



UNIVERSITY OF WYOMING

SCHOOL OF ENERGY RESOURCES

CENTER FOR ENERGY  
REGULATION & POLICY  
ANALYSIS

**WORKING  
PAPERS**

NO. 2

**Working Paper Title:**

**Adapting to Coal-Plant Closures:  
A Framework for Understanding State  
Resistance to the Energy Transition**

**Tara Righetti, Temple Stoellinger,  
Rob Godby, Kipp Coddington | 2020**

# CENTER FOR ENERGY REGULATION & POLICY ANALYSIS WORKING PAPERS

DIRECTOR: KIPP CODDINGTON, ESQ.

## **About the University of Wyoming School of Energy Resources' (SER) Center for Energy Regulation & Policy Analysis (CERPA) Working Paper Series**

CERPA, which is one of SER's Centers of Excellence, draws upon interdisciplinary energy law, policy, technology and economic experts to conduct world-class energy analyses for the benefit of the State of Wyoming, the intermountain west region and the United States. CERPA was founded in 2020 specifically to respond to the energy challenges and opportunities facing the State of Wyoming.

The objective of the CERPA Working Paper Series is to share "works in progress". The authors of the papers are solely responsible for the content of their contributions. The working papers can be found at <https://www.uwyo.edu/ser/research/centers-of-excellence/energy-regulation-policy/working-papers.html>.

For more information about CERPA, please visit the CERPA web site at <https://www.uwyo.edu/ser/research/centers-of-excellence/energy-regulation-policy/index.html>.



UNIVERSITY  
OF WYOMING

School of Energy Resources  
Center for Energy Regulation  
& Policy Analysis

# ADAPTING TO COAL-PLANT CLOSURES: *A FRAMEWORK FOR UNDERSTANDING STATE RESISTANCE TO THE ENERGY TRANSITION*

Tara Righetti, Temple Stoellinger, Rob Godby, Kipp Coddington<sup>1</sup>

*In response to market pressures and renewable generation mandates, utilities are making the decision to close coal-fired generation assets prior to their scheduled retirement dates. Impacts of early coal-plant closures to workers and communities can be devastating. The conventional response among state policy makers has been to create short term programs to transition workers and provide local economic development assistance. However, through detailed comparative analysis of energy transition policies among states in the Rocky Mountain region a heterogeneity of policy choices emerges. Notably, this includes energy transition resistance, efforts to thwart or delay coal-plant closures and other changes consistent with a shift towards renewable generation. The article unpacks the underlying drivers of energy transition resistance as closely tied to fossil-dependent revenue models and suggests the need for both state-level policies and federal investments in economic diversification.*

## **I. Introduction**

Throughout the United States, coal-fired power plant generation (hereinafter, “coal plants”) are retiring or announcing plans to do so at an increasing rate.<sup>2</sup> Significant additional retirements are anticipated through 2025<sup>3</sup> as a result of shifting social, political, regulatory, and economic conditions. Although core to decarbonization policies, early coal-plant retirements pose significant impacts to states, ratepayers, and communities with resource-dependent economies. Coal-plant retirements may result in a variety of social and economic challenges. These challenges include management of residual economic value of coal plants that have been retired early; economic redevelopment of coal assets and the communities where they are located; and significant declines in tax revenue, job losses, and workforce displacement and retraining.

Faced with ongoing coal-plant retirements and, in some instances, the closure of coal mines, states have adopted a variety of approaches to address the economic and distributive impacts of coal asset retirements. These policies are aimed at transforming state economies, workforces, energy markets, and communities.<sup>4</sup> Policies may intend to accelerate the transition to renewable and zero-carbon electricity; to ease local and statewide impacts of the energy transition; or, to resist the transition through policies designed to defer retirements and avoid detrimental impacts to state and local economies. In each case, state policies reflect a series of choices that

---

<sup>1</sup> This essay was prepared with funding from the Center for Energy Regulation & Policy Analysis at the University of Wyoming. The authors would like to acknowledge Jada Garofalo and Sara Falen (J.D. '21) for their assistance.

<sup>2</sup> Slade Johnson & Kien Chau, *More U.S. Coal-Fired Power Plants Are Decommissioning as Retirements Continue*, U.S. ENERGY INFORMATION ADMINISTRATION (last updated July 26, 2019) <https://www.eia.gov/todayinenergy/detail.php?id=40212>.

<sup>3</sup> *Id.*, at Fig. 1 *Total net summer capacity of retired and retiring coal units (2010-2025)*.

<sup>4</sup> Emma Cimino & Jessica Rackley, *Governors Leading on Energy Transitions: An overview of State Energy Goals*, NATIONAL GOVERNORS ASSOCIATION, CENTER FOR BEST PRACTICES (September 1, 2020).

consider the interests of ratepayers, utility shareholders, impacted communities, and other stakeholders.

While the forces motivating the reduction of coal in the national generation fleet are common, the responses among states can be quite different while rationally motivated. This article examines the policy responses to the energy transition in the four states along the eastern edge of the Rocky Mountain region: Colorado, Montana, New Mexico and Wyoming. Each of these states has coal assets that are slated for early retirement<sup>5</sup> and economies that are supported or even dependent on, to a greater or lesser extent, resource extraction as well as generation. Legislative responses are tailored differently depending upon the anticipated positive or negative economic impacts predicated to result from the energy transition. This article categorizes and differentiates these approaches as those that *compel*, *ease*, or *resist* the driving forces of energy transition at play within each state. In so doing, it provides a compelling window into the distributive impacts of the energy transition and the forces underpinning energy transition resistance.

The closures and retirement of coal generation assets are both pivotal to the decarbonization goals of the energy transition and a consequence of decades of changing social and economic conditions. Part II of this article examines the drivers of coal-assets retirements, including economic competition from other sources, regulatory uncertainty, and climate policy. Part III then provides an overview of the social and economic impacts of early coal asset retirements to workers, communities, utility ratepayers, and, at times, state revenue. These drivers of change and associated impacts have compelled states to enact new energy transition policies. Part IV uses the aforementioned framework to compare and contrast energy transition policies in the four states, categorizing various attributes as either *compelling*, *easing*, or *resisting* the energy transition. Part V examines the underlying drivers of state resistance to energy transition through the lenses of economic analysis and just transition. It identifies state and federal policy opportunities to address the disproportionate impacts of the energy transition in states like Wyoming, where economic impacts deeply resonate throughout the state's economy and cannot be addressed through community and workforce policies alone.

## II. The Decline of Coal Generation

In response to a variety of economic, regulatory, and policy challenges, utilities throughout the United States have increasingly opted to retire coal generation assets.<sup>6</sup> Over the past decade electricity demand has been lower than anticipated, making competition among energy sources keener.<sup>7</sup> Low natural gas prices and comparably lower costs associated with building natural gas generation facilities have been the primary reason for the decline of coal.<sup>8</sup> Looking forward, renewables pose an even greater threat to remaining coal generation as a result of diminishing operating and construction costs combined with federal and state incentives to make new capital

---

<sup>5</sup> See *infra* text accompanying notes 46–125.

<sup>6</sup> Kenneth Dubin, *U.S. Coal Plant Retirements Linked to Plants with Higher Operating Costs*, U.S. ENERGY INFORMATION ADMINISTRATION (last updated Dec. 3, 2019), [https://www.eia.gov/todayinenergy/detail.php?id=42155#:~:text=Coal%20units%20with%20higher%20operating,in%20the%20lowest%20cost%20group;Johnson & Chau, \*supra\* note 2.](https://www.eia.gov/todayinenergy/detail.php?id=42155#:~:text=Coal%20units%20with%20higher%20operating,in%20the%20lowest%20cost%20group;Johnson%20&%20Chau,supra%20note%202.)

<sup>7</sup> TREVOR HOUSER ET AL., CAN COAL MAKE A COMEBACK, COLUMBIA CENTER OF GLOBAL ENERGY POLICY (APRIL 2017).

<sup>8</sup> FRANCISCO FLORES-ESPINO ET AL., COMPETITIVE ELECTRICITY MARKET REGULATION IN THE UNITED STATES: A PRIMER, NATIONAL RENEWABLE ENERGY LABORATORY 12 (2016); CAMILA STARK ET AL., RENEWABLE ELECTRICITY: INSIGHTS FOR THE COMING DECADE, JOINT INSTITUTE FOR ENERGY ANALYSIS vi (2015); See Houser et al., *supra* note 7.

investments.<sup>9</sup> In many parts of the United States, renewables are now the lowest cost form of new generation,<sup>10</sup> at times exceeding both new natural gas projects and existing partially or fully depreciated coal plants.<sup>11</sup> As utilities invest in more intermittent renewable generation, coal has limited flexibility to adjust output relative to other thermal sources, which undermines the incentive to retain coal assets.<sup>12</sup>

In addition to market challenges, coal plants are subject to additional regulatory costs and risks. Following the U.S. Supreme Court in *Massachusetts v. EPA*,<sup>13</sup> the EPA implemented a suite of regulatory programs intended to limit atmospheric emissions of GHGs, including CO<sub>2</sub> from both stationary and mobile sources.<sup>14</sup> Compliance with these programs, and future regulatory mandates, may pose significant additional costs to coal plants.<sup>15</sup> Renewable energy sources do not emit criteria pollutants that are regulated under the Clean Air Act and, thus, do not face the same costs related to post-combustion emission control.<sup>16</sup> As a result, renewables enjoy an additional and unpriced advantage regulatory advantage over existing coal generation.

Although not a principal driver of early coal retirements thus far, decarbonization policies further discourage continued operation of coal plants. On the first day of his term in office, President Biden announced his goal for total decarbonization of the United States electricity market by 2035.<sup>17</sup> In conjunction with similar International, national, regional, state, and local decarbonization policies favoring renewable or zero-carbon generation, National policies create further challenges to continued use of coal-fired generation. The Paris Agreement,<sup>18</sup> federal tax-

---

<sup>9</sup> WORLD ENERGY INVESTMENT 2020, INTERNATIONAL ENERGY AGENCY (last updated May 15, 2020), <https://www.iea.org/reports/world-energy-investment-2020/power-sector>.

<sup>10</sup> See LAZARD'S LEVELIZED COST OF ENERGY ANALYSIS—VERSION 14.0, LAZARD (2020).

<sup>11</sup> *Id.*

<sup>12</sup> See Miguel Angel Gonzalez-Salazar et al., *Review of the operational flexibility and emissions of gas- and coal-fired power plants in a future with growing renewables*, 82 RENEWABLE AND SUSTAINABLE ENERGY REVIEWS 1498 (2018); U.S. ENERGY INFO, ADMIN. Today in Energy, EIA EXPECTS 2020 SUMMER U.S. ELECTRICITY DEMAND TO BE LOWEST SINCE 2009 (June 10, 2020), <https://www.eia.gov/todayinenergy/detail.php?id=44055#>.

