THE POWER OF COMMUNITY UTILITIES

Publicly owned and cooperative electric utilities as anchors for community wealth building and a just energy transition

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April 2022

DEMOCRACY COLLABORATIVE

climate + community project

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Published by:

The Democracy Collaborative & the Climate and Community Project

The Climate and Community Project (CCP) is a network of social scientists, lawyers, and policy experts conducting cutting-edge qualitative and quantitative research who are committed to supporting a justice-based Green New Deal. @cpluscp https://climateandcommunity.org

The Democracy Collaborative (TDC) is a research and development lab that explores and charts pathways to a more equitable, democratic, reparative, and sustainable political economic system. @democracycollab https://democracycollaborative.org

Suggested citation: Thomas M. Hanna, Johanna Bozuwa, and Raj Rao, The Power of Community Utilities: Publicly owned and cooperative electric utilities as anchors for community wealth building and a just energy transition (Washington, D.C. and Philadelphia: The Democracy Collaborative and the Climate and Community Project, 2022).

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ACKNOWLEDGEMENTS

The authors would like to thank this project's advisory panel and acknowledge their time, expertise, and contributions: Michael MacMiller; Dieynabou Barry; Liz Veazey; Tiffany Wong; Daniel Chavez; Daniel Tate; and Sylvia Chi.

We would also like to thank everyone who was interviewed for this project for sharing their expertise and insights with us, as well as the Spumoni cooperative for their amazing design and graphic contributions. This report was made possible by generous support from the Summit Foundation, and we are grateful for their continued leadership around the intersections of climate and economic justice.

THE POWER OF COMMUNITY UTILITIES

Executive Summary

Publicly and cooperatively owned electric utilities (community utilities) have the potential to demonstrate what an equitable, clean energy system looks like in the United States. They could become powerful "anchor institutions" in their community by grounding their decisions in democratic governance and community partnership, affordable energy and community wealth building, and access to renewable energy.

The United States urgently needs to transition off of fossil fuels and onto clean sources of energy (especially renewable energy) to maintain a livable climate. As of 2020, only around 20% of US electricity generation is from renewable energy sources. Energy utilities – the companies that run our power systems – have enormous control over the scope and scale of the transition, but have often dragged their feet or even fought against clean energy. Not only does their inaction imperil the very future of humanity, but it directly harms families – often Black, Indigenous, low income, or otherwise marginalized – who live in the shadow of toxic power plants. The current US energy system is dirty and expensive. 31% of households in the country have to make the choice between buying groceries or paying their energy bills. In response, communities across the country are beginning to mobilize to demand an energy transition.

Topline Findings:

1 - Community utilities (i.e. public and cooperatively-owned utilities) are better suited for a "Green New Deal"-style transition than for-profit corporate utilities (i.e. investor-owned utilities, IOUs).

2 - Many community utilities as they currently exist must be significantly reformed to fulfill their full potential.

We have a powerful tool to accelerate the energy transition in a way that builds community wealth and energy justice in our communities: publicly- and cooperatively- owned energy utilities. In this report, we refer to these types of utilities as "community utilities" because they are owned by the local community. Around thirty percent of households in the United States get their energy from community utilities. This is no small part of our energy system. As non-profit utilities without faraway shareholders that are ultimately accountable to the local community, these utilities have the potential to be an example for what an equitable, clean, and democratic energy system could look like. Collective action and organizing to push community utilities toward the intersections of clean/renewable energy and community development can be more tractable than in corporate utility areas because community utilities' mandate is to provide a public good, not to maximize profits for shareholders.

Community utilities and cooperatives have a radical history. In the early days of electrification one hundred years ago, residents across the country rose up against profiteering private utilities who provided poor (or nonexistent) service at high prices by creating their own publicly and cooperatively owned utilities. In the state of Nebraska, for instance, they kicked all private utilities out of the state for good. To this day, there are no private utilities providing electricity to Nebraskan homes. This cause was, in turn, taken up by national leaders. For instance, Franklin D. Roosevelt started the Rural Electrification Administration (REA) after rural communities pushed for access to light in their regions. Before that, corporate actors didn't want to enter rural areas because they didn't see how they could profit from such unpopulated land. The REA program took electrification from ten to ninety percent in ten years as groups of farmers banded together to start their own electric cooperatives, run on cooperative principles.

However, today some community utilities have forgotten their past and are not living up to their potential. Many still rely on fossil fuel energy and some have even pushed back against important climate resiliency approaches like rooftop solar. In some places, democratic governance structures have deteriorated (or been manipulated by powerful interests) and residents don't even know that they actually own their utility. **It is time to reignite the radical history of community utilities to herald the transition to a genuinely democratic, equitable, and clean energy system.**

As large non-profit entities that are rooted in place, provide a critical public service, and have a large economic impact, community utilities meet the classic definition of **"anchor institutions,"** and should embrace this by integrating an **"anchor mission"** into their mandate. An anchor mission is "a commitment to intentionally and comprehensively apply an institution's assets in partnership with community to mutually benefit the long-term well-being of both." In order for community utilities to achieve their full potential as anchor institutions and embrace their radical roots, **we recommend the following:**

1. Block Privatization

Block extractive and expansive "public-private partnerships" and other efforts to sell or lease community utility assets to for-profit corporations. Efforts could include ordinances or referendums banning sales or leases, amendments to state constitutions, or a federal-level prohibition on community utility sales.

2. Deeper Democratic Governance.

Unite around increasing democratic governance and control. Community utilities should incorporate innovative democratic approaches such as autonomous, community-based observatories. In particular, amend existing laws and regulations to maximize democratic participation, accountability, and transparency, and block capture by local elites.

3. Renewable Energy Mandates.

Set renewable/clean energy generation mandates that apply to community utilities, but which take into account both issues of scale and the additional economic and social benefits community utilities provide.

4. Renewable Energy Financial Incentives.

Federal, state, and local governments should reconsider the tax credit approach to incentivizing the generation of renewable energy and, at the least, provide community utilities with equivalent incentives in the form of grants and no-interest loans.

5. Public Distributed Renewable Energy & Electrification.

Invest in public distributed renewable energy, weatherization, and electrification programs. These should be done in-house with an explicit focus on providing local residents with pathways to quality employment in the utility; or in partnership with non-profit or democratically owned community-based organizations.

6. Procurement programs.

In-source contracts wherever possible, especially as it relates to renewable energy generation. When procurement from private sources is still necessary, community utilities should establish or expand procurement programs and goals that prioritize local businesses – especially MWBE companies and democratically owned firms (such as worker cooperatives) – in collaboration with the community. Provide financing and technical assistance to help create local procurement supply chains where they don't yet exist.

7. Public Banking & Finance.

Establish public banks and other public financing mechanisms to provide services and support to community utilities, especially around decommissioning fossil fuel infrastructure and scaling up in-house renewable energy generation. Redirect community utility deposits and investments to non-profit community-serving financial entities like public banks and CDFIs where they exist.

8. Supporting Local Innovation.

Establish laws and regulations, especially at the Federal level, that prevent states from blocking or "preempting" local innovations around community utilities, especially with regards to broadband internet services, progressive procurement and rate structures, and local municipalization campaigns.

9. Public Finance for Shifting IOUs into Public & Cooperative Ownership.

Local, state, and federal policymakers should create new financial and technical institutions capable of facilitating and supporting communities if they wish to take their utility into public or cooperative ownership.

