



COMMUNITIES IN TRANSITION: STATE RESPONSES TO ENERGY-SECTOR JOB LOSSES

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The United States energy industry is changing at an unprecedented rate. The declining use of coal as the nation’s primary resource for electricity generation is well documented¹— as are the rising fortunes of natural gas and renewable resources.² This large-scale transition has extensive benefits, including reducing both environmental impacts and regional health effects.³ However, there are also economic consequences to these transitions, particularly for communities with economies linked to the use of coal. States are now acting in many different ways to address their changing energy sectors—including introducing policies that help the communities most effected by shifts within the energy industry.

Energy is now regulated in many ways and at different levels.⁴ These choices raise different

¹ See, e.g., *Annual Coal Report*, U.S. EIA (Oct. 3, 2019), <https://www.eia.gov/coal/annual/>.

² See generally U.S. DEP’T OF ENERGY, U.S. ENERGY INFO. ADMIN., *ANN. ENERGY OUTLOOK 2019 WITH PROJECTIONS TO 2050* (2019), available at <https://www.eia.gov/outlooks/aeo/pdf/aeo2019.pdf>.

³ See Eric Amster & Clara Lew Levy, *Impact of Coal-fired Power Plant Emissions on Children’s Health: A Systematic Review of the Epidemiological Literature*, 16 INT. J. ENVTL. RES. & PUB. HEALTH 2008 (2019), available at <https://www.mdpi.com/1660-4601/16/11/2008#>; Brian Strasert, *et al.*, *Air quality and health benefits from potential coal power plant closures in Texas*, 69 J. AIR & WASTE MGMT. ASSOC. 333 (2019), available at <https://www.ncbi.nlm.nih.gov/pubmed/30339492>.

⁴ See William Boyd & Ann E. Carlson, *Accidents of Federalism: Ratemaking and Policy Innovation in Public Utility Law*, 63 UCLA L. REV. 810, 835-39 (2016), available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2783894 (detailing three models of electricity regulation in the U.S. and labeling them as the traditional model, restructured model, and hybrid model). “[T]he United States has a byzantine bureaucratic structure for governing electric energy. It involves federal, regional, state, and local oversight of for-profit, not-for-profit, and cooperatively owned ventures that manage the production, generation, transmission, transportation, and distribution of electricity.” Shelley Welton, *Grasping for Energy Democracy*, 116 MICH. L. REV.

challenges while also offering varying policy solutions.⁵ Energy policies historically incentivized decades-long investments to serve the energy needs of all Americans.⁶ Bankruptcies and funding shortfalls exacerbate this problem.⁷ Idling regulations allow companies to temporarily close facilities, sometimes for decades, leaving workers and environmental remediation efforts in limbo.⁸ Now rapidly changing economics may deplete regional tax bases, leaving local governments with little choice but to drastically cut services such as education and public transportation.⁹

These developments in energy policy may help to provide a path forward for affected communities. Some states are implementing legislative and regulatory solutions to help develop new industries to transition to a healthy future, while others are examining strategies to preserve existing jobs.

The focus of this paper is on the policy mechanisms themselves, noting different ways states are acting to address job losses and economic development in communities impacted by the ongoing energy transition. The paper briefly discusses the changing energy industry before examining state-specific policies currently being implemented.

581, 594 (2018), available at http://michiganlawreview.org/wp-content/uploads/2018/02/116MichLRev581_Welton.pdf.

⁵ “Recent developments are causing policymakers to once again consider the balance between competitive markets, monopolies, and financial support for certain facilities. Some states that embraced competitive markets are now grappling with whether, and how, to control the downsides of competition...States with monopoly utilities face a different set of questions. Rather than focusing on mitigating the downsides of competition, some traditionally regulated states are now exploring mechanisms to realize the benefits of competition while also preserving the cost-of-service model.” Jonas Monast, *Electricity Competition and the Public Good: Rethinking Markets and Monopolies*, 90 COLO. L. REV. 667, 669-71 (2019), available at http://lawreview.colorado.edu/wp-content/uploads/2019/04/7.-Monast_.pdf.

⁶ “[F]ossil fuel-dependent communities were not born in a vacuum. They were created.” Ann M. Eisenberg, *Just Transitions*, 92 S. CAL. L. REV. 273, 300 (2019), available at <https://southern.california.lawreview.com/2019/01/04/just-transitions-article-by-ann-m-eisenberg/>.

⁷ For instance, the Black Lung Disability Trust Fund is more than \$4 billion dollars in debt. Howard Berkes and Huo Jingnan, *Coal Miners To Demand Congress Restore Full Black Lung Benefits Tax*, FRONTLINE/NPR (July 23, 2019), <https://www.pbs.org/wgbh/frontline/article/coal-miners-to-demand-congress-restore-full-black-lung-benefits-tax/>.

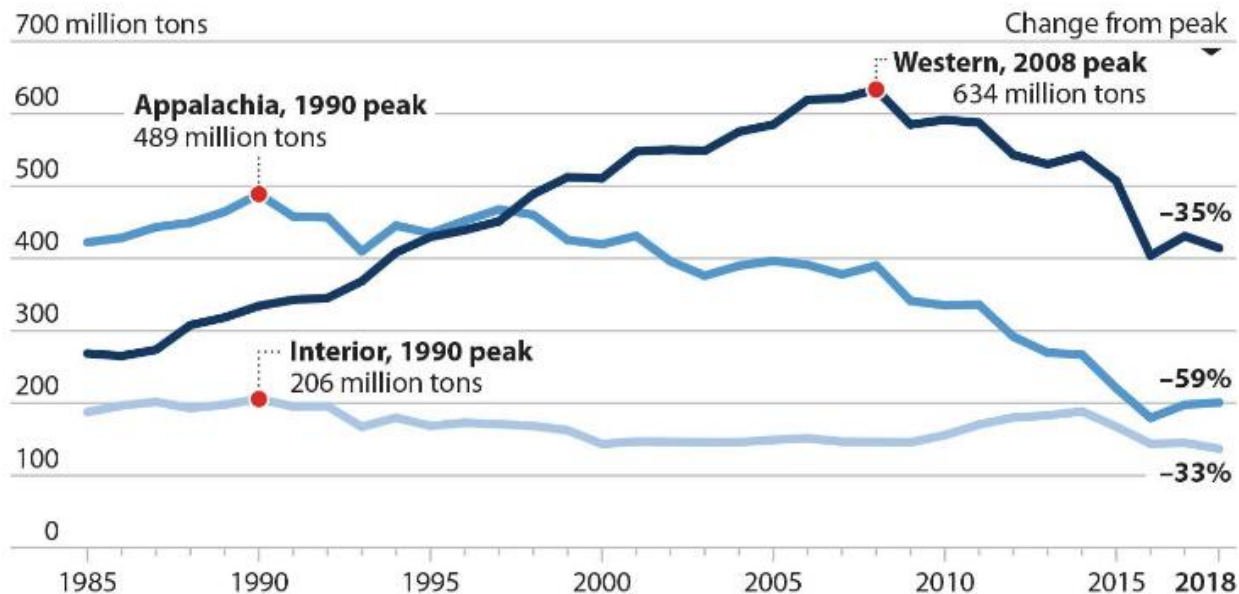
⁸ “Coal mines and the plants serving them that have been idled for at least three years had 85 percent fewer full-time employees after switching into idle status than they did a year before....Management often promises that jobs will quickly return, miners say, encouraging workers to stay in towns with few other prospects....As the industry shrinks, long-term idling can be used as a stepping stone to forfeiture, passing [environmental] cleanup responsibilities to the government and taxpayers.” Mark Olalde and Hoe Yerardi, *While ‘zombie’ mines idle, cleanup and workers suffer in limbo*, CENTER FOR PUB. INTEGRITY (Sept. 4, 2019), <https://publicintegrity.org/environment/while-zombie-mines-idle-cleanup-and-workers-suffer-in-limbo/>.

⁹ See *Replacing Coal Revenue and Investing in Economic Transition: Solutions for Coal-Dependent Communities*, HEADWATERS ECON. (Sept. 2019), available at https://headwaterseconomics.org/wp-content/uploads/HE_Coal_Transition_Solutions_2019.pdf; Julia H. Haggerty, et al., *Planning for the local impacts of coal facility closure: Emerging strategies in the U.S. West*, 57 RESOURCES POLICY 69 (2018), available at <https://par.nsf.gov/servlets/purl/10057131>; see also Brady Dennis & Steven Mufson, *In small towns across the nation, the death of a coal plant leaves an unmistakable void*, WASH. POST (Mar. 28, 2019), https://www.washingtonpost.com/national/health-science/thats-what-happens-when-a-big-plant-shuts-down-in-a-small-town/2019/03/28/57d62700-4a57-11e9-9663-00ac73f49662_story.html.

A Period of Rapid Change

Figure 1: Regional U.S. Coal Production, 1985-2018¹⁰

Coal production has fallen significantly in all three major coal mining regions. Since their peak production years, output is down by more than 33 percent in the West and the Interior, and down 59 percent in Appalachia.



The U.S. energy sector is undergoing a period of rapid, widespread change.¹¹ While declining technological costs continue to make wind and solar generation increasingly competitive,¹² the U.S. saw significant increases in petroleum and natural gas production in 2018—mostly due to advances in technologies used to access resources trapped in shale.¹³ Unlike when coal dominated power generation in the U.S., there are now many technologies competing to be part of energy generation portfolios, each with many different factors impacting cost effectiveness. Taken as a whole, this explains why the current energy sector is both more volatile and less predictable than in previous decades.¹⁴ Stakeholders and regulators must make long-term decisions and investments despite this unpredictability, with sometimes drastic effects on the communities where energy

¹⁰ INST. FOR ENERGY ECON. & FINANCIAL ANALYSIS, COAL OUTLOOK 2019 7 (Mar. 2019), available at http://ieefa.org/wp-content/uploads/2019/03/Coal-Outlook-2019_March-2019.pdf.

¹¹ See generally ANN. ENERGY OUTLOOK 2019, *supra* note 2 (projecting the future of the U.S. energy market based on prevailing trends, historical data, and other relevant factors).

¹² INT'L RENEWABLE ENERGY AGENCY, RENEWABLE POWER GENERATION COSTS IN 2018 9-10 (2019), available at https://www.irena.org/-/media/Files/IRENA/Agency/Publication/2019/May/IRENA_Renewable-Power-Generations-Costs-in-2018.pdf.

¹³ ANN. ENERGY OUTLOOK 2019, *supra* note 2, at pg. 12; *The United States Is Now the Largest Global Crude Oil Producer*, U.S. ENERGY INFO. ADMIN. (Sept. 12, 2018), <https://www.eia.gov/todayinenergy/detail.php?id=37053>.

