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Greening the Old New Deal: Strengthening Rural Electric Cooperative Supports and Oversight to Combat Climate Change

Gabriel Pacyniak

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ABSTRACT

New Deal cooperatives succeeded in electrifying rural America when for-profit utilities would not. Today, however, rural electric cooperatives are lagging behind when it comes to meeting the challenge of climate change. Cooperatives have collectively been slower to embrace the shift to low-carbon electricity than for-profit and municipal utilities and have served as a drag on state and federal clean energy and climate policies. This is partially because of the structural differences between cooperatives and other utilities, but also because of a weak and underdetermined federal and state regulatory structure. A few cooperatives in Colorado and New Mexico are seeking to lead the charge to a low-carbon electricity system, but they are finding themselves stymied by their own power supply cooperative. Drawing on insights from organization, public choice, and energy regulation theories, this Article argues that institutional incentives at power supply cooperatives inhibit prudent resource planning in a time of climate change. It concludes that cooperatives need significant changes to state and federal regulatory structures to counter these factors. These changes include subjecting power supply cooperatives to rigorous integrated resource planning requirements and providing state utility commissions oversight over power supply contract buy-out fees. It also includes reconsidering the wholesale electricity rate structure between power supply and distribution cooperatives.

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I. INTRODUCTION

One of the signature achievements of the New Deal was the electrification of rural America, which was accomplished chiefly through the formation of rural cooperatives bankrolled by federal loans.[1] At a time when less than 10% of the rural United States was electrified, President Franklin D. Roosevelt and Congress made available hundreds of millions of dollars in subsidized loans to bring electric power to farms across America.[2] Private, for-profit utilities refused to carry out this sweeping rural electrification effort – even with government subsidies – in large part because of the expense of serving poor and sparsely-populated areas.[3] Federal administrators therefore looked to a model for rural electrification that was used successfully in Europe and had been tried in a few areas in the United States: customer-owned non-profit cooperatives. The federal loan program gave preference to cooperatives and government-owned utilities over for-profit utilities and helped rural communities organize such cooperatives.[4]

The program, carried out by the Rural Electrification Administration ("REA") and later the Rural Utilities Service ("RUS"),[5] was strikingly successful. Two years after it was started in 1936, "more than 350 projects in

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1. ROBERT DALLEK, FRANKLIN D. ROOSEVELT: A POLITICAL LIFE 220 (2017).

2. Establishing the Rural Electrification Administration, Exec. Order No. 7037 (1935), *available at* https://www.presidency.ucsb.edu/documents/executive-order-7037-establishing-the-rural-electrification-administration [perma.cc/VP39-Z9BU]; Rural Electrification Act of 1936, 7 U.S.C. § 901 *et seq*. (2018); Carl Kitchens & Price Fishback, *Flip the Switch: The Impact of the Rural Electrification Administration 1935–40*, 75 J. ECON. HIST. 1161, 1163 (2015); *see generally* D. CLAYTON BROWN, ELECTRICITY FOR RURAL AMERICA: THE FIGHT FOR THE REA 50 (1980).

3. BROWN, *supra* note 2, at 50; Debra C. Jeter et al., *Democracy and Dysfunction: Rural Electric Cooperatives and the Surprising Persistence of the Separation of Ownership and Control*, 70 ALA. L. REV. 361, 381–82 (2018).

4. Jeter et al., *supra* note 3; BROWN, *supra* note 2, at 13–21. A frequently cited definition of a cooperative is:

> [A]n organization established by individuals to provide themselves with goods and services or to produce and dispose of the products of their labor. The means of production and distribution are those owned in common and the earnings revert to the members, not on the basis of their investment in the enterprise but in proportion to their patronage or personal participation in it. Cooperatives may be divided roughly into consumer cooperatives and producer cooperatives.

Puget Sound Plywood, Inc. v. Comm'r, 44 T.C. 305, 306 (1965).

5. BROWN, *supra* note 2. The REA was renamed the RUS in 1994 in a reorganization of the Department of Agriculture. Laurence J. Malone, *Rural Electrification Administration*, EH.Net (Mar. 16, 2008) https://eh.net/encyclopedia/rural-electrification-administration/ [perma.cc/6MQ3-CXJT].

forty-five states [were delivering electricity to] 1,450,000 farms."[6] These electricity distribution cooperatives went on to form power supply cooperatives – cooperatives of cooperatives – to build and own power plants and high-voltage transmission lines.[7] By the mid-1950s most American farms had electrical service.[8] The REA's electrification of America "is considered one of the most immediate and profound successes in the history of federal policy-making for the national economy."[9]

Today over 800 rural electric distribution cooperatives provide electricity to 42 million people in 48 states, approximately 13% of the U.S. population.[10] Many of these cooperatives purchase wholesale power from 62 power supply cooperatives.[11] Collectively, electric cooperatives serve 56% of the U.S. land mass and supply 13% of U.S. electricity.[12]

Now, however, addressing the challenge of climate change will require the "near-complete decarbonization" of the U.S. electricity industry by 2050.[13] Electric utilities will need to shut down nearly all of their coal and natural gas power plants and shift instead to renewable energy and other sources of zero-carbon electricity in the next twenty to thirty years.

This challenge occurs while the domestic electricity sector undergoes other dramatic changes. Building natural gas, wind, or solar power plants is now cheaper than building coal power plants due to rapid declines in the cost of natural gas fuel and renewable technologies.[14] And after 100 years of relying exclusively on centralized power plants, the domestic electricity system is now flooded with decentralized actors that can supply electricity and other services to the grid, upending the traditional utility business model.

Within this changing environment, and despite the lack of a comprehensive federal climate policy, utilities across the nation have significantly decarbonized their generating portfolios over the past decade. Since 2005, electric utilities have cut carbon dioxide emissions by 28%.[15]

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6. BROWN, *supra* note 2, at 69.

7. *See infra* Part I.B.

8. *See infra* Part I.C.

9. Malone, *supra* note 5.

10. Nat'l Rural Electric Cooperative Ass'n, *America's Electric Cooperatives: 2019 Fact Sheet*, AMERICA'S ELECTRIC COOPERATIVES (April 23, 2019), https://www.electric.coop/electric-cooperative-fact-sheet/ [perma.cc/48XG-WKKP].

11. *Id.*

12. *Id.*

13. THE WHITE HOUSE, United States Mid-Century Strategy for Deep Decarbonization 48 (2016), *available at* https://unfccc.int/files/focus/long-term_strategies/application/pdf/mid_century_strategy_report-final_red.pdf [perma.cc/S3U7-XAWS].

14. *Levelized Cost of Energy Analysis*, LAZARD (Nov. 8, 2018), https://www.lazard.com/perspective/levelized-cost-of-energy-and-levelized-cost-of-storage-2018/ [perma.cc/46MA-QPQR].

15. Perry Lindstrom, *Carbon Dioxide Emission from the U.S. Power Sector Have Declined 28% Since 2005*, U.S. ENERGY INFOR. ADMIN. (Oct. 29, 2018), https://www.eia.gov/todayinenergy/detail.php?id=37392 [perma.cc/T64R-YMNB].

While these reductions are not sufficient to address climate change, they represent critical and needed progress in the absence of a comprehensive federal climate policy.

These utilities are cutting carbon primarily because it makes economic sense. To take advantage of low natural gas prices resulting from the fracking boom, utilities have shifted from coal-fired power plants to cheaper, less-carbon-polluting natural gas power plants. Federal renewable energy tax credits, state renewable energy mandates, and falling renewable technology costs have combined to make wind energy, and increasingly solar energy, the cheapest forms of new electricity to construct.[16] Moreover, most utility executives are betting that their firms will eventually be subject to substantial greenhouse gas ("GHG") standards, even if the Trump Administration has rolled back the climate regulations established by the Obama Administration.[17] Putting all of these factors together, utilities have generally been shifting to lower-carbon electricity generation portfolios.

Note that several reports found that power sector carbon dioxide emissions rose in 2018 after over a decade of reductions. *Preliminary US Emissions Estimates for 2018*, RHODIUM GROUP (Jan. 8, 2019), https://rhg.com/research/preliminary-us-emissions-estimates-for-2018/ [perma.cc/8YA3-4QU6].

16. *Levelized Cost of Energy Analysis*, *supra* note 14, at 2.

17. Affordable Clean Energy Rule, 84 Fed. Reg. 32,520 (2019). The Trump Administration's Affordable Clean Energy Rule rescinded and replaced the Obama Administration's Clean Power Plan regulation. *Id.* Whereas the Clean Power Plan was projected to reduce US electricity-sector carbon emissions by over 200 million short tons in the fifth year of compliance and over 400 million short tons in the tenth year compared to a no-rule scenario, the Affordable Clean Energy Rule is never projected to decrease emissions by more than 12 million short tons in any year. *Compare* U.S. ENVTL. PROTECTION AGENCY, FINAL CLEAN POWER PLAN, REGULATORY IMPACT ANALYSIS ES-4 and ES-5 (2015), https://www3.epa.gov/ttnecas1/docs/ria/utilities_ria_final-clean-power-plan-existing-units_2015-08.pdf [perma.cc/SE8Q-RDWM], *with* U.S. ENVTL. PROTECTION AGENCY, FINAL CLEAN POWER PLAN, REGULATORY IMPACT ANALYSIS ES-4 and ES-5 (2019), https://www.epa.gov/stationary-sources-air-pollution/regulatory-impact-analysis-repeal-clean-power-plan-and-emission [perma.cc/3QED-C6DW]; *see also* Umair Iran, *Trump's EPA Just Replaced Obama's Signature Climate Policy with a Much Weaker Rule*, VOX (June 19, 2019), https://www.vox.com/2019/6/19/18684054/climate-change-clean-power-plan-repeal-affordable-emissions [perma.cc/Z3L2-LTSF]. In industry surveys utility executives broadly state that they would prefer climate regulation, and analysts cite the expectation of future regulations as one of the reasons that many utilities are setting or maintaining climate goals even during the Trump Administration's rollback of the Clean Power Plan. Amy Gahran, *State of the Electric Utility: 2019 Survey Report* 48 (2019), https://resources.industrydive.com/State-of-the-Electric-Utility-2019-Survey-Report [perma.cc/HF82-M3CB]; Dan Bakal, *Committing to Climate: Transformation is Underway in the US Power Sector*, UTILITY DRIVE (Apr. 22, 2019),

Cooperative utilities, however, have generally lagged behind in this shift. Power supply cooperatives rely on coal-fired power plants to a much greater degree than for-profit or municipal utilities, and they have been slower to retire these power plants.[18] From 2009 to 2017, the electric power sector as a whole reduced carbon emissions by 23%, but cooperatives reduced emissions by only 9%.[19] Among the 100 largest power producers in the United States – which includes ten power supply and distribution cooperatives – six out of the top ten most carbon-intensive emitters were cooperatives.[20] In an important case study highlighted in this Article, Tri-State Generation and Transmission Association, Inc. ("Tri-State") – one of the largest power supply cooperatives – has until recently repeatedly stymied efforts of some of its distribution cooperatives to accelerate a transition to a lower-carbon electricity system.[21] Tri-State also was endeavoring to build a new coal-fired power plant at a time when most utilities were shifting away from coal.[22] Cooperatives have also been slower to move to renewable energy and to implement energy efficiency.[23]

This Article seeks to explain why cooperatives are lagging behind. Drawing on the insights of organization theory, public choice, and theories of energy governance, this Article argues that a combination of structural barriers, institutional incentives, and a weak system of governance and regulation inhibit prudent resource planning in the face of the climate change challenge. The Article also identifies ways that cooperative oversight and supports can be strengthened to facilitate the transition to a low-carbon electricity system.

Even though rural electricity cooperatives serve a relatively small portion of the population, they represent an important piece of the puzzle in finding policy solutions for climate change. For one, cooperatives are responsible for a significant portion of electric-sector carbon emissions. Cooperatives account for 6% of the carbon emissions of the largest 100 utilities even though they account for only 4% of electricity generated by this

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https://www.utilitydive.com/news/committing-to-climate-transformation-is-underway-in-the-us-power-sector/553067 [perma.cc/NK8P-SH2X].

18. *See infra* Part II.B.

19. *Compare* Nat'l Rural Electric Cooperative Ass'n, *supra* note 10 (citing to EPA and EIA data), *with* ENERGY INFORMATION ADMINISTRATION, U.S. Electric Power Industry Estimated Emissions by State EIA-767, EIA-906, EIA-920, and EIA-923, https://www.eia.gov/electricity/data/state/ [perma.cc/6SC6-SZ7M] (carbon dioxide (CO2) emissions for total electric power industry, 2009-2017).

20. CHRISTOPHER VAN ATTEN ET AL., BENCHMARKING AIR EMISSIONS OF THE 100 LARGEST ELECTRIC POWER PRODUCERS IN THE UNITED STATES 18 (2019), https://www.mjbradley.com/sites/default/files/Presentation_of_Results_2019.pdf [perma.cc/3FKL-XP3T]. This means that they emitted more carbon pollution for each megawatt hour of electricity produced across their fleet of power plants. *Id.*

21. *See infra* Part II.B.

22. *See infra* Part II.B.

23. *See* Miriam Fischlein et al., *Carbon Emissions and Management Scenarios for Consumer-Owned Utilities*, 12 ENV. SCI. & POL'Y 778, 782 (2009).

group.[24] Achieving decarbonization will require dramatic reductions from all electric utilities, including cooperatives.

Cooperatives are important for other reasons. Cooperatives serve less affluent communities, and these communities will feel the effects of any rate increases to a greater degree.[25] This is doubly true because unlike for-profit utilities, any business losses sustained by cooperatives will also be borne by cooperative member-owners as a loss in the equity that they have paid into the cooperative (referred to as patronage capital).[26] No separate shareholders absorb losses from bad business decisions made by cooperative managers. Therefore, shifting to a low-carbon electricity system poses unique equity issues for rural electricity cooperatives.

Moreover, polling has found that rural residents are somewhat less likely to believe in climate change than their urban counterparts.[27] At the same time, cooperatives wield outsized political power at both federal and state levels, and they have used that power to lobby against federal and state climate and clean energy legislation.[28] Cooperatives therefore also pose a unique political challenge when it comes to advancing climate policy. Identifying and mitigating structural and governance barriers that make it harder for cooperatives to transition to a low-carbon economy can help reduce cooperative political opposition to climate policymaking.

The importance of rural electricity cooperatives for climate policy was underscored by 2020 Democratic Presidential primary campaigns. Several prominent candidates – Bernie Sanders, Elizabeth Warren, and Jay Inslee – released proposals focusing on how to equitably reduce emissions in rural

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24. VAN ATTEN ET AL., *supra* note 20, at 18. Calculations of the author based on 2017 data set published by M.J. Bradley and Associates supporting their Benchmarking Air Emissions report. *Id.*

25. *See* NAT'L RURAL ELEC. CO-OP. ASS'N, COMMENTS ON PROPOSED REPEAL OF CARBON POLLUTION EMISSIONS GUIDELINES FOR EXISTING STATIONARY SOURCES (2018). "In 2015, the median household income for electric cooperative consumers was 11% below the national average." *Id.* at 8.

26. *See infra* Part III.C.

27. Peter D. Howe et al., *Geographic Variation in Opinions on Climate Change at State and Local Scales in the USA*, 5 NATURE CLIMATE CHANGE 596, 604 (2015). Belief that global warming is happening is "significantly lower" in rural counties than in the nation's largest cities. *Id.*

28. Fischlein et al., *supra* note 23, at 780.

communities.[29] Bernie Sanders held up cooperatives as a superior alternative to for-profit utilities because they represent a form of public ownership.[30]

An in-depth examination evidences, however, that cooperatives are underperforming their for-profit and municipally-owned utility counterparts when it comes to decarbonization at this time. The New Deal demonstrated that the cooperative model can harness community initiative to solve problems the market fails to address. This Article aims to identify how the current system of cooperative regulation and incentives can fail to prompt prudent resource planning by cooperatives in the face of climate change and to identify ways that the system can be adapted to better harness the benefits of cooperatives to meet this challenge.

Many energy law scholars have argued that governance and regulation of the energy sector will need to change significantly to facilitate the shift to a low-carbon economy.[31] A few scholars have recently focused on the role that public municipal utilities can play in this shift.[32] Several scholars have also critiqued the rural electric cooperative system more generally,

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29. *See The Green New Deal*, BERNIESANDERS.COM, https://berniesanders.com/en/issues/green-new-deal/ [perma.cc/7XHL-CSR7] (last visited Feb. 16, 2020) (promising that all clean energy will be publicly owned, including through cooperatives); Elizabeth Warren, *My Plan for 100% Clean Energy*, MEDIUM (Sept. 3, 2019), https://medium.com/@teamwarren/100-clean-energy-for-america-de75ee39887d [perma.cc/5NNW-ZPJP] (promising to provide grants for clean energy projects through RUS); *Growing Rural Prosperity*, JAY INSLEE FOR GOVERNOR, https://www.jayinslee.com/issues/growing-rural-prosperity [perma.cc/M3LZ-XYBY] (last visited Feb. 14, 2020) (promising to create a "Next-Generation Rural Electrification initiative").

30. *The Green New Deal*, *supra* note 29.

31. *See e.g.*, William Boyd, *Public Utility and the Low-Carbon Future*, 61 UCLA L. REV. 1614, 1621–22 (2013) (arguing that a revitalized and broad sense of public utility will be necessary "to decarbonize the power sector by midcentury"); Joel B. Eisen & Felix Mormann, *Free Trade in Electric Power*, 2018 UTAH L. REV. 49 (2018) (proposing a legal framework for a free electricity trading system that could be more responsive to climate change); Emily Hammond & David B. Spence, *The Regulatory Contract in the Marketplace*, 69 VAND. L. REV. 141 (2016) (proposing an updated version of the "regulatory contract" that can mediate between competing energy policy visions for more competitive markets and an "ever-greener" mix of electricity generation); Inara Scott, *Teaching an Old Dog New Tricks: Adapting Public Utility Commissions to Meet Twenty-First Century Climate Challenges*, 38 HARV. ENVTL. L. REV. 371 (2014) (arguing that Public Utility Commission regulatory structure must be changed in order for the "utility system [to] become significantly greener, more efficient, and less reliant on fossil fuels"); Hannah J. Wiseman & Hari M. Osofsky, *Regional Energy Governance and U.S. Carbon Emissions*, 43 ECOLOGY L.Q. 143 (2016) (arguing that lowering carbon emissions will require enhancements of "regional approaches to generation capacity planning and transmission expansion, the interconnection of generator to lines, and energy markets").

32. *See* Uma Outka, *Cities and the Low-Carbon Grid*, 46 ENVTL. L. 105 (2016); Garrick B. Pursley & Hannah J. Wiseman, *Local Energy*, 60 EMORY L.J. 877 (2010); Shelley Welton, *Public Energy*, 92 N.Y.U. L. REV. 267 (2017).

highlighting management problems, economic inefficiency, and a failure to provide low rates.[33] Until now, however, there has been no legal scholarship that has considered how oversight of and incentives for rural electric cooperatives will need to change to support decarbonization of the electricity system.

This Article proceeds as follows: Part I describes how and why the New Dealers turned to cooperatives to electrify rural America and why cooperatives were largely exempted from the economic regulation imposed on for-profit utilities. It concludes by highlighting some of the successes and challenges that cooperatives have faced. Part II presents an overview of available data demonstrating that cooperatives lag behind when it comes to shifting to a lower-carbon resource mix. It also identifies two important structural barriers: many cooperatives built coal-fired power plants in the 1980s because of a federal mandate and many cooperatives cannot take direct advantage of federal renewable energy tax credits. Part II concludes with a case-study of Tri-State and its member distribution cooperatives, demonstrating how and why a power supply cooperative can frustrate attempts by member cooperatives seeking to accelerate clean energy deployment. It also describes how member unrest and state policies have prompted a significant change of course. Part III identifies four factors that inhibit prudent resource decision making within cooperatives. These include the frequently distant and diffuse benefits of addressing climate change, the counter incentives cooperative managers have to invest in fossil fuel power plants that grow organizational size and revenue, and the threat to the power supply cooperative business model presented by shifting to low-carbon resources. Part IV concludes by suggesting regulatory changes as well as incentives and technical support that would remove structural barriers, counter unhelpful institutional incentives and strengthen resource planning oversight. Chief among these changes is subjecting power supply cooperatives to rigorous integrated resource planning ("IRP") requirements and power supply contract buy-out fee oversight by state public utility commissions or the Federal Energy Regulatory Commission ("FERC"). It also suggests that the RUS support the abandonment of coal-fired power

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33. *See* W. G. Beecher, *Is It Time to Revoke the Tax-Exempt Status of Rural Electric Cooperatives?*, 5 WASH. & LEE J. ENERGY, CLIMATE, & ENV'T 221 (2013) (arguing rural cooperatives have begun to resemble for-profit entities and therefore their tax-exempt status should be revoked); Jim Cooper, *Electric Co-Operatives: From New Deal to Bad Deal Policy Essay*, 45 HARV. J. ON LEGIS. 335 (2008); Richard P. Keck, *Reevaluating the Rural Electrification Administration: A New Deal for the Taxpayer*, 16 ENVTL. L. 39 (1985) (arguing cooperative subsidies are a bad deal for taxpayers with "little or no public policy justification remaining"); Jeter et al., *supra* note 3 (arguing that creating a market for cooperatives could create improvements in cooperative governance).

plants and encourage revisions to the wholesale electricity rate structure between power supply and distribution cooperatives.

Cooperatives realized a singular achievement in the electrification of rural America. Strategic changes to the oversight and support mechanisms of cooperatives can better position cooperatives to lead a similar response to the challenge of climate change.

II. COOP HISTORY AND GOVERNANCE

To understand why cooperatives lag behind in the shift to the low-carbon economy, it's important to understand how cooperatives came to electrify America and how a system of federal and state regulation was established over them. This Section first describes how the federal government promoted and financed a cooperative rural electricity system; it then explains why cooperatives were largely exempted from a system of regulation that was established for for-profit utilities. The last part of this Section overviews historical successes and challenges faced by these member-owned institutions.

A. New Dealers Turned to Coops to Electrify Rural America[34]

1. Cities Electrified Quickly; the Countryside Did Not

The city of Cleveland was the first to light up its town square in 1879, and after that both the technology and business of electricity developed rapidly.[35] During its first couple of decades, electricity was produced in small generating stations in towns and cities and transmitted short distances to homes and businesses.[36] Electric companies competed to provide services in towns. By the end of the World War I, most city residents had electricity.[37]

The countryside was another story. Rural electrification posed economic challenges. Farms were far apart – on average there were only two to five dwellings per mile – and the distances between residences required a much greater investment in poles and wires.[38] Utilities generally expected rural

34. In general, for the history of the development of the early electricity sector and lead up to the creation of the REA, *see* BROWN, *supra* note 2, at 13–21; RICHARD RUDOLPH & SCOTT RIDLEY, POWER STRUGGLE: THE HUNDRED-YEAR WAR OVER ELECTRICITY 82 (1986); PHILIP J. FUNIGIELLO, TOWARD A NATIONAL POWER POLICY: THE NEW DEAL AND THE ELECTRIC UTILITY INDUSTRY, 1933–1941 (1973); Kitchens & Fishback, *supra* note 2; H.S. Person, *The Rural Electrification Administration in Perspective*, 24 AGRIC. HIST. 70 (1950); Morris Llewellyn Cooke, *The Early Days of the Rural Electrification Idea: 1914–1936*, 42 AM. POL. SCI. REV. 431 (1948).

35. RUDOLPH & RIDLEY, *supra* note 34, at 24.

36. *Id.* at 28.

37. *See* Kitchens & Fishback, *supra* note 2, at 1163 ("By 1930, almost every major city and town in the United States was electrified.").

38. FREDERICK WILLIAM MULLER, PUBLIC RURAL ELECTRIFICATION 7–8 (1944).

customers to finance extensions of distribution service.[39] Moreover, farmers had limited income, and electric power equipment was not yet widely adopted, so utilities expected low revenue with which to amortize investments into distribution infrastructure.[40]

Only 10% of U.S. farms were electrified by the 1930s.[41] Other countries were proving that widespread rural electrification was possible. Sweden, France, Germany, Czechoslovakia and Denmark had achieved 50 to 90% rural electrification at that time.[42]

Progressives of the 1920s, and eventually the New Dealers of the 1930s, seized on rural electrification as a solution to multiple challenges plaguing rural America, including poor health outcomes and quality of life. Electrification could substantially reduce work on the farm – especially for women – and provide more leisure time through electrified lighting.[43] Electrification could also reduce disease, as electric pumps would bring running water and indoor plumbing.[44] Moreover, progressives were concerned about the increasing migration from farms to cities, and they viewed electrification as one of the attractions of urban living.[45]

The for-profit electric industry also expressed interest in rural electrification as a potential way to grow business. In 1923, the electric power industry's trade association initiated an effort to educate famers on the uses of electricity and launch demonstration projects in a few communities.[46] It did not address the high cost of rural power, however, and as a result, it failed to achieve any significant increase in rural electrification.[47]

39. *Id.* at 16.

40. BROWN, *supra* note 2, at 5.

41. *Id.* at 16. Similarly, in 1925 in Pennsylvania, only 12% of farms had electricity of any type. REPORT OF THE GIANT POWER SURVEY BOARD TO THE GENERAL ASSEMBLY OF THE COMMONWEALTH OF PENNSYLVANIA, at 37 (1925) [hereinafter GIANT POWER SURVEY].

42. BROWN, *supra* note 2 at 16–17. The geography of rural communities in these countries made electrification easier. For example, in many instances, farmers would live in a town.

43. HOWARD HAMPTON & BILL RENO, PUBLIC POWER: THE FIGHT FOR PUBLICLY OWNED ELECTRICITY 60 (2003).

44. GIANT POWER SURVEY, *supra* note 41, at v.

45. Jean Christie, *Giant Power: A Progressive Proposal of the Nineteen-Twenties*, 96 PA. MAG. HIST. & BIOGRAPHY 480, 486 (1972). "The greatest menace to the national prosperity and general welfare of the United States . . . is the alarming decline of American agriculture and the astounding migration from the farms to the cities." *Id.* (citing Basil Manly, a future appointee to the Federal Power Commission).

46. BROWN, *supra* note 2, at 3.

47. *Id.* at 3–12. The effort was led by the Committee on the Relation of Electricity to Agriculture ("CREA").

Eventually, the effort to electrify rural America became wrapped up in the great debate of private versus public power in the 1920s. Progressives became increasingly skeptical of for-profit utilities, even after a system of state rate-regulation became widely implemented.[48] Progressives criticized utility companies for seeking ever-greater returns on equity, for capture of regulatory agencies, and for bribery of politicians.[49] Groups like the National Public Government League and Public Ownership League touted public municipal ownership as the better alternative.