There is a growing movement to shift how community utilities operate in the United States. This is a crucial time to mobilize for a just transition from fossil fuels. If we leverage community utilities and transform them, they could help shift a sizable portion of the grid toward an equitable energy economy. These wins would resonate across the United States and abroad, laying the groundwork for how we reconstitute our utility system for good.

FOREWORD

Over the past two decades, a powerful movement has been gathering momentum and impact across the United States. Inspired to action by the continued racial and economic inequality plaguing our society, some of the nation's largest nonprofit and public institutions – most prominently hospitals and universities – are coming together around a commitment to repair past harms and tear down the wall dividing them from their communities.

These "anchor institutions" are joining together in networks – the Healthcare Anchor Network, the Anchor Institution Taskforce, the Coalition of Urban and Metropolitan Universities, and many more – to leverage their economic power to benefit the places in which they are rooted. While footloose for-profit corporations may come and go from our communities (taking jobs with them while extracting local wealth), anchor institutions are in their communities for the long-haul. In many cities, they are among the most powerful economic engines, often among the top ten local employers. In Cleveland, Ohio, for example, two of the city's health systems (the Cleveland Clinic and University Hospitals) are among the five largest private employers in the entire state. These hospitals, along with Case Western Reserve University, annually purchase more than $3 billion in goods and services; and together, their endowments and investment portfolios total billions of dollars more.

By adopting what is called an "anchor mission," these institutions and countless others around the country are starting to focus their economic might locally, increasingly through a lens of equity and inclusion. Specifically, they are starting to create good paying jobs and economic opportunity by supporting local and democratically owned businesses, shifting a percentage of their investment assets from Wall Street to Main Street, and establishing local hiring and workforce development strategies.

This new report, "The Power of Community Utilities," suggests that the nation's thousands of publicly owned and cooperative electric utilities have tremendous potential to become a powerful new form of anchor institution, owned locally and benefiting their communities, while supporting the desperately needed transition to a just and sustainable energy future. Authors Hanna, Bozuwa and Rao are thus making a powerful contribution to advancing the anchor movement and the case for truly acting like an anchor institution. As they argue in the following pages, "if community utilities embrace the anchor mission by integrating and expanding their economic development and energy transition activities, they can, and will, become vital community-sustaining (and building) elements of a transition to a more just, equitable, and democratic energy system."

To be sure, just as with hospitals and universities, shifting the operating paradigm and daily practices of these utilities will not be easy, but this report cites many incidences of how transformation is already occurring and presents a range of proposals to accelerate change. At this time, when the Federal government has made a historic funding commitment to reinvigorating America's infrastructure, on the one hand, and the climate crisis is accelerating on the other, public and cooperative utilities have a once-in-a-generation opportunity to transform themselves into one of our country's, and planet's, most important anchor sectors.

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INTRODUCTION

The United States is currently the 2nd largest emitter of climate changing greenhouse gas emissions in the world and has, cumulatively, been responsible for more greenhouse gas emissions than any other single country.[1] The US electricity sector (including generation, transmission, and distribution) accounts for around 25% of the country's emissions and, despite some reductions in recent years, is still heavily reliant on fossil fuels.[2] Moreover, in total, the US electricity sector alone contributes more CO_2 emissions each year than most other countries on the planet.[3] Therefore, in order to stand any chance of addressing and mitigating the threat of catastrophic climate change, the United States must urgently accept its international responsibility by rapidly ending its dependence on fossil fuels and transitioning towards a just, clean, and efficient electricity system.[4]

However, as we enter an era of intersecting ecological, social, and economic crises, this "energy transition" must be designed not only to rapidly shift towards clean sources of power and increased efficiency, but also to address and redress a range of historical and contemporary racial, economic, and environmental inequities. This includes ensuring a just transition for workers and communities affected by the necessary changes in the generation, transmission, and distribution of electricity, supporting the development of more equitable, democratic, and sustainable communities, and prioritizing racial and economic equity (specifically around issues of pollution and health, climate vulnerability, and energy poverty) – goals that are sometimes collectively referred to as energy democracy or energy justice. As such, the energy transition lines up well with an emerging concept in economic development called the "*anchor mission,*" which can be defined as "a commitment to intentionally and comprehensively apply an institution's assets in partnership with community to mutually benefit the long-term well-being of both."[5]

Publicly owned utilities and electric cooperatives – which already provide almost 30 percent of US Americans with electricity – are uniquely positioned to be champions of the energy transition.[6] Unlike their corporate counterparts, these "community utilities" do not necessarily have to focus on profit maximization, are at least nominally accountable to public concerns, and *could* pave the way toward a new vision of utilities in a clean energy era. Moreover, as relatively large non-profit entities that are rooted in place and owned and operated by the communities they serve, publicly and cooperatively owned electric utilities meet the classic definition of "anchor institutions."[7]

While the overwhelming focus of anchor institution research and literature to date has been on hospitals and universities (so-called "eds and meds"), there is an openness to extending the concept to other types of institutions. For instance, many publications reference municipal government as an anchor institution and several reports, papers, and articles specifically mention utilities as anchors. This includes two reports from the University of Pennsylvania (published in 2008 and 2014, respectively) that focus on eds and meds but make passing reference to utility companies, as well as a variety of other publications that include "public utilities" in their definition of anchor institutions.[8]

Recently, there have been signs of an emerging interest in further interrogating the concept of utilities as anchor institutions. This includes a 2018 Brookings article which argues for "infrastructure" to be considered a "local economic anchor." "The major facilities that utilities and transit agencies oversee serve as major public assets, but they also carry out many public responsibilities in their local communities," Joseph W. Kane wrote in the piece. In particular, Kane presents findings that many water utilities in particular consciously focus their operations – including investments and workforce development activities – in historically disinvested areas and communities.[9] There have also been a series of webinars held in recent years that focus on water utilities as anchor institutions. This includes a 2018 webinar sponsored by the Environmental Protection Agency (EPA), Water Environment Federation, Water Environment & Refuse Foundation, WaterReuse,

and the National Association of Clean Water Agencies. The webinar description stated: "As 'anchor institutions' in their communities, these Utilities of the Future employ innovative approaches not only to meet their own goals, but also to support the financial and social health of the communities they serve."[10] Similarly, a recent April 2021 webinar sponsored by the Urban Waters Learning Network focused on "how water utilities can use their physical structures (built capital), economic and financial assets (financial capital), and human or social capital to create maximum shared value in their communities."[11]

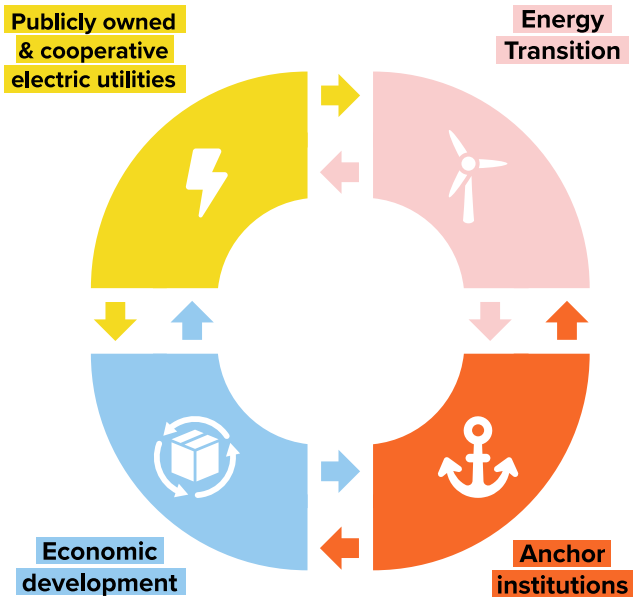
However, this emerging interest in utilities as anchor institutions has thus far not extended to electric utilities. There is currently very little published research that specifically addresses electric utilities as anchor institutions – especially not in the context of the intersections between the energy transition and community economic development. When energy issues are addressed at all, it is usually regarding activities that traditional anchors (eds and meds) can or should undertake to incentivize renewable energy, energy conservation, and community participation. For instance, siting wind turbines and solar panels on campus or contracting with local businesses to replace inefficient lighting.[12]