¹⁴ Evan D. Sherwin, Max Henrion & Inês M. L. Azevedo, *Estimation of the Year-On-Year Volatility and the Unpredictability of the United States Energy System*, 3 NATURE ENERGY 341-46 (2018), available at <https://www.nature.com/articles/s41560-018-0121-4#Abs1>.

production and electricity generation occur.¹⁵

More changes are predicted for the foreseeable future. A growing number of coal-fired power plants are struggling to remain competitive;¹⁶ as are nuclear power plants.¹⁷ Since 2008, U.S. coal production has fallen by a third, leading to the closure of over half of existing coal mines.¹⁸ The U.S. Energy Information Administration projects substantial growth in both natural gas and renewable energy sectors, with additional retirements of both coal and nuclear facilities.¹⁹ Energy storage deployments hit record levels in 2018 and are projected to rise sharply.²⁰

An annual survey of energy employment found job growth through most of the domestic energy industry—with the notable exception of the solar and coal generation industries.²¹ The energy efficiency (76,000 new jobs), transmission, distribution, and storage (collectively 33,000 new jobs), natural gas generation (5,200 new jobs), and wind generation (3,700 new jobs) sectors all gained substantial employment in 2018.²² Despite the trend of mine closures, employment in the extraction sectors of the petroleum, natural

¹⁵ When Blackjewel LLC filed for bankruptcy on July 1, 2019, many communities were heavily impacted. Eagle Butte and Belle Ayr (the fourth and sixth largest mines, respectively, by production in the U.S.) both closed in the same region of Wyoming, leaving 600 employees without jobs or health insurance. The prospect of reopening under new ownership has left these workers in limbo. *See* Mead Gruver, *Idle Mines Portend Dark Days for Top U.S. Coal Region*, A.P. (Sept. 15, 2019), <https://apnews.com/8c87064f45d04625857f99030b243fe7>.

¹⁶ For example, the Northern Indiana Public Service Co. (NIPSCO) recently found that “it can save customers more than \$4 billion over 30 years by moving from 65% coal today to 15% coal in 2023 and eliminating the resource by 2028,” Gavin Bade, *Even in Indiana, new renewables are cheaper than existing coal plants*, UTILITY DIVE (Oct. 25, 2018), <https://www.utilitydive.com/news/even-in-indiana-new-renewables-are-cheaper-than-existing-coal-plants/540242/>. PacifiCorp found that currently “13 of its 22 coal units are more expensive than alternative options....” Iulia Gheorghiu, *PacifiCorp Shows 60% of Its Coal Units Are Uneconomic*, UTILITY DIVE (Dec. 5, 2018), <https://www.utilitydive.com/news/pacificorp-shows-60-of-its-coal-units-are-uneconomic/543566/>.

¹⁷ *More Than Half Of The Nation's Nuclear Power Plants Are At Risk Of Closing* (NPR radio broadcast June 12, 2018 5:10 AM), available at <https://www.npr.org/2018/06/12/618812542/more-than-half-of-the-nation-s-nuclear-power-plants-are-at-risk-of-closing>.

¹⁸ “As U.S. coal demand has declined, the number of active coal mines has decreased by more than half, from 1,435 mines in 2008 to 671 mines in 2017. As the U.S. market contracted, smaller, less efficient mines were the first to close, and most of the mine closures were in the Appalachian region.” *Today in Energy: More Than Half of the U.S. Coal Mines Operating in 2008 Have Since Closed*, U.S. ENERGY INFO. ADMIN. (Jan. 30, 2019), <https://www.eia.gov/todayinenergy/detail.php?id=38172&src=email>.

¹⁹ ANN. ENERGY OUTLOOK 2019, *supra* note 2, at 12.

²⁰ “Battery installations for 2018 totaled 311 megawatts and 777 megawatt-hours...” and are expected to double in 2019 and triple in 2020. Julian Spector, *U.S. Energy Storage Broke Records in 2018, but the Best Is Yet to Come*, GREEN TECH MEDIA (Mar. 5, 2019), <https://www.greentechmedia.com/articles/read/us-energy-storage-broke-records-in-2018-but-the-best-is-yet-to-come#gs.4fsc34>; *see also* WOOD MACKENZIE, ENERGY STORAGE ASSOCIATION, U.S. ENERGY STORAGE MONITOR (2019), available at <https://www.woodmac.com/research/products/power-and-renewables/us-energy-storage-monitor/>.

²¹ “The number of employees who spend the majority of their time on solar declined by 3.2 percent” (8,000) and coal generation employment declined by 7.2% (6,600). NAT’L ASSOC. STATE ENERGY OFFICIALS, ENERGY FUTURES INITIATIVE, 2019 U.S. ENERGY AND EMPLOYMENT REPORT 2-4 (2019), available at <https://static1.squarespace.com/static/5a98cf80ec4eb7c5cd928c61/t/5c7f3708fa0d6036d7120d8f/1551849054549/USEER+2019+US+Energy+Employment+Report.pdf>.

²² *Id.*

gas, and coal industries all increased, albeit only slightly for coal.²³ These numbers only represent a snapshot of a changing industry. Year-over-year trends show increasing employment in the solar industry²⁴ and decreases within the coal extraction sector.²⁵

While national numbers may broadly present trendlines, they provide limited clarity as to regional impacts. Different regions, and different resources, often render starkly divergent pictures. For instance, although half of U.S. coal mines closed over the past decade—with most of the closures occurring in Appalachia²⁶—coal production is expected to increase from interior regions while continuing to decrease in both Appalachia and western regions.²⁷ The U.S. Energy Information Administration projects that oil production will increase in the Permian basin (Southwest Texas and New Mexico), the Bakken (North Dakota), Eagle Ford (Southeast Texas), Haynesville (Texas and Louisiana), and Marcellus and Utica (Ohio, West Virginia, Pennsylvania, and New York) plays.²⁸ Increased solar development is projected throughout the U.S.²⁹ Wind generation is dominated by interior states from Texas to Minnesota, with contributions from the west coast and a growing interest in offshore developments in the Atlantic.³⁰

These changes are impacting communities across the U.S. One example is the impending closure of the Navajo Generating Station in Arizona on Navajo Nation land.³¹ The nearby Kayenta Mine already closed.³² When operating at full capacity the generating station and mine employed over a thousand people and has contributed nearly \$1.3 billion to the

²³ Petroleum extraction gained 33,500 new positions, natural gas extraction gained 17,000, and coal extraction added 650 jobs. *Id.*

²⁴ While employment in the solar industry declined in 2017, “[t]he solar workforce increased by 168% in the past seven years, from about 93,000 jobs in 2010 to over 250,000 jobs in 2017.” *National Solar Jobs Census 2017*, THE SOLAR FOUND. (Feb. 2018), <https://www.thesolarfoundation.org/national/>; Silvio Marcacci, *Renewable Energy Job Boom Creates Economic Opportunity As Coal Industry Slumps*, FORBES (Apr. 22, 2019), <https://www.forbes.com/sites/energyinnovation/2019/04/22/renewable-energy-job-boom-creating-economic-opportunity-as-coal-industry-slumps/#266630833665>.

²⁵ National coal mining employment dropped to 52,600 in October 2018 from “the most recent peak of nearly 90,000 in late 2011.” *Kentucky Coal Mining Jobs Continue to Decline*, INST. FOR ENERGY ECON. & FINANCIAL ANALYSIS (Nov. 13, 2018), <https://ieefa.org/kentucky-coal-mining-jobs-continue-to-decline/>.

²⁶ *Today in Energy: Jan. 30, 2019*, *supra* note 18.

²⁷ ANN. ENERGY OUTLOOK 2019, *supra* note 2, at 109-10.

²⁸ *Id.* at 57-58, 78.

²⁹ *Id.* at 103-04.

³⁰ *Wind Facts at a Glance*, AM. WIND ENERGY ASS’N, <https://www.awea.org/wind-101/basics-of-wind-energy/wind-facts-at-a-glance> (last visited Oct. 21, 2019). The U.S. Interior Department recently shattered previous auction records when it leased three areas located in the federal waters off the coast of Massachusetts and Rhode Island—the auction total was \$405.1 million. Most of the revenue brought in from wind auctions has come from recent auctions, “indicating a growing interest in U.S. offshore wind development.” Iulia Gheorghiu, *Record-breaking \$405M U.S. Offshore Wind Leasing Auction Shows 'Bullish' Interest*, UTILITY DIVE (Dec. 17, 2018), <https://www.utilitydive.com/news/record-breaking-405m-offshore-wind-us-leasing-auction-shows-bullish-inte/544465/>.

³¹ The Navajo Generating Station is slated for closure in December 2019. *Navajo Generating Station*, SRP, <https://srpnet.com/about/stations/ngs/default.aspx> (last visited Oct. 21, 2019).

³² Laying off the last of its employees, 265 people, after already being down 350 workers from 2018. Harrison Mantas, *Kayenta Mine layoffs hit, as Navajo Generating Station closure looms*, TUCSON SENTINEL (Aug. 26, 2019), http://www.tucsonsentinel.com/local/report/082619_kayenta_layoffs/kayenta-mine-layoffs-hit-as-navajo-generating-station-closure-looms/.

Navajo and Hopi economies since 1987.³³ Coal retirements have far reaching impacts for the Navajo Nation —four generating stations and three mines are located either on their land or in surrounding territory.³⁴ Currently, Navajo officials project \$35 million in budget cuts for 2021.³⁵ While there are efforts for reinvestment underway,³⁶ the tribe continues to face serious economic development challenges.³⁷

Changes are also happening quickly in Indiana. The Northern Indiana Public Service Company (NIPSCO) announced in 2018 its intention to eliminate the use of coal within ten years.³⁸ The preferred portfolio projections would result in a net loss of 246 employees and a reduction of \$74 million (29%) of local tax revenues (with any additions yet to be calculated).³⁹ NIPSCO is currently moving forward with new generation proposals, though new additions are not explicitly tied to job or property tax losses identified by early retirement scenarios.⁴⁰ In Wyoming, PacifiCorp is proposing reduced operations⁴¹ and

³³ COCONINO COUNTY, ARIZONA, POTENTIAL ECONOMIC IMPACT OF CLOSURE, CURRENT COCONINO COUNTY INITIATIVES MOVING FORWARD (2018), *available at*

https://www.coconino.az.gov/DocumentCenter/View/21885/NGS_economicFacts18_0427PRINT-002

³⁴ Benjamin Storrow, *Navajo Imagine a Future without Coal*, E&E NEWS (Apr. 8, 2019),

<https://www.eenews.net/stories/1060148179>. An independent analysis from 2017 noted that “[c]oal revenues provide an estimated 80% of the Hopi tribe’s budget and approximately 25% of funding for the Navajo Nation general fund, and have been declining over the past decade.” Haggerty, *et al. supra* note 9, at pg. 76; INST. FOR ENERGY ECON. & FINANCIAL ANALYSIS, A TRANSITION PLAN FOR COMMUNITIES AFFECTED BY THE CLOSINGS OF NAVAJO GENERATION STATION AND KAYENTA MINE 24 (2017), *available at* <http://ieefa.org/wp-content/uploads/2017/06/IEEFA-Transition-Plan-for-Navajo-Generating-Station-and-Kayenta-Mine-060617.pdf>.

³⁵ Benjamin Storrow, *supra* note 34.

³⁶ Including a 55.1 MW solar facility being built near Kayenta. Laurel Morales, *Navajo Receive Federal Loan to Complete Solar Farm*, FRONTERAS (Aug. 29, 2019), <https://fronterasdesk.org/content/973856/navajo-receive-federal-loan-complete-solar-farm>; *id.*

³⁷ The Navajo Nation has about 15,000 people living without electricity and a very high unemployment rate. *Id.* Many in the community see a future in renewables, even if they will have a difficult time fully replacing lost revenue and salaries from coal. Benjamin Storrow, *supra* note 34. Some are calling for greater federal involvement, including Rep. Tom O’Halloran from Arizona, *id.*; however, even with an increase in investment in renewable generation or if federal aid is offered, the near-term impacts of coal closures throughout the Navajo Nation will be stark.

³⁸ Darrell Proctor, *Indiana Utility Will Close Coal Units, Transition to Renewables*, POWER (Nov. 5, 2019), <https://www.powermag.com/indiana-utility-will-close-coal-units-transition-to-renewables/>.

³⁹ NORTHERN INDIANA PUBLIC SERVICE COMPANY LLC, 2018 INTEGRATED RESOURCE PLAN 155, 162-71 (Oct. 2018), *available at* <https://www.in.gov/iurc/files/2018%20NIPSCO%20IRP.pdf>. NIPSCO’s analysis of potential portfolios included a number of factors, including the cost to customers, cost certainty, cost risk, reliability risk, and “[o]ther factors, such as the loss of work for employees, and the reduction of property tax base for surrounding communities....” *Id.* at 149.

⁴⁰ *Id.* at 162-171. In October, NIPSCO announced a Request for Proposals for 300 MW of wind, 2,300 MW of solar and solar-plus-storage projects, and a yet-to-be decided amount of other capacity resources; this follows the selection of 800 MW (among three projects) of new wind generation solicited earlier in 2019. Iulia Gheorghiu, *NIPSCO to Replace Coal with 2.3 GW of Solar, Storage in Latest RFP*, UTILITY DIVE (Oct. 9, 2019), <https://www.utilitydive.com/news/nipsco-to-replace-coal-with-23-gw-of-solar-storage-in-latest-rfp/564427/>.

⁴¹ PacifiCorp and the Wyoming Department of Environmental Quality are pursuing a strategy of reducing output at the Jim Bridger Plant to 76.3% capacity instead of spending \$280 million to comply with Clean Air Act regional haze requirements. Angus M. Thuermer Jr., *PacifiCorp, DEQ Pick Less Power over Clean-Coal Technology*, WYOFILE (Sept. 3, 2019), <https://www.wyofile.com/pacificcorp-deq-pick-less-power-over-clean-coal-technology/>. Though this plan was initially questioned by the U.S. EPA as well as challenged by a coalition of four counties’ commissioners and a group of environmental organizations, so the end result is not certain. Angus M. Thuermer Jr.,

early closure of both the Jim Bridger Plant and Naughton Plan—potentially effecting nearly a thousand employees.⁴² PacifiCorp’s plans call for the addition of almost 7,000 MW of new renewable generation and energy storage, some of which would be sited in Wyoming along with two ongoing transmission line projects.⁴³ Though the Colorado legislature acted to help transitioning communities in 2019, as discussed below, these actions came too late to help the communities affected by the closing of the Nucla Station in western Colorado.⁴⁴ Tri-State Generation and Transmission, the electric cooperative that owns the Nucla Station, recently committed to paying \$500,000 over five years to help with the transition.⁴⁵ Currently, the town of Nucla is working with Colorado’s West End as a whole to diversify the region’s economy—an area long associated with mining and energy generation.⁴⁶ Whether these efforts are successful remains to be seen, but with change rapidly forced upon them, these communities responded by working together to redefine their futures.

The benefits of new development, and burdens of abandoned investments, accrue disproportionately to different regions. States are using a variety of methods to address the effects of the changing energy sector, including the communities most impacted by retiring facilities.

PacifiCorp: early closure of Wyo coal plants saves \$599 million, WYOFILE (Sept. 10, 2019), <https://www.wyofile.com/pacificorp-early-closure-of-wyoming-plants-saves-599-million/> (WyoFile Sept. 10).

⁴² PACIFICORP, 2019 INTEGRATED RESOURCE PLAN (2019), *available at* https://www.pacificorp.com/content/dam/pcorp/documents/en/pacificorp/energy/integrated-resource-plan/2019_IRP_Volume_I.pdf; *see also* Robert Walton, *PacifiCorp to add 7 GW renewables + storage, close 20 of 24 coal plants*, UTILITY DIVE (Oct. 3, 2019), <https://www.utilitydive.com/news/pacificorp-to-add-7-gw-renewables-storage-close-20-of-24-coal-plants/564299/>. PacifiCorp’s 2019 Integrated Resource Plan calls for one unit at Jim Bridger to be closed by 2023 and the other by 2028 (instead of in 2037 as under previous plans). *Id.* Currently the plant and associated mining operations employ around 800 people. WyoFile Sept. 10, *supra* note 41. Units 1 and 2 at the Naughton Plant in Wyoming are also slated for closure under the 2019 IRP; though Unit 3, which was closed early this year, is proposed to be converted into a natural gas burning facility. Having already lost about 25% of its workforce through attrition over the last five years, the Naughton Plant currently employs about 126 workers. *Wyoming: PacifiCorp closes Unit 3 at Naughton coal plant*, INST. FOR ENERGY ECON. & FIN. ANALYSIS (Feb. 1, 2019), <http://ieefa.org/wyoming-pacificorp-closes-unit-3-at-naughton-coal-plant/>.

⁴³ Robert Walton, *supra* note 42; PacifiCorp 2019 IRP, *supra* note 42.

⁴⁴ The decision to close early was made as Tri-State Generation and Transmission (Tri-State), an electric cooperative and Nucla Station’s owner, faced regional haze pollution issues and is increasingly focused on reducing costs through renewable generation. Judith Kohler, *Tri-State Officially Retires Nucla Coal-Fired Power Plant Well ahead of Planned 2022 Closure*, DENVER POST (Sept. 21, 2019), <https://www.denverpost.com/2019/09/21/tri-state-closes-nucla-coal-plant/>; Grace Hood, *Nucla’s Coal-Fired Power Plant Will Close Early as Tri-State Aggressively Focuses On Renewables*, CO PUB. RADIO (July 17, 2019), <https://www.cpr.org/2019/07/17/rural-electricity-provider-announces-early-coal-plant-closure-focus-on-renewables/>.

⁴⁵ While also keeping about 35 employees to work on plant decommissioning. *Id.*

⁴⁶ Colorado’s West End includes Nucla, Naturita, Norwood, Redvale, Bedrock, and Paradox, among others. Stina Sieg, *Tiny Town of Nucla Looks To A Future Without Mining And Sees Opportunity and Uncertainty*, CO PUB. RADIO (June 24, 2019), <https://www.cpr.org/2019/06/24/tiny-town-of-nucla-looks-to-a-future-without-mining-and-sees-opportunity-and-uncertainty/>. Economic development work includes using grants to help with access to this remote area (such as by expanding the local airport), an increasing focus around outdoor recreation tourism, agriculture, and incubating the projects of local entrepreneurs. *Id.*; *see also Our Location*, WEST END ECON. DEV. CORP., <https://www.choosewestend.org/> (last visited Oct. 21, 2019); *Colorado’s Western Edge—Pioneers Redefined*, NUCLA-NATURITA CHAMBER OF COMMERCE, <https://www.nucla-naturita.com/> (last visited Oct. 21, 2019).

Examples of State Policy Responses

Over time, states chose divergent approaches to energy regulation, which now leaves many facing different challenges and varying policy solutions.⁴⁷ While the Federal Energy Regulatory Commission (FERC) and other relevant federal agencies⁴⁸ maintain significant oversight authority over key aspects of the energy system, most of the policies affecting transitioning communities are being written by states. This allows states to be the “laboratories of democracy,” developing an array of policies that target local or regional objectives, the best of which can then be replicated.⁴⁹

Some states require the inclusion of other considerations or programs within public utility commission (PUC) proceedings—some of which may impact programs designed to help transitioning communities. One policy gaining traction is a requirement for “demand-side management” programming, which includes energy efficiency measures.⁵⁰ Some of these policies may be statutorily linked to energy transitions and related job losses. It is relevant to note that most “clean energy jobs” are currently found within the energy efficiency sector⁵¹ and that skilled labor is essential in this field,⁵² which may explain states’ interest in retraining and apprenticeship programs (discussed in more detail in the following sections).⁵³ Another commonly implemented policy are renewable portfolio standards

⁴⁷ Boyd & Carlson, *supra* note 4, at pp. 840-41.

⁴⁸ Such as the U.S. Department of Energy, U.S. Environmental Protection Agency, and the U.S. Department of the Interior.

⁴⁹ See *New State Ice Co. v. Liebmann*, 285 U.S. 262, 311 (1932) (Brandeis, L., dissenting); “[T]here is value not only in the fact of state experimentation but also in the diversity of models that we have inherited after restructuring. This diversity has...created opportunities for a range of experiments and innovation that we might not see under a single uniform approach. Boyd & Carlson, *supra* note 4, at pg. 878.

⁵⁰ *Utility Regulation and Policy*, AM. COUNS. FOR AN ENERGY-EFFICIENT ECON., <https://aceee.org/topics/utility-regulation-and-policy> (last visited Oct. 21, 2019); *State and Local Policy Database*, AM. COUNS. FOR AN ENERGY-EFFICIENT ECON., <https://database.aceee.org/> (last visited Oct. 21, 2019). These are efforts that focus on using less energy through various means, including offering “free or low cost energy audits...of homes and businesses, free or discounted energy-efficient lightbulbs, and rebates to customers who purchase energy-efficient...major appliances...” Demand response programs are also included. These programs aim to reduce electricity demand during peak consumption times by incentivizing usage during off-peak hours, for example by introducing time-of-use rates where the cost of electricity depends on overall demand across the grid. *Today in Energy: Demand-Side Management Programs Save Energy and Reduce Peak Demand*, U.S. ENERGY INFO. ADMIN. (Mar. 29, 2019), <https://www.eia.gov/todayinenergy/detail.php?id=38872>.

⁵¹ *US Clean Energy Jobs Grow 3.6% to Nearly 3.3 Million*, E2 (Mar. 13, 2019), <https://www.e2.org/releases/us-clean-energy-jobs-grow-to-nearly-3-3-million/>; *Fact Sheet - Jobs in Renewable Energy, Energy Efficiency, and Resilience (2019)*, ENVTL. & ENERGY STUDY INST. (July 23, 2019), <https://www.eesi.org/papers/view/fact-sheet-jobs-in-renewable-energy-energy-efficiency-and-resilience-2019>.

⁵² Mary Shoemake & David Ribeiro, *Through the Local Government Lens: Developing the Energy Efficiency Workforce*, AM. COUNS. FOR AN ENERGY-EFFICIENT ECON. (June 2018), <https://www.naesco.org/data/industryreports/ACEEE%20%20EE%20Workforce%20June%202018.pdf>; *California Public Utility Commission agrees: A Skilled, Trained, and Diverse Workforce Is the Key to Achieving Efficiency Goals*, BLUEGREEN ALLIANCE (Jan. 11, 2019), <https://www.bluegreenalliance.org/resources/california-public-utility-commission-agrees-a-skilled-trained-and-diverse-workforce-is-the-key-to-achieving-efficiency-goals/>.

⁵³ See Colorado, *infra* footnotes 79, 152-57; see Illinois, *infra* footnotes 116-17; see New Mexico, *infra* footnotes 124-25; see Washington State, *infra* footnotes 164-67.

(RPS). RPS are in place in 29 states, Washington, D.C., and three territories.⁵⁴ Actual implementation varies widely, but the basic objective is to incentivize the use of more renewable generation resources.⁵⁵ Setting and implementing RPS policies may present states with the opportunity to steer growth for the benefit of transitioning communities or, in some cases, protect resources from competition it views as essential to public policy goals.⁵⁶

State legislatures also have a history of stepping in to legislate the “public interest,” at times forgoing traditional energy regulatory mechanisms—a tool that may be used for the benefit of transitioning communities. Legislatures can act on a project-specific basis, such as offshore wind deployment⁵⁷ or building new nuclear facilities.⁵⁸ States can also allow for new financing tools that may allow uneconomic facilities to close early⁵⁹ and produce

⁵⁴ With a further eight states (and one territory) implementing renewable energy goals. *State Renewable Portfolio Standards and Goals*, NAT’L CONF. OF ST. LEGISLATURES (Feb. 1, 2019), <http://www.ncsl.org/research/energy/renewable-portfolio-standards.aspx>.

⁵⁵ *Id.*

⁵⁶ See NY and IL zero emissions credits policies, *infra* footnotes 172-85.

⁵⁷ One recent example is Dominion Energy’s offshore wind pilot project. The Virginia State Corporation Commission found that under traditional review the proposed project “would not be deemed prudent,” but “that as a matter of law the new statutes governing this case subordinate the factual analysis to the legislative intent and public policy clearly set forth in the statutes...[so the project is approved].” Case No. PUR-2018-00121, Final Order 15 (Va. State Corp. Comm’n, Nov. 2, 2018) *available at* <http://www.scc.virginia.gov/docketsearch/DOCS/4c%24z01!.PDF>; see also Robert Walton, *Virginia Approves Dominion \$300M Offshore Wind Pilot, Despite Ratepayer Concerns*, UTILITY DIVE (Nov. 5, 2018), <https://www.utilitydive.com/news/virginia-approves-dominion-300m-offshore-wind-pilot-despite-ratepayer-con/541383/>.

⁵⁸ Both South Carolina and Georgia state legislatures chose to override traditional project financing requirements in order to support the development of new nuclear facilities—in particular, the requirement that facilities be “used and useful” before a utility may recover the costs of construction. See 2007 South Carolina Act No. 16, *available at* https://www.scstatehouse.gov/sess117_2007-2008/bills/431.htm; see 2009 Georgia Senate Bill 31, *available at* <http://www.legis.ga.gov/Legislation/20092010/87038.pdf>. These decisions became controversial as the proposed projects were either canceled or delayed with cost overruns. Brad Plumer, *U.S. Nuclear Comeback Stalls as Two Reactors Are Abandoned*, N.Y. TIMES (July 31, 2017), <https://www.nytimes.com/2017/07/31/climate/nuclear-power-project-canceled-in-south-carolina.html>; Andrew Brown, *Was the 2007 Law that Jumpstarted S.C. Nuclear Project Unconstitutional? Attorneys Ask Circuit Judge to Decide*, POST & COURIER (Apr. 20, 2018), https://www.postandcourier.com/business/was-the-law-that-jumpstarted-s-c-nuclear-project-unconstitutional/article_d7eeaa2-44a5-11e8-afe1-93e0bae931e9.html; Julian Spector, *More Delays Likely for Vogtle Nuclear Plant, Georgia Regulator Says*, GREEN TECH MEDIA (Aug. 1, 2019), <https://www.greentechmedia.com/articles/read/georgia-utility-regulator-more-delays-likely-for-vogtle-nuclear-plant#gs.9ou6tg>; Kristi E. Swartz, *Effort to End Financing Law Gains Steam in Ga.*, E&E NEWS (Feb. 27, 2018), <https://www.eenews.net/energywire/stories/1060074819?t=https%3A%2F%2Fwww.eenews.net%2Fstories%2F1060074819>.

⁵⁹ Accelerated depreciation and securitization are two tools currently being used to retire uneconomic generating facilities early (usually coal-fired power plants). There are key differences between the two options, and the choice is usually up to the utility, though securitization may allow for savings to be used to help transitioning communities, as discussed more below. See Herman K. Trabish, *Securitization Fever: Renewables Advocates Seize Wall Street’s Innovative Way to End Coal*, UTILITY DIVE (May 28, 2019), <https://www.utilitydive.com/news/securitization-fever-renewables-advocates-seize-wall-streets-innovative-w/555089/>; see also Ron Lehr, *How Utilities Can Swap Coal Debt for Clean Energy Equity*, FORBES (Feb. 4, 2019), <https://www.forbes.com/sites/energyinnovation/2019/02/04/how-utilities-can-swap-coal-debt-for-clean-energy-equity/#61ea9f1b32c2>.

savings that can be used to benefit impacted communities.⁶⁰ Legislatures can even change how PUCs evaluate utility investments entirely.⁶¹ Performance-based ratemaking, which usually includes a multiyear rate plan component along with performance incentive mechanisms for consumer protection,⁶² may also provide PUCs with the ability to incentivize investment in transitioning communities.⁶³

While there is clear evidence of a widespread economic transition in progress, states are still answering the question of how, or if, to respond. When states do act, there are a wide array of responses responding to similar sets of concerns. Some of these new policies may also be used to help communities impacted by the changing economics of the energy sector. These efforts can largely be sorted into four categories: planning for the transition, developing fund-based approaches, establishing requirements for new resources, and protecting existing jobs.

⁶⁰ See NM ETA, *infra* footnotes 119-25; see CO-EI Bonds, *infra* footnotes 135-40.

⁶¹ Since 2015, performance-based ratemaking was introduced or considered by 19 states and Washington, D.C.—with Illinois being the first adopter in 2011. Herman K. Trabish, *Performance-Based Regulation: Seeking the New Utility Business Model*, UTILITY DIVE (July 23, 2019), <https://www.utilitydive.com/news/performance-based-regulation-seeking-the-new-utility-business-model/557934/>.

⁶² *Id.*; see also REGULATORY ASSISTANCE PROJECT, NATIONAL RENEWABLE ENERGY LABORATORY, NEXT-GENERATION PERFORMANCE-BASED REGULATION (2017), available at <https://www.nrel.gov/docs/fy17osti/68512.pdf>.

⁶³ See Wash. St. tax incentives, *infra* footnotes 164-67.

Strategy	State	Summary
I. Planning for Transition	Colorado	<ul style="list-style-type: none"> Created a Just Transition Office with an Advisory Committee mandated to develop a statewide Just Transition Plan Requires workforce transition plans for closing facilities Directs Air Quality Control Commission to solicit diverse stakeholder input while promulgating rules
	Washington State	<ul style="list-style-type: none"> Broadly defines the “public interest” as it applies to regulating utilities Creates a State Energy Strategy Advisory Committee and an Energy and Climate Policy Advisory Committee
II. Developing Fund-based Approaches	Litigation-based	<ul style="list-style-type: none"> Using litigation settlements to provide for funding, example from Illinois
	Montana	<ul style="list-style-type: none"> Allowing countries to set aside revenues from coal-related activities to form a County Coal Trust Fund Requiring bonds from coal entities sufficient to pay employee pension benefits
	Illinois	<ul style="list-style-type: none"> Using two state funds tied to renewable energy to fund a Solar for All program Require large utilities to finance training programs at a rate of \$10 million paid three times over nine years
	New Mexico	<ul style="list-style-type: none"> Directs savings from the securitization (use of bonds) of facilities retiring early into an economic development assistance fund and a displaced worker assistance fund Directing use of securitization savings to aid affected communities from closure of the San Juan Generating Station
	Colorado	<ul style="list-style-type: none"> Allows for the use of securitization along with the use of savings to benefit affected communities
III. Establishing Requirements for New Resources	New Mexico	<ul style="list-style-type: none"> Requirements for “replacement resource” acquisition near closing facilities
	Illinois	<ul style="list-style-type: none"> Solar for All program Utility-financed training programs Employment requirements for infrastructure investment and modernization programs
	Colorado	<ul style="list-style-type: none"> Employment requirements for EV infrastructure program Expands the definition and application of “best value employment metrics” for new energy infrastructure
	Connecticut	<ul style="list-style-type: none"> Innovative quantitative evaluation metrics to be used in evaluating proposals submitted for offshore wind development
	Washington State	<ul style="list-style-type: none"> Tiered tax structure incentivizing, among other things, local employment, apprenticeship programs, contracts with women, minority, or veteran-owned businesses, and payment of prevailing wages
	Ohio	<ul style="list-style-type: none"> Tax requirements and incentives for the use of Ohio-domiciled labor
IV. Protecting Existing Jobs	Illinois	<ul style="list-style-type: none"> Legislation requiring the purchase of Zero Emission Credits (ZECs) to support nuclear generators
	New York	<ul style="list-style-type: none"> Regulatory requirement for the purchase of ZECs to support nuclear generation
	Ohio	<ul style="list-style-type: none"> Direct subsidies to nuclear and coal generators

I. Planning for Transition

Colorado and Washington State recently adopted laws requiring state agencies to begin planning for the energy transition. Both states rely on advisory committees with a diverse range of stakeholders to help develop statewide plans and to aid in the implementation of policy objectives.

In 2019, Colorado passed a bundle of legislation pursuing a fast and equitable transition towards a clean energy future.⁶⁴ The Colorado legislation created a first-of-its-kind Just Transition Office (JTO).⁶⁵ The job of the JTO is to “[i]dentify or estimate...the timing and location of facility closures and job layoffs in coal-related industries and their impact on affected workers, businesses, and coal transition communities, and make recommendations...as to how the office can most effectively respond to these economic dislocations.”⁶⁶ There is also a JTO Advisory Committee that is tasked with developing a Just Transition Plan for Colorado to be presented to the director of the JTO by July 1, 2020.⁶⁷ The Advisory Committee must consist of five members of the executive branch (specific offices are delineated), one member from each chamber of the legislature, three members that represent coal transition workers, three members from coal transition communities, two members with professional economic development or workforce retraining experience, two members from disproportionately impacted communities, and two members from utilities that operate a coal-fueled generating station.⁶⁸ Specific considerations that the Advisory Committee must consider while developing the plan include, among other things, how best to align local, state, and federal resources and programming, establishing benefits for coal transition workers including wage differential benefits, educational community-based components, projected costs of each component, potential sources for sustainable funding, and the potential application of plan components to other economic sectors.⁶⁹ Implementation of these mandates are still ongoing.

⁶⁴ COLO. GOV. OFFICE, ROADMAP TO 100% RENEWABLE ENERGY BY 2040 AND BOLD CLIMATE ACTION (2019), available at <https://drive.google.com/file/d/0B7w3bkFgg92dMkpxY3VsNk5nVGZGOHJGRUV5VnJwQ1U4VWtF/view>. After a bill was introduced in January 2018 calling for 100% renewable energy by 2035, efforts were made to broaden stakeholder engagement. See 2018 Colorado Senate Bill 64, available at <https://leg.colorado.gov/bills/sb18-064>. A Colorado affiliate of the People’s Climate Movement was founded in February 2018 to organize discussions that included labor leaders, local and national environmental organizations, faith-based organizations, and others in order to envision a “just and equitable transition into a renewable energy economy.” Rachel M. Cohen, *The Just Transition for Coal Workers Can Start Now. Colorado Is Showing How*, IN THESE TIMES (July 24, 2019), <https://inthesetimes.com/working/entry/21975/colorado-just-transition-labor-coal-mine-workers-peoples-climate-movement>; *Colorado Climate Movement*, PEOPLES CLIMATE MOVEMENT, <https://peoplesclimate.org/actions/colorado/> (last visited Oct. 21, 2019). Once the opportunity came to pass policy, the groundwork was in place for a broad base of support. *Id.*

⁶⁵ See 2019 Colorado House Bill 1314(8-83-503), available at https://leg.colorado.gov/sites/default/files/2019a_1314_signed.pdf.

⁶⁶ *Id.* at 8-83-503(3)(a).

⁶⁷ *Id.* at 8-83-503(6)(a)-(b).

⁶⁸ *Id.* at 8-83-503(6)(e).

⁶⁹ *Id.* at 8-83-503(6)(c)-(d).

In the event of an accelerated retirement of a coal-fueled generating facility, the utility must submit a workforce transition plan to the JTO and the affected community at least six months before the actual retirement and within 30 days of approval from the utility's regulating body.⁷⁰ While still a limited amount of time, this is intended to prevent sudden closure decisions and give communities an opportunity to begin planning for the economic impacts.⁷¹ The workforce transition plan must include estimates of total workers employed (including those working in generation and delivery as well as contractors), the amount of positions to be retained versus eliminated, the number of the positions eliminated, estimates as to employees retiring or voluntarily leaving, employees transferred to other facilities, and employees being laid off. If there are plans for a replacement generation facility, estimates of workers transition from the old to new facility and jobs to be filled by contractors.⁷² The requirements of this section largely mirror provisions within other legislation pertaining to the functioning of the Colorado Public Utilities Commission (CO PUC), detailed below, as such it does not apply if a utility has already submitted a workforce transition plan to the CO PUC.⁷³

Colorado also implemented widespread changes to the functioning of the CO PUC and the considerations it must take into account.⁷⁴ Upon filing of an electrical resource plan in 2020 or later, qualifying utilities⁷⁵ must include a clean energy plan.⁷⁶ Among other things, if the "plan includes accelerated retirement of any existing generating facilities...[it] must include workforce transition and community assistance plans for utility workers impacted...and a plan to pay community assistance to any local government or school district" for the completion of voter-approved projects dependent on property tax revenues derived from the retiring facility.⁷⁷ The costs associated with these plans may be recovered by the utility, though no rate of return is allowed.⁷⁸ The requirements of the workforce transition plan, as filed within the utility's clean energy plan, are almost exactly the same as those discussed above, though in the case of replacement generation the "utility shall develop a training or apprenticeship program...for the maintenance and operation of any new combination generation and storage facility owned by the utility that does not emit carbon dioxide...."⁷⁹ This legislation also allows for the use of "CO-EI Bonds" to decrease the costs of accelerated retirement, as discussed further below.⁸⁰ The workforce transition requirements can also be found in complementary legislation.⁸¹

⁷⁰ *Id.* at 8-83-505(1).

⁷¹ See Rachel M. Cohen, *supra* note 64.

⁷² 2019 Colorado House Bill 1314, *supra* note 65, at 8-83-505(2).

⁷³ *Id.* at 8-83-505(3).

⁷⁴ See generally 2019 Colorado Senate Bill 236, available at https://leg.colorado.gov/sites/default/files/2019a_236_signed.pdf.

⁷⁵ A utility that serves over 500,000 customers in Colorado, excluding municipalities. *Id.* at 40-2-125.5(2)(c)(I).

⁷⁶ *Id.* at 40-2-125.5(4)(a).

⁷⁷ *Id.* at 40-2-125.5(4)(a)(VII).

⁷⁸ *Id.*

⁷⁹ *Id.* at 40-2-125.5(4)(a)(VII)(D). However, a later section of the same legislation defining workforce transition planning does not contain this extra provision and precisely mirrors the language pertaining to the JTO. It also excludes not only municipalities but electric cooperatives as well. *Id.* at 40-2-133.

⁸⁰ *Id.* at Art. 41; see Discussion on CO-EI Bonds, *infra* footnotes 135-40.

⁸¹ See 2019 Colorado House Bill 1313, available at https://leg.colorado.gov/sites/default/files/documents/2019A/bills/2019a_1313_ren.pdf.

The statute also establishes Colorado’s greenhouse gas (GHG) reduction goals,⁸² including specific directives for the air quality control commission while it promulgates and implements rules to achieve these goals. The commission must solicit input from stakeholders, including disproportionately impacted communities, large emission sources, and communities dependent on fossil fuel industries.⁸³ The commission must take into account include the benefits of compliance, cost of compliance, economic and job impacts and opportunities, the equitable distribution of benefits, opportunities to incentivize renewable energy development in disproportionately impacted and transitioning communities, and the potential to enhance community resiliency.⁸⁴ The statute also directs the air quality commission to consult with the CO PUC on the development of relevant utilities’ clean energy plans with a goal of reducing GHG emissions from the electricity sector by 80% by 2030.⁸⁵

There may be other streams of funding for the programs created by Colorado’s new legislation, such as savings from the use of CO-EI bonds.⁸⁶ However, further funding will be necessary to achieve these goals. In particular, the statute states that sustainable sources of funding⁸⁷ are preferred rather than one-off appropriations or fees.⁸⁸

Washington legislators recently adopted legislation with some provisions that are comparable to those Colorado is in the process of implementing, except they are all contained in one bill.⁸⁹ This law calls for the state to eliminate the use of coal for power generation⁹⁰ and requires the state’s electricity sector to be carbon neutral by 2030 and carbon free by 2045.⁹¹ While pursuing these goals “the state must prioritize the maximization of family wage job creation, [and] seek to ensure that all customers are benefiting from the transition to a clean energy economy....”⁹² The law identifies electric utilities as important to this transition and empowers the Washington Utilities and

⁸² They are a 26% reduction by 2025, 50% by 2030, and 90% by 2050. 2019 Colorado House Bill 1261, 25-7-102(2)(g), *available at* https://leg.colorado.gov/sites/default/files/2019a_1261_signed.pdf.

⁸³ *Id.* at 25-7-105(1)(e)(IV).

⁸⁴ *Id.* at 25-7-105(1)(e)(VI).

⁸⁵ *Id.* at 25-7-105(1)(e)(VIII).

⁸⁶ *See* Discussion on CO-EI Bonds, *infra* footnotes 135-40.

⁸⁷ These may include dedicated funding from the general budget, fees collected by instituting a carbon cap or tax, increasing the tax on gasoline, or introducing a coal severance fee—though any taxes should control for effects on disproportionately impacted communities. This may in effect be accomplished through sufficient endowment or fund financing, which may involve one-time payments.

⁸⁸ *See* 2019 Colorado House Bill 1314, *supra* note 65, at 8-83-503(6)(c)-(d).

⁸⁹ *See* 2019 Washington Senate Bill 5116, *available at* <http://lawfilesexternal.wa.gov/biennium/2019-20/Pdf/Bills/Session%20Laws/Senate/5116-S2.SL.pdf#page=1>.

⁹⁰ Each utility must eliminate the use of coal-fired generation resources from its portfolio serving Washington State by the end of 2025. *Id.* at § 3(1)(a). Though accelerated depreciation must be approved by regulators to facilitate in meeting these requirements. *Id.* at § 3(2).

⁹¹ *Id.* at § 1(2). Up to 20% of these obligations (until the end of 2044) may be met through the payment of an administrative fee, the acquisition of renewable energy credits, or by investing in energy transformation projects (which is defined broadly to include many energy conservation or efficiency resources and efforts as well as building electric transportation infrastructure and developing renewable natural gas projects.) *Id.* at § 2(18), 4(1)(b), 4(2).

⁹² *Id.*

Transportation Commission (Wash UTC) to utilize “flexible regulatory mechanisms where appropriate to achieve fair, just, reasonable, and sufficient rates and its public interest objectives.”⁹³ The law defines the public interest to include the equitable distribution of benefits with specific emphasis on the protection of vulnerable populations and highly impacted communities.⁹⁴ If utilities fail to meet clean energy requirements, and an extension has not been granted by the Wash UTC, they must pay an administrative penalty to the state for use in the low-income weatherization and structural rehabilitation assistance account.⁹⁵

The Washington statute also provides for the creation of a state energy strategy advisory committee to aid in the implementation of the requirements discussed above. Membership on this committee is detailed and includes representatives from varying types of utilities,⁹⁶ various types of energy consumers,⁹⁷ clean energy businesses, labor unions, civic and environmental organizations, and various members of government from both the executive and legislative branches.⁹⁸ There is also an energy and climate policy advisory committee consisting of, “at minimum, representatives of each the state's public four-year institutions of higher education, the Pacific Northwest National Laboratory, and the Washington state institute for public policy.”⁹⁹

II. Developing Fund-Based Approaches

Fund-based approaches are a common strategy to promote economic development, and some states are creating new funds to help communities adjust to job losses resulting from the transitioning energy economy. Sometimes funds are created as the result of litigation, while legislation-based proposals may be found within self-contained bills or as part of broader legislative packages. There are varying levels of detail as to the actual administration of these funds. Below are some recent examples of how transition funds within the energy sector are being implemented.

In Illinois, a proposed settlement would see the E.D. Edwards power plant shuttered by the end of 2022 while providing \$8.6 million in funds for workforce development strategies as well as public health and environmental projects.¹⁰⁰ The plant currently employs over 70

⁹³ Such as, but not limited to, performance and incentive-based regulation and multiyear rate plans. *Id.* at § 1(5), 20.

⁹⁴ *Id.* at § 1(6).

⁹⁵ *Id.* at § 9(1)-(8).

⁹⁶ Including one each for investor-owned electricity and gas utilities, gas pipeline utilities, municipally owned utilities, electric cooperatives, and public utility districts. *Id.* at § 22(1)(a)-(e).

⁹⁷ Including one seat each for industrial, commercial, and agricultural consumers as well as a representative each from the association of Washington cities, the association of Washington counties, Washington Indian Tribes. *Id.* at § 22(1)(f)-(m).

⁹⁸ *Id.* at § 22(1).

⁹⁹ *Id.* at § 23.

¹⁰⁰ The U.S. Department of Justice and EPA still needs to approve the settlement before it must also be approved by U.S. District Judge Joe Billy McDade. Chris Kaergard, *Agreement could Shutter Edwards Coal Plant in 2022*, PEORIA JOURNAL STAR (Sept. 16, 2019), <https://www.pjstar.com/news/20190916/agreement-could-shutter-edwards-coal-plant-in-2022>.

people and is impacting the air quality of nearby low-income and minority communities.¹⁰¹ If approved, the settlement money will be spent on encouraging local clean energy development, education and job training programs, and lowering electricity bills.¹⁰² This settlement resolved a six year lawsuit brought by local and national environmental groups, and provided the basis for transition funding.¹⁰³ However, Vistra Energy (owner of E.D. Edwards) previously announced plans to close four other coal power plants in southern Illinois without providing transition funding¹⁰⁴—showing the limitations of this approach long-term. These closures are expected to lead to the termination of 300 employees.¹⁰⁵

Montana enacted two statutes in 2019 that may help provide funding during transition periods. Senate Bill 191 allows county governments to set aside revenues received from coal-related activities into a county coal trust fund.¹⁰⁶ These funds may be used “to pay for outstanding capital projects;” provide “assistance to existing business for retention and expansion or to assist new business; attract new industry to the impact area; provide cash incentives for expanding the employment base;” or “provide grants or loans to other local government jurisdictions to assist with impacts....”¹⁰⁷ However, the funds may not be disbursed until coal-related activities have permanently ceased or coal-related employment is less than 75% from the average over the preceding five years.¹⁰⁸ Senate Bill 201 requires companies that hold coal mining permits to post bonds sufficient to cover employee pension programs in the event of bankruptcy or reorganization.¹⁰⁹ This bill takes on particular importance within the context of recent bankruptcies affecting the Powder River Basin region, an area that includes portions of both Wyoming and Montana.¹¹⁰

Illinois passed the Future Energy Jobs Act in 2016.¹¹¹ Two potentially impactful provisions create new funding for job creation and retraining: the Solar for All program and utility job training programs. The Solar for All program seeks to engage and serve low-income and environmental justice communities as the state continues to build out renewable energy

¹⁰¹ *Id.*

¹⁰² Darrell Proctor, *Vistra Will Close Another Illinois Coal Plant*, POWER (Sept. 16, 2019), <https://www.powermag.com/vistra-will-close-another-illinois-coal-plant/> (quoting Ryan Hidden, Sierra Club); Tim Shelley, *Edwards Coal Plant Will Close in 2022, Under Proposed Settlement*, PEORIA PUB. RADIO (Sept. 16, 2019), <https://www.peoriapublicradio.org/post/edwards-coal-plant-will-close-2022-under-proposed-settlement#stream/0>.

¹⁰³ *Id.*

¹⁰⁴ Michael Hawthorne, *Another Illinois coal plant is closing—the fifth announced in a month*, CHI. TRIB. (Sept. 16, 2019), <https://www.chicagotribune.com/news/environment/ct-illinois-coal-plant-closing-20190916-3ql3ch4c3vhmfcnznot5z2zt4-story.html>.

¹⁰⁵ Michael Hawthorne, *A Texas company is closing 4 Illinois Coal Plants but Plans to Keep Some of Its Dirtiest Units Running*, CHI. TRIB. (Aug. 22, 2019), <https://www.chicagotribune.com/news/environment/ct-illinois-coal-plant-shutdowns-20190822-5m5icfssrbdlldgrggp6rd65brm-story.html>.

¹⁰⁶ 2019 Montana Senate Bill 191, available at <https://leg.mt.gov/bills/2019/billpdf/SB0191.pdf>.

¹⁰⁷ *Id.* at § 1(3)(a)-(f).

¹⁰⁸ *Id.* at § 1(2)(a)-(b).

¹⁰⁹ 2019 Montana Senate Bill 201, available at <https://leg.mt.gov/bills/2019/billpdf/SB0201.pdf>.

¹¹⁰ *Wyoming, Montana Bankruptcy Sale of Coal Mines OK'd by Judge*, AP (Aug. 19, 2019), <https://www.apnews.com/222c39b3fa434b499336f6c79fc2d8fc>.

¹¹¹ See 2016 Illinois Senate Bill 2814, available at <http://www.ilga.gov/legislation/99/SB/PDF/09900SB2814enr.pdf>.

resources.¹¹² Funding is sourced through the Illinois Power Agency Renewable Energy Resources Fund (\$20 million) and the REPS Fund (5% per year or \$10 million, whichever is greater).¹¹³ Specific incentives offered under the Solar for All Program include a low-income distributed generation incentive, low-income community solar incentive, incentives for non-profits and public facilities, and low-income community solar pilot projects.¹¹⁴ If possible, projects should be connected to utility job training programs described below.¹¹⁵

The Illinois Future Energy Jobs Act also requires each utility serving over three million customers to pay \$10 million into a variety of training programs three separate times over nine years (payments are due in 2017, 2021, and 2025).¹¹⁶ Required programs include: \$3 million for a solar training pipeline program with a goal of 50% participation from environmental justice communities, \$3 million for a craft apprenticeship program, and \$4 million for multi-cultural jobs programs with designated outlays for nonprofit organizations performing specific works in their communities.¹¹⁷

New Mexico adopted the Energy Transition Act (ETA) in March of 2019.¹¹⁸ The ETA allows utilities to use bonds to securitize generating facilities they wish to close early, greatly decreasing financing costs in the process, while also requiring both that a portion of the savings be paid to help affected communities with the transition and that a portion of new generation be sited near the closing facility.¹¹⁹ Once the utility receives the bond proceeds they are required to transfer, as a percentage of the total amount of energy transition bonds financed, 1.65% “to the economic development department for deposit in the Energy Transition Economic Development Assistance Fund” (EDAF) and 3.85% “to the workforce solutions department for deposit in the Energy Transition Displaced Worker Assistance Fund” (DWAF).¹²⁰ The EDAF aims to help affected communities diversify their economies by promoting economic development opportunities not related to fossil fuels, while the DWAF focuses on the “displaced workers in an affected community.”¹²¹ The implementation and administration of each fund mirrors the other, with the economic development department charged with developing an economic diversification and development plan and the workforce solutions department tasked with creating a displaced worker development plan.¹²² Each must develop a public planning process that

¹¹² *Id.* at § 1-56; *see also* Kari Lydersen, *Solar for All: Illinois Incentive Program Aims to Make Solar More Accessible*, ENERGY NEWS NETWORK (May 24, 2019), <https://energynews.us/2019/05/24/midwest/solar-for-all-illinois-incentive-program-aims-to-make-solar-more-accessible/>.

¹¹³ *Id.* These funds were created before the Future Energy Jobs Act was passed.

¹¹⁴ 2016 Illinois Senate Bill 2814, *supra* note 111, at § 1-56(b)(2)(A)-(D).

¹¹⁵ *Id.* at § 1-56(b)(2).

¹¹⁶ *Id.* at § 16-108.12.

¹¹⁷ *Id.* at § 16-108.12(a)(1)-(3).

¹¹⁸ Press Release, NM Office of the Governor, Governor signs landmark energy legislation, establishing New Mexico as a national leader in renewable transition efforts (Mar. 22, 2019), *available at* <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/>.

¹¹⁹ *See* 2019 New Mexico Senate Bill 489, *available at* <https://www.nmlegis.gov/Sessions/19%20Regular/bills/senate/SB0489.pdf>.

¹²⁰ *Id.* at § 16(G)(1)-(2).

¹²¹ *Id.* at § 16(A)-(F).

¹²² *Id.* at § 16(C), (F).

includes no fewer than three public meetings in the affected community.¹²³ Disbursement from the EDAF may go to an organization with an approved economic development program, an employer to aid in the hiring of displaced workers, or to a municipality, county, or Indian nation, pueblo, or tribe for economic development programing.¹²⁴ Expenditures from the DDAF may be used to assist employers of displaced workers, be used by the workforce solutions department either to provide assistance to displaced workers through a program or aid displaced workers in enrolling in certified apprenticeship programs, or be paid to a municipality, county, or Indian nation, pueblo, or tribe for job training or apprenticeship programs or to support programs promoting economic development in the affected community.¹²⁵

Implementation of the ETA continues to be controversial. The Public Service Co. of New Mexico (PNM) filed for early closure of the San Juan Generating Facility in its 2017 IRP,¹²⁶ which was approved by the New Mexico Public Regulation Commission (NM PRC) in December 2018.¹²⁷ The San Juan plant and related mining operations employ around 440 workers and provide about \$3.2 million in property taxes yearly.¹²⁸ The New Mexico legislature and governor passed the ETA in order to, among other reasons, allow securitization of the San Juan plant and allow PNM to use around \$40 million of the savings for transition funding.¹²⁹ However, the city of Farmington, a minority owner of San Juan and the closest municipality, would rather pursue a carbon capture and sequestration proposal—though state lawmakers passed the ETA while expressing doubts about the efficacy of that plan.¹³⁰ In July the NM PRC voted to bifurcate the San Juan proceedings (between abandonment and replacement) in an apparent attempt to circumvent the ETA.¹³¹ This has prompted both the governor and legislature to take actions towards reforming the structure of the NM PRC itself.¹³² While the future of San Juan remains unclear, it is the position of PNM that the ETA applies to both bifurcated cases and they are moving forward with replacement proposals.¹³³ PNM's preferred proposal would see the

¹²³ *Id.*

¹²⁴ *Id.* at § 16(C).

¹²⁵ *Id.* at § 16(F).

¹²⁶ See PNM, INTEGRATED RESOURCE PLAN: PUBLIC COMMENT DRAFT (Apr. 2017), available at <https://www.pnm.com/documents/396023/3306887/IRP+April+Public+Comment+Draft/00d6e2d1-7df2-424c-9dc1-a61c900e7104>.

¹²⁷ Hanna Grover, *PRC accepts PNM's integrated resource plan over county's protests*, FARMINGTON DAILY TIMES (Dec. 19, 2018), <https://www.daily-times.com/story/news/2018/12/19/county-official-prc-decision-brings-area-closer-power-plant-closure/2364551002/>.

¹²⁸ PNM, WELCOME TO THE PNM STAKEHOLDER MEETING: POWER POINT (2019), available at <https://www.pnmforwardtogether.com/assets/uploads/PNM-Stakeholder-Outreach-July-18-2019.pdf>.

¹²⁹ Catherine Morehouse, *New Mexico regulators attempt to bypass San Juan securitization, to PNM's surprise*, UTILITY DIVE (July 12, 2019), <https://www.utilitydive.com/news/new-mexico-regulators-attempt-to-bypass-san-juan-securitization-to-pnms-s/558641/>.

¹³⁰ Darrell Proctor, *Carbon Capture Proposed to Save New Mexico Coal Plant*, POWER (Mar. 3, 2019), <https://www.powermag.com/carbon-capture-proposed-to-save-new-mexico-coal-plant/>.

¹³¹ *New Mexico regulators attempt to bypass San Juan securitization*, *supra* note 129.

¹³² Catherine Morehouse, *New Mexico governor wants to upend PRC as regulators skirt clean energy law*, UTILITY DIVE (Aug. 8, 2019), <https://www.utilitydive.com/news/new-mexico-governor-wants-to-upend-prc-as-regulators-skirt-clean-energy-law/560467/>.

¹³³ WELCOME TO THE PNM STAKEHOLDER MEETING: POWER POINT, *supra* note 128, at 12.

development of a 280 MW natural gas power plant as well as 370 MW of solar and 60 MW of battery storage (among 3 projects) within 100 miles of the San Juan plant.¹³⁴ The siting of replacement resources is also discussed within the ETA, as explored further below.

Colorado’s legislation allows for the use of “CO-EI bonds” to decrease the costs of accelerated retirement—a mechanism similar to that included in New Mexico’s ETA. The use of these bonds is at the filing utility’s discretion.¹³⁵ If a utility chooses to securitize the closure of a facility using CO-EI bonds, the CO PUC’s review of the proposal must follow numerous steps to ensure the process is in the public’s interest, including a couple considerations for the benefit of the communities affected by the proposed closure.¹³⁶ If energy assistance funds are included in the issuance of the bonds, the CO PUC may designate a third party to receive the funds and “to administer transition assistance on behalf of displaced workers and affected communities...,” which must occur by the time the facility ends operations.¹³⁷ If a local government or school board is funding a project through property taxes that would be affected by closure, and voters approved the project beforehand, the CO PUC’s order must include the provision of funds equal to those expected from pre-closure taxes.¹³⁸ However, as an incentive to build new generation in the same community, these payments are reduced by the amount of “property tax...derived from new electric infrastructure.”¹³⁹ Finally, the CO PUC is allowed to enforce any other conditions it finds are needed in order to “promote the public interest.”¹⁴⁰

III. Establishing Requirements for New Resources

States are taking many approaches to job creation within their borders, with some explicitly tied to replacing jobs lost during the transition to alternative energy generation sources. The examples below highlight the diversity of approaches, ranging from focusing on the development of new energy resources to employment requirements for new energy infrastructure to tax incentives for employers to hire local. Many of the programs are new or are still developing, so their efficacy remains untested and may ultimately depend on choices made during implementation.

New Mexico’s ETA requires utilities that abandon a qualifying facility to file for competitive procurement of replacement resources within one year thereafter.¹⁴¹ Replacement resources are defined as up to 450 MW “of nameplate capacity identified by the qualifying utility as replacement for a qualifying generating facility.”¹⁴² The utility score submitted proposals based on “cost, economic development opportunity and ability to provide jobs with comparable pay and benefits to those lost,” The law creates a preference for proposals

¹³⁴ *Id.*

¹³⁵ 2019 Colorado Senate Bill 236, *supra* note 74, at Art. 41.

¹³⁶ *Id.* at § 40-41-104.

¹³⁷ *Id.* at § 40-41-104(2)(I)(II).

¹³⁸ *Id.* at § 40-41-104(5).

¹³⁹ *Id.*

¹⁴⁰ *Id.* at § 40-41-104(6).

¹⁴¹ 2019 New Mexico Senate Bill 489, *supra* note 119, at § 3(A).

¹⁴² *Id.* at § 3(F).

that have low environmental impacts, that have high capital cost to fuel cost ratios, that may reduce the costs of reclamation and/or use former mining areas, and that prioritize the use of New Mexico workers.¹⁴³

Illinois legislators introduced two bills in 2019 that would focus on developing new energy generation resources and job creation in communities affected by fossil-fuel related closures. Both have since stalled, but they offer additional models for the use of energy transition funds. The Coal to Solar and Energy Storage Act would incentivize the development of renewable resources at sites of former coal generation facilities.¹⁴⁴ The Clean Energy Jobs Act is a more comprehensive approach to incentivizing renewable energy generation, energy storage, demand side reduction (including developing time-of-use rates), and transportation electrification.¹⁴⁵ This bill would create “Clean Energy Workforce Hubs” targeting low-income communities and former fossil fuel workers as well as quadruple the size of the Solar for All program outlined above.¹⁴⁶

Illinois’ Future Energy Jobs Act includes three sections aimed at expanding equitable employment in the energy sector: the aforementioned Solar for All and utility payments for training programs,¹⁴⁷ as well as explicit requirements for infrastructure investment and modernization, including employment requirements.¹⁴⁸ Each participating utility must create 2,000 full-time equivalent jobs, or 450 jobs if the utility is a “combination utility” (supplying both gas and electricity), during the program’s peak investment year.¹⁴⁹ Project specific investment details are also included within this section.¹⁵⁰ For each full-time equivalent the Illinois Commerce Commission finds the participating utility in deficiency, the utility is required to pay \$6,000 to a training grant fund administered by the Department of Commerce and Economic Opportunity Law.¹⁵¹

Another requirement from Colorado’s suit of legislation regards electric vehicle infrastructure. It mandates that all work done on the customer side of the utility meter to be done by licensed electricians,¹⁵² which ensures labor a role in the process. For electric vehicle charging stations owned by utilities, employees or contractors must have access to an apprenticeship program.¹⁵³

¹⁴³ *Id.* at § 3(A)-(C).

¹⁴⁴ 2019 Illinois House Bill 2713, *available at* <http://www.ilga.gov/legislation/billstatus.asp?DocNum=2713&GAID=15&GA=101&DocTypeID=HB&LegID=118938&SessionID=108>.

¹⁴⁵ 2019 Illinois Senate Bill 2132, *available at* <http://www.ilga.gov/legislation/billstatus.asp?DocNum=2132&GAID=15&GA=101&DocTypeID=SB&LegID=120304&SessionID=108>; *see also* *What is the Clean Energy Jobs Act?*, CITIZENS UTILITY BOARD, <https://www.citizensutilityboard.org/clean-energy-jobs-act/> (last visited Oct. 21, 2019).

¹⁴⁶ *Id.*

¹⁴⁷ *See supra* footnotes 111-17.

¹⁴⁸ 2016 Illinois Senate Bill 2814, *supra* note 111, at § 16-108.5.

¹⁴⁹ *Id.*

¹⁵⁰ *See id.*

¹⁵¹ *Id.*

¹⁵² 2019 Colorado Senate Bill 77, 40-5-107(3)(a), *available at* https://leg.colorado.gov/sites/default/files/2019a_077_signed.pdf.

¹⁵³ *Id.* at 40-5-107(3)(b).

The changes to CO PUC considerations, as discussed above, include expanding the use of “best value employment metrics” to all decisions involving electric resource acquisitions.¹⁵⁴ The CO PUC must also consider the “positive impacts on the long-term economic viability of Colorado communities.”¹⁵⁵ The “best value employment metrics” include the availability of apprenticeship programs, use of Colorado labor compared to outside labor, long term career opportunities, and the provision of industry-standard wages, healthcare, and pension benefits.¹⁵⁶ For new facilities that do not emit carbon dioxide, both utility employees and contractors must have access to a registered apprenticeship program.¹⁵⁷ The CO PUC is allowed to waive these requirements if the utility enters into a project labor agreement for construction or expansion of a facility.¹⁵⁸ These “best value employment metrics” are also found within complementary legislation.¹⁵⁹

The Connecticut Department of Energy and Environmental Protection’s (DEEP) recently solicited proposals for offshore wind development projects, and the criteria DEEP will use to evaluate the proposals share some similarities to those used in Colorado’s “best value employment metrics.”¹⁶⁰ DEEP will evaluate each proposal using a 100-point scale with 75 points allowed to quantitative factors and 25 for qualitative.¹⁶¹ While the quantitative considerations focus on the economic benefits of the proposals, both direct and indirect, the qualitative metrics include plans for the use of skilled labor, impacts on Connecticut’s economic development, and plans and practices to avoid or minimize potential damages to wildlife and natural resources as well as other industries dependent on those resources such as commercial fishing¹⁶²—this includes a requirement for an environmental and fisheries mitigation plan developed through a stakeholder engagement process.¹⁶³

Tax policies may provide another way to incentivize development that benefits transitioning communities. The State of Washington created a tiered tax incentive structure for the remittance of state and local taxes during the purchase of new generating facilities.¹⁶⁴ A 50% tax remittance is allowed if the Washington Department of Labor and Industries (Wash DLI) certifies that a project includes “procurement from and contracts with women, minority, or veteran-owned businesses; procurement from and contracts with entities that have a history of complying with federal and state wage and hour laws

¹⁵⁴ 2019 Colorado Senate Bill 236, *supra* note 74, at 40-2-129(1)(a).

¹⁵⁵ *Id.*

¹⁵⁶ *Id.*

¹⁵⁷ *Id.* at 40-2-129(2).

¹⁵⁸ *Id.* at 40-2-129(1)(c).

¹⁵⁹ *See* 2019 Colorado House Bill 1313, *supra* note 81.

¹⁶⁰ Such as the use of skilled labor and potential impacts on economic development. *See id.* at 40-2-129(1)(a); CONN. DEPT. OF ENERGY & ENVTL. PROT., NOTICE OF REQUEST FOR PROPOSALS FOR OFFSHORE WIND FACILITIES 19 (2019), *available at* [http://www.dpuc.state.ct.us/DEEPEnergy.nsf/c6c6d525f7cdd1168525797d0047c5bf/ccf12ec6cdf19ca7852584580072434d/\\$FILE/2019.08.16_Final.OSW.RFP.pdf](http://www.dpuc.state.ct.us/DEEPEnergy.nsf/c6c6d525f7cdd1168525797d0047c5bf/ccf12ec6cdf19ca7852584580072434d/$FILE/2019.08.16_Final.OSW.RFP.pdf).

¹⁶¹ *Id.* at pg. 19.

¹⁶² *Id.* at pp. 19-20.

¹⁶³ *Id.* at pg. 17.

¹⁶⁴ This incentive structure only applies to projects built between 2020 and the end of 2029. 2019 Washington Senate Bill 5116, *supra* note 89, at § 18(1)(d).

and regulations; apprenticeship utilization; and preferred entry for workers living in the area where the project is being constructed,” or a good faith effort to accomplish each of these requirements.¹⁶⁵ The purchaser may receive a 75% tax remittance if the above requirements are met and the project “compensates workers at prevailing wage rates determined by local collective bargaining”—though certain utility-scale solar developments are excluded.¹⁶⁶ All (100%) state and local taxes paid can be remitted if the project is developed using a community workforce agreement or project labor agreement, as certified by the Wash DLI.¹⁶⁷ Other tax incentives include a 100% exemption from state and local sales taxes for solar developments under 100 KW_{AC}¹⁶⁸ and “labor and services rendered in respect to installing machinery and equipment....”¹⁶⁹

Ohio’s House Bill 6, signed into law in July 2019, includes a provision that incentivizes the use of local labor by requiring developers of qualified energy projects to maintain a ratio of Ohio-domiciled construction or installation employees at 80% for solar and 50% for all others.¹⁷⁰ There is also a taxation mechanism where, depending on the ratio of Ohio-domiciled employees, companies would pay higher taxes for having lower local employment ratios.¹⁷¹

IV. Protecting Existing Jobs

In addition to new state efforts to plan for the energy transition, create new funding for communities experiencing energy-related job losses, and create new energy jobs. State responses also include efforts to protect existing energy jobs by delaying power plant retirements. This section focuses on three examples: an Illinois law requiring local utilities to purchase Zero Emission Credits (ZEC) from certain in-state nuclear power plants, the New York ZEC program implemented by the state’s Public Service Commission, and a 2019 Ohio law subsidizing nuclear and coal power plants. These examples differ in scope, process, and policy goals, but each approach cites job losses as a contributing justification.

Illinois and New York use Zero Emission Credits (ZECs) to support existing nuclear facilities. Generally, ZECs require electricity distribution companies to purchase credits from nuclear facilities as an acknowledgement of uncompensated public interest benefits.¹⁷² Illinois established ZEC requirements in its 2016 Future Energy Jobs Bill, which also increased the stringency of the state’s Renewable Energy Portfolio Standards and

¹⁶⁵ *Id.* at § 18(1)(c)(i)(A). Though developers of utility-scale solar must submit additional documentation to the Wash DLI. *Id.* at § 18(1)(c)(i)(B).

¹⁶⁶ *Id.* at § 18(1)(c)(ii).

¹⁶⁷ *Id.* at § 18(1)(c)(iii). Community workforce agreements or project labor agreements are defined as “prehire collective bargaining agreement[s] with one or more labor organizations that establishes the terms and conditions of employment for a specific construction project. *Id.* at § 18(3)(d).

¹⁶⁸ Applicable to projects built between July 1, 2019 and the end of 2029. *Id.* at § 18(1)(e)(i).

¹⁶⁹ Applicable to projects built between July 1, 2019 and the end of 2029. *Id.* at § 18(1)(e)(ii).

¹⁷⁰ 2019 Ohio House Bill 6 § 5727.75(F)(6)., available at <https://www.legislature.ohio.gov/legislation/legislation-summary?id=GA133-HB-6>.

¹⁷¹ *Id.* at § 5727.75(G).

¹⁷² Jonas Monast, *supra* note 5, at 685-86.

expanded state investments in energy efficiency.¹⁷³ The New York Public Service Commission (NY PSC) established the New York ZEC requirements as part of a larger Clean Energy Standard.¹⁷⁴ The NY PSC's order allows ZEC purchase obligations and Renewable Energy Credit (REC) requirements to work alongside each other, together with other programs, in order to achieve statewide GHG reduction goals.¹⁷⁵ For both programs, each utility that serves end-use customers is required to purchase an amount of ZECs that aligns with the portion of the total market they serve.¹⁷⁶ Similarly, these load-serving entities are required to obtain new renewable resources, as shown by the procurement of qualifying RECs, in increased percentages year over year.¹⁷⁷ Both states' ZECs proposals faced court challenges. Though the states were successful at both federal district court¹⁷⁸ and circuit court levels,¹⁷⁹ legal clarity was only achieved once the U.S. Supreme Court denied certiorari in April 2019.¹⁸⁰

Although the core motivation for the ZEC requirements is to preserve dispatchable, zero-carbon electricity generation,¹⁸¹ New York and Illinois policymakers also identified employment effects and other economic impacts as reasons to act. Before implementing the Clean Energy Standard (including the ZEC program), the NY PSC conducted a cost study. This study noted several benefits of maintaining nuclear facilities including 28,800 jobs, \$3.16 billion in Gross Domestic Product, and \$144 million in NY state tax revenues.¹⁸² The Illinois legislature adopted the Future Energy Jobs Bill after lawmakers requested the Illinois Commerce Commission, the Illinois Power Agency, the Illinois Environmental Protection Agency, and the Illinois Department of Commerce and Economic Opportunity (the Agencies) to write reports on the impacts of potential nuclear plant closures as well as make suggestions to address the impacts identified—the reports were released in 2015.¹⁸³ While Illinois' ZEC program is not explicitly linked to job retention, economic development,

¹⁷³ 2016 Illinois Senate Bill 2814, *supra* note 111; *see also* NUCLEAR ENERGY INST., ZERO-EMISSION CREDITS (Apr. 2018), *available at* <https://www.nei.org/CorporateSite/media/filefolder/resources/reports-and-briefs/zero-emission-credits-201804.pdf>.

¹⁷⁴ Case 15-E-0302, Case 16-E-0270, Order Adopting a Clean Energy Standard (N.Y. Pub. Serv. Comm'n, Aug. 1, 2016), *available at* <http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId=%7b44C5D5B8-14C3-4F32-8399-F5487D6D8FE8%7d>.

¹⁷⁵ *Id.* at pg. 2.

¹⁷⁶ *Id.* at pg. 19-20; 2016 Illinois Senate Bill 2814, *supra* note 111, at §1-75(d-5).

¹⁷⁷ *Id.* at pg. 14-17; *Id.* at §1-75(c). Though in New York the location of the projects may vary as utilities may satisfy the REC requirements by purchasing them from the New York State Energy Research and Development Authority or other sources, or by making alternative compliance payments. *Id.*

¹⁷⁸ Village of Old Mill Creek, *et al.*, v. Anthony Star, *et al.*, 2017 WL 3008289 (N.D. Illinois July 14, 2017); Coalition for Competitive Electricity, *et al.*, v. Audrey Zibelman, *et al.*, 272 F.Supp.3d 554 (S.D. New York July 25, 2017).

¹⁷⁹ Electric Power Supply Ass'n, *et al.*, v. Anthony Star, *et al.*, 904 F.3d 518 (7th Cir. Sept. 13, 2018); Coalition for Competitive Electricity, *et al.*, v. Audrey Zibelman, *et al.*, 906 F.3d 41 (2nd Cir. Sept. 27, 2018).

¹⁸⁰ Electric Power Supply Ass'n, *et al.*, v. Anthony Star, *et al.*, 139 S.Ct. 1547 (Apr. 15, 2019); Coalition for Competitive Electricity, *et al.*, v. John Rhodes, *et al.*, 139 S.Ct. 1547 (Apr. 15, 2019).

¹⁸¹ NAT'L CONF. OF ST. LEGISLATURES, STATE OPTIONS TO KEEP NUCLEAR IN THE ENERGY MIX 15-19, 25-26 (2017), *available at* http://www.ncsl.org/Portals/1/Documents/energy/StateOptions_NuclearPower_f02_WEB.pdf#page=29.

¹⁸² NY PSC Order Adopting a Clean Energy Standard, *supra* note 174, at pg. 61.

¹⁸³ ILL. COM. COMM'N, ILL. POWER AGENCY, ILL. ENVTL. PROTECTION AGENCY, ILL. DEPT. OF COM. & ECON. OPP., POTENTIAL POWER PLANT CLOSINGS IN ILLINOIS: IMPACTS AND MARKET-BASED SOLUTIONS (Jan. 2015), *available at* <https://www.icc.illinois.gov/programs/Potential-Nuclear-Plant-Closing-in-Illinois>.

or job retraining, the Agencies' reports did find that retiring three nuclear facilities, as would happen without intervention, would result in 2,500 direct job losses, 4,431 indirect job losses, and \$1.8 billion in reduced economic activity.¹⁸⁴ However, the report also found that “[j]ob losses and electricity price increases can be largely mitigated by fully developing energy efficiency and renewable energy resources.”¹⁸⁵ The Future Energy Jobs Bill included other provisions incentivizing such development, as discussed above.

Ohio's House Bill 6 provides subsidies for 2 nuclear reactors operated by FirstEnergy Solutions as well as 2 coal power plants owned by the Ohio Valley Electric Corp.¹⁸⁶ The bill provides payments to the owners of these generating facilities through 2027, at rates of approximately \$150 million per year for the nuclear facilities and \$50 million per year for the coal plants.¹⁸⁷ FirstEnergy is currently going through bankruptcy proceedings, potentially undermining the legislative intent of protecting workers that underlies HB 6. Though FirstEnergy's initial court filings argued that the company would be unable to honor existing union contracts, including pension plans;¹⁸⁸ the utility negotiated with union representatives and agreed to maintain the existing contracts, including the retirement plans.¹⁸⁹ This allows the ongoing process of restructuring to continue.¹⁹⁰

Conclusion

The energy system will continue to evolve to take advantage of low natural gas prices, falling costs for renewable energy, and improved energy storage technologies. While many of these changes will deliver benefits for ratepayers and help reduce greenhouse gas emissions, they will also have significant impacts on local economies that lose jobs as older power plants retire and mines close. This paper highlighted four approaches that states are using to help those communities adjust to a transitioning energy sector. It is still too early to determine the efficacy of many of these programs as there are simply too many implementation decisions yet to be made. Regardless of the approach, today's examples will inform the policy choices states choose to make tomorrow—however they choose to act.

¹⁸⁴ *Id.* at pg. 135.

¹⁸⁵ *Id.*

¹⁸⁶ 2019 Ohio House Bill 6, *supra* note 170; *see also* John Funk, *Ohio Gov DeWine Signs Controversial Nuke Subsidy Bill*, UTILITY DIVE (July 23, 2019), <https://www.utilitydive.com/news/breaking-ohio-passes-controversial-uke-subsidy-bill-by-one-vote/559342/>.

¹⁸⁷ *Id.*

¹⁸⁸ John Funk, *FirstEnergy Solutions Moves to Ditch Union Contracts for Bailed Out Plants, Drawing Democrats' Ire*, UTILITY DIVE (Aug. 14, 2019), <https://www.utilitydive.com/news/firstenergy-solutions-moves-to-ditch-union-contracts-for-bailed-out-plants/560236/>.

¹⁸⁹ John Funk, *FirstEnergy Solutions' Shift on Pensions Paves Way for Bankruptcy Exit*, UTILITY DIVE (Oct. 16, 2019), <https://www.utilitydive.com/news/firstenergy-solutions-shift-on-pensions-paves-way-for-bankruptcy-exit/565134/>.

¹⁹⁰ *Id.*