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COMMUNITY ENERGY EXIT

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ABSTRACT

Communities across the United States are taking advantage of new technologies and governance forms to assert greater control over their energy systems. For decades, energy provision throughout much of the nation was heavily centralized. Even where market-oriented reforms emerged, most consumers had little ability to take advantage of the changes. But resurgent interest in municipal takeover of energy systems, alongside new phenomena such as community choice aggregation and microgrid construction, are making what we call "community energy exit" a reality. Popular and academic commentators have hailed these developments as key steps toward decarbonization, social justice, and energy democracy.

This Article raises cautionary notes about the emerging changes. Although they can bring important benefits, community-centered energy systems could also generate systemic inequities. Traditional energy systems, despite all their flaws, also contain mechanisms for sharing the benefits and burdens of energy provision. When communities exit traditional systems, those mechanisms can be undermined or even lost. Inequities may also arise because local governance, despite its many virtues, can build and entrench social

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inequality. Important pressure on incumbent utilities, in public utility commission proceedings and other fora, also could be lost if communities elect exit over voice.

Beyond raising theoretical concerns, this Article explores emerging evidence from actual energy exits. The preliminary story is more nuanced than either the celebratory or critical accounts would suggest, partly because communities, legislators, and administrators in key states have taken concrete steps to avoid some of the inequities we fear. Without adequate legal oversight, however, future expansion could devolve into a form of energy elitism. The Article closes by summarizing and recommending ways to facilitate equity in community energy exits.

TABLE OF CONTENTS

INTRODUCTION

In April 2022, the city council of San Jose, California, met to consider a proposal to build a solar-based-energy microgrid.[1] The microgrid, whose upfront capital costs would be paid by tech giant Google, would power Google's new San Jose office along with an area of downtown San Jose.[2] When problems arose on the larger, integrated California grid, this area could operate as an energy island, severing its connection to the larger grid.[3] At other times, the microgrid would maintain its grid connection, and when prices were right, it could sell energy back to the local, investor-owned utility ("IOU"), the Pacific Gas and Electric Company ("PG&E").[4] The proposal was not San Jose's first effort to localize its energy systems. The city also operates as a community choice aggregator ("CCA"), which means it serves as a wholesale electricity buyer for its residents.[5] And the city has considered full municipalization of its energy systems, which would mean taking over local transmission and distribution of energy in addition to energy acquisition.[6]

San Jose's story reflects broader trends. For most of the last century, the vast majority of customers (especially those in urban

1. Elisa Wood, *San Jose, California Mayor Again Pushes for Energy Independence with Support of Google Microgrid*, MICROGRID KNOWLEDGE (Apr. 22, 2022), https://www.microgridknowledge.com/microgrids/article/11427318/san-jose-california-mayor-again-pushes-for-energy-independence-with-support-of-google-microgrid [https://perma.cc/625D-AKTV].

2. Jana Kadah, *Downtown San Jose Gets Google—and a Power Grid*, SAN JOSE SPOTLIGHT (Oct. 10, 2022), https://sanjosespotlight.com/downtown-san-jose-gets-google-and-a-power-grid [https://perma.cc/AA2J-JMF8].

3. *See* ESA, DOWNTOWN WEST MIXED-USE PLAN DRAFT ENVIRONMENTAL IMPACT REPORT 2-57 (2020), https://sj-admin.s3-us-west-2.amazonaws.com/2_GSJ_ProjectDescription_DEIR.pdf [https://perma.cc/XQP9-V4HW].

4. *See id.* at 2-58 (anticipating that the project's "generation and storage technologies [could] provide grid services").

5. *About SJCE*, SAN JOSE CLEAN ENERGY (2023), https://sanjosecleanenergy.org/about-sjce [https://perma.cc/4JR7-HU7F].

6. Replacement Memorandum from Sam Liccardo, Mayor, City of San Jose, to Rules & Open Gov't Comm., Public Safety Power Shutoffs: Making San Jose Grid-Resilient 2, 4 (Oct. 22, 2019) [hereinafter Replacement Memorandum], https://cal-cca.org/wp-content/uploads/2019/10/San-Jose-Liccardo-PSPS-Memorandum.pdf [https://perma.cc/KC3Y-MTT3].

areas) have received electricity from a major IOU.[7] These utilities are big by design; energy distribution in the United States was built on the belief that large, vertically integrated, and heavily regulated monopolies were the optimal energy suppliers.[8] And although large industrial customers could negotiate better deals, or even generate their own energy, and some municipalities and cooperatives ("co-ops") maintained their own systems, most consumers had no real choice.[9] The big utility was the only seller in town. Even in states that restructured their energy systems to promote customer choice of electricity providers, most consumers lacked the sophistication or the will to shop around.[10]

Today, customers have more options. Municipalization,[11] community choice aggregation,[12] and microgrids[13] all can give communities of energy consumers the ability to leverage their shared resources and market power to participate in energy markets. Distribution co-ops—groups of energy consumers who band together to run their own utility—can achieve similar goals by severing ties with larger generation and transmission ("G&T") co-ops.[14] These innovations give communities and consumer collectives opportunities

7. *See Investor-Owned Utilities Served 72% of U.S. Electricity Customers in 2017*, U.S. ENERGY INFO. ADMIN. (Aug. 15, 2019), https://www.eia.gov/todayinenergy/detail.php?id=40913 [https://perma.cc/4XZR-GWXZ]. Publicly owned systems and cooperatives supplied the remainder. *Id.*

8. *See* RICHARD F. HIRSH, POWER LOSS: THE ORIGINS OF DEREGULATION AND RESTRUCTURING IN THE AMERICAN UTILITY SYSTEM 17–18, 23 (1999) (describing the emergence of ideas about natural monopolies and energy economies of scale).

9. *See id.* at 30–31 (describing investor-owned utilities' partial triumph over government-owned systems); *see also id.* at 49 (describing industrial users' choices).

10. *See* William Boyd & Ann E. Carlson, *Accidents of Federalism: Ratemaking and Policy Innovation in Public Utility Law*, 63 UCLA L. REV. 810, 833 (2016) ("[E]ven in [states with competitive retail energy markets], most residential consumers simply default into the incumbent utility and most continue to pay flat rates."). There are exceptions. In Texas, Indiana, and Ohio, more than 50 percent of the total power load is provided by an alternative supplier. *See* Ralph Cavanagh & Amanda Levin, *Rehabilitating Retail Electricity Markets: Pitfalls and Opportunities*, *in* FUTURE OF UTILITIES – UTILITIES OF THE FUTURE 177 (Fereidoon P. Sioshansi ed., 2016).

11. Municipalization means that a municipality takes over operation of its electric grid. *See infra* notes 115–21 and accompanying text.

12. Community choice aggregation means that a governmental body becomes an electricity purchaser for a community or group of communities. *See infra* notes 151–55 and accompanying text.

13. A microgrid is an energy-generation and distribution system capable of operating independently of the larger grid. *See infra* notes 177–79 and accompanying text.

14. *See infra* notes 210–13 and accompanying text.

to inject their values into energy decision-making, often by selecting greener energy supplies. Not surprisingly, these changes are generating tremendous excitement. Entrepreneurs see possibilities for innovation and for escaping the dominance of energy institutions they regard as rigid dinosaurs.[15] Many commentators see this localization of energy decision-making as advancing "energy democracy" and as a key step toward decarbonizing energy systems—and, thus, addressing climate change.[16]

Although we agree that excitement is justified, this Article sounds cautionary notes. Our fundamental concern is that municipalization, community choice aggregation, microgrids, and related phenomena—which we term "community energy exit"—must be properly managed to avoid unintended equity consequences. Traditional energy systems, for all their flaws, are also important mechanisms for achieving equity. Contemporary rhetoric often disparages IOUs, but this arrangement of private service-provision closely overseen by government regulators grew out of Progressive-era ideals of business regulation in the public interest.[17] States use utility regulation to socialize the costs of providing energy to low-income customers and to customers who, because of the places they live, are more expensive to supply.[18] Utilities also use cost sharing as a form of insurance, which allows them to spread the risk of catastrophic events across wide swaths of consumers.[19] Similarly, states use IOUs to socialize the burdens of environmental policy, typically by

15. *See* Darren Sweeney, *Utilities Embracing Decarbonization as They Shed 'Dinosaur' Mentality*, S&P GLOBAL (Apr. 16, 2019), https://www.spglobal.com/marketintelligence/en/news-insights/trending/31frfzp2O9GmoGbfI18A-w2 [https://perma.cc/LWF9-JWLN] ("'Some folks call our industry a dinosaur. And we can be that dinosaur . . . or we can not only survive, but thrive,' Adrian Rodriguez, senior vice president and general counsel at El Paso Electric Co., said.").

16. *See infra* notes 225–33 and accompanying text.

17. *See infra* notes 58–60 and accompanying text.

18. *See* Adrienne L. Thompson, *Protecting Low-Income Ratepayers as the Electricity System Evolves*, 37 ENERGY L.J. 265, 273–79 (2016) (describing existing programs).

19. *See, e.g.*, Kavya Balaraman, *PG&E Gets Initial Approval To Securitize $7.5B of Wildfire Costs, Despite Ratepayer Impact Concerns*, UTIL. DIVE (Apr. 23, 2021), https://www.utilitydive.com/news/pge-gets-initial-approval-to-securitize-75b-of-wildfire-costs-despite-r/598909 [https://perma.cc/PP2C-4FBS] (describing a California regulation allowing a utility to securitize wildfire-related costs).

allowing utilities to pass the costs of purchasing renewable energy through to consumers.[20]

Despite these benefits, we do not contend that large IOUs are the only—or even the best—way to achieve equity among energy customers. Critiques of these utilities as narrowly profit driven, insufficiently attentive to the public good, and slow to innovate are well taken. Instead, we raise three related sets of concerns about the effects of community energy exit, each of which law can address. Our aim is to ensure that these concerns are taken seriously and that policymakers learn from jurisdictions that are already managing exit, thereby avoiding the most pernicious consequences.

Our first fear is that community exit from common utility systems can impose burdens on those left behind.[21] Utility investments, which are made based on demand projections, may no longer be needed, but the costs must still be paid.[22] Consequently, a shrinking customer base may see its rates increase unless transition costs are properly allocated among departing and remaining customers.[23] The IOU also may be less able to socialize the costs of disasters or public benefit projects.[24] Exacerbating these equity concerns, wealthier communities are probably better situated than others to capture the benefits of exit, which entails significant start-up costs.[25]

Our second concern is that local control can itself produce injustices. Many of the new innovations in energy policy give individual communities—typically, but not always, local governments—increased control of their own destiny. That may sound like an unalloyed good; few things are as celebrated in legal and political discourse as local control.[26] But the history of local control in other contexts suggests that

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20. *See* Jared A. Ellias & George Triantis, *Government Activism in Bankruptcy*, 37 EMORY BANKR. DEV. J. 509, 532 (2021) (describing California's "extremely successful" use of this mechanism).

21. *See infra* notes 235–50 and accompanying text.

22. This problem of stranded costs is a familiar one in energy law. *See, e.g.*, Duquesne Light Co. v. Barasch, 488 U.S. 299, 302 (1989) (evaluating Pennsylvania regulators' allocation of the costs of abandoned nuclear facilities).

23. *See* Elisabeth Graffy & Steven Kihm, *Does Disruptive Competition Mean a Death Spiral for Electric Utilities?*, 35 ENERGY L.J. 1, 10 (2014) (explaining how a declining rate base can raise rates).

24. *See infra* notes 251–53 and accompanying text.

25. *See infra* notes 250–52, 305–15, 339–46 and accompanying text.

26. *See, e.g.*, Garcia v. San Antonio Metro. Transit Auth., 469 U.S. 528, 575–77 (1985) (Powell, J., dissenting) (extolling the accessibility and responsiveness of local government).

placing communities at the center of energy reform can be a fraught act.[27] In the United States, community governance is largely about using zoning and annexation policy to decide who gets to be part of the community, and there is a long history of communities using those powers to keep low-income people and people of color out.[28] That creates two reasons to worry about community-centered energy reform. First, it may be led by communities with histories of discrimination.[29] Second, those communities may respond to the economic incentives of energy distribution in the same problematic ways they have handled economic incentives associated with local zoning, housing, or education policy.[30] Community-centered energy reform, in other words, could be a story of energy cliques as much as it is a story of democratic self-determination.

Our final concern is that community energy exit may be less successful than internal advocacy at inducing change in legacy utility systems. Drawing on Albert Hirschman's classic paradigm,[31] we argue that, as better-resourced customers exit IOUs, they no longer have strong incentives to reform the system from within.[32] Their ability to participate as parties in utility-related regulatory proceedings may also be limited.[33] Thus, potentially powerful voices for change are lost, leaving legacy utility customers as a whole worse off.

In this Article, we explain why these concerns arise and why they are important considerations in the transition to a greener, more just energy economy. We also evaluate whether our concerns are reflected in practice. Here, the still-preliminary story is complicated. We are not

27. *See* Richard Briffault, *Our Localism: Part I – The Structure of Local Government Law*, 90 COLUM. L. REV. 1, 1–5 (1990) (describing how local governance can lead to inequity).

28. *See generally* Michelle Anderson, *Mapped out of Local Democracy*, 62 STAN. L. REV. 931 (2010) (critiquing annexation policies); Andrew H. Whittemore, *The Experience of Racial and Ethnic Minorities with Zoning in the United States*, 32 J. PLAN. LITERATURE 16, 16–17 (2017) (summarizing the history of discriminatory zoning policies).

29. That may be true even in communities with progressive political leanings. *See, e.g.*, Moira O'Neill, Giulia Gualco-Nelson & Eric Biber, *Sustainable Communities or the Next Urban Renewal?*, 47 ECOLOGY L.Q. 1061, 1069 (2020) (describing the lingering effects of racialized zoning in the San Francisco Bay Area).

30. *See infra* notes 260–79 and accompanying text.

31. *See generally* ALBERT O. HIRSCHMAN, EXIT, VOICE, AND LOYALTY (1970) (exploring the effects of two stakeholder responses to poor institutional performance—exit and voice—on the institutions themselves).

32. *See generally id.* at 36–43 (explaining the importance of internal dissent to business and political communities).

33. *See infra* note 297 and accompanying text.

seeing evidence—yet—of persistent efforts to construct energy communities in economically or racially exclusive ways, and we instead find some significant examples of inclusion.[34] But these events did not happen automatically. In most situations, they happened because legislators, regulators, local leaders, and activists were not blinded by lofty rhetoric about local control or energy democracy. Instead, they made conscious commitments to equity, and they backed those commitments with action, often in the form of substantive law.[35] These efforts provide both grounds for optimism and examples worth imitating and expanding. But they also underscore the importance of equity-oriented lawmaking as energy decision-making continues to localize.

This Article proceeds as follows. In Part I, we set the stage, summarizing the rise of a centralized model of energy governance along with common critiques of the model. Because this story has been told eloquently and often by other authors, our account is relatively brief. Part II describes the mix of new and resurgent technical and policy innovations that are enabling communities to exit parts of the old system and assert greater control over their energy decision-making. We focus primarily on municipalization, community choice aggregation, microgrids, and energy cooperative self-supply. Part III presents our concerns about these innovations along with steps that policymakers and innovators have taken so far to try to make their reforms equitable. Finally, Part IV suggests how law might manage community energy exit while maintaining the collective spirit of public utility. These questions will assume greater importance as more communities embrace the promise of a distributed-energy future.

I. SOCIALIZED COSTS AND THE RISE OF THE INTEGRATED GRID

For a long time, the story of the electric grid was predominantly one of increasing integration. Although Thomas Edison may have invented the modern electric utility industry and opened the first central electric station in the United States (the Pearl Generating Station in lower Manhattan),[36] it was his one-time employee Samuel

34. *See infra* notes 351–54 and accompanying text.

35. *See infra* notes 356–58 and accompanying text.

36. JOHN F. WASIK, THE MERCHANT OF POWER 17–21 (2006); VACLAV SMIL, ENERGY AND CIVILIZATION: A HISTORY 261 (2017) ("New York's Pearl Street Station, commissioned on September 4 [1882], was the first American thermal power plant.").

Insull who proved the concept and "put the central station on a sound economic footing."[37] Insull built an empire as president of Chicago Edison, acquiring competing power firms in and around the city and interconnecting them to create the nation's first large-scale electric utility.[38] Through a combination of efficient, centralized power generation and a system of substations, Insull supplied electricity over greater distances to both urban and ex-urban populations.[39]

Insull's successful resistance to competition in Chicago produced an integrated, monopolistic firm—Commonwealth Edison—whose features were reproduced throughout the nation.[40] At the same time, the holding company form enabled the capital accumulation required to construct large networked systems.[41] While Congress ultimately placed limits on holding company control,[42] the economic benefits of expanded networks were undeniable.[43]

Until relatively recently, this central-station model dominated electricity production, distribution, and use.[44] A simple economic logic justified that dominance. The largest share of an electric utility's costs was sunk into its power plants.[45] Adding each additional customer produced only a small marginal cost such that larger utility systems

37. HAROLD L. PLATT, THE ELECTRIC CITY 67 (1991).

38. WASIK, *supra* note 36, at 94.

39. *Id.* at 90; *see also* JEREMIAH D. LAMBERT, THE POWER BROKERS: THE STRUGGLE TO SHAPE AND CONTROL THE ELECTRIC POWER INDUSTRY 10–11 (2015) (describing the expansion of Chicago Edison).

40. *Emergence of Electrical Utilities in America*, SMITHSONIAN INST., https://americanhistory.si.edu/powering/past/h1main.htm [https://perma.cc/G7WU-LW42]. According to David Schap, "[c]onsolidation is the word best describing the development of the electric power industry in the 1920s and early 1930s." DAVID SCHAP, MUNICIPAL OWNERSHIP IN THE ELECTRIC UTILITY INDUSTRY: A CENTENNIAL VIEW 51 (1986).

41. SCHAP, *supra* note 40, at 102. By 1932, ten holding companies controlled more than three-quarters of light and power businesses in the United States. *Id.* at 65.

42. Public Utility Act of 1935, ch. 687, Title I, 49 Stat. 803 (1935), repealed by Energy Policy Act of 2005, Pub. L. No. 109-58, 119 Stat. 594.

43. On the benefits of "network effects," see MORGAN RICKS, GANESH SITARAMAN, SHELLEY WELTON & LEV MENAND, NETWORKS, PLATFORMS, AND UTILITIES: LAW AND POLICY 9 (2022).

44. *See* LAMBERT, *supra* note 39, at 13.

45. *See* Forrest McDonald, *Samuel Insull and the Movement for State Utility Regulatory Commissions*, 32 BUS. HIST. REV. 241, 243–44 (1958); Danny Waggoner, *Make or Buy for Utilities: Putting Services and Capital Investments on a Level Playing Field*, UTIL. DIVE: OPINION (July 16, 2018), https://www.utilitydive.com/news/make-or-buy-for-utilities-putting-services-and-capital-investments-on-a-le/527777 [https://perma.cc/6CAE-AQGY] (explaining the utility incentive to prefer capital investments over operating expenditures).

could offer their products at lower prices.[46] These economies of scale meant that smaller utilities found it very difficult to compete.[47]

As IOUs expanded, they absorbed municipal utilities and private competitors. More than one thousand municipal electric utilities ceased operations from 1924 to 1932 alone.[48] Central power plants became larger and more efficient, culminating in a mid-century fervor to build giant nuclear power plants.[49] But growth could not continue forever. In the 1950s, "there were significant scale economies available to nearly all" utilities.[50] By 1970, however, "a large share of total electric power was generated by firms which had exhausted scale economies."[51] The 1970s were a tipping point in another respect: the oil crisis in that decade led to flattening demand as ratepayers and utilities alike embraced energy conservation.[52]

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46. *See* Steve Corneli & Steve Kihm, *Will Distributed Energy End the Utility Natural Monopoly?*, ELEC. POL'Y ELEC. DAILY, June 2016, at 1–2, https://emp.lbl.gov/sites/default/files/reports/corneli_29june2016.pdf [https://perma.cc/URK6-B6KC]; Lucas W. Davis, *Prospects for Nuclear Power*, 26 J. ECON. PERSPS. 49, 51 (2012); Douglas Gegax & Kenneth Nowotny, *Competition and the Electric Utility Industry: An Evaluation*, 10 YALE J. ON REGUL. 62, 64 (1993).

47. *See* LAMBERT, *supra* note 39, at 21 (describing how large-scale central generating plants became the industry norm).

48. SCHAP, *supra* note 40, at 102.

49. A single commercial nuclear reactor can produce one thousand megawatts of electricity or more, *see Frequently Asked Questions (FAQs)*, U.S. ENERGY INFO. ADMIN., https://www.eia.gov/tools/faqs/faq.php [https://perma.cc/89B4-FHNB], enough to power about 750,000 homes, *see Understanding Electricity*, CAL. ISO (2023), http://www.caiso.com/about/Pages/OurBusiness/Understanding-electricity.aspx [https://perma.cc/N89G-4YLS].

50. Laurits R. Christensen & William H. Greene, *Economies of Scale in U.S. Electric Power Generation*, 84 J. POL. ECON. 655, 656 (1976); *see also* Karl R. Rábago & Radina Valova, *Revisiting Bonbright's Principles of Public Utility Rates in a DER World*, 31 ELEC. J. 9, 9 (2018) ("[I]n 1961 . . . [t]he central station utility model was dominant, and economies of plant scale appeared inexhaustible. In fact, the 1960s marked the zenith of the trend toward large power plants . . . .").

51. Christensen & Greene, *supra* note 50.

52. *Electricity Explained: Use of Electricity*, U.S. ENERGY INFO. ADMIN., https://www.eia.gov/energyexplained/electricity/use-of-electricity.php [https://perma.cc/8B8Z-VKTB]; *see also* Earle H. O'Donnell & Laurel W. Glassman, *Industrial Opportunities To Engage in Direct Purchase of Electricity: The Purchaser's Perspective*, 7 J. ENERGY & NAT. RES. L. 101, 104–05 (1989) ("Across the country, in response to spiraling energy costs and fuel surcharges . . . large manufacturers undertook massive energy conservation programs to drastically cut fuel consumption."); *Oil Shock of 1973–74*, FED. RSRV. HIST. (Nov. 22, 2013), https://www.federalreservehistory.org/essays/oil-shock-of-1973-74 [https://perma.cc/TQP3-TKSR] (explaining the oil crisis of the 1970s as a product of embargos and production cuts by members of the Organization of Arab Petroleum Exporting Countries).

Notwithstanding limits on growth, the centralized power generation model, best embodied by today's large IOUs, remains the dominant approach to electricity provision today. As of 2017, nearly three out of four utility customers in the United States were served by an IOU.[53]

The first two sections below provide background on government regulation of these utilities and the ways in which utility rates socialize costs across customers. The third section describes the major critiques of IOUs but explains that discontented customers had few—if any—alternatives to the monopoly system.

A. Regulation

As monopoly IOUs consolidated their control over larger geographic regions, regulation of electric utilities became centralized in state utility commissions. Insull himself supported state-level regulation of utility companies, promoting public control as a "logical and necessary corollary" of monopoly.[54] In a metaphorical "regulatory compact," states allowed utilities to continue as monopolies in their assigned service territories while subjecting them to relatively intrusive price and service regulation.[55]

The relationship between utilities and their regulators evolved partly out of utility self-interest. Private utilities preferred state regulation to the corruption of local government oversight,[56] and grants of monopoly service territory virtually ensured predictable returns on investment.[57] But that relationship also was infused with the Progressive spirit of the era. The Progressives believed in a more expansive state role in solving social problems, particularly those

53. *Investor-Owned Utilities Served 72% U.S. Electricity Customers in 2017*, U.S. ENERGY INFO. ADMIN. (Aug. 15, 2019), https://www.eia.gov/todayinenergy/detail.php?id=40913 [https://perma.cc/LBS9-QA65].

54. McDonald, *supra* note 45, at 243; LAMBERT, *supra* note 39, at 15–16.

55. *See* HIRSH, *supra* note 8, at 11–31. Electricity provision was deemed a "natural monopoly" because it entailed high start-up costs and benefited from economies of scale. As economist John Neufeld explained, it "never seemed possible for electric utilities to operate in an industry structure in which the users of electricity could effectively choose among many competing firms for their supply." JOHN L. NEUFELD, SELLING POWER: ECONOMICS, POLICY, AND ELECTRIC UTILITIES BEFORE 1940, at 4 (2016) (citation omitted).

56. *See* McDonald, *supra* note 45.