<sup>13</sup> 549 U.S. 497, 127 S. Ct. 1438, 167 L. Ed. 2d 248 (2007).

<sup>14</sup> U.S. ENVIRONMENTAL PROTECTION AGENCY, ENDANGERMENT AND CAUSE OR CONTRIBUTE FINDINGS FOR GREENHOUSE GASES UNDER THE SECTION 202(A) OF THE CLEAN AIR ACT <https://www.epa.gov/ghgemissions/endangerment-and-cause-or-contribute-findings-greenhouse-gases-under-section-202a-clean> (last visited Aug. 8, 2020).

<sup>15</sup> U.S. ENV. PROTECTION AGENCY, FACT SHEET, REGULATORY IMPACT ANALYSIS FOR THE AFFORDABLE CLEAN ENERGY RULE AND CLEAN POWER PLAN REPEAL (June 19, 2019) (noting potential costs of the Affordable Clean Energy Rule of 280 million in 2030).

<sup>16</sup> U.S. ENV. PROTECTION AGENCY, AVOIDED EMISSIONS AND GENERATION TOOL (AVERT), <https://www.epa.gov/statelocalenergy/avoided-emissions-and-generation-tool-avert> (last accessed February 3, 2020); JEREMY FISHER ET AL, ASSESSING THE EMISSION BENEFITS OF RENEWABLE ENERGY AND ENERGY EFFICIENCY USING EPA'S AVOIDED EMISSIONS AND GENERATION TOOL (AVERT) (2005).

<sup>17</sup> Exec. Order No. 14008, 86 Fed. Reg. 7619 (Jan. 27, 2021) (“Tackling the Climate Crisis at Home and Abroad”), <https://www.whitehouse.gov/briefing-room/presidential-actions/2021/01/27/executive-order-on-tackling-the-climate-crisis-at-home-and-abroad/>.

<sup>18</sup> UNITED NATIONS, ADOPTION OF THE PARIS AGREEMENT 9 (Dec. 12, 2019). While United States started the process of withdrawing from the Paris Agreement under President Trump, states and investors have separately followed the goals in the agreement. (See GOVERNORS, UNITED STATES CLIMATE ALLIANCE 1, (last visited Aug. 8, 2020), <http://www.usclimatealliance.org/governors>. Most recently, President Biden accepted the agreement, initiating the process to re-enter the United States into the agreement. (See THE WHITE HOUSE, BRIEFING ROOM, PARIS CLIMATE AGREEMENT (Jan. 20, 2021), <https://www.whitehouse.gov/briefing-room/statements-releases/2021/01/20/paris-climate-agreement/>).

subsidy programs for renewable resources,<sup>19</sup> and regional, state, and local low carbon fuel and electricity standards have guaranteed markets for renewable generation and have further encouraged transitions away from coal.<sup>20</sup>

Combined with higher operating, workforce, and maintenance costs,<sup>21</sup> over the past decade utilities across the country have acknowledged the economic advantages to retiring coal units and replacing their electrical output with energy generated from natural gas, wind, and solar.<sup>22</sup> Although coal generation continues to be constructed abroad, due to these market pressures utilities throughout the nation have not invested in the construction of new coal plants, despite the presence of immense domestic coal resources.<sup>23</sup> Instead, they are actively considering retirement of their coal assets, sometimes prior to the end of their economic lives, and increasingly making new capital investments in natural gas and renewable generation.

### III. Social and Economic Impacts of the Energy Transition

While there are positive environmental benefits associated with the early closure of coal plants, including the reduction in air pollution, negative social and economic impacts often follow as well.<sup>24</sup> As noted by Professor Ann Eisenberg, “the transition to a low-carbon society will have winners and losers as the costs and benefits of decarbonization fall unevenly on different communities.”<sup>25</sup> For some communities, particularly low-income and communities of color, the closure of coal plants is often a benefit.<sup>26</sup> For other communities, coal-fired power plants have provided a stable source of employment and tax revenue.<sup>27</sup> Citizens, local governments, and even states have come to rely upon these facilities as a driving force in their economies.<sup>28</sup> When coal-fired power plants are retired, jobs are lost and tax revenue goes away, causing economic and social impacts, particularly at the community level.<sup>29</sup> The Pew Center of Global Climate Change has found that the negative impacts of economic transitions like the energy transition “are

---

<sup>19</sup> Bonnie West et al., *Direct Federal Financial Interventions and Subsidies in Energy in Fiscal Year 2016*, U.S. ENERGY INFO, ADMIN. 1 (last updated Apr. 2016).

<sup>20</sup> Jonas J. Monast, *Electricity Competition and the Public Good: Rethinking Markets and Monopolies*, 90 U. COLO. L. REV. 667 (2019).

<sup>21</sup> Herminé Nalbandian-Sugden, *Operating Ratio and Cost of Coal Power Generation*, INTERNATIONAL ENERGY AGENCY, 50 (Dec. 2016).

<sup>22</sup> Stark et al., *supra* note 8; TAYLOR KUYKENDALL, S&P GLOBAL MARKET INTELLIGENCE, US POWER GENERATORS REPORTING SAVINGS, OTHER BENEFITS FROM PHASING OUT COAL (Aug. 7, 2019), <https://www.spglobal.com/marketintelligence/en/news-insights/latest-news-headlines/us-power-generators-reporting-savings-other-benefits-from-phasing-out-coal-53387443>.

<sup>23</sup> U.S. ENERGY INFO. ADMIN, ANNUAL ENERGY OUTLOOK 2021, U.S. CUMULATIVE AND NEW GENERATING CAPACITY (FEB. 3, 2021) (forecasting significant coal retirements and no new coal generation between 2021 and 2050).

<sup>24</sup> Matthew S. Henry, Morgan D. Brazilian, & Chris Markuson, *Just Transitions: Histories and Futures in a Post-COVID World*, 68 ENERGY RES. & SOC. SCI. (2020); Ann M. Eisenberg, *Just Transitions*, 92 S. CAL. L. REV. 273 (2019).

<sup>25</sup> Eisenberg, *supra* note 24.

<sup>26</sup> *Id.* The Energy News Network, quoting the NAACP has stated that “[n]ationally, over 60% of African Americans and 40% of Latinos live within 30 miles of a coal-fired power plant, and those residents are typically exposed to upward of 60% more pollution than they produce through consumption and daily activities[.]” THOUSANDS OF COAL WORKERS LOST JOBS. WHERE WILL THEY GO?, ENERGY AND ENVIRONMENT NEWS (June 25, 2020), <https://energynews.us/2020/06/25/southeast/thousands-of-coal-workers-lost-jobs-where-will-they-go/>.

<sup>27</sup> *Id.*

<sup>28</sup> Ethan Rosenfeld, *Transition Plans for Coal-Fired Power Plant Closings: Stability, Opportunity*, 16(2) J. ENERGY & ENVTL. L. 71 (2015).

<sup>29</sup> Julia Haggerty et al., *Planning for the Local Impacts of Coal Facility Closure: Emerging Strategies in the U.S. West*, 57 RESOURCES POL’Y 69, 71 (2018).

generally manifested sequentially: businesses are usually first to feel the pain of economic decline, followed by their workers, and then the local communities where those workers live.”<sup>30</sup>

While the U.S. economy is large enough that it is not impacted by coal-sector job losses, the impact to regional and local economies will be significant.<sup>31</sup> This is particularly true in rural settings where there are relatively few job opportunities for laid-off workers and where it may be difficult to attract and create new jobs.<sup>32</sup> These impacts may be most acute for skilled, but less well-educated workers due to the lack of replacement jobs.<sup>33</sup>

Although the impacts of coal asset retirements may differ based on a number of factors, including general economic conditions, rural communities may face the most drastic impacts.<sup>34</sup> These communities may be more dependent on coal assets and, thus, less able to diversify into growing economic sectors. Due to limited access to metropolitan markets and educated labor forces, rural communities may struggle to diversify their economies.<sup>35</sup> The loss of coal industry also equates to the loss of a major employer and taxpayer, which can jeopardize the ability of local governments to provide public services, administer state programs, provide social and health services, conserve the environment, and strengthen economies.<sup>36</sup> These system-wide impacts ripple through communities, constraining economic adaptation by limiting options for workforce development and funding from government services.<sup>37</sup> Because long-term planning and impact analysis are not mandated components of retirement and decommissioning processes, coal plant retirements often come as a surprise to local communities.<sup>38</sup> This is, perhaps, the commanding impact felt by rural communities— at the community level there is an absence of preparation for the shift away from coal.

Despite a general awareness of the energy transition and the existing and future impacts to communities and states from the early retirement of coal assets, state-level transition planning and community impact solutions and analyses have been slow to develop.<sup>39</sup> State policies, when extant, have only been enacted within the past several years. Notably, these policies are increasingly focused on labor and community impacts. State approaches, however, differ significantly in their objectives and mechanisms, at times accelerating energy transition policies and in others attempting to address social impacts by attempting to forestall transitions by stabilizing markets for coal.

#### **IV. Comparison of Energy Transition Policies in the Rocky Mountain Region**

State legislatures across the Rocky Mountain region have adopted energy transition policies in response to the industrial transitions underway in those states. This section categorizes

---

<sup>30</sup> Judith M. Greenwald et al., *Community Adjustment to Climate Change Policy, Prepared for: PEW CENTER ON GLOBAL CLIMATE CHANGE 1* (last updated Dec. 2001).

<sup>31</sup> Mark Haggerty, *Communities at Risk from Closing Coal Plants*, HEADWATERS ECONOMICS (Mar. 23, 2017), <https://headwaterseconomics.org/energy/coal/communities-coal-plant-closures/>.

<sup>32</sup> *Id.*

<sup>33</sup> *Id.*

<sup>34</sup> *Id.*

<sup>35</sup> *Id.*

<sup>36</sup> Rosenfeld, *supra* note 30, at 72.

<sup>37</sup> *Id.* at 73.

<sup>38</sup> Haggerty, *supra* note 34.

<sup>39</sup> Rosenfeld, *supra* note 30, at 72.

these policies as either compelling, easing, or resisting the underlying energy transition.<sup>40</sup> Policies which *compel* are those which accelerate the transition towards specific, more desirable alternative energy and industrial systems but address short term and localized impacts. These policies can be distinguished from those that *resist*. Rather than accept the energy transition as a fait accompli, resisting policies attempt to perpetuate aspects of the current or historic system by counteracting drivers of the transition. While each state’s overall response to the energy transition may be categorized generally within one of these responses, a state’s response may—at the same time—be comprised of multiple policies that, alone, are consistent with more than one type of strategy.