This report attempts to bridge these gaps by interrogating the possibility and potential of extending the anchor institution and anchor mission frameworks to community utilities in the context of the intersection between community wealth building – a new approach to local economic development seeking to achieve racial and economic equity, ecological sustainability, and genuine democracy through development of community-based models of ownership and control – and the energy transition. By doing so, we hope to not only advance the conceptual literature in these three important areas (community utilities, the energy transition, and anchor institutions/mission), but to also provide actionable information – including best practices, lessons learned, and recommendations – to activists, organizers, and policymakers interested in working at the intersection of these issues.

The research for this report was conducted in three phases. First, we convened an expert advisory panel to help guide the research, including formulating research questions, identifying potential interviewees and resources, and reviewing results. We then assembled a literature review that looked at the three main building blocks of this concept: **A)** the strengths and weaknesses of community utilities as it relates to their direct and indirect renewable energy activities; **B)** the strengths and weaknesses of community utilities as it relates to their economic and community development activities; and **C)** literature on the anchor institution framework generally, and the anchor mission approach as it relates to electric utilities specifically.

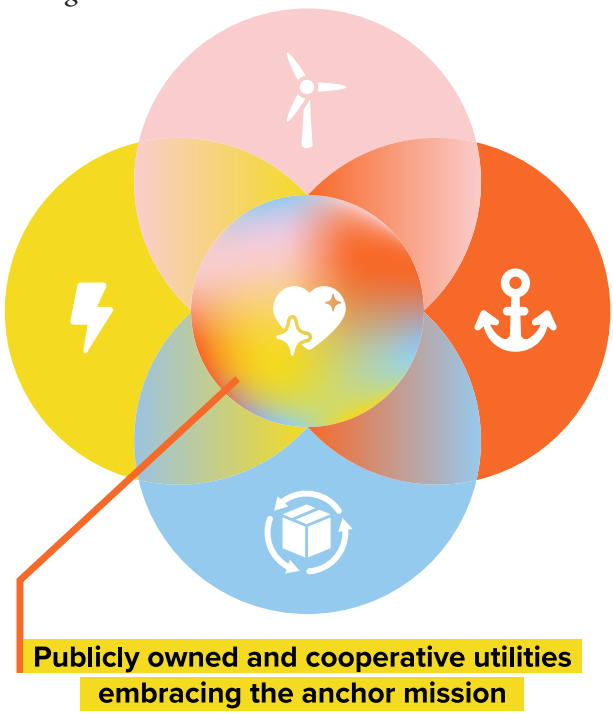
In surveying the literature and examples around the economic development and energy transition activities of community utilities, as well as the anchor mission and anchor institution concept, what emerges is a picture of numerous intersections and overlaps, but the lack of an integrated and unified approach. Specifically, the literature on community utilities primarily intersects with the literature on both the energy transition and economic development (but does not overlap much with the literature on anchor institutions); the literature on the energy transition primarily intersects with both community utilities and anchor institutions (but does not overlap much with the literature on economic development); the literature on anchor institutions primarily intersects with both the energy transition and economic development (but does not overlap much with community utilities); and the economic development literature primarily intersects with both anchor institutions and community utilities (but does not overlap much with the energy transition). Figure 1 attempts to illustrate this analysis.

Figure 1



The current state of the literature reinforces our contention, and the basic premise of this project, that more fully connecting and integrating these four key concepts could create a powerful and compelling framework for a genuinely just, equitable, and democratic energy transition in the coming years. Specifically, if community utilities embrace the anchor mission by integrating and expanding their economic development and energy transition activities, they can, and will, become vital community-sustaining (and community-building) elements of a transition to a more just, equitable, and democratic energy system. Figure 2 attempts to illustrate this potential by showing how the four concepts discussed in this background paper could intersect and connect.

Figure 2



After discussing the literature review results with our advisory panel, we then conducted 20 qualitative interviews with activists, organizers, and experts working at the intersection of community utilities, economic development, the energy transition, and energy democracy/justice.[1]

Overall, our research suggests that there is ample *potential* for community utilities to become important anchor institutions and play a prominent role in the effort to combat climate change and advance energy democracy throughout the country and around the world. Specifically, when compared with large, for-profit investor-owned utilities, community utilities are, or have the potential to be:

- Better aligned with, responsive to, and supportive of a community's climate change and economic development goals.
- More affordable for consumers and better able to address issues of energy poverty.
- More accessible and democratically accountable (and less politically corrosive).
- Better able and quicker to integrate and adopt

[1] Interviewees are listed in Appendix A and referenced throughout the report.

new clean energy technologies and approaches (especially those that may challenge conventional utility business models, such as energy efficiency programs and distributed renewables).

- More responsive and resilient in the face of climate-fueled natural disasters.
- More able to prioritize alternative models of community economic development (including procurement from diverse suppliers along with direct and indirect investments in community wealth building institutions and approaches – such as public transit and municipal broadband).

However, many community utilities have a long way to go before achieving these goals. While public and cooperative ownership provides a degree of flexibility, possibility for change, and community benefit that does not necessarily exist with corporate for-profit utilities, significant structural barriers, cultural reticence, and power imbalances continue to prevent community utilities from evolving to meet the imperatives of the energy transition and fulfill their potential as powerful, community serving anchor institutions. These include:

- Corporatization, an overreliance on hiring from the private sector and traditional business schools, and other approaches that entrench neoliberal principles and goals (especially in larger community utilities, Generation and Transmission cooperatives (G&Ts), and Joint Action Agencies (JAAs)).[13]
- Asymmetries in terms of expectations and possibilities between boards and elected representatives, on the one hand, and utility managers and staff on the other.
- Resistance to genuine democratic accountability and community/member participation amongst staff, managers, and/or governance bodies (such as boards).
- Imbalances of power and possibility related to both geography (i.e. the urban and rural divide) and scale (i.e. larger vs. smaller utilities).
- Path dependency and a hesitancy to make important alterations to conventional methods of operation (e.g. around distributed renewable energy, energy efficiency, the need to wind down gas subsidiaries/operations, and conventional models of economic development).

This report is organized into two parts. Part I provides details from our research on some of the benefits and limitations of community utilities – including best practices and the personal experiences and perspectives of practitioners and organizers – as it relates to the energy transition, democratization, and community economic development. Then, in Part II, we offer a series of recommendations that we believe should be considered not only by organizers and policymakers, but also, potentially, by utility leaders who want to advance an anchor mission as it relates to their energy transition and economic development activities. These are roughly grouped into nine broad categories:

Resisting privatization

- Defending community utilities from privatization threats and pressure (for instance, by passing legislation at various levels banning or setting a high bar for privatization or demutualization).
- Resisting more expansive forms of public-private partnerships and wherever possible bringing outsourced contracts back in house.
- Ending the outsourcing and contracting of renewable energy generation to the private sector (for instance, by providing community utilities the equivalent of the tax credits given to private providers).