57. *See* Roger Sherman, *Monopoly Regulation: From Legal Unrealism to Unreal Legalism and Beyond*, 8 REV. INDUS. ORG. 257, 263 (1993) ("Returns of regulated public utilities were virtually guaranteed to investors . . . .").

resulting from industrialization and urbanization.[58] Companies like electric utilities were deemed "public service corporations" or, more simply, "public utilities" whose task was to provide the public at large with basic goods and services.[59] Through the regulation of utility companies, "progressive policy makers pioneered a more capacious notion of 'public interest' in politics and economics and a more comprehensive conception of the 'social control of American capitalism.'"[60] At least in theory, this original spirit of public-utility governance put the notion of the public good at the center of the regulatory project.

B. Socialized Costs

One of the most important utility commission responsibilities was, and still is, to ensure just and reasonable prices for economic activities that are "affected with a public interest," like the provision of electric and gas service.[61]

Regulators generally set rates for monopoly utilities using cost-of-service principles.[62] First, regulators determine the utility's revenue requirement: how much money the utility must make to cover its fixed and variable costs, including payment on debt and a return to investors.[63] That revenue requirement is then allocated among customer classes. These customer classes typically include residential customers, small business customers, and large commercial and industrial customers, among others.[64] Finally, a service price for

58. LEWIS L. GOULD, AMERICA IN THE PROGRESSIVE ERA, 1890–1914, at 3 (2001); *see also* WILLIAM J. NOVAK, NEW DEMOCRACY 1 (2022) (explaining that the Progressive era replaced ideals of local self-government with "a modern approach to positive statecraft, social legislation, economic regulation, and public administration still with us today").

59. NOVAK, *supra* note 58, at 108; *see also* RICKS ET AL., *supra* note 43, at 7 (offering a definition and examples of utilities).

60. NOVAK, *supra* note 58, at 109, 112–13 ("The public service corporation was one of the major progressive responses to the emerging power of big business in the twentieth century . . . .").

61. *Id.* at 114 (citing Matthew Hale, *De Portibus Maris*, *in* 1 A COLLECTION OF TRACTS RELATIVE TO THE LAW OF ENGLAND 77–78 (Francis Hargrave ed., 1787)). Another crucial responsibility was ensuring the adequacy of utility service. NOVAK, *supra* note 58, at 123.

62. JOEL B. EISEN, EMILY HAMMOND, JIM ROSSI, DAVID B. SPENCE & HANNAH J. WISEMAN, ENERGY, ECONOMICS, AND THE ENVIRONMENT: CASES AND MATERIALS 480–82 (5th ed. 2020).

63. *Id.*

64. JIM LAZAR, PAUL CHERNICK & WILLIAM MARCUS, RAP, ELECTRIC COST ALLOCATION FOR A NEW ERA 14, 29 (Mark LeBel ed., 2020), https://www.raponline.org/wp-

customers within each class is set based on that class's allocated share of the utility's revenue requirement.[65] The resulting rates typically are amalgams of multiple components. The two primary components are fixed charges, which are billed at a flat rate for that customer class, and volumetric charges, which fluctuate based on a customer's actual energy consumption.[66] Utilities can recover their own fixed costs (for example, the cost of maintaining the grid[67]) through either fixed or volumetric customer charges.

An important principle of rate regulation is that costs should be allocated fairly among customers.[68] Typically, regulators try to achieve that fairness by using cost-causation principles. In other words, prices for each class of customers reflect the cost of providing service to that class.[69] However, a perfect application of cost-causation principles has proved neither achievable nor desirable. It would be administratively impossible to ensure that each customer pays only for that customer's costs to the system. In practice, this means costs generally do not vary within a class.[70] Instead, costs are socialized within classes since some customers in the class will cost more to serve than others.

Additionally, while cost-causation principles are important, electric rates also reflect the cost of utility-wide programs and expenses. For example, many states require their utilities to subsidize low-income users.[71] Low-income users typically carry a higher "energy burden" than other customers—that is, they pay a higher percentage of their income for energy, even though their absolute levels of use may

content/uploads/2020/01/rap-lazar-chernick-marcus-lebel-electric-cost-allocation-new-era-2020-january.pdf [https://perma.cc/G3XY-WQQJ].

65. *See* EISEN ET AL., *supra* note 62, at 480–82.

66. *See* Severin Borenstein, *What's So Great About Fixed Charges?*, ENERGY INST. AT HAAS (Nov. 3, 2014), https://energyathaas.wordpress.com/2014/11/03/whats-so-great-about-fixed-charges [https://perma.cc/4JSB-CWA8].

67. In the long run, of course, all costs are variable. *See* Peter S. Fisher, *The Strange Career of Marginal Cost Pricing*, 25 J. ECON. ISSUES 77, 81 (1991).

68. In his classic treatise on the principles of public utility rates, James C. Bonbright emphasized the fair apportionment of costs among customers. He also stressed that rates should be simple, feasible of application, stable, and nondiscriminatory. Rábago & Valova, *supra* note 50, at 10; LAZAR ET AL., *supra* note 64, at 26–27.

69. LAZAR ET AL., *supra* note 64, at 26.

70. *Id.* This is sometimes called "postage stamp pricing," a reference to the fact that domestic first-class stamps cost the same amount regardless of where the sender is located.

71. *See* Thompson, *supra* note 18, at 273–79 (explaining that "[t]he primary means through which low-income ratepayers receive financial help is through favorable rate structures").

be relatively low.[72] Redistributive utility pricing is one way to ease that burden.[73] Similarly, and more recently, states have used utility pricing to spread the costs of preferred environmental and social policies. Renewable portfolio standards, for example, typically require utilities to obtain more of their energy from renewable sources, even if that means paying a premium, and utilities can then pass that premium on to consumers.[74] More recently, as renewable prices and natural gas prices have dropped below those of coal and nuclear power, states have used energy pricing to spread the burden of keeping older power plants operating.[75] The underlying policies reflected by these examples differ; indeed, in some circumstances, they are nearly diametrically opposed.[76] But the common idea is that utility pricing is a way to socialize the costs of pursuing policy goals.

C. Discontent and Limited Exit Options

This brief history and summary of energy utilities supports two key points: first, that the utility-based model was born partly out of Progressive-era impulses toward serving the public good; and second, that states continue to use utilities in ways that are arguably consistent with those original public-spirited goals. Those points imply a positive view of utilities and their regulators. But that positive view is no longer dominant. Instead, frustrations with traditional utilities have become increasingly widespread and have led many energy users to seek exit from the traditional utility system.

Though it has evolved, this quest for energy exit is not a new phenomenon. From the beginning, the story of integration and collective good obscured discontent with incumbent utilities and

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72. *See* Marilyn A. Brown, Anmol Soni, Melissa V. Lapsa, Katie Southworth & Matt Cox, *High Energy Burden and Low-Income Energy Affordability: Conclusions from a Literature Review*, PROGRESS ENERGY, Oct. 2020, at 1, 5.

73. *See* Thompson, *supra* note 18, at 275–79.

74. *See* N.M. Att'y Gen. v. N.M. Pub. Regul. Comm'n, 359 P.3d 133, 141–42 (N.M. 2015) (describing renewable portfolio standards and their effects on rates).

75. *See* Tara Righetti, Temple Stoellinger & Robert Godby, *Adapting to Coal Plant Closures: A Framework for Understanding State Resistance*, 51 ENV'T L. 957, 976–77 (2021) (describing Wyoming's efforts to keep its coal-fired power plants operating); James M. Van Nostrand, *Using Emergency Powers To Provide Financial Assistance to Coal and Nuclear Plants*, KY. J. EQUINE, AGRIC. & NAT. RES. L. 189, 193–94 (2018) (describing state efforts to prop up nuclear facilities).

76. Righetti et al., *supra* note 75, at 976 (describing Montana's use of pro-coal policies to attempt to counteract pro-renewable policies in Oregon and Washington).

customer efforts to break away. Large industrial customers sometimes had the means to self-supply their electricity[77] or take power directly from interstate transmission lines.[78] These large industrials were always key to utility success since they not only consumed large amounts of electricity but could frequently do so at off-peak times, evening out the utility's load.[79] To induce large industrial customers to remain within their systems, utilities offered them rate incentives.[80]

Moreover, communities sometimes preferred to establish their own municipal utilities rather than subscribe to service by an IOU.[81] Some communities selected municipalization because IOUs would not serve their communities.[82] Others feared the potential corruption of the franchise system, under which cities extracted rents from private utilities for the privilege of serving those cities' residents.[83] After the federal government began developing large hydroelectric projects in the early part of the twentieth century, more local governments created municipal electric utilities to take advantage of low-cost hydropower, as well as other New Deal–era federal subsidies.[84]

More generally, it was clear from the start that public-spirited regulation was neither assured nor, if adopted, guaranteed to keep private utilities from pursuing profit over public benefit. Regulators were supposed to protect the interests of the public from monopolist utilities. However, scholars and ratepayers have accused public utility commissions ("PUCs") of "capture" by the utilities they regulate.[85]

77. Kenneth Rose & John F. McDonald, *Economics of Electricity Self-Generation by Industrial Firms*, 12 ENERGY J. 47, 47–48 (1991).

78. *See* REGUL. ASSISTANCE PROJECT, ELEC. REGULATION IN THE US 1, 65 (2011), https://www.raponline.org/wp-content/uploads/2016/05/rap-lazar-electricityregulationintheus-guide-2011-03.pdf [https://perma.cc/JY9Y-VQNR].

79. SMITHSONIAN INST., *supra* note 40.

80. *See* Elliot Taubman & Karl Frieden, *Electricity Rate Structures: History and Implications for the Poor*, 10 CLEARINGHOUSE REV. 431, 432–33 (1976) (describing declining block rate structures).

81. *See infra* notes 115–21 and accompanying text.

82. *See infra* note 122 and accompanying text.

83. *See* Werner Troesken, *Regime Change and Corruption: A History of Public Utility Regulation*, *in* CORRUPTION AND REFORM: LESSONS FROM AMERICA'S ECONOMIC HISTORY 264 (Edward L. Glaeser & Claudia Goldin eds., 2006).

84. *See infra* notes 125–27 and accompanying text.

85. *See, e.g.*, MARVER H. BERNSTEIN, REGULATING BUSINESS BY INDEPENDENT COMMISSION 3–4, 170 (1955); George J. Stigler, *The Theory of Economic Regulation*, 2 BELL J. ECON. & MGMT. SCI. 3, 3 (1971); Michael Asimow, *Regulatory Capture and the California Public*

Regulatory capture occurs when "regulated monopolies end up manipulating the state agencies that are supposed to control them."[86] While critics allege that capture is not as pervasive or problematic as the earliest accounts suggested,[87] there is some evidence of capture,[88] and even the perception of undue influence by utilities on regulators might induce individuals or communities to break away.

Discontent also can be traced to the Progressive ideal of expert regulation insulated from politics.[89] Historian Lewis Gould has argued that the emphasis on regulation by expert commissions and exclusion of political partisans "had anti-democratic implications that not all progressives grasped at the time."[90] That charge is contested; other jurists and commentators have argued that expert-driven decision-making is neither politically insulated nor anti-democratic.[91] Nevertheless, the perception that insulated experts are at odds with democracy is still widespread, and it continues to animate political and academic rhetoric about centralized energy delivery and regulation.[92] That perception also would ultimately drive additional customers and communities to seek exit from the investor-owned monopoly system.[93]

A related source of frustration is the economic incentives created by cost-of-service utility ratemaking. Under that approach, utilities can recover their capital investments plus a return—a profit, in non-utility-

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Utilities Commission, 40 ADMIN. & REG. L. NEWS 25, 25 (accusing the California Public Utilities Commission of capture by regulated utility PG&E); Troesken, *supra* note 83, at 259, 264–65.

86. Ernesto Dal Bó, *Regulatory Capture: A Review*, 22 OXFORD REV. ECON. POL. 203, 203 (2006).

87. *See, e.g.*, DANIEL CARPENTER & DAVID A. MOSS, PREVENTING REGULATORY CAPTURE: SPECIAL INTEREST INFLUENCE AND HOW TO LIMIT IT 2 (2014) ("Regulatory capture is not always and everywhere the devastating problem it is often made out to be.").

88. *See, e.g.*, Heather Payne, *Game Over: Regulatory Capture, Negotiation, and Utility Rate Cases in an Age of Disruption*, 52 U.S.F. L. REV. 75, 88–100 (2017) (finding empirical evidence that rate case outcomes consistently favor utilities); Troy A. Rule, *Buying Power: Utility Dark Money and the Battle over Rooftop Solar*, 5 LSU J. ENERGY L. & RES. 1, 2–3 (2017) (explaining that "Public Utility Commissions (PUCs) [are] susceptible to 'regulatory capture'").

89. GOULD, *supra* note 58, at 41.

90. *Id.* at 42.

91. *See, e.g.*, West Virginia v. EPA, 142 S. Ct. 2587, 2641–44 (2022) (Kagan, J., dissenting) (pointing out that the EPA had exercised its expertise at the direction of a democratically elected Congress).

92. *See, e.g.*, Free Enter. Fund v. Pub. Co. Acct. Oversight Bd., 561 U.S. 477, 499 (2010) (expressing concern that in a government "ruled by experts," power "may slip from the Executive's control, and thus from that of the people").

93. *See infra* notes 122–34, 156–65, 180–85 and accompanying text.

law terms—from rates set by regulators.[94] This approach creates a powerful incentive for utilities to maximize plausible capital investments.[95] By contrast, utilities can recover the costs of system maintenance but do not earn a return on those costs.[96] Moreover, once their rates have been set by regulators, they remain essentially static until the next regulatory rate case.[97] Therefore, utilities have incentives to build services like maintenance and customer support into their rates but not their practices.[98] Expert, deeply informed, and independent regulators might check those incentives,[99] but if the regulator is even somewhat captured or is at an informational disadvantage, it may provide little restraint. The result can be overbuilt infrastructure, excessive prices, poor service, and consumers looking for a way out.

Regardless of how they felt about IOUs, however, residential and smaller commercial customers generally had no ability to leave the monopoly utility. There were always a few people, inspired by Thoreau, the myth of the frontier, libertarianism, or other ideals, who sought primarily rural lifestyles disconnected from centralized energy systems.[100] This lifestyle gradually became known as living "off the grid."[101] Prior to the advent of low-cost solar, however, self-generation was expensive and unreliable, and it often produced localized

94. *See* Harvey Averch & Leland L. Johnson, *Behavior of the Firm Under Regulatory Constraint*, 52 AM. ECON. REV. 1052, 1052 (1962).

95. *See id.* at 1053.

96. *See* Regulatory Assistance Project, *supra* note 78, at 36–46 (summarizing the cost-of-service ratemaking process).

97. *See, e.g.*, *What Is a General Rate Case (GRC)?*, CAL. PUB. UTILS. COMM'N, https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/electric-rates/general-rate-case [https://perma.cc/46CJ-6AP9] (explaining that large electric utilities in California file a general rate case application every three years).

98. Katharine M. Mapes, Lauren L. Springett & Anree G. Little, *Retooling Ratemaking: Addressing Perverse Incentives in Wholesale Transmission Rates*, 42 ENERGY L.J. 339, 344–46 (describing the incentives created by traditional ratemaking for utilities to underspend on maintenance).

99. STEVE KIHM, JANICE BEECHER & RONALD LEHR, REGULATORY INCENTIVES & DISINCENTIVES FOR UTILITY INVESTMENTS IN GRID MODERNIZATION 42–43 (2017) (discussing the various tools available to regulators and the incentives they produce).

100. *See, e.g.*, Harvey Solomon-Brady, *No Signal by Brice Portolano*, WHYNOW (Jan. 13, 2023), https://whynow.co.uk/read/no-signal-brice-portolano [https://perma.cc/52PT-EJY2]; ANNE LABASTILLE, WOODSWOMAN 7 (1976).

101. Merriam-Webster dates the first-known use of "off-grid" to 1978. *Off-grid*, MERRIAM-WEBSTER (2023), https://www.merriam-webster.com/dictionary/off-grid [https://perma.cc/MQ9B-LJ8W].

pollutants as well as greenhouse gases.[102] Even exiting the utility through municipalization became more challenging. Municipalization slowed as federal subsidies disappeared and IOUs offered lower rates due to economies of scale.[103] Today, publicly owned utilities (including federal, state, and municipal utilities) serve only about 15 percent of customers in the United States.[104]

Structural shifts in the electric utility industry in the 1990s gave consumers in some states more control over the source of their electricity. During this period, many states "restructured" their retail electric systems to require that incumbent monopoly utilities open up their grids to other electricity providers.[105] This meant that customers could now choose between receiving their electricity from the former incumbent or from an alternate seller.[106] The incumbent utility still held a monopoly over the distribution grid, but it could not discriminate against other sellers in the use of its lines.[107] Today, customers in some states can select from among providers that offer electricity at differing prices and with different attributes.[108]

While this restructuring might appear to represent the triumph of decentralizing forces, the effort was incomplete. Only sixteen states (and the District of Columbia) offer retail energy choice to

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102. Wood-burning stoves produce small particulates, carbon monoxide, and other dangerous air pollutants. *Frequent Questions About Wood-Burning Appliances*, U.S. EPA, https://www.epa.gov/burnwise/frequent-questions-about-wood-burning-appliances [https://perma.cc/F2YJ-FQHA]. Gasoline or diesel generators produce smog-forming pollutants, particulates, and greenhouse gases. *Take Control and Help Clean the Air with Nonpolluting Generator Options*, CAL. AIR RES. BD., https://ww2.arb.ca.gov/news/take-control-and-help-clean-air-nonpolluting-generator-options [https://perma.cc/CXW3-ZP6N].

103. *See* SCHAP, *supra* note 40, at 93–95.

104. U.S. ENERGY INFO. ADMIN., *supra* note 7.

105. *See* Severin Borenstein & James Bushnell, *The U.S. Electricity Industry After 20 Years of Restructuring* 1–12 (Nat'l Bureau of Econ. Rsch., Working Paper No. 21113, 2015), http://www.nber.org/papers/w21113 [https://perma.cc/R4TF-28C4].

106. *Id.*

107. *Id.*

108. For a list of states with retail electric choice programs, see *Residential Retail Electric Choice Participation Has Leveled Off Since 2019*, U.S. ENERGY INFO. ADMIN. (Mar. 15, 2023), https://www.eia.gov/todayinenergy/detail.php?id=55820 [perma.cc/Y2RV-GJCD]. One example of the range of plans available to customers in these states comes from Ohio, where some providers offer 100 percent renewable electricity and others offer discounts and pledge to make donations to charities. *Apples to Apples: Electric*, ENERGY CHOICE OHIO, https://energychoice.ohio.gov/ApplesToApplesCategory.aspx?Category=Electric [https://perma.cc/9D93-3EKJ].

customers.[109] California's disastrous attempt to restructure its retail electric system, which triggered an energy crisis, made other states wary.[110] Thus, in most of the country, customers are still served by monopoly IOUs.[111] For these customers, exit prospects remained dim—until relatively recently.

II. THE EMERGENCE/RESURGENCE OF COMMUNITY ENERGY EXIT

Even in parts of the country without successful retail-choice programs, the predominance of the traditional utility model, in which nearly everyone within a given service territory relies on the incumbent IOU for power, is breaking down. Individual exit remains a possibility, and new technologies, like solar panels and batteries, are making that option more widely available.[112] Innovations like community solar and peer-to-peer projects offer individual exit options to those without the physical capacity or means to install on-site generation.[113] But the more significant forms of exit, and the ones upon which we focus here, are collective. Municipalization remains an option, and while completed municipalizations remain rare, cities are taking the option seriously, and academic interest has been reborn.[114] Other possibilities are also emerging, as a combination of legal and technological innovations now allows communities to partially exit from the IOU model and assert greater levels of community control.

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109. *See Deregulated Energy Markets*, ELEC. CHOICE, https://www.electricchoice.com/map-deregulated-energy-markets [https://perma.cc/5VRX-CNCY].

110. *See* Borenstein & Bushnell, *supra* note 105, at 2.

111. U.S. ENERGY INFO. ADMIN., *supra* note 7.

112. DAVID LITTELL, CAMILLE KADOCH, PHIL BAKER, RANJIT BHARVIRKAR, MAX DUPUY, BRENDA HAUSAUER, CARL LINVILL, JANINE MIGDEN-OSTRANDER, JAN ROSENOW, WANG XUAN, OWEN ZINAMAN & JEFFREY LOGAN, 21ST CENTURY POWER P'SHIP, NEXT-GENERATION PERFORMANCE-BASED RATEMAKING, at ix (2017), https://www.nrel.gov/docs/fy17osti/68512.pdf [https://perma.cc/346R-M7CQ] ("Today, average residential customers are increasingly able to control their energy usage and even become grid resources, something not contemplated in the 20th century era of large, centrally operated generating plants.").

113. Solar gardens, sometimes called "community solar" or "solar neighborhoods," are small- to medium-sized solar panel installations that may or may not be located near their subscribers. Customers buy or lease a share of the project. *Community Solar*, NAT'L RENEWABLE ENERGY LAB'Y, https://www.nrel.gov/state-local-tribal/community-solar.html [https://perma.cc/KDG5-VDUW].

114. *See generally, e.g.*, Alexandra B. Klass & Rebecca Wilton, *Local Power*, 75 VAND. L. REV. 94 (2022); Shelley Welton, *Public Energy*, 92 N.Y.U. L. REV. 267 (2017); Uma Outka, *Cities and the Low-Carbon Grid*, 46 ENV'T L. 105 (2015); Shelley Ross Saxer, *Eminent Domain, Municipalization, and the Dormant Commerce Clause*, 38 U.C. DAVIS L. REV. 1505 (2005).

This Part summarizes these exit options. We begin with municipalization and then discuss community choice aggregation and microgrids, explaining how they work, why they hold widespread appeal, where they are growing—sometimes explosively—and why their emergence has generally been hailed as cause for celebration. We also discuss the recent trend toward exits from energy co-ops, which, while different from community exits from IOUs, raises some parallel concerns.

A. Resurgent Municipalization

Sometimes entire municipalities break from their incumbent IOU. City residents, frustrated with the price, quality, or other attributes of their existing utility service, may turn to public ownership as a more appealing option.[115] As one advocate of public power explained, "private utilities are not up to the task . . . . They can't even maintain the current energy grid, let alone get us prepared for the future."[116] The process of cutting ties with the existing utility typically begins with an economic feasibility study,[117] then moves to a community vote,[118] state PUC approval if necessary,[119] and negotiations with the incumbent utility.[120] If the utility resists, the city may be forced to condemn the utility's assets through eminent domain.[121] The eventual result, if the effort is successful, is that energy purchasing and distribution become local government services.

Cities municipalize for varied reasons. In the early days of electric utilities, cities in rural areas formed their own utilities because private

115. *See* Outka, *supra* note 114, at 107–08.

116. Jason Fulton, *Sparking Change? Why Activists in New York, Maine and Elsewhere Are Pushing for Public Power*, USA TODAY (Sept. 3, 2022), https://www.usatoday.com/story/news/nation/2022/09/03/public-power-new-york-maine-climate-sustainability/7904405001 [https://perma.cc/8DTR-BQCE] (statement of Daniel Atonna, Political Coordinator, For The Many).

117. Suedeen G. Kelly, *Municipalization of Electricity: The Allure of Lower Rates for Bright Lights in Big Cities*, 37 NAT. RES. J. 43, 43 (1997).

118. *Id.*

119. *Id.* at 45. State approval may be necessary if a city seeks to serve customers outside its borders, for example, or if condemning utility assets will affect service to remaining IOU customers.

120. *Id.*

121. *See* Shelley Ross Saxer, *Government Power Unleashed: Using Eminent Domain To Acquire a Public Utility or Other Ongoing Enterprise*, 38 IND. L. REV. 55, 69–70 (2005).

companies were reluctant to serve them.[122] Early municipalization was also driven by a desire to avoid the corruption of the franchise system.[123] Later, price advantages emerged.[124] For example, where municipal utilities can benefit from low-priced federal hydropower, they can offer lower rates than private counterparts.[125] Other cost advantages of municipalization include lower bond interest rates, the absence of an obligation to pay dividends to investors, exemption from federal taxes,[126] and access to low-cost federal loans.[127] Conversely, some aspects of municipal utility ownership can *increase* costs. Municipalities generally lack IOUs' economies of scale, for example. And some municipal utility goals, including environmental priorities, can produce higher costs.[128]

Another advantage of municipal utilities is the autonomy that comes with public ownership and operation.[129] In a review of four recent efforts to municipalize, a consultant for the District of Columbia Department of Energy and Environment concluded that "municipalization tended to be spurred by a sense that a community's priorities and goals were different than that of the incumbent utility or the surrounding area."[130] But reasons varied significantly across the

122. SCHAP, *supra* note 40, at 23 ("[T]he choice was not private versus public ownership; rather, the choice in many cases was between public ownership and no electrification." (citations omitted)).