By taking a comparative and holistic approach which views each response as a thoughtful policy adaptation to dynamic and systemic changes in the energy landscape, this framework illustrates the differences between state approaches and positions them along a spectrum ranging from policies that advance or accelerate the transition towards ones which attempt to impede changes underway. In so doing, it identifies and groups together policy choices consistent with state-level energy transition resistance. The article then unpacks the underlying economic conditions which may serve as drivers of energy transition resistance. In so doing, it illuminates opportunities for resisting states to adapt to the energy transition while concurrently suggesting the need for federal resources.

### **Compel: Policies that Accelerate Long-Term Industrial and Energy Transitions**

Policies that accelerate the energy transition are classified as policies that *compel* change. They lay out frameworks and establish funding to support municipalities and public utility regulatory agencies efforts to adapt to the energy transition. In line with recent Congressional acts signaling federal movement toward energy transition policy, research, and development,<sup>41</sup> state policies have encouraged communities to invest in the “new energy economy,” develop jobs associated with clean energy,<sup>42</sup> and provide grants to accelerate research and development of advanced industries and for collaborative projects.<sup>43</sup>

#### *Industrial Transitions and Economic Development: Driving the New Energy Economy*

Both Colorado and New Mexico have developed comprehensive energy policy strategies intended to accelerate the transition within their states. Both state’s economies have relied on natural resource extraction and coal-fired power generation in the past, yet both states have taken a leadership position asserting that states can lead the way on climate and clean energy.<sup>44</sup> Colorado

---

<sup>40</sup> This framework was developed, in part, based on the resist, adapt, direct (RAD) framework used to evaluate managerial responses to ecosystem change. (See, Laura M. Thompson, et al. *Responding to Ecosystem Transformation: Resist, Accept, Or Direct?* FISHERIES MAGAZINE (2020)).

<sup>41</sup> The Energy Act of 2020, contained within the Consolidated Appropriations Act of 2020, awards funds focused on energy efficiency; nuclear energy development; renewable energy and storage; carbon management and storage; decreasing emissions from industrial and manufacturing technologies; the extraction of rare earth elements (REE) and critical minerals (CM) from coal resources; grid modernization, and other energy innovation. The federal movement and support toward an energy transition is expected to continue under the Biden administration. (See Consolidated Appropriations Act, 2020, Pub. L. No. 116–260, Dec. 27, 2020, 134 Stat. 1182 (Division Z—Energy Act of 2020); Scott H. Segal, et al., *Energy: 2020 Post-Election Analysis Issue-by-Issue*, XI THE NAT’L L. REV. 11 (2021).

<sup>42</sup> COLO. REV. STAT. ANN. § 8-83-308 (West 2020) (commonly referred to as Colorado’s “Just Transition Act.”).

<sup>43</sup> COLO. REV. STAT. ANN. § 24-47.5-101 (West 2020).

<sup>44</sup> See Patricia Nelson Limerick, et al., *What Every Westerner Should Know About Energy*, CENTER FOR THE AMERICAN WEST (2003).



Governor Jared Polis and New Mexico Governor Michelle Lujan Grisham, co-authored an editorial in October of 2020 calling for western states “to continue to work together toward cleaner energy, cleaner jobs, cleaner economies and cleaner cars to mitigate further public health and economic crisis brought on by deteriorating air quality, rising temperatures, undiversified energy economies and a federal government that is looking the other way.”<sup>45</sup>

Beginning in 2004 with its first-in-the-country voter-adopted renewable energy standard, Colorado has taken active steps to transition to a *New Energy Economy* designed to “re-orient the state’s energy economy away from fossil fuels and toward clean energy technologies through a coherent set of policy initiatives...”<sup>46</sup> Championed from 2007 to 2011 by then Governor Bill Ritter, Colorado’s *New Energy Economy* efforts during that period of time included the coordination of 57 pieces of legislation as well as organizational and administrative changes in state government, and various initiatives developed and funded by the state.<sup>47</sup> To assist in this effort, Colorado has created the Colorado Energy Office (CEO), a non-regulatory department within the Colorado Governor’s Office. The CEO’s mission is to “reduce greenhouse gas emissions and consumer energy costs by advancing clean energy, energy efficient and zero emission vehicles to benefit all Colorado citizens.”<sup>48</sup> Colorado’s recent efforts to accelerate the transition toward a *New Energy Economy* include, but are not limited to, efforts to increase appliance energy efficiency standards, update energy efficient building code, create electric vehicle tax incentives, improve infrastructure, enact just transition policies to benefit communities and workers, amend the state’s utility laws, and increase the state renewable energy standard.<sup>49</sup>

Through a mixture of legislation, incentives and business deals, New Mexico has also developed a policy strategy to accelerate its energy economy transition.<sup>50</sup> New Mexico’s *New Energy Economy* efforts began after Colorado’s and are primarily centered around the 2019 Energy Transition Act. The Energy Transition Act attempts to accelerate New Mexico’s transition to a new energy economy by requiring investor-owned utilities to increase to 80% renewable energy by 2040, bolstering the state’s economy via a large renewable energy buildout with a locally-trained workforce, restructuring financing on stranded assets with securitization, and providing low-interest bonds to finance economic relief for communities impacted by coal plant closures.<sup>51</sup> The 2019 Energy Transition Act<sup>52</sup> has been described by New Mexico Governor Michelle Lujan Grisham, as “landmark legislation that sets bold statewide renewable energy standards and establishe[s] a pathway for a low-carbon energy transition away from coal...”<sup>53</sup>

---

<sup>45</sup> Jared Polis & Michelle Lujan Grisham, *States Can Lead on Climate and Clean Energy*, THE HILL (October 16, 2020), <https://thehill.com/blogs/congress-blog/energy-environment/521437-states-can-lead-on-climate-and-clean-energy>.

<sup>46</sup> Michele Betsill & Dimitris Stevis, *The politics and dynamics of energy transitions: lessons from Colorado’s (USA) “New Energy Economy”*, 34 ENV’T & PLAN. 381 (2016).

<sup>47</sup> *Id.*

<sup>48</sup> COLORADO ENERGY OFFICE, ABOUT US (last visited Jan. 29, 2021), <https://energyoffice.colorado.gov/about-us>.

<sup>49</sup> COLORADO ENERGY OFFICE, 2019 LEGISLATIVE SUMMARY SNAPSHOT (May, 2019), <https://drive.google.com/file/d/1VPBPqXCH1GHjeekFktEtwzw5dLhzDH4j/view> (last visited Feb. 3, 2021,).

<sup>50</sup> Collin Krabbe, New Mexico’s energy transition continues amid pandemic, ALBUQUERQUE BUSINESS FIRST (Dec. 3, 2020), <https://www.bizjournals.com/albuquerque/news/2020/12/03/pandemic-could-chang-down-transition-to-renewables.html>.

<sup>51</sup> S.B. 489, 54th Leg., 1st Sess. (N.M. 2019) (“Energy Transition Act”).

<sup>52</sup> N.M. STAT. ANN. § 62-16-1 et seq. (West 2020) (“Renewable Energy Act”).

<sup>53</sup> OFFICE OF THE GOVERNOR MICHELLE LUJAN GRISHAM, PRESS RELEASES, (Mar. 22 2019), <https://www.governor.state.nm.us/2019/03/22/governor-signs-landmark-energy-legislation-establishing-new-mexico-as-a-national-leader-in-renewable-transition-efforts/>.

### *Securing Markets for Renewable and Low Carbon Energy: Renewable Portfolio Standards*

The most popular state policy instrument used to direct the energy transition in the United States is the Renewable Portfolio Standard (RPS).<sup>54</sup> RPS policies generally require electric utilities in a state to add a specified percentage capacity or capacity addition of renewable-based electricity to its production mix by a specified date.<sup>55</sup> When scholars critically examine RPS policies they find that a more stringent RPS, measured by the required percentage increase of renewables, have a “positive and significant” impact on renewable electricity investment,<sup>56</sup> the percentage of renewable energy sales by utilities,<sup>57</sup> and overall renewable generation and capacity.<sup>58</sup> In addition to guaranteeing markets for new renewable generation, they can be utilized to actively steward the pace of the energy transition within a state.

Compared to the four states in the case study, Colorado and New Mexico have similar RPS policies that are among the most stringent in the U.S. Montana has adopted an initial, less stringent RPS policy requiring that only 15% of electricity generated by utilities in the state come from renewable sources by 2015.<sup>59</sup> In contrast, Wyoming has enacted a low carbon energy standard that requires retrofitting existing power plants with carbon capture and storage technology.<sup>60</sup> Although that mechanism functions similarly to RPS policies in the other states – by assuring a certain percent of the market is available for generation from a preferred source – when combined with other requirements limiting cost recovery for replacement generation, Wyoming’s standard resists rather than accelerates transitions away from fossil generating resources.

New Mexico’s RPS is arguably the most aggressive among the four states. Its current RPS policy is the result of the state’s enactment of the 2019 Energy Transition Act.<sup>61</sup> The Energy Transition Act requires public utilities serving New Mexico customers to have retail sales of “no less than” 20% renewable energy by 2020, 50% by 2030, and 80% by 2040.<sup>62</sup> The Act further mandates that by 2045, 100% of retail sales in New Mexico will be supplied by carbon-free resources.<sup>63</sup> The New Mexico Public Regulation Commission further requires public utilities to meet their RPS targets utilizing a diversified mix of renewable energy sources. Specifically,

---

<sup>54</sup> Shan Zhou & Barry D. Solomon, *Do Renewable Portfolio Standards in the United States Stunt Renewable Electricity Development Beyond Mandatory Targets?* 140 ENERGY POLICY 111377, 1 (2020).

<sup>55</sup> *Id.* at 2.

<sup>56</sup> *Id.* (citing Haitao Yin, & Nicholas Powers, *Do state Renewable Portfolio Standards promote in-state renewable generation?* 38(2) ENERGY POLICY 1140 (2010)).

<sup>57</sup> *Id.* (citing Miriam Fischlein & Timothy M. Smith, *Revisiting Renewable Portfolio Standard effectiveness: policy design and outcome specification matter* 46(3) POLICY SCIENCES 277–310 (2013)).

<sup>58</sup> *Id.* (citing Carley et al., *Empirical evaluation of the stringency and design of renewable portfolio standards*, 3 Nature Energy 754 (2018)). Zhou and Solomon found that in states endowed with large renewable energy resources, stringent RPS policies can motivate energy producers to invest in renewable electricity capacity beyond the RPS mandatory target in order to minimize the economic cost of electricity supply. (*See* Zhou & Solomon, *supra* note 54, at 6). However, in states with constrained or limited renewable energy sources, stringent RPS policies can lead to lower levels of renewable energy development beyond the RPS target. (*Id.*).