Meanwhile, progressives were developing a grand vision of hydropower resource development that could also supply electricity to rural America, a vision that was to become an important foundation of the New Deal. Developing better electricity transmission and larger generators meant that for the first time a network of electricity lines could bring power to large service territories.[50] Harnessing America's water power resources could provide flood control, economic development, and electricity to rural communities.[51] The concept had already been proven in Ontario, Canada, where the publicly-owned Hydro-Electric Power Commission had built a dam at Niagara Falls and was providing electricity to the province at cheaper rates than those in America.[52] The program included government subsidies for electrification of rural Ontario.[53]

In the United States, Pennsylvania Governor Gifford Pinchot seized on this vision in a plan called "Giant Power," which proposed to develop a large, interconnected grid that could electrify rural Pennsylvania.[54] Pinchot's team hoped that Giant Power could create a "veritable 'back to the land' movement" and diffuse industrial development so that even small towns "are on the same footing as large centers."[55]

48. *See infra* Part I.B.

49. *Id.*

50. Christie, *supra* note 45, at 481 ("By 1920 engineers were learning how to transmit high voltage current over distances of two hundred miles or more.").

51. *See* HAMPTON & RENO, *supra* note 43, at 77.

52. *Id.* at 87, 92.

53. *Id.* Legislation providing "bonus" subsidies for the primary cost of transmission to rural areas was passed in the early 1920s, more than a decade before the REA. By the 1950s, however, the REA effort had surpassed Hydro Ontario in providing power to rural communities. *Id.* at 51–66.

54. *See* Gifford Pinchot, *Giant Power*, 51 THE SURVEY 561 (1924).

> Giant Power means giving to every producer of current an opportunity to add to a common stock and to every user an opportunity to draw therefrom. Giant Power mans the practice on the broadest possible scale of every possible economy, such as the pooling of standby facilities and the elimination of every waste, such as that due to a low power factor.

Id. Pinchot's plan proposed this electrification without hydropower, but rather through a system of that interconnected central generating stations that could make use of Pennsylvania's coal resources. *Id.*

55. *Id.* at 561–62. "[O]ur first concern will be with the small user – particularly with the farmer." *Id.*

For-profit companies had their own vision of an interconnected electricity system: "superpower."[56] Unlike Giant Power, however, superpower did not include in its vision either greater public regulation or a widespread rural electrification effort.[57]

As the debate of public versus private power intensified, the electricity industry used aggressive tactics to prevent or buy out municipal public power utilities – including "rate wars, buy-out campaigns, harassing litigation, and a massive propaganda campaign."[58]

This coincided with a period of rapid consolidation in the industry. Through a series of mergers and consolidations under holding companies, sixteen holding companies controlled 85% of the nation's electricity by 1935.[59] For-profit electricity companies also aggressively sold watered-down stock to middle-Americans. Some of these holding companies imploded during the Great Depression.[60]

For all of these reasons, electric power became a major issue during the presidential election of 1932.[61] In a speech delivered in Portland, Oregon, Franklin D. Roosevelt argued that for-profit utilities were over-charging customers by inflating capital costs and fleecing ordinary investors.[62] Moreover, Roosevelt argued that for-profit utilities were also responsible for the lack of rural electrification, saying that "many selfish interests in control of light and power industries have not been sufficiently farsighted to establish water rates low enough to encourage widespread public use."[63]

Roosevelt called for federal regulation of holding companies.[64] He also argued that water power resources should be publicly owned – "should belong

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56. *See* W.S. MURRAY, *A Superpower System for the Region Between Boston and Washington* 9 (1921), http://pubs.er.usgs.gov/publication/pp123 [perma.cc/RFT6-8ATJ] (last visited Feb. 17, 2020). Superpower arose out of concerns that electricity demands of industry on the eastern seaboard during World War I would outstrip electricity supply. Congress subsequently commissioned a report on the development of a "Superpower System" for the northeast. *Id.*

57. GIANT POWER SURVEY, *supra* note 41, at vii. "Giant Power and super-power are as different as a tame elephant and a wild one . . . . The place for the public is on the neck of the elephant, guiding its movements, not on the ground helpless under its knees." *Id.*

58. RUDOLPH & RIDLEY, *supra* note 34, at 47.

59. *Id.* at 46–47.

60. *Id.* at 60.

61. *Id.* at 62.

62. Address of Governor Franklin D. Roosevelt (Sept. 21, 1932), *in* 1 FRANKLIN D. ROOSEVELT – "THE GREAT COMMUNICATOR": THE MASTER SPEECH FILES, 1898, 1910–1945, File No. 518, at 7–12, *available at* https://www.fdrlibrary.marist.edu/_resources/images/msf/msf00530.

63. *Id.* at 14.

64. *Id.* at 16–17.

to all the people . . . [and be] transferred into usable electrical energy and distributed at the lowest possible cost."[65] In Roosevelt's vision, federally-owned public power – along with local publicly-owned utilities – would serve as a "birch rod" or "yard stick" that could be used as a measure to ensure that private for-profit utility rates were fair.[66] He also envisioned that these federally-owned facilities would facilitate rural electrification.[67]

2. After Exhausting Other Options, the Roosevelt Administration Settled on Cooperatives

After Roosevelt was elected in 1932, his Administration initially focused on creating the Tennessee Valley Authority ("TVA") and on taming the holding companies.[68] Behind the scenes, however, Morris Llewyln Cooke – one of Roosevelt's TVA Commissioners who had also previously directed Pinchot's Giant Power effort – lobbied the Administration to develop a rural electrification plan.[69] The National Grange and American Farm Bureau Federation, the two leading agricultural civic organizations, also called for a federal rural electrification program.[70]

Cooke's ideas finally gained traction from the Administration when pitched as a way to fulfill the jobs goals of the New Deal.[71] In April of 1935, Congress passed the Roosevelt Administration's second major Depression-relief appropriation.[72] As part of the nearly $5 billion appropriation, the bill earmarked $100 million for rural electrification.[73] A month later, Roosevelt

65. *Id.* at 25.

66. *Id.* at 23.

67. *Id.* at 27. "The power issue, when vigorously handled in the public interest, means . . . reduced rates and increased use in millions of urban and rural homes." *Id.*

68. BROWN, *supra* note 2, at 17–19. The focal point of the public vs. private power debate in the 1920s was a half-completed damn of the Tennessee River at Muscle Schoals in the Tennessee Valley. *Id.* Progressives argued that the government should complete and own the damn; conservatives and industry were opposed to government controlling such an economic interest. *Id.* Congress established TVA through legislation in 1933. Tennessee Valley Authority Act, ch. 32, 48 Stat. 58 (1933). After nine years of hearings, Congress passed the Public Utility Holding Company Act in 1935, which subjected holding companies to regulation by both the Securities and Exchange Commission (SEC) and the Federal Power Commission (FPC, subsequently renamed the Federal Energy Regulatory Commission (FERC)). Public Utility Holding Company Act, ch. 687, 49 Stat. 803 (1935).

69. *See* BROWN, *supra* note 2, at 26–29.

70. FUNIGIELLO, *supra* note 34, at 135–36.

71. Person, *supra* note 34, at 70 ("It should be emphasized that the REA was established under conditions that made it one element in a general program of relief of unemployment. This was the controlling factor in its initial activities.").

72. FUNIGIELLO, *supra* note 34, at 137.

73. Emergency Relief Appropriation Act of 1935, ch. 48, 49 Stat. 115 (1935).

created the REA through an executive order, tasking it with developing "generation, transmission, and distribution of electric energy in rural areas."[74]

Roosevelt appointed Cooke as the first Administrator of the REA. Although Cooke was a public power supporter, he believed that the skill and expertise of for-profit utilities would be necessary to electrify rural America, especially given the need to expend $100 million in a short time period.[75]

In response to Cooke's entreaties, the for-profit utilities proposed a limited plan that focused on providing electricity to large, energy-intensive uses such as "dairying, irrigation, or poultry farming."[76] They did not see small farmers and other rural residents as viable customers, even though early rural electrification pilot projects demonstrated that individual households would become significant consumers of electricity as they acquired electric appliances.[77] Moreover, the costs projected by the utilities were much higher than those anticipated by the Administration.[78] The utilities proposed spending over $113 million to connect 351,000 rural customers,[79] a far cry from the New Deal vision of bringing electricity to all rural communities. Cooke summed up the proposal as a deal where "the federal government should risk its entire capital appropriation while the industry reaped the profits."[80] Further negotiation with the for-profit utilities was shut down after the companies squared off with the Administration over legislation that would significantly restrict the holding company corporate structure used by most of the companies at that time.[81]

Cooke also convened representatives of municipal public power utilities to see if they could carry out rural electrification.[82] The municipal utilities raised concerns about cost, as well as legal and political issues.[83]

With for-profit utilities and municipal power companies dismissed as possible solutions, the last remaining option was the cooperative model.

Farmers were already familiar with cooperatives as an organizational model because of the prevalence of cooperatively-owned grain elevators and

74. Exec. Order No. 7,037, Establishing the Rural Electrification Administration (1935), *available at* https://www.presidency.ucsb.edu/node/208659 [perma.cc/5F5W-893X].

75. BROWN, *supra* note 2, at 48–49.

76. *Id.* at 50–51.

77. *Id.*

78. *Id.* at 55.

79. FUNIGIELLO, *supra* note 34, at 141.

80. *Id.* at 142.

81. BROWN, *supra* note 2, at 48–52.

82. *Id.* At 52.

83. *Id.*

farm produce marketing cooperatives.[84] In some European countries – particularly Sweden – cooperatives had been used to electrify rural communities.[85]

A small number of electric cooperatives were already functioning successfully in the United States, chiefly in Iowa, Washington, Minnesota, and Wisconsin.[86] As part of the process of standing up TVA, the residents of Alcorn County, Mississippi, established an electric cooperative to provide distribution service to their poor agricultural county and its town of Corinth.[87] Within six months, the Alcorn County Electric Cooperative proved to be solvent.[88] It served as an important example that farmers – even poor, one-crop farmers in the South – could use the cooperative model to electrify their communities.[89]

When Cooke's repeated efforts to encourage for-profit utilities to present proposals for area coverage at reasonable cost bore no fruit, he resigned himself to the cooperative as the model for rural electrification.[90]

Cooke also realized that achieving widespread electrification would require making REA a permanent agency with additional funding. Cooke and his Congressional allies achieved this result in 1936 with the passage of the Rural Electrification Act ("RE Act").[91] The RE Act appropriated $410 million to the REA over a 10-year period to make loans for rural electrification.[92] The Act required that the REA administrator give preference to public agencies and "cooperative . . . associations."[93]

The vision of cooperatives embraced by the REA was based on cooperative principles developed nearly 100 years earlier. The Rochdale Society of Equitable Pioneers, a group of weavers and other tradespeople, formed a consumer cooperative in England in 1844.[94] The "Rochdale"

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84. BROWN, *supra* note 2, at 53; HENRY HANSMANN, THE OWNERSHIP OF ENTERPRISE 120, 124–25 (1996). In 1935 the Division of Self-Help Cooperatives of the Federal Emergency Relief Administration published a study of the suitability of the cooperative model for rural electrification, and perhaps not too surprisingly, found that cooperatives would be a viable model. UDO RALL, FEDERAL EMERGENCY RELIEF ADMINISTRATION, A STUDY OF COOPERATIVE CONSUMER ASSOCIATIONS FOR RURAL ELECTRIFICATION (1935), *available at* https://catalog.hathitrust.org/Record/101683939 [perma.cc/3NP5-NT8H].

85. BROWN, *supra* note 2, at 16.

86. *Id.* at 13–14.

87. *Id.* at 36–37.

88. *Id.*

89. *Id.* at 38.

90. *See id.* at 55.

91. *Id.* at 56–57, 65.

92. Rural Electrification Act of 1936, Pub. L. No. 74-605, § 3, 432 Stat. 1363, 1364 (1936).

93. *Id.* § 4, 432 Stat. at 1365.

94. *See* ISRAEL PACKEL, THE ORGANIZATION AND OPERATION OF COOPERATIVES 4–5 (4th ed. 1970).

principles still shape cooperatives around the world across all sectors of the economy.[95]

As restated by the REA in its guidance documents, some of the key Rochdale principles were as follows: (1) A cooperative's membership is to be open to all; (2) The cooperative is to be controlled democratically, with each member receiving one vote; (3) Members receive equity in proportion to their patronage (i.e., how much electricity they purchase); and (4) Members are not to receive any profit on their equity investment, only interest.[96]

Although the REA initially was structured as a lender, by 1937 the agency provided "engineering, management, legal, and financial" services to help stand up cooperatives across the country.[97] By 1939, the REA had disbursed over $227 million in loans for rural electrification – predominantly to newly formed electricity cooperatives – and had doubled the number of farms with electricity.[98]

3. Faced with Continued Private Sector Opposition, Cooperatives Banded Together to Build Power Plants and Transmission Lines

REA's early leaders envisioned that the REA would focus on financing and supporting electricity distribution cooperatives.[99] The main responsibilities of distribution cooperatives were to string power lines to individual customers (i.e., member-owners) and to set up a system of accounts.[100] The distribution cooperatives were not responsible for generating the electricity; instead they were to contract for wholesale power with for-profit utilities or the federal government and would similarly contract for transmission service with for-profit utilities.[101]

In practice, however, the for-profit utilities frequently viewed cooperatives as unwelcome competitors. Attempts by cooperatives to contract with these utilities often proved acrimonious, and cooperatives complained about rates they were offered.[102]

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95. Jeter et al., *supra* note 3, at 385–86.

96. *Id.* For a history of how cooperative principles have been updated over time by the International Cooperative Alliance, *see* Ann Hoyt, *Cooperative Principles Updated*, COOPERATIVE GROCER NETWORK (1996), https://www.grocer.coop/articles/cooperative-principles-updated [perma.cc/8TFA-JZDV] (last visited Feb. 19, 2020).

97. RONALD R. KLINE, CONSUMERS IN THE COUNTRY: TECHNOLOGY AND SOCIAL CHANGE IN RURAL AMERICA 145–151 (2000).

98. Kitchens & Fishback, *supra* note 2, at 1162.

99. BROWN, *supra* note 2, at 91.

100. *Id.*

101. *Id.*

102. *Id.* at 91–92.

At the same time, Congress was authorizing the development of federal multi-use dams throughout the country that would provide additional sources of hydroelectric power.[103] Many dams were constructed for irrigation or flood control purposes, but also generated electricity.[104] Since the early 1900s, Congress had consistently required that these federal dams give preference to public entities when disposing of any "surplus" electricity.[105] Congress included non-profit cooperatives among the preferred customers of federal hydropower facilities, including in the TVA Act, the Bonneville Project Act of 1937, and the Flood Control Act of 1944.[106] This opened the door for a slew of new power sources for distribution cooperatives.

Cooperatives sought a means to get power from these new dams to their service territories.[107] Since they could not rely on for-profit utilities to offer them transmission at reasonable rates, electricity distribution cooperatives began to band together to form "Generation and Transmission" or power supply cooperatives.[108] Some also sought to build their own power plants.

The RE Act specifically authorized the REA to provide loans not only for electricity distribution service, but also for "the construction and operation of generating plants" and "transmission . . . lines."[109] The REA began using this authority to finance power plants and transmission lines in 1936 and, in 1938, approved its first loan to a power supply cooperative in Wisconsin.[110]

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103. *Id.*

104. *Id.* at 99–100.

105. *See generally* Eric Redman, *Preference and Other Clauses in Federal Power Marketing Acts*, 13 ENVTL. L. 773 (1982); Jeffrey C. Fereday, Comment, *The Meaning of the Preference Clause in Hydroelectric Power Allocation under the Federal Reclamation Statutes*, 9 ENVTL. L. 601 (1978).

106. Flood Control Act of 1944, Pub. L. No. 78-534, § 5, 58 Stat. 887, 890 (1944); Bonneville Project Act, Pub. L. No. 75-329, § 4, 50 Stat. 731, 733 (1937); Tennessee Valley Authority Act, § 10, ch. 32, 48 Stat. 58 (1933).

107. BROWN, *supra* note 2, at 17–19.

108. RICHARD A. PENCE & PATRICK. DAHL, THE NEXT GREATEST THING: FIFTY YEARS OF ELECTRIFICATION 182 (1984).

109. Rural Electrification Act, Pub. L. No. 74-605 § 3(a), 49 Stat. 1363, 1364 (1936).

110. DONALD H. COOPER, RURAL ELECTRIC FACTS; AMERICAN SUCCESS STORY 70 (1970). The old guard leadership of the REA was skeptical that cooperatives should be in the power supply business. BROWN, *supra* note 2, at 91. This set up a fight with the newly formed National Rural Electricity Cooperative Association ("NRECA"), which lobbied aggressively for such loans. *Id.* at 85. In 1941 the then-REA Administrator Harry Slattery opposed a loan to the Brazos River Generating and Transmission Cooperative. *Id.* at 91–92. The Brazos power supply cooperative was formed by 11 distribution cooperatives in Texas that were dissatisfied with utility wholesale power rates. *Id.* The collective applied for REA financing to build transmission that would enable them to procure power from the federal Possum Kingdom hydroelectric power plant. *Id.* NRECA and its allies ultimately succeeded in having the loan approved, and the issue contributed to Slattery's eventual resignation in 1944. *Id.* at 92–94. The high-profile fight opened the door to further

The REA was making rapid progress standing up distribution cooperatives and bringing electricity to rural farms. By 1963, over 97% of farms in the United States had electricity service, with approximately half being served by cooperatives and other REA borrowers.[111] But rural retail electricity rates offered by cooperatives were still high, 15% to 20% higher than those in cities.[112] The cost of wholesale power and transmission service procured from for-profit utilities was a major factor behind those high rates. In 1963, 38% of the power supplied to cooperatives came from for-profit utilities.[113] Power purchased from those for-profit utilities was substantially more expensive than power from federal entities.[114] For these reasons, after 1944 the REA increasingly focused on lowering the cost of rural power by financing generation and transmission.[115]

For-profit utilities bitterly opposed both the federal power purchase preferences for cooperatives as well as REA's willingness to finance generation and transmission projects. They viewed these actions as government-subsidized competition to their business model.[116]

The private-sector utilities brought several rounds of legal challenges to both the federal power purchase preferences and to the REA's financing of cooperative-owned generation and transmission resources, and they brought similar cases against municipal utilities.[117] The utilities claimed that the federal government exceeded its authority with these preferences and loans, among other claims.[118] In 1938, one of the municipal cases reached the Supreme Court. In *Alabama Power Co. v. Ickes*, the Court held that where a utility has a non-exclusive franchise, a utility's loss of business as a result of competition from federally-financed municipal power plants was not a legal

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loans to REA power supply cooperatives, and REA's subsequent leadership was committed to financing power supply cooperatives. *Id.* at 91–92, 101–113.

111. *Agricultural Appropriations for 1963: Hearing on H.R.12648 Before the Subcomm. of the Comm. on Appropriations*, 88th Cong. 2406 (1962) (statement of Norman M. Clapp, Administrator, Rural Electrification Administration) [hereinafter 1963 REA Appropriation Hearing].

112. *Id.* at 2466–68.

113. *Id.* Another 39% came from federal power sources such as TVA or federal power marketing agencies, 7% from other public agencies like municipalities, and 16% was generated by REA-financed resources. *Id.* at 2465.

114. COOPER, *supra* note 110, at 70–71.

115. For example, in 1962, 59% of loans were used for generation and transmission facilities. 1963 REA Appropriation Hearing, *supra* note 110, at 2409.

116. BROWN, *supra* note 2, at 101–13.

117. *Id.* at 101–13.

118. Other causes of action were that the actions represented a taking of the utilities' business and that the actions represented a monopolistic conspiracy between the federal government and cooperatives in violation of anti-trust laws. *See infra* notes 119, 120.

injury sufficient to grant standing.[119] Federal appellate courts eventually applied this precedent to dismiss utility challenges to REA generation and transmission loans, with the leading case being the D.C. Circuit's 1955 decision in *Kansas City Power & Light Co. v. McKay*.[120]

In 1961, the REA expanded the circumstances under which it would finance generation and transmission. The RE Act limited the REA's authority to financing facilities that would provide electricity to areas "not receiving central station service."[121] Previously, the REA had financed power plants and transmission lines where there was no service available.[122] Under the new policy, the REA would also finance these facilities in situations where rates offered by for-profit utilities to cooperatives were higher than those that would result from REA financing and also where "generation and transmission facilities are necessary to protect the security and effectiveness of REA-financed systems."[123] The REA justified this expansion as being in keeping with its "responsibility to assist borrowers in achieving the most advantageous power supply arrangements."[124]

Despite the opposition of for-profit utilities – and largely because of their unreasonable wholesale pricing – the REA went on to finance a substantial number of generation and transmission facilities.[125] In fact, the majority of

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119. Ala. Power Co. v. Ickes, 302 U.S. 464, 479–80 (1938); *see also* Tenn. Elec. Power Co. v. Tenn. Val. Auth., 306 U.S. 118, 139 (1939), *abrogated by* Bond v. United States, 564 U.S. 211 (2011) (holding utilities challenging federal Tennessee Valley Authority generation and sale of wholesale power did not have exclusive state franchise and therefore loss of business from lawful competition was not sufficient for standing).

120. Kansas City Power & Light Co. v. McKay, 225 F.2d 924, 933 (D.C. Cir. 1955), *cert. denied*, 350 U.S. 884 (1955); *see also* Rural Electrification Admin. v. N. States Power Co., 373 F.2d 686, 692 (8th Cir. 1967); Rural Electrification Admin. v. Cent. La. Elec. Co., 354 F.2d 859, 865 (5th Cir. 1966).

121. Rural Electrification Act, 74 Pub. L. 605, § 2, 49 Stat. 1363 (1936).

122. *Id.*

123. REA Bulletin 20-6 (May 31, 1961), *reprinted in* 29 Fed. Reg. 2765, 2766 (Feb. 27, 1964).

124. *Id.* at 2765.

125. 1963 REA Appropriation Hearing, *supra* note 111, at 2606–07. For-profit utilities complained to Congress about what they viewed as a further incursion into their territory. *Id.* Congress prodded REA on whether the agency was going beyond its authority. The REA subsequently agreed to conduct a "power supply survey" prior to issuing any further loans for generation and transmission facilities. Rural Electrification Administration Power Supply Surveys, 29 Fed. Reg. 2765, 2766 (Feb. 27, 1964). Where contracts existed, the REA said it would only grant financing where existing contracts were "unreasonable" and after utilities had been given an opportunity to bring rates down to a reasonable level. *Id.* For-profit utilities saw a chance to use this new survey requirement as a procedural hook to attain standing to challenge these loans. *Id.* The courts, however, did not find that the policy created any new procedural right, and these new challenges were also dismissed. *See, e.g.*, Ala. Power Co. v. Ala. Elec. Co-op., Inc., 394 F.2d 672, 677 (5th Cir. 1968); Rural

loans originated over the lifetime of the federal rural electrification program have funded generation and transmission facilities.[126]

Today, there are 62 power supply cooperatives. Cooperatives – including both power supply and distribution cooperatives – generate 5% of total electricity produced in the United States.[127]

B. Coops Are Largely Exempted from Utility Regulation

The electric power sector is one of the most heavily regulated industries in the United States. Rural electricity cooperatives, however, are largely either exempted from state and federal economic regulations or subjected to less scrutiny. To understand why cooperatives have lagged behind in the transition to a lower-carbon electricity system, it is important to first understand how the system of electric utility regulation evolved and why cooperatives were exempted.

This Part first describes how state and federal economic regulation of utilities developed in response to the emergence of utility monopolies. It also describes how regulation expanded to include resource planning requirements in the 1980s and how in some markets, several states and the federal government replaced regulation with competition. It then describes how cooperatives were largely exempted from these state and federal regulations because they lacked a profit-motive and were therefore seen as self-regulating.

1. States and the Federal Government Develop a State-Federal Regulated Monopoly Model

The structure of the U.S. model of electricity regulation developed in response to technology advances that changed the industry from small, competitive municipal utilities to consolidated monopolies serving large geographic areas. In response to this change, states first developed a model of utility commission regulation, and the federal government then exerted its authority over sales of wholesale electricity and interstate transmission.

At the end of the 19th Century, most for-profit electric utilities served urban areas and operated under municipal franchises.[128] Municipal oversight

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Electrification Admin. v. N. States Power Co., 373 F.2d 686, 696 (8th Cir. 1967); Rural Electrification Admin. v. Cent. La. Elec. Co., 354 F.2d 859, 866 (5th Cir. 1966).

126. *Compare* $56.9 billion in long term financing approved to distribution cooperatives *with* $72.3 billion approved to generation and transmission cooperatives. RURAL UTILITIES SERVICE, U.S. DEP'T OF AGRIC., 2011 STATISTICAL REPORT: RURAL ELECTRIC BORROWERS 8 (2011).

127. Nat'l Rural Electric Cooperative Ass'n, *supra* note 10.

128. Thomas P. Lyon & Nathan Wilson, *Capture or Contract? The Early Years of Electric Utility Regulation*, 42 J. REG. ECON. 225, 227 (2012).

initially made sense because the direct current technology of the time limited electricity distribution to a small radius around the generating station.[129] Generating stations were therefore located in cities and served a small surrounding area.[130] Utilities needed municipal authority to access public streets to string wires.[131]

The resulting municipal franchises took form as long-term contracts that authorized utilities to operate in a city and "dig up streets" and usually imposed price ceilings and minimal service thresholds.[132] Most cities awarded multiple franchises under the theory that competition should lead to lower prices.[133]

The municipal franchise model quickly revealed its weaknesses. Rapid technology improvements caused the price of electricity delivery to fall quickly, rendering the price ceilings that had been written into long-term contracts useless.[134] Corruption was a major problem, with politicians demanding bribes for the award of franchises and favorable franchise terms or for forgoing the award of franchises to competitors.[135]

In addition, while most cities awarded multiple franchises, few companies were able to survive competition in such a capital-intensive industry.[136] By 1910, few cities had any meaningful utility competition,[137] leaving the surviving for-profit utilities in a monopolistic market position with the ability to charge customers monopoly prices and to use discriminatory pricing.[138]

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129. *Id.*

130. *Id.*

131. *Id.*

132. Franchise contract terms were typically 20 to 50 years. Werner Troesken, *Regime Change and Corruption: A History of Public Utility Regulation*, *in* CORRUPTION AND REFORM: LESSONS FROM AMERICA'S ECONOMIC HISTORY, 260 (Edward L. Glaeser & Claudia Golden eds., 2006).

133. RUDOLPH & RIDLEY, *supra* note 34, at 31 ("nearly every city in the country had granted several . . . franchises to competing electric companies"); *but see* Troesken, *supra* note 132, at 261 (stating that "most markets were not sufficiently large to support competition").