123. *Id.* at 24. The franchise system enabled the extraction of illicit concessions from utilities by local officials in exchange for contracts to serve the city. *See* Troesken, *supra* note 83, at 264.

124. *See* Kelly, *supra* note 117, at 45.

125. A 1983 article in the New York Times reported that a family on Long Island paid more than $200 less for electricity than a comparable family eight miles away because they received energy from a local municipal utility, which bought hydropower from the state, rather than from the local investor-owned utility. James Barron, *Hydropower Lowers Rates for a Small L.I. Utility*, N.Y. TIMES (Sept. 11, 1983), https://www.nytimes.com/1983/09/11/nyregion/hydropower-lowers-rates-for-a-small-li-utility.html [https://perma.cc/6WDU-TUGA].

126. SYNAPSE ENERGY ECON., INC., AN ANALYSIS OF MUNICIPALIZATION AND RELATED UTILITY PRACTICES, PREPARED FOR THE DISTRICT OF COLUMBIA DEPARTMENT OF ENERGY AND ENVIRONMENT (DC DOEE) 2 (2017).

127. CITY OF BAINBRIDGE ISLAND, ELECTRIC UTILITY MUNICIPALIZATION FEASIBILITY STUDY, EXECUTIVE SUMMARY 1 (Jan. 23, 2017), https://www.bainbridgewa.gov/DocumentCenter/View/7983/Bainbridge-Island—-Preliminary-Draft-Report—-012317 [https://perma.cc/8BXU-PDQP].

128. SYNAPSE ENERGY ECON., INC., *supra* note 126, at 2.

129. Klass & Wilton, *supra* note 114, at 100.

130. SYNAPSE ENERGY ECON., INC., *supra* note 126, at 1–2 (examining municipalization efforts in Long Island, New York; Winter Park, Florida; Jefferson County, Washington; and Boulder, Colorado).

four case studies examined. They ranged from reliability concerns and high bills to the loss of local control to a citywide sustainability policy.[131] In other cases, municipalities have sought better-quality service than they received from their IOU.[132] And some municipalities are motivated by a desire to achieve climate objectives.[133] For example, Boulder, Colorado, emphasized the reduction of carbon emissions as a key goal in its municipalization efforts.[134]

Municipalization is not a new phenomenon. Some local communities have long owned and operated their own utilities. Development of municipal power systems was robust from 1882 through 1923,[135] particularly in places larger private utilities were unable or unwilling to serve.[136] Municipalization received an additional boost from the 1920s through the 1940s when large federal hydropower projects were constructed across the nation[137] and municipal utilities received preferential access to the new hydropower,[138] along with New Deal–era federal financing.[139] Since the middle of the last century, however, the number of new municipal electric utilities has declined.[140] According to a recent study, only eighteen municipal utilities have been formed since 1990.[141]

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131. *Id.* at 1.

132. *Municipalization Resources*, AM. PUB. POWER ASS'N (2023), https://www.publicpower.org/municipalization-resources [https://perma.cc/X8TR-BC5M] (discussing Hermiston, Oregon's formation of a municipal utility after the incumbent investor-owned utility closed its local customer service office).

133. *See* Welton, *supra* note 114, at 270–73.

134. *See* Michael Elizabeth Sakas, *Boulder Ends Decade Long Pursuit of City-Owned Power Utility*, CPR NEWS (Nov. 20, 2020), https://www.cpr.org/2020/11/20/boulder-ends-decade-long-pursuit-of-city-owned-power-utility [https://perma.cc/AVE7-Y4KC] ("'The only way [the Boulder City Council] felt to accelerate the conversion to renewable sources was to start its own municipal utility in Boulder,' [former Boulder mayor Bob] Yates said.").

135. SCHAP, *supra* note 40, at 8.

136. *See id.* at 23 ("[T]he choice in many cases was between public ownership and no electrification.").

137. *See id.* at 86 ("[F]ederal government hydroelectric installed generating capacity increased nearly twentyfold from 1933 to 1945.").

138. *Id.* at 7; *see also* RICHARD J. CAMPBELL, CONG. RSCH. SERV., R45548, THE POWER MARKETING ADMINISTRATIONS: BACKGROUND AND CURRENT ISSUES (2019) (describing the history of power-marketing administrations and explaining the preference for sales of their power to public-utility districts).

139. SCHAP, *supra* note 40, at 78–85.

140. *Id.* at 8, 93–95.

141. SYNAPSE ENERGY ECON., INC., *supra* note 126, at 8.

But these numbers may understate the resurgent importance of a municipalization. Many local governments have considered the move recently or are currently doing so. Beginning in 2011, Boulder, Colorado, sought to establish its own municipal utility by taking over the assets of Public Service Company of Colorado ("PSCo"), a subsidiary of Xcel Energy. The process ended when Boulder signed a settlement with PSCo. The agreement created a partnership on pilot projects and gave the city an option to exit the franchise agreement and restart the municipalization process well before the agreement's expiration in 2041.[142] Similarly, local governments in California have been actively considering municipalization in the wake of catastrophic wildfires sparked by IOU equipment and the subsequent bankruptcy of PG&E, which serves most of Northern California. In 2019, as PG&E was engaged in bankruptcy proceedings, San Francisco offered it $2.5 billion for the city's grid; PG&E declined.[143] San Jose is also exploring municipalization, with its mayor citing PG&E's Public Safety Power Shutoffs program, which uses power outages to prevent wildfires on hot, windy days, as a primary motivation.[144] The City of Bainbridge Island in Washington recently commissioned a feasibility study on municipalization, with advocates hoping for "cleaner energy [and] better reliability, as well as local control and jobs."[145] Academic interest in municipalization has also revived, with commentators arguing that municipally owned energy systems can provide a range of benefits that IOUs may be unable to match.[146]

142. *Xcel Energy Partnership*, CITY OF BOULDER, https://bouldercolorado.gov/projects/xcel-energy-partnership [https://perma.cc/QYB5-8D2P].

143. Robert Walton, *San Francisco Offers PG&E $2.5B for City's Grid*, UTIL. DIVE (Sept. 9, 2010), https://www.utilitydive.com/news/san-francisco-offers-pge-25b-for-citys-grid/562487 [https://perma.cc/9A9G-Y9XS].

144. *See* Peter Maloney, *San Jose, Calif., Mayor Wants To Explore Municipalization*, AM. PUB. POWER ASS'N (Oct. 21, 2019), https://web.archive.org/web/20230328135034/https://www.publicpower.org/periodical/article/san-jose-calif-mayor-wants-explore-municipalization [https://perma.cc/X399-B3D9] (describing the mayor of San Jose's 2019 municipalization proposal).

145. Nathan Pilling, *Puget Sound Energy Flames Bainbridge Public Power Study*, KITSAP SUN (May 17, 2017), https://www.kitsapsun.com/story/news/local/communities/bainbridge-islander/2017/05/17/puget-sound-energy-flames-bainbridge-public-power-study/101793236 [https://perma.cc/4ZMJ-SR9Q].

146. *See* Klass & Wilton, *supra* note 114, at 96 (arguing that municipalization can help communities meet economic, environmental, political, and social policy goals); Outka, *supra* note 114, at 136 (citing lower electricity rates, environmental goals, local control, and enhancements to the local economy as reasons cities might be drawn to municipally owned systems).

These efforts may be the start of a new wave of municipalization, but even if they are not, serious contemplation alone creates leverage. President Franklin Roosevelt once called the ability of communities to form public utilities a "'birch rod' in the cupboard to be taken out and used only when the 'child' [the private utility] gets beyond the point where a mere scolding does no good."[147] That threat might induce a utility to reduce rates,[148] accelerate climate actions,[149] or offer other incentives to the local government. It can also produce more generous or more innovative franchise agreements, like the one Boulder entered into with Xcel in 2020.[150]

B. Community Choice Aggregation

In contrast to municipalization, which involves a complete local takeover of energy service, community choice aggregation is a partial form of energy exit.[151] In a community choice aggregation system, a community—typically a city, county, or, in some states, an aggregation of cities and counties—becomes an energy buyer for its residents.[152] Those residents generally have a choice between the CCA and the

147. President Franklin D. Roosevelt, Campaign Address in Portland, Oregon on Public Utilities and Development of Hydro-Electric Power (Sept. 21, 1932), https://www.presidency.ucsb.edu/documents/campaign-address-portland-oregon-public-utilities-and-development-hydro-electric-power [https://perma.cc/UC9J-AXES].

148. *See* Kelly, *supra* note 117, at 45, 49 (describing why municipalization or the threat of municipalization may bring lower electric rates).

149. *See* David Roberts, *A Major US Utility Is Moving Toward 100% Clean Energy Faster Than Expected*, VOX (May 29, 2019), https://www.vox.com/energy-and-environment/2018/12/5/18126920/xcel-energy-100-percent-clean-carbon-free [https://perma.cc/2VSG-LEPK] (citing Boulder, Denver, Breckenridge, and Pueblo's desire for 100 percent renewable energy as one of the motivations, alongside the declining cost of renewable generation, for Xcel's decision to go carbon free by 2050 across its eight-state territory).

150. *See Xcel Energy Partnership*, *supra* note 142 (providing information about the City of Boulder's Xcel Energy Partnership).

151. Some support for CCA-enabling legislation came from communities that had attempted and failed to municipalize. *See* David Hsu, *Straight Out of Cape Cod: The Origin of Community Choice Aggregation and Its Spread to Other States*, 86 ENERGY RSCH. & SOC. SCI. 1, 8 (2022) (describing San Francisco's attempt to municipalize and its state representative's subsequent sponsorship of a successful bill to authorize CCA).

152. *See* ERIC O'SHAUGHNESSY, JENNY HEETER, JULIEN GATTACIECCA, JENNY SAUER, KELLY TRUMBULL & EMILY CHEN, COMMUNITY CHOICE AGGREGATION: CHALLENGES, OPPORTUNITIES, AND IMPACTS ON RENEWABLE ENERGY MARKETS 1 (2019) (defining community choice aggregation).

traditional utility provider,[153] although, in states where CCAs have succeeded, the CCA becomes consumers' default choice, and those consumers must opt out if they wish to remain with the incumbent utility.[154] The energy utility generally continues to handle energy transmission and distribution, as well as billing functions; only energy-supply purchasing shifts to the new governmental entity.[155]

For consumers frustrated with the traditional utility model, CCAs appear to solve several problems. Consumers might want out of the traditional model because they believe it is bloated and costly. But even in restructured states where individual consumers can choose their energy provider—in many states, they cannot[156]—studies are ambivalent about whether that flexibility has helped consumers.[157] It is not hard to understand why: most consumers have neither the skills nor the inclination to navigate complex energy markets.[158] Community purchasing offers a solution. By aggregating the purchasing power of thousands of consumers and giving them energy-market-expert representation, CCAs can help consumer groups obtain good deals.[159]

153. *See id*. at iv ("[C]ustomers may opt *out* in order to return to utility service." (emphasis in original)).

154. *See id*. (highlighting the advantages of the opt-in structure).

155. *See* Alexandra McGee & Shalini Swaroop, *The Power of Power: Democratizing California's Energy Economy To Align with Environmental Justice Principles Through Community Choice Aggregation*, 46 ECOLOGY L.Q. 985, 991 (2019) (describing the responsibilities of the CCA and IOU in a CCA system).

156. *See* Eric O'Shaughnessy, Jenny Heeter, Julien Gattaciecca, Jenny Sauer, Kelly Trumbull & Emily Chen, *Empowered Communities: The Rise of Community Choice Aggregation in the United States*, 132 ENERGY POL'Y 1110, 1111 (2019) (noting that individual retail choice is unavailable in some markets, including California); *State-by-State Information*, AM. COAL. OF COMPETITIVE ENERGY SUPPLIERS, https://competitiveenergy.org/consumer-tools/state-by-state-links [https://perma.cc/EVA7-HTAE] (tracking which states have individual retail choice).

157. *See* Noah Dormady, Matthew Hoyt, Alfredo Roa-Henriquez & William Welch, *Who Pays for Retail Electric Deregulation? Evidence of Cross-Subsidization from Complete Bill Data*, 40 ENERGY J. 161, 161 (2019) ("[E]mpirical support for [cost-saving] claims remains frustratingly opaque."). *But see* Agustin J. Ros, *Does Electricity Competition Work for Residential Consumers? Evidence from Demand Models for Default and Competitive Residential Energy Services*, 58 J. REG. ECON. 1, 2–3 (2020) (stating that "economic evidence on the effects of retail competition on the residential customer class is mixed" but finding evidence of reduced prices in Illinois).

158. *See* O'Shaughnessy et al., *supra* note 156, at 1110 ("Even where retail electricity competition exists most customers have made no active effort to choose a new competitive supplier and continue to be served by an investor-owned utility.").

159. *See* Mahelet G. Fikru & Casey Canfield, *Demand for Renewable Energy via Green Electricity Versus Solar Installation in Community Choice Aggregation*, 186 RENEWABLE ENERGY 769, 770 (2022) (describing advantages arising from administrative efficiencies and economies of scale); Proceeding on Motion of the Comm'n To Enable Cmty. Choice Aggregation

Similar aggregation can occur where consumers can choose among private middlemen, as is possible in restructured markets.[160] But consumers might prefer a nonprofit governmental entity that answers to elected officials to a private company seeking to extract profits from its deals.

CCAs also can appeal to communities that are frustrated with the traditional utility's energy-supply mix or with centralized decision-making more generally.[161] Many CCAs openly tout their green energy-purchasing policies and offer fully renewable purchasing options.[162] A CCA thus may accelerate the renewable energy transition.[163] Similarly, a locally governed energy supplier may be much more appealing than a massive, profit-motivated company[164] or a more centralized administrative agency.[165] Of course, the extent to which CCAs will deliver on all this potential remains unknown; CCAs are still quite new. But supporters believe CCAs can provide local responsiveness and, often, greener power at competitive prices.

Programs, No. 14-M-0224, 2016 WL 1643338, at *1 (N.Y. Pub. Serv. Comm'n Apr. 21, 2016) ("CCA programs can result in more attractive energy supply terms than can be obtained by individual customers through the bargaining power that aggregation provides, the expertise provided by municipal or consultant experts, and the competitive public process for choosing a supplier.").

160. *See, e.g.*, PUB. UTIL. COMM'N OF TEX., SCOPE OF COMPETITION IN ELECTRIC MARKETS IN TEXAS 2 (2019), https://ftp.puc.texas.gov/public/puct-info/industry/electric/reports/scope/2019/2019scope_elec.pdf [https://perma.cc/AHP8-RBTT] (describing the large number of competing suppliers in Texas).

161. *See* Hsu, *supra* note 151, at 2 ("Communities form CCAs to obtain cleaner and/or cheaper power than offered by the incumbent utility, and to establish local control.").

162. The website of MCE, California's first successful CCA, is a typical example. The C originally stood for clean, the homepage is filled with references to clean energy (and the color green), and fully renewable plans are prominent options. *See* MCE, https://www.mcecleanenergy.org [https://perma.cc/62E9-YP8T] (providing information about its services and purchase plans).

163. *See* John H. Armstrong, *Taking Control To Do More: How Local Government and Communities Can Enact Ambitious Climate Mitigation Policies*, 24 J. ENV'T POL'Y & PLAN. 160, 160 (2021) (describing CCAs as "impactful climate policy").

164. *See id.* at 168 ("[L]ocal control was an important concern behind CCA adoption.").

165. *See id.* at 169 (explaining perceived benefits of local control); Welton, *supra* note 114, at 309 (arguing that CCAs can "function as aggregators of *citizen* preferences, not merely consumers" (emphasis in original)).

Because of these potential advantages and state legislative support,[166] CCAs have grown rapidly in some states.[167] In the United States, the first CCA was developed on Cape Cod in 1998.[168] Since that time, ten states have enacted legislation authorizing CCAs.[169] In some of those states, CCA membership has "exploded."[170] In California, for example, eleven million people (more than a quarter of the state's population) receive energy from the state's twenty-five CCAs[171]; from 2016 to 2021, the load served by California CCAs grew by 865 percent.[172] Likewise, New York has seen a CCA boom.[173] In Illinois, between 2010 and 2014, CCA coverage expanded to encompass nearly the entire state.[174] A subsequent drop in prices charged by traditional IOUs led many of those CCAs to lapse, but coverage still remains extensive.[175] Other states may be poised to follow.[176] Consequently, in

166. *See* Hsu, *supra* note 151, at 2 (observing that "ten US states have passed legislation to authorize CCA" and that additional states are considering such legislation).

167. *Id.* at 2–3 (illustrating the rapid growth of CCAs, primarily in California, Illinois, Massachusetts, New Jersey, New York, and Ohio).

168. *See id.* at 7 (identifying the Cape Light Compact in Cape Cod, MA, as the first U.S. CCA).

169. *CCA by State*, LEAN ENERGY US, https://www.leanenergyus.org/cca-by-state [https://perma.cc/DHP6-FCX3]. LEAN Energy notes that five additional states—Arizona, Colorado, Michigan, New Mexico, and Pennsylvania—are considering CCA legislation. *States Under Consideration*, LEAN ENERGY US, https://www.leanenergyus.org/states-under-consideration [https://perma.cc/M94R-3UYD].

170. Ahmad Faruqui, Mariko Geronimo Aydin & John Higham, *Factors Behind the Formation of Community Choice Aggregation*, 33 ELEC. J. 1, 2 (2020) (describing the growth of CCAs in California).

171. *See CCA Impact*, CALCCA, https://cal-cca.org/cca-impact [https://perma.cc/PTY9-FGZZ] (providing information about California CCAs).

172. Kassia Micek, *California CCA Membership Surpasses 200 Communities, 28% of Utility Load*, S&P GLOBAL (Apr. 15, 2021), https://www.spglobal.com/commodityinsights/en/market-insights/latest-news/metals/041521-california-cca-membership-surpasses-200-communities-28-of-utility-load [https://perma.cc/K63B-7WP8].

173. *See* O'Shaughnessey et al., *supra* note 156, at 1112.

174. *See id.* at 1116 (describing the growth of CCAs in Illinois); Hugh Bartling, *Choosing Community Choice Aggregation: The Experience of Illinois Municipalities in the Electricity Market*, 3 ILL. MUN. POL'Y J. 49, 54 (2018) (illustrating CCA referendum results across Illinois).

175. *See* O'Shaughnessy et al., *supra* note 156, at 1116 (providing information on the challenges of CCA growth in Illinois).

176. *See States Under Consideration*, *supra* note 169 (describing the status of CCA growth in several U.S. states). *But see generally*, Commission's Implementation of Section 40-4-120, C.R.S., the Study of Community Choice in Wholesale Electric Supply, No. 22I-0027E, 2022 WL 205046 (Colo. Pub. Utils. Comm'n Jan. 13, 2022) (identifying potential advantages of CCAs but also raising many concerns).

some parts of the country, CCAs are no longer a fringe novelty but a viable alternative to IOU power.

C. Microgrids

Although they have not yet grown as rapidly as CCAs, microgrids also are an important emerging element of energy localization. A microgrid, according to a widely used definition offered by the United States Department of Energy, is "a group of interconnected loads and distributed energy resources within clearly defined electrical boundaries that acts as a single controllable entity with respect to the grid."[177] "A microgrid can connect and disconnect from the grid to enable it to operate in both grid-connected or island mode."[178] In other words, a microgrid is a group of energy producers and users that can isolate from the larger grid and operate on their own.[179]

Like CCAs and municipalization, microgrids offer potential advantages to their participants. For some participants, energy security is key. Having a microgrid can be like having a backup generator;[180] it may be somewhat expensive to operate or maintain, but for facilities like campuses, hospitals, or military bases, the cost of a power shutdown could be intolerable.[181] Security also can be important to communities in locations where remoteness, recurring fires, or storms mean power is often lost.[182] Microgrids can also offer energy-cost

177. DEP'T OF ENERGY, DOE MICROGRID WORKSHOP REPORT 1 (Aug. 30–31, 2011).

178. Dan T. Ton & Merrill A. Smith, *The U.S. Department of Energy's Microgrid Initiative*, 25 ELEC. J. 84, 84 (2012) (quoting the Microgrid Exchange Group).

179. *See* Taha Selim Ustun, Cagil Ozansoy & Aladin Zayegh, *Recent Developments in Microgrids and Example Cases Around the World—A Review*, 15 RENEWABLE & SUSTAINABLE ENERGY REVS. 4030, 4031 (2011) ("The groundbreaking feature of a microgrid is its ability to operate 'autonomously' when there is a power outage in the main grid.").

180. *See* Justin Gundlach, *Microgrids and Resilience to Climate-Driven Impacts on Public Health*, 18 HOUS. J. HEALTH L. & POL'Y 77, 98–99 (2018) (noting that generators can be expensive to operate and prone to failure).

181. *See* MICROGRID KNOWLEDGE, THE GENIUS OF MICROGRIDS IN HIGHER EDUCATION 3 (2020), https://cdn.microgridknowledge.com/files/base/ebm/microgridknowledge/document/2022/09/1663609159293-mgkreportgeniusofmicrogridsinhighereducation.pdf [https://perma.cc/9MLU-TZTT] (arguing that maintaining resilience is particularly important for higher-education facilities).

182. *See* STEVE HOFFMAN & CHARLES CARMICHAEL, NINE LESSONS LEARNED FROM SUCCESSFUL COMMUNITY MICROGRIDS 5 (2020), https://hoffmanpowerconsulting.com/wp-content/uploads/2020/10/Microgrid-Lessons-Learned-White-Paper-Hoffman-Power-Consulting-2020.pdf [https://perma.cc/FZU9-XM6K] (describing the motivations for the Borrego Springs

savings. Some facilities—a college campus with combined electricity generation and heating systems, for example—may produce energy more cheaply than the surrounding grid.[183] In some circumstances, the microgrid could even take advantage of price differentials by selling energy back into the grid.[184] And as with municipalization and CCAs, there may be noneconomic motivations for microgrids. A microgrid provides a measure of local control. For some people, that local control is an end in itself. Others may want to use local control to choose a preferred mix of energy supplies, often by favoring more renewable sources.[185]

Because of these potential advantages, people have been building microgrids for a long time. At one point, energy distribution systems consisted only of isolated microgrids; interconnected grids had not yet been constructed.[186] As those larger grids emerged in the United States and elsewhere, some energy users chose to maintain the ability to operate independently, even as they connected to that larger grid. Many of those users were university campuses, military bases, or industrial facilities.[187] Fully isolated microgrids also often exist in remote places, like islands, where connecting to the larger grid would make little sense.[188] Campuses and geographic islands aside, however, the idea of a *community* microgrid is of more recent vintage, and

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microgrid, which is in a remote area of Southern California, and resilience benefits more generally).

183. MICROGRID KNOWLEDGE, *supra* note 181, at 7 (describing multiple ways a campus could leverage microgrids for cost savings).

184. *See id.* (noting the possibility of selling "ancillary services to the electric grid").

185. *See* Adam Hirsch, Yael Parag & Josep Guerrero, *Microgrids: A Review of Technologies, Key Drivers, and Outstanding Issues*, 90 RENEWABLE & SUSTAINABLE ENERGY REVS. 402, 404 (2018) (noting that the renewable-energy transition has been a primary motivator for European microgrids).

186. *See* Stephanie Lenhart & Kathleen Araújo, *Microgrid Decision-Making by Public Power Utilities in the United States: A Critical Assessment of Adoption and Technological Profiles*, RENEWABLE & SUSTAINABLE ENERGY REVS. 1, 2 (2021) ("In the first decades of the 20th century, before extensive deployment of long-distance transmission and centralized-infrastructure, small-scale grids were the norm.").

187. *See* HOFFMAN & CARMICHAEL, *supra* note 182, at 3 ("[M]ost existing microgrids serve a single entity (e.g., a university, military base, or commercial/industrial customer) . . . ."); Gundlach, *supra* note 180, at 101 (citing 2015 statistics but also noting that microgrid deployment is changing quickly).

188. Martin Warneryd, Maria Håkansson & Kersti Karltorp, *Unpacking the Complexity of Community Microgrids: A Review of Institutions' Roles for Development of Microgrids*, RENEWABLE & SUSTAINABLE ENERGY REVS. 1, 1 (2020) ("Historically, MGs have been implemented in remote areas . . . .").

examples are few.[189] These microgrids also are generally small in scale, with capacity measured in kilowatts rather than megawatts.[190]

There are legal reasons for the rarity of community microgrids. Until recently, no states had laws specifically directed at microgrids.[191] And in more than half of the states, the word "microgrid" still appears nowhere in statutory codes.[192] In the absence of laws facilitating microgrids, general restrictions on energy development often made community microgrid construction difficult if not impossible.[193] State laws may prohibit anyone but utilities from stringing wires across public roads, and they often require prior approval before an entity can begin retail electricity sales.[194] They may also grant exclusive franchise agreements to incumbent utilities.[195] For all these reasons, in many states, the only entities that could construct microgrids were owners of contiguous parcels not crossed by public roads—like college campuses or private businesses—or utilities themselves.

Nevertheless, microgrid law is evolving quickly, and recent development of microgrids has been rapid. In the wake of Superstorm Sandy, New York introduced the "New York Prize" program,[196] which has encouraged apartment complexes in and around New York City to form microgrids.[197] Following the state's enactment of microgrid legislation,[198] the California Public Utilities Commission has held

189. *See id.* at 2 (describing grid-integrated community microgrids as "in a formative development phase"). The United States Department of Energy maintains a database of microgrids. *Microgrid Installations*, U.S. DEP'T OF ENERGY COMBINED HEAT & POWER & MICROGRID INSTALLATION DATABASES, https://doe.icfwebservices.com/microgrid [https://perma.cc/4GTU-29HF].

190. *See* U.S. DEP'T OF ENERGY, *supra* note 189 (listing the sizes of microgrids).

191. *See infra* notes 196–202 and accompanying text (summarizing the emergence of microgrid legislation).

192. *Id.*

193. *See* Sara Bronin, *Curbing Energy Sprawl with Microgrids*, 43 CONN. L. REV. 547, 550–51 (2010) (summarizing restrictions).

194. *See* LEE R. HANSEN, MICROGRIDS: OLR RESEARCH REPORT 4 (2012), https://www.cga.ct.gov/2012/rpt/pdf/2012-R-0417.pdf [https://perma.cc/P58G-NR4P].

195. *Id.*

196. *See* Hirsch et al., *supra* note 185, at 404 (describing the program's emergence); *NY Prize Microgrid Competition*, N.Y. STATE GOVERNOR'S OFFICE OF STORM RECOVERY, https://stormrecovery.ny.gov/ny-prize-microgrid-competition [https://perma.cc/6WER-BE6T].

197. For data on microgrid installation nationwide, including in and around New York City, see U.S. DEP'T OF ENERGY, *supra* note 189.

198. 2018 Cal. Legis. Serv. Ch. 566 (S.B. 1339), codified at CAL. PUB. UTILS. CODE §§ 8370–8372.

rulemaking proceedings designed to create regulatory structures for community microgrids,[199] and the state's major utilities are developing pilot projects.[200] Other states and Puerto Rico have enacted legislation, most of it quite recent, designed to facilitate community microgrid development.[201] In the past two years, a barrage of federal legislation has directed funding to microgrid initiatives.[202] The San Jose microgrid, if it comes to fruition, would be a particularly ambitious example, given the number and variety of users it would serve, but it also would be part of a growing trend.

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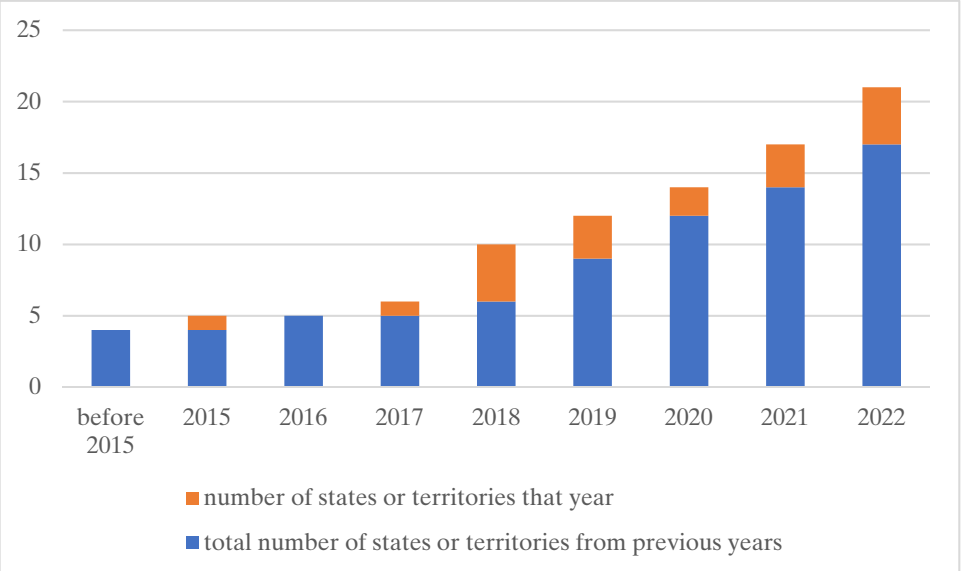
199. *Resiliency and Microgrids*, CAL. PUB. UTILS. COMM'N, https://www.cpuc.ca.gov/resiliencyandmicrogrids [https://perma.cc/J79C-5HBX] (summarizing the rulemaking proceeding and linking to key documents).

200. *See, e.g.*, Jude Schneider, *The Microgrid Solution: Could Microgrids Help Keep the Lights On?*, EDISON INT'L ENERGIZED (Jan. 30, 2020), https://energized.edison.com/stories/the-microgrid-solution [https://perma.cc/ULJ3-QHXR] (describing Southern California Edison's pilot program).

201. *See, e.g.*, ALASKA STAT. ANN. § 29.55.100 (West 2022) (including microgrids in an energy-efficiency and resiliency grant program for municipalities); CO. REV. STAT. ANN. §§ 40-9.8-101–40.9.8-105 (West 2022) (Colorado's "Microgrids for Community Resilience Act"); CONN. GEN. STAT. ANN. § 16-243y (West 2012) (authorizing a microgrid grant and loan program); HAW. REV. STAT. § 269-46 (authorizing microgrids and directing the state's PUC to set microgrid tariffs); 50 ILL. COMP. STAT. § 50/5 (2019) (qualifying microgrid spending eligible for inclusion in the state's Commercial Property Assessed Clean Energy ("C-PACE") program, which helps finance energy-efficiency improvements for businesses); MD. CODE ANN., STATE GOV'T § 9-2014 (West 2022) (qualifying microgrids for funding in a resiliency grant program targeted at low- and moderate-income housing); ME. REV. STAT. § 3351 (requiring the Maine PUC to approve microgrids that meet specific criteria); MINN. STAT. § 216B.2425 (2015) (requiring utility plans to address microgrids); NEV. REV. STAT. § 701B.980 (2017) (including microgrids in a definition of "system efficiency project"); N.J. STAT. ANN. 34:1B-375 (West 2021) (mentioning microgrids in a provision addressing renewable energy financing); N.M. STAT. ANN. 1978, § 71-11-1 (2020) (calling for microgrids to be addressed in a "[g]rid modernization roadmap and grant program"); N.C. GEN. STAT. ANN. § 62-133.16(a)(3) (West 2021) (including microgrids in a definition of "distributed energy resource" in a statute authorizing performance-based regulation of ratemaking); OR. REV. STAT. § 469A.400(2) (2021) (mentioning microgrids as potential elements of "[c]ommunity-based renewable energy"); 12 PA. STAT. AND CONS. STAT. ANN. §§ 4301–4302 (West 2022) (making microgrids eligible improvements for C-PACE financing); P.R. LAWS ANN. 22 § 1052c (2014) (requiring Puerto Rico's main utility to plan for microgrids); TENN. CODE ANN. § 68-205-102 (making microgrids eligible improvements for C-PACE financing); VA. CODE ANN. § 56-576 (2018) (including microgrids in the definition of "electric distribution grid transformation project"); WIS. STAT. § 66.0627(1)(am) (2022) (defining microgrid construction as a potential part of an "[e]nergy efficiency or reliability improvement").

202. *See, e.g.*, 10 U.S.C. § 2920(b)(2)(B) (requiring military planning to "promote installing microgrids to ensure the energy security and energy resilience of critical missions"); 26 U.S.C. § 48 (extending an energy tax credit to microgrid controllers); 42 U.S.C. § 17233 (authorizing grants to fund feasibility studies for microgrid projects); 42 U.S.C. § 18712(c)(3) (authorizing "Federal financial assistance to rural or remote areas for the purpose of . . . developing microgrids").

Figure 1. States and Territories with Legislation Mentioning Microgrids



To date, microgrids have generally emerged where established utilities are comfortable with that emergence. In many places, IOUs have been partners in microgrid development, primarily because they see potential reliability benefits from being able to island areas where power outages are common or where power is particularly difficult to supply or restore.[203] But in a few states—California, Maine, and Hawai'i—legislation and regulatory initiatives have begun setting the groundwork for community-initiated microgrid projects, even in places

203. *See, e.g.*, Lisa Cohn, *PG&E Opts for "Radical Collaboration" with Operators of Microgrids and DERs with DERMs*, MICROGRID KNOWLEDGE (July 31, 2023), https://www.microgridknowledge.com/distributed-energy-resources/article/33008991/pge-opts-for-radical-collaboration-with-operators-of-microgrids-and-ders-with-derms [https://perma.cc/DG4E-BVQ4] (describing how microgrids and advanced energy technology can help utilities); Schneider, *supra* note 200; *see also* Rohit Trivedi, Sandipan Patra, Yousra Sidqi, Benjamin Bowler, Fiona Zimmermann, Geert Deconinck, Antonios Papaemmanouil & Shafi Khadem, *Community-Based Microgrids: Literature Review and Pathways To Decarbonise the Local Electricity Network*, 15 ENERGIES 1, 23 (2022) (noting that European microgrids have also been built with traditional-utility support).

where those microgrids lack IOU support.[204] And proposals are beginning to emerge. In September 2022, for example, a company called Sunnova proposed to begin building microgrids in new master-planned communities in California.[205] Sunnova's proposal is opposed by the state's major IOUs[206] and some CCAs,[207] and in April 2023, the California Public Utilities Commission rejected the proposal, arguing that distributed microgrid policy should emerge through rulemaking rather than a decision on one application.[208] But the company described itself as "undeterred," and the idea of non-IOU-initiated microgrids is unlikely to go away.[209]

D. Co-ops

A parallel exit movement may be emerging among co-ops. While distinct from the examples above because communities seek to leave other co-ops rather than IOUs, co-op exits are motivated by similar goals and raise similar concerns.

Co-ops are nonprofit, customer-owned utilities that were funded by the federal government as part of a New Deal–era effort to electrify

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204. *See* CAL. PUB. UTILS. CODE §§ 8371–8372 (directing state regulators and utilities to develop procedures for approving microgrid applications); HAW. REV. STAT. § 269-46 (authorizing microgrids and directing the state's PUC to set microgrid tariffs); ME. REV. STAT. § 3351 (requiring the Maine PUC to approve microgrids that meet specific criteria).

205. Application of Sunnova Community Microgrids, LLC for a Certificate of Public Convenience and Necessity, No. A.22-09-002, slip op. at 1 (Cal. Pub. Utils. Comm'n Sept. 6, 2022), https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M496/K696/496696207.pdf [https://perma.cc/3VJD-UCT6].

206. Ethan Howland, *Major Utilities Oppose Sunnova's 'Micro-utility' Microgrid Proposal at California PUC*, UTIL. DIVE (Oct. 12, 2022), https://www.utilitydive.com/news/pge-sce-sunnova-microgrid-california-puc/633910 [https://perma.cc/GUQ2-R4VD].

207. Protest of Sonoma Clean Power Authority and Peninsula Clean Energy Authority to the Application of Sunnova Community Microgrids California, LLC for a Certificate of Public Convenience and Necessity, No. A.22-09-002, slip op. at 3 (Cal. Pub. Utils. Comm'n Sept. 6, 2022), https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M497/K621/497621827.pdf [https://perma.cc/DE2W-W9WX].

208. Decision Granting the Public Advocates Office of the California Public Utilities Commission Motion To Dismiss Sunnova Community Microgrids California, LLC's Application, Decision 23-04-005, slip op. at 25 (Cal. Pub. Utils. Comm'n Apr. 6, 2023), https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M505/K890/505890607.pdf [https://perma.cc/K3GF-L8JE].

209. Ryan Kennedy, *California Utilities Commission Rejects Solar Microgrid Proposal*, PV MAG. (Apr. 13, 2023), https://pv-magazine-usa.com/2023/04/13/california-utilities-commission-rejects-solar-microgrid-proposal [https://perma.cc/ENZ7-88H8].

rural parts of the country.[210] IOUs were reluctant to serve these relatively poor, sparsely-populated areas.[211] Cooperative distribution utilities then banded together to create larger co-ops that invested in power plants and transmission lines.[212] There are more than sixty G&T co-ops in the United States, along with more than eight hundred distribution co-ops.[213]

Today, distribution co-ops that were once part of G&Ts are breaking away (or attempting to do so). Most notably, several distribution co-ops have exited or are seeking to exit Tri-State G&T, which provides power to distribution co-ops in the western United States and is one of the nation's largest G&Ts.[214] Most of the co-ops seeking exit hope to procure cheaper or greener energy than the G&T can provide.[215] G&Ts may have little ability to accommodate member co-op priorities because, in many cases, they have locked themselves into ownership of, or long-term purchase agreements with, coal-fired power plants.[216]

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210. Gabriel Pacyniak, *Greening the Old New Deal: Strengthening Rural Electric Cooperative Supports and Oversight To Combat Climate Change*, 85 MO. L. REV. 409, 412 (2020).

211. *Id.*

212. *Id.* at 413.

213. Electric Co-op Facts & Figures, NAT'L RURAL ELEC. COOP. ASS'N (Apr. 28, 2022), https://www.electric.coop/electric-cooperative-fact-sheet [https://perma.cc/HBE7-XECF]. These cooperatives serve approximately forty-two million customers across 56 percent of the country's landmass. *Id.*

214. *Financials*, TRI-STATE GENERATION & TRANSMISSION ASS'N, https://tristate.coop/financials [https://perma.cc/5L29-PY4D]; *see* Ethan Greenberg & Corina McKendry, *Contested Power: Energy Democracy and the Repoliticization of Electricity in the Western U.S*, 73 ENERGY RES. & SOC. SCI. 1, 5–7 (2021) (mentioning the exit of KCEC and LPEA's efforts to do the same).

215. Katherine Stahla, *FERC Rejects United Power's Approach to Leaving Tri-State*, LONGMONT TIMES-CALL (Apr. 22, 2022, 5:13 PM), https://www.timescall.com/2022/04/22/ferc-rejects-united-powers-approach-to-leaving-tri-state [https://perma.cc/8J9X-BTJJ]; Ethan Howland, *Will Tri-State's Exit Fee Dispute at FERC Shake Up the Cooperative Utility Model?*, UTIL. DIVE (Dec. 15, 2021) [hereinafter Howland, *FERC Shake Up*], https://www.utilitydive.com/news/will-tri-states-exit-fee-dispute-at-ferc-shake-up-the-cooperative-utility/611030 [https://perma.cc/WWC9-9X3B]. In 2014, cooperatives relied on coal and natural gas plants for more than 70 percent of their power. By 2020, that number had declined to 60 percent. NAT'L RURAL ELEC. COOP. ASS'N, AMERICA'S ELECTRIC COOPERATIVES 2 (2022), https://www.electric.coop/wp-content/uploads/2021/10/2022_NCS4918_Coop_FactsAndFigures_6.03.22a.pdf [https://perma.cc/U8ZC-CA9J].

216. ERIC HATLESTAD, KATIE ROCK & LIZ VEAZEY, RURAL ELECTRIFICATION 2.0: THE TRANSITION TO A CLEAN ENERGY ECONOMY 6 (2019), https://www.cureriver.org/wp-content/uploads/2019/06/Rural-Electrification-2.0-report_CURE-1.pdf [https://perma.cc/9DD5-ELSC].

Co-ops in other parts of the country have also sought exit from long-term generation contracts for the purposes of lowering costs, increasing renewable energy, and establishing local control.[217] Minnesota's largest electric distribution co-op, Connexus Energy, recently terminated its membership in G&T Great River Energy. It did so because of Great River's decision to keep a large coal plant operational, and because it had broader concerns about costs and restrictions on Connexus's ability to purchase renewable power.[218] And in 2020, two distribution co-ops, Dakota Energy Cooperative, Inc., and Marlboro Electric Cooperative, Inc., attempted to terminate multi-decade, wholesale power contracts with their respective G&Ts.[219] In separate decisions, federal courts in South Dakota and South Carolina found that exit was precluded by the specific terms of the original contracts.[220] Dakota Energy has publicly expressed disappointment with the rulings, speculating that its G&T co-op was "trying to slow down innovation, limit [its] freedom of choice, and stifle competition."[221]

E. The Surrounding (and Laudatory) Rhetoric

In summary, recent legal changes, technological developments, and institutional innovations are combining to transform key parts of energy distribution. These innovations offer communities a variety of ways to take charge of energy policy and to tailor their degree of

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217. Ethan Howland, *Courts Dismiss Co-op Suits Seeking Exits from Long-term Power Supply Contracts*, UTIL. DIVE (Apr. 20, 2022) [hereinafter Howland, *Co-op Suits*], https://www.utilitydive.com/news/courts-dismiss-dakota-marlboro-coop-suits-power-contracts/622355 [https://perma.cc/4XNV-MQCM].

218. Dan Gearino, *After a Clash over Costs and Carbon, a Minnesota Utility Wants To Step Back from Its Main Electricity Supplier*, INSIDE CLIMATE NEWS (Aug. 30, 2021), https://insideclimatenews.org/news/30082021/great-river-energy-connexus-energy [https://perma.cc/J4KJ-JYCH].

219. *Courts Uphold Wholesale Power Contracts Among Electric Cooperatives*, EVERSHEDS SUTHERLAND (Apr. 14, 2022), https://us.eversheds-sutherland.com/mobile/NewsCommentary/Legal-Alerts/250220/Courts-uphold-wholesale-power-contracts-among-electric-cooperatives [https://perma.cc/M3PP-66N4].

220. Memorandum Opinion and Order on Motions for Summary Judgment, Dakota Energy Coop., Inc. v. East River Elec. Power Coop., Inc., No. 4:20-CV-4192-LLP, 2022 WL 1775687, at *9 (D.S.D. Apr. 11, 2022); Order at 20, Marlboro Elec. Coop., Inc. v. Central Elec. Power Coop., Inc., No. 4:20-cv-4386-SAL (D.S.C. Mar. 28, 2022), *reconsideration denied*, 2022 WL 17484831 (D.S.C. Dec. 7, 2022).

221. Howland, *Co-op Suits*, *supra* note 217 (quoting Chase Binger, Dakota Energy Bd. Chair).

control to the needs and capabilities of the community. Communities are taking advantage of these opportunities. CCAs have grown particularly rapidly, microgrids could follow close behind, co-ops are starting to fragment, and, in some places, complete municipalization may be the ultimate goal. These changes are not happening everywhere; instead, the changes have been primarily blue-state phenomena,[222] and the domains of IOUs remain large even within some of those states.[223] Other states have restructured and decentralized with an emphasis on individual choice rather than community actors.[224] But the changes are happening in many places and are affecting millions of people.

For many stakeholders in energy governance, the resurgence of municipalization and the emergence of CCAs, microgrids, and other forms of community self-generation have been causes for celebration.[225] That celebration has arisen for a range of reasons. Some are pragmatic—many commentators see localized energy as a pathway to innovation and a more resilient grid[226] or simply as a way to lower energy prices.[227] Some are grounded in profit motives; the decline of IOU hegemony creates opportunities for private firms to market a

222. *See supra* note 169 (showing states with CCAs and CCAs under consideration); *supra* notes 196–201 and accompanying text (identifying states where microgrid legislation has been enacted). Notably, however, co-op exit or attempted exit has occurred in all types of states. *See supra* notes 214–19 and accompanying text.

223. *See, e.g.*, BLOOMENERGY, NEW CHALLENGES AND MARKET DYNAMICS FOR CA ELECTRIC UTILITIES TECHNICAL NOTE (2019), https://www.bloomenergy.com/resource/white-paper-new-challenges-and-market-dynamics-for-ca-electric-utilities-technical-note [https://perma.cc/MK96-LBM6] (describing the rise of CCAs but also noting that California's IOUs serve approximately 58 percent of the state's electrical load).

224. *See* Boyd & Carlson, *supra* note 10, at 837–38 (describing the "fully restructured model" and the states where it operates).

225. *See, e.g.*, Welton, *supra* note 114, at 313 ("[T]hese movements for public control of energy resonate with the broad political and moral agenda of early twentieth century municipalizers.").

226. *See, e.g.*, Alexandra Klass, Joshua Macey, Shelley Welton & Hannah Wiseman, *Grid Reliability Through Clean Energy*, 74 STAN. L. REV. 969, 987–88 (2022) (describing microgrids' potential); Klass & Wilton, *supra* note 114, at 147–50 (arguing that customers of publicly owned utilities experienced fewer outages and that those outages were of shorter duration than those experienced by customers of investor-owned utilities).

227. *See, e.g.*, Derrick Johnson & Ashura Lewis, *Organizing for Energy Democracy in Rural Electric Cooperatives*, *in* ENERGY DEMOCRACY 93, 96 (Denise Fairchild & Al Weinrub eds., 2017) ("The key to bridging the economic gap is the *decentralization* of energy–the transition of authority to the community itself.").

variety of new technologies and services.[228] Some are closely related to climate policy goals. In both academic and trade literature, it has become commonplace to identify CCAs, microgrids, and municipalization with decarbonization. The literature often asserts and sometimes just appears to assume that local control and a move toward cleaner energy will go hand in hand.[229] Still other reasons for the celebration of energy exit are tied to more abstract hopes for citizen and community empowerment, social justice, and "energy democracy."[230]

In much of the literature, these potential advantages are inexorably intertwined. "Local control," as one study puts it, "is emerging as part of localism and energy democracy movements that seek ambitious climate policies and energy transitions."[231] And that emphasis on the democratic and environmental potential of energy localism is not unique to the United States. In energy literature from around the world, there is a general sense, or at least a hope, that "the world's electricity systems are starting to 'decentralize, decarbonize,

228. *See, e.g.*, *supra* notes 183–84 and accompanying text (describing new business models built around community-microgrid construction).

229. *See* Klass & Wilton, *supra* note 114, at 157–58 (describing the potential for municipal utilities to achieve decarbonization and arguing that municipal utilities "have been able to pivot more quickly" to renewable energy); Ida Dokk Smith, Julia Kirch Kirkegaard & Kacper Szulecki, *A Functional Approach to Decentralization in the Electricity Sector: Learning from Community Choice Aggregation in California*, 66 J. ENV'T PLAN. & MGMT., 1305, 1306 (2023) ("[M]uch of the energy transition research takes an uncritically positive view on decentralization, assuming it leads to decarbonization and innovation alongside normative goals, such as energy justice and democratization.").

230. *See, e.g.*, SHALANDA BAKER, REVOLUTIONARY POWER: AN ACTIVIST'S GUIDE TO THE ENERGY TRANSITION 97–98 (2021) (arguing that a decentralized energy system under some form of collective ownership, governance, and control is required to achieve energy justice); ENERGY DEMOCRACY, *supra* note 227, at 1 (identifying both "get[ting] real about climate change" and "tak[ing] back control over our energy resources" as goals). As Shelley Welton notes, the phrase "energy democracy" has been given a variety of different meanings and can stand for customer choice, local control over energy systems, or access to process. Shelley Welton, *Grasping for Energy Democracy*, 116 MICH. L. REV. 581, 585 (2018).

231. Armstrong, *supra* note 163, at 161. Al Weinrub identifies the potential benefits for local communities of CCAs as local control, local choice, local economic development benefits, environmental benefits, new local energy programs such as energy efficiency, rate stability, and lower prices. Al Weinrub, *Democratizing Municipal-Scale Power*, *in* ENERGY DEMOCRACY, *supra* note 227, at 139, 141–43. Derrick Johnson and Ashura Lews identify the goals of "energy democracy" as including the scaling up of renewable and low-carbon energy for low-income households, the creation of jobs and local wealth, and community and democratic control. Johnson & Lewis, *supra* note 227, at 95–96.

and democratize.'"[232] Establishing greater community control of energy, the literature suggests, is a key step toward a cleaner, more democratically vibrant, and more just world.[233]

III. THE POTENTIAL PROBLEMS WITH COLLECTIVE EXIT

A movement toward localized, democratized, and decarbonized energy systems sounds enticing. It seems to combine a Tocquevillian celebration of American local governance with energy reformers' affinity, which dates back to the 1970s, for "small-is-beautiful" solutions.[234] And it should sound enticing; although this Article raises cautions, we agree that the emerging technological and legal innovations hold transformative potential and that the transformations can be for the good. Nevertheless, this Part explores reasons for concern. We begin with the economic and service impacts collective exits may impose on the energy users that are left behind. We then discuss how other areas of local government law provide cautionary lessons for community-centered policy initiatives, and we close by considering how exits might lead to the loss of key voices from important venues of energy policymaking. But we also discuss how policymakers and entrepreneurs have been anticipating and responding to these threats. The overall theme that emerges is that a transition toward community energy control can negatively impact ratepayer equity and welfare but that well-crafted laws can anticipate and respond to these potential problems.

A. Concerns

1. *Effects on Those Left Behind.* Two core principles of the traditional utility system are that costs will be socialized across large

232. Hirsch et al., *supra* note 185, at 402; *see* Madeleine Wahlund & Jenny Palm, *The Role of Energy Democracy and Energy Citizenship for Participatory Energy Transitions: A Comprehensive Review*, 87 ENERGY RSCH. & SOC. SCI. 1, 4, 6 (2022) (linking decentralization and community initiatives to energy democracy).

233. *See, e.g.*, Matthew J. Burke & Jennie C. Stephens, *Energy Democracy: Goals and Policy Instruments for Sociotechnical Transitions*, 33 ENERGY RSCH. & SOC. SCI. 35, 35 (2017) ("The energy democracy movement seeks to create opportunities for destabilizing power relations, reversing histories of dispossession, marginalization and social and environmental injustices, and replacing monopolized fossil fuel energy systems with democratic and renewable structures.").

234. *See* HIRSH, *supra* note 8, at 137–54 (describing energy reformers who drew inspiration from E.F. Schumacher's famous book SMALL IS BEAUTIFUL: ECONOMICS AS IF PEOPLE MATTERED (2010)).

groups of people and businesses[235] and that expanding the cost-sharing pool will lower participating individuals' costs.[236] If those principles hold true, then the consequences of exits from the system will be widely felt. That is particularly likely if exits are motivated, at least partly, by the perceived economic advantages of departure, since those advantages are likely to be counterbalanced by increased costs for those who remain within the system.

To some degree, this effect follows from the simple and familiar economic logic of large-scale, regulated utilities. Utilities expanded partly because they believed a combination of large fixed costs for infrastructure and decreasing marginal costs of adding new customers meant that bigger would be better.[237] If, conversely, a utility shrinks, it then will have fewer ratepayers to cover those fixed costs, and either rates will go up, service quality will go down, profits will be smaller—or all three.[238] And although smaller profits affect only the utility's shareholders, rising rates and declining service quality will directly impact the customers who remain in the system.

Declining energy costs can add to these effects. In recent years, renewable energy costs have decreased dramatically.[239] Yet many utilities are locked into long-term contracts at older, more expensive prices.[240] Sometimes, they entered into those contracts because states' renewable portfolio standards compelled them to do so.[241] Exiting the

235. *See id*. at 17–18 (2002) (describing the origins of this economies-of-scale understanding of electric distribution).

236. *See supra* notes 71–76 and accompanying text.

237. *See supra* notes 44–47 and accompanying text.

238. *See* Graffy & Kihm, *supra* note 23, at 10 (explaining how a declining rate base can lead to higher rates, further encouraging consumers to leave the system); Steven Lacey, *This Is What the Utility Death Spiral Looks Like*, GREENTECH MEDIA (Mar. 4, 2014), https://www.greentechmedia.com/articles/read/this-is-what-the-utility-death-spiral-looks-like [https://perma.cc/6GPZ-W9HE].

239. *See* Christine Ro, *Renewable Energy Costs Have Dropped Much Faster than Expected, But There's a Catch*, FORBES (Sept. 14, 2022), https://www.forbes.com/sites/christinero/2022/09/14/renewable-energy-costs-have-dropped-much-faster-than-expected-but-theres-a-catch [https://perma.cc/3XVA-9WG9].

240. *See, e.g.*, Jeff St. John, *PG&E's Bankruptcy Judge Leaves Door Open to Shredding Renewables Contracts*, GREENTECH MEDIA (June 10, 2019), https://www.greentechmedia.com/articles/read/pge-bankruptcy-judge-leaves-door-open-to-severing-renewable-energy-contract [https://perma.cc/W2BU-29QT] (describing huge differences between renewable energy prices under older contracts and prices at the time of the article).

241. *See* Decision 18-10-019, Decision Modifying the Power Charge Indifference Adjustment Methodology 8–9 (Cal. Pub. Utility Comm'n Oct. 19, 2018), https://docs.cpuc.ca.gov/PublishedDo

utility and negotiating newer and lower-priced deals could mean escaping those prices, but only for those consumers who actually leave.[242] Those who remain stay locked into the deals with the elevated cost of those energy purchases now spread across a smaller base of consumers.[243] Similarly, G&T co-ops invested in fossil fuel generation facilities with the expectation that their member co-ops would purchase energy from those facilities over the long term. If distribution co-ops exit their contracts early, the remaining members can be saddled with higher costs.[244]

Adding to the threat is the possibility that exiting communities will be comparatively cheap to serve. Delivering electricity costs different amounts in different places, even within the same utility's service area,[245] and delivering to dispersed and rural populations is likely to be particularly expensive.[246] Those expenses will arise partly because rural populations are spread out. If serving each customer requires building and maintaining more wires, costs will go up.[247] Indeed, the relative expense of delivering electricity in sparsely populated areas was the primary reason why it took so long, in the early part of the twentieth century, for many rural areas to get electricity service at all.[248] It is also why rural electrification remains a major challenge in other parts of the

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cs/Published/G000/M232/K687/232687030.pdf [https://perma.cc/L8KV-TF5F].

242. Herman K. Trabish, *Key Regulatory Decision Leaves California Reliability Issues Unresolved, Aggravates Tensions*, UTIL. DIVE, (Sept. 8, 2021), https://www.utilitydive.com/news/key-regulatory-decision-leaves-california-reliability-issues-unresolved-ag/605015 [https://perma.cc/K7W5-YHG8].

243. *See id.* As we will discuss in more detail later, California has taken legislative and regulatory steps to address this issue. *See infra* Part IV.

244. This is why cooperatives impose exit charges on members "to compensate [the G&T] and the remaining Members for the loss of the long-term revenue stream the withdrawing Member had committed to contribute." Tri-State Generation and Transmission Ass'n, Inc., 170 FERC ¶ 61,224, ¶ 5 (Mar. 20, 2020) (Declaratory Order).

245. *See* PAUL CHERNICK & PATRICK MEHR, LEXINGTON ELEC. UTIL. COMM., ELECTRICITY DISTRIBUTION COSTS: COMPARISONS OF URBAN AND SUBURBAN AREAS 10–11 (2003), https://web.archive.org/web/20170226175650/http:/massmunichoice.org/resources/Electricity-distribution-costs-urban-vs-suburban-areas.doc [https://perma.cc/RGF8-M8QG].

246. *See* Lazar et al., *supra* note 64, at 63–64 ("Customers in deeply rural areas tend to be more expensive to serve, since they typically are too far from their neighbors to share transformers, require a long run of primary line along the public way, and generally have higher unit costs related to lower load per mile of distribution line.").

247. *Id.*; *see* Peter G. Soldatos, *The Long-run Marginal Cost of Electricity in Rural Regions: A Methodology for Calculating the Real Cost of Electricity*, 13 ENERGY ECON. 187, 188 (1991).

248. *See* Alexandra B. Klass & Gabriel Chan, *Cooperative Clean Energy*, 100 N.C. L. REV. 1, 14 (2021) ("[E]xisting investor-owned utilities asserted that they could not earn a sufficient profit from rural electrification . . . .").

world.[249] Additionally, in the western United States, the growing threat of wildfire, which tends to arise in rural areas, is now adding to the costs of energy service.[250] If urban communities tend to exit, those heightened rural costs will concentrate among the ratepayers who remain behind.

Service costs can vary in other ways. If a utility provides cost subsidies to low-income areas and relatively wealthy areas leave, a smaller base of ratepayers will subsidize those costs.[251] Poorer communities also are likely to have more people who struggle to pay their bills, again increasing the costs of service provision.[252] The variations may not all be in the same direction; some programs, like preferential payments for rooftop solar power, can make wealthier customers more expensive to serve.[253] But even if the effects might go in multiple directions, it is clear that exits from the traditional system can have wide-reaching equity impacts.

There are possible rejoinders to this point. First, these effects, although real and important, are not necessarily problematic. The difference between the imposition of an unfair cost and the loss of an unjustified benefit is often in the eye of the beholder, and that is particularly likely to be true for energy transitions.[254] While rural areas may be concerned that the loss of cost sharing with urban regions might

249. *See* K. Kaygusuz, *Energy Services and Energy Poverty for Sustainable Rural Development*, 15 RENEWABLE & SUSTAINABLE ENERGY REVS. 936, 937 (2007). That challenge also persists in a few parts of the United States. *See* Sandra K. Begay, *Navajo Residential Solar Energy Access as a Global Model*, 31 ELEC. J. 9, 10 (2018) (describing limited electricity access on Navajo lands).

250. *See* Ali Arab, Amin Khodaei, Rozhin Eskandarpour, Matthew P. Thompson & Yu Wei, *Three Lines of Defense for Wildfire Risk Management in Electric Power Grids: A Review*, 9 IEEE ACCESS 61577, 61577 (2021) (describing risks to the grid); Thomas Fuller & Ivan Penn, *California, Wary of More Wildfires, Is Paying for Them Already*, N.Y. TIMES (July 22, 2019), https://www.nytimes.com/2019/07/22/us/california-wildfires-costs.html [https://perma.cc/2F2H-Z6U3] (describing wildfire-driven liabilities and rate increases).

251. *See supra* notes 71–73 and accompanying text (describing subsidy programs for low-income ratepayers).

252. *See* Kenneth W. Costello, *U.S. Utilities Have Billions in Unpaid Customer Balances. What Should They Do?*, UTIL. DIVE (Oct. 6, 2021), https://www.utilitydive.com/news/us-utilities-have-billions-in-unpaid-customer-balances-what-should-they-do/607682 [https://perma.cc/2CDS-RD8M].

253. *See* Severin Borenstein, *It's Time for Rooftop Solar To Compete with Other Renewables*, 7 NATURE ENERGY 298 (2022) (explaining how subsidies for residential, rooftop solar go primarily to wealthy homeowners and drive up overall electricity costs).

254. *See* Todd Aagaard, *Compensating Regulatory (and Unregulatory) Losers* (forthcoming) (on file with authors).

affect the price or even the viability of rural energy service, city residents would argue that they should have been receiving the benefits of more cost-effective living choices all along.[255] For example, urban dwellers might ask why the costs of energy service to high-fire-risk areas should be shared by people who have chosen to live in places without those risks.[256]

Second, there may be nothing wrong with rewarding initiative. Many communities would argue that effective local governments should be able to bring benefits to their residents—and, through a combination of innovation and competitive incentives, to other communities.[257] If creative and proactive communities find ways to provide cheaper, greener, and more reliable energy and less creative and proactive communities find themselves at a disadvantage, that may be a feature of the system, not a bug, or so the argument would go.[258] Relatedly, local-energy advocates might contend that utility cost sharing has degenerated into an expensive and regressive mess of cross-subsidies and, therefore, that anything that gets consumers out of this system represents progress.[259]

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255. *See, e.g.*, Richard A. Posner, *Taxation by Regulation*, 2 BELL J. ECON. & MGMT. SCI. 22, 40 (1971) ("A program of internal subsidies that denies the cost advantages of proximity and density, as is often the case, encourages greater geographic dispersion."). Similar debates arise in many arenas in which money arguably flows from urban to rural areas. *See, e.g.*, Nathan Arnosti & Amy Liu, *Why Rural America Needs Cities*, BROOKINGS INST. (Nov. 30, 2018), https://www.brookings.edu/research/why-rural-america-needs-cities [https://perma.cc/JUC2-YUW5] (describing urban-to-rural wealth transfers).

256. *See* Volker C. Radeloff, David P. Helmers, H. Anu Kramer, Miranda H. Mockrin, Patricia M. Alexandre, Avi Bar-Massada, Van Butsic, Todd J. Hawbaker, Sebastián Martinuzzi, Alexandra D. Syphard & Susan I. Stewart, *Rapid Growth of the US Wildland-Urban Interface Raises Wildfire Risk*, 115 PNAS 3314, 3314 (2018), (explaining how rural development patterns accelerate wildfire risk and cost); Emma Marris, *People Deserve To Know Their Houses Are Going To Burn*, ATLANTIC (Mar. 15, 2022), https://www.theatlantic.com/science/archive/2022/03/wildfire-insurance-california-fair-plan/627065 [https://perma.cc/AX7G-4TXS] (addressing similar issues in the context of fire insurance).

257. *See generally* Charles M. Tiebout, *A Pure Theory of Local Expenditures*, 64 J. POL. ECON. 416 (1956) (arguing that government units compete for residents by offering different arrays of services).

258. *See generally* Ilya Somin, *How Foot Voting Enhances Political Freedom*, 56 SAN DIEGO L. REV. 1089 (2019) (arguing that the ability to choose among different political communities produces many benefits).

259. *See, e.g.*, SEVERIN BORENSTEIN, MEREDITH FOWLIE & JAMES SALLEE, DESIGNING ELECTRICITY RATES FOR AN EQUITABLE ENERGY TRANSITION 27 (2021), https://www.next10.org/sites/default/files/2021-02/Next10-electricity-rates-v2.pdf [https://perma.c

But even if cost spreading across utility ratepayers is flawed in practice, energy exit can still exacerbate inequalities, at least in the short term. Most importantly, the benefits of exit may accrue primarily to communities that are already doing well economically, while the burdens may fall on disadvantaged communities. Compounding the problem, the burdens also may fall on ratepayers who lack political leverage and are therefore the least well equipped to lobby regulators or the incumbent utility for change. As the next subsection explains, the history of local governance in other contexts provides ample reason for that concern.

2. *Localism.* The rhetoric surrounding community exits echoes the rhetoric of local governance more generally. Legal discourse often idealizes local governments as the truest and most responsive democracies and as key wellsprings of policy creativity.[260] Indeed, much of the literature on local governance seeks to protect this creativity and responsiveness from centralized powers.[261] But there is another side to the local government story, and it helps explain some potential concerns about community energy. Sometimes a defining preference of local communities is to limit membership to relatively privileged groups.[262] Consequently, when local decision-makers get to decide who participates in a community initiative, their decisions may build or entrench social, economic, and racial hierarchies.[263]

In nonenergy governance matters, local governments have built and reinforced these hierarchies in several ways. One is through

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c/H7WF-P8XA] (arguing that California's wide variety of policy-oriented subsidy programs raises rates, which creates heavy burdens on poorer consumers and that these policies would be more equitably accomplished through taxation).

260. *See, e.g.*, San Antonio Indep. Sch. Dist. v. Rodriguez, 411 U.S. 1, 49–50 (1973) (describing local governance of public education as a source of "freedom," tailoring to local needs, "healthy competition," and policy experimentation); Garcia v. San Antonio Metro. Transit Auth., 469 U.S. 528, 576 (1985) (Powell, J., dissenting) (describing "the far more effective role of democratic self-government at the state and local levels"); Gerald E. Frug, *The City as a Legal Concept*, 93 HARV. L. REV. 1057, 1068–72 (1980) (explaining cities' democratic potential).

261. *See generally, e.g.*, Richard C. Schragger, *The Attack on American Cities*, 96 TEX. L. REV. 1163 (2018). Schragger's focus, like that of much of the contemporary academic literature that favors local government, is specifically on cities, which differentiates it from the paeans to suburban living that often appeared in mid-twentieth-century judicial opinions.

262. *See* Briffault, *supra* note 27, at 1–2.

263. *See id.* at 5 ("In a setting of interlocal and interpersonal wealth inequalities . . . autonomy often tends to exacerbate the disparities between rich and poor.").

defining the boundaries of municipalities (or special districts).[264] Municipalities generally have broad discretion, largely unrestrained by civil rights law, to decide which areas they will annex and which they will leave to be governed by the default governance structure (typically a county).[265] Communities have often made those decisions through simple geographic logic,[266] but sometimes there is a cold fiscal calculation involved. Annexing an area with a relatively poor population may generate higher governance costs and less tax revenue than annexing a wealthy area, and municipal governments therefore have powerful economic incentives to leave the poor areas out.[267] That economically freighted decision-making already has troubling distributional consequences, particularly in a nation where access to wealth is intertwined with long histories of social subordination. In some circumstances, the problem is arguably even worse. Academic studies and court proceedings alike have produced strong evidence that race can operate as an independent driver for annexation decisions.[268]

Communities also have accomplished their exclusions through zoning and other land-use laws. In the early twentieth century, when zoning first emerged, it was often explicitly racial, and exclusive public laws were backed by racially restrictive, private covenants.[269] The result

264. *See generally* Anderson, *supra* note 28 (describing and proposing responses to exclusive municipal-annexation policies); Richard Thompson Ford, *Geography and Sovereignty: Jurisdictional Formation and Racial Segregation*, 49 STAN. L. REV. 1365, 1367 (1997) [hereinafter Ford, *Geography and Sovereignty*] ("Even the most benign group affiliations can all too quickly become a source of prejudice for insiders and the object of resentment for outsiders.").

265. *See* Anderson, *supra* note 28, at 971 (explaining how, in Supreme Court cases since the 1970s, "local autonomy now constituted a defense of existing local borders, even those drawn using segregation's pen").

266. For a broad overview of the history of municipal annexation policies, see Gerald Frug, *Beyond Regional Government*, 115 HARV. L. REV. 1763, 1766–73 (2002).

267. *See* Briffault, *supra* note 27, at 19–21.

268. *See generally* Daniel T. Lichter, Domenico Parisi, Steven Michael Grice & Michael Taquino, *Municipal Underbounding: Annexation and Racial Exclusion in Southern Small Towns*, 72 RURAL SOC. 47 (2007); City of Pleasant Grove v. United States, 479 U.S. 462, 465–67 (1987); Comm. Concerning Cmty. Improvement v. City of Modesto, 583 F.3d 690, 705 (9th Cir. 2009) (finding that evidence of discriminatory annexation policies "has created a sufficient inference of discriminatory intent"); Noah J. Durst, *Municipal Underbounding and Selective Annexation of Colonias in Texas' Lower Rio Grande Valley*, 46 ENV'T & PLANNING 1699 (2014) (documenting patterns of leaving poor and underserved communities out of municipal annexations).

269. *See* Michael Jones-Correa, *The Origins and Diffusion of Racial Restrictive Covenants*, 115 POL. SCI. Q. 541, 544–51 (2000).

was highly segregated residential landscapes.[270] After the United States Supreme Court held that racially restrictive zoning was unconstitutional,[271] the mechanisms eventually became more subtle.[272] By using low-density zoning and actively opposing the construction of affordable housing, communities could maintain high price points for their real estate, effectively freezing poorer people out.[273] Such zoning continues to predominate across much of the American landscape, helping sustain old patterns of racial and economic segregation.[274] And while scholars have traditionally identified these exclusive patterns with the suburbs, they exist in major cities as well.[275]

Community efforts toward exclusion and exit have not been limited to municipal action. Developers build gated communities, often with associated deed restrictions and other private governance structures, creating both physical and legal isolation from an unwanted outside world.[276] Outside gated-community boundaries, homeowners' associations still form, again defining smaller-scale communities with their own separate rules.[277] Within larger school districts, dissatisfied

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270. *See* Whittemore, *supra* note 28, at 16–17 (describing this use of zoning, as well as the effects of lending practices and steering by real estate agents); *see generally* Christopher Silver, *The Racial Origins of Zoning: Southern Cities from 1910–40*, 6 PLANNING PERSP. 189 (1991) (describing the use of explicitly racial zoning across the South).

271. *See* Buchanan v. Warley, 245 U.S. 60, 82 (1917).

272. *See* Richard Thompson Ford, *The Boundaries of Race: Political Geography in Legal Analysis*, 107 HARV. L. REV. 1841, 1844–45 (1994) [hereinafter Ford, *Boundaries of Race*] ("[R]acial segregation persists in the absence of explicit, legally enforceable racial restrictions.").

273. Moira O'Neill, Giulia Gualco-Nelson & Eric Biber, *Sustainable Communities or the Next Urban Renewal?*, 47 ECOLOGY L.Q. 1061, 1071 (2020); Briffault, *supra* note 262, at 22–23, 39–41.

274. *See* Michael C. Lens, *Zoning, Land Use, and the Reproduction of Urban Inequality*, 48 ANN. REV. SOC. 421, 433–34 (2022); *see, e.g.*, Stephen Menendian, Samir Gambhir & Chih-Wei Hsu, *Single-Family Zoning in Greater Los Angeles*, OTHERING & BELONGING INST. (Mar. 2, 2022) https://belonging.berkeley.edu/single-family-zoning-greater-los-angeles [https://perma.cc/856J-C52F].

275. *See* O'Neill et al., *supra* note 273, at 1069; David Schleicher, *City Unplanning*, 122 YALE L.J. 1670, 1675 (2013); *see also* Robert C. Ellickson, *Zoning and the Cost of Housing: Evidence from Silicon Valley, Greater New Haven, and Greater Austin*, 42 CARDOZO L. REV. 1611, 1620–33 (2021) (providing recent empirical documentation of the effects of zoning).

276. *See generally* SETHA LOW, BEHIND THE GATES: LIFE, SECURITY AND THE PURSUIT OF HAPPINESS IN FORTRESS AMERICA (2003) (describing life within and the impacts of gated communities).

277. *See* Ford, *Boundaries of Race*, *supra* note 272, at 1858 (describing core activities of homeowners' associations).

parents form charter schools or opt out of public education entirely.[278] All of these institutions can have salutary motivations. But they also can function as tools of racial separation and class stratification.[279]

This history holds three important implications for analyses of community energy exit. First, placing municipalities or other self-defined, local communities at the center of a major energy transition is not a neutral act.[280] Those communities may have complicated histories of decisions about where their boundaries lie and who gets to be part of the community. That does not mean local government institutions are the wrong choice; most governing institutions have complex histories, and there is no question that local governments sometimes operate as forces for equity.[281] They also may be more readily available to take on the role than any other governance institution. And there is ample evidence to suggest that individualized market decisions often are not the path to equity. But this history does suggest that oversight is important so that regulators and the general public become aware of situations in which community-centered energy exits may compound troubling legacies.

The second implication is that if communities have responded, often in problematic ways, to economic and racial incentives in contexts like boundary-setting, zoning, and education, they also might do so with energy policy. If a key selling point for assuming community control of energy is to lower costs, the community may not want to include people who will be relatively expensive to serve.[282] Even if the stated goal is to make the community's energy supply greener, the economic incentives may remain. Typically, communities that want to green their energy supply still want to achieve at least cost parity with other energy-service options, and serving some populations may make

278. *See* Tammy Harel Ben Shahar, *Race, Class, and Religion: Creaming and Cropping in Religious, Ethnic, and Cultural Charter Schools*, 7 COLUM. J. RACE & L. 1, 9–29 (1996) (describing the rise of, and motivations for, affinity-group charter schools).

279. *See* Ford, *Geography and Sovereignty*, *supra* note 264, at 1367 (warning that any effort to define a community can lead to prejudice and discrimination).

280. *See* Nestor Davidson, *Cooperative Localism: Federal-Local Collaboration in an Era of State Sovereignty*, 93 VA. L. REV. 959, 1025 (2007) ("If devolving authority may reinforce community, then the empowerment of artificially narrow communities has the potential to exacerbate local biases.").

281. *See generally* RICHARD C. SCHRAGGER, CITY POWER: URBAN GOVERNANCE IN A GLOBAL AGE (2016) (arguing that cities do and should use their power to promote equity goals).

282. *See supra* note 18 and accompanying text (noting the heightened expense potentially associated with distributing energy to geographically dispersed or poorer people).

achieving fiscal goals more difficult.[283] The incentives also may not be economic. Some motivations for community energy are grounded in environmental preferences and a desire for local control, and these preferences often align with interest in working with people who are perceived to be like-minded. After all, achieving any policy goal is easier if people start out on the same page. There are countervailing incentives; a community energy system may have better economies of scale and more negotiating leverage if it scales up.[284] But the history of municipal behavior in other contexts counsels against assuming that the motivations for defining the boundaries of an energy community will be benign.

The third implication focuses on what happens if community-based exits become the norm rather than the exception. At that point, the relationship between community-controlled energy systems and default systems may be analogous to the relationships between charter schools and the broader public education system, or between gated communities and surrounding towns. Participants in the exclusive system may lose their motivation to support broader public infrastructure or seek systemic reform.[285] Similarly, widespread exit may exacerbate disparities between communities that can afford an energy system tailored to their needs and preferences and those whose sole viable option is to remain within the IOU system. At present, energy is unlike many other aspects of American life; one's zip code generally does not determine either the availability of service or its quality.[286] But with a shift toward community-centered energy, the

283. *See supra* note 18.

284. *See supra* notes 156–65 and accompanying text (describing CCAs' incentives).

285. *See* Sheryll D. Cashin, *Privatized Communities and the "Secession of the Successful": Democracy and Fairness Beyond the Gate*, 28 FORDHAM URB. L.J. 1675, 1677–79 (2001).

286. *See, e.g.*, Jamie Ducharme & Elijah Wolfson, *Your Zip Code Might Determine How Long You Live – and the Difference Could Be Decades*, TIME (June 17, 2019), https://time.com/5608268/zip-code-health [https://perma.cc/7XD4-Z32M] (noting that where you live affects your air quality, access to green space, and quality of medical care). Common experience illustrates how electricity service is different: unlike the quality of school systems or environmental amenities, people almost never cite electricity service quality or prices when deciding where to live. Geographic disparities do sometimes arise. *See, e.g.*, Cheng-Chun Lee, Mikel Maron & Ali Mostafavi, *Community-Scale Big Data Reveals Disparate Impacts of the Texas Winter Storm of 2021 and Its Managed Power Outage*, 9 HUMANS. & SOC. SCI. COMMC'NS 1, 6 (2022); Heather Tanana & Warigia Bowman, *Energizing Navajo Nation: How Electrification Can Secure a Sustainable Future for Indian Country*, BROOKINGS (July 14, 2021), https://www.brookings.edu/blog/how-we-rise/2021/07/14/energizing-navajo-nation-how-electrification-

stark inequalities that pervade these other aspects of American life might gain purchase in a new context.

3. *Exit and Voice.* A final concern is that departing customers might be those who were best positioned to influence IOUs from within the system and that their departure therefore weakens key voices in support of change while removing resources that could be used for such change.

In his classic work *Exit, Voice, and Loyalty*, Albert Hirschman distinguished between two reactions to lapses by firms and other organizations: exit and voice.[287] Customers "exit" a firm when they stop buying the firm's products, while members of an organization "exit" by leaving the organization.[288] By contrast, customers or members exercise the "voice" option by remaining connected to the firm or organization but expressing their dissatisfaction.[289] Theories of market capitalism tend to emphasize the exit option, and political accounts have sometimes followed that lead.[290] Theorists tend to assume improvement will be motivated primarily by the loss of customers or citizens.[291] Hirschman emphasized, however, that exit can be problematic. Too much exit can deprive a firm or organization of the resources it needs to address shortcomings.[292] And contestation from within, though messy, can be a powerful mechanism for reform.[293]

The dangers of exit and the power of voice both raise additional concerns about community energy exits. The availability of community exits does have potential benefits; exit may send signals to the utility, and the possibility of exit can enhance the power of voice.[294] But

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can-secure-a-sustainable-future-for-indian-country [https://perma.cc/9GSM-GQ5T] (pointing out that many Navajo citizens lack electricity due to the absence of adequate infrastructure).

287. *See* HIRSCHMAN, *supra* note 31, at 15.

288. *Id.* at 4.

289. *Id.*

290. *See* Heather K. Gerken, *Exit, Voice, and Disloyalty*, 62 DUKE L.J. 1349, 1356 (2013) (noting and critiquing "the salience of exit to federalism theory").

291. *See* HIRSCHMAN, *supra* note 31, at 17 (describing "the economist's bias in favor of exit and against voice").

292. *Id.* at 24.

293. *Id.* at 15.

294. *See supra* notes 147–49 and accompanying text (describing Franklin Roosevelt's "birch rod" theory of threatened municipalization). A concrete example of the power of exit is that of Tri-State, the generation and transmission cooperative, which has committed to more renewable generation since a few of its members exited or sought exit and plans to offer members more flexible supply options. *See* Howland, *FERC Shake Up*, *supra* note 215.

customers who exit their local utilities, either alone or *en masse*, give up chances to influence the utility from within.[295] They may no longer express their dissatisfaction with products, services, or policy through established complaint channels. They may also cease voicing their opposition in regulatory proceedings. Securing party status in these proceedings requires petitioning for intervention, with agency discretion to deny intervention if the petitioner cannot demonstrate an interest in the proceedings.[296] Communities that exit may struggle to show such an interest.

Of course, the loss of voice is not complete. IOUs are overseen by PUCs, which are overseen by legislatures and governors. These political overseers are elected by all the voters in a state, not just those voters who obtain their electricity from IOUs. Nevertheless, voting is a gross tool by which to achieve utility reform, and the loss of other mechanisms will sometimes matter.

Community exits also may deprive utilities of the customers most likely to seek reform—to the detriment of those who remain.[297] Because exercising voice is relatively resource-intensive,[298] the best-resourced customers are more likely to serve as active voices for change within an institution. These also could be the customers and communities most likely to exit the utility.[299] The utility and, perhaps, the PUC may see this as no great loss. As Hirschman pointed out, struggling companies and governments are often content, or even

295. HIRSCHMAN, *supra* note 31, at 37 ("Once you have exited, you have lost the opportunity to use voice, but not vice versa . . . .").

296. *See, e.g.*, COLO. CODE REGS. § 723-1:1401(c) (West 2020) (requiring persons seeking to intervene to demonstrate that the proceeding may substantially affect their pecuniary or tangible interests); N.J. ADMIN. CODE § 1:1-16.1(a) (West 2023) (requiring potential intervenors to show that they will be substantially, specifically, and directly affected by the outcome of a contested case). In other states, the intervention standards are more lenient. *See, e.g.*, CAL. CODE REGS. tit. 20, § 1.4(b)(2)-(c) (requiring persons seeking party status to show that the factual and legal claims they intend to make will be reasonably pertinent to the issues already presented in the proceeding but allowing the Administrative Law Judge to deny party status or limit participation).

297. *See* HIRSCHMAN, *supra* note 31, at 59–61.

298. The costs of participation in state-utility-commission proceedings are underscored by the efforts of several states to develop intervenor compensation programs. However, programs are actively being used by intervenors in fewer than ten states. NAT'L ASS'N OF REGUL. UTIL. COMM'RS, STATE APPROACHES TO INTERVENOR COMPENSATION 5 (Dec. 2021), https://pubs.naruc.org/pub/B0D6B1D8-1866-DAAC-99FB-0923FA35ED1E [https://perma.cc/BL6S-FAM6].

299. *See infra* Part III.B.

pleased, to see their critics go.[300] Instead, those who suffer most from an excess of exit and a lack of voice are the remaining customers of the IOU.[301] These customers may be more passive, not because they lack interest, but because they do not have the time, money, or political power to assert their voices effectively. And they will no longer benefit from any improvements to the utility's business that might have stemmed from the advocacy of departing communities. Moreover, while we have not yet reached this point, Hirschman sounded a note of caution about a state of disequilibrium in which so many customers exit that the organization has insufficient means to reform itself.[302]

B. Specific Innovations and Evidence from Practice

Analogies to past examples of localization and privatization suggest that these equity concerns should not be taken lightly. However, the actual evidence of community energy exit is more nuanced than either the pro–local energy or energy democracy literature—or this Article's more cautionary analogies—might suggest.

The discussion that follows examines both the potential threat that each community-energy-exit strategy will lead to equity problems and the evidence, so far, about what communities are actually doing. An important caveat is that the changes are all in nascent stages. This presents both a challenge and an opportunity. The challenge is that this Part's descriptions rely on limited information and provide only preliminary bases for understanding how transitions to localized energy could unfold. The opportunity is that, if concerns about transitional inequities are taken seriously, communities and other policymakers can avoid problematic outcomes while capitalizing on the advantages of these new forms of control.

1. *Municipalization.* Municipalization represents a local community's complete exit from an IOU system. It therefore raises each of the concerns identified above. Customers in the community no longer contribute to the utility's fixed costs, including the longer-term costs incurred to serve departing customers.[303] And urban exits could

300. *See* HIRSCHMAN, *supra* note 31, at 59–61 (noting the same preferences among companies and dictatorships).

301. *See* Jessica Bulman-Pozen & Heather K. Gerken, *Uncooperative Federalism*, 118 YALE L.J. 1256, 1299 (2009) (arguing, in the context of federal–state relationships, that constructive debate can arise from internal tensions).

302. *See* HIRSCHMAN, *supra* note 31, at 24.

303. These are sometimes referred to as "stranded costs." *See* Saxer, *supra* note 121, at 66.

have particularly pronounced effects on energy-cost socialization because urban areas are often wealthy, highly educated, and have denser populations, which are generally cheaper to serve. Formation of new municipal systems also implicates our concerns about the history of local government exclusion. The municipality's own boundaries may arise from problematic histories, or the municipal utility may define its new boundaries in problematic ways. Additionally, municipalization raises concerns about voice because cities may cease to participate in IOU ratemaking proceedings.

In practice, municipalization has been so rare in recent years that firm conclusions about its impacts on incumbent IOUs and their customers are difficult to draw. Its rarity is due in part to vigorous opposition by IOUs. In fact, consultant reports cite the expense of legal battles as a key factor for cities to consider in deciding whether to pursue municipalization.[304] This opposition is noteworthy for two reasons. First and most obviously, it suggests that IOUs believe they have much to lose from the expansion of municipalization. To the extent that any such impacts would negatively affect IOU customers, this is a concern for us as well. Second, because IOU opposition increases the costs of municipalization, it can worsen the equity implications of this form of energy exit: less well-resourced cities will be less able to separate from utilities, while their better-resourced peers may do so by paying a steep price.

Analysis of recent cases yields a mixed picture about municipalization's equity implications. We would be concerned if municipalization efforts were arising primarily in wealthy cities, and some of the most prominent examples—San Francisco and Boulder—might lead one to suspect that municipalization does indeed skew towards money.[305] For example, in California, of four ongoing or recent efforts to municipalize, three are in cities whose per capita income is

304. *See, e.g.*, CONCENTRIC ENERGY ADVISORS, PRELIMINARY FEASIBILITY STUDY CITY OF PUEBLO, COLORADO MUNICIPALIZATION 24 (2019) (discussing the litigation costs associated with the municipalization effort in Fort Wayne, Indiana); SYNAPSE ENERGY ECON., INC., *supra* note 126, at 25–26 (discussing the litigation costs associated with municipalization efforts in Boulder, Colorado).

305. Here and in later sections of our analysis, we use median per capita income as a proxy for wealth. Income is an imperfect proxy; higher costs of living may wipe out the benefits of higher per capita income, and wealthy cities may have important pockets of poverty. There also could be important equity stories—good or bad—that a wealth-focused measure does not capture. But income data do provide a reasonable basis for an initial screening, and these data have the virtue of being readily available.

above the state average (the remaining one is a long-standing effort by an irrigation district in San Joaquin County).[306] But going back to the 1990s, successful municipalization efforts in the state are more diverse, with some communities falling above the state average income and others below.[307] Six of the nine communities that successfully municipalized all or part of their electric systems since 1995 have per capita incomes below the state average. Some municipalizations are just idiosyncratic. Two of those municipal utilities serve only some of the customers in each city, and in one case in Victorville, only commercial and industrial customers at an industrial park near the airport benefit.[308] Another municipal utility serves a former naval shipyard on Mare Island that was only transferred to the City of Vallejo in the late 1990s.[309]

Outside of California, there is some evidence that wealthier urban communities hold an advantage in municipalization. One recent successful municipalization effort in Florida was by the City of Winter Park, which has an average per capita income well above the state average.[310] The same is true for the counties in New York served by the Long Island Power Authority.[311] New York City, where average per

306. *See generally* Petition of the City and County of San Francisco for a Valuation of Certain Pacific Gas & Electric Company Property Pursuant to Public Utilities Code Section (July 27, 2021) (expressing San Francisco's intention to acquire PG&E's assets serving the city); Replacement Memorandum, *supra* note 6 (discussing San Jose, California's exploration of municipalization); CITY OF SAN DIEGO STAFF REPORT, PUBLIC POWER FEASIBILITY STUDY CONSULTANT CONTRACT AWARD TO NEWGEN STRATEGIES & SOLUTIONS LLC 1 (Aug. 18, 2022); Press Release, South San Joaquin Irrigation District, CA Supreme Court Denies PG&E Appeal, Handing Win to SSJID (Mar. 25, 2022) (describing a case allowing the district to pursue acquisition of PG&E assets through eminent domain in order to form a municipal utility).

307. For these calculations, we used average per capita income as of 2021. *See QuickFacts*, U.S. CENSUS BUREAU, https://www.census.gov/quickfacts (enter the town, then the state, and then select "Per capita income in past 12 months (in 2021 dollars), 2017-2021") (last updated Aug. 31, 2023).

308. *Victorville Municipal Utilities Services*, VICTORVILLE, https://www.victorvilleca.gov/government/city-departments/utilities/electric/vmus-electric [https://perma.cc/5S2J-M9HW].

309. *About Us*, PITTSBURG POWER CO., https://islandenergy.com/about-us [https://perma.cc/K7SU-BPJB].

310. SYNAPSE ENERGY ECON., INC., *supra* note 126, at 13–17; *Winter Park City, Florida*, U.S. CENSUS BUREAU: QUICKFACTS, https://www.census.gov/quickfacts/fact/table/winterparkcityflorida,FL/PST045221 [https://perma.cc/EC98-94H2].

311. *Nassau County, New York*, U.S. CENSUS BUREAU: QUICKFACTS, https://www.census.gov/quickfacts/fact/table/nassaucountynewyork/LND110210 [https://perma.cc/QNX9-6P8L]; *Suffolk County, New York*, U.S. CENSUS BUREAU: QUICKFACTS, https://www.census.gov/quickfacts/fact/table/suffolkcountynewyork/HCN010217 [https://per

capita income is above the state average, is currently considering municipalization.[312] But the evidence is not consistent—and, again, the sample size is tiny. Oregon's sole successful example of municipalization since 1995 was in the relatively less-affluent City of Hermiston.[313] Jefferson County, the only locality in Washington state to successfully municipalize in that period, also has a per capita income below the state average.[314] In Alaska, two cities have municipalized since 1995, one above the state average per capita income and one below. Both are small (with forty-seven and thirty-eight residents, respectively) and located far from Alaska's major population centers.[315]

Collectively, these cases suggest several hypotheses about municipalization but no firm conclusions. Wealth may indeed help some localities municipalize, and there are preliminary indications that urban interest in municipalization arises in wealthier cities. It also may be easier to start out with municipal electric service than to take over service from an incumbent IOU, as in the case of Mare Island, California. And small size or rural (or isolated) location might also be

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ma.cc/DR5P-4LV2]; *New York*, U.S. CENSUS BUREAU: QUICKFACTS, https://www.census.gov/quickfacts/fact/table/NY/INC110221 [https://perma.cc/X68G-D2VF].

312. *See generally* JUMAANE D. WILLIAMS, PUB. ADVOC. FOR THE CITY OF NEW YORK, MUNICIPALIZING NEW YORK CITY'S ELECTRIC GRID (2020) (analyzing the steps necessary to achieve municipalization); *New York City, New York*, U.S. CENSUS BUREAU: QUICKFACTS, https://www.census.gov/quickfacts/fact/table/newyorkcitynewyork/HSG010221 [https://perma.cc/WAN5-BC7V].

313. *See* Ursula Schryver, *Going Local: Municipalization Empowers Communities*, AM. PUB. POWER ASS'N (July 24, 2014), https://www.publicpower.org/blog/going-local-municipalization-empowers-communities [https://perma.cc/8YY6-Y5HY]; D. Hittle & Assocs., Inc., *Preliminary Draft Report: City of Bainbridge Island Electric Utility Municipalization Feasibility Study* app. B (Jan. 23, 2017) (Publicly Owned Electric Utilities Established 1973-2011), https://www.bainbridgewa.gov/DocumentCenter/View/7983/Bainbridge-Island—-Preliminary-Draft-Report—-012317 [https://perma.cc/UZ2E-RXZC]; *Hermiston City, Oregon*, U.S. CENSUS BUREAU: QUICKFACTS, https://www.census.gov/quickfacts/hermistoncityoregon [https://perma.cc/53ZY-755W].

314. D. Hittle & Assocs., Inc., *supra* note 313, at app. B (Publicly Owned Electric Utilities Established 2005-2015); *Publicly Owned Electric Utilities Established 2008-2018*, AM. PUB. POWER ASS'N (2018), https://www.publicpower.org/system/files/documents/New%20Public%20Power%20Utilities%202008-2018.pdf [https://perma.cc/FXD9-TB7Q]; *Jefferson County, Washington*, U.S. CENSUS BUREAU: QUICKFACTS, https://www.census.gov/quickfacts/jeffersoncountywashington [https://perma.cc/2P3P-ZMMV]; *Washington*, U.S. CENSUS BUREAU: QUICKFACTS, https://www.census.gov/quickfacts/washington [https://perma.cc/BWX7-UXDF].

315. *Egegik, AK*, CENSUS REP., https://censusreporter.org/profiles/16000US0221150-egegik-ak [https://perma.cc/B9X2-YDB9]; *Atka, AK*, CENSUS REP., https://censusreporter.org/profiles/16000US0204210-atka-ak [https://perma.cc/XKW8-52YH].

an advantage, since IOUs may be less likely to fight small localities' municipalization efforts. However, the small sample size makes firm conclusions impossible to draw.

With respect to municipalization's impact on voice, the evidence is similarly suggestive but thin. One type of evidence comes from the record of intervention in major utility-rate cases. Cities like San Francisco[316] and Boulder[317] are regular intervenors in these rate cases, challenging utility positions and making their own proposals. If these larger cities and others like them were to exit their IOU, they would have little incentive to participate in such cases, and commissions might

316. For examples of positions that San Francisco has taken in California Public Utility Commission proceedings involving Pacific Gas and Electric Company, see Application of Pac. Gas and Elec. Co. for Approval of the Retirement of Diablo Canyon Power Plant, Implementation of the Joint Proposal, and Recovery of Associated Costs Through Proposed Ratemaking Mechanisms (U39E), 2018 WL 555608, at *1 (Cal. Pub. Utils. Comm'n Jan. 11, 2018) (supporting the shutdown of the Diablo Canyon nuclear plant as no longer needed in light of reductions in demand and increases in renewable generation capacity); Energy Division, 2013 WL 5488501, at *5 (Cal. Pub. Utils. Comm'n Sept. 19, 2013) (objecting to the expansion of liability limitations for PG&E); Pac. Gas & Elec. Co., 1983 WL 909368 (Cal. Pub. Utils. Comm'n Dec. 22, 1983) (arguing for a lower rate of return on equity in PG&E's rates because inflation and interest costs had abated); Sale of PG&E's Coal Property Found Not To Be of Used and Useful Property Subject to Section 851 of the P.U. Code; Gains on Sale of those Properties Attributable to Rate Base To Be Distributed to Ratepayers, 1982 WL 196690, at *6 (Cal. Pub. Utils. Comm'n Dec. 20, 1982) (arguing that ratepayers should receive the full benefit from PG&E's sale of assets). The Commission has itself emphasized the value of San Francisco's participation. *Id.* at *15 ("San Francisco's participation materially enhanced the record in this proceeding, and the decision-making process is similarly enhanced.").

317. For examples of positions that Boulder has taken in Colorado Public Utility Commission proceedings involving Public Service Company of Colorado, see Advice Letter No. 1797 Filed by Pub. Serv. Co. of Colorado To Reset the Currently Effective Gen. Rate Schedule Adjustment (Grsa) as Applied to Base Rates for All Elec. Rate Schedules as well as Implement a Base Rate Kwh Charge, Gen. Rate Schedule Adjustment-Energy (Grsa-e) To Become Effective June 20, 2019., No. 19AL-0268E, 2020 WL 837723, at *64 (Colo. Pub. Utils. Comm'n Dec. 11, 2019) (advocating that Public Service be required to compare the costs of operating and maintaining its existing generation facilities to the costs of new renewable-energy-generation resources); Advice Letter No. 1535 by Pub. Serv. Co. of Colorado To Revise Its Colorado PUC No. & Elec. Tariff To Reflect Revised Rates and Rate Schedules To Be Effective on June 5, 2009., No. 09AL-299E, 2010 WL 1424306, at ¶ 126 (Colo. Pub. Utils. Comm'n Mar. 29, 2010) (arguing alongside the City of Denver that many municipalities were interested in acquiring street lighting facilities from Public Service Company of Colorado and arguing for a lower rate for that service); The Tariff Sheets Filed by Pub. Serv. Co. of Colorado with Advice Letter No. 1535 – Electric, No. 09AL-299E, 2009 WL 5155322, at ¶ 176 (Colo. Pub. Utils. Comm'n Dec. 1, 2009) (advocating that Public Service Company of Colorado be required to obtain a certificate of public convenience and necessity before conducting a smart grid pilot project).

deem their interests insufficient to permit intervention.[318] The fact of their exit might send an important signal to the IOU that it must take customer concerns more seriously. But their absence from proceedings before the utilities commission—the key forum for holding IOUs accountable—could weaken voices for IOU reform going forward.

2. *Community Choice Aggregation.* Compared to municipalization, CCAs raise fewer worries about equity impacts because the exit is partial. The IOU still provides transmission and distribution services to the community, and CCA participants still pay for those services.[319] Returning to full IOU service also generally remains a possibility, and in some states, CCAs have gone back and forth between independent energy purchasing and working through the incumbent IOU.[320] Nevertheless, the rapid growth of CCAs raises several concerns.

Most importantly, choices about CCA formation and boundaries could lead to a situation in which savvier and perhaps wealthier communities gain the advantages of CCAs while other communities are stuck with the burdens of a more traditional model.[321] That issue could be compounded if the advantage of joining a CCA comes partly from escaping the utility's high-priced energy-supply deals. Such a price difference could happen either because the incumbent utility was insufficiently motivated (because it could pass through costs) to procure energy at low prices or because the incumbent had to negotiate its deals at times when energy costs were higher.[322] It also might happen because the incumbent utility is subject to cost-socialization requirements that the CCA is not.[323] If the exiting CCAs are leaving

318. *See supra* note 296 and accompanying text (providing examples of intervention requirements by state).

319. *See supra* note 155 and accompanying text.

320. *See, e.g.*, *Ohio*, LEAN ENERGY US, https://www.leanenergyus.org/ohio [https://perma.cc/7K85-QBWE] ("[I]n August 2022, [Northeast Ohio Public Energy Council] announced it was moving 550,000 (about half) of its customers back to FirstEnergy utilities.").

321. *See* CAL. PUB. UTILS. COMM'N, COMMUNITY CHOICE AGGREGATION EN BANC BACKGROUND PAPER 13 (2017) [hereinafter CAL. PUB. UTILS. COMM'N, COMMUNITY CHOICE AGGREGATION] ("CCAs could 'cherry pick' customers by creating geographic boundaries that avoid low income or otherwise underserved neighborhoods.").

322. *See supra* notes 239–44 and accompanying text (describing huge declines in renewable energy costs and the consequent disadvantages created by long-term legacy contracts).

323. *See supra* notes 71–73 and accompanying text (describing programs that subsidize low-income consumers).

incumbent utilities with fewer customers paying for relatively expensive energy deals or social programs, the burdens on those customers will increase.[324]

The actual on-the-ground story includes some evidence that might bolster these fears and some that should ameliorate them. Initially, the effects on existing utilities do not seem to be dire. In some states with CCAs, like Massachusetts and New York, full retail restructuring had already happened, which means consumers already could partially exit the traditional utility system.[325] In those states, CCA formation just means a change from individual to community choices about energy providers, sometimes with greater flexibility to negotiate long-term contracts that provide more stable pricing.[326] It also appears to make a relatively modest economic difference. A recent Massachusetts study, for example, found that CCAs generally saved money, but not much; the average savings came out to around sixty dollars per household per year.[327] In other states, CCA savings have come and gone, and in periods of lesser savings, some CCAs have suspended operations or gone out of business.[328] The changes are not inconsequential; the CCA form has provided a viable alternative to traditional utilities for millions of consumers who might not have been willing to navigate competitive energy markets on their own. But the changes also do not appear to be truly transformative.

California is different in some important ways, and those differences explain why we have taken a closer look at California's experience. With limited exceptions, the state had not allowed

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324. *See supra* notes 235–56 and accompanying text (discussing the effects of exiting CCAs on incumbent utilities and their customers).

325. *See* REISHUS CONSULTING, LLC, ELECTRIC RESTRUCTURING IN NEW ENGLAND – A LOOK BACK 28–31 (2015) (describing Massachusetts' restructuring program); WILLIAMS, *supra* note 312, at 3–4 (describing New York's restructured market).

326. *See* COMMONWEALTH OF MASS., EXEC. OFF. OF ENERGY & ENV'T AFFS., DEP'T OF ENERGY RES., GUIDE TO MUNICIPAL ELECTRIC AGGREGATION IN MASSACHUSETTS 2 ("The aggregator's primary role is to act as a catalyst or agent, introducing interested customers to a suitable supplier."); *New York*, LEAN ENERGY U.S., https://www.leanenergyus.org/new-york [https://perma.cc/NX8F-CLBD] (noting that CCAs, unlike New York's electricity utilities, "can offer stable prices and can guarantee those rates for one or more years").

327. UMASS CLEAN ENERGY EXTENSION, A SURVEY OF MUNICIPAL AGGREGATION PERFORMANCE IN MASSACHUSETTS 1 (2018).

328. *See, e.g.*, *New Jersey*, LEAN ENERGY U.S., https://www.leanenergyus.org/new-jersey [https://perma.cc/9ZDL-6FXF] (exploring the problems facing CCAs in New Jersey); *Illinois*, LEAN ENERGY U.S., https://www.leanenergyus.org/illinois [https://perma.cc/ZPL3-F3JG] (exploring the problems facing CCAs in Illinois).

individuals to choose their electricity suppliers,[329] and that means CCA formation marks a significant departure from the traditional IOU system.[330] It also is a departure that IOUs initially opposed, vehemently;[331] the opposition was intense enough that, in 2011, the California Legislature forbade IOUs from spending ratepayer funds to campaign against CCA formation.[332] And unlike CCAs in other states, California's CCAs do not just solicit and compare bids from private companies competing to be the CCA's exclusive electricity supplier. Instead, California CCAs purchase power from a variety of sources,[333] and they may also implement energy conservation and demand-response programs.[334] California's CCAs therefore are more transformational and more ambitious.

But even with these differences, there is little evidence—so far—that California's CCAs have been instruments of inequity. That is partly because of governing law: California legislators and regulators have taken steps to protect IOU customers from the impacts of departures.[335] Most importantly, they have imposed "power charge

329. *See Direct Access*, CAL. PUB. UTILS. COMM'N, https://www.cpuc.ca.gov/consumer-support/consumer-programs-and-services/electrical-energy-and-energy-efficiency/community-choice-aggregation-and-direct-access-/direct-access [https://perma.cc/4LT6-R948] (discussing energy restructuring in California). California limited retail markets in response to the infamous energy crisis of 2000. *See* William Boyd, *Public Utility and the Low-Carbon Future*, 61 UCLA L. REV. 1614, 1667–69 (2014) (describing the crisis).

330. *See Community Choice Aggregation and Direct Access*, CAL. PUB. UTILS. COMM'N, https://www.cpuc.ca.gov/consumer-support/consumer-programs-and-services/electrical-energy-and-energy-efficiency/community-choice-aggregation-and-direct-access [https://perma.cc/2596-XS2D] (identifying CCA as one of two ways for customers in IOU service areas to access energy markets).

331. *See* Bentham Paulos, *Should Investor-Owned Utilities Be Worried About Community Choice Aggregation?*, POWER (May 1, 2017), https://www.powermag.com/should-investor-owned-utilities-be-worried-about-community-choice-aggregation [https://perma.cc/JB2D-WT42] (discussing IOU opposition to early CCAs, as well as continuing concerns).

332. *See* CAL. PUB. UTILS. CODE § 707(a) (outlining these prohibitions).

333. *See, e.g.*, *Our Power Mix*, EAST BAY CMTY. ENERGY (2023), https://ebce.org/our-power-mix [https://perma.cc/DY9M-BS9J].

334. *See* Stephen Gunther, *CCAs and Demand Response: Uncertainties and Opportunities*, CTR. FOR SUSTAINABLE ENERGY (Apr. 7, 2020), https://energycenter.org/thought-leadership/blog/cca-and-demand-response-uncertainties-and-opportunities [https://perma.cc/X9JD-7ZNY] (discussing demand-response programs among CCAs in California).

335. *See* CAL. PUB. UTILS. CODE § 366.2(a)(4) ("The implementation of a community choice aggregation program shall not result in a shifting of costs between the customers of the community choice aggregator and the bundled service customers of an electrical corporation.").

indifference adjustments" ("PCIAs") on departing CCAs.[336] These charges are designed to compensate the utility and its ratepayers for the departing consumers' share of infrastructure costs already incurred and contractual commitments already made by the IOU.[337] As one might expect, the CCAs and the IOUs hotly contest whether these charges are too high or too low.[338] For our purposes, however, the key point is that state regulators are trying to make sure that CCA customers are not burdening the left-behinds with costs incurred partly on those CCA customers' behalf.

Initial data on participation in CCAs also tell a complicated story. At first blush, it might appear that CCAs are closely identified with elites. The first CCA emerged from relatively wealthy communities on Cape Cod in Massachusetts.[339] New York started with Westchester County,[340] where average per capita income is over 40 percent higher than the state average.[341] The origin story of CCAs in California also involves a striking disparity: an attempted CCA in the relatively poor San Joaquin Valley was crushed by incumbent-utility opposition,[342] and the first successful CCA instead was born in some of the toniest

336. *See* Order Instituting Rulemaking to Review, Revise, and Consider Alternatives to the Power Charge Indifference Adjustment, Rulemaking 17-06-026, 2017 WL 3055538, at *1 (Cal. Pub. Utils. Comm'n June 29, 2017) (describing the legislative framework for power charge indifference adjustments).

337. *See id.* at *4 (describing guiding principles).

338. *See* Bill Picture, *Controversial Rate Increase for Community-Based Energy Programs*, BAY CROSSINGS (Nov. 1, 2018), https://www.baycrossings.com/controversial-rate-increase-for-community-based-energy-programs [https://perma.cc/2ALM-XUME] (exploring an argument over such charges); COLO. DEPT. OF REGUL. AGENCIES, IN THE MATTER OF THE COMMISSION'S IMPLEMENTATION OF § 40-4-120, C.R.S., THE STUDY OF COMMUNITY CHOICE IN WHOLESALE ELECTRIC SUPPLY: INVESTIGATIVE REPORT OF THE PUBLIC UTILITIES COMMISSION OF THE STATE OF COLORADO 15–16 (2022) (warning of challenges and costs associated with calculating exit fees).

339. *See* Hsu, *supra* note 151, at 5–7 (exploring the development of CCAs in Cape Cod).

340. *Westchester Power*, SUSTAINABLE WESTCHESTER, https://sustainablewestchester.org/wp [https://perma.cc/CTS8-M4MD].

341. *Westchester County, New York*, U.S. CENSUS BUREAU: QUICKFACTS, https://www.census.gov/quickfacts/fact/table/NY,westchestercountynewyork/PST045222 [https://perma.cc/67DS-G7PV]. In the paragraphs that follow, all per capita income data derive from the 2020 Census. *See QuickFacts*, U.S. CENSUS BUREAU, https://www.census.gov/quickfacts (enter the town, then the state, and then select "Per capita income in past 12 months") (last updated Aug. 31, 2023). We used weighted averages to calculate per capita income figures, which roughly means that cities with larger populations influence the number more. The dataset, with 2016–20 numbers, is on file with the Authors.

342. *See* McGee & Swaroop, *supra* note 155, at 993–94.

communities in ultra-wealthy Marin County.[343] Even today, average per capita income in CCA communities is about 20 percent higher than average per capita income in the state as a whole.[344] And the only California CCA to go bankrupt was also one of its least economically advantaged.[345] The Western Community Energy CCA, which ceased operations in 2021, served communities whose average per capita income was 33 percent lower than the state average.[346]

But other evidence tells a story of inclusion.[347] In California, the gap between the average income of CCA-participating communities and average income statewide has shrunk over time.[348] That has happened partly because CCAs have formed in less wealthy places[349] and because some CCAs form as mixes of poor, wealthy, and in-between communities.[350] The change also has happened because CCAs that started in wealthy areas expanded to include poorer communities. The story of Marin Clean Energy (now MCE), California's first successful CCA, is a particularly compelling example. Though it began

343. *See About Us*, MCE CLEAN ENERGY, https://www.mcecleanenergy.org/about-us [https://perma.cc/Z3QA-A6Q5] (describing MCE's history). The founding communities have an average per capita income (for the 2016–20 period) almost twice the statewide average. *See infra* Figure 2 and accompanying text (displaying the average per capita income and aggregate population of communities in California CCAs).

344. *See infra* Figure 2 and accompanying text.

345. *See* Rob Nikolewski, *Riverside Community Energy Program Closes Its Doors for Good After Bankruptcy*, SAN DIEGO UNION-TRIB. (June 16, 2021), https://www.sandiegouniontribune.com/business/story/2021-06-16/riverside-county-community-choice-energy-program-closes-its-doors-for-good [https://perma.cc/58NE-4Z94] (discussing the insolvency and subsequent closure of Western Community Energy).

346. *See id*. (listing "the six towns that made up Western Community Energy — Perris, Hemet, Wildomar, Norco, Jurupa Valley and Eastvale").

347. *See* CAL. PUB. UTILS. COMM'N, COMMUNITY CHOICE AGGREGATION, *supra* note 321, at 13 (2017) (stating that "there is no evidence that [cherry picking] has happened with existing CCAs" but adding that "[f]urther research is required to determine if CCAs tend to form in more well-off sections of the state, and what impacts this might have on remaining IOU customers").

348. *See infra* Figure 2 and accompanying text.

349. In California, for example, Central Coast Community Energy serves municipalities and unincorporated areas in Monterey and San Luis Obispo counties. While the service area includes famously wealthy communities, including the settings for book and television show *Big Little Lies*, many communities are poor, and the 2016–20 average per capita income for the founding cities and towns is around $30,000, which is well below the state average. *See* 2020 Census data, *supra* note 341 (on file with authors).

350. For example, the Clean Energy Alliance, which serves communities near Los Angeles, included Malibu (2016–20 average per capita income: $116,108) and Paramount (2016–20 average per capita income: $19,815) among its founding members. *See* 2020 Census data, *supra* note 341 (on file with authors).

with wealthy communities,[351] the CCA soon added the city of Richmond, which is one of the poorest and most environmentally impacted cities in the San Francisco Bay Area.[352] MCE has continued to expand into less wealthy and more industrial Contra Costa County, dramatically diluting the voting shares of its original founder communities as well as lowering the average per capita income of its service area.[353] Other CCAs have expanded in similar ways.[354] Meanwhile, we have found no evidence of California CCAs refusing to include communities that wish to join.

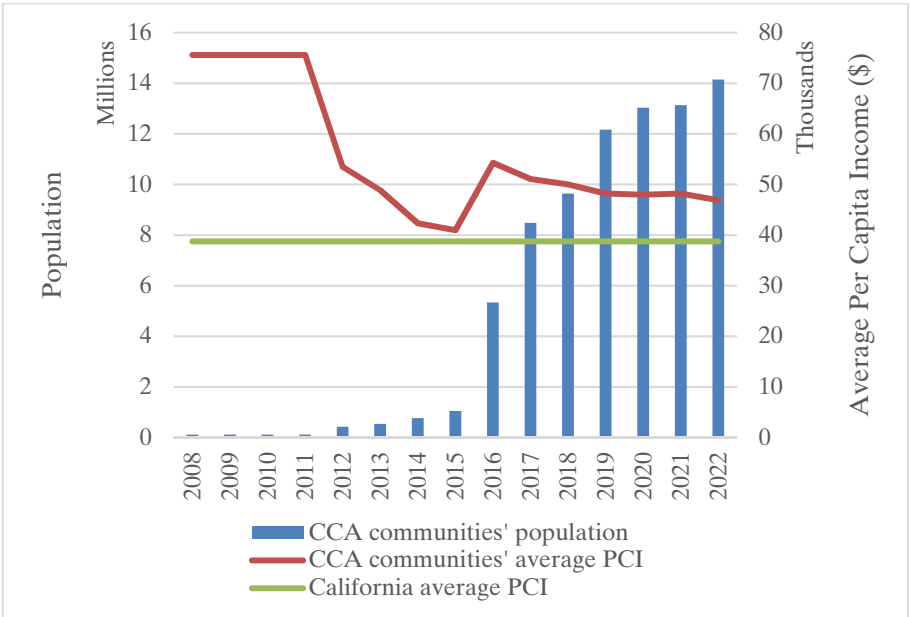
351. *See About Us*, MCE CLEAN ENERGY, https://www.mcecleanenergy.org/about-us [https://perma.cc/R93H-D2RN] (listing MCE's founding members and their communities).

352. *See* E.G. Neckow, *Richmond Set To Join Marin Clean Energy*, NORTH BAY BUS. J. (June 18, 2012), https://www.northbaybusinessjournal.com/article/industry-news/richmond-set-to-join-marin-clean-energy [https://perma.cc/9SPN-TNW6] (noting Richmond's entry into the CCA); *Richmond*, CMTYS. FOR A BETTER ENV'T, https://www.cbecal.org/organizing/northern-california/richmond [https://perma.cc/M4TW-4SEB] (exploring the economic and environmental history of Richmond).

353. *See Communities We Serve*, MCE CLEAN ENERGY, https://www.mcecleanenergy.org/service-area [https://perma.cc/V47B-PD9H] (listing the communities currently served by MCE).

354. For example, in 2021 and 2022, the Clean Energy Alliance, which formed in three wealthy suburbs of San Diego, expanded to include four nearby cities with average per capita incomes well below the state average. *See, e.g.*, *City of Escondido Joins the Clean Energy Alliance*, CLEAN ENERGY ALL. (Nov. 12, 2021), https://thecleanenergyalliance.org/city-of-escondido-joins-the-clean-energy-alliance [https://perma.cc/JWX4-RHYP] (noting Escondido's entry into the Clean Energy Alliance, and that Oceanside, San Marcos, and Vista were planning to join).

Figure 2. Average Per Capita Income and Aggregate Population of Communities in California CCAs from 2008–2022[355]



The emerging evidence also provides some preliminary indications about why the on-the-ground picture is more equitable than one might fear. One reason is that the economics of CCAs are in some ways different from the economics of other local government decision-making. Growth in the CCA context can be desirable, for it provides more negotiating leverage and greater administrative economies of scale.[356] That means many CCAs have been eager to add new territory. Indeed, in California and New York, CCAs have grown to such a degree that many are more regional than local (which could complicate

355. We compiled our dataset using CCA formation documents and census data, which leads to some gaps. Census data are not broken out for cities or towns with fewer than five thousand residents or for the unincorporated populations of counties, so the data exclude both categories. We also used 2020 populations and 2016–20 income levels throughout, rather than trying to adjust population and income for each individual year of the time period. Additionally, because our goal was to assess how inclusive CCAs were, we used the dates when communities reached agreements to join CCAs rather than the dates when CCA service began.

356. *See* Neckow, *supra* note 352 (quoting an MCE official describing the benefits of expansion).

some of the community-democracy arguments in their favor).[357] The incentives are also not just economic. Many CCAs self-identify as organizations working for social and environmental change, and they are surely aware that these perceived commitments affect their political viability.[358] Including poorer communities is a highly visible way to make those commitments seem real.

The emerging story of CCAs and equity is complex, with much still to be determined. Nevertheless, even at this very preliminary stage, we can draw a few conclusions. The first is that CCAs do create a potential for impacts, which could be substantial, on incumbent utilities' left-behind customers, and they could be mechanisms of exclusivity. The second is that the evidence so far suggests more of a tendency toward inclusion and some state concern for the impacts on residual utility customers. But the story of CCAs is still in a very early chapter. As CCAs continue to evolve, their equity impacts may also change, particularly if they emerge in states that do not prioritize protection of the people left behind.

3. *Microgrids.* With microgrids, the equity story also seems to be nuanced—and to be at an even earlier stage. Again, there are reasons for both concern and optimism as well as some preliminary positive signs.

The reasons for optimism have been widely explored in the existing microgrid literature, and they explain the recent surge of policymaker support for microgrids. Well-designed and well-situated microgrids can provide benefits both within and beyond the microgrid's boundaries.[359] If the existence of a microgrid allows grid

357. MCE, for example, now includes thirty-three communities spanning four counties along with the unincorporated areas of those counties. *See Communities We Serve*, MCE CLEAN ENERGY, https://www.mcecleanenergy.org/service-area [https://perma.cc/V47B-PD9H]; *New York*, LEAN ENERGY U.S., https://www.leanenergyus.org/new-york [https://perma.cc/V8V2-GFNF], (last updated May 30, 2023) (describing the large service areas of New York's major CCAs).

358. *See, e.g.*, *About Us*, MCE CLEAN ENERGY, https://www.mcecleanenergy.org/about-us [https://perma.cc/R93H-D2RN] ("MCE's mission is to confront the climate crisis by eliminating fossil fuel greenhouse gas emissions, producing renewable energy, and creating equitable community benefits"); *Philosophy and Principles*, SUSTAINABLE WESTCHESTER, https://sustainablewestchester.org/about/#Philosophy [https://perma.cc/7EN5-WUU6] (articulating a commitment to environmental justice).

359. *See* U.S. DEP'T OF ENERGY OFF. OF ENERGY EFFICIENCY & RENEWABLE ENERGY, MICROGRIDS OVERVIEW 4 (2021) (exploring the benefits of microgrids).

managers to shut down high-risk power lines during a weather event, for example, or to delay restoring power to areas with known microgrids, other communities can benefit.[360] Activists and commentators also have identified the possibility of targeting microgrid development to disadvantaged communities, which could mean more reliable power and a measure of self-determination in communities that traditionally have had poor governmental services and little control.[361] These reasons explain why interest in microgrids has surged globally and why, in the words of one energy expert, the field is evolving "at a blinding pace."[362]

But, again, there are reasons to worry. Creating a microgrid means creating a geographic area that has benefits that most other areas lack. There is no reason to presume that sort of privilege will wind up being distributed in equitable ways. And if the microgrid can wall itself off from problems in the larger grid, participants in the microgrid may care less about those problems. Energy-system managers routinely must decide how much to spend on reliability, and the decisions are difficult and high stakes. Consider, for example, questions about how much money Texas energy providers should have spent to protect their facilities from freezing weather,[363] or how much money western utilities should spend to protect their power lines from falling trees.[364] One might expect microgrid participants would oppose rate hikes designed

360. *See id.* (noting how microgrids can benefit other communities).

361. *See* Kate Anderson, Amanda Farthing, Emma Elgqvist & Adam Warren, *Looking Beyond Bill Savings to Equity in Renewable Energy Microgrid Development*, 41 RENEWABLE ENERGY FOCUS 15, 15 (2022) (exploring this possibility); Response of Joint Respondents on the Application of Sunnova Community Microgrids, LLC, at 3, Application of Sunnova Community Microgrids California, LLC for a Certificate of Public Convenience and Necessity to Construct and Operate Public Utility Microgrids and to Establish Rates for Service, Application 22-09-002 (filed Sept. 1, 2021), https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M497/K621/497621963.pdf [https://perma.cc/G3E4-2GUH] (explaining the potential environmental-justice benefits of microgrids).

362. DANIEL SCHNITZER, DEEPA SHINDE LOUNSBURY, JUAN PABLO CARVALLO, RANJIT DESHMUKH, JAY APT & DANIEL M. KAMMEN, MICROGRIDS FOR RURAL ELECTRIFICATION: A CRITICAL REVIEW OF BEST PRACTICES BASED ON SEVEN CASE STUDIES viii (2014).

363. *See* Jeremy Schwartz, Kiah Collier & Vianna Davila, *"Power Companies Get Exactly What They Want": How Texas Repeatedly Failed To Protect Its Power Grid Against Extreme Weather*, TEX. TRIB. (Feb. 22, 2021), https://www.texastribune.org/2021/02/22/texas-power-grid-extreme-weather [https://perma.cc/Y4Q3-D7EN] (discussing such questions).

364. *See* Michael Liedtke, *PG&E Will Spend At Least $15 Billion Burying Power Lines*, AP NEWS (July 21, 2021), https://apnews.com/article/business-government-and-politics-527e93e58c6ac7736488d8cd60003f86 [https://perma.cc/8RJJ-VPVD].

to support general grid reliability once residents of the microgrid area no longer see that reliability as such a pressing need.

Because the microgrid era, if that is what is emerging, is still in its very early stages, no one can say for sure which of these stories will play out in practice. But so far, three themes are apparent. One is that common arguments favoring microgrids, though not directly phrased in terms of exclusivity, could easily move in that direction. If a key argument for microgrids is that they allow exits from the problems of the larger grid, then at least some microgrid participants are likely to care less about that larger grid's problems.[365] Second, microgrid development so far has been largely driven by state or utility priorities, which means microgrids are likely to operate in symbiosis with—rather than as escapes from—the larger grid.[366] Third, microgrids aren't just popping up in wealthy communities. Public housing complexes in New York City,[367] environmental-justice neighborhoods in California,[368] and poor cities elsewhere[369] all have either formed microgrids or emerged as candidates to do so, along with wealthier neighbors. That combination of centralized planning and development in a range of communities may in some ways be a hopeful sign, but it also may predict little about how microgrid equities will play out once (or if) microgrid decision-making becomes more decentralized and microgrids become more prevalent.

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365. *See, e.g.*, Elisa Wood, *2022 Was a Bad Year for Electric Grids*, MICROGRID KNOWLEDGE (Dec. 5, 2022) https://www.microgridknowledge.com/grid/blog/21438573/2022-was-a-bad-year-for-electric-grids [https://perma.cc/F2DX-XXB] ("[T]he electric grid is vulnerable. And that's why we are here writing about microgrids.").

366. We have not found examples of community microgrids built despite utility opposition, and instead, utilities have usually been partners in microgrid construction. *See, e.g.*, CAL. ENERGY COMM'N, BORREGO SPRINGS: CALIFORNIA'S FIRST RENEWABLE ENERGY-BASED COMMUNITY MICROGRID 1–2 (2019) (summarizing San Diego Gas & Electric's role in developing a microgrid in an area with frequent outages).

367. *See* NYCEEC, FINANCING BATTERY STORAGE FOR THE NATION'S FIRST AFFORDABLE HOUSING MICROGRID 2–4 (2017) (describing the microgrid at the Marcus Garvey Apartments in Brooklyn).

368. *See Hunters Point Community Microgrid Project*, CLEAN COAL., https://clean-coalition.org/community-microgrids/hunters-point-community-microgrid-project [https://perma.cc/N7XY-SKNE]; *Valencia Gardens Energy Storage (VGES) Project*, CLEAN COAL., https://clean-coalition.org/community-microgrids/valencia-gardens-energy-storage-project [https://perma.cc/C88M-XG79].

369. *See, e.g.*, Bruce Gellerman & David Greene, *Chelsea and Chinatown Are Building Microgrids To Solve Big Energy, Climate Challenges*, WBUR NEWS (Nov. 24, 2021), https://www.wbur.org/news/2021/11/24/massachusetts-microgrids-energy-resilience [https://perma.cc/4ZEM-7ZXQ] (describing a microgrid initiative in Chelsea, Massachusetts).

4. *Cooperatives.* Co-op exit is distinct from the other forms of exit discussed here in that it does not involve communities breaking away from an IOU. However, it shares important features with other exit scenarios. First, the drivers of co-op exit overlap with those driving municipalization, community choice aggregation, and microgrids. Customers are dissatisfied with the high prices and fossil-fuel energy that legacy utilities are offering, and they seek the autonomy to pursue cheaper, cleaner power unhampered by the past choices of their legacy utility and the legacy utility's resistance to change.[370] Second, as with municipalization, CCA formation, and microgrid construction, co-op exit can create inequities for remaining customers.

The battles over Tri-State—which, as discussed earlier, serves large parts of the west and is one of the nation's largest co-ops—exemplify the potential concerns. Former Colorado Public Utilities Commission chairman Ron Lehr has described the Tri-State exit battles as one between "big, progressive, and dissident members, and smaller, more dependent entities who cling to the past."[371] The CEO of a Tri-State member co-op not seeking exit sees the potential for departing members to impose costs on those who remain, arguing that "[t]he bigger problem is that a small handful of vocal G&T members across the country want to terminate their contracts, and do so at the lowest cost possible, no matter how that might affect the rest of us."[372] Regardless of which of these views is more correct (or whether they both contain elements of truth), co-op exit disrupts the larger economic and, to some extent, social bargain that co-ops entered into by joining G&Ts in the first instance.

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370. *See, e.g.*, Katherine Stahla, *United Power Continues Plan To Leave Tri-State*, TIMES-CALL (May 3, 2022), https://www.timescall.com/2022/05/03/united-power-continues-plans-to-leave-tri-state [https://perma.cc/D6GF-D9BF] (identifying above-market rates and insufficient renewable resources as the sources of United's dissatisfaction with Tri-State).

371. Howland, *FERC Shake Up*, *supra* note 215 (quoting Ron Lehr). Some cooperatives that have left or are seeking to leave Tri-State have ambitious renewable energy goals. *See* HATLESTAD ET AL., *supra* note 216 (describing the Kit Carson Electric Cooperative's goal of sourcing 100 percent of its daytime energy from solar power by 2022 as well as La Plata Electric Association's goal of cutting carbon 50 percent from 2018 by 2030), https://www.cureriver.org/wp-content/uploads/2019/06/Rural-Electrification-2.0-report_CURE-1.pdf [https://perma.cc/W2U9-CU4Q].