<sup>59</sup> MONT. CODE ANN. § 69-3-2001 et seq. (West 2020) (“Montana Renewable Power Production and Rural Economic Development Act”).

<sup>60</sup> WYO. STAT. ANN. § 37-18-101(ii) (West 2020). For a more detailed analysis of Wyoming’s low carbon energy standard *see, infra* notes 119–24 and accompanying text.

<sup>61</sup> N.M. STAT. ANN. § 62-16-1 et seq. (West 2020) (“Renewable Energy Act”).

<sup>62</sup> N.M. STAT. ANN. § 62-16-4(A)(2) (West 2020).

<sup>63</sup> N.M. STAT. ANN. § 62-16-4 (West 2020).

investor-owned utilities are required to source 30% of their renewables from wind energy, 30% from solar, 5% from other renewable technologies, and 3% from distributed generation.<sup>64</sup>

Colorado’s current RPS policy, or Renewable Energy Standard (RES) policy as it is called, requires investor-owned utilities to generate 30% of their electricity from renewable energy sources by 2020, of which, 3% must come from distributive energy resources.<sup>65</sup> In addition, cooperative and municipal utilities must generate 20% of their electricity from renewables.<sup>66</sup> In 2019, Colorado enacted legislation (SB 13-252) requiring utilities serving over 500,000 or more customers to utilize 100% clean energy by 2050.<sup>67</sup> The legislative declaration within the 2019 Act states “[i]t is a matter of statewide importance to promote the development of cost-effective clean energy and new technologies and reduce the carbon dioxide emissions from the Colorado electric generating system...”<sup>68</sup> This text indicates the Colorado legislature’s intent for its RES to serve as a policy driver for the state’s energy transition.

### **Ease: Economic Policies to Address Short-Term Impacts of the Energy Transition**

In addition to RPS policies, Colorado, New Mexico, and Montana have each adopted policies to *ease* the impacts of the transition on ratepayers and local communities. These policies largely allow securitization or other economic restructuring mechanisms to reduce the economic impacts on ratepayers and investors from early coal-asset retirements. In all three states, additional policies provide aid to communities experiencing the most direct impacts of the energy transition. These policies can provide public utility commissions and communities with the tools to more conscientiously transition away from fossil fuels. These policies can be classified as policies that *ease* change because policymakers either view resisting as infeasible or the broader changes associated with the energy transition as socially and economically desirable.

#### *Securitization*

All three states have passed legislation authorizing state public utility regulatory agencies to issue financing orders or ratepayer-backed bonds in order to lower costs as part of retiring coal generation and building renewable replacement generation. Early retirement of a coal-fired power plants may also result in negative impacts to utility rate-payers and utility shareholders, at times with regressive impacts.<sup>69</sup> Changing regulatory circumstances can result in the issue of stranded assets – when a utility has remaining useful life but it cannot expect to recover the difference between its book value and market value due to changing market shifts or regulation.<sup>70</sup> Stranded assets contribute to “carbon lock-in” by disincentivizing decarbonization efforts and investment in lower-emission generation,<sup>71</sup> transfer risks from ratepayers to utility investors, and discourage new investment dollars in newly constructed, and often lower cost, decarbonized energy infrastructure.

---

<sup>64</sup> N.M. Admin. Code 17.9.572.7(G).

<sup>65</sup> COLO. REV. STAT. ANN. § 40-2-124(1)(c)(I)(E) (West 2020).

<sup>66</sup> COLO. REV. STAT. ANN. § 40-2-124(1)(c)(V.5) (West 2020).

<sup>67</sup> COLO. REV. STAT. ANN. § 40-2-125.5(3)(II) (West 2020).

<sup>68</sup> COLO. REV. STAT. ANN. § 40-2-125.5(1)(a)-(b) (West 2020).

<sup>69</sup> Sanya Carley & David M. Konisky, *The Justice and Equity Implications of the Clean Energy Transition*, NATURE ENERGY 5, 569 (2020).

<sup>70</sup> Christopher Serkin & Michael P. Vandenberg, *Prospective Grandfathering: Anticipating the Energy Transition Problem*, 102 MIN. L. REV. 1019 (2018); Emily Hammond & Jim Rossi, *Stranded Costs and Grid Decarbonization*, 82 BROOK. L. REV. 645 (2017).

<sup>71</sup> Tracey M. Roberts, *Stranded Assets and Efficient Pricing for Regulated Utilities: A Federal Tax Solution*, 11 COLUM. J. TAX. L. 1 (2019); Gregory C. Unruh, *Understanding Carbon Lock-In*, 28 ENERGY POL’Y 817, 817 (2000).

Originally developed to *ease* the transition from regulated to deregulated markets,<sup>72</sup> securitization policies allow utilities to finance the under-depreciated capital costs, often called stranded costs,<sup>73</sup> that remain after early retirement of generation assets by lowering interest rates and funding new investments in replacement generation with lower marginal costs.<sup>74</sup> As a result, securitization mechanisms can produce substantial savings to the utility, which may be shared with utility shareholders, and a portion which may be passed on to vulnerable transitioning communities, or used for other programs, though savings may not immediately lower costs to the ratepayer despite lower costs of generation.<sup>75</sup> Rather than requiring coal-plant operation until investments have been fully recovered and depreciated, securitization policies allow utilities to more rapidly transition to lower cost generation and prevent stranded assets, while protecting ratepayers from cost increases as a result.

Colorado’s 2019 comprehensive energy legislation, SB 19-236, includes the Colorado Energy Impact Bond Act (the “Impact Bond Act”), which aims to protect ratepayers from the economic risks of the energy transition by establishing securitization measures to refinance fossil energy assets.<sup>76</sup> Among these changes, SB 1-236 authorizes the Colorado Public Utility Commission to allow utilities to issue low-cost “energy impact assistance bonds” to cover energy impact costs (EI-Costs) associated with or resulting from retirements of electric generating facilities.<sup>77</sup> EI-Costs encompass decommissioning and restoration spending, capital and operating costs associated with existing debt, and assistance to affected workers and communities.<sup>78</sup> Utilities may use the funds raised by the bonds to pay off costs, including the remaining and unamortized portion of prematurely retired coal assets. Costs associated with the bonds are passed through to consumers as an Energy Impact Assistance Charge.<sup>79</sup> SB 19-236 accepts early coal asset retirements as inevitable and as consistent with the directive changes in Colorado’s renewable portfolio standards, while concurrently protecting workers and communities and lowering costs to ratepayers when early retirements occur.

Similarly, SB 489, which includes New Mexico’s Energy Transition Act (ETA),<sup>80</sup> provides financing mechanisms to securitize transition costs, including costs of workforce and community transitions and capital and debt costs associated with undepreciated assets.<sup>81</sup> Following approval of an application for abandonment pursuant to New Mexico Statute § 62-18-4, the utility can apply to the Commission for a financing order to “recover all transition costs through the issuance of energy transition bonds.”<sup>82</sup> While the utility forfeits profits on its investments in prematurely retired assets, the bonds permit the utility to recoup its investments and restructure debt.<sup>83</sup> A

---

<sup>72</sup> Walter R. Hall, II, *Securitization and Stranded Cost Recovery*, 25 ENERGY L.J. 173 (2004); J. Paul Forrester, *Unstranding Stranded Costs*, 14 J. STRUCTURED FIN. 33 (2008); Hammond & Rossi, *supra* note 71.

<sup>73</sup> Hall, II, *supra* note 73, at 191-92.

<sup>74</sup> Seth Gillen, *Great Expectations: Stranded Cost Recovery and the Interplay of the Electricity Industry, Consumers, and the Public Utility Commission of Texas*, 7 TEX. TECH ADMIN. L.J. 345, 359-360 (2006).

<sup>75</sup> *Id.*

<sup>76</sup> COLO. REV. STAT. ANN. §§ 40-41-101–116 (West 2020) (“Colorado Energy Impact Bond Act”).

<sup>77</sup> COLO. REV. STAT. ANN. § 40-41-111 (West 2020). (Electric generating facilities is not defined in the statute, and thus presumably the Energy Impact Assistance Bonds could be issued for retiring coal, gas, and renewable facilities.)

<sup>78</sup> COLO. REV. STAT. ANN. § 40-41-110 (West 2020).

<sup>79</sup> COLO. REV. STAT. ANN. § 40-41-109 (West 2020).

<sup>80</sup> N.M. STAT. ANN. § 62-18-1 et seq. (West 2020).

<sup>81</sup> N.M. STAT. ANN. § 62-18-7(A) (West 2020).

<sup>82</sup> N.M. STAT. ANN. § 62-18-4(A) (West 2020).

<sup>83</sup> N.M. STAT. ANN. § 62-18-5(I) (West 2020).

financing order, if approved by the Commission, authorizes the utility to issue bonds that would eventually be paid off by utility customers in the form of a non-bypassable energy transition charge on a customer's utility bill.<sup>84</sup> By securitizing transition costs, including stranded debt on retired coal facilities, the ETA permits qualifying utilities move towards lower cost and renewable assets while protecting ratepayers from later increases.<sup>85</sup>

The Montana Energy Impact Assistance Act of 2019 revises utility laws to authorize the Montana Public Service Commission (MPSC) to issue ratepayer-backed bonds to refinance utility debt on coal-fired generation investments and make lower-cost energy investments.<sup>86</sup> Montana lawmakers have previously used securitization of “transition property” to address stranded costs associated with deregulation of its utility industry, as required by the state's 1997 Electric Utility Industry Restructuring and Customer Choice Act.<sup>87</sup> Like Colorado SB 19-236 and New Mexico's ETA, the Energy Impact Assistance Act authorizes securitized, ratepayer-backed bonds to lower long-term costs paid by the utility customers – both by refinancing the debt on retiring units and by financing investments in “modernized infrastructure and facilities and services, including least-cost electric generating facilities and other supply-side and demand-side resources.”<sup>88</sup> The Montana Energy Impact Assistance Act does not mandate any specific “least-cost generation resource” and instead defines the term as “an incremental supply-side or demand-side resource that when included in an electric utility's generation portfolio produces the lowest cost among alternative resources, considering both short-term and long-term costs and assessing the likelihood of changes in future fuel prices and the future environmental requirements.”<sup>89</sup>

Energy transition legislation may also provide public utility regulatory agencies with authority to consider community impacts as part of decisions regarding early requirements and whether to issue rate-payer backed energy transition financing. Both Colorado and New Mexico's energy legislation requires utilities proposing closures to consider and estimate local impacts – such as job training and worker displacement – among the costs of abandonment. For instance, in New Mexico, the application for a financing order must include, *inter alia*, an estimation of the transition costs, severance job training expenses for affected employees losing their jobs, and information relating to energy transition bonds.<sup>90</sup> The ETA also allows the New Mexico Public Regulation Commission (NMPRC) to consider local impacts to communities around potentially abandoned facilities as part of the decision to approve or deny early decommissioning. In Colorado, utilities proposing an accelerated retirement of an electric generating facility must submit a workforce transition plan identifying the number of employees affected by the closure and a community assistance plan.<sup>91</sup> The Colorado statute requires clean energy plans to consider payment of community assistance to local governments and school districts and authorizes rate recovery for such payments.<sup>92</sup> As a result, securitization policies may work in tandem with related, or separate, just transition policies designed to assist impacted communities and encourage workforce redevelopment.

---

<sup>84</sup> N.M. STAT. ANN. § 62-18-4 (West 2020).

<sup>85</sup> *Id.*

<sup>86</sup> MONT. CODE. ANN. § 90-3-1606 (West 2020).

<sup>87</sup> S.B. 390, 55th Leg., Reg. Sess. (Mont. 1997).

<sup>88</sup> *Id.*

<sup>89</sup> MONT. CODE. ANN. § 90-3-1602 (West 2020).

<sup>90</sup> N.M. STAT. ANN. § 62-18-4 (West 2020).

<sup>91</sup> COLO. REV. STAT § 40-2-125.5(3)(VII) (2004).

<sup>92</sup> *Id.*

### *Just Transition Policies – Workforce Redevelopment and Local Impact Support*

Colorado, New Mexico, and Montana have all enacted policies designed to address energy justice concerns and local impacts associated with the energy transition. These policies are designed to address issues related to “coal-impacted communities” in a number of ways, including requiring planning relative to community transitions, and establishing new funds and agencies to provide assistance to impacted communities. These just transition policies are by definition policies that *ease* the energy economy transition. Having accepted coal-plant closures as inevitable or desirable, these policies endeavor to provide communities with resources to help them adapt to the social, industrial, and economic transitions associated therewith.

In each state, energy transition policies have endeavored to provide funding and support to communities impacted by the energy transition. State definitions of coal-impacted communities vary slightly, however. For instance, New Mexico’s ETA makes funding available to “affected communities,” defined as a “New Mexico county located within one hundred miles of a New Mexico facility producing electricity that closes, resulting in at least forty displaced workers.”<sup>93</sup> Similarly, in Montana, recent legislation authorized new funding and expanded financial assistance programs through its Coal board. The legislation provides support to each “county, incorporated city or town, school district, or other government unit” impacted by coal development.<sup>94</sup> Colorado’s Just Transition Bill is the most expansive, including workers in mining, transportation, and the processing supply chain<sup>95</sup> as well as “coal transition communities” with industries undergoing significant economic transition and facing critical losses of tax base and revenue.<sup>96</sup> Colorado’s bill specifically seeks to redress impacts of coal-power pollution to “communities of color, low-to-middle income communit[ies], or indigenous communit[ies].”<sup>97</sup> Although the current bill focuses on coal transition communities, Colorado’s legislation requires its new energy transition agency to consider offering similar support to other transitioning industries.<sup>98</sup>

Of the states studied, Colorado’s Just Transition Bill is the most extensive in its provisions for planning and administration. It supports coal-impacted communities through establishment of a comprehensive information gathering and planning process to target resources and challenges associated with the energy justice impacts of Colorado’s transition to renewable energy.<sup>99</sup> Following approval of accelerated retirements, the Just Transition Bill requires utility workforce transition plans related to the accelerated retirements of the generating units.<sup>100</sup> Following approval of the accelerated retirement, and at least six months prior to the retirement, the utility is required to submit a workforce transition plan identifying the number of affected workers and their potential reemployment.<sup>101</sup> It also establishes a new transition office in the Department of Labor and Employment.<sup>102</sup> Together with an advisory committee, that office is charged with aligning resources and identifying and estimating impacts to coal-transition communities and reporting on and identifying options for benefits for coal transition workers, access to education and training

---

<sup>93</sup> N.M. STAT. ANN. § 62-18-16(L)(1) (West 2020).

<sup>94</sup> MONT. CODE. ANN. § 9-06-207 (West 2020).

<sup>95</sup> COLO. REV. STAT. ANN. § 8-83-501(1)(B)(II) (West 2020).

<sup>96</sup> COLO. REV. STAT. ANN. § 8-83-505 (West 2020).

<sup>97</sup> COLO. REV. STAT. ANN. § 8-83-503 (West 2020).

<sup>98</sup> COLO. REV. STAT. ANN. § 8-83-506 (West 2020).

<sup>99</sup> COLO. REV. STAT. ANN. § 8-83-501(1)(C)(1) (West 2020).

<sup>100</sup> COLO. REV. STAT. ANN. § 8-83-505(1) (West 2020).

<sup>101</sup> *Id.*

<sup>102</sup> *Id.*

programs for high-quality jobs, and grants for entities in coal transition communities who want to create “more diversified, equitable, and vibrant economic futures.”<sup>103</sup>

Energy transition legislation in Colorado, New Mexico and Montana also provide mechanisms to direct funding to impacted communities. While not making a direct appropriation, Colorado’s Just Transition Bill directs the Office of Energy Transition to align potential sources of funding and establishes a Just Transition Cash Fund for any money credited to the fund or transferred and appropriated from the general assembly.<sup>104</sup> New Mexico’s ETA creates three separate funds to assist with energy transition costs affecting communities and workers losing their jobs: the energy transition Indian affairs fund, the energy transition economic development assistance fund, and the energy transition displaced Worker Assistance Fund.<sup>105</sup> Finally, in Montana, recent legislation increases allocations to the Coal Board to address consequences of major declines in coal mining<sup>106</sup> and authorizes communities to plan for future coal-plant retirements and to set aside revenue from coal related activities to address impacts of closure.<sup>107</sup>

### **Resist: Economic Policies to Resist the Transition and Preserve Existing Markets**

Wyoming and Montana have each enacted legislation intended to defer or prevent early coal asset retirements in their states. These policies can be construed as policies that *resist* adaptation to the energy transition because they aim to maintain the existing industrial and economic composition. These laws are intended to provide utilities with new options to keep coal-fired generation assets operating, despite pressure to close them as a result of alternative generation options, multi-state resource planning, or out-of-state renewable portfolio standards.

In response to the anticipated retirement of two units of Montana’s Colstrip plant in 2022 and the expected acceleration of its remaining two units, the Montana legislature enacted HB 476.<sup>108</sup> HB 476 authorizes public financing to restructure ownership of the facility in order to prevent its closure.<sup>109</sup> Currently, half of units 1 and 2 of Colstrip are owned by Puget Sound Energy, which seeks to shutter the units in response to Washington State legislation requiring utilities in to remove coal from their portfolios.<sup>110</sup> HB 476 authorizes the board of investments to make loans from the Montana permanent coal tax trust to a public utility for purposes of improvements, acquisition of new coal interests or investments in transmission infrastructure.<sup>111</sup> This bill would position other co-owners of the Colstrip facilities, notably NorthWestern Energy, to buy out Puget Sound Energy from the facility or build a new infrastructure that would allow coal plants to import coal from alternate sources.<sup>112</sup> Seemingly in conflict with the Montana Energy Impact Assistance Act, which allows securitization of stranded investments and could encourage closure, HB 476 could provide lower cost capital to NorthWestern to allow Colstrip to continue to operate. Read together with Montana’s other energy transition legislation and modest renewable

---

<sup>103</sup> COLO. REV. STAT. ANN. § 8-83-503(c)(4) (West 2020); BILL TRACK, CO HB1314 Just Transition from Coal-Based Electrical Energy Economy (text quoted from “Bill Summary”), <https://www.billtrack50.com/BillDetail/1114411> (last visited Jan. 29, 2021, 4:25 PM).

<sup>104</sup> COLO. REV. STAT. § 8-83-504 (West 2020).

<sup>105</sup> N.M. STAT. ANN. § 62-18-16 (West 2020).

<sup>106</sup> MONT. CODE ANN. § 90-6-201 (West 2020).

<sup>107</sup> MONT. CODE ANN. § 7-6-622 (West 2020).

<sup>108</sup> MONT. CODE ANN. § 17-6-301 (West 2020).

<sup>109</sup> *Id.*

<sup>110</sup> MONT. CODE ANN. § 17-6-305 (West 2020).

<sup>111</sup> MONT. CODE ANN. § 17-6-302 (West 2020).

<sup>112</sup> MONT. CODE ANN. § 17-6-316(3) (West 2020).

portfolio standards, HB 476 aims to delay imminent coal-asset closures while protecting ratepayers and communities from broader impacts of the energy transition.

Montana’s energy transition response illustrates the principle that a state’s general response to the energy transition may overwhelmingly be categorized as one strategy, yet be comprised of multiple types of strategies. While HB 476 can be construed as a policy that *resists* the energy transition by attempting to preserve coal operations using state financing, collectively Montana’s policies reflect an adaptive strategy with a focus on *easing* transitions by gradually providing communities and utilities with tools to adapt to changing electricity markets.

Of the states studied, Wyoming’s energy transition policy is the clear outlier. For instance, Wyoming imposes requirements prior to early asset retirement in order to discourage closure of coal-assets within the state. It is also the only state that does not include opportunities for utility securitization<sup>113</sup> or community transition funding. Instead, in 2019 the Wyoming Legislature enacted legislation to forestall, or *resist*, the retirements of coal assets. This legislation requires the purchase of coal-generated electricity, encourages the sale and continued operation of facilities slated for retirement, and establishes additional procedural requirements as a precondition of Public Service Commission (PSC) approval of cost recovery for replacement generation.<sup>114</sup> To encourage sale, the law prohibits cost recovery on new generation designed to replace generation from coal-fired electric facilities, unless the utility first made a “good faith effort” to sell the facility.<sup>115</sup> In addition, SF 0159 encourages purchasers to acquire otherwise retiring coal assets by providing 100% rate recovery of purchase costs, regulatory exemptions, and by mandating purchase of the plant output by other utilities.<sup>116</sup> It requires a public utility to purchase coal-generated electricity from a plant that would have otherwise been retired, provided the coal-generated electricity is offered at a price that is equal or greater to the utility’s avoided cost, including the capacity value of maintaining dispatchable power on a power system increasingly dominated by intermittent renewable resources.<sup>117</sup>

In 2020, Wyoming enacted “reliable and dispatchable low-carbon energy standards,” becoming the first state to encourage retrofitting coal plants with CCUS technology and permitting rate recovery of investments in carbon capture.<sup>118</sup> HB 200 requires the PSC to establish energy portfolio standards to maximize use of “dispatchable and low-carbon electricity.”<sup>119</sup> The law defines dispatchable and low-carbon electricity as energy that “is available for use on demand,” “can have its output adjusted according to market needs,” and “is generated while using carbon capture, utilization, and storage technology.”<sup>120</sup> The law authorizes a utility to apply for rate recovery for new investments in carbon capture, utilization, and storage infrastructure.<sup>121</sup> It also builds on the rate recovery limitations enacted in SF 0159 by prohibiting recovery of costs or earnings on new facilities, built to replace retiring coal plants, unless the new facility can demonstrate it is working towards the newly enacted electricity generation standards.<sup>122</sup> In direct contrast to securitization laws enacted in other states that allow utilities to recover

---

<sup>113</sup> For a discussion of challenges to securitization in Wyoming, *see, infra* note 141 and accompanying text.

<sup>114</sup> WYO. STAT. ANN. § 37-2-11 (West 2020).

<sup>115</sup> WYO. STAT. ANN. § 37-2-117(a) (West 2020).

<sup>116</sup> WYO. STAT. ANN. § 37-2-115 (West 2020).

<sup>117</sup> *Id.*

<sup>118</sup> WYO. STAT. ANN. § 37-18-101-102 (West 2020).

<sup>119</sup> WYO. STAT. ANN. § 37-18-102(a) (West 2020).

<sup>120</sup> WYO. STAT. ANN. § 37-18-101(ii) (West 2020).

<sup>121</sup> WYO. STAT. ANN. § 37-18-102(c)(iii) (West 2020).

<sup>122</sup> WYO. STAT. ANN. § 37-18-102(d) (West 2020).



underappreciated investments in coal facilities, HB 200 could require utilities to make new investments in coal facilities and would assure that ratepayers were responsible for any costs of doing so. In combination, SF 0159 and HB 200 use rate-recovery limitations to discourage and delay coal asset retirements and construction of replacement generation, while encouraging utilities to make new investments in CCUS and other low-carbon coal-generating technologies.<sup>123</sup>

A review of state-based energy-transition policies in the Rocky Mountain Region reveals a spectrum of responses, ranging from strongly directive to fiercely resistant. Despite efforts to keep specific coal plants in Montana and New Mexico operational, legislation in Colorado, New Mexico, and Montana largely embrace the energy transition using policies that primarily *compel* or *ease* the transition. In these states, responses to early coal plant retirements focus on protecting ratepayers from the costs of stranded assets, shifting towards lower-cost generation, and addressing localized impacts to coal-dependent workforces and communities. In Colorado and New Mexico, energy transition policies are paired with ambitious zero-carbon energy standards to accelerate change towards renewable energy and coal plant retirements, complementing aggressive climate policy goals.<sup>124</sup>

In contrast, Wyoming's policies are aimed towards *resisting* the energy transition. Wyoming's response has been to pass legislation designed to forestall early retirements of coal generating units and to encourage utilities to continue using coal by implementing CCUS technologies. These efforts prohibit cost recovery in replacement generation unless the utility has first attempted to sell its coal-fired units and met the new standards for low-carbon retrofits. The state has provided very limited direct support to coal-impacted communities or requirements relative to workforce transition. These policies are collectively designed to delay and preempt retirements.

Contextualized, the spectrum of policies among the states directly corresponds with the rate of change and the magnitude of impact the energy transition poses to each state. Seen in this light, it becomes clear that Wyoming's resistance towards coal retirements and the energy transition is grounded in the relative recency of coal-retirement announcements, the possibility of continued low-carbon generation, and the importance of coal assets to Wyoming's overall economy. Rather than addressing individual retirements, Wyoming's policies are oriented towards protecting its revenue model by securing continued use of, and markets for, coal and providing support to remaining facilities where retirement is not yet assured.

## V. Understanding Energy-Transition Resistance in Wyoming

When compared with the other states along the eastern front of the Rocky Mountain Region, Wyoming's policy response to coal-asset retirements emerges as an outlier. Rather than enacting policies that fall into the *compel* and *ease* categories of our framework, as Colorado, Montana, and New Mexico have done to a varying degree, Wyoming has enacted policies that generally fall into the *resist* category of the framework. These policies include attempts to hamper coal-plant retirements and to secure an enduring market for coal generation through new markets or new technologies including CCUS. Despite emerging as an outlier, Wyoming's rationale for

---

<sup>123</sup> WYO. STAT. ANN. § 37-18-101(a)(iii) (West 2020). (Wyoming is one of the few states that includes carbon capture utilization in its definition for "low carbon.")

<sup>124</sup> OFFICE OF COLORADO GOVERNOR JARED POLIS, GREENHOUSE GAS POLLUTION REDUCTION ROADMAP, PUBLIC REVIEW DRAFT (Sept. 30, 2020); OFFICE OF THE GOVERNOR, MICHELLE LUJAN GRISHAM, PRESS RELEASES, GOVERNOR LUJAN GRISHAM SIGNS EXECUTIVE ORDER COMMITTING NEW MEXICO TO ESSENTIAL CLIMATE CHANGE ACTION, (Jan. 29, 2019), <https://www.governor.state.nm.us/2019/01/29/gov-lujan-grisham-signs-executive-order-committing-new-mexico-to-essential-climate-change-action/>.

resistance is obvious— Wyoming’s statewide economy and state budget are wedded to mineral extraction. Early coal-plant retirements in Wyoming, paired with a reduction in out-of-state purchases of Wyoming’s coal and coal-generated electricity have reduced demand, resulting in rapid contraction of the coal-economy. This reduction in demand causes an irreplaceable decline in Wyoming’s state budget revenues. This is a financial position not shared by Colorado, Montana, or New Mexico.

Although all states studied in this essay have coal-mining operations, Wyoming’s are significantly greater as is its economic dependence on those operations. Since 1985, Wyoming has been the largest producer of coal in the United States, and in 2019 Wyoming produced almost 40% of the nation’s coal output.<sup>125</sup> In 2019, Wyoming produced approximately 277 million short tons of coal.<sup>126</sup> In the same year, 13.4 million, 14.5 million, and 34.5 million short tons were produced in Colorado, New Mexico, and Montana, respectively.<sup>127</sup> As the smallest state in the United States by population and the second smallest by size of economic output, Wyoming’s prolific coal-production statistics illustrate the significance of coal to Wyoming’s economy.<sup>128</sup> In 2019, coal mining directly contributed 5,404 jobs in Wyoming, and power plants another 1,197; combined the coal industry accounted for 2.3% of all jobs in the state.<sup>129</sup> The percentage of coal industry jobs in Wyoming is over seven times that of Montana, the state with the second largest share.<sup>130</sup>

Wyoming’s dependence on coal is not just seen in the share of its private economic activity, but also in its state revenue dependence. A substantial share of Wyoming’s state revenue is produced through coal mining and generation, sales of electricity and coal, and related activities. Of coal mining and generation, coal mining contributes the largest share of coal revenues through federal coal leasing payments, federal mineral royalties, state mining severance and valorem taxes, sales and use taxes, abandoned mine lands distributions, and state rents and royalties.<sup>131</sup> A 2015 report found that Wyoming’s coal economy it was the most stable source of tax revenue since the 1970’s, making up an average of 11.2% of total state revenue at the time.<sup>132</sup> In 2016, coal mining alone accounted for over \$1 billion in revenues in Wyoming, compared to \$109 million in

---

<sup>125</sup> U.S. ENERGY INFO. ADMIN., WYOMING STATE PROFILE AND ENERGY ESTIMATES (February 3, 2021) <https://www.eia.gov/state/analysis.php?sid=WY>

<sup>126</sup> U.S. ENERGY INFO. ADMIN., ANNUAL COAL REPORT (Oct. 5, 2020), [https://www.eia.gov/coal/annual/#:~:text=The%20Annual%20Coal%20Report%20\(ACR,and%20previous%20years%20are%20final.](https://www.eia.gov/coal/annual/#:~:text=The%20Annual%20Coal%20Report%20(ACR,and%20previous%20years%20are%20final.)

<sup>127</sup> *Id.*

<sup>128</sup> In all four states, coal mining accounts for the majority of non-oil and gas mining activity. All mining (excluding oil and gas) constituted over 10% of Wyoming GDP in 2019, while the shares in Colorado, Montana and New Mexico are 0.4%, 3.7% and 1.4%, *see*, U.S. BUREAU OF ECONOMIC ANALYSIS, GDP BY STATE (Dec. 23, 2020), <https://www.bea.gov/data/gdp/gdp-state>.

<sup>129</sup> Coal mining employment data comes from the Mining Safety and Health Administration Database Mine Data Retrieval System using average annual employment by mine in each state for 2019, *see*, UNITED STATES DEPARTMENT OF LABOR, MINE DATA RETRIEVAL SYSTEM, <https://www.msha.gov/mine-data-retrieval-system>, (last accessed February 4, 2021); Power plant employment is not generally public information, but numbers were estimated using state, company and press reports. Calculations on file with author.

<sup>130</sup> *Id.* In Montana, mining accounted for 1301 jobs in 2019, and power plants an additional 346, accounting for 0.32% of that state’s employment. Colorado mining employed 1285 and plants 880 (0.1% of state employment) and there were 927 mining and 708 power plant jobs (totaling 0.2% of total employment) in New Mexico in 2019.

<sup>131</sup> *See* WYOMING STATE GOVERNMENT REVENUE FORECAST, WYOMING CONSENSUS REVENUE ESTIMATING GROUP, (January, 2021).

<sup>132</sup> ROBERT GODBY, ET AL., THE IMPACT OF THE COAL ECONOMY ON WYOMING, CENTER FOR ENERGY ECONOMIC AND PUBLIC POLICY (February 2015).

Montana, \$236.9 million in Colorado, and \$13.6 million in New Mexico, all states with larger (sometimes much larger in the case of Colorado) public budgets.<sup>133</sup>

The decline of the coal economy has significant and holistic impacts on budgets throughout Wyoming that cannot be easily replaced. The reason for this is the state revenue model, under which revenue from mineral extraction makes up a significant portion of the state's budget. For example, in 2017, mineral extraction revenue accounted for over 52% of the state's general budget.<sup>134</sup> Over the past two decades coal has been responsible for approximately one third of these revenues, with the rest coming from oil and natural gas.<sup>135</sup> This has allowed the average family of three in the state to consume an estimated seven times the value in public services that it pays for in taxes.<sup>136</sup> This revenue dependence, however, also creates a political dilemma—to accept the energy transition will require Wyoming lawmakers to find alternative sources of revenue, a reality that likely means raising taxes or cutting public services to balance the state's budget. Wyoming's decision to depend on energy-commodity taxes has created an “economic and political ‘mineral[-]tax trap’ wherein a political culture has developed around protecting the self-interest of low taxes and the status quo.”<sup>137</sup> In fact it creates two problems— identifying new economic development to replace the lost private sector activity coal mining and creating and raising taxes or cutting public spending. Unlike states that can target localized impacts to counties and cities where retiring coal generation facilities are located, the decline of the coal-economy has significant and holistic impacts on budgets statewide, impacts that cannot be replaced solely by jobs in other sectors. The importance of the coal industry to Wyoming's economy cannot be understated and this alone likely provides motivation to adopt policies resistive to the energy transition away from coal.

Wyoming's comparative lack of policies addressing short term and local impacts may also be tied to the recency of announced retirements and small share of total generation scheduled for decline. The first specific proposal to close a modern coal plant ahead of its scheduled retirement date in Wyoming occurred in 2019 and still have not been approved by regulatory authorities.<sup>138</sup> Moreover, at the time of Wyoming's legislative actions in 2019 and 2020,<sup>139</sup> the share of total

---

<sup>133</sup> *C.f.*, VIRGINIA T. MCLEMORE, ECONOMIC IMPACT OF THE MINERAL INDUSTRY IN NEW MEXICO, NEW MEXICO BUREAU OF GEOLOGY & MINERAL RESOURCES (January 16, 2019) <https://geoinfo.nmt.edu/resources/minerals/impact.html>; WYOMING MINING ASSOCIATION, *WYOMING COAL SEPTEMBER 2018 CONCISE GUIDE* (September 2018); MARK HAGGERTY, , THE IMPACT OF FEDERAL COAL ROYALTY REFORM ON PRICES, PRODUCTION, AND STATE REVENUE, HEADWATERS ECONOMICS (May 2015); SONJA NOWAKOWSKI, SENATE JOINT RESOLUTION 5: COAL IN MONTANA; FISCAL IMPACTS, ENVIRONMENTAL QUALITY COUNCIL, (January 17, 2018).

<sup>134</sup> Michael Madden, *Take a Closer Look at Wyoming's Unsustainable Revenue Structure*, WYOMING TAXPAYERS ASSOC. (2018), (unpublished manuscript) (on file with author); Michael Madden, *The Costly Lessons of Wyoming's Limited Revenue Diversity*, WYOFIELD, (Dec. 8, 2020), <https://www.wyofile.com/the-costly-lessons-of-wyomings-limited-revenue-diversity/>.

<sup>135</sup> Wyoming State government Revenue Forecast, *supra* note 131, at Appendix Table 4.

<sup>136</sup> WYOMING TAXPAYERS ASSOC, DIRECT TAX COLLECTIONS & PUBLIC SERVICE COSTS, (Dec. 2, 2020).

<sup>137</sup> Rob Godby, et al., *The Overlooked Importance of Federal Public Land Fiscal Policy* in People and Public Lands Forum, HEADWATERS ECONOMICS (May 2019).

<sup>138</sup> *Integrated Resource Plan*, PACIFICORP(October 2019) (recommending early retirement of generators at the Naughton plant Units 1 and 2, and early retirement of Bridger Units 1 and 2.)

<sup>139</sup> After the most recent Wyoming legislation was passed in March 2020 affecting future coal retirements, in December of 2020 Tri-State Generation and Transmission Association announced it was considering closure of Laramie River Station Unit 3 if it can come to an agreement with the other owners of the plant., *see*, Camille Erickson, *The owner of Wyoming coal power plant in weighing whether to close it in 2033*, CASPER STAR TRIBUNE

generation slated for early retirement, approximately 24%,<sup>140</sup> was far lower than in the other states considered here. Comparatively, 100% of coal-fired generation is currently planned for retirement by 2030 in New Mexico and Montana, and over 70% of coal generation in Colorado is expected to retire by 2032. In contrast to these states, as of today, there is still a future for coal-generation in Wyoming. Wyoming’s policy choices to support continuing operation of its existing assets is pragmatic and not entirely anomalous. Both Montana and New Mexico have similarly evaluated options to continue operation of units that are closely tied to mining operations— the San Juan mine near the San Juan Generating Station in New Mexico and the Rosebud mine near Colstrip.

In addition to the market pressures created by declining market demand, Wyoming’s ability to effectively enact policies that drive the energy transition towards favorable ends may also be hampered by the interstate nature of Wyoming’s electricity and coal markets. Most power generation in the state is operated by multi-state utilities where affected infrastructure is paid for by ratepayers across multiple states. For instance, several of the coal plants which may benefit from securitization in Wyoming are owned by PacifiCorp, which serves six states through two subsidiary utilities, Rocky Mountain Power and Pacific Power.<sup>141</sup> Accordingly, enactment of policies like securitization would require parallel state enabling legislation, requiring coordination of specific financial market expertise and harmonization of differing, and at times inapposite, policies related to decarbonization and climate. Moreover, Wyoming may have little reach to defer coal-plant retirements in other states that rely on its coal exports, thus limiting the impact of state wide policies like HB200 and SF0159 to counteract coal market declines. Wyoming’s policies endeavor to forestall retirements and to secure an enduring market for coal generation within the state.

In response to the economy-wide impacts of the energy transition in Wyoming, the state has also attempted to find alternative markets for its coal resources,<sup>142</sup> including overseas markets. Towards that effort, Wyoming has supported the development of new coal export terminals along the West Coast, an effort which has been thwarted by objections from the State of Washington. Recently, Wyoming and Montana have asked the United States Supreme Court to hear a challenge objecting to Washington State’s denial of water quality permit applications needed to move forward with the construction of a proposed coal terminal in Longview, Washington.<sup>143</sup> Consistent with these efforts, Wyoming has also supported coal exports via ports in Mexico and Canada.

---

(Dec. 16, 2020) available at: [https://trib.com/news/state-and-regional/the-owner-of-a-wyoming-coal-power-plant-is-weighing-whether-to-close-it-in/article\\_f54a9fd4-16ad-574c-bff2-d0a319de967c.html](https://trib.com/news/state-and-regional/the-owner-of-a-wyoming-coal-power-plant-is-weighing-whether-to-close-it-in/article_f54a9fd4-16ad-574c-bff2-d0a319de967c.html).

<sup>140</sup> Calculations on file with author.

<sup>141</sup> PACIFICORP (select “About” page) (last visited Feb. 1, 2021), <https://www.pacificorp.com/about.html>.

<sup>142</sup> U.S. ENERGY INFORMATION ADMINISTRATION, RANKINGS: COAL PRODUCTION, 2019 (THOUSAND SHORT TONS) (2018), <https://www.eia.gov/state/rankings/?sid=US#/series/48>. (Wyoming ranks first in coal production among the states.)

<sup>143</sup> *Montana & Wyoming v. Washington*, 141 S. Ct. 229, 208 L. Ed. 2d 11 (2020). On January 21, 2020, Wyoming and Montana filed their Motion for Leave to file a bill of complaint. After a few extension requests, the National Mining Association and The National Association of Manufacturers filed an amicus curiae brief, as did Kentucky et al. Following this, Washington filed its Brief In Opposition on June 8, 2020 and Wyoming and Montana filed their Reply on June 22, 2020. Most recently, the Trump administration Acting Solicitor General was invited to file a brief expressing the views of the United States, however he failed to do so prior to the leaving office. The petition is still “pending.” See *Montana & Wyoming v. Washington*, SCOTUS BLOG (Jan, 12, 2021), <https://www.scotusblog.com/case-files/cases/montana-and-wyoming-v-washington/> (select the docket number link to see the proceedings, PDFs of filings, and orders).

During the 2020 legislative session, Wyoming passed HB 231 which provides a 3% tax exemption to coal producers who export Wyoming coal via ports in either Mexico or Canada.<sup>144</sup>

Wyoming has also engaged in efforts to prevent the closure of coal plants in other states that utilize Wyoming coal. During the 2020 session, Wyoming passed HB 004 which creates a Wyoming coal marketing program.<sup>145</sup> It provides the Governor with a \$1 million dollar budget to protect and expand Wyoming's coal markets.<sup>146</sup> The fund can also be used for "projects with a public benefit that address impacts cities, towns, and counties have experienced or will experience due to changes in the coal market."<sup>147</sup> Wyoming has directed some of this funding (as well as previous state funds) to the Energy Policy Network, a non-profit lobbying group that actively campaigns against the closure of coal-plants that burn Wyoming coal in other states.<sup>148</sup> Wyoming Governor Mark Gordon has justified the expenditures as an effort to extend the life of coal, which he stated is "a wise investment for Wyoming, [a] wise investment for the globe."<sup>149</sup>

However pragmatic, considering its revenue profile and economic dominance, Wyoming's myopic focus on preserving markets for coal carries an opportunity cost—pursuing *resisting* policies to the exclusion of *easing* or *compelling* policies to support energy communities and plan for economic diversification may further entrench Wyoming's revenue challenges.<sup>150</sup> Thus, Wyoming presently has an opportunity to concurrently address negative impacts to workers and communities *and* make investments to attract new industries. Wyoming can look to the policies deployed by its neighbors which provide direct funding and support to communities and workers impacted by the energy transition. Wyoming has not yet assessed the magnitude of its impacts of coal-plant closures and declining coal exports on communities and workers. Although HB 0004 takes a small step in this direction, with the possibility of some of its \$1 million dollar appropriation going towards community impacts, significant additional resources are needed. Additionally, Wyoming must begin to take seriously the need for economic and revenue diversification. The state has taken steps to encourage new industries around the use of coal and CO<sub>2</sub>, including carbon capture and advanced coal technologies,<sup>151</sup> and enacted legislation supporting workforce training in new industries.<sup>152</sup> Wyoming can look to the policies deployed by its neighbors, particularly New Mexico and Colorado, which provide significantly more direct funding and support to communities and workers impacted by the energy transition.

State policies alone, however, may be insufficient to address the impacts of the energy transition on coal-revenue dependent states and communities. Although Wyoming may be uniquely vulnerable to impacts of the energy transition due to its revenue model and resource-based economy, it is emblematic of challenges faced by similarly situated states. For instance, coal producing states West Virginia and Arizona face similar challenges, prompting lawmakers from

---

<sup>144</sup> H.B. 0231, 65th Leg., Budget Sess. (Wyo. 2020).

<sup>145</sup> H.B. 0004, 65th Leg., Budget Sess. (Wyo. 2020).

<sup>146</sup> *Id.*

<sup>147</sup> *Id.*

<sup>148</sup> Andrew Graham & Cooper McKim, *Wyoming's 'Dark Money' Coal Campaign*, WyoFile (Oct. 2, 2020), <https://www.wyofile.com/wyomings-dark-money-coal-campaign/>.

<sup>149</sup> *Id.*

<sup>150</sup> Robert Godby, Roger Coupal, Mark Haggerty, HEADWATERS ECONOMICS, *The Overlooked Importance of Federal Public Land Fiscal Policy* (May 2019) available at: <https://headwaterseconomics.org/public-lands/papl-godby/>

<sup>151</sup> Sarah Young, *Wyoming Integrated Test Center Fostering New-Generation Technology for Today's Energy Resources*, 4 CLEAN ENERGY 1, 85-87 (2020).

<sup>152</sup> STATE OF WYOMING LEGISLATURE, REP. ALBERT SOMMERS, WY LEGISLATURE APPROVES ENDOW BILLS TO DIVERSIFY STATE'S ECONOMY (Mar. 10, 2018).

those states, respectively, to resist the Clean Power Plan<sup>153</sup> and Paris Agreement<sup>154</sup> and, more recently, attempt to roll back state-level renewable portfolio standards.<sup>155</sup> In states with fossil-based economies, lawmakers have taken action to preempt local governments from banning new gas infrastructure.<sup>156</sup> Even in New Mexico, which has progressive policies compelling the energy transition away from fossil sources and has actively sought to diversify its economy, officials have expressed opposition to and concern over President Biden's leasing moratorium and proposals to change permitting, regulation, and leasing practices on public lands.<sup>157</sup>

Foremost, addressing lost revenues and developing new industries is expensive. Even in Colorado, which already boasts a diverse economy and derives a small fraction of its revenue from coal generation and extraction, the Office of Just Transition estimates the cost for adequately aiding the eleven counties in the state anticipated to be impacted by coal declines will be at least \$100 million.<sup>158</sup> Such costs are far more than local communities can shoulder and, given the current state of affairs with state budgets,<sup>159</sup> more than most affected states can afford. States dependent on coal-revenue may be even less equipped to respond. For fossil-dependent states, *resistance* emerges as a rational response to an insurmountable challenge because these states lack resources to make the substantial investments required for economic diversification and development or to support workers and communities in transition.

This suggests a need for federal resources to address the problem. Until recently, a federal energy-transition strategy and related policies have been slow to develop. The limited federal resources that have been made available are often use-restricted, lacking flexibility and opportunity for affected workers and communities.<sup>160</sup> Funding directed toward the coal industry is also unlikely to provide the long-term transition support needed. For instance, President-Obama's

---

<sup>153</sup> Joe Manchin Newsroom, *Manchin Testifies at EPA Hearing on Existing Source Rule*, (July 30, 2014), <https://www.manchin.senate.gov/newsroom/press-releases/manchin-testifies-at-epa-hearing-on-existing-source-rule>.

<sup>154</sup> Joe Manchin Newsroom, *Manchin Statement on President's Decision to Leave the Paris Climate Agreement* (June 1, 2017), <https://www.manchin.senate.gov/newsroom/press-releases/manchin-statement-on-presidents-decision-to-leave-the-paris-climate-agreement>

<sup>155</sup> Bob Christie, *Arizona Renewable Energy Standards Targeted by GOP Lawmakers*, ASSOCIATED PRESS, (January 19, 2021) available at: <https://apnews.com/article/state-courts-legislature-electric-utilities-arizona-utilities-2c8b55d120ddc5361bac3f43f698137d>.

<sup>156</sup> LA. REV. STAT. 40:1730.21.1 (2020); SB1934, 111<sup>th</sup> Gen. Assembly (TENN. 2020), HB 3619, 2020 Reg. Sess. (OKLA. 2020), HB 2686, 54<sup>th</sup> Leg, Second Sess., (ARIZ. 2020); Jeffrey Tomich, *Gas ban backlash spreads across the U.S.*, E&E NEWS, ENERGY TRANSITIONS, (February 2, 2021) <https://www.eenews.net/stories/1063724065> (noting proposed legislation prohibiting municipal gas bans in Kansas, Missouri, Indiana, Georgia, Florida, and other states).

<sup>157</sup> David Blackmon, *New Mexico Officials Taken Aback by Biden Assault on Oil and Gas*, FORBES, (Jan. 24, 2021) <https://www.forbes.com/sites/davidblackmon/2021/01/24/new-mexico-officials-taken-aback-by-biden-assault-on-oil-and-gas/?sh=53f4c1f83db7>; Representative Yvette Herrell, *Letter to Governor Michelle Lujan Gisham* (Jan. 25, 2021), <https://herrell.house.gov/sites/evo-subsites/herrell.house.gov/files/evo-media-document/012521%20Letter%20to%20MLG.pdf>.

<sup>158</sup> COLORADO DEPARTMENT OF LABOR AND EMPLOYMENT, COLORADO JUST TRANSITION ACTION PLAN 3 (Dec. 31, 2020).

<sup>159</sup> NATIONAL CONFERENCE OF STATE LEGISLATURES, *Coronavirus (COVID-19): Revised State Revenue Projections* (January 18, 2021), <https://www.ncsl.org/research/fiscal-policy/coronavirus-covid-19-state-budget-updates-and-revenue-projections637208306.aspx>.

<sup>160</sup> See, .e.g., Jeffrey Selingo, *The False Promises of Worker Retraining*, THE ATLANTIC, (Jan. 8, 2018), <https://www.theatlantic.com/education/archive/2018/01/the-false-promises-of-worker-retraining/549398>; DELTA INSTITUTE AND JUST TRANSITION FUND, *Coal in the United States: Policy Responses to an Industry In Decline* (March 2018); Daniel Raimi, et al, *Federal Economic Development Support for Coal Communities: A Case Study of the Athens, Ohio Region*, RESOURCES FOR THE FUTURE, (February, 2021).

Clean Power Plan initially included \$2 billion in tax credits, a much greater amount than was designated for workforce development, to support carbon capture retrofits on power plants.<sup>161</sup> While this would have provided a subsidy to coal producers and may have slowed declines in production temporarily, it neither promoted state and local transitions to other economic activities and revenue sources nor replaced previously lost employment opportunities.<sup>162</sup> Federal policy makers have an opportunity with newly proposed decarbonization and economic development policies to support state energy transitions, including state-wide economic and industrial transitions.

In the first week of his administration, President Biden released an executive order on climate that proposes efforts to “empower workers through revitalizing energy communities.”<sup>163</sup> The order establishes an Interagency Working Group on Coal and Power Plant Communities and Economic Revitalization to explore brownfield development opportunities at retired coal plants and to “coordinate the identification and delivery of Federal resources to revitalize the economies of coal, oil and gas, and power plant communities.”<sup>164</sup> These policies should focus not only on cities and counties with coal and other fossil generation, but also on the larger impacts related to the Biden Administration’s efforts to overhaul fossil leasing and permitting practices on public land. Rather than exclude states that have historically benefited from federal public land policy, Federal efforts to decarbonize and invest in green energy should prioritize the people and places most vulnerable to impacts of the energy transition. It remains to be seen how the Interagency Working Group implements its charge to “assess opportunities to ensure benefits and protections for coal and power plant workers” by “seek[ing] the views of State, local and Tribal officials . . . who may have perspectives on the mission of the Interagency Working Group.”<sup>165</sup> As the Federal government furthers momentum in the energy transition, states with fossil-based economies like Wyoming should strive to actively inform Federal goals and policies and to coordinate state and federal efforts and resources.

Federal investments in economic development and diversification can address the drivers of energy-transition resistance. States and communities that depend on high-carbon industries are justifiably concerned about bearing an undue share of the cost of the industrial transitions contemplated by decarbonization policies.<sup>166</sup> As one scholar as notes, “[t]he effect that a lack of transition planning may cause . . . worryingly resembles the steel mill closures and deindustrialization of the 1970s and early 1980s, which devastated communities that continue to struggle to recover.”<sup>167</sup> Federal investments in the people and places most impacted by the energy transition may help overcome opposition to climate reform including the longstanding “jobs-

---

<sup>161</sup> THE CONVERSATION, *How Should the US Government Help Coal Communities?* (Feb. 15, 2016), <https://theconversation.com/how-should-the-u-s-government-help-coal-communities-53475>.

<sup>162</sup> *Id.*

<sup>163</sup> Exec. Order No. 14008, *supra* note 17.

<sup>164</sup> *Id.*

<sup>165</sup> *Id.*, at Sec 218.

<sup>166</sup> Eisenberg, *supra* note 25, at 275-276. The Energy Transition movement has roots in the global labor market and has been endorsed by the International Labour Organization and the United National Environmental Program as well as being a policy objective in the Paris Agreement. (See, David J. Doorey, *Just Transitions Law: Putting Labour Law to Work on Climate Change*, 30 J. ENVTL. L. & PRAC. 201, 206 (2017).

<sup>167</sup> Rosenfeld, *supra* note 30, at 71; See also Lisa Hamilton et al., *Transition Support Mechanisms for Communities Facing Full or Partial Coal Power Plant Retirement in New York*, PACE ENERGY & CLIMATE CTR., Transition Support 1, 6 (2017) (Noting that the challenges NY faces in addressing the fiscal challenges of retiring electric generation units “are not unlike the challenges faced by communities, legislators, and plant owners during the periods of deindustrialization of the late 1960’s through 1980’s.”).

verses-environment” tensions that persist.<sup>168</sup> Moreover, investments in natural amenities, cleanup, and basic infrastructure may both promote economic recovery, replace funding for public services currently supported by coal revenues, and immediately improve the quality of life in impacted communities.<sup>169</sup>

### **Conclusion:**

Although the policy responses between states such as Colorado and Wyoming stand in stark opposition, the goals are largely the same. Energy transition policies reflect legislative efforts to minimize the short-term impacts and long-term costs associated with a shift away from coal resources. Energy-transition policies are, thus, designed to address the distributive and justice concerns associated with early retirements and the transition away from the coal economy. Whereas in Colorado, New Mexico, and Montana the key stakeholders are utility ratepayers, mine and plant employees, and the “frontline communities” in which mines and generation resources are located, revenue impacts in Wyoming are holistic and statewide. Understanding the underlying drivers of energy transition resistance in Wyoming provides insight to climate-driven energy-policy resistance in states dependent on fossil-derived revenue.<sup>170</sup> Although this article focuses on declines in the coal economy and early coal generation retirements, parallel concerns underlie resistance to other energy-transition efforts including potential changes to oil and gas development on public land.

States with ongoing coal-generation are likely to support and, at times, attempt to extend the operation of such facilities and related economic activities where doing so is not in direct conflict with other priorities. Thoughtful policy responses can address the underlying sources of energy-transition resistance. Concurrently, state policy efforts can address local community and workforce impacts and encourage economic diversification and industrial transition. Finally, federal energy-transition efforts, including climate and economic-recovery spending, should provide support to state efforts related to the energy transition by considering immediate job losses and declining revenue precipitated by declining fossil production on federal land. By coordinating investments and other efforts, policymakers can remove sources of resistance to climate and energy transition policy while encouraging growth in the new energy economy.

---

<sup>168</sup> Eisenberg, *supra* note 25, at 276.

<sup>169</sup> THE CONVERSATION, *supra* note 165.

<sup>170</sup> James Bruggers, *supra* note 160.