134. Troesken, *supra* note 132, at 260–261.

135. JOHN L. NEUFELD, SELLING POWER: ECONOMICS, POLICY, AND ELECTRIC UTILITIES BEFORE 1940, 49–53 (2016); *see also* Troesken, *supra* note 132, at 268–69.

136. NEUFELD, *supra* note 135, at 48–49.

137. *Id.* at 48–49.

138. *Id.* In the absence of competition, monopolies have absolute power to set prices, and can set prices in a way that generates maximum profit irrespective of the marginal cost of producing the product. Similarly, monopolies can further increase profits by setting different prices for different customers not tied to the marginal cost of producing the product.

These factors led progressives and other reformers to seek alternatives to municipal franchise regulation of for-profit utilities. Many called for public municipal ownership of utilities.[139]

At the same time, J.P. Morgan and other wealth financiers were buying up municipal for-profit utilities and consolidating them under large holding companies.[140] One reason for this shift was technological improvements that allowed for longer distance delivery of electricity, making possible new economies of scale for larger systems.[141]

As a result, the for-profit electric industry changed from a universe of many competitive municipal utilities into a universe of large, consolidated utilities with monopoly power in their service territories.[142]

In 1898, Samuel Insull, then-President of Chicago Edison and of the National Electric Light Association (the electric power trade association), called on his colleagues in the industry to support shifting to a regulated monopoly model.[143] Despite initial opposition from his fellow industry executives, he argued that a system of regulated monopolies would protect for-profit utilities from disastrous competition and from the threat of municipal takeovers urged by public-power proponents.[144]

In 1907 progressive reformers and for-profit utility leaders both agreed that a new regulatory model was necessary in a major report commissioned

139. *Id.* at 52–53. "Many progressives regarded the municipal ownership of utilities as a solution to the corruption problem." *Id.* at 52.

140. *See* RUDOLPH & RIDLEY, *supra* note 34, at 60.

141. Christie, *supra* note 45, at 481.

142. RUDOLPH & RIDLEY, *supra* note 34, at 46–47.

143. Forrest McDonald, *Samuel Insull and the Movement for State Utility Regulatory Commissions*, 32 BUS. HIST. REV. 241, 242 (1958).

144. *Id.* Insull highlighted the perils of competition in the utility industry, noting that competition spooked investors and therefore forced utilities to "pay a very high price for capital," and that when competitors are inevitably acquired, the surviving utility is saddled with duplicate infrastructure and high debt. SAMUEL INSULL, PUBLIC CONTROL AND PRIVATE OPERATION OF PUBLIC SERVICE 8 (1899). Neufeld adds that Insull's turn towards support for state regulated monopoly came after the Supreme Court's decision in *Smyth v. Ames*. NEUFELD, *supra* note 135, at 61. In that case, the court affirmed that states have the power to set rates for in-state railroad travel and identified a convoluted set of factors that states would need to follow to ensure that rates were not so low as to amount to a taking under the 14th Amendment of the Constitution. Smyth v. Ames, 169 U.S. 466 (1898); *see also* Munn v. Illinois, 94 U.S. 113 (1876) (affirming constitutionality of state laws setting rates for private businesses "affected with a public interest"); Nebbia v. New York, 291 U.S. 502 (1934) (clarifying that legislatures, not courts, determine whether rate regulation required by public interest for any business, and holding that courts are without authority to override such determinations).

by the National Civic Federation.[145] The near-consensus report found that "public utilities are so constituted that it is impossible for them to be regulated by competition."[146] Instead, "utilities whether in public or private hands, are best conducted under a system of legalized and regulated monopoly" and "private companies operating public utilities should be subject to public regulation and examination."[147]

After the issuance of the report, Wisconsin and New York adopted utility commissions in 1907.[148] The commission model, borrowed from the railroads,[149] reflected a progressive belief in scientific management, where rate regulation would be in the hands of "expert, nonpolitical state commissions."[150] The overall goal of these regulations was to "fix rates at a level that would prevent economic coercion and balance the needs of investors and ratepayers."[151] By 1930, all but one state had established public utility commissions charged with regulating monopoly utility franchises to ensure just and reasonable rates and non-discriminatory provision of service.[152]

As electricity systems grew in size, interstate transfers of electricity became more common, raising the question of what entity would regulate these interstate activities.[153] In 1927, the U.S. Supreme Court held that the dormant Commerce Clause doctrine prohibited state utility commissions from

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145. *See Municipal and Private Operation of Public Utilities Before Comm. on Public Ownership and Operation*, NAT'L CIVIC FEDERATION (1907); RUDOLPH & RIDLEY, *supra* note 34, at 35–40.

146. *Municipal and Private Operation of Public Utilities Before Comm. on Public Ownership and Operation*, *supra* 145, at 23.

147. *Id.* at 26. As William Boyd notes, "There is a diverse literature on the origins of public utility regulation, with strong competing explanations between those advancing a public interest theory or regulation and those arguing for a public choice explanation, which held that regulated entities actively sought regulation and used it for their benefit." William Boyd, *Just Price, Public Utility, and the Long History of Economic Regulation in America*, 35 YALE J. ON REG. 721, 755 n.135 (2018).

148. *Id.* at 755. John Commons, the lead author of the Wisconsin legislation and a progressive, was an author of the Civic Federation Commission report and attributed the bill's structure to the report. *See* JOHN R. COMMONS, MYSELF (1934). "I adopted nearly the whole of the recommendations . . . of the investigating committee of the Civic Federation." *Id.* at 120.

149. *Id.* at 755 n.135.

150. McDonald, *supra* note 143, at 244.

151. Boyd, *supra* note 147, at 756. Key features of the Wisconsin model – now common in utility regulation – included "mandatory universal service, protected local franchises, delegated powers of eminent domain, a cost-based 'used and useful' standard for valuing assets as part of rate base, a uniform system of accounting, commission powers of investigation and adjudication, and, most importantly, a requirement that utility rates be 'reasonable and just.'" *Id.*

152. *Id.* at 755. Delaware was the lone holdout. *Id.*

153. *See* Pub. Utils. Comm'n of R.I. v. Attleboro Steam & Elec. Co., 273 U.S. 83 (1927), *abrogated by* Ark. Elec. Co-op. v. Ark. Pub. Serv. Comm'n, 461 U.S. 375 (1983).

regulating these transfers,[154] creating a "gap" in regulation.[155] Congress filled this gap in 1935 with the Federal Power Act, which authorized the Federal Power Commission ("FPC") to regulate interstate transmission of electricity and wholesale sales of electricity.[156] The Act explicitly preserved states' "jurisdiction over the planning and siting of generation infrastructure and ratemaking for retail sales of electricity and use of local distribution systems."[157]

During the middle decades of the 20th century, the state utility commission model worked fairly well as utilities built larger power plants to capture economies of scale and meet increasing demand. Electricity rates generally declined.[158] But beginning in the 1970s, these happy times ended as the energy crisis spiked fuel costs; there were no more efficiencies from economies of scale to be had, and a nuclear building boom spun out of control due to cost increases.[159]

As a result of rapid rate increases and spate of abandoned nuclear projects, two important trends emerged. First, state utility commissions recognized that utilities needed more formalized oversight for long-term resource planning and introduced the integrated resource plan ("IRP") requirement.[160] IRPs require utilities to forecast future loads, identify potential resource options (e.g., power plants or energy efficiency measures) to meet those loads, and analyze what set of resources will create the optimal, lowest cost mix for meeting those requirements.[161] Congress then passed the 1992 Energy Policy Act, which required that each state utility commission consider adopting an IRP mandate.[162] In 2011, FERC's Order 1000 established somewhat similar requirements for interstate transmission

154. *Id.* at 89.

155. William Boyd & Ann E. Carlson, *Accidents of Federalism: Ratemaking and Policy Innovation in Public Utility Law,* 63 UCLA L. REV. 810, 824 (2016).

156. Federal Power Act, ch. 687, §201(b), 74 Stat. 803, 847–48 (1935 (codified as amended at 16 U.S.C. § 824 (2018)).

157. Boyd & Carlson, *supra* note 155, at 824.

158. *See generally id.* at 828–30.

159. *Id.* at 828–32.

160. CHERYL HARRINGTON ET AL., INTEGRATED RESOURCE PLANNING FOR STATE UTILITY REGULATORS 5–7 (1994); c*f.* Boyd, *supra* note 31, at 1693 (asserting that although IRPs formalized resource planning, such planning "has long been at the heart of traditional utility regulation").

161. RACHEL WILSON & BRUCE BIEWALD, REGULATORY ASSISTANCE PROJECT, BEST PRACTICES IN ELECTRIC UTILITY INTEGRATED RESOURCE PLANNING: EXAMPLES OF STATE REGULATIONS AND RECENT UTILITY PLANS 4 (2013), https://www.raponline.org/wp-content/uploads/2016/05/rapsynapse-wilsonbiewald-bestpracticesinirp-2013-jun-21.pdf [perma.cc/VRG4-D78H].

162. 16 U.S.C. §§ 2621(c)–(d) (2018); *see also* § 2602(19) (defining IRP).

planning where utilities are required to take into account public policy objectives such as renewables mandates.[163]

Second, the crisis fomented critiques of the regulated monopoly model and increased interest in moving to a competitive market framework. An earlier law, the Public Utility Regulatory Policy Act ("PURPA"), had already created a mechanism that demonstrated that under the right circumstances, small, renewable energy producers could successfully compete against large, incumbent utilities.[164] Several states and the federal government introduced regulatory changes to promote competition or "deregulate" the sector. At the federal level, FERC mandated open access to transmission, required utilities to "unbundle" generation and transmission services, and encouraged the development of competitive wholesale electricity markets.[165] Sixteen states implemented changes allowing retail customers to choose retail service providers, creating a competitive retail market.[166]

There are now three different models of electricity regulation, as characterized by William Boyd and Anne Carlson.[167] In the Southeast and much of the West, the traditional regulated monopoly model remains dominant, and there are no organized wholesale electricity markets.[168] The competitive model prevails in Texas, much of the northeast, and some of the Midwest, where states authorize retail competition and there are organized wholesale markets.[169] The remaining areas operate under a mix of the two, with organized wholesale markets but traditional monopoly regulation at the retail level.[170] Cooperatives operate in all three types of regulatory models.[171]

2. The REA Viewed Itself as Cooperative Overseer and Urged States and the Federal Government to Avoid Additional Regulation

The state-federal regulatory structure described above developed to protect consumers from exploitative pricing imposed by profit-seeking corporations. Cooperatives, on the other hand, were by definition – and by

163. Boyd, *supra* note 31, at 1696–97.

164. 16 U.S.C. § 824a-3 (2018); Boyd, *supra* note 31, at 1675. PURPA requires that utilities allow small renewable and alternative energy "qualifying facilities" to interconnect into the electricity grid and requires the utilities to purchase the power at avoided cost. §§ 824a-3 (a), (b), and (e); 18 C.F.R. § 292.303(a). *See generally* RICHARD F. HIRSH, POWER LOSS: THE ORIGINS OF DEREGULATION AND RESTRUCTURING IN THE AMERICAN ELECTRIC UTILITY SYSTEM (2001) (describing how PURPA demonstrated that competition could work in the electricity sector).

165. Promoting Wholesale Competition Through Open Access Non-discriminatory Transmission Services by Public Utilities, 62 Fed. Reg. 12,274 (Mar. 14, 1997).

166. Boyd & Carlson, *supra* note 155, at 833.

167. *Id.* at 835–39.

168. *Id.* at 835.

169. *Id.* at 837–38.

170. *Id.* at 838–39.

171. *Id.* at 830–36.

law – not-for-profit organizations. Their early proponents saw little reason that these member-owned not-for-profits should be regulated as for-profit corporations. The REA therefore advocated for minimal state regulation by developing model state laws that were widely adopted.[172] The agency was also successful in advocating that the FPC disclaim federal regulatory authority over the sale of wholesale power and interstate transmission service by power supply cooperatives.[173] The REA itself did exercise some quasi-regulatory authority over cooperatives in its role as a lender, but this oversight role was limited and has diminished over time.[174]

Electricity cooperatives were a novel concept in most states, and they needed legal authorization as corporate entities and utilities under state law. The federal Public Works Administration and later the REA issued several versions of model state laws that would authorize electricity cooperatives.[175] The model legislation provided broad powers to the cooperatives to engage in rural electrification, including the generation, transmission, and distribution of electricity to their members.[176] The laws also granted cooperatives the authority to exercise eminent domain.

Consistent with the Rochdale principles, the model acts reflected a strong commitment to democratic control of the cooperative.[177] The model acts provided that cooperatives were to be governed under a one-member, one-vote principle.[178] The default for a quorum was set at a very low 5% of membership "in order to insure workability in practice."[179] Although the model laws called for governance by an elected board of trustees, they also included a more direct member control mechanism to "safeguard the democratic principle" by allowing members to "call special meetings and to initiate changes by petition."[180]

The model acts specifically exempted cooperatives "from the jurisdiction and control of the public service commission of the state."[181] In its 1939 model act, the REA said that this was "based upon the experience of

172. Richard P. Keck, *Reevaluating the Rural Electrification Administration: A New Deal for the Taxpayer*, 16 ENVTL. L. 39, 47–48 (1985).

173. *Id.* at 48.

174. *Id.*

175. *Id.* at 46 n.42.

176. *Id.*

177. *See* PACKEL, *supra* note 94, at 2 (defining cooperative in part to provide "for substantial equality in ownership and control").

178. The model rules allowed for "joint membership of husband and wife in order to permit election of women to [the] board of trustees." RURAL ELECTRIFICATION ADMINISTRATION, A DRAFT OF A RURAL ELECTRIC COOPERATIVE ACT 3–4 (1939).

179. *Id.* at 3.

180. *Id.* at 4.

181. *Id.*

the [REA] in meeting cooperative problems."[182] Israel Packel, a former REA lawyer who went on to author an authoritative book on cooperative organizations under U.S. law, argued that exemption from regulation was appropriate because cooperatives do not serve the public at large, but rather enter into a "special relationship" among their members "aimed at equality in ownership and in control."[183]

Even in states that did not pass legislation explicitly exempting cooperatives from utility commission regulation, courts in early years often found that utility commission authority did not extend to cooperatives absent express language to the contrary.[184] State legislation that enabled utility commissions frequently authorized these commissions to regulate electric utilities that were providing a "public" service.[185] A number of state courts found that this did not apply to cooperatives because a member-based cooperative model was chiefly providing service to its own members, not to the public at large.[186]

Recent scholarship confirms that states generally exempt cooperatives from full rate regulation:

> Only seven states (Arizona, Hawaii, Louisiana, Maine, Maryland, New York, and Vermont) allow full regulation of co-op rates. Six (Arkansas, Kentucky, Michigan, New Mexico, Virginia, and West Virginia) allow streamlined or less stringent regulation than faced by IOUs, and the rest of the states either make rate regulation optional to the co-op or disallow it entirely.[187]

In addition to advocating that states eschew regulation of cooperatives, the REA similarly advocated that power supply cooperatives be exempted from federal FPC regulation. By definition, power supply cooperatives

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182. *Id.* at 5. The model Act also exempted cooperatives from regulation of the issue of securities by the state and exempted cooperatives from state excise taxes (in return for a member-based annual fee to be paid to the state). *Id.* at 27. From its initial enactment, the Rural Electrification Act did require that "no loan for the construction, operation, or enlargement of any generating plant shall be made unless the consent of the State authority having jurisdiction in the premises is first obtained." *Id.* This provision, however, has been chiefly concerned with the regulation of siting of electricity infrastructure, not with regulation over rates.

183. PACKEL, *supra* note 94, at 281; *see also* Israel Packel, *Commission Jurisdiction over Utility Cooperatives*, 35 MICH. L. REV. 411, 431 (1936).

184. Packel, *supra* note 183, at 413.

185. *Id.* at 412–13.

186. *Id.* at 414 (citing cases in highest courts of California, Illinois, Mississippi, Missouri, Nebraska, Utah, Washington, and Wisconsin).

187. Cooper, *supra* note 33, at 342 n.53. In a 1990 rulemaking, REA reported that 45 of 66 power supply borrowers were not subject to rate regulation. Federal Preemption in Rate Making in Connection with Power Supply Borrowers, 55 Fed. Reg. 38,638, 38,642 (Sep. 19, 1990) [hereinafter Rate Making Preemption Rule]. Similarly, only 293 out of over 600 distribution cooperatives were subject to rate regulation at that time. *Id.* at 38,644.

engage in the sale of wholesale electricity, and they often provide interstate transmission services. The Federal Power Act gave the FPC jurisdiction over "public utilities" engaged in both of these activities.[188] From the passage of the FPA until the 1960s, however, the FPC did not regulate power supply cooperatives and the issue was not formally considered by the FPC.

In 1963, the FPC initiated a proceeding *sua sponte* to determine whether power supply cooperatives should be subject to its regulatory jurisdiction.[189] Distribution cooperatives in Colorado also petitioned the FPC to assert jurisdiction over their power supply cooperative to supersede a Colorado Supreme Court decision barring construction of a new power plant.[190] The FPC resolved the issue in *Dairyland Power Cooperative*, where the agency determined that it did not have jurisdiction over power supply cooperatives because "cooperatives financed by REA are not public utilities within the meaning of Part II of the Federal Power Act" and that "Congress never intended this Commission to regulate cooperatives under the Federal Power Act."[191]

The FPC reasoned in part that Congress's chief animus for passing the FPA was to tame the for-profit utility holding companies, including by subjecting them to FPC regulation.[192] But cooperatives were not part of the holding company problem. Indeed, Congress chose to explicitly exempt "federal instrumentalities" from FPC jurisdiction in Sec. 201 (f) of the Federal Power Act. The FPC reasoned that when Congress enacted the RE Act the year after the FPA was passed, it made cooperatives "the instrumentalities chosen by Congress for the purpose of bringing abundant, low cost electric energy to rural America," and therefore did not intend for them to be regulated by the FPC.[193] Although the FPC interpreted the law to deny it the authority to regulate power supply cooperatives, it also argued that it would be in the public interest for the FPC to have such authority over "major generating and transmission cooperatives in interstate commerce."[194] The FPC argued that such authority would be appropriate because power supply cooperatives

188. Federal Power Act, ch. 687, 74 Stat. 803, 848 (1935) (codified as amended 16 U.S.C. § 824).

189. Dairyland Power Cooperative, 37 F.P.C. 12, 15, 26 (F.P.C. 1967).

190. Salt River Project Agr. Imp. & Power Dist. v. Fed. Power Comm'n, 391 F.2d 470, 472 (D.C. Cir. 1968), *cert. denied*, 393 U.S. 857 (1968).

191. *Dairyland Power Cooperative*, 37 F.P.C. at 15.

192. *Id.* at 16.

193. *Id.* at 18; *see also* Federal Power Act, ch. 687, § 201(f), 74 Stat. 803, 848 (1935) ("No provision in this Part shall apply to, or be deemed to include, the United States, a State or any political subdivision of a State, or any agency, authority, or instrumentality of any one or more of the foregoing . . . .").

194. *Dairyland Power Cooperative*, 37 F.P.C. at 28.

transacted regularly with for-profit utilities and "have become an important segment of the interstate electricity industry."[195]

The FPC's Dairyland decision was affirmed by the D.C. Circuit Court of Appeals the following year.[196] In 2005, Congress codified this result by amending the Federal Power Act to expressly exempt from FPC jurisdiction "an electric cooperative that receives financing under the Rural Electrification Act . . . or that sells less than 4,000,000 megawatt hours of electricity per year."[197] The amendment also exempted electric cooperatives "wholly owned, directly or indirectly" by exempted entities, which includes power supply cooperatives wholly owned by exempted distribution cooperatives.[198]

One of the other rationales the FPC relied on in disclaiming jurisdiction was that the REA was already exercising a significant quasi-regulatory role over both distribution and power supply cooperatives, including some oversight of rates.[199] Over time, however, the level of this oversight has diminished, and courts have questioned whether the oversight provided by REA/RUS was sufficient to protect the interest of cooperative members.

The REA/RUS has always required that its cooperative borrowers gain the service's approval on loan contracts, security instruments, and the wholesale power contracts between power supply cooperatives and their distribution cooperative.[200] At the time of the *Dairyland* ruling, the REA also required that a cooperative secure approval of their "manager, engineer, and counsel; of its construction contracts and contracts for purchase of materials, equipment, and supplies; of its contracts for purchase and sale of power; of its insurance coverage; [and] its purchase of land."[201]

The REA/RUS oversight mechanisms have included some constraints on rate setting. For example, the RUS requires that the wholesale contract that power supply cooperatives enter into with distribution cooperatives set wholesale rates at levels "sufficient, but only sufficient, to meet the power supply borrower's costs, including repayment of [RUS] loans."[202] This

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195. *Id.*

196. Salt River Project Agr. Improvement & Power Dist. v. Fed. Power Comm'n, 391 F.2d 470, 477 (D.C. Cir. 1968).

197. Energy Policy Act of 2005, Pub. L. 109-58, 119 Stat. 594, 985 (2005) (codified as amended at 16 U.S.C. § 824(f)).

198. *Id.* at § 824(f).

199. *Dairyland Power Cooperative*, 37 F.P.C. at 20–22; *see also Salt River Project*, 391 F.2d at 476.

200. *See* Rate Making Preemption Rule, *supra* note 187, at 38,640.

201. *Salt River Project*, 391 F.2d at 473; *see also* Federal Pre-emption in Rate Making in Connection with Power Supply Borrowers, 55 Fed. Reg. 12,194, 12,195 (proposed Apr. 2, 1990) [hereinafter Proposed Rate Making Preemption Rule]; *see generally* 7 C.F.R. § 1717.600 (2020).

202. Rate Making Preemption Rule, *supra* note 187, at 38,640. The REA recognized, however, that "this wholesale power contract provision does not, of course, ensure that the rates charged for electric power and energy by REA-financed electric systems will not be higher than rates charged-by other utilities for similar

provision is meant to first ensure that RUS loans will be repaid by having rates set high enough to cover the debt payments.[203] But it is also intended to keep rates "as low as practicable" in keeping with RUS's mission to provide low-cost electricity service to rural America.[204]

The nature and type of these oversight controls have varied over the years.[205] In 1995, RUS limited many of these "operational controls,"[206] for example, by automatically granting approval of a new general manager if a borrower is otherwise in compliance with its loan provisions.[207]

Even when the oversight policies were more robust, courts and others noted that REA/RUS oversight has not always been as thorough as other regulatory agencies, for example FERC.[208] As one commentator noted, the REA/RUS has been "more cheerleader than critic."[209] Importantly, RUS oversight also does not apply to former borrowers that have paid off their loans. Several cooperatives, like Tri-State, no longer hold any RUS debt.

Recent court cases have also raised questions about the extent of RUS's authority to impose regulatory requirements, at least to the degree that RUS claims these requirements can preempt state law.

In *Arkansas Elec. Co-op. Corp. v. Arkansas Public Service Commission*, the U.S. Supreme Court held in 1983 that the RE Act allowed for state rate regulation of cooperatives concurrently with the REA's quasi-regulatory requirements as a lending agency.[210] In that case, an Arkansas power supply cooperative challenged the Arkansas state utility commission's assertion of jurisdiction over the wholesale electricity rates it charged its distribution

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service. Indeed, historically, rates of REA borrowers have been higher than rates of other utilities." *Id.*

203. *Id.*

204. *Id.*

205. *See e.g.*, Person, *supra* note 34, at 14 (describing how visits, audits, inspections declined after 1945).

206. Loan Policies and Security Documents for Electric Borrowers, 60 Fed. Reg. 67,396 (Dec. 29, 1995).

207. 7 C.F.R. § 1717.609 (2020).

208. *See, e.g.*, Ark. Elec. Co-op. Corp. v. Ark. Pub. Serv. Comm'n, 461 U.S. 375, 387 n.12 (1983) ("How well this oversight works in practice may be another matter . . . . As the United States admits in its brief, 'the REA does not control the rates and rate structure of . . . generation and transmission associations as thoroughly or with the formality of the Federal Power Commission.'"); *but see* Salt River Project Agric. Improvement & Power Dist. v. Fed. Power Comm'n, 391 F.2d 470, 473 (D.C. Cir. 1968) ("REA regulation and supervision of cooperatives are, in many respects, far more comprehensive than those which the Federal Power Commission exercises over investor-owned utilities.").

209. Cooper, *supra* note 33, at 343.

210. *Ark. Elec. Coop.*, 461 U.S. at 377.

cooperative members.[211] The Court held that the RE Act did not preempt the Arkansas Public Service Commission from regulating the rates of the AECC, in part because the REA's implementing regulations expressly required cooperatives to seek any required state PUC approvals prior to submitting a rate change to the REA.[212] In other words, the REA's own regulations contemplated that REA rate-related contract conditions could overlap with state jurisdiction over rates.[213] The Court held open, however, the possibility that the RE Act could preempt state regulation if the REA changed its policies in a way authorized by the RE Act, or if a particular rate "compromise[d] important federal interests, including the ability of the AECC to repay its loans."[214]

This issue came to the fore in the late 1980s after the REA authorized several large loan guarantees that would allow power supply cooperatives to gain ownership shares in new nuclear power plants. These power plants experienced cost overruns, and in one case, construction of the plant was abandoned.[215] In Louisiana and Indiana, state utility commissions found that power supply wholesale rates established to pay off these large loans were not "just and reasonable" under traditional ratemaking principles requiring investments to be "prudent" and "used and useful."[216]

Seizing on the Supreme Court's suggestion in *Arkansas Elec. Co-op.* that state regulation could be pre-empted given the right circumstances, the REA in 1990 promulgated regulations explicitly giving itself the authority to

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211. *Id.*

212. *Id.* at 387–88.

213. *Id.*

214. *Id.* at 389. The Court also dismissed a dormant Commerce Clause challenge claiming that under the *Attleboro Steam* precedent, the state could not regulate rates for wholesale sales of electricity. *Id.* at 393. But the Supreme Court declined to apply the bright line rule from *Attleboro Steam*, pointing to the evolution of its dormant Commerce Clause jurisprudence in the past 50 years. *Id.* Instead, the Court applied the balancing test it had recently articulated in *Pike v. Bruce Church*, 397 U.S. 137 (1970). *Id.* at 394. Under that test, state statutes that do not facially discriminate against interstate commerce and have a legitimate local public interest are to be upheld "unless the burden imposed on such commerce is clearly excessive in relation to the putative local benefits." *Bruce Church*, 397 U.S. at 142. The Court found no facial discrimination and a legitimate public purpose, and found further that any effects on interstate commerce resulting from the regulation of AECC's wholesale rates would be incidental. *Ark. Elec. Coop.*, 461 U.S. at 394. At the same time, however, the Court noted that AECC's power generation facilities were all within the state and it served exclusively in-state distribution cooperatives. *Id.* at 394–95. The Court analogized that for the purposes of the Commerce Clause analysis, this particular power supply cooperative was more akin to a distribution utility than a multi-state wholesale power generator. *Id.* at 395.

215. William E. Schmidt, *Rural Electric Co-ops Fight to Keep Subsidy*, THE N.Y. TIMES, Apr. 19, 1984, at A16.

216. Matter of Cajun Elec. Power Co-op., Inc., 109 F.3d 248, 253 (5th Cir. 1997); *see* Wabash Valley Power Ass'n v. Rural Electrification Admin., 988 F.2d 1480, 1482 (7th Cir. 1993).

preempt state rate regulation of power supply cooperatives in circumstances where states disapprove rates necessary to make payments on federal loans.[217] The REA then sought to use this preemption authority to override the state utility commission orders in Louisiana and Indiana and impose rates sufficient to recoup its loans. The U.S. Courts of Appeals for the Fifth and Seventh Circuits were not impressed, however, and both courts invalidated the REA's preemption bids.[218] In both cases, the courts noted the lack of any express statutory authorization in the RE Act for REA rate regulation or preemption of state rate regulation.[219] The courts also noted that the REA's actions seemed solely focused on its role as a creditor and not on the REA's broader goal of providing low-cost electricity or on the traditional rate-making principles that balance risk of shareholders against customer interests.[220] The Seventh Circuit found the entire rulemaking invalid on its face.[221] In July 2019, the RUS rescinded its preemption regulations, citing "federal court decisions."[222]

Although the RUS retreated from its quasi regulatory role in its 1995 amendments, power supply cooperatives remain largely unregulated by FERC and states.[223] This is in part because cooperatives have resisted any additional regulation, maintaining that non-profits are self-regulating.

Jurisdiction over power supply cooperatives is particularly underdetermined. At least one power supply cooperative, Tri-State, has until recently argued in court that it should be further limited from state regulation under the theory that state oversight of a power supply cooperative with interstate operations would impermissibly interfere with interstate commerce

217. Rate Making Preemption Rule, *supra* note 187, at 38,647. Under the two-part test, the RUS will assert preemption and assume exclusive jurisdiction over rate regulation if the Administrator determines that state-approved rates are "inadequate to produce revenues sufficient to permit the borrower to make required payments on its secured loans and the borrower has failed to make required payments on its secured loans." *Id.*

218. *Cajun Elec. Power Co-op.*, 109 F.3d at 255; *Wabash Valley Power Ass'n*, 988 F.2d at 1491.

219. *Cajun Elec. Power Co-op.*, 109 F.3d at 255; *Wabash Valley Power Ass'n*, 988 F.2d at 1491.

220. *Cajun Elec. Power Co-op.*, 109 F.3d at 257; *Wabash Valley Power Ass'n*, 988 F.2d at 1489–90.

221. *Wabash Valley Power Ass'n*, 988 F.2d at 1491 ("The REA has not identified a source of authority in either the express language or the purpose and operation of the RE Act to justify its preemption regulations.").

222. Streamlining Electric Program Procedures, 84 Fed. Reg. 32,607, 32,609 (July 9, 2019).

223. *But see* discussion *infra* in section II.B.5.

under the dormant Commerce Clause doctrine.[224] Historically, many power supply cooperatives have argued that they should not be subject to FERC's authority.[225] As discussed below in Section II.B., Tri-State recently became subject to FERC jurisdiction to avoid state rate regulation in Colorado and New Mexico.

In sum, electricity regulation is split between state and federal regulation. This split developed because of monopoly pricing and discrimination concerns and grew to include oversight over resource planning.

Proponents of cooperatives did not see the need for such regulations because cooperatives had no profit motive. The REA advocated for exempting cooperatives from both state and federal regulation, and many states followed this lead. In early years, the REA saw itself as a quasi-regulator of cooperatives, both as a lender and as an agency whose mission was to provide low-cost electricity to rural America. Over time, however, courts recognized that the RE Act grants no explicit regulatory authority over cooperatives to the RUS, and the agency's own actions have prioritized its role as a lender, not as a regulator balancing the interests of lenders and customers. As the RUS's regulatory role diminished, however, neither FERC nor states have filled in the gap, and cooperatives have used political power and legal challenges to avoid further regulation. As a result, cooperatives are subject to a weak regulatory scheme and the limits of state and federal jurisdictions are at least somewhat uncertain.

C. Coop Successes and Challenges

Before directly addressing how cooperatives are responding to the challenge of climate change and the need to transition to a low-carbon electricity system, it is helpful to consider the successes and struggles of cooperatives.

By 1953, 90% of farms in the United States were receiving central station electricity service.[226] The REA had loaned \$2.73 billion to 1079 electricity borrowers, of which 983 were cooperatives.[227] These borrowers

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224. Plaintiff's Amended Complaint at 1, Tri-State Generation and Transmission Ass'n v. N. M. Pub. Regulation Comm'n, No. 13-CV-00085-KG-LAM (D.N.M. filed 2013). Tri-State relies on a 1969 Tenth Circuit Court of Appeals case, TriState Gen. & Trans. Ass'n, Inc. v. Public Serv. Comm. of Wyo., 412 F.2d 115. *Id.* at 2. In that case, the court found that Wyoming's Public Service Commission had unlawfully interfered with interstate commerce when "it entered directives that resulted in Tri-State's Wyoming Member Systems not paying an increased wholesale rate to Tri-State." *Id.*

225. Salt River Project Agric. Imp. & Power Dist. v. Fed. Power Comm'n, 391 F.2d 470, 472 (D.C. Cir. 1968)

226. U.S. DEP'T OF AGRIC., REPORT OF THE ADMINISTRATOR OF THE RURAL ELECTRIFICATION ADMINISTRATION 12 (1953).

227. *Id.* at 7.; BROWN, *supra* note 2, at 113.

were serving almost 4 million rural customers – 67% of which were farmers – and operating 1.27 million miles of distribution lines.[228]

Moreover, the combination of federal hydropower and REA-financed generation and transmission kept electricity prices reasonable. By 1953, rural electricity rates were on the decline and were comparable to or below for-profit utility rates, despite the fact that service territories of cooperatives were more dispersed.[229]

The REA managed all of this while maintaining a less than 1% default rate for much of its history and while insisting on a policy of area coverage that ensured that all rural residents were receiving electricity, not just richer farmers or those located close to profitable electricity distribution corridors.[230]

The federal REA program provided advantages to cooperatives that for-profit utilities did not have. After the passage of the Pace Act in 1944, rural cooperatives received a below-market interest rate of 2% until 1973.[231] For-profit utilities accessing private-sector lenders paid at least a 1% higher interest rate to borrow funds.[232] Cooperatives were and continue to be generally exempt from federal income tax obligations,[233] and they were also often subject to a less burdensome state property tax regime.[234]

Cooperatives accomplished this feat of electrification despite substantial challenges and interference. For the first decade of the existence of the REA, for-profit utilities aggressively challenged cooperatives by seeking to serve the "cream" of rural areas, by building "spite lines" that interfered with cooperative service territories, by aggressively litigating against cooperatives, and by failing to offer reasonable wholesale electricity or transmission prices.[235]

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228. REPORT OF THE ADMINISTRATOR OF THE RURAL ELECTRIFICATION ADMINISTRATION, *supra* note 226, at 1; BROWN, *supra* note 2, at 113 (67% of subscribers were farmers).

229. BROWN, *supra* note 2, at 114.

230. *Id.* at 115.

231. *Id.* at 114.

232. *Id.*

233. Beecher, *supra* note 33, at 228. "Rural electric cooperatives have been exempt from federal taxation since the Revenue Act of 1916." *Id.* A 1980 amendment to federal tax law maintains this exception as long as rural electricity cooperatives "(1) [are] organized and operated under cooperative principles; (2) adhere to the activities for which it was created; and (3) derive no less than eighty five percent of its income from members." *Id.* at 228–29.

234. BROWN, *supra* note 2, at 115. "States frequently assessed only the earning power of the cooperatives and not the property, agreeing that since they had a lower earning power than electric companies operating in the urban market, they must not be taxed beyond their ability to pay." *Id.*

235. *Id.* at 113.

That the cooperatives succeeded despite this is a testament to the value that electrification brought to rural America, both in terms of improvements in quality of life and economic productivity of rural farms and other businesses.

The model was deemed successful enough that the federal government turned to cooperatives to bring telephone service to rural America – which succeeded – and cooperatives are now playing a role in bringing broadband internet service to rural communities.[236] U.S. rural electric cooperatives have also served as a model for rural electrification in other countries.[237]

In the words of one historian, "The R.E.A. is considered one of the most immediate and profound successes in the history of federal policy-making for the national economy."[238]

For all the early success that cooperatives had electrifying rural America, a significant number of cooperatives struggled to maintain efficient and competent administration of their affairs once electrification was completed.[239] The democratic ownership model of cooperatives has often failed to provide sufficient oversight over the management of these organizations.[240] In a 2018 article, Debra C. Jeter, Randall S. Thomas, & Harwell Wells described this system as resulting in an "organizational sector mired in governance dysfunctions stemming from the separation of ownership and control."[241] Similarly, federal Representative Jim Cooper (D-Tenn.), whose father helped start a rural electricity cooperative, detailed many ways in which "coops have failed to serve their members interests."[242]

Participation in distribution cooperative elections is generally very low. According to a 2016 report by the Institute for Local Self Reliance ("ILSR") based on data submitted by cooperatives to the RUS, 70% of cooperatives had

236. *History of Rural Telecommunications*, NTCA – THE RURAL BROADBAND ASS'N, https://www.ntca.org/ruraliscool/history-rural-telecommunications [perma.cc/6YDL-J38D] (last visited Feb. 23, 2020).

237. *See, e.g.*, Pellegrini L. & Tasciotti L., *Rural Electrification Now and Then: Comparing Contemporary Challenges in Developing Countries to the USA's Experience in Retrospect*, 40 FORUM FOR DEV. STUDIES 153 (2013); Annabel Yadoo & Heather Cruickshank, *The Value of Cooperatives in Rural Electrification*, 38 ENERGY POL'Y 2941–47 (2010).

238. Malone, *supra* note 5.

239. Jeter et al., *supra* note 3, at 366.

240. *Id.* at 365.

241. *Id.* at 363.

242. Cooper, *supra* note 33, at 339.

election turnout below 10% during years 2006–2011.[243] Out of 583 distribution cooperatives, only 57 had voter participation above 20%.[244]

Low participation in elections translates into weak accountability for cooperative boards of directors. Jeter, Thomas, and Wells noted that low voter participation, and the resulting self-perpetuation of board members, has been a perennial problem.[245] As far back as 1937, REA staff reportedly stated that no cooperative in "Indiana, Iowa, and Ohio . . . had called an annual meeting to elect a board of directors."[246] Cooper highlighted that "an Alabama co-op failed to hold elections for board members for 38 years."[247] ILSR profiled a member of the Jackson Energy Cooperative in Kentucky who was the first person to contest a board seat in the cooperative's 71-year history.[248]

In at least some cooperatives, proxy voting has been used to give insiders control over elections, despite the REA's initial goals of limiting proxy voting to promote active participation by members.[249] In one example highlighted by ISLR, members of Missouri's Citizen's Electric Corporation can sign a proxy card, and then if they do not vote in a future year, the proxy committee will vote on the member's behalf.[250]

Several advocacy organizations have also pointed out problems with gender and race representation in the distribution cooperative boards elected from among the member-owners. In the 1980s, the Southern Regional Council created the Co-op Democracy and Development Project to challenge white control of cooperatives serving areas with substantial black populations in the Southeast.[251] An article in the Council's journal recounted that "in areas like the Black Belt, self-selected boards of economically powerful whites . . . dominated management of the co-ops through intimidation, misinformation,

243. John Farrell et al., *Report: Re-Member-ing the Electric Cooperative*, INST. FOR LOCAL SELF RELIANCE (Mar. 29, 2016), https://ilsr.org/report-remembering-the-electric-cooperative/ [perma.cc/4BPD-CRAM]. The report was based on data obtained through a Freedom of Information Act Request to the RUS. Author correspondence with John Farrell; Matt Grimley, *Just How Democratic Are Rural Electric Cooperatives?*, INST. FOR LOCAL SELF-RELIANCE (Jan. 13, 2016), https://ilsr.org/just-how-democratic-are-rural-electric-cooperatives/ [perma.cc/4S79-GFXR].

244. Farrell et al., *supra* note 243.

245. Jeter et al., *supra* note 3, at 431–32.

246. *Id.* at 390.

247. Cooper, *supra* note 33, at 341.

248. Grimley, *supra* note 243.

249. *Id.*

250. *Id.*; Board of Directors, CITIZENS ELECTRIC CORP., https://www.cecmo.com/content/board-directors#Proxy [perma.cc/7G26-MTJ4] (last visited Jul 5, 2019) (describing proxy vote policy).

251. Henry Leifermann & Pat Wehner, *A Question of Power: Race and Democracy in Rural Electric Co-ops*, 18 J. S. REGIONAL COUNCIL 3, 4 (2003).

and blatant manipulation of electoral procedures."[252] More recently, in 2016 a joint project of Labor Neighbor Research and Training Center and Acorn International found that board members in the 313 Southern rural cooperatives continued to be overwhelmingly white (95%) and male (90%).[253]

Self-dealing has also been a longstanding problem with cooperatives, "with board members being employed by the cooperative, employing relatives, owning businesses that would benefit from the cooperative (notably appliance stores), or stealing from the cooperative."[254]

In 2007, scandal engulfed the Pedernales Electric Cooperative, the largest distribution cooperative in the country.[255] In a deposition, board President W.W. "Bud" Burnett, who had served on the board for 40 years, "had difficulty remembering whether he has ever seen any of the electric utility's budgets, whether the board has any standing committees and who, if anyone, approves top executive and director expenses, including his own." Burnett also drew a $190,000 annual salary as employee of the cooperative with the title of "coordinator."[256] The cooperative's general manager, Bennie Fuelberg, was awarded a $2 million deferred compensation package and a $375,000 signing bonus without the cooperative's members' knowledge.[257] When the House of Representatives' Committee on Oversight and Government Reform held a hearing on the self-dealing, Committee Chair Rep. Henry Waxman stated that over the past five years "Mr. Fuelberg and the board spent $700,000 to stay in five-star hotels like the Ritz Carlton and Four Seasons, dine at expensive restaurants, and buy themselves fancy chocolates and Celine Dion concert tickets. They also spent millions of dollars in an unsuccessful legal battle against their own customers."[258]

The Pedernales situation was not unique. In the past two years the Tri-County Electric Cooperative came under scrutiny for having board members pay themselves an average of $52,000, accrued from "calling short meetings – as brief as 15 minutes long – and then collecting a $450-a-day" per diem.[259]

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252. *Id.* at 3.

253. LABOR NEIGHBOR RES. & TRAINING CTR. & ACORN INT'L, THE CRISIS IN RURAL ELECTRIC COOPERATIVES IN THE SOUTH 2 (2016), http://ruralpowerproject.org/wp-content/uploads/2016/02/Rural-Power___Final.pdf [perma.cc/3P3M-896W].

254. Jeter et al., *supra* note 3, at 391 (citing RONALD R. KLINE, CONSUMERS IN THE COUNTRY: TECHNOLOGY AND SOCIAL CHANGE IN RURAL AMERICA 170–71 (2000)).

255. Claudia Grisales, *Testimony Shows How Co-op Operates at Top*, AUSTIN AM. STATESMAN, Dec. 9, 2007, at A.1.

256. *Id.*

257. *Id.*

258. *Governance and Financial Accountability of Rural Electric Cooperatives: The Pedernales Experience, Hearing before the H. Comm. on Oversight and Government Reform*, 110th Cong. 2 (2008) (opening statement of Chair Rep. Henry Waxman).

259. Avery G. Wilks, *SC Utility's Part-Time Board Enriched Itself While Customers Paid High Power Bill*, THE STATE (May 21, 2018), https://www.thestate.com/news/politics-government/article211575649.html.

The board members also awarded themselves lifetime health insurance through the cooperative's employee-benefit plan.[260] In 2010, an audit found that another South Carolina cooperative, Santee Electric Cooperative, similarly doubled their per diem to $450, awarded themselves cash bonuses at the end of the year, and "spent nearly $342,000 in one year – far above the national average – to send its full nine-member board to out-of-town events and conferences."[261]

Cooperatives have also sought expansion into various other businesses. "A suburban Atlanta co-op turned over its entire operation to a for-profit subsidiary that diversified into 'pest control, mortgages, consulting, a customer call center, staffing, security systems, natural gas and another co-op in South Carolina.'"[262] The Denton County Electric Cooperative, which served a district around Fort Worth, Texas, borrowed more than $1 billion to branch "out into telecommunications and real estate. It bought a golf course, a luxury Westin hotel in Fort Worth and part of a shopping mall."[263] In 2001 it went bankrupt.[264]

This type of mismanagement and self-dealing should sting all the more because it is done with the equity of the member-owners. Cooperative members own the assets of the cooperative in proportion to the amount of electricity they have purchased from the cooperative.[265] To the extent that cooperative funds are mismanaged, wasted, or stolen, member owners bear the costs.

In addition, while cooperatives need to keep a portion of member equity as working capital, distribution cooperatives have struggled to return excess member equity in a principled way.[266] Early in their history, cooperatives did not refund member equity because they needed to build financial strength and to use the equity to expand member services.[267] Yet as cooperatives became more established, many "continued to accumulate capital credits without

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260. *Id.*

261. Avery G. Wilks, *High Pay and Expensive Perks: Has 'Absolute Power' Corrupted SC Electric Co-ops?*, THE STATE (August 9, 2018), https://www.thestate.com/news/politics-government/article216222990.html.

262. Cooper, *supra* note 33, at 341 (citing Margaret Newkirk, *From Co-op to Conglomerate*, ATLANTA J.-CONST., Aug. 19, 2007, at IA).

263. Seven Mufson, *Defaults Plague Little-Known Big Lender*, WASH. POST, Apr. 30, 2007, at D1.

264. *Id.*

265. Emmanuel S. Tipon, Annotation, *Co-operative Associations: Rights in Equity Credits or Patronage Dividends*, 50 A.L.R.3d 434 (originally published in 1973).

266. Jeffrey S. Royer, *Assessing the Ability of Rural Electric Cooperatives to Retire Capital Credits*, 31 J. COOPERATIVES 32, 33 (2016).

267. *Id.*

establishing plans for retiring them."[268] Since the issue was first addressed in the 1970s, most cooperatives have implemented policies that result in the refund of member equity; a 2003 report found that 84% of cooperatives with adequate levels of equity were refunding "capital credits" to member owners.[269] However, there are still reports of cooperatives hoarding equity.[270] For example, Cooper highlighted that cooperatives that purchase electricity from the Tennessee Valley Authority maintained excess reserves and "refused to refund any member equity."[271]

Finally, according to some sources, cooperatives have not always succeeded in their principle mission – providing low cost electricity service to their member-owners.[272] Cooper points to a 1996 National Rural Electric Cooperative Association ("NRECA") report acknowledging that average cooperative electricity rates were 9% higher than neighboring IOUs.[273]

Cooperatives achieved an unprecedented triumph by electrifying rural America cost-effectively, but many have also struggled with competent management. Both sides of the story are important when considering how cooperatives are responding to the challenge of climate change.

III. COOPS AND THE CHALLENGE OF CLIMATE CHANGE

Preventing the worst harms of climate change will require a "near-complete decarbonization" of the U.S. electricity industry by 2050.[274] Although there are multiple pathways to this end, they all require development of massive amounts of new renewable resources and the retirement of most fossil-fuel generation that does not capture and store emitted GHGs. Such a transition will pose numerous technical and operational challenges, including the need to adapt to the variable nature of wind and solar resources, to incorporate increasingly prolific customer-sited energy resources such as rooftop solar, and to integrate energy storage that is now economically viable at scale for the first time. In addition, the electricity sector will need to accommodate new uses of electricity, including electric vehicles.

These new technologies are already decarbonizing the grid, and at the same time they are also changing the business model of electricity. In the old model, a vertically integrated utility produced power at large, centralized power plants and distributed it to its captive customers. Now, all kinds of entities can be players in the electricity market, from residents with rooftop

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268. *Id.*

269. *Id.* at 34.

270. *Id.*

271. Cooper, *supra* note 33, at 340.

272. Buckeye Power, Inc. v. United States, 38 Fed. Cl. 154, 161 (1997). "The concept of operation at cost simply means that a cooperative was organized for the purpose of rendering economic services, without gain to itself, to shareholders or to members who own and control it." *Id.*

273. Cooper, *supra* note 33, at 339.

274. THE WHITE HOUSE, *supra* note 13, at 48.

solar and electric cars to companies that can participate in demand side management and have their own backup power.

As a result, there is tremendous dynamism and uncertainty in what the utility business model of the future will look like and how it will be regulated.

One certainty, however, is that utilities will need to transition from fossil-fuel resources to zero-carbon energy resources. This shift is already happening. Thanks in large part to economic factors, federal tax credits, and state mandates, the United States has witnessed a substantial shift away from coal and towards renewables, along with significant increases in conservation from efficiency measures.

For the most part, however, cooperatives have lagged behind in this transition to cleaner energy. Part A of this section first summarizes available evidence demonstrating that cooperatives have moved slower than their for-profit counterparts to reduce reliance on coal and ramp up renewable energy. It also identifies several structural factors that have inhibited this transition, including a federal law that promoted coal-fired generation at a time when cooperatives were adding generation resources and the inability of non-profit cooperatives to directly take advantage of federal renewable energy tax credits. Part B then provides a case study of Tri-State and its member distribution cooperatives to highlight some of the ways that the power supply-distribution cooperative structure has stymied efforts by distribution cooperatives to accelerate the shift to clean energy in Colorado and New Mexico.

A. Coops Have Lagged Behind in the Transition to Clean Energy

Existing data makes it difficult to comprehensively understand the GHG emission and generation picture of electric cooperatives. The leading government data sources do not code generation resource ownership based on utility type. Utilities also often share ownership of generation resources and contract for electricity. This Part presents an overview of the best data available within those limitations.

According to NRECA, cooperatives have reduced carbon emissions 9% between 2009 and 2017. In comparison, the electric power sector as a whole has reduced carbon emissions 23% in the same time period.[275]

Moreover, in a 2019 edition of an annual report that benchmarks air emissions of the 100 largest electricity producers ("Benchmarking Report"),

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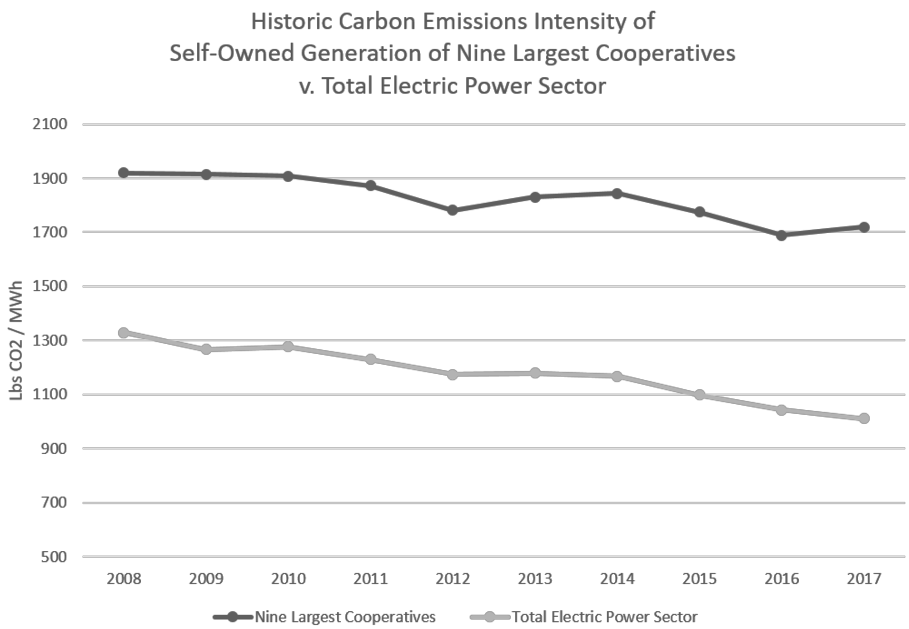
275. *Compare* Nat'l Rural Electric Cooperative Ass'n, *supra* note 10 (citing to EPA and EIA data), *with* Energy Information Administration, U.S. Electric Power Industry Estimated Emissions by State (EIA-767, EIA-906, EIA-920, and EIA-923, https://www.eia.gov/electricity/data/state/ [perma.cc/3KN7-X5YW] (carbon dioxide (CO_2) emissions for total electric power industry, 2009-2017).

M.J. Bradley and Associates found that six out of the top ten most carbon-intensive emitters were cooperatives.[276]

Ten cooperatives make the overall list of 100 largest emitters.[277] In 2017, those 10 cooperatives accounted for 4% of the total electricity generation of the group, but because of their carbon-intensity, accounted for 6% of total carbon dioxide emissions.[278] The 10 cooperatives together have a much higher carbon-intensity than for-profit or municipal utilities in the report: 1701 pounds per megawatt hour (lbs/Mwh) compared to 979 and 781,



276. VAN ATTEN ET AL., *supra* note 20, at 17; s*ee also* Moody's Investor Service, *Press Release: US Public Power and Electric Generation and Transmission Cooperative Utilities Face Risking Risks from Carbon Transition*, MOODYS.COM (2018), https://www.moodys.com/research/Moodys-US-public-power-and-electric-generation-and-transmission-cooperative—PR_383734 [perma.cc/N8CYS9GJ] (last visited Feb 19, 2020) ("public power and G&T coops have higher carbon intensities in their generation fleets than their IOU peers").

277. VAN ATTEN ET AL., *supra* note 20, at 7. The ten are: Basin Electric Power Cooperative, Associated Electric Cooperative, Inc., Oglethorpe Power Corp., Tri-State Generation and Transmission, Inc., Buckeye Power, Inc., Seminole Electric Cooperative, Arkansas Electric Cooperative Corp., Great River Energy, East Kentucky Power Cooperative, and Power South Energy Cooperative. *Id.*

278. Calculations of the author based on 2017 data set provided by M.J. Bradley & Associates. *See* M.J. BRADLEY & ASSOCIATES, BENCHMARKING AIR EMISSIONS OF THE 100 LARGEST ELECTRIC POWER PRODUCERS IN THE UNITED STATES (2019). Data available at: M.J. Bradley & Associates, *Benchmarking Air Emissions - Past Reports*, https://mjbradley.com/content/benchmarking-air-emissions-past-reports [perma.cc/B8RV-D26X].

respectively.[279] Moreover, the 9 cooperatives that have made the top 100 report every year since 2008 have been slower to reduce their carbon intensity when compared with the electric power sector as a whole.[280]

The chief reason for this high carbon intensity is that coal-fired power plants account for a disproportionate share of the generation capacity owned by cooperatives. In 2014, NRECA reported that 65 power supply cooperatives provided power to 668 of the 838 distribution cooperatives.[281] The power supply cooperatives produced half of the generation required by these 668 distribution cooperatives, and at least 75% of the generation supplied by the power supply cooperatives was from coal-fired power plants.[282]

A key factor for this large reliance on coal is that many of these power plants were built between 1979 and 1987, when the federal Powerplant and Industrial Fuel Use Act ("FUA") prohibited the use of natural gas or petroleum as "a primary energy source in new electric power plants."[283] The Act also mandated that any new power plant be "coal capable."[284] The FUA was enacted during the energy crisis of the Carter Administration when "oil and gas resources were expected to become scarce" and aimed to speed a shift to the use of coal for electricity generation.[285] According to NRECA, "about two-thirds of today's cooperative coal-fired generation was built under the

279. *Id.*

280. The 9 cooperatives are the same as listed in note 277 with the omission of Power South Energy Cooperative. Computations by the author based on 2008–2017 cooperative carbon dioxide emissions and electricity generation data provided by M.J. Bradley & Associates from their 2010 through 2019 BENCHMARKING AIR EMISSIONS OF THE 100 LARGEST ELECTRIC POWER PRODUCERS IN THE UNITED STATES REPORTS, *Id.*, as compared with total electric power sector emissions and generation data from the Energy Information Administration ("EIA"). EIA datasets used were: U.S. Electric Power Industry Estimated Emissions by State (EIA-767, EIA-906, EIA-920, and EIA-923) and Net Generation by State by Type of Producer by Energy Source (EIA-906, EIA-920, and EIA-923), *both available at* https://www.eia.gov/electricity/data/state/ [perma.cc/8QSS-LXCH].

281. NAT'L RURAL ELEC. COOP. ASS'N, COMMENTS ON PROPOSED CARBON POLLUTION EMISSION GUIDELINES FOR EXISTING STATIONARY SOURCES: ELECTRIC UTILITY GENERATING UNITS AND NOTICE OF DATA AVAILABILITY 1 (2014).

282. *Id.*

283. Pub. L. No. 95-620 § 201, 92 Stat. 3289, 3298 (1978), repealed by Pub. L. No. 100-42, 100 Stat. 310 (1987).

284. *Id.*

285. *Fuel Use Act Repealed*, CQ ALMANAC 1987, at 323 (1988), http://library.cqpress.com/cqalmanac/cqal87-1145085 [perma.cc/7WSK-JBKZ]. Among the purposes enumerated in the act are to "conserve natural gas and petroleum for uses, . . . other than . . . generation of . . . electricity, for which there are no feasible alternative fuels" and to "foster the greater use of coal and other alternate fuels . . . as a primary energy source." § 102(b), 92 Stat. at 3291.

Act's 'coal capable' mandate" before those provisions were repealed in 1987.[286]

Even after the FUA mandate ended in 1987, however, cooperatives continued to initiate build outs of coal-fired power plants at a higher rate than for-profit utilities.[287]

Cooperatives also have less renewable capacity within their owned-generation portfolios. An analysis of the M.J. Bradley & Associates data for the largest 100 power producers shows that the 10 cooperatives that are part of that group have very limited renewable capacity within their owned-generation mix, particularly when compared to for-profit utilities.[288] Among this group, for-profit utilities grew their renewable generation resources from 4% to nearly 8% between 2012 and 2017.[289] The largest 9 cooperative utilities barely grew self-owned renewable generation, going from 0.9% to 1%.[290]

An important caveat is that this data represents renewable generation owned by power producers, and there is an important structural reason why power supply cooperatives may choose not to build self-owned renewable generation. Federal tax credits have been the primary driver of increased renewable energy deployment over the past two decades.[291] The Production Tax Credit ("PTC") provides a 2.3 cents per kilowatt hour credit for wind electricity produced in a project, and the solar Investment Tax Credit ("ITC") provides a credit for up to 30% of capital costs in solar projects.[292] Because most cooperatives are non-profit entities exempted from federal income tax, however, tax-exempt cooperatives cannot access these benefits as owners of qualifying projects.[293] In contrast, through long-term power purchase

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286. NAT'L RURAL ELEC. COOP. ASS'N, *supra* note 281, at 11.

287. Fischlein et al., *supra* note 23, at 780. "Despite a recent bout of project cancellations, [cooperatives and municipal utilities] still propose 20% capacity growth from coal, compared to 4.9% for investor-owned utilities." *Id.*

288. *See supra* note 275.

289. *Compare* M.J. BRADLEY & ASSOCIATES, BENCHMARKING AIR EMISSIONS OF THE 100 LARGEST ELECTRIC POWER PRODUCERS IN THE UNITED STATES (2019), *with* M.J. BRADLEY & ASSOCIATES, BENCHMARKING AIR EMISSIONS OF THE 100 LARGEST ELECTRIC POWER PRODUCERS IN THE UNITED STATES (2014) (using 2017 and 2012 data, respectively).

290. Calculations of the author based on 2012 through 2017 data sets provided by M.J. Bradley and Associates and EIA data for Renewable Energy Generation. *See* data information *supra* at note 289.

291. TRIEU MAI ET AL., IMPACTS OF FEDERAL TAX CREDIT EXTENSIONS ON RENEWABLE DEPLOYMENT AND POWER SECTOR EMISSIONS iv (2016).

292. *Id.* at 1–2. Both tax credits are in the process of phasing down. Emma Foehringer Merchant, *US Lawmakers Stiff Solar, Wind Gets Modest Victory in Tax Deal*, GREENTECH MEDIA (Dec. 17, 2019), https://www.greentechmedia.com/articles/read/u-s-lawmakers-hand-clean-energy-tax-credits-a-loss-though-wind-gets-a-win [perma.cc/XYX8-K7C4].

293. VAN ATTEN ET AL., *supra* note 20, at 19 (" Rural cooperatives are non-profit entities that are generally unable to take advantage of renewable tax credits, so they will tend to purchase renewable energy under long-term contracts rather than owning

agreements ("PPAs"), a cooperative can contract with a for-profit developer that can then pass along some of the benefits of these important federal subsidies to the cooperative.[294] For this reason, cooperatives likely find it advantageous to contract, instead of self-own, renewable electricity. For example, in 2017 Basin Electric Power Cooperative, the nation's largest power supply cooperative that serves 2.8 million customers in 11 states, owned 285.7 MW of wind capacity but held PPAs for 1,274.9 MW of wind generation capacity.[295] Golden Spread Electric Cooperative in Texas owned 78.2 MW of wind capacity but held PPAs for 200 MW of wind.[296] Some power supply cooperatives like Tri-State, however, are not tax-exempt and therefore are not subject to this barrier.

Another likely reason that cooperatives have been slower to shift to zero-carbon resources or to implement energy efficiency is that cooperatives are frequently exempted from state renewable electricity mandates or given weaker targets. Fischlein, Smith, and Wilson stated in a 2009 article that only 7 state renewable electricity mandates fully applied to consumer-owned utilities, and another 9 included them with exceptions or special provisions.[297] Similarly, of the 27 state programs that set binding energy efficiency mandates on utilities, 16 completely excluded consumer-owned utilities.[298]

As described in more detail in the case study below, there has also been tension between distribution cooperatives that are seeking to increase local renewable energy and power supply cooperatives that would prefer to avoid load defection to local renewable energy generation.[299]

Cooperatives have taken some steps to implement energy efficiency and shift to renewable energy. Starting in 1980, the REA created the Energy Resources Conservation Program.[300] In 2013, the Obama Administration expanded scope and breadth of the program and made available $250 million in funding to support energy efficiency and small scale renewable energy projects.[301]

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the facilities."); Herman K. Trabish, *How Rural Co-Ops Are Shifting to a Cleaner Power Mix*, UTILITY DIVE (Aug. 21, 2017), https://www.utilitydive.com/news/how-rural-co-ops-are-shifting-to-a-cleaner-power-mix/503024/ [perma.cc/Z4JA-8JNT].

294. VAN ATTEN ET AL., *supra* note 20, at 19

295. Trabish, *supra* note 293.

296. *Id.*

297. Fischlein et al., *supra* note 23, at 782.

298. *Id.*

299. *See infra* Part II.B.

300. *See* Extension of Principal Repayments to Achieve Conservation Objectives, 45 Fed. Reg. 82,623 (1980).

301. Energy Efficiency and Conservation Loan Program, 78 Fed. Reg. 73,356, 73,356–58 (2013). Congress amended the RE Act in 1993 to expressly authorize REA loans for "demand side management, energy conservation programs, and on-grid and off-grid renewable energy systems," Rural Electrification Loan Restructuring Act of

The NRECA has also launched the Solar Utility Network Deployment Acceleration project, which uses funding from DOE to "develop models and resources for electric cooperatives interested in developing solar energy."[302] A 2018 report issued by the NRECA stated that in the four years after the project started in 2014, cooperatives owned or purchased 9 times as much solar photovoltaic ("PV") power as they did in 2013.[303]

Despite these clean energy initiatives, cooperatives have until this point generally opposed ambitious state and federal clean energy and climate change policies. Many cooperatives have demanded to be exempted from the state renewable electricity mandates – referred to as renewable portfolio standards ("RPS") – that have been a primary driver of renewable energy development.[304] Similarly, the NRECA opposed the Obama Administration's federal GHG regulations for existing power plants in exceptionally strong terms – calling the proposed regulation full of "misinformed statements and Pollyannaish judgments."[305]

B. Case Study: Tri-State Coops in CO and NM

The tension between power supply and distribution cooperatives when it comes to shifting to a low-carbon electricity system has played out dramatically in Colorado and New Mexico.[306] This Section provides a case study of how some distribution cooperatives in these states have challenged their power supply cooperative, Tri-State, in an effort to allow them to develop more locally-sited renewable energy. These efforts included seeking clarification from FERC that would allow cooperatives to use PURPA to supersede self-generation limits in their wholesale power supply contract with Tri-State and ultimately seeking to buy-out their contract with Tri-State and

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1993, Pub. L. No. 103-129 § 2(c)(1)(B), 107 Stat. 1363, and then again in 2008 to revise the language to list "energy efficiency and conservation programs" as one of the approved uses, 2008 Farm Bill, Pub. L. No. 110-246, § 4(a), § 6101, 122 Stat. 1664, 1956 (2008).

302. NAT'L RURAL ELEC. COOP. ASS'N, A SOLAR REVOLUTION IN RURAL AMERICA 1 (2018).

303. *Id.*

304. *See, e.g.*, Marianne Goodland, *Rural Co-ops Reject Proposed Renewable Standards*, J.-ADVOCATE (May 8, 2019), https://search.proquest.com/docview/1326559641/abstract/AC5B1E07C1B241EBPQ/3 [perma.cc/5QYS-EP7Q]; Gene Zaleski, *Co-ops: Renewable Energy Standard Has Costs*, MCCLATCHY - TRIBUNE BUS. NEWS (Mar. 31, 2011), https://search.proquest.com/docview/859429781/abstract/AC5B1E07C1B241EBPQ/34 [perma.cc/AFU8-MSH4].

305. *See e.g.*, Rod Kuckro, *Coal-Heavy Electric Cooperatives Take Hard Line on EPA Clean Power Plan*, ENERGYWIRE, December 15, 2014, https://www.eenews.net/stories/1060010539 [perma.cc/Q5T5-2QER].

306. *See* Kevin Robinson-Avila, *Changing Energy Landscape Shakes Up Rural Co-ops*, ALBUQUERQUE J. (Nov. 10, 2019), https://www.abqjournal.com/1389706/changing-energy-landscape-shakes-up-rural-coops.html [perma.cc/M6KT-US5W].

exit the power supply cooperative.[307] In 2019, legislatures in both states passed ambitious laws that would drive a cleaner energy mix and that explicitly applied to cooperatives.[308] Following all of these developments, Tri-State announced that it would be closing its remaining coal-fired power plants in Colorado and New Mexico.[309]

1. Tri-State's Organization and Generation Mix

Originally formed in 1952, Tri-State is one of the largest power supply cooperatives.[310] It has 43 member distribution cooperatives in 4 states: Colorado, New Mexico, Wyoming, and Nebraska.[311] In 2017, Tri-State sold 18 million MWh of electricity for $1.3 billion in revenue.[312] The majority of that electricity – 88.3% – was sold to its members, and the rest was sold to other market participants.[313]

Each Tri-State member distributive cooperative selects one director, trustee, or general manager to sit on Tri-State's Board of Directors, and each member receives one vote.[314] Each member cooperative has signed a long-term requirements contract with Tri-State, promising to purchase at least 95% of their power from Tri-State at rates set by the Tri-State Board of Directors.[315] These contracts extend through 2050 for all but one member cooperative, whose contract extends through 2040.[316]

Tri-State charges the same wholesale electricity rate to all of its member cooperatives, sometimes called a "postage stamp" rate.[317] In 2018, the average wholesale rate for members was 7.5 cents per kWh.[318]

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307. *See infra* Part B.II.4.

308. *See infra* Part B.II.6.

309. *See infra* Part B.II.7.

310. *Tri-State Generation and Transmission Association*, NM RURAL ELECTRIC COOPERATIVES, http://www.nmelectric.coop/tristate [perma.cc/Z3EZ-K8VD] (last visited Feb. 25, 2020).

311. TRI-STATE GENERATION & TRANSMISSION ASSOCIATION, INC., BETTER TOGETHER: 2018 ANNUAL REPORT 18–19 (2019) [hereinafter TRI-STATE 2018 ANNUAL REPORT].

312. *Id.* at 39.

313. *Id.*

314. TRI-STATE GENERATION AND TRANSMISSION ASSOCIATION INC., BYLAWS Art. I, IV (amended and restated Apr. 3, 2016).

315. TRI-STATE 2018 ANNUAL REPORT, *supra* note 311, at 39.

316. *Id.* at 39.

317. Tri-State Generation & Transmission Ass'n v. N.M. Pub. Regulation Comm'n, 787 F.3d 1068, 1069 (10th Cir. 2015). The rate is a combination of an energy charge and a demand charge. *Id.*

318. TRI-STATE 2018 ANNUAL REPORT, *supra* note 311, at 5.

Although Tri-State relied on federal RUS loans to finance most of its power plants and transmission wires, Tri-State paid off its RUS debt in 2014.[319] It is therefore no longer subject to oversight as an RUS borrower.

Of the 18 million MWh of electricity sold by Tri-State, more than half came from coal-fired power plants.[320] Tri-State owns five coal-fired power plants built between 1959 and 2006. Approximately 30% of the rest of the power it sold in 2017 came from hydroelectric power supplied by the Western Area Power Administration ("WAPA") and from renewable energy PPAs. Tri-State's contracted-for-power capacity is about evenly split between WAPA hydropower contracts and PPAs for wind and solar.[321]

2. Reasons for Member Coop Dissatisfaction

Tri-State member distribution cooperatives have identified a number of reasons for seeking to increase renewable energy, including lower energy costs, local economic development, and resiliency benefits. Distribution cooperatives seeking to develop such resources, however, are constrained by the terms of their power supply contracts with Tri-State, which until recently limited distribution coops to owning no more than 5% of their supply.

i. High Wholesale Rates

One of the chief reasons for member cooperative dissatisfaction with Tri-State is the cost of wholesale electricity and the number of rate increases over the past decade and a half.[322] Between 2000 and 2016 Tri-State's rates more than doubled over the course of 12 rate increases.[323] As an example, wholesale rates charged to Kit Carson Electric Cooperative ("Kit Carson") increased from 3.9 to 7.9 cents per kWh.[324] In contrast to Tri-State's 7.5 cent average wholesale retail electricity rate, current regional wholesale electricity prices are just over 3 cents.[325]

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319. Tri-State Generation and Transmission Association, Inc., Initial Rate Filing of FERC Electric Tariff Volume No. 1 at 8 (Dec. 23, 2019) (No. ER19-2442-000) [hereinafter Tri-State Initial Rate Filing].

320. Of the 9.6 million total MWh of electricity produced by Tri-State-owned power plants, 93% came from coal. VAN ATTEN ET AL., *supra* note 20, at 35.

321. Computed by subtracting 579 MW aggregate generation capacity specified for wind and solar PPAs from 1170 MW total "renewable" generation capacity. TRI-STATE 2018 ANNUAL REPORT, *supra* note 311, at 5, 63.

322. Mark Jaffe, *Rural Electric Cooperatives Look at Cutting the Cord*, COL. POL. (Aug. 7, 2018), https://coloradopolitics.com/colorado-rural-electric-cooperatives/ [perma.cc/E3UA-3NU5].

323. KARLE CATES & SETH FEASTER, CASE STUDY: HOW KIT CARSON ENGINEERED A COST-EFFECTIVE COAL EXIT 3–4 (2019), http://ieefa.org/ieefa-report-new-mexico-electric-co-op-gains-from-breakup-with-coal-centric-tri-state-group/ [perma.cc/J53W-DZ48].

324. *Id.* at 4.

325. Jaffe, *supra* note 322.

Tri-State's relatively high rate reflects its investment choices and heavy capital spending.[326] Tri-State has developed 5562 miles of high voltage transmission lines and has interests in five coal-fired and six natural gas-fired power plants.[327] In 2006, it sought to build 895 MW of coal generation capacity in Holcomb, Kansas.[328] This was the wrong bet at a time when the electricity sector was changing rapidly; energy demand was flattening and prices for competing generation resources – natural gas and renewables – were dropping significantly.[329] Ultimately, Tri-State abandoned the proposal in 2017 due in part to environmental challenges, at a loss of $93 million that will be borne by its member distribution cooperatives.[330]

In addition to the rate increases, cooperatives have complained about the lack of certainty about when such increases would happen. The Tri-State board has unilateral authority to increase rates, and member cooperatives complained that although they knew rates would go up, they never knew how much.[331]

ii. Desire for Increased, Locally-Sited, Renewable Energy

Many of the disgruntled cooperatives are interested in increasing renewable electricity generation, and particularly locally-sited renewable electricity.

Renewable energy is attractive because of rapidly dropping costs in the region. For example, in northern Colorado, Mountain Parks Electric recently negotiated a power purchase agreement from a solar facility for 4.5 cents per kWh.[332]

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326. *See id.*; Tri-State Generation and Transmission Association, Inc., *Annual Report (Form 10-K)*, at 33 (Dec. 31, 2018) (listing ownership interests).

327. *Annual Report (Form 10-K)*, *supra* note 326.

328. Tri-State Generation and Transmission Association, Inc., *Annual Report at 13 (Form 10-K)* (Mar. 8, 2018).

329. *See* Allen Best, *A Time of Inflection for Rural America's Energy Paradigms*, MOUNTAIN TOWN NEWS (Jan. 31, 2018), https://mountaintownnews.net/2018/01/31/a-time-for-inflection-for-rural-americas-energy/ [perma.cc/R69M-JMET].

330. Joe Smyth, *Economic Reality Sets in for Tri-State Efforts to Expand the Holcomb Coal Plant,* CLEAN COOPERATIVE BLOG (Sep. 14, 2017), https://www.cleancooperative.com/news/colorado-utility-says-odds-it-will-build-a-major-new-coal-plant-are-now-remote [perma.cc/Q4YM-B5K2]; *Kansas: Utility Abandons Proposed Coal Power Plant*, ENERGYWIRE (Jan. 16, 2020), https://www.eenews.net/energywire/stories/1062091229/search?keyword=holcomb [perma.cc/H3D8-RFEH] (noting announcement by Tri-State project partner to abandon effort to build plant on January 15, 2020).

331. CATES & FEASTER, *supra* note 323, at 4.

332. Jaffe, *supra* note 322.

Local renewable energy can also provide other benefits. By being closer to electricity users, it can reduce transmission line losses.[333] When the generation can be directly interconnected with the distribution grid, it avoids transmission service charges and potentially avoids the need to build additional transmission capacity. Depending on how the renewable resource matches with electricity load, local renewables can also help reduce electricity demand at peak usage times, reducing the amount of generation capacity otherwise required.[334]

Another major rationale offered by communities seeking to promote renewable development is the desire for local economic benefits. Coalfield communities have also looked at alternate sources of local power to replace some of the lost economic activity related to coal mining and the retirement of coal-fired power plants.[335]

Finally, several cooperatives have expressed interest in shifting to a low-carbon electricity system to address climate change. In 2016, Kit Carson set a goal of serving its customers with 100% renewable electricity by 2023,[336] and in 2019 La Plata Electric Association announced a goal of reducing its carbon footprint 50% below 2018 levels by 2030.[337] Two other cooperatives in Colorado that are not served by Tri-State – Grand Valley Power and Holy Cross Energy – also announced GHG or clean energy goals in 2018 or 2019.[338]

Until very recently, however, Tri-State was not moving quickly to increase its utility-scale procurement of renewable energy; instead, it was betting on a large new coal plant in Kansas to meet its projected load.[339]

Moreover, Tri-State's power supply contract and its implementing policies limited distribution cooperatives from developing a significant portion of their own generation and prevented cooperatives from benefitting financially from locally-sited generation.

Under the power supply contracts with Tri-State, member distribution cooperatives agree to receive 95 to 100% of their electricity requirements from Tri-State.[340] Up to 5% of a member's requirements "can be obtained

333. *Id.*

334. *Id.*

335. *See, e.g.*, Order on Petition for Declaratory Order at 1, 15 F.E.R.C. ¶ 61,238 (June 18, 2015) (No. EL15-43).

336. Laurie Stone, *A Rural Electric Cooperative Sets a 100% Renewables Target*, ROCKY MOUNTAIN INST. (2016), https://rmi.org/rural-electric-cooperative-sets-100-renewables-target/ [perma.cc/ZQF2-MA5G].

337. Joe Smyth, *More Colorado Co-ops Announce Clean Energy Goals*, CLEAN COOPERATIVE (FEB. 11, 2019), http://www.cleancooperative.com/1/post/2019/02/more-colorado-co-ops-announce-clean-energy-goals.html [perma.cc/ZU39-V4EQ].

338. *Id.*

339. Best, *supra* note 329.

340. Power Supply Contract between Delta Montrose Electric Association and Tri-State Generation and Transmission Association at 1, Exhibit B, Petition of Delta Montrose Electric Assoc., Delta-Montrose Electric Assoc., 151 FERC ¶ 61,238, *reh'g denied*, 153 FERC ¶ 61,028 (2015).

from generation owned or controlled" by the distribution cooperative.[341] These provisions were initially required to be included in power supply contracts by REA/RUS to ensure that power supply cooperatives would have sufficient revenue to pay back federal loans.[342]

At least 5 distribution cooperatives that are Tri-State members have reached the 5% limit on self-owned or controlled generation.[343]

In addition to the 5% limit, Tri-State Board Policy 115 imposes fees on the distribution cooperative-owned or -controlled generation within the 5% cap.[344] Under Policy 115, distribution cooperatives are charged for the electricity generated at their facilities at the normal Tri-State postage stamp rate and are then credited on their bills at a lower rate for the electricity produced from their local generation.[345] The rationale for this policy is that cooperatives that choose to exercise the 5% self-generation option decrease overall revenues to Tri-State, thereby increasing fixed costs among remaining cooperatives not pursuing self-generation.[346] The policy therefore seeks to have coops that exercise the self-generation option effectively pay Tri-State's fixed costs on top of their generation cost to "minimize subsidization between Member Systems that choose to implement this option and Member Systems that do not."[347]

Tri-State has also applied Policy 115 to electricity supplied from a cooperative's battery storage resource.[348] A complaint by member distribution cooperative United Power alleged that Tri-State "effectively double charges . . . for [electric storage resource capacity]" by imposing

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341. *Id.* at 2.

342. Proposed Rate Making Preemption Rule, *supra* note 201, at 12,195.

343. They include United Power, the Delta-Montrose Electric Association ("DMEA"), the La Plata Electric Association ("LPEA"), San Miguel Power, and Mora-San Miguel Electric. Joe Smyth, *Uncooperative: Tri-State Policies are Limiting Colorado Communities from Developing Local Renewable Energy Projects*, CLEAN COOPERATIVE (Jan. 2018) http://www.cleancooperative.com/uncooperative.html#approaching [perma.cc/S8JZ-LEJ5]; Joe Smyth, *Uncooperative: Tri-State Policies are Limiting New Mexico Co-ops' Access to Cheap Solar Power*, CLEAN COOPERATIVE, (Mar. 2018), http://www.cleancooperative.com/uncooperative-new-mexico.html [perma.cc/P3MN-96CJ].

344. TRI-STATE GENERATION AND TRANSMISSION ASSOCIATION, INC., BOARD OF DIRECTORS POLICY 4 (2017).

345. *Id.*

346. *Id.*

347. *Id.*

348. Tri-State Generation and Transmission Association, Inc.'s Motion to Dismiss Formal Complaint or, in the Alternative, to Stay Proceeding at 5, United Power, Inc. v. Tri-State Generation and Transmission Ass'n, (Col. Pub. Util. Comm'n 2019) (No. 19F-0691E).

capacity charges both when the storage resource is charged and then when it is discharged.[349]

3. Kit Carson's Exit from Tri-State and Subsequent Accelerated Clean Energy Pathway

As a result of these grievances, the Kit Carson distribution cooperative bought out its power supply contract in 2016 and left Tri-State, creating a potential model for other cooperatives.[350]

Kit Carson serves Taos, Rio Arriba, and Colfax counties in norther New Mexico.[351] This covers a diverse service area, including the city of Taos, ski resorts at Taos Valley and Angel Fire, the Native American Pueblos of Taos and Picuris, and rural ranching communities.[352] Kit Carson serves 29,000 electricity customers, and its revenue in 2017 was $42 million.[353]

The distribution cooperative's leadership and members were eager to achieve lower prices for their members and shift to renewable energy through the development of local renewable energy. After unsuccessfully seeking changes to the power supply contract through Tri-State, Kit Carson sought to exit from their contract.[354]

Tri-State's bylaws allow for distribution members to withdraw from the power supply cooperative "upon compliance with such equitable terms and conditions as the Board of Directors may prescribe," but only if the distribution cooperative "has met all its contractual obligations to this Corporation."[355] In practice, this means that the cooperative must "buy out" its contract with Tri-State. In 2015, Kit Carson agreed to a $37 million exit fee.[356]

Subsequent to leaving Tri-State, Kit Carson entered into a 10-year, fixed price, wholesale power supply contract with energy brokerage Guzman Energy.[357] During the first 6 years of the Guzman-Kit Carson contract, Kit-Carson's wholesale power rates will incorporate payments to cover a loan for

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349. Formal Complaint at 2, United Power, Inc. v. Tri-State Generation and Transmission Ass'n, (Col. Pub. Util. Comm'n 2019) (No. 19F-0691E).

350. Jaffe, *supra* note 322.

351. *About Us*, KIT CARSON ELECTRIC COOPERATIVE, https://kitcarson.com/about-us [perma.cc/R2KK-AVU8] (last visited Feb. 26, 2020).

352. *2019 Media Kit*, KIT CARSON ELECTRIC COOPERATIVE, https://kitcarson.com/2018-media-kit [perma.cc/A38N-7AVK] (last visited Feb. 26, 2020).

353. *See* KIT CARSON ELECTRIC COOPERATIVE, 2017 ANNUAL REPORT (2017), *available at* https://kitcarson.com/wp-content/uploads/2018/06/2017-Annual-Report.pdf [perma.cc/R3VN-7BQU]; Jaffe, *supra* note 322.

354. Jaffe, *supra* note 322.

355. TRI-STATE GENERATION AND TRANSMISSION ASSOCIATION INC., BYLAWS, *supra* note 311, at Art. I § 4(a).

356. CATES & FEASTER, *supra* note 323, at 3.

357. *Id.*

the $37 million exit-fee Kit Carson paid to Tri-State.[358] Even during that period, however, the wholesale rates will be lower than what Kit Carson paid during its last contract year with Tri-State, 7.9 cents per kWh.[359] Rates are projected to drop substantially during 2022 to 2025, to an average of 4.7 cents per kWh.[360] Kit Carson leaders estimate the Guzman contract will save $50 to $70 million over the life of the contract.[361]

In addition, there is no cap on self-generation in the Kit Carson-Guzman contract.[362] After entering into the contract with Guzman, Kit Carson established its goal of being 100% daytime solar reliant by 2022.[363] The cooperative has partnered with Guzman to add 8.5 MW of solar power to its grid.[364] As of January 2020, it had added 5 solar arrays totaling over 6 MW of capacity, with another 3 MW array pending completion.[365] Kit Carson was also in negotiations for another 21 MW of solar with battery storage.[366] The cooperative's leadership estimates that the solar buildout will bring $10 million of direct local economic benefits, including 50 full-time jobs per year.[367]

4. Delta-Montrose's Attempt to Use PURPA to Greenlight Additional Local Renewables

The Delta-Montrose Electric Association ("Delta-Montrose") is another Tri-State distribution cooperative dissatisfied with Tri-State's rates and with the restrictions on development of local renewable resources.[368]

Delta-Montrose first sought to use a provision of PURPA as a way to get around the self-generation limitation in the Tri-State power supply contract.[369] PURPA's Section 210 – as implemented through FERC regulations – requires

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358. *Id.* at 4.

359. *Id.*

360. *Id.* at 5.

361. *Id.* at 4–5.

362. *Id.* at 3.

363. *Id.* at 4.

364. *Id.* at 5.

365. *KCEC's Solar Production*, KIT CARSON ELECTRIC COOPERATIVE, https://kitcarson.com/kcecs-solar-fleet [perma.cc/7A6N-JMGF] (last visited Feb. 26, 2020).

366. *Id.*

367. CATES & FEASTER, *supra* note 323, at 5.

368. *Id.*

369. *See* Alison Holm, *FERC Ruling Paves Way for Increased Local Renewable Energy Generation*, NREL (Dec. 26, 2016), https://www.nrel.gov/state-local-tribal/blog/posts/ferc-ruling-paves-way-for-increased-local-renewable-energy-generation.html [perma.cc/24ZV-XQEP].

utilities to allow small alternative energy facilities to interconnect with their grid and requires the utilities to purchase power from these Qualifying Facilities ("QFs") at an "avoided cost" rate.[370] In recent years, PURPA has gained new life as falling renewable prices – combined with other federal and state incentives – have reignited renewable QF development in states that do not participate in competitive wholesale electricity markets, including in North Carolina, Idaho, Utah, Georgia, Oklahoma, Minnesota, Nebraska, and Oregon.[371]

States are generally charged with promulgating regulations that govern key PURPA contract terms – including how avoided cost is calculated and whether there needs to be a minimum contract length.[372] States that offer long term contracts and a favorable avoided cost methodology have seen dramatic growth in PURPA-driven renewable development.[373]

Cooperatives that are not rate-regulated by a state utility commission, however, can set those terms themselves, subject to factors identified by FERC.[374] Because Delta-Montrose is not rate-regulated by the Colorado Public Utility Commission ("Colorado Commission"), it could set its own QF contract terms, allowing it to effectively negotiate terms with QF providers.[375]

Delta-Montrose was at its 5% self-generation limit under its Tri-State power supply contract when it was approached by a small, run-of-the-river hydro provider.[376] Since Delta-Montrose was interested in having this local, zero-carbon resource added to its grid, Delta-Montrose petitioned FERC for a declaratory judgment that PURPA's must-purchase provisions superseded its

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370. 16 U.S.C. § 824a-3(b) (2018). Avoided cost is the cost the utility would otherwise have incurred to generate or purchase the incremental unit of power that it is instead procuring from the qualifying facility – in economic terms, the marginal cost. Regulations Implementing Section 210 of PURPA, 45 Fed. Reg. 12214, 12216 (Feb. 25, 1980).

371. Manussawee Sukunta, *PURPA-Qualifying Capacity Increases, But It's Still a Small Portion of Added Renewables,* U.S. ENERGY INFO. ADMIN. (Aug. 16, 2018), https://www.eia.gov/todayinenergy/detail.php?id=36912 [perma.cc/MW42-4EAN]. The Energy Policy Act of 2005 added § 210(m) that allows utilities to be exempted from the must-purchase provisions if they are in organized wholesale or capacity markets. 16 U.S.C. § 824a-3(m) (2018); Energy Policy Act of 2005, Pub. L. No. 109-58, § 1253(a) (2005).

372. 18 C.F.R. § 292.304(e) (2020).

373. *See* DSIRE Insight Team, *Three Trends in State PURPA Implementation*, DSIRE INSIGHT (Sept. 17, 2019), https://www.dsireinsight.com/blog/2019/9/17/three-trends-in-state-purpa-implementation [perma.cc/JY22-32L9].

374. *See* 18 C.F.R. § 292.304(e) (2020).

375. Colorado law allows distribution cooperatives to exempt themselves from the state's Public Utilities Law through a vote of their membership. COLO. REV. STAT. § 40-9.5-103.

376. Order on Petition for Declaratory Order at 2, 151 FERC ¶ 61,238 (Fed. Energy Regulatory Comm'n 2015) (No. EL15-43-000). Percheron Power, LLC sought to build a small, sub-1 MW hydroelectric project known as the South Canal Drop 2 Project. *Id.*

Tri-State power supply contract self-generation constraints.[377] In 2015 FERC ruled that PURPA did indeed supersede power supply contract constraints.[378] The following year, FERC ruled again in Delta-Montrose's favor when Tri-State brought a related action, holding that Tri-State could not try to recover otherwise "unrecovered fixed costs" from Delta-Montrose resulting from an interconnection of a QF that exceeded the 5% self-generation limit.[379]

Initially, these rulings sparked hope that Tri-State member cooperatives could use PURPA to authorize substantial local renewable power even if they were at the 5% self-generation limit.

Subsequently, however, FERC granted a limited order of rehearing in 2016. FERC did not take any action on the matter for three years, creating legal uncertainty.[380] As this Article was about to be published, FERC ruled that because it separately found that Tri-State had become subject to FERC's jurisdiction, the material facts in the matter had changed, and it was therefore dismissing the request for rehearing and also vacating the underlying 2016 decision.[381]

In addition, in September of 2019, FERC issued a notice of proposed rulemaking to amend PURPA regulations.[382] Overall, the proposal would allow states and non-regulated utilities greater discretion with regard to how they would set avoided cost rates, likely reducing financial certainty for QFs.[383] The proposal does not address the issues raised in the Delta-

377. *Id.* at 1. DMEA also asked FERC to confirm that it could choose to negotiate a rate for purchase with the QF and requested judgment on whether Tri-State "is a public utility pursuant to Federal Power Act (FPA) sections 201(e) and (f)2, making Delta Montrose's wholesale requirements contract with Tri-State subject to sections 205 and 206 of the FPA." *Id.*

378. *Id.* at 18 (citing Regulations Implementing Section 210 of PURPA, 45 Fed. Reg. 12,214, 12,219 (Feb. 25, 1980)).

379. Order on Petition for Declaratory Order at 2, 155 FERC ¶ 61,269 (Fed. Energy Regulatory Comm'n 2016) (No. EL16-39-000).

380. *See id.* During a pending rehearing, the Commission's initial order is in effect. 18 C.F.R. § 385.713(e) ("Unless otherwise ordered by the Commission, the filing of a request for rehearing does not stay the Commission decision or order.").

381. Order Dismissing Rehearing and Vacating Prior Order at 11, 170 FERC ¶ 61,263 (Fed. Energy Regulatory Comm'n 2020) (No. EL16-39-001). See discussion *infra* at note 401.

382. PURPA Implementing Regulation Amendments, 168 FERC ¶ 61,184 (proposed Sep. 19, 2019).

383. Qualifying Facility Rates and Requirements; Implementation Issues Under the Public Utility Regulatory Policies Act of 1978, 84 Fed. Reg. 53,246, 53,247 (Oct. 4, 2019). Democratic FERC Commissioner Richard Glick wrote the proposal "would effectively gut" PURPA in a dissent. *Id.* at 53,272–73. *See also* Catherine Morehouse, *FERC Proposal Would 'Gut' PURPA, Could Lower Rates Utilities Pay to Solar Developers*, UTILITY DIVE (Oct. 8, 2019), https://www.utilitydive.com/news/FERC-

Montrose-Tri-State proceedings, but it generally sides with incumbent power-producing utilities over QF developers.[384] As such, it adds uncertainty as to whether the new Commission will revisit, and perhaps reverse, its prior rulings in the Delta-Montrose-Tri-State dispute.

Taken together, these developments have dissuaded cooperatives or QFs from using PURPA in Tri-State's territory.[385]

5. Delta-Montrose and Two Other Coops Seek Colorado Utility Commission Oversight over Exit Price

In 2018, Delta-Montrose next sought to follow Kit Carson's example and exit from Tri-State.[386] According to DMEA court filings, Tri-State calculated a "punitive" exit charge – reportedly much higher than Kit Carson's exit charge – and would not provide insight into its buyout-price-setting methodology.[387] As a result, Delta-Montrose filed a petition asking the Colorado Commission to ensure that Tri-State offer Delta-Montrose a "just and reasonable" exit fee offer.[388] Delta-Montrose was supported in its request by two other Tri-State members, United Power and the La Plata Electric Association ("La Plata"); Colorado's State Energy Office; and a majority of the state's legislators.[389]

Despite Tri-State's opposition, the Commission ruled it did have jurisdiction to regulate exit fees under its broad state Constitutional authority granted to "regulate the . . . rates . . . and charges of every public utility operating within Colorado."[390]

Mid-way through the proceeding, Tri-State took the dramatic step of seeking jurisdiction under FERC, a move that it claimed would have the effect of pre-empting the jurisdiction of the Colorado Commission with regard to regulation of exit fees.[391] The Tri-State board voted to "add new members to

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PURPA-changes-solar-competition-market-flexibility-Chatterjee/563369/ [perma.cc/J5DF-Q7NZ].

384. PURPA Implementing Regulation Amendments, *supra* note 382.

385. Distribution cooperatives and QF developers are unwilling to risk an adverse future FERC decision that would subject them to fees for "unrecovered fixed costs." *See* 151 FERC ¶ 61,238, *supra* note 376.

386. *See* Formal Complaint, Delta-Montrose Elec. Ass'n v. Tri-State, Generation and Transmission Ass'n (Col. Pub. Util. Comm'n 2018) (No. 18F-0866E).

387. *Id.* at 1.

388. *Id.* at 13. Tri-State has maintained that the exit charge offered is confidential. *Id.* at 4 n.6.

389. CATES & FEASTER, *supra* note 323, at 8.

390. Interim Decision Denying Motion to Dismiss Formal Complaint at 5, Delta-Montrose Elec. Ass'n v. Tri-State Generation and Transmission, Inc., (Col. Pub. Util. Comm'n 2018) (No. 18F-0866E).

391. *Tri-State Board of Directors to Place Cooperative Under FERC Rate Regulation*, TRI-STATE GENERATION AND TRANSMISSION ASS'N (July 9, 2019), https://www.tristate.coop/tri-state-board-directors-place-cooperative-under-ferc-rate-regulation [perma.cc/R8C6-Q39K].

the wholesale cooperative" that were not RUS borrowers, which it argued would have the effect of "eliminat[ing] the Federal Power Act exception" that exempts entities owned solely by RUS borrowers from FERC jurisdiction.[392] In its press release, Tri-State said that the action would lead to "lower costs and greater efficiency" by eliminating "inconsistent rate treatment across the states" – and particularly in Colorado and New Mexico.[393] Delta-Montrose decried the action, stating that "[t]he sole purpose appears to be an attempt to evade Colorado law by forum shopping."[394]

After the FERC filing, Delta-Montrose reached a settlement agreement with Tri-State as to an exit price on July 15, 2019.[395] The buy-out price was $62.5 million, and the exit was to be concluded by July 2020.[396]

On October 4, 2019, FERC rejected Tri-State's initial bid to become subject to its wholesale rate jurisdiction, finding that Tri-State had not submitted sufficient detail on its costs.[397] On December 23, 2019, Tri-State tried again, filing a petition for a declaratory order that it was subject to FERC's jurisdiction under the Federal Power Act and filing a new rate tariff.[398]

In November of 2019, La Plata and United Power followed Delta-Montrose's example. These two cooperatives – respectively Tri-State's largest and third-largest members – contribute 22% of the power supply cooperatives revenues.[399] Both filed complaints asking the Colorado

392. *Id.*

393. *Id.*

394. *Colorado Co-op Sues to Block Tri-State's Move to FERC Regulation, State Lawmakers Also Concerned*, EUCI (June 9, 2019), https://www.euci.com/colorado-co-op-sues-to-block-tri-states-move-to-ferc-regulation-state-lawmakers-also-concerned/ [perma.cc/9XT6-F4B9] (quoting DMEA's CEO Jason Bronec).

395. *Id.*

396. *Id.*; Katharhynn Heidelberg, *Signed, Sealed, Delivered: DMEA Poised for $62.5M July Exit from Tri-State*, MONTROSE DAILY PRESS (Apr. 10, 2020), https://www.montrosepress.com/signed-sealed-delivered-dmea-poised-for-62-5m-july-exit-from-tri-state-updated/article_36572b32-7b71-11ea-a59b-13d78c2b2c22.html [perma.cc/8Q42-Y2K3].

397. Order Rejecting Filings without Prejudice, 169 FERC ¶ 61,012 at 8–9 (Fed. Energy Regulation Comm'n 2019) (No. ER19-2440-000, et al.).

398. Notice of Petition for Declaratory Order; Tri-State Generation and Transmission Association, Inc., 85 Fed. Reg. 506 (Jan. 1, 2020); Tri-State Generation and Transmission Association, Inc. Initial Rate Filing of FERC Electric Tariff Volume No. 1 (Fed. Energy Regulatory Comm'n Dec. 23, 2016) (No. ER20-676) (second Tri-State initial rate filing).

399. *See* Joint Submission of La Plata Electric Association and United Power, Inc. on the Issue of the Commission's Jurisdiction Over This Exit Charge Proceeding, (Col. Pub. Util. Comm'n 2019) (Nos. 19F-0620E and 19F-0621E).

Commission to set a "just, reasonable, and nondiscriminatory" exit charge.[400] Tri-State is again contesting the action, arguing in part that the Colorado Commission does not have jurisdiction because of its FERC applications.[401]

In March 2020, shortly before publication of this Article, FERC ruled that Tri-State's addition of a for-profit, non-cooperative member did bring Tri-State under FERC's jurisdiction.[402] FERC also held that its authority did extend to overseeing Tri-State's exit charges and invited Tri-State to file a methodology for calculating exit fees.[403] At the same time, FERC found that its authority did not necessarily preempt the Colorado Commission from concurrently exercising oversight over exit fees.[404] After the FERC decision, Tri-State announced a new public policy for calculating exit fees that would be based on "mak[ing] whole" the remaining distribution cooperative utility members in regard to any financial impacts caused by the exit of a member.[405] Tri-State announced that it planned on filing this policy with FERC for approval.

As of this writing, the La Plata and United Power exit charge proceedings are ongoing.

One result of La Plata's and United Power's complaints was that S&P Global Ratings downgraded Tri-State's credit rating from an A to A- and issued a negative outlook for the future.[406] S&P pointed to the two exit charge complaints as the immediate cause for the downgrade and identified member

400. Joint Response of La Plata Electric Association, Inc. and United Power, Inc. Clarifying Requested Relief in Response to Decision No. C19-0955-I at 2 (Col. Pub. Util. Comm'n 2019) (Nos. 19F-0620E and 19F-0621E). La Plata alleged that Tri-State unjustly refused to provide an exit charge, and United Power alleged that the exit charged offered by Tri-State was unjust. *Id.* at 2–3.

401. Tri-State Generation and Transmission Association's Brief on Jurisdiction and Request for Hearing at 9, (Col. Pub. Util. Comm'n 2019) (No. 19F-0620E) (arguing Colorado Commission's jurisdiction is "entirely preempted" by FERC.).

402. Order Granting in Part and Denying in Part Petition, 170 FERC ¶ 61,224 at 82–92 (Fed. Energy Regulatory Comm'n 2020) (No. EL20-16-000).

403. *Id.* at 116–21.

404. "A ruling by the Colorado PUC on those complaints would not be preempted unless and until such ruling conflicts with a Commission-approved tariff or agreement that establishes how Tri-State's exit charges will be calculated." *Id.* at 116–21. As of the writing of this article, Tri-State was requesting rehearing on the issue of whether the Colorado Commission was preempted from exercising oversight on exit fees. Request for Rehearing Limited to the Issue of Preemption, 170 FERC ¶ 61,224 (2020) (Fed. Energy Regulatory Comm'n 2020) (No. EL20-16-000).

405. *See* Press Release, Tri-State Generation and Transmission Ass'n, Tri-State Takes Significant Step to Increase Member Flexibility, Sets Contract Termination Payment Methodology, (April 9, 2020), https://www.tristategt.org/tri-state-takes-significant-step-increase-member-flexibility-sets-contract-termination-payment [perma.cc/CSL4-KD6A].

406. *S&P Global Ratings Issues New Ratings for Tri-State*, TRI-STATE (Nov. 19, 2019), https://www.tristategt.org/sp-global-ratings-issues-new-ratings-tri-state [perma.cc/YE8Q-MKLT].

dissatisfaction, high rates, and high reliance on coal-fired power plants as some of the reasons for its negative longer-term outlook.[407]

6. Colorado, New Mexico 2019 Legislation

The unrest by Kit Carson, Delta-Montrose, United Power, La Plata, and other Tri-State cooperatives in Colorado and New Mexico have also led to important legislative developments.

In 2019, Colorado passed legislation that subjected Tri-State to an IRP filing requirement overseen by the Colorado Commission.[408] Previously, Tri-State had been required to submit an IRP under a settlement agreement but was not required to have the plan approved by the Commission.[409] The legislation clarified the authority of the Commission to require a more rigorous process.[410]

Colorado and New Mexico also both passed ambitious climate or clean energy laws in the 2019 legislative session.[411] Colorado's H.B. 19-1261 directs the state air quality body to promulgate GHG regulations to meet economy-wide GHG reduction goals.[412] The law allows utilities the option of developing their own "clean energy plans" for how to achieve an 80% reduction in GHG emissions associated with their retail sales by 2030 from 2005 levels.[413] Utilities that receive the Colorado Commission's approval of such plans and achieve the planned reductions will not be required to achieve further reductions by the state air quality body, nor will they be subject to additional direct, nonadministrative costs, until after 2030.[414] The legislation explicitly allows distribution cooperatives to submit such plans.[415]

New Mexico's Energy Transition Act extends the state's RPS to require that distribution cooperatives supply 50% of electricity from renewable resources by 2030 and 100% from zero-carbon resources by 2050.[416]

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407. *Id.*

408. COLO. REV. STAT. ANN. § 40-2-134 (2019).

409. Joe Smyth, *Colorado Public Utilities Commission Will Oversee Tri-State Resource Planning*, CLEAN COOPERATIVE (May 7, 2019), https://www.cleancooperative.com/news/colorado-public-utilities-commission-will-oversee-tri-state-resource-planning [perma.cc/6862-EWQA].

410. *Id.*

411. *See* COLO. REV. STAT. ANN. § 25-7-105(1)(e)(II) (2019); S.B. 489, 54th Leg., 1st Sess., § 26 (N.M. 2019).

412. § 25-7-105 (1)(e)(II).

413. § 22-7-105(1)(e)(VIII)(B).

414. § 25-7-105 (1)(e)(VIII)(C).

415. § 25-7-105 (1)(e)(VIII)(F).

416. S.B. 489, 54th Leg., 1st Sess., § 26 (N.M. 2019). In 2050, distribution cooperatives are required to achieve both an 80% renewable and 100% zero-carbon resource standard "provided that: 1) achieving the target is technically feasible; 2) the

In both states, this means that Tri-State's member cooperatives will become subject to some of the most ambitious GHG reduction or renewable energy requirements in the nation. Because Tri-State is responsible for supplying at least 95% of the wholesale power to its member cooperatives, these requirements effectively fall on Tri-State as well.[417]

Although Tri-State has argued that its attempts to secure FERC jurisdiction preempt the Colorado Commission's authority to establish an exit charge, it has not disputed Colorado or New Mexico's authority to subject its member cooperatives to resource planning, renewable energy, or GHG mandates.[418]

7. Tri-State's Coal Power Plant Closures and Responsible Energy Plan

Starting in July of 2019, Tri-State announced that it would be developing a new energy plan.[419] The announcement followed the hiring of a new CEO, Duane Highley.[420] Tri-State unveiled its "Responsible Energy Plan" in January of 2020.[421]

The plan announced that Tri-State was committing to retire its two remaining coal-fired power plants in Colorado and New Mexico.[422] The power supply cooperative will close the 253 MW Escalante Generating Station in New Mexico by the end of 2020 and will close the 1,285 MW Craig Station and the associated Colowyo coal mine in Colorado by 2030.[423] Tri-

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rural electric cooperative is able to provide reliable electric service while implementing the target; and 3) implementing the target shall not cause electric service to become unaffordable." *Id.*

417. TRI-STATE 2018 ANNUAL REPORT, *supra* note 311, at 39.

418. "FERC regulation will not affect resource planning, carbon reduction or renewable energy regulation in the states in which Tri-State operates." *Tri-State Board of Directors to Place Cooperative Under FERC Rate Regulation*, *supra* note 390.

419. *See Tri-State Announces Transformative Responsible Energy Plan*, TRI-STATE (July 17, 2019), https://www.tristate.coop/tri-state-announces-transformative-responsible-energy-plan [perma.cc/K6AU-X3RR].

420. *See* Darrell Proctor, *Tri-State Announces Duane Highley as Next Chief Executive Officer*, POWER (Feb. 12, 2019), https://www.powermag.com/press-releases/tri-state-announces-duane-highley-as-next-chief-executive-officer/ [perma.cc/Y7TD-6RAZ].

421. *Tri-State Announces Transformative Responsible Energy Plan Actions to Advance Cooperative Clean Energy*, TRI-STATE (Jan. 15, 2020), https://www.powermag.com/press-releases/tri-state-announces-duane-highley-as-next-chief-executive-officer/ [perma.cc/E593-FNHL].

422. *Tri-State Announces Retirement of All Coal Generation in Colorado and New Mexico*, TRI-STATE (Jan. 9, 2020), https://tristate.coop/tri-state-announces-retirement-all-coal-generation-colorado-and-new-mexico [perma.cc/865B-V3Y2].

423. Tri-State reported that the closures would affect 600 power plant and mine employees. *Id.*

State also retired its 100 MW Nucla coal-fired power plant in September 2019.[424]

In its plan Tri-State also committed to add 1 gigawatt ("GW") of additional renewable energy capacity to its portfolio by 2024.[425] It also touted a recent change in the power supply cooperative's policies that would allow member distribution cooperatives to "build community solar to serve an additional 2 megawatts or 2% of their consumption" above the 5% self-generation limit.[426] (As this Article was about to be published, Tri-State further announced a process by which cooperatives could seek to additionally increase self-generation, with interested cooperatives being able to self-supply in aggregate up to 10% of Tri-State's system peak demand.)[427]

The Plan was announced by Highley in a press conference with Colorado Governor Jared Polis.[428] Highley said that he hoped the plan would give member cooperatives considering exiting Tri-State a "reason to think about staying."[429]

As of this writing, it is not clear whether the plan will be enough to satisfy disgruntled member cooperatives.

In sum, climate change will require near total decarbonization on the part of electric utilities, including cooperatives. A combination of economic factors, government subsidies, and state and federal regulations have caused utilities to start this shift to a low-carbon economy. Cooperatives, however, are lagging behind in this shift. They own more coal-fired power plants and have been slower to close these power plants and to add renewable energy.

As the Tri-State example shows, some of the distribution cooperatives that have been most eager to accelerate this shift to a low-carbon electricity system have been stymied by their power supply cooperative. Until recently Tri-State was focused on building a large new coal plant and aggressively resisted efforts by distribution cooperatives to add significant renewable generation to their grids. After the successful exit of two cooperatives, exploration of exit by two additional cooperatives, new state legislation imposing dramatic clean energy and resource planning mandates, and a

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424. Judith Kohler, *Tri-State Officially Retires Nucla Coal-Fired Power Plant Well Ahead of Planned 2022 Closure*, DENVER POST (Sep. 21, 2019), https://www.denverpost.com/2019/09/21/tri-state-closes-nucla-coal-plant/ [perma.cc/CH2Z-ZR5D].

425. *Tri-State Announces Transformative Responsible Energy Plan Actions to Advance Cooperative Clean Energy*, *supra* note 419.

426. TRI-STATE, RESPONSIBLE ENERGY PLAN 5 (2020).

427. Press Release, Tri-State Generation and Transmission Ass'n, *supra* note 405.

428. Governor Jared Polis, *More Renewable Energy in Colorado*, FACEBOOK (2020), https://www.facebook.com/jaredpolis/videos/558653254862714/ [perma.cc/9C84-TPEP].

429. *Id.*

downgrade of its credit rating, Tri-State has made a significant turn towards clean energy.

IV. COOP OVERSIGHT IS NOT ADEQUATE TO ADDRESS CLIMATE CHANGE

Cooperatives emerged at the dawn of utility regulation. At the time, they avoided regulation because they were perceived as largely self-regulating and because the REA played an oversight role.

Addressing climate change, however, will require cooperatives to navigate a dramatic shift in generation resources in a time of significant technological, regulatory, and economic uncertainty.

This Part argues that the current regulatory scheme will not adequately prompt a rapid and efficient shift to a low-carbon electricity system. Section A discusses why the benefits of the cooperative organizational form will not carryover as well to the climate challenge as they did to electrifying rural America. Section B details why the separation of ownership and control is a particular problem for U.S. cooperatives and how manager incentives and organizational inertia conflict with prudent planning to transition to a low-carbon electricity system. Section C discusses how key decarbonization strategies – distributed energy resources, energy efficiency, and increasing reliance on energy markets – threaten to destabilize the existing model of power supply and distribution cooperative relationships. Section D identifies the lack of rigorous resource planning oversight as a key gap in the cooperative regulatory scheme. Section E concludes by discussing the implications for cooperatives of failing to prudently plan for a low-carbon future.

A. Not All Benefits of the Coop Form Transfer to the Clean Energy Transition

The success of cooperatives in electrifying rural America can be attributed in part to the benefits of the cooperative organizational form. Transitioning to a low-carbon electricity system presents a somewhat similar challenge, and some of the benefits of the cooperative form will again prove useful, particularly the cost savings provided by the vertical integration and non-profit status of cooperatives. But the challenge of low-carbon transition also differs in important ways from electrification, particularly because many of the benefits of acting on climate are diffused and deferred. Where rural electrification benefitted from substantial in-kind contributions by cooperative member owners, it is not clear that low-carbon transition will reap the same benefit.

Scholars such as Henry Hansmann, Peter Molk, and Melissa Scanlan have identified diverse benefits and drawbacks of the cooperative as an organizational form.[430]

One of the chief benefits is that rural electricity cooperatives reduce costs to consumers.[431] As consumer cooperatives, they vertically integrate the firm and end-use consumers and therefore eliminate the profit that would be extracted by a for-profit distribution utility (or a distribution-utility component of a vertically-integrated utility).[432] Where a distribution cooperative purchases wholesale electricity from a power supply cooperative or a federal power entity, they also eliminate profit that would otherwise be extracted by a for-profit generation utility (or generation-utility component).[433] These cost savings were an important factor in the success of cooperative rural electrification because they made it more feasible to string wires in sparsely populated, poor communities.

A second important benefit of the cooperative structure is that the act of ownership can "induce desirable activity by those patrons that is not replicable through market contracting or through ownership by investors."[434] It is clear from numerous reports that the member-owners of new rural cooperatives put tremendous energy and effort into establishing their rural electricity cooperatives.[435] For example, when cooperatives were first getting organized, future member-owners recruited members, developed the organization, and plotted power-lines, all without pay.[436] These volunteers would make house calls to convince those farmers who were skeptical, recognizing the importance of having the largest number of users along a power line.[437] Moreover, future member owners donated most of the easements for power lines in early cooperatives.[438] These contributions can be attributed to the collective-ownership nature of the enterprise and to the dramatic improvement in quality-of-life that electrification provided.[439]

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430. HANSMANN, *supra* note 84; Peter Molk, *The Puzzling Lack of Cooperatives*, 88 TUL. L. REV. 899 (2013); MELISSA K. SCANLAN, COOPERATING FOR A LIVABLE PLANET (forthcoming Yale University Press 2021) (based on draft of forthcoming book shared by the author).

431. Molk, *supra* note 430, at 912.

432. *Id.*

433. *Id.* This is not a reduction of economic costs – it is a transfer of wealth from shareholders to consumers. They "accomplish vertical integration" by "coupling the firm with [a] . . . downstream (consumer) process." *Id.*

434. *Id.* at 914.

435. *See* PENCE & DAHL, *supra* note 108, at 83.

436. *Id.*

437. *Id.*

438. *Id.* at 87.

439. *Id.*

There were other factors that contributed to rural electrification. These include the technical assistance provided by the REA from the outset, as well as the subsidized interest rate provided to cooperatives between 1944 and 1973.[440] Yet the cooperative form itself provided some of the benefits that helped the rural electrification effort succeed.

Decarbonizing the rural electricity sector is in some ways a similar challenge to electrifying rural America in the first place. Rural communities were more expensive to electrify because of dispersed living patterns; those same living patterns make it more expensive to implement some lower-carbon strategies like energy efficiency.[441] Rural communities were also challenging to electrify because residents were poorer and therefore were expected to be less able to afford new technologies. The same remains true today.

But shifting to a lower carbon grid will also pose challenges that are different from electrification. In some cases, the benefits of the cooperative form may not aid in addressing the climate change challenges to the same degree they helped electrify rural America.

First, shifting to a lower-carbon electricity system will not always improve the quality of life for cooperative member owners with the same kind of immediacy and universality that electrification did. That is not to say that decarbonizing the electricity system won't benefit rural Americans. Improved energy efficiency will reduce bills and improve the quality of housing for those who receive such services. Distributed wind and solar, coupled with battery storage, will make rural distribution grids more resilient and reliable in the long term. And acting quickly to decarbonize the grid will reduce the severity of harmful climate impacts. Yet many of these benefits are reductions in future harms and, in some cases, reductions of harms far in the future. It is well established that "people discount future utility and put off long-term investments in favor of short-term return."[442] Where these benefits are immediate – for example bill reductions from energy efficiency or rooftop solar – they are generally not universal. There are important exceptions. For example, Kit Carson's exit from Tri-State and shift to cleaner energy is projected to reduce rates for all member owners in the next 10 years.[443] Absent such clear benefits, however, it should be expected that there would be less support for decarbonization compared to electrification because the benefits will either be further off or will not accrue to all cooperative member-owners.

440. *Id.*

441. MARY SHOEMAKER ET AL., REACHING RURAL COMMUNITIES WITH ENERGY EFFICIENCY PROGRAMS, AMERICAN COUNCIL FOR AN ENERGY EFFICIENT ECONOMY 10 (2018) ("Delivering and scaling energy efficiency programs is particularly challenging for utilities serving rural communities because low population density may mean higher program cost per capita.").

442. Richard J. Lazarus, *Super Wicked Problems and Climate Change: Restraining the Present to Liberate the Future*, CORNELL L. REV. 1153, 1174 (2008).

443. In some cases there may be universal short term benefits. *See supra* Part II.B.3.

Second, polling shows that rural residents are somewhat less likely to believe that climate change is occurring or caused by human activity than urban counterparts.[444] To a lesser but still significant degree, rural residents are also less likely to support requiring increased renewable energy.[445] It is important not to overstate such findings. In the past five years, belief that climate change is happening has grown by 11 percentage points – 73% of Americans overall now believe climate change is happening and 69% are worried about it.[446] Moreover, not all rural communities are the same, and some cooperative service territories include suburban areas. Nevertheless, there likely is somewhat less support for taking action to address climate change in cooperative service territories.

During the 1930s, ranchers and farmers lined up to plunk down $5 and donate an easement to join a cooperative and receive electric light for the first time. Given that the benefits of shifting to a cleaner electricity system are often more distant and diffuse – and that addressing climate change may be less of a compelling rationale in cooperative service territories – it seems likely that fewer cooperative member owners would be willing to take similar action in this context.

The cooperative form will still provide benefits in addressing climate change. The non-profit status and vertical integration of cooperatives will reduce costs in the transition. Shelley Welton has also argued that many of the choices that will need to be made in the transition are public policy decisions that are more appropriately made by democratically accountable institutions, including cooperatives, as opposed to for-profit utilities.[447] And in a forthcoming book, Melissa K. Scanlan highlights the value of cooperatives in transitioning to a low-carbon economy, including case studies of electricity cooperatives in Spain and the United States. She argues that not only can cooperatives be successful organizational models for the transition to a low-carbon electricity system, the cooperative form provides important

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444. Belief that global warming is happening is "significantly lower" in rural counties than in the nation's largest cities. Howe et al., *supra* note 27, at 600.

445. *See Yale Climate Opinion Maps 2018*, YALE PROGRAM CLIMATE CHANGE COMM. (Aug. 7, 2018), https://climatecommunication.yale.edu/visualizations-data/ycom-us-2018/ [perma.cc/7C76-JL58].

446. Abel Gustafson et al., *A Growing Majority of Americans Think Global Warming is Happening and are Worried*, YALE PROGRAM CLIMATE CHANGE COMM. (Feb. 21, 2019), https://climatecommunication.yale.edu/publications/a-growing-majority-of-americans-think-global-warming-is-happening-and-are-worried/ [perma.cc/P345-446U].

447. *See* Shelley Welton, *Public Energy*, 92 N.Y.U. L. REV. 267, 270 (2017) ("In debates over public/private boundaries, commentators often argue that decisions involving open-ended policy choices with broad public consequences belong with government").

complementary benefits such as the opportunity to reinvest surplus revenue into the community instead of siphoning such revenue to shareholders.[448]

Although the cooperative form continues to provide benefits, it is not clear how many member owners will replicate the extra-transactional "desirable activity" that helped make cooperative electrification such a broad success.

B. Coop Managers Often Have Incentives to Grow Size and Revenue

Whereas early utility regulation was chiefly concerned with preventing exploitative profits, the energy crises of the 1980s underscored that in some circumstances, for-profit utilities will make imprudent choices that eventually harm both shareholders and rate payers. Skewed management incentives and institutional biases can drive poor resource planning, especially in times of drastic change and uncertainty.

Prudent long-term resource planning by utilities will be the central challenge in shifting to a low-carbon electricity system. At least some of the institutional pressures bearing on both distribution and power supply cooperatives, however, may skew cooperative responses to the climate challenge.

First, cooperative managers – particularly of power supply cooperatives – have an institutional incentive to grow the budget and size of the cooperative, and this incentive favors maintaining a fossil-fuel heavy generation portfolio.

A longstanding criticism of the cost-of-service regulatory model for for-profit utilities is that these utilities have an incentive to overbuild utility infrastructure to receive a rate-of-return on a higher level of capital investment (referred to as the Avery-Johnson effect).[449] This is the reason that utilities in cost-of-service regulatory models would prefer to build their own generation instead of securing long-term PPAs agreements that do not provide them with a rate-of-return on capital investment.[450]

Because cooperatives have no profit motive, most early cooperative proponents did not believe that cooperatives had a similar incentive to overbuild infrastructure.

Yet some of the insights from organizational theory and public choice theory of the Niskanen variety can help explain why managers of non-profit power supply cooperatives may also be motivated to increase capital infrastructure.

Organization theorists have long focused on the problem of the separation of ownership and control in a corporation. This refers to the differences between the interests of the owners and the managers of a firm, and how to use corporate governance mechanisms to counter these

448. SCANLAN, *supra* note 430.
449. Boyd, *supra* note 31, at 1652.
450. *Id.* at 1653–54.

differences.[451] Jeter, Thomas, and Wells argue in their 2018 article that cooperatives are particularly susceptible to this problem because they have "weak corporate governance structures" that prevent effective or efficient monitoring of cooperative managers.[452] "Cooperatives fail because of bad boards of directors and uninformed, passive members. Member apathy is rampant, and only a small fraction of members attend annual meetings to cast their votes to elect directors."[453] They contrast cooperative governance to modern corporate governance, which "thrive[s] on diligent boards of directors acting without conflicts of interest on a fully informed basis and subject to close monitoring by outside investors."[454] In short, cooperative managers are given more deference by their boards, and their decisions are subject to less rigorous scrutiny than those of for-profit utilities.[455]

William Niskanen argued in 1971 that bureaucrats seek to maximize their agency budgets as a way to maximize their utility.[456] While few contemporary scholars accept Niskanen's simplistic model that budget maximization is deterministic, it is broadly accepted that budgets "are among the things agencies seek to maximize – even if their utility functions are a great deal more complicated than the highly stylized Niskanen model would suggest."[457]

This dynamic plausibly explains some of the behavior of power supply cooperatives. For example, Tri-State managers are highly paid executives that likely have an incentive to increase Tri-State's revenues and size even though Tri-State is not a for-profit firm.[458] Tri-State's recently-retired CEO earned just over $1 million in total compensation in 2017, and four other senior executives earned over $600,000.[459] The Tri-State CEO's base salary is set by the Board and is based on performance and "national salary data" for "positions with similar responsibilities."[460] There are no fixed performance incentives for the Tri-State CEO, for example, no bonus for managing to

451. The seminal starting point is ADOLF A. JR. BERLE & GARDINER C. MEANS, THE MODERN CORPORATION AND PRIVATE PROPERTY 119 (1991).

452. Jeter et al., *supra* note 3, at 396.

453. *Id.* at 396–97.

454. *Id.* at 397.

455. *Id.* at 397–98.

456. WILLIAM A. NISKANEN, BUREAUCRACY AND REPRESENTATIVE GOVERNMENT 37 (2d ed. 1974).

457. Christopher C. Jr. DeMuth & Michael S. Greve, *Agency Finance in the Age of Executive Government*, 24 GEO. MASON L. REV. 555, 556 (2016).

458. *See Tri-State Generation Annual Report (Form 10-K)*, *supra* note 326, at 94.

459. *Id.* at 96.

460. *Id.* at 97.

reduce the wholesale electricity rate while providing reliable service.[461] Other cooperatives have similarly stated that they index salaries to cooperatives of similar "size."[462]

Hence, the Tri-State CEO has a personal financial incentive to grow the size of Tri-State as an organization, even though that may not be the most prudent course of action for Tri-State's member-owners.

Research on the non-profit hospital sector has found similar incentives. A 2013 Kaiser Health News report found that private, non-profit hospitals were increasingly pegging management pay incentives to increased volume of service and revenue growth, not on quality-of-service.[463]

These manager incentives to grow organizational size are coupled with a board of directors that is not in a strong position to provide oversight. Almost none of the current Tri-State board members have formal training or experience in the electricity sector.[464] Many are farmers and ranchers.[465] Moreover, board members may feel beholden to power supply cooperative managers thanks to generous perks such as a $500 per diem for board meetings, in addition to travel expenses.[466]

Finally, literature on institutional governance points out that non-profit organizations historically exhibit "high degrees of inertia and path dependency."[467] Organizational theorists highlight that in non-profits, board members have weaker incentive signals and may rely more on "deep-seated dispositions" that combine to maintain a preference for the status quo.[468]

C. Shifting to a Low-Carbon System will Likely Require Disrupting the Power Supply – Distribution Coop Model

Prudent action to prepare for a carbon-constrained world will likely require generation-owning cooperatives to close fossil-fuel fired power plants, contract out for renewable generation, and reduce wholesale power sales – all

461. *Id.* "[S]ubstantially all of our monetary compensation to our executive officers is provided in the form of base salary." The Board does have the discretion to provide bonuses. *Id.*

462. Terence Corrigan, *How Much Pay is the Right Amount for Electric Co-op Managers?*, SHELBYVILLE TIMES-GAZETTE (Aug. 1, 2018), https://www.t-g.com/story/2541460.html [perma.cc/YDE7-LCRQ].

463. Jay Hancock, *Hospital CEO Bonuses Reward Volume and Growth*, KAISER HEALTH NEWS (June 6, 2013), https://khn.org/news/hospital-ceo-compensation-mainbar/ [perma.cc/GB4X-MTKB].

464. *Tri-State Generation Annual Report (Form 10-K)*, *supra* note 326, at 87–91.

465. *Id.* at 90–94.

466. *Id.* at 98. On average, board members received just over $19,000 per person in 2017. *Id.* at 100. The Chairman and President received $167,447, based on an expectation that he or she is available for Tri-State business 260 days a year. *Id.*

467. HELMUT K. ANHEIER, NONPROFIT ORGANIZATIONS: THEORY, MANAGEMENT, POLICY 517 (2014).

468. *Id.*

actions that run counter to the management incentive to increase organizational size and budget.

Historically, power supply cooperatives sought to ensure a sufficient power supply for the needs of member distribution cooperatives and to keep the wholesale power costs as low as possible.

When there was a growing electricity demand, stable fuel costs, and growing economies of scale, achieving these goals was simple. Power supply cooperatives would build sequentially larger power plants to meet growing demand, and the larger power plants would produce cheaper power. This model neatly aligned with the financial incentives of managers to grow revenues and organizational size.

Now, however, the fundamentals of the electricity business have changed. Electricity demand is flat.[469] Legacy coal plants, which were once the cheapest source of baseload power, are now more expensive to run than natural gas plants due to the declining cost of natural gas.[470] Wind and solar power plants have become, in turn, cheaper to build than natural gas and have no fuel costs at all.[471]

Utility managers also face substantial regulatory uncertainties. The Trump Administration has significantly weakened federal GHG standards for existing power plants, but most utility managers expect significant carbon regulations in the future.[472] Most states already have renewable electricity mandates, but they vary in their levels of ambition. Several states have recently increased targets; others are likely to follow in future years.[473] In short, utility managers know that substantial carbon or clean energy regulations of some sort are likely in the future, but they don't know what these regulations will look like or when they will come into effect.

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469. U.S. ENERGY INFO. ADMIN., ELECTRIC POWER ANNUAL, TABLE 2.2. SALES AND DIRECT USE OF ELECTRICITY TO ULTIMATE CUSTOMERS, *available at* https://www.eia.gov/electricity/annual/html/epa_02_02.html [perma.cc/F96M-YNJT] (showing little change in electricity sales from 2008 to 2018).

470. Elizabeth Weise, *On World Environment Day, Everything You Know About Energy in the US Might Be Wrong*, USA TODAY (JUNE 4, 2019), https://www.usatoday.com/story/news/2019/06/04/climate-change-coal-now-more-expensive-than-wind-solar-energy/1277637001/ [perma.cc/B2ND-UC3K].

471. *Id.*

472. Gavin Bade, *SEU 2019 Survey: Uncertainty Mounts in the Clean Energy Transition*, UTILITY DIVE (February 26, 2019), https://www.utilitydive.com/news/seu-2019-survey-uncertainty-mounts-in-the-clean-energy-transition/549214/ [perma.cc/T4W7-C975] (last visited Sept. 15, 2019).

473. Galen Barbose, *U.S. Renewables Portfolio Standards: 2019 Annual Status Update* 48 (2019), https://emp.lbl.gov/publications/us-renewables-portfolio-standards-2 [perma.cc/YDW6-872P].

While there can be cost benefits to shifting to low-carbon resources, the strategies available to power supply cooperatives can threaten the traditional power supply-distribution cooperative model.

First, transitioning away from coal generation will likely be more painful for many cooperatives than for for-profit utilities. Coal-fired power plants are now more expensive to run than natural gas power plants and also more carbon-intensive.[474] In some cases, it is cheaper to retire those coal-fired power plants and to replace them with renewable energy than to continue to run the plants.

However, in many cases, cooperatives are still paying off debt from capital investments into these power plants because the power plants have not reached the end of their planned "useful life."[475]

For-profit utilities are also confronting such "stranded assets," but utilities in cost-of-service jurisdictions have the potential to recover at least some of the costs of paying off the debt from ratepayers. To the degree that ratepayers cover these stranded costs, the "owners" receive some protection from the losses related to these stranded assets.[476] With favorable PUC treatment, shareholders may have less concern about retiring coal plants. Where PUCs can be expected to grant some rate recovery for stranded assets, there is less concern about a potential loss for shareholders and therefore less opposition to retiring power plants that have not reached the end of their useful life.[477]

For cooperatives, however, the owners and the customers are the same. If there are business losses resulting from decisions to invest in coal, the losses come at the expense of member-owners, either through losses of patronage capital or in the form of higher rates.

Second, adding renewable energy to a power supply cooperative's portfolio can also run counter to a cooperative's institutional incentives.

Because a tax-exempt power supply cooperative cannot take direct advantage of federal renewable energy tax credits, they are more likely to procure renewable energy through PPAs.[478] In a PPA, a separate entity that is capable of benefitting from the renewable energy tax credit would own the

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474. Weise, *supra* note 470.

475. ERIK HATLESTAD ET AL., RURAL ELECTRIFICATION 2.0: THE TRANSITION TO A CLEAN ENERGY ECONOMY 2 (2019), https://www.cfra.org/publications/RuralElectrification [perma.cc/GZ49-GL85].

476. SCOTT HEMPLING, REGULATING PUBLIC UTILITY PERFORMANCE: THE LAW OF MARKET STRUCTURE, PRICING, AND JURISDICTION 236 (2013). Utility commissions may exclude "imprudent" costs from a utilities rate base. *Id.*

477. When a utility is able to impose costs of stranded assets on captive ratepayers instead of investors, it raises significant equity concerns that are important but beyond the scope of this article. The point here is that a profit-driven utility in a cost-of-service jurisdiction has the potential of shifting at least some losses from shareholders to ratepayers.

478. Bob Gibson, *Electric Co-ops Get Creative to Finance Solar*, SMART ELEC. POWER ALLIANCE (FEB. 5, 2015), https://sepapower.org/knowledge/electric-co-ops-get-creative-to-finance-solar/ [perma.cc/XK3K-2G9W].

renewable resources and would sell the energy produced to the cooperative.[479] Under such an arrangement, a cooperative would not increase its assets or personnel – though a PPA will still increase the quantity of wholesale electricity sales. To the extent that the cooperative management team's compensation is based in part on the utility's assets and personnel, a power supply utility will have an institutional preference for maintaining ownership of existing generation assets instead of replacing some of that capacity through a PPA.

An even more threatening issue is the potential of replacing electricity generated or procured by a power supply cooperative with renewable electricity generated at the local level.

For nearly one hundred years, centralized power plants provided electricity to all consumers. Now, however, a whole suite of community – and customer – scale technologies like rooftop solar, battery storage, demand response, and in the future, electric vehicles, are providing electricity and other services to the grid. These distributed energy resources ("DERs") are aided by advances in information and communication technologies such as smart grids and smart appliances. Collectively, the use of these technologies is growing rapidly.

DERs already play a significant role in decarbonizing the electricity system. Some DERs themselves provide renewable energy or reduce energy usage. This includes rooftop and community solar, which accounted for 11% of new electricity capacity in 2015.[480] It also includes demand response services, which refers to business processes or technologies that can reduce power consumption at times of peak grid usage – imagine electric vehicles that postpone charging to times of lower demand. DERs can also provide other types of services that are valuable to a grid that increasingly relies on intermittent renewable resources, such as the storage of energy for when the wind stops blowing, and the regulation of electric frequency and voltage.

Although it is not clear yet how large of a role DERs will play in the low-carbon grid of the future, their role is already substantial and growing.[481]

It is clear, however, that customers and communities like the benefits of DERs. DER technologies allow consumers to have more control over interactions with the electricity grid. Communities and businesses seek to install their own renewable electricity generation resources to reduce or eliminate electricity payments, to increase their resilience in the face of

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479. *Solar Power Purchase Agreements*, SOLAR ENERGY INFO. ASS'N, https://www.seia.org/research-resources/solar-power-purchase-agreements [perma.cc/SCS6-HVUE] (last visited Feb. 27, 2020).

480. MIT ENERGY INITIATIVE, UTILITY OF THE FUTURE: AN MIT ENERGY INITIATIVE RESPONSE TO AN INDUSTRY IN TRANSITION 3 (2016).

481. *See* Lorenzo Kristov, Paul De Martini & Jeffrey D. Taft, *A Tale of Two Visions: Designing a Decentralized Transactive Electric System*, 14 IEEE POWER AND ENERGY MAG. 63, 63 (2016).

potential grid failures in the future, to achieve clean energy or climate goals, and to promote local economic development and jobs.

One of the consequences of increased use of DERs is that there are many new actors in the electricity sector, creating new types of competition in both competitive and regulated markets. In states with competitive wholesale or retail electricity markets, regional grid operators or PUCs are finding ways to allow these actors to compete in the marketplace. As Jonas Monast has described, even in traditionally regulated states, utility commissions are finding ways to allow these actors to compete with vertically integrated utilities within the bounds of a traditional rate regulation model.[482]

These changes threaten many traditional utility business models because customers can now become power generators themselves.[483] This reduces demand for electricity from traditional utilities.[484]

For the same reasons, these changes also threaten the power supply distribution cooperative model. The power supply cooperative relies on steady purchases of power from distribution cooperatives to pay for its fixed costs, including its debt payments, and seeks to generate all of the electricity that the distribution cooperatives need to provide for their member owners. Reductions in electricity demand from distribution cooperatives – whether because of energy efficiency improvements or customer-sited generation resources – reduce overall wholesale electricity purchases from the power supply cooperative. If there is enough of a reduction in electricity demand, it will require the cooperative to raise rates to maintain the revenue it needs to meet its fixed costs.[485]

Power supply cooperatives could and do seek to sell their excess electricity on wholesale markets to other customers, not just to their member owners. For example, last year, Tri-State sold 10% of its electricity to non-members.[486] Yet for a utility like Tri-State, which has high wholesale electricity costs because of its coal-heavy portfolio and level of debt, its wholesale electricity prices may not be competitive in the market.[487]

All of these changes that reduce revenue or increase costs present the power supply cooperatives with unattractive choices that can result in a spiraling of bad events. A loss of revenue can require the cooperative to raise rates or default on its debt. Raising rates could increase member dissatisfaction, increasing the risk of members choosing a "buy-out" of their contract and leaving the power supply cooperative. Having members leave

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482. Jonas J. Monast, *Electricity Competition and the Public Good: Rethinking Markets and Monopolies*, U. COLO. L. REV. 667, 669 (2019).

483. Fereidoon P. Sioshansi, *Why the Time Has Arrived To Rethink The Electric Business Model*, 25 ELECTRICITY J. 65, 66 (2012).

484. Sharon B. Jacobs, *The Energy Prosumer*, 43 ECOLOGY L.Q. 519, 520 (2016).

485. *See Tri-State Annual Report (Form 10-K)*, *supra* note 326, at 27.

486. *Id.* at 60.

487. *Id.* at 24. "Sustained low natural gas prices could have an adverse effect on the operation of our facilities and our cost of electric service." *Id.*

the cooperative would mean less revenue to cover fixed costs. These actions could result in a lower credit rating, raising the cost of capital.

While DERs threaten power supply cooperatives, they present potential benefits to distribution cooperatives. Energy efficiency investments reduce customer bills. Demand side management programs can reduce the amount of wholesale electricity the distribution cooperative needs to purchase at peak times, reducing the demand charge portion of the wholesale electricity rate. Distributed renewable energy – either customer-sited or "distribution scale" systems that can plug into the local grid – can create jobs and reduce transmission costs. Local energy and microgrids can help systems become more resilient in the face of storms or wildfire.

But these benefits accrue to the distribution cooperative, not to the power supply cooperative. To the power supply cooperative, they can be an existential threat that imperils the financial health of the organization. In addition, when a distribution cooperative reduces its electricity demand through energy conservation or self-generation, it shifts costs to the other distribution cooperatives that are part of the power supply cooperative. That is because part of the rate that a distribution cooperative pays for wholesale electricity covers the fixed costs of the cooperative, including debt service for its capital investments. If one cooperative reduces its demand for electricity, the other cooperatives will need to pay a higher share of the fixed costs of the power supply cooperative. This is why Tri-State has sought to limit self-generation and to impose fees to recover "lost" fixed costs revenues from self-generation and from any PURPA interconnections.

These dynamics are not unique to cooperatives. Many utilities are struggling with reduced electricity demand, the resulting need to raise rates, and the potential of increased customer defections because of higher raised rates – what has been described as a utility "death spiral."[488]

In the cooperative context, however, this dynamic means that power supply cooperative managers have an institutional incentive to protect their business model. Allowing increased DER use by distribution cooperatives reduces the power supply cooperative's revenue, one of the factors likely considered in executive compensation. Moreover, a significant loss of revenue could spiral into increased rates, dissatisfaction and potential exit of other member cooperatives, and potentially lower credit ratings. Cooperative managers would likely be eager to avoid all of those outcomes, which would be perceived negatively by the board of directors.

In short, many of the strategies for decarbonizing a power supply cooperative have drawbacks from a manager's perspective. Shutting down

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488. *See* Mike O'Boyle, *Three Ways Electric Utilities Can Avoid a Death Spiral*, FORBES (Sept. 25, 2017), https://www.forbes.com/sites/energyinnovation/2017/09/25/three-ways-electric-utilities-can-avoid-a-death-spiral/#74d7c932758d [perma.cc/MTW7-FYME].

coal power plants with still-existing debt can lead to rate increases. Transitioning from coal to renewables will likely reduce a power supply cooperative's assets and personnel, potentially impacting manager compensation. Even more challenging is shifting generation to DERs, which can threaten the business model of the power supply cooperative.

D. Coops Have Largely Been Exempted from Rigorous Resource Planning Oversight

A final factor to identify is that addressing climate change is largely an issue of resource planning in the face of substantial regulatory, financial, and technological uncertainty. Many utilities are required to take part in rigorous resource planning processes that test resource planning assumptions and scenarios. These IRP processes reflect an updated understanding of the role of utility oversight and recognize the various incentives that may skew resource planning. Cooperatives, however, are largely exempted from rigorous resource planning exercises.

As described in Section I.B., after nuclear power plant abandonments and cost-overruns of the 1980s, regulators realized that utility commissions could play a useful resource planning oversight function.[489] Imposing an IRP planning requirement represents an evolution in the theory of utility regulation because it reflects a regulatory concern that goes beyond a concern over exploitative rates and discrimination. The failure of utilities to accurately project the costs of building nuclear plants, anticipate the level of future electricity demand, or evaluate all least cost options harmed not only ratepayers but also shareholders.[490] Utility commissions recognized that rigorous oversight of resource planning was valuable because of the high-stakes of these decisions and the high degree of uncertainty involved.[491]

The long time-horizon in utility resource planning exacerbates the principal-agent problem because neither the principle nor the agent may believe that they will be personally affected by the long-term outcomes of decisions. In particular, agents may be more focused on short-term consequences – maintaining growth or putting off painful decisions – rather than making prudent choices that will pay of decades down the road. Moreover, institutional culture could shape expectations of reasonable future assumptions and scenarios. Utilities that choose to model the possibility of stringent future climate policies may make different investments than those that do not. Finally, resource planning is highly technical. Oversight by board members or non-technical managers may not identify biases or undue

489. Pamela Lesh, *Planning for the Future*, 22 ELECTRICITY J. 45, 47 (2009) ("Since the offending assumptions and ultimate resource decisions had been largely internal to the utilities, many believed that bringing the planning process and its key assumptions into the public eye would be useful.").

490. *Id.*

491. *Id.* at 48.

narrowness in technical assumptions that have a significant bearing on the outcome.

Resource planning exercises are now widespread, although they take different forms in different contexts. In rate-regulated utilities, the utility is often subject to a formal IRP proceeding. According to experts, robust proceedings include "a meaningful stakeholder process and oversight from an engaged public utilities commission" as well as requirements that the IRP include detailed forecasting, evaluation of a full range of alternatives, and accounting for risks and uncertainties.[492]

Many cooperatives do undergo some type of resource planning. For example, in the West, all power supply cooperatives that are purchasers of power from the Western Area Power Administration ("WAPA") must submit an integrated resource plan every 5 years.[493] This includes major power supply cooperatives such as Tri-State and Basin Electric.[494] The WAPA IRP regulations require that all plans "identify and compare of all practicable energy efficiency and energy supply resource options," and that they "describe efforts to minimize adverse environmental effects of new resource acquisitions."[495] Larger WAPA customers like power supply cooperatives must "consider all reasonable opportunities to meet future energy service requirements using DSM techniques [and] renewable energy resources."[496] WAPA also requires that in developing the IRP, the utilities "provide ample opportunity for full public participation" and that the IRP note how the customer responded to public comments.[497]

While these WAPA regulations are important, they fall short of a formal IRP process before a utility commission. A Regulatory Assistance Project assessment of best IRP practices stresses the importance of quasi-judicial PUC processes that allow for stakeholder comments on an IRP to inform the Commission's "active role in assessing the validity of the inputs used by the utilities in their filings, the resulting outcomes, and whether these are consistent with both the IRP rules and the state's energy policies and goals."[498] This quasi-judicial process is especially critical when it comes to preparing

492. WILSON & BIEWALD, *supra* note 161, at 2.

493. 42 U.S.C. §§ 7275, 7276b (1992); *see also* Energy Policy Act of 1992 § 114, 42 U.S.C. § 1642 (2005); 10 C.F.R. §§ 905.10 (2020).

494. *See* TRI-STATE GENERATION AND TRANSMISSION ASS'N, INTEGRATED RESOURCE PLAN/ELECTRIC RESOURCE PLAN (2015); BASIN ELECTRIC POWER COOP., 2018 INTEGRATED RESOURCE PLAN (2019–2028) (2018).

495. 10 C.F.R. § 905.11(b) (2020); *Integrated Resource Planning Guidelines*, WESTERN AREA POWER ADMIN. (Jan. 13, 2020), https://www.wapa.gov:443/PowerMarketing/IRP/Pages/guidelines.aspx [perma.cc/T993-578M].

496. 10 C.F.R. § 905.11(c) (2020).

497. § 905.11(b)(4).

498. WILSON AND BIEWALD, *supra* note 161, at 27.

for climate change because it can allow a public utility commission to hear from expert intervenors that can challenge the assumptions, scenarios, and outcomes of a utility IRP. This serves as an important check on institutional and managerial biases in a very technical proceeding.

Outside of the WAPA process, however, few states subject cooperatives to IRP proceedings.

E. Implications of Failure to Prudently Plan for the Shift to a Low-Carbon Electricity System

This Section identifies four factors that have prevented cooperatives from moving quickly to a low-carbon electricity system in contrast to other utilities. The frequently distant and disperse benefits of addressing climate change remove some of the advantages of the cooperative organizational form. Cooperative managers have incentives to grow the size and budget of cooperatives. The strategies necessary to respond to climate change – closing fossil-fuel fired power plants, contracting for renewable energy, and incorporating DERs – can run counter to this incentive. To the degree that these strategies reduce wholesale power sales, they can also threaten the viability of a power supply cooperative's business model. Finally, shifting to a low-carbon electricity system is an exercise in complex resource planning in the face of uncertainty; however, cooperatives have been largely exempted from a rigorous IRP process that could fully vet assumptions and scenario choices against input from other stakeholder experts.

This Article argues that these factors explain why many cooperatives have not moved as quickly as many other utilities to shift to a lower-carbon electricity system and why they are in danger of continuing to lag behind.

Lagging behind on the shift to a low-carbon electricity system likely carries significant consequences for cooperative member owners. As the Tri-State example shows, continuing down a fossil-heavy path will likely result in higher electricity rates for distribution cooperative member owners, especially if federal or state carbon regulations are put in place that disadvantage utilities with a high-carbon portfolio.[499]

Continued fossil-fuel reliance could also lead to potential bankruptcy. Kit Carson and DMEA left Tri-State because they saw an economic benefit from leaving a slow-to-change power supply provider with a high-cost and high-carbon generation portfolio, even given the need to "buyout" more than 10 years of their contract. For Tri-State, however, the loss of distribution cooperative members reflects a potentially existential threat. If they continue to lose members, they will not have the revenue base necessary to cover their fixed costs and could end up defaulting on their loans.

This would not be the first time that power supply cooperatives have gone bankrupt because of poor resource planning. In fact, some of Tri-State's

499. MARK DYSON & ALEX ENGEL, A LOW-COST ENERGY FUTURE FOR WESTERN COOPERATIVES: EMERGING OPPORTUNITIES FOR COOPERATIVE ELECTRIC UTILITIES TO PURSUE CLEAN ENERGY AT A COST SAVINGS TO THEIR MEMBERS 18 (2018).

service territory was previously served by the Colorado-Ute Electric Association, which went bankrupt in 1989 because it overinvested in a new coal-fired power plant after projecting large growth in electricity demand that failed to materialize.[500] Other power supply cooperatives have similarly entered bankruptcy for making poor investments. This includes the Southern Montana Electric Generation & Transmission Cooperative in 2011, whose bankruptcy was caused in part because of investments into a subsequently abandoned coal-fired power plant.[501] Wabash Valley Power Association in Indiana, Cajun Electric Power in Louisiana, and the New Hampshire Electric Cooperative all entered bankruptcy because of defaults related to investments in an abandoned nuclear power plants, and the Vermont Electric Cooperative narrowly avoided bankruptcy for the same reason.[502]

In short, allowing the status quo to prevail can have substantial consequences for both cooperative member owners and for U.S. climate policy. Allowing power supply cooperatives to continue resource planning without rigorous oversight risks the equity of less affluent rural member owners. Alternatively, lack of oversight of imprudent resource decision-making could lead to more expensive federal or state bailouts in the future. Cooperatives have historically been very successful in lobbying legislatures.[503] Failure to take prudent action now could lead to requests for large-scale cooperative bailouts in the future, based on arguments that a disproportionate part of the cost of clean energy transition will fall on cooperatives.

500. HATLESTAD ET AL., *supra* note 475, at 2–3; Victor H. Palmieri, *Better Answers Than Bankruptcy*, 32 MGMT. Q., Winter 1991–92.

501. Clair Johnson, *Plan Filed to Save Bankrupt Power Co-op*, BILLINGS GAZETTE (Feb. 18, 2013), https://billingsgazette.com/news/state-and-regional/montana/plan-filed-to-save-bankrupt-power-co-op/article_17af476e-48f2-51c2-8cec-e8d2c338e330.html [perma.cc/HQ7A-9DGZ].

502. Laurie Asseo, *High Court Lets Stand Electric Cooperative's Bankruptcy Plan*, ASSOCIATED PRESS (Nov. 4, 1996); *Cajun, In Regulatory Squeeze, Seeks Chapter 11 Bankruptcy Protection*, ELECTRIC UTIL. WEEK (Dec. 26, 1994); John Milne, *Power Bill to Increase for Several*, THE BOSTON GLOBE (May 12, 1991); *Vermont Electric Cooperative Averts Bankruptcy Following REA Assurances*, ELECTRIC UTIL. WEEK (Sept. 1, 1986).

503. Fischlein et al., *supra* note 23, at 780 ("geographical pervasiveness of COUs provides them with considerable political clout"); Cooper, *supra* note 33, at 342 n.48 (The Center for Responsive Politics ranks NRECA as the sixty-fifth largest donor in American politics from 1989 to 2006, with contributions of $9.9 million).

V. STRENGTHENING COOP SUPPORTS AND OVERSIGHT TO ADDRESS CLIMATE CHANGE

The previous Section argued that cooperatives should not be viewed as "self-regulating" when it comes to making prudent resource planning decisions in the face of climate change. This Section suggests ways that the system of cooperative regulation could be strengthened to ensure that structural barriers and institutional incentives are not preventing cooperatives from taking economically prudent actions to shift to a low-carbon electricity system. It also suggests ways that state and federal actors can facilitate and incentivize such actions.

First, a few caveats. Federal clean energy or GHG reduction mandates would be the most direct way to achieve a shift by cooperatives to a low-carbon electricity system. This Article, however, is focused on changes to regulatory requirements and institutional supports that will help ensure that cooperatives make prudent choices on whether and how to shift to a low-carbon electricity system.

One reason for this choice is because there is already an extensive literature discussing options for federal climate policy.[504] In addition, the Trump Administration is currently rolling back the GHG standards promulgated by the Obama Administration for the electricity sector. But even if a future Administration were to put in place an aggressive climate policy, it is quite likely that such a policy would offer utilities flexibility in how they achieve required reductions, at least based on recent precedents.[505] So even under an ambitious federal policy, cooperatives will still likely need to make choices about how to shift to a low-carbon electricity system.

In the absence of a strong federal policy it is plausible that a number of factors will combine to continue driving an industry-wide shift to a low-carbon electricity system, although not as quickly as climate change requires. These include continued leadership by a number of states through clean electricity mandates and through GHG reduction policies such as the cap-and-trade programs in California and the Northeast.[506] These also include continuing advances in low-carbon grid technologies and attendant reductions

504. *See, e.g.*, Richard J. Lazarus, *Super Wicked Problems and Climate Change: Restraining the Present to Liberate the Future*, 94 CORNELL L. REV. 1153 (2009); Hari M. Osofsky, *Diagonal Federalism and Climate Change Implications for the Obama Administration*, 62 ALA. L. REV. 237, 238 (2011); Robert Sussman, *Designing the New Green Deal: Where's the Sweet Spot?*, 49 ENVTL. L. REP. NEWS & ANALYSIS 10428 (2019)

505. *See* Tom Krisher, *Politics of Climate Change Put Corporations in Tough Spot*, ASSOCIATED PRESS (Aug. 30, 2019), https://apnews.com/a4bbcd6b04014d27aca276bc08733c28 [perma.cc/2JBB-BVD2].

506. *See Greenhouse Gas Emissions Reduction Targets and Market-based Policies*, NAT'L CONF. OF S. LEGISLATURES (Dec. 17, 2019), https://www.ncsl.org/research/energy/greenhouse-gas-emissions-reduction-targets-and-market-based-policies.aspx [perma.cc/UD3B-BS45].

in cost – including renewable energy and battery storage – as well as improvements in grid-operations. Other factors include increasing demand from commercial consumers for zero-carbon electricity and from private lenders.[507] In this environment, cooperatives will first face a choice of whether to lower the carbon intensity of their generation mix and to what degree, and then how to do so.

This Article proposes changes to the system of cooperative oversight and supports that will remove structural barriers, counter unhelpful institutional incentives, and strengthen resource planning to promote prudent cooperative resource decision-making.

A second caveat is that this Article does not entertain a wholesale transformation away from the cooperative model. There are both benefits and drawbacks to the cooperative utility model in comparison to for-profit utilities or publicly-owned utilities, discussed infra in Sections I.C. and III.B. From a pragmatic perspective, however, cooperatives are well-established institutions with substantial political power and a complicated set of legal rights. A wholesale transformation away from cooperative utilities does not seem feasible, and therefore, this Article does not address whether cooperatives are better or worse than other forms of utility ownership for the purpose of transitioning in response to climate change.

A. States Should Include Coops in Clean Energy Resource Planning Mandates

Many scholars have chronicled how states have led the innovation of low-carbon and clean energy policies in the United States and why such state leadership is part of a beneficial state-federal iterative process in the development and refinement of such policies.[508]

Those states that have historically led in this field are increasing the ambition of their climate and energy policies. In just the past two years, 10 states have increased their clean energy mandates. California, New Mexico, New York, and Washington also joined Hawaii in establishing 100% zero-carbon electricity targets.[509]

507. Mike Scott, *Companies Continue To Drive Demand For Clean Energy*, FORBES, (Sept. 9, 2019), https://www.forbes.com/sites/mikescott/2019/09/09/companies-continue-to-drive-demand-for-clean-energy/ [perma.cc/VZH3-S5J4].

508. *See e.g.*, Vicki Arroyo et al., *State Innovation on Climate Change: Reducing Emissions from Key Sectors While Preparing for a New Normal*, 10 HARV. L. & POL'Y REV. 385 (2016); Ann E. Carlson, *Iterative Federalism and Climate Change*, 103 NW. U.L. REV. 1097 (2009).

509. Barbose, *supra* note 473, at 12.

In the past, states have largely either exempted cooperatives from these targets or applied weaker targets to cooperatives.[510] Cooperatives have argued that meeting the targets imposes a higher burden for them because they cannot directly reap the benefits of federal tax credits because their rural member-owners are less able to pay for any related cost increases or because smaller cooperatives are less able to deal with the administrative requirements of compliance.

Given the need to decarbonize the electricity sector, exempting cooperatives from these mandates has been counter-productive. State renewable energy mandates have been a leading driver of renewable energy deployment in the United States.[511] They have also forced utilities to develop mechanisms and business models for renewable energy procurement and RPS compliance. Many of the utilities subject to state clean energy mandates are now benefitting from lower-cost electricity thanks to price drops of renewable energy.

In contrast, exempting cooperatives from these mandates allowed for continued reliance on fossil-fuel fired power plants and potentially increased incentives to build new natural gas power plants.

There are significant equity factors related to imposing clean energy mandates on cooperatives. For-profit utilities that build their own renewable generation can reap more of the federal renewable energy tax-credit benefit than a cooperative working with a for-profit renewable energy developer. It is also true that cooperatives may have a greater proportion of lower-income customers that are less able to shoulder cost increases. But these disparate circumstances would best be addressed through other policies that directly target these disparities. For example, this can be achieved through state rural energy subsidies or through low-income energy efficiency and energy assistance programs.

Notably, New Mexico and Colorado did not exempt cooperatives from their recent increases of clean energy mandates.[512] Other states should follow their lead.

Similarly, states should apply IRP requirements to power supply cooperatives. A formal IRP process,[513] with opportunities for intervenors to vet assumptions, scenarios, and forecasts, is the best way to counter potential institutional biases and incentives described in Section III that can inhibit cooperatives from taking prudent action to transition to the low-carbon economy. Colorado recently subjected Tri-State to IRP requirements, and several other states also require IRPs.

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510. *Id.* at 8. State operated GHG cap-and-trade programs in California and the northeast do require cooperatives that own qualifying fossil-fuel generation facilities to participate in those programs.

511. Barbose, *supra* note 473, at 4.

512. *See supra* Part II.B.6.

513. *See supra* Parts I.B.1 and III.D.

B. Allow Distribution Coops to Innovate, Require Power Supply Cooperatives to Compete

While the shift to a more decentralized electricity grid potentially benefits rural distribution cooperatives, it threatens the traditional power supply-distribution cooperative relationship. Nearly all generation is provided by the power supply cooperative, and there are significant constraints in terms of self-generation limits and fees on distribution cooperatives to prevent loss of revenue to the power supply cooperative.

The traditional relationship between power supply and distribution cooperative assumes that the power supply cooperative provides nearly all electricity related services to its member distribution cooperatives. The model envisions that the power supply cooperative and its member cooperatives comprise a self-contained energy island. This no longer reflects reality. Distribution cooperatives and their customers are increasingly generating electricity, and power supply cooperatives already sell electricity to non-members through power purchase agreements and short-term markets.

It is not yet known how decentralized the grid will become in the shift to a low-carbon electricity system. This will depend on how technologies and grid management practices evolve, what policy choices are made by regulators and grid operators, and what kind of business models are developed by different actors. Part of what is needed now is innovation and experimentation to identify potential business models that can support the shift to a low-carbon electricity system.

Maintaining tight self-generation limits and punitive fees on distribution cooperatives prohibits this type of innovation and experimentation. Maintaining this model also inhibits deployments of technologies and systems that have the potential to benefit rural consumers. Distributed renewable generation, both customer-sited and distribution-grid scale, has the potential to reduce rural electricity costs, create local economic activity, and improve resilience. Similarly, energy efficiency and demand side management programs can reduce electricity demand and associated transmission costs.

That is not to dismiss concerns about reduced revenue to power supply cooperatives – these concerns have merit, especially since increased local generation may unfairly shift fixed-costs from one distribution cooperative to others.

But there are alternatives to the simple and unchanging wholesale electricity rate structure that is currently in use by power supply cooperatives. In the for-profit utility context, utility commissions have experimented with rate models that give utility incentives for reducing energy usage (as opposed to selling more electricity).[514] Similarly, value-of-solar proceedings seek to

514. *Utility Rate Decoupling*, ALLIANCE TO SAVE ENERGY (Oct. 14, 2013), https://www.ase.org/resources/utility-rate-decoupling-0 [perma.cc/6ME2-J2PA].

identify the full value of distributed renewable energy while simultaneously valuing the benefits of wires and other infrastructure that the utility is bringing.[515]

A power supply cooperative could similarly review options for changing rate structures and membership terms to provide additional flexibility and incentives to distribution cooperatives to shift to clean electricity.

It is notable that in response to actions by Kit Carson and DMEA, Tri-State has proposed a new contract model that would allow some distribution cooperatives to significantly increase local generation.[516] This shows that the structure of power supply cooperatives can evolve.

The RUS could support such rate structure experimentation through technical assistance and through changes to its regulations governing wholesale power contracts.

There are additional legal tools that can and should be used to sharpen incentives for power supply cooperatives to consider such reforms.

First, states can and should provide formal PUC oversight in power supply buyout negotiations, as the Colorado Commission has sought to do. Where FERC has jurisdiction over a power supply cooperative, it should do the same. Allowing fair buyouts from a power supply cooperative is an important structural mechanism that places competitive pressure on power supply cooperatives to respond to the demands of its distribution cooperative members. In contrast, the power supply cooperative has a strong incentive to prevent such defections because they can lead to rate increases for remaining members and to decreases in credit ratings. A formal PUC or FERC regulatory proceeding to ensure that the buyout offer is "just and reasonable" can prevent the power supply cooperative from offering an inflated buyout cost.

Second, FERC can continue to affirm that PURPA supersedes the power supply contract and that power supply cooperatives cannot add fees on top of a distribution cooperative's avoided cost rate (or negotiated rate) with a PURPA qualifying facility. This would allow small renewable energy generators to compete with the power supply cooperative to provide wholesale power to distribution cooperatives.

515. Coley Girouard, *Utility Regulators Were Busy in 2015. Here Are the Top 10 Issues They Dealt With*, GREENTECH MEDIA (Dec. 22, 2015), https://www.greentechmedia.com/articles/read/top-10-utility-commission-issues-of-2015#gs.7olczj [perma.cc/79FV-VVJ3].

516. *See* discussion *supra* note 427; *see also* Joe Smyth, *Tri-State Expects Member Co-ops to Support Bylaw Changes at Annual Meeting*, CLEAN COOPERATIVE (Mar. 18, 2019), https://www.cleancooperative.com/news/tri-state-expects-member-co-ops-to-support-bylaw-changes-at-annual-meeting [perma.cc/Y24M-66KC].

C. Use RUS to Incentivize the Shift to Low-Carbon Electricity

The REA and RUS have played an important part of the governance of rural cooperatives, most importantly through the design of the loan programs and technical assistance that they provided.

In an administration favorable to climate change policies, the RUS should be used to incentivize the shift to a low-carbon electricity system. This should include expanding current programs to offer loans for energy efficiency and renewable energy programs. The RUS should go beyond existing programs in two important ways.

First, the RUS should explore ways to ease the closure of cooperative-owned coal power plants and to support the provision of transition assistance for workers and communities.[517] Cooperatives have legitimate claims that the FUA, as well as the structure of renewable incentives, pushed them to a coal-heavy generation portfolio. Retiring coal plants before the end of their useful life – and before their debt service is paid off – can impose high costs to rural owner operators. This raises legitimate concerns that rural residents are being burdened with a disproportionately high cost in the transition to a low-carbon economy.

This is not unlike the task that the REA undertook in electrifying rural America in the first place. The rural electricity sector will be more expensive to transition, and rural residents generally less able to bear the brunt of that cost. As a starting place, the RUS could look at ways to use subsidies to relieve costs of prematurely abandoning coal plants.

Second, the RUS should provide technical assistance for the transition. Chief among this might be facilitating the development of new rate models between power supply cooperatives and distribution cooperatives. Other opportunities include developing assistance for purchasing energy storage resources, integrating distribution scale renewable energy, and preparing electricity grids to operate with a much higher proportion of renewable grid.

D. Give Coops an Out

Finally, as other scholars have noted, having a large number of small cooperatives is inefficient in the electricity sector, especially when member participation is low, some cooperatives are poorly managed, and the challenge of clean energy transition requires leadership and resources.

Relaxing merger policies would allow cooperatives to consider other options – including privatization and merger with other cooperatives – that may help add capacity to these organizations to prudently plan for the low-carbon transition. [518]

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517. *See* proposed solutions in HATLESTAD ET AL., *supra* note 475, at 11–14.

518. Jeter et al., *supra* note 3, at 386 (citing Cooper, *supra* note 33, at 364).

VI. CONCLUSION

Roosevelt's New Deal harnessed cooperatives to electrify rural America when the private sector would not. Cooperatives were successful in part because the cooperative structure reduced costs and motivated contributions from member-owners. Because cooperatives were democratic, non-profit organizations, they were seen as self-regulating and therefore largely exempted from rate regulation intended to prevent unfair rate setting by monopoly, for-profit utilities.

But cooperatives have also struggled with efficient and competent administration. They generally have very low participation by members, and boards often provide weak oversight without a high level of technical oversight capacity.

These weaknesses are magnified when responding to climate change, which will require a near complete decarbonization of the electricity sector. The key challenge for utilities of all types is prudent resource planning in the face of substantial technological, cost, and regulatory uncertainty.

Cooperatives have lagged behind other types of utilities when it comes to reducing reliance on fossil fuel power plants, especially coal, and shifting to zero-carbon resources. This is in part because of structural reasons; many power supply cooperatives built power plants at a time when federal law required such plants to be "coal capable," and cooperatives are frequently unable to take direct advantage of federal renewable energy tax credits. But it is also because power supply cooperatives have institutional incentives to continue investments in traditional power plants and disincentives to use PPAs for renewable energy or to allow distribution cooperatives to reduce demand by adopting DERs or energy conservation strategies.

Changes to the state-federal system of cooperative regulation and support could counter these incentives and facilitate prudent resource planning by cooperatives. Among the most important of these suggestions are that state PUC's assert jurisdiction over the "buyout" calculations of cooperatives and require formal IRP planning. This also includes having RUS support the shutdown of coal plants and provide technical support to develop new wholesale electricity rate structures between power supply and distribution cooperatives.