372. Mario Romero, *The G&T Cooperative Business Model Is Not Broken, Despite Some Vocal Tri-State Opponents*, UTIL. DIVE (Aug. 23, 2021), https://www.utilitydive.com/news/the-gt-cooperative-business-model-is-not-broken-despite-some-vocal-tri-st/605328 [https://perma.cc/3HBF-3N6M].

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While the evidence is preliminary, on-the-ground experience with community energy exit offers reasons for both concern and optimism. We are concerned, for example, that better-resourced urban localities tend to be the ones undertaking serious studies of municipalization. And we are concerned that more affluent areas have taken the lead in adopting community choice aggregation in California. At the same time, there is evidence that less well-resourced, rural communities can achieve municipalization if other factors cut in their favor. In California, CCAs are consciously expanding to include less affluent communities, and in other states, the path to forming or joining a CCA can be streamlined, thereby making it accessible to more communities. Similarly, funding programs can support microgrid development in less affluent neighborhoods. Nevertheless, as long as some communities can secure the advantages of exit while others are relegated, by default rather than choice, to service by IOUs and G&T co-ops, the benefits and costs of exit can be lopsided. In the next Part, we discuss ways to address those potential imbalances.

IV. MANAGING ENERGY EXIT

Individuals and communities who choose to extricate themselves, partially or completely, from the local IOU can reap economic, environmental, and even equity benefits.[373] They can also produce positive externalities. They might incentivize additional carbon-free generation.[374] They could run innovative pilot projects to reduce demand or test new technologies.[375] They may spur increased competition among generators and energy services companies.[376]

The challenge for lawmakers will be to encourage the beneficial effects of exit while minimizing its potential to create or deepen

373. *See supra* Part II.

374. *See* KELLY TRUMBULL, JULIEN GATTACIECCA & J.R. DESHAZO, THE ROLE OF COMMUNITY CHOICE AGGREGATORS IN ADVANCING CLEAN ENERGY TRANSITIONS: LESSONS FROM CALIFORNIA 6 (2021).

375. *See* Outka, *supra* note 114, at 135 (noting municipal utilities' ability to innovate).

376. *See* TRUMBULL ET AL., *supra* note 374, at 34 (noting the competition produced by the emergence of CCAs); Stephen Gunther, *CCA and Demand Response: Uncertainties and Opportunities*, CTR. FOR SUSTAINABLE ENERGY (Apr. 7, 2020), https://energycenter.org/thought-leadership/blog/cca-and-demand-response-uncertainties-and-opportunities [https://perma.cc/RKC8-8UVH] (describing the potential for CCAs to create demand-response programs that can compete with utility programs).

inequity among customers. Rather than recommend a single approach, this Part surveys the available options, drawing on existing examples where possible. We focus on four basic approaches: limiting exit, requiring exit payments, extending rules that govern IOUs to new entities, and expanding exit opportunities. Policymakers may choose to mix and match from among the options we propose, and, indeed, some of the approaches may work best in combination.

Our recommendations envision state and local governance as complements, not substitutes. Much of the recent discourse of energy law and policy treats those relationships as a matter of binary choice; the options, it would seem, are either an older and more centralized model built around state PUCs or a new model based on decentralization and local empowerment.[377] This binary treatment echoes discussions of state–local relationships in other contexts and, to an even greater extent, the ways in which federalism theory addresses relationships between the federal government and the states.[378] Our recommendations reject that binary treatment. They instead envision robust and interacting state and local roles, and that, in the interactions between levels of government, better and more equitable governance will tend to emerge.[379]

A. Limiting Exit

The most draconian response to our concerns is to limit exit, either by prohibiting specific forms of exit or by positioning utilities or regulators as gatekeepers. But this is strong medicine, preserving the status quo and foreclosing the benefits of exit without addressing problems with the existing system.

1. *Prohibiting Exit.* The simplest, and most prevalent, way of avoiding equity problems with community exits is to prohibit them entirely. Community exit may be a rapidly growing phenomenon, but that growth is happening only in a minority of jurisdictions. In most states, community exit options are limited. Municipalization may be a

377. *See, e.g.*, BAKER, *supra* note 230, at 91 (calling for a local-centered revolution against centralized energy systems).

378. *See, e.g.*, Gregory v. Ashcroft, 501 U.S. 452, 458 (1991) (extolling a version of federalism that primarily keeps the federal government out of state business).

379. This vision echoes more recent strands of federalism and local-government research that emphasize the value of interaction. *See, e.g.*, Dave Owen, *Cooperative Subfederalism*, 9 U.C. IRVINE L. REV. 177, 223–25 (2018) (explaining the importance of multilevel interaction).

possibility, but most states do not have legislation authorizing community choice aggregation.[380] Similarly, in most states, a variety of legal restrictions makes community microgrids either impossible to form or possible only with direct support from state authorities and the incumbent utility.[381] Similar restrictions, which limit but do not entirely prohibit exit, come from governance of individual exits. Perhaps the best-known limits on energy exit, albeit in the context of individual customer exit, are caps that individual utilities placed on behind-the-meter generation.[382] Comparable prohibitions could continue to emerge in the context of community exit. For example, although California law allows microgrids, it initially capped the total number of microgrid projects that could be developed in IOU service territories.[383]

Both categorical and strongly limiting approaches ensure that community exits will not create equity problems among electricity customers. But they also foreclose the many benefits that innovative community-based energy systems can provide. And they may also create their own equity costs, particularly if the absence of community-based energy systems was forcing some communities to provide unfair cross subsidies to consumers elsewhere on the grid or if the existing system locked consumers into inequitable relationships with the dominant utility. For these reasons, we do not recommend categorical prohibitions, and we focus our discussion on more nuanced approaches.

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380. *See supra* notes 167–76 and accompanying text.

381. *See supra* notes 193–95 and accompanying text.

382. *See, e.g.*, Colin Yost, *The Interconnection Nightmare in Hawaii and Why It Matters to the U.S. Residential PV Industry*, RENEWABLE ENERGY WORLD (Feb. 12, 2014), https://www.renewableenergyworld.com/solar/the-interconnection-nightmare-in-hawaii-and-why-it-matters-to-the-u-s-residential-pv-industry [https://perma.cc/6E9Z-BC93] (describing individual interconnection limits in Hawaii); Jaclyn Brandt, *Michigan Lawmakers Consider Bill To Remove Cap on Distributed Generation*, DAILY ENERGY INSIDER (Mar. 5, 2021), https://dailyenergyinsider.com/policy/29405-michigan-lawmakers-consider-bill-to-remove-cap-on-distributed-generation [https://perma.cc/KE5K-FP43] (discussing a Michigan cap on distributed generation).

383. Administrative Law Judge's Ruling Requesting Comment on the Track 2 Microgrid and Resiliency Strategies Staff Proposal, Facilitating the Commercialization of Microgrids Pursuant to Senate Bill 1339, Rulemaking 19-09-009, slip op. at 10 (Cal. Pub. Utils. Comm'n July 23, 2020) (proposing a subscription limit of ten microgrid projects within the territory of the state's three large investor-owned utilities).

2. *Exit Gatekeeping.* A milder form of prohibiting exit is to subject each proposed exit to state scrutiny and oversight. For example, in several states, microgrid project developers seek a Certificate of Public Convenience and Necessity from the state's PUC before construction and operation of the facility.[384] Communities seeking to establish CCAs must apply for regulatory commission approval as well.[385]

These kinds of regulator-approved exits entail transaction costs and will make exits politically vulnerable, but they also offer advantages. They allow legislators and regulators to pre-specify criteria for exits, and they provide procedural opportunities to weigh a variety of potential concerns and, if necessary, demand measures to address those concerns. They thus provide chances to implement other equity strategies, several of which we describe below.

B. Compensation – The Indifference Approach

If the goal is to allow exit but seek to address its equity implications, regulators can require that exiting communities compensate incumbent-utility customers at a level that makes those customers indifferent to community exit. During retail restructuring, such compensation took the form of "transition charge[s]" on customer bills.[386] Similar mechanisms exist for municipalization and community choice aggregation.

In the context of municipalization, compensation is either agreed upon by the municipality and the incumbent utility or is set by the courts in eminent domain proceedings in which local governments seek to condemn the utility's assets within municipal limits.[387] The compensation mechanism works differently for CCAs, whose members

384. *See generally* El Paso Electric Company's Application for a Certificate of Public Convenience and Necessity, 2020 WL 2081560 (N.M. Pub. Regul. Comm'n Apr. 28, 2020); Application of Sunnova Community Microgrids California, LLC for a Certificate of Public Convenience and Necessity To Construct and Operate Public Utility Microgrids and To Establish Rates for Service, No. A2209002, at 1 (Cal. Pub. Utils. Comm'n Sept. 6, 2022).

385. In New York, prospective CCAs must file an Implementation Plan and data security agreement for commission review and approval before implementing a CCA program. *Community Choice Aggregation*, NEW YORK STATE DEP'T OF PUB. SERV., https://www.nyserda.ny.gov/All-Programs/clean-energy-communities/how-it-works/toolkits/community-choice-aggregation [https://perma.cc/VG2G-VYNZ].

386. Jonas J. Monast, *Electricity Competition and the Public Good: Rethinking Markets and Monopolies*, 90 U. COLO. L. REV. 667, 672 (2019).

387. *See* Saxer, *supra* note 114, at 1511 (describing these processes, which can be contentious).

continue to pay their local utility for distribution services. In California, CCAs must pay transition-related charges to the IOU[388] as well as an ongoing "power charge indifference adjustment" designed to make remaining utility customers whole.[389] The California Public Utilities Commission sets the PCIA.[390] Similarly, departing co-ops must pay the larger G&T co-op an "exit charge." In a recent case, the D.C. Circuit underscored the importance of getting co-op exit charges right, explaining that an exit charge "protects members of a cooperative against rate increases caused by the exit of a member, while also increasing membership commitment and stability."[391]

Although exit compensation charges may sound straightforward in theory, setting them can be difficult.[392] In municipalization proceedings, disagreements are common about the amount of compensation owed for the utility's physical assets, long-term investments made to serve the community, and intangibles such as "business goodwill."[393] Parties in state commission proceedings argue

388. California law expressly states that "[t]he implementation of a community choice aggregation program shall not result in a shifting of costs between the customers of the community choice aggregator and the bundled service customers of an electrical corporation." CAL. PUB. UTILS. CODE § 366.2(a)(4). To that end, the investor-owned utility "shall recover" transition-related charges and any other charges "attributable to the community choice aggregator." CAL. PUB. UTILS. CODE § 366.2(c)(20).

389. The California Public Utilities Commission sets the PCIA, which was implemented "to respond to widespread concerns that the Commission's existing cost allocation and recovery mechanism is not preventing cost shifting between different groups of customers . . . ." Decision Modifying the Power Charge Indifference Adjustment Methodology, Rulemaking 17-06-026, slip op. at 2 (Cal. Pub. Utils. Comm'n Oct. 19, 2018) [hereinafter Cal. Pub. Utils. Comm'n, Rulemaking]. Costs recovered through the PCIA might include power purchased on the customer's behalf prior to the time they joined the CCA as well as past undercollections. CAL. PUB. UTILS. CODE § 366.1(f).

390. *See* Cal. Pub. Utils. Comm'n, Rulemaking, *supra* note 389, at 8.

391. United Power, Inc. v. Fed. Energy Regul. Comm'n, 49 F.4th 554, 561 (D.C. Cir. 2022).

392. *See, e.g.*, COLO. DEP'T OF REGUL. AGENCIES, *supra* note 338, at 15 (emphasizing the challenges charge setting has posed in California).

393. In the case of Boulder's attempted municipalization, the incumbent utility, PSCo (a subsidiary of Xcel), estimated going concern costs and stranded costs at $350 million and $335 million, respectively. Laura Snider, *Boulder Municipalization Fact-Checking: Final Off-Ramps for Starting Utility*, DAILY CAMERA (Oct. 5, 2011, 5:47 PM), https://www.dailycamera.com/2011/10/05/boulder-municipalization-fact-checking-final-off-ramps-for-starting-utility [https://perma.cc/M2P6-5NZQ]. Those figures were vigorously contested by Boulder. *Id.* Similarly, the City of Bainbridge's commissioned study on municipalization estimated the costs of the incumbent utility's infrastructure at $23–49 million. Pilling, *supra* note 145. The utility's report estimated infrastructure-acquisition costs of more than $109 million. *Id.*

over the precise amount of PCIA charges for CCAs.[394] And there can be a vast gulf between the exit charges proposed by member co-ops and those proposed by their G&Ts.[395]

While getting the numbers right is hard, exit charges are important elements of community-exit law. Indeed, the challenges are closely tied to the advantages. Setting the exit price is difficult precisely because price-setting requires grappling with difficult equity questions that otherwise might be ignored.

However, exit charges are not complete solutions. Compensation does not address barriers to exit for those left behind, nor does it address the loss of exiting communities' voices within the legacy regulatory system. The first concern is better addressed by restricting or expanding exit opportunities. The second could be partially addressed through liberalization of agency intervention rules, which could expand participation by individuals and communities without a direct stake in the proceedings. Each of these interventions could complement compensatory approaches.

C. Equal Treatment

A third strategy, which should be less controversial than banning exits or imposing exit charges, is requiring equal treatment of exiting communities and existing-utility customers. If the existing utility must fulfill a renewable portfolio standard, energy storage capacity requirements, or cost-redistribution requirements, the exiting community should be subject to those same requirements.[396] In the absence of such requirements, the exit might just be a way to escape the costs of environmental and equity policies—an ironic result, given all the rhetoric emphasizing energy localism's environmental and democratic potential.

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394. Cal. Pub. Utils. Comm'n, Rulemaking, *supra* note 389, at 8 (noting "increased interest in PCIA matters by parties participating in Commission proceedings").

395. Tri-State initially proposed a charge of approximately $1.25 billion to United Power as a starting point for negotiations. Recommended Decision No. R20-0502, at ¶ 71, La Plata Elec. Ass'n v. Tri-State Generation & Transmission Ass'n, No. 19F-0620E, 19F-0621E, 2020 WL 4209103 (Colo. Pub. Utils. Comm'n July 10, 2020) (ALJ). This figure is significantly higher than the $234.8 million figure a Colorado Public Utilities Commission ALJ proposed before Tri-State successfully challenged the Commission's jurisdiction. *Id.* at ¶ 222 (adopting methodology proposed by United Power).

396. *See, e.g.*, CAL. PUB. UTILS. COMM'N, COMMUNITY CHOICE AGGREGATION, *supra* note 321, at 7–8 (noting some ways California CCAs are subject to the same requirements as IOUs and some ways they are not).

For example, California has already addressed these concerns in the context of microgrids by requiring customers who supply all or a portion of their electricity needs with their own generation to continue to pay for public purpose programs and nuclear decommissioning.[397] California's public purpose programs include energy efficiency plans as well as low-income energy-assistance programs and fire-mitigation fees.[398]

Equal treatment may also require new inclusivity obligations for exiting communities. The classic monopoly utility "duty to serve" may not operate to the same extent in the case of community exit or, especially, partial exit, creating the need for some other inclusion mechanism—particularly given the sometimes-problematic history of setting local government boundaries. In response to those exclusionary patterns, policymakers have sometimes tasked state or regional governments with reviewing boundary-setting decisions.[399] They occasionally take more active roles, requiring local governments to merge or to extend their service areas.[400] Similar interventions are possible for energy exits, particularly if government exercises a gatekeeper function.

State governments could exercise that review in several ways. One possibility is integrating equity review into decisions to municipalize or form CCAs or microgrids. That review could require exiting communities to demonstrate that they are not excluding lower-income or racial-minority areas without compelling and race- and class-neutral justifications. For example, to prevent cherry-picking, a public agency

397. PAC. GAS & ELEC. CO., ELECTRIC SCHEDULE E-BTMM – BEHIND-THE-METER MICROGRIDS 3 (2021), https://www.pge.com/tariffs/assets/pdf/tariffbook/ELEC_SCHEDS_E-BTMM.pdf [https://perma.cc/7GPQ-SEVH].

398. *See* Kimberly J. Quesnel & Newsha K. Ajami, *Advancing Water Innovation Through Public Benefit Funds: Examining California's Approach for Electricity*, 110 AM. WATER WORKS ASS'N E18, E22 (2018) (summarizing public-purpose program surcharges 1998–2011); CAL. PUB. UTILS. CODE §§ 3280 et seq. (establishing a wildfire fund funded in part by ratepayers of large electrical utilities in the state).

399. *See, e.g.*, Sarah Ihn, *The Long Road to Self-Determination: A Critique of Municipal Incorporation Through the East Los Angeles Cityhood Movement*, 13 HARV. LATINO L. REV. 67, 77–80 (2010) (describing review of annexation proposals by a regional agency).

400. *See, e.g.*, *Mandatory Consolidation or Extension of Service for Disadvantaged Communities*, CAL. STATE WATER RES. CONTROL BD., https://www.waterboards.ca.gov/drinking_water/programs/compliance [https://perma.cc/9A2L-LZ62] (last updated June 7, 2023) (describing the authority of the State Water Board to mandate that water systems that consistently provide unsafe drinking water consolidate or receive an extension of service from another public water system).

serving as a CCA in California must "offer the opportunity to purchase electricity to all residential customers within its jurisdiction."[401] CCAs must also submit a plan to the state providing for "[e]quitable treatment of all classes of customers."[402] A second possibility is to authorize petitions for inclusion, which would allow left-out areas to join CCAs, municipal utilities, or microgrids, and would require granting those petitions absent strong justifications for continued exclusion.

D. Expanding Exit Opportunities

A final mechanism for maintaining equity would be to try to make exit available to all customers or communities who desire them. To be sure, expanding exit is more easily recommended than accomplished. Many of the hurdles to exit are financial, not legal. True equity of opportunity therefore requires lowering the costs of exit. For example, New York has created a uniform pathway to CCA formation and provides more guidance to local communities than does California, potentially lowering exit costs for communities.[403]

Governments could also target resources to support exits by disadvantaged communities. This is not a novel approach; in a huge variety of policy settings, including recent climate and energy legislation, policymakers try to remedy social inequities by identifying particularly disadvantaged populations for special treatment.[404] This policy approach already is being deployed for some forms of energy exits—microgrid funding in particular has been targeted toward disadvantaged communities, and community-solar legislation in some states contains carve-outs or economic supports for lower-income

401. CAL. PUB. UTILS. CODE § 366.2(b).

402. CAL. PUB. UTILS. CODE § 366.2(c)(4)(C).

403. *See* N.Y. STATE ENERGY RSCH. & DEV. AUTH., *Community Choice Aggregation: A High Impact Action for the Clean Energy Communities Program*, https://www.nyserda.ny.gov/-/media/Project/Nyserda/Files/Programs/Clean-Energy-Communities/CEC-Community-Choice-Aggregation-Step-by-Step-Guidance.pdf [https://perma.cc/R9RX-GP2H] (describing CCA formation processes and supporting resources offered by the state).

404. *See, e.g.*, Inflation Reduction Act, Pub. L. No. 117-169, § 13103(a), 136 Stat. 1921, 1921–24 (2022) (offering increased tax credits for small solar and wind facilities placed in service in connection with low-income communities); *id.* § 30002, 136 Stat. 2027, 2027–28 (appropriating money for grants for improving energy efficiency or climate resilience of affordable housing); *id.* § 60201, 136 Stat. 2078, 2078–79 (codified as amended at 42 U.S.C. § 7438) (appropriating money for environmental and climate-justice block grants).

customers.[405] The possibility of increased use of this option explains why some social-justice advocates have enthusiastically embraced localized energy.[406]

This approach has some obvious advantages. Most importantly, it is familiar, and it can direct funding and attention to some of the neediest communities. It also can work well in combination with other approaches. For example, a community-based energy system may be more amenable to the compelled inclusion of low-income neighborhoods if that inclusion will be facilitated by a governmental grant.

But this approach also has important disadvantages, particularly if it is the primary method of seeking equity. Most importantly, it risks creating a substantial mismatch between a broad problem and a narrow remedy. Just as targeted interventions have fallen short of eliminating the inequities of our education systems, targeting a few communities to be model microgrids will not be enough if inequities are more systemic.[407] A few particularly deserving communities may be helped, but many other slightly-less-deserving communities may be left behind.

CONCLUSION

Predicting our energy future requires humility, and it is too soon to tell if community energy governance will become the new normal.[408] But the fact of community exit, and its increasing popularity, tells us that energy consumers are unhappy with the status quo. We take the complaints about IOU shortcomings seriously. We also take seriously the benefits—financial, environmental, and otherwise—that can accrue to communities that exit their IOU system. Our goal has been

405. *See generally* NAT'L RENEWABLE ENERGY LAB'Y, EQUITABLE ACCESS TO COMMUNITY SOLAR: PROGRAM DESIGN AND SUBSCRIPTION CONSIDERATIONS (2021), https://www.nrel.gov/docs/fy21osti/79548.pdf [https://perma.cc/GWP6-H4T2] (detailing equitable community-solar programs).

406. *See, e.g.*, BAKER, *supra* note 230, at 113 (arguing that community-centered renewable energy projects in disadvantaged communities should be at the heart of the energy transition).

407. *See* Jeremy Ashkenas, Haeyoun Park & Adam Pearce, *Even with Affirmative Action, Blacks and Hispanics Are More Underrepresented at Top Colleges Than 35 Years Ago*, N.Y. TIMES (Aug. 24, 2017), https://www.nytimes.com/interactive/2017/08/24/us/affirmative-action.html [https://perma.cc/YH4V-J9EZ].

408. One famously poor prediction, by Lewis Strauss, chairman of the Atomic Energy Commission in 1954, was that nuclear power would make electrical energy "too cheap to meter." *See* DANIEL FORD, THE CULT OF THE ATOM: THE SECRET PAPERS OF THE ATOMIC ENERGY COMMISSION 50 (1982).

to identify potential unintended consequences of exit and the legal means to mitigate those consequences.

There are alternatives to community exit that still depart from the status quo. One is for more states to resume the restructuring of their retail electricity sectors. This would give all customers in a state the option to pick their electricity provider, although their legacy utility (for most people, an IOU) would continue to provide distribution service. Another alternative is for the states to take a leading role in exiting the IOU system. Currently, only the state of Nebraska is served entirely by publicly-owned utilities, as it has been since the early twentieth century.[409] However, public power advocates in Maine are pushing for a statewide referendum on a public takeover of the state's two large IOUs, Central Maine Power and Versant.[410] California also considered a state takeover of PG&E in the wake of the catastrophic wildfires sparked by its equipment.[411] The advantage of this approach is that it minimizes the number of customers left behind by community exit. It also preserves some of the size advantages of IOUs, including the ability to spread costs across a larger customer base.

Yet these alternatives do not satisfy what appears to be a driving force behind community energy exit: the desire for community autonomy when it comes to energy decision-making. Moreover, states have shown little sustained interest in comprehensive public power systems.[412] Nor have they seemed eager to continue the retail restructuring experiment, and evidence about whether that experiment produced improvements in price, quality of service, or anything else is decidedly mixed.[413] Therefore, community energy exit probably will

409. *Public Power: History*, NEB. POWER ASS'N, https://www.nepower.org/public-power/history.html [https://perma.cc/4Z8S-SCMS].

410. Brooks Hays, *Maine Policymakers Make Bold Push for Publicly Owned Power*, UNITED PRESS INT'L (Feb. 21, 2022, 1:00 AM), https://www.upi.com/Science_News/2022/02/21/public-electricity-climate-change/3351645022497 [https://perma.cc/Y9P4-MF3N].

411. Judy Lin, *What Happens If California Takes Over PG&E?*, CALMATTERS (Feb. 21, 2020), https://calmatters.org/politics/2020/02/what-happens-if-california-takes-over-pge [https://perma.cc/W3D3-DZXY].

412. *See, e.g.*, Ellias & Triantis, *supra* note 20, at 542–43 (describing PG&E's avoidance of a state takeover).

413. *See generally*, *e.g.*, Borenstein & Bushnell, *supra* note 105 (concluding that restructuring has produced more rent-shifting than cost-savings); Seth A. Blumsack, Jay Apt & Lester B. Lave, *Lessons from the Failure of U.S. Electricity Restructuring* (Carnegie Mellon Electr. Indus. Ctr. Working Paper, Paper No. CEIC-05-09), https://www.cmu.edu/ceic/assets/docs/publications/working-papers/ceic-05-09.pdf [https://perma.cc/84XV-CCGJ] (citing studies showing benefits but concluding that there is no evidence of systemic benefits to consumers).

continue to be the primary path away from IOU service for at least the near future. That being the case, we hope that both those communities contemplating exit and policymakers will take our concerns seriously. Each state will need to determine whether and how to promote community exit opportunities while ensuring fairness for customers of the legacy IOUs.