Supporting (re) municipalization/ mutualization

- Engaging with and supporting emerging campaigns to establish publicly or cooperatively owned utilities.
- Creating cross-jurisdictional networks and "pro-public" movements to share resources, expertise, and capacity.

- Establishing "Community Ownership of Power Administrations" (COPAs) at the state level to provide legal, technical, and other assistance to communities seeking to establish publicly owned or cooperative utilities.

Democratization

- Democratizing the governance and management of community utilities, including establishing and implementing a set of values and culture around public service rather than corporatization.
- Increasing accountability and raising/equalizing standards around issues related to the energy transition, economic development, and democracy, accessibility, and participation through, for instance, enhanced state and national regulations and/or the creation of autonomous community-based oversight organizations that sit alongside a community utility.
- Including workers and unions in decision-making and oversight (including, for instance, seats on the board of the community utility and/or the community oversight organization) and establishing new standards and programs (including project labor agreements) to create or develop pathways for low-income and frontline workers to get jobs within the community utility.
- Increasing community climate resiliency and preparedness by regularly engaging in integrated participatory planning processes with community groups, government agencies, and frontline workers.

Organizing to contest for power and control

- Fielding candidates for board seats where there are competitive elections.
- Suggesting and campaigning for aligned nominees for appointed boards.
- Organizing to attend annual member meetings, board meetings, city council meetings, or utility engagement meetings.
- Working directly with aligned staff through established community engagement channels (and pushing those staff to expand such opportunities).
- Leveraging other institutions and opportunities in the community utility ecosystem (e.g. relationships with, and access to, supportive city councilors, state legislature representatives, trade associations, media, etc.).
- Proposing and supporting public referendums on community utility governance, accountability and transparency, and operations (where such opportunities exist).
- Organizing pressure campaigns with democratization being a defining feature.
- Creating or joining national and international pro-public networks.

Establishing mandates & incentives

- Establishing mandates and incentives for community utilities to invest in renewable energy and economic development with a strong equity lens and community participation.
- Removing legislative and regulatory barriers that prevent community utilities from scaling up renewable energy and economic development activities, including those restricting the rights of organized labor and those preempting municipal broadband development.
- Making specific commitments to prioritize energy poverty (including, for instance, progressive rate schedules, debt cancellation for low-income customers, and mandatory reserve funds to cover the suspension of shut-offs during times of crisis).
- Incentivizing, enabling, and/or requiring community utilities to invest in or directly provide public broadband internet and public transportation services as part of their economic development activities.

- Considering pathways towards energy as a universal basic service (for instance, by allowing all residential customers a baseline allowance of free energy, with costs integrated into the tax base).
- Linking community utilities to public sources of funding and investment at various scales, including new public banks at the local, state, and federal level.

Creating "public" distributed renewable energy programs

- Creating "public" distributed renewable energy (PDRE) programs in which the community utility directly plans, installs, and pays for the installation of rooftop solar and community energy storage (which could both mitigate socioeconomic inequities in the proliferation of, and benefit from, distributed renewables as well as allow the utilities to better plan how distributed renewables will impact their energy needs and capacity, as well as grid reliability).

Public-public & public-community partnerships

- Establishing or enhancing public-public or public-community partnerships between community utilities and local agencies, departments, and community groups as an alternative to private contracting.
- Exploring opportunities for community utilities to partner with other public or community entities to pursue electrification and energy efficiency goals (for instance, partnering with local transportation agencies to electrify buses or local housing authorities or non-profits to electrify homes and make them more energy efficient).
- Challenging the corporatization and path dependency of the larger Joint Action Agencies, G&T cooperatives, and federal Power Marketing Administrations (PMAs) by organizing pressure campaigns and pursuing options like utility debt cancellation and support for contract terminations.

Procurement

- Increasing community utility procurement from, and contracts to, local firms, especially worker cooperatives, employee-owned businesses, and women- and minority-owned enterprises.
- Ensuring that community utility procurement processes are accessible, transparent, and regularly reviewed for effectiveness by democratic structures.
- Establishing local and regional procurement boards or roundtables to coordinate around community utility procurement needs and local capacity to respond to those needs.

Investment & asset management

- Shifting utility bank accounts and deposits to local Community Development Financial Institutions (CDFIs) and/or community development credit unions.
- Requiring a specified percentage of community utility revenue or profits be allocated annually to autonomous community-controlled and directed revolving loan funds that would invest in community determined priorities (that could be established through a participatory budgeting process).
- Inventorying community utility owned land and providing unneeded or underused land to municipal agencies and/or non-profit community groups for housing, community space, or other publicly benefitting purposes.

With a rapidly shrinking window to avert and mitigate catastrophic climate change (and its extremely destabilizing social, economic, and ecological effects), now is the time to fundamentally transform our electricity system in a way that builds more resilient, equitable, and cleaner communities. Similar to the early days of electrification, publicly owned utilities and electric cooperatives are well placed to play a leading role in this transformation due to their more flexible and accountable ownership and incentive structures.

However, ensuring that community utilities live up to their transformative potential as key anchor institutions will require major organizational, regulatory, legislative, and cultural shifts at various scales; shifts that, in turn, are only likely to occur with significant organizing attention and activity.

PART I: THE BENEFITS & LIMITATIONS OF COMMUNITY UTILITIES

Publicly owned and cooperative electric utilities have a long history in the United States, dating back to the dawn of electrification in the late 19th and early 20th centuries. From the beginning, the large corporations that dominated the electric sector (e.g. the Edison Illuminating Company, the precursor to the current investor-owned utility ConEd) focused primarily on denser, urban areas where they could easily turn a profit.[14] Due to a combination of corporate neglect of less profitable areas, competition between smaller private providers that drove many to bankruptcy, and profiteering and other abusive corporate practices, many communities were left without affordable access to electricity (and its numerous positive social and economic effects). These places often responded by establishing a locally owned and controlled electric utility, usually in the form of a municipal enterprise (run by a local government entity) or a cooperative (run by members).[15]

During the New Deal era of the 1930s, these local entities were augmented by, and linked to, several larger-scale public interventions into the electricity system, such as the New York Power Authority (NYPA, founded in 1931), the Tennessee Valley Authority (TVA, founded in 1933), and the Bonneville Power Administration (BPA, founded in 1937). Over time, this ecosystem of community utilities and public power generators became an established part of the US electricity system and many of the local, community utilities formed their own networks to deal with issues of scale and coordination – JAAs in the case of publicly owned utilities and G&Ts in the case of cooperatives. Moreover, this community approach to electricity provision has remained relatively stable and popular, despite increased policymaker interest in privatization and deregulation since the 1970s. For instance, new municipalizations have slightly outpaced privatizations in recent decades and half-hearted proposals to privatize federal power agencies (like TVA) have faltered due to both community and bipartisan political opposition.[16]

Currently, community utilities far outnumber investor-owned utilities in the United States (see table 1). However, due to their more localized nature, they are generally smaller and, combined, cooperatives and publicly owned utilities provide power to around 28% of the nation's electricity customers.[17]

Table 1

Utility type	Number	Percent of total customers
Publicly owned	2,003	14.5%
Cooperatives	856	13.2%
Investor-owned	178	66.9%

1.1 Community Utilities & the Energy Transition

One primary way community utilities can play a role in the energy transition is directly through their own operations. This includes converting their energy generation and purchasing to clean sources, investing in energy efficiency and storage, increasing electrification and winding down gas services, modernizing the grid so that it can weather storms, and advancing distributed renewable energy and demand side management technologies.

First and foremost, many community utilities are in the process of transitioning to cleaner types of energy and, in particular, increasing their use of renewable energy (often in response to various public mandates). When it comes to generation from renewables, publicly owned utilities fare significantly better than both investor-owned utilities and cooperatives. Around

18.6 percent of publicly owned utilities' generation capacity (in megawatts) is composed of renewables, compared with 9.4 percent for investor-owned utilities and 2.3 percent for cooperatives.[18] However, the vast majority of this difference is due to publicly owned utilities' hydro-power facilities. Beyond this, the American Public Power Association (APPA) maintains that between 2005 and 2017 publicly owned utilities reduced their CO_2 emissions by 33 percent, outpacing the electrical sector as a whole (24 percent reduction). While lagging behind, cooperatives are also quickly adding new renewable generation capacity (primarily utility scale solar and wind), and in 2017 renewables accounted for around 17.7 percent of their total retail mix (generation plus procured).[19]

However, there is a long way to go and a big need to accelerate the process in various ways. One of the important challenges is that community utilities often do not control their own generation facilities. For instance, Binghamton University professor George Homsy writes that "most of the municipally-owned power companies must purchase power; only 31.9 percent produce any of their own electricity and, of those, nearly three-quarters (72%) generate five megawatts or less."[20] As a whole, however, publicly owned electric utilities generate around 65 percent of the energy they sell on to consumers (and purchase the rest).[21] For cooperatives, this generation percentage is even less at around 50 percent.[22] In many cases, smaller community utilities will receive a substantial amount of their electricity from larger, wholesale providers. These include federal Power Marketing Agencies (such as the BPA and TVA), Joint Action Agencies (cooperatives of municipal utilities), and Generation & Transmission cooperatives (cooperatives of rural electric cooperatives).[23] These larger entities often have long-term contracts with the local utilities and can be a significant factor in whether the community utility has access to clean energy, and especially if it can invest in local, distributed renewables.

Community utilities also have significant work to do in decommissioning polluting and harmful fossil fuel plants. In particular, electric cooperatives continue to burn some of the dirtiest fossil fuels in the form of coal. In total, cooperatives still generate around 37.5% of their electricity from coal, compared to 29.8% for investor-owned utilities and 23.6% for publicly owned utilities.[24] Community utilities also have significant room for improvement when it comes to incorporating economic and racial equity considerations into their renewable energy and fossil fuel transition plans. For instance, Agustin Cabrera, the former RePower LA Director for the Los Angeles Alliance for a New Economy (LAANE), states that the recent study LADWP (one of the biggest publicly owned utilities in the country) commissioned on pathways to 100% renewable energy (LA100) was impressive from a technical standpoint but "there was this lack of explanation with regards to how equity fits into the study."[25] This includes issues such as "ensuring access to clean energy and bill-reducing programs and maintaining affordability for low-income residents (particularly because of the housing crisis LA is facing)."[26]

While the presence of a publicly or cooperatively owned electric utility is no guarantee that a community can or will shift to renewable energy, evidence suggests that it is an important factor for localities that want to achieve that goal. For instance, a 2020 study of the five US communities that had, at that point, achieved a transition to 100 percent renewable sources of electricity found that three had publicly owned utilities, one had a cooperative, and one had an investor-owned utility (IOU).[27] Moreover, the energy transition in both Greensburg, Kansas (served by the cooperative) and Rock Port, Missouri (served by the IOU) could be considered "quasi-public" because they involve public-private partnerships with the municipality playing a prominent role in developing renewable energy generation facilities.[28] "Utility ownership type is a vital factor to transitioning, as most of the municipalities have [municipally owned utilities (MOUs)]," the authors conclude. "This suggests that MOUs have the greater flexibility to transition to 100% [renewable energy (RE)] and could facilitate such sociotechnical change." Similarly, another study by David Hess and Haley Gentry found that "in general, communities with electricity supplied by an investor-owned utility (65% in the larger data set) may find it more difficult to switch to 100% renewable electricity than those with

alternative organizations such as local public power, a locally controlled electricity cooperative, or community choice aggregation."[29]

More recently, the state of Nebraska became the first Republican dominated state to commit to fully decarbonizing its electricity system.[30] It was able to do so primarily because all utilities in the state are public or cooperatively owned (with most being public). "That gives voters in Nebraska quite a bit of power to determine the future of our electricity generation," Chelsea Johnson, deputy director of Nebraska Conservation Voters explains.[31] Through the direct election of supporters to the utility boards (as well as other advocacy activities), clean energy advocates were able to achieve this success despite the continued intransigence of the state government on climate issues.

Outside the United States, there is also evidence that publicly and cooperatively owned utilities are important actors in facilitating the transition to renewable energy. For instance, a prominent feature of Germany's energy transition (Energiewende) over the past decade has been returning utilities to public ownership. Research suggests that there have been around 284 such "remunicipalizations" in the German energy sector since 2005. According to Sören Becker, this "wave of remunicipalisations" is due, at least in part, to the failure of the country's "Big Four" for-profit energy corporations to "address [the] demands for renewable energy."[32]

Moreover, cooperatives have traditionally played a prominent role in renewable energy *generation* in Germany. It is estimated that there are around 1,000 energy cooperatives in the country with around 180,000 members.[33] These cooperatives not only supply energy but play an important role in developing community support and buy-in for renewable energy projects (and the energy transition generally). In recent years, as the number of new cooperatives has fallen due to various regulatory and market changes there has been a corresponding negative effect on community support for renewable energy projects.[34] "As larger corporate producers come to dominate, protests against new onshore wind energy are increasing," L. Michael Buchsbaum writes.[35] More generally, a 2018 cross-country quantitative study found 2,671 renewable energy cooperatives in just four European countries (UK, Germany, Austria, and Denmark) and concluded that "energy cooperatives are important enablers of the energy transition."[36]

Burlington Vermont

Burlington, Vermont is recognized as being the first municipality in the US to reach 100 percent renewable energy (achieving that goal in 2014). The final milestone occurred when the publicly owned electric utility (Burlington Electric Department) purchased the privately-owned Winooski One hydro-electric plant. Currently, the utility's energy mix is comprised of around 50 percent hydro, 30 percent biomass (sustainably harvested wood chips), and 20 percent solar, wind, and landfill methane.[37] Moreover, prior to a rate increase in 2021 due to financial issues caused by the COVID-19 pandemic, the utility had not raised rates in 12 years. The utility also has recently implemented several equity-based programs, including an energy assistance program (in the form of bill credits) for low-income residents, arrearage assistance for customers behind on their bills, and a suspension of electricity shut-offs and late payment fees.[38]

Due to its partial ownership stake in the biomass plant (with surrounding municipalities) BED is still forced to purchase some of its renewable energy from outside sources and use renewable energy credits; but, if it were to take full ownership of the biomass plant the city could completely power itself from locally owned and controlled sources.[39] However, it must be noted that while biomass can be considered a renewable resource, it is not necessarily carbon neutral and can have damaging impacts to the environment and surrounding communities.[40] Recognizing this, the city currently has plans to move beyond 100% renewable energy to completely carbon neutral by 2050. This includes continuing to add more renewable energy generation as well as focusing on energy retrofits and efficiency efforts across various sectors.

Here too, the publicly owned utility is playing a leading role. It developed the roadmap on how to

achieve the city's goal and runs various programs related to energy efficiency, including an incentive program to help residents convert from gas to electric heat pumps (such indirect efforts will be discussed further in part II of this section). Burlington's mayor, Miro Weinberger, has acknowledged that having a publicly owned utility has been critical to the city setting and achieving its ambitious goals, stating "I think it's not an accident that it was a city with the publicly owned utility that got there first."[41]

Beyond direct investments in renewable energy

In addition to procuring or building renewable energy generation themselves, community utilities also play a role in the energy transition through other activities – including, but not limited to: incentivizing, marketing, and socializing energy efficiency programs; supporting distributed energy resources including rooftop or community solar and storage; providing revenue for municipal sustainability efforts; and coordinating and facilitating renewable energy planning on behalf of municipal authorities.

First and foremost, research by George Homsy shows that the presence of a publicly owned utility increases the likelihood of "community-wide sustainable energy policies." This is primarily due to the "the increased capacity that publicly owned utilities provide by virtue of income generated and access to energy-specific grants as well as the local nature of their operations, which allows a better fit of sustainable energy measures to local circumstances."[42] Further research by Homsy confirmed these findings, specifically that A) "the presence of a municipal electric company correlates to increased [sustainability] policymaking by a city or town in the greater community;"[43] and B) that in smaller, less resourced communities "municipal electric utilities provide an important alternative revenue source in support of sustainability efforts."[44]

In addition to generating revenue that can then be used for wider energy efficiency and climate mitigation programs and increasing local planning capacity, publicly owned utilities also often engage in certain "demand-side management" activities. Specifically, Richard Feiock, et al. found that "municipal-owned utilities promote energy efficiency by providing incentives, in the forms of rebates and loans, for residents, commerce and industries to buy energy-efficient equipment and engage in load management programs."[45] In addition to the aforementioned effort in Burlington to incentivize residents to convert to heat pumps, another example concerns NYPA. While NYPA is not a local publicly owned utility (rather a state-level publicly owned power generator), it nonetheless has had several interesting programs related to incentivizing energy efficiency. In the 1990s, for instance, NYPA worked with the New York City Housing Authority (NYCHA) on a highly successful effort to purchase new, purposefully built energy-efficient refrigerators in bulk and install them in thousands of public housing units at no cost to the residents.[46] Currently, NYPA runs several similar programs, including the BuildSmart NY program, which is focused on coordinating energy efficiency efforts in all public buildings, and the Municipal Alternative Vehicle Program, which provides zero percent interest financing to local governments seeking to replace their vehicle fleet with energy-efficient alternatives.[47]

Similarly, many electric cooperatives are also engaged in additional energy transition programming. A 2015 survey by the National Rural Electric Cooperative Association (NRECA) found that 92 percent of cooperatives communicated with their members about energy efficiency, 77 percent offered free or low cost energy audits, 49 percent offered financial incentives to increase efficiency, 40 percent directly offered efficiency services to members, and 50 percent offered advanced meters to some members.[48] Summing up the evidence in 2016, Adam Bickford and Howard Geller wrote that demand side energy programs can help all parts of the cooperative ecosystem, including G&T cooperatives, local cooperatives, and individual members. Energy efficiency and other demand side activities can flatten out energy demand and lessen the need for expensive new facilities that can handle demand spikes and currently are some of the most inefficient fossil fuel plants (sometimes called "peaker plants").[49] For the local cooperatives, such programs

can reduce the amount of energy they need to purchase and for members, it can help lower their electricity bills. These investments are particularly critical because rural electric cooperatives serve some of the lowest income areas in the United States where people are suffering major economic burdens and are struggling to pay their energy bills. Moreover, contrary to popular narratives about rural areas, these burdens are disproportionately affecting elderly, nonwhite, and renting households.[50]

Roanoke Electric Cooperative & Pay As You Save

The Roanoke Electric Cooperative, which serves around 16,000 customers in northeast North Carolina, is a recognized leader in energy efficiency programming and addressing energy poverty. In 2014, the cooperative partnered with Clean Energy Works to implement an innovative efficiency program called Pay As You Save (PAYS) to both lower people's bills and their energy consumption. In particular, this program can help those living in energy poverty (pervasive throughout the United States but also particularly prevalent in more rural areas) since it is designed to benefit families that don't have the upfront capital or credit to invest in efficiency upgrades or who are renters that have less ability or incentive to take on retrofits.[51] The PAYS model implemented by Roanoke, and increasingly other rural electric cooperatives across the United States, stands out because it abandons debt financing and provides an on-bill tariff that pays the utility back over time. Some of the specifics and successes of the program include:

- Those households within Roanoke Electric Cooperative's service territory that made efficiency upgrades under the program realized average savings of around 50%.[52]
- According to Curtis Wynn, the co-op's president, the utility is conducting 200 efficiency upgrades per year via the program over five years, equivalent to an estimated 7% of the service population.[53]
- Roanoke Electric Cooperative is considering applying similar programming for distributed renewable energy projects, like rooftop solar.
- In order to support the development of a local contractor pool to do efficiency upgrades, the cooperative facilitated multiple workshops.
- After implementation in Roanoke, Ouachita Electric Cooperative in Arkansas took up the model and found that subscriptions to efficiency projects doubled within six months, a third of which were renters who are particularly hard to target with debt-based programs.[54]

Roanoke Electric Cooperative's efforts, including the PAYS program, is an example of how community utilities can implement progressive programs that both support lower-income customers and invest in reducing energy needs for homes across their area. More generally, since such programs benefit the customers who are also owners of electric cooperatives, they have the potential to be highly popular and replicable.

Challenges & limitations

While many community utilities are in the process of shifting a significant percentage of their generated and purchased energy to renewable sources, it is important to recognize that significant structural barriers remain. First, the prevailing incentive structure for the deployment of renewable energy generation infrastructure in the US is based largely on tax incentives that community utilities lack access to. This means that they must procure much of their renewable energy instead of building and owning it themselves. This can have the effect of raising the cost for community utilities to shift to renewable energy (especially if the providers are private companies) or even disincentivizing investment in renewables.[55] "So we sign a power purchase agreement with a third party. Which is fine, but the third party takes the tax incentive and makes a profit. It's not as efficient a way, as if we could do it directly," NRECA CEO Jim Matheson recently told *Utility Dive*.[56]

Second, in some areas, long-term contracts and relationships with G&Ts, PMAs, JAAs or other entities can sometimes obstruct the energy transition, with

smaller community utilities locked into long-term fossil fuel contracts when they have interest in moving towards more local, renewable energy. For instance, in the Tennessee Valley Authority area, Jason Carney, CEO of Energy Electives and President of the Tennessee Solar Energy Association, observes that local communities and organizers are in a bind when it comes to advocating for increased renewable energy. Since local community utilities primarily distribute energy generated by TVA, they are largely bound by the decisions TVA makes regarding its sources of energy.[57] Moreover, since TVA serves hundreds of such local utilities, it is difficult to generate any significant bottom-up pressure on TVA to shift its energy mix. This dynamic has the additional effect of providing some local utilities with a convenient excuse for why they cannot shift to renewable energy; and, for TVA, an excuse as to why it does not have to listen or respond to resident concerns (since TVA sees the local utilities as its customers, not the people and businesses that are the ultimate end consumers of its electricity).[58]

While there are some examples of communities that have taken action to get out of such contracts – like Kit Carson Electric Cooperative in New Mexico, which pulled out of its long-term contracts with G&T Tri-State in order to build new renewable energy – this option may not be available to all community utilities (or widely understood by them).[59] More problematically, these buyouts are often facilitated by private equity backed renewable energy companies. In other words, private for-profit companies supported by wealthy individual and institutional investors pay the cooperative's contract termination fee to the G&T, and then the cooperative enters into an energy supply contract with this new entity which includes paying back the termination fee over time.[60] This is concerning because, as Erik Hatlestad of Minnesota-based Clean Up the River Environment (CURE) explains, it essentially "trades debt service from the federal government or a cooperative bank to the private equity sector," which can contribute to both financialization (and its destabilizing economic effects) and inequality (through private extraction and accumulation), among other issues.[61] Moreover, private equity backed buyouts are likely only going to be available or practical for larger, better resourced cooperatives and "at the end of the day, were that trend to continue, you will have smaller, lower income cooperatives holding the bag for these billion-dollar investments in coal plants," Hatlestad states.[62]

Third, there is a critical need to further investigate the extent to which public and cooperative utilities have supported or opposed distributed renewables such as rooftop and community solar in the United States (and why). As discussed further below and in Part II, while distributed renewables have, thus far, primarily benefited wealthier and whiter communities, they nonetheless have the potential to serve as a crucial tool to build community wealth, create local climate resilience, and foster direct investment in BIPOC communities. While some utilities, such as Kau'i Island Utility Cooperative in Hawaii, have moved to invest dramatically in rooftop solar as well as larger solar plus storage projects, there are also examples of community utilities that have been reticent or even obstructive to distributed renewable energy.[63] For example, some of the G&Ts have put caps on the amount of electricity that can be generated through local renewable sources for their member cooperatives.[64]

Fourth, while community utilities do not have the same profit-driven incentive structures as investor-owned utilities, they may still also have sunk investments in fossil fuels that could become stranded assets as the energy transition progresses. Beyond this, some community utilities may not currently have the capacity (e.g. technical, financial, or regulatory expertise) or the appropriate structure (i.e. less rigid and bureaucratic) set up to facilitate shifts to renewable energy generation and purchasing, climate resilience, or new business models while ensuring grid reliability and affordable rates. This may cause those utilities to hesitate and/or reject fully embracing the energy transition in fear of destabilizing supply or having to pass additional costs on to their customer members. While these are undoubtedly complex issues that will affect each utility differently, the New York Power Authority offers an interesting example of how to begin to navigate them in a more democratic way. They have recently entered into a "memorandum of

understanding" with environmental justice advocates in the PEAK Coalition to come to a decision about how to wind down the utility's peaker plants that are located in a neighborhood that is low income and predominately people of color. These sorts of nascent community partnerships and systems of accountability to environmental justice communities can become the building blocks upon which community utilities can start to build genuine community and worker buy-in and capacity in support of the energy transition.[65]

Lastly, in some community utilities there can be asymmetries of expertise, knowledge, or interest regarding the energy transition, energy systems in general, and other utility activities between those individuals and entities responsible for governance and oversight, and those responsible for management and operations. For instance, speaking about the effort to establish and develop a community choice energy program (also known as Community Choice Aggregation) in northern California, Jessica Tovar of the Local Clean Energy Alliance explains that the elected officials who appoint board members, and some of the appointees themselves, often "have little understanding of energy and how to run an energy program, so they are learning as they go along."[66]/[67] Often in such cases this will result in elected officials and board representatives of community utilities deferring to the managerial staff and technical experts employed by the utility to decide what is and isn't possible with regards to energy transition, economic development, and other activities. Related to this Andres Ramirez, Policy Director of Pacoima Beautiful, notes that utility staff can sometimes be resistant and reluctant to consider or implement community priorities around the energy transition and energy justice.[68] For instance, Professor Ryan Wishart from Creighton University in Nebraska notes that while the Omaha Public Power District (OPPD) now has a majority progressive and ecologically focused board, they have experienced push back to defer to the utility's staff, which has slowed those agendas, for example, rebuffing as impractical the reversal of regressive changes to the billing structure that many board members campaigned for office against.[69] This dynamic can be especially true in more corporatized utilities which have adopted private sector principles, structures, and management approaches (including recruiting executives and managers from private sector companies and/or traditional business/management schools and programs).

However, on the flip side, there is also evidence that in some cases it is utility staff driving innovative energy transition and economic development programs with board members being resistant or hesitant, either because of ideological opposition or a general lack of knowledge. For instance, Brianna Knisley, campaign manager for Appalachian Voices, states that in many cases board members are entrenched, see little opposition during elections, and do not have a lot of technical knowledge about how utilities work. As such, "finding the utilities with more progressive leadership within staff is really the route to go with trying to get progressive programs."[70] Either way, mismatches of interest, expertise, and knowledge between board members, staff, and elected representatives were identified as a major impediment to advancing innovative energy transition and economic development efforts by many interviewees, and recommendations for how to correct these imbalances will be suggested in Part II.

1.2 Economic Development Activities and Effects of Community Utilities

A conventional argument made in favor of community electric utilities is that they can, and do, play an important role in local economic (and community) development through providing more equitable access to affordable electricity. For instance, with regards to cooperatives, Dusan Parades and Scott Loveridge have found that the share of electricity provided by a cooperative is positively associated with wage growth at the county level in rural areas and that "an [electric cooperative] often plays direct roles in economic development."[71]

In general, providing affordable electricity to previously unserved or underserved areas and populations can have major economic and social benefits, and begin to address and redress economic and racial inequities. This was a primary reason why many community utilities in the US were formed in the first place during the

electrification era and remains an important motivator around the world. For instance, in post-1994 South Africa, the publicly owned utility Eskom – which had previously served only white areas – embarked on a major electrification effort across the whole country in order to support the new democratically elected government's efforts to improve social and economic conditions, reduce poverty, and dismantle apartheid. "It was incredibly successful," Sandra van Niekerk recalls. "It actually electrified huge areas...and showed what was possible for a publicly owned utility to do."[72] Similarly, in Costa Rica, the publicly run electricity and telecommunications utility ICE (Costa Rican Electricity Institute) is credited with successfully extending electricity access to nearly 100% of the population while focusing on keeping rates as low as possible through various energy efficiency programs.[73]

As seen in the South Africa and Costa Rica examples, electrification is intimately related to both affordability and racial and economic equity, since technical access to electricity means little without the ability to pay for the service. As such, evidence for the impact of community utilities on economic development often revolves around cost savings – and specifically the fact that publicly owned and cooperative utilities often have lower electric rates than investor-owned utilities. For instance, Homsy writes that "this lower price is a major component of the economic development argument for municipalization of electricity."[74] Similarly, Stephanie Lenhart, et al. have found that "in many municipalities, affordable electricity [from municipal utilities] supports economic development."[75]

While rates vary from community to community, on average residential customers across the United States pay around 13% less for electricity from publicly owned and cooperative utilities than they do from investor-owned utilities. Specifically, recent data from APPA shows an average cost of 11.8 and 11.9 cents per kWh for public and cooperative power respectively compared to 13.5 cents for investor-owned utilities. While average national rates for commercial and industrial customers are relatively similar, in some areas public and cooperative power is significantly cheaper for these consumers as well. For instance, in California (the most populous state in the nation), the average rate for commercial customers is 14.6 cents for public power, 15.2 cents for cooperative power, and 17.1 cents for private power. For industrial customers, it is 12 cents for public power, 8.4 cents for cooperative power, and 15.6 cents for private power.[76] While keeping rates low is often a primary goal for many community utilities (at the expense of other activities), some are starting to explicitly connect energy transition programs to lower costs. For instance, Ouachita Electric Cooperative in Arkansas is specifically passing along the savings from their investments in renewable energy to consumers in the form of lower rates.[77] However, on the other hand, with the advent of more distributed renewables and energy efficiency investments, some municipal and cooperative utilities have been struggling with how to manage their rate programming given the new reality. For instance, the Omaha Public Power District increased the fixed cost of utility bills to compensate for potential perceived revenue losses.[78]

Some community utilities are also beginning to experiment with innovating rate design structures that are explicitly designed to provide additional benefits to less energy-intensive and lower-income consumers (and address energy poverty issues). For instance, Seattle's local municipal utility, Seattle City Light, has a tiered rate design system such that the first "block" of energy comes at a lower, more affordable cost that is actually below the cost of service, with increasing cost if consumers use beyond the first "block" of energy. Additionally, the municipal utility provides 60% discounted rates to residents making up to 70% of the state median income.[79] Reflecting on this approach, and the overall performance of Seattle City Light, Katrina Peterson of Puget Sound Sage states that their research shows that "the public utility [Seattle City Light] is actually doing a better job of providing energy assistance for our local community members than the rival for profit utility [Puget Sound Energy]."[80] Specifically, while each utility had a low-income energy assistance program, the rate of enrollment of eligible customers for Seattle City Light was more than double that for Puget Sound Energy. Furthermore, "the programs and the financial resources available were greater for those who were in Seattle City Light's service territory as opposed to

Puget Sound Energy's service territory."[81]

Economic development linked to the lower energy costs offered by community utilities can be either a passive or active process. With regards to the former, the lower cost of electricity can provide: A) an incentive to businesses looking to locate, scale, or retain their operations in a local community; and B) an economic multiplier effect as cost savings to residents and businesses ripple out through additional employment and spending on goods and services in the local economy. For instance, in 2013, a US Department of Energy (DOE) report stated that reduced energy costs can be associated with "sales and employment gains" for local businesses as well as "multiplier effects of recirculating more local income due to reduced household utility bills."[82]

In terms of the latter, community utilities can directly provide lower cost electricity for economic development purposes. For instance, NYPA runs several economic development programs in which lower-cost power is provided to incentivize the creation and expansion of jobs in certain geographic areas. This includes the Industrial Economic Development Program (IEDP), which allocates up to 54MW of hydropower to local publicly and cooperatively owned utilities that see an increase in need due the creation or expansion of businesses in their service areas; ReCharge NY (RNY), which allocates up to 910MW of power to applicants committed to creating or retaining jobs in the state; and Preservation Power, which allocates up to 490MW of hydropower from the St. Lawrence Franklin D. Roosevelt Power Project to new and existing businesses in the region (Franklin, Jefferson, and St. Lawrence counties).[83]

Beyond providing lower cost power, community utilities can, and do, engage in a number of other activities that have economic development effects. These include: transferring revenue to a community's general fund or specific programs; procuring goods and services from local businesses; directly and indirectly employing community members; and providing additional services beyond electricity.

Returning revenues

There is a significant body of literature suggesting that quality public services and infrastructure – such as roads and public transportation, schools and libraries, parks and recreation, etc. – are positively associated with economic development. For instance, in a 1997 report in the *New England Economic Review*, Ronald Fisher wrote "in many studies, government spending, public capital, or public services are estimated to exert a positive and statistically significant effect on economic development."[84] Similarly, in 2004, Robert Lynch stated that "the literature on the effects of state and local public services indicates that state and local spending may stimulate economic growth and create jobs."[85]

In most US communities, the extent and quality of public services and infrastructure is at least partially dependent on local revenue generation (in addition to state and federal funding and investments). For instance, regarding schools, on average around 45 percent of funding comes from local sources, 47 percent comes from state sources, and 8 percent comes from federal sources.[86] Public and cooperatively owned utilities both return revenue to their local government to support such services, but there are some important differences. Cooperatively owned utilities, like investor-owned utilities, return revenue to a local government in the form of taxes. "While most electric cooperatives are exempt from federal income taxation under Internal Revenue Code (the "Code") section 501(c)(12), all electric cooperatives pay state and local property taxes, sales tax and payroll and excise taxes – over $1 billion annually," the National Rural Electric Cooperative Association reported in 2015.[87]

Publicly owned utilities, on the other hand, are exempt from most taxes and instead return revenue to local governments through a variety of other means, such as payments in lieu of taxation and direct transfers.[88] In general, these payments tend to be more than what is returned by investor-owned utilities through taxation. For instance, the latest data from the American Public Power Association (2018) suggests that publicly owned utilities return around 5.4 percent of operating revenues to local communities, compared to

4.8 percent for investor-owned utilities (a 13 percent difference).[89] This data suggests that publicly owned utilities in particular can, and do, play an important role in returning revenue so local communities can deliver high quality public services which, in turn, can lead to increased economic development. However, related to the discussion in the "Community Utilities and Democracy" section below about transparency and democratic accountability, there is room for improvement at both the utility and city level regarding how publicly owned utilities determine how much to return to local agencies and what it is used for (especially in larger jurisdictions with fewer opportunities for residents to regularly interface with utility managers, staff, and board members/commissioners).[90]

There is also a larger question about the implications and effects of relying on revenues from electricity provision to fund government services. First and foremost, as John Farrell of the Institute for Local Self Reliance (ILSR) points out, usually a utility's rate structure is relatively flat, essentially amounting to a regressive form of taxation when those revenues are being used as a source of public funding (i.e. people at the bottom of the income distribution end up being more economically burdened by electricity bills than those at the top).[91] However, this does not necessarily have to be the case. In fact, one of the benefits of community utilities (especially publicly owned utilities) is that they can choose to establish progressive rate structures and still return revenue to the community for economic development and other purposes. "You can always adjust your rate design," Farrell explains. "You could, as a utility or city government, set a policy that the utility transfer X amount [to the general fund] and shall adjust rates to ensure that it works."[92] Moreover, by making this rate adjusting process transparent and participatory, communities could preserve electric revenues as a stable and reliable source of income to fund public services while creating an important public forum for active conversations around racial equity, energy poverty, economic development/planning, and other important social and economic issues.

Secondly, a related concern is that when a community's public services are reliant on utility revenue, it may lead to ossification of the utility's existing business model. In other words, a community may be reluctant to advocate for, or demand, important or innovative changes to the utility's programs and practices if it thinks that doing so may reduce the amount of revenue it receives. This, Farrell points out, is particularly problematic when it comes to distributed solar and other energy transition programs that challenge the conventional utility business model.[93] However, similar to progressive rate structures, this is a problem of design and community utilities can, and should, develop new business models that both return revenues to communities if that is a local priority and incorporate such programs in an equitable manner that does not disproportionately burden the lower income households who have thus far been largely excluded from such programs (one such proposal for how this could work is suggested in Part II).

Additionally, as Katrina Peterson points out, policymakers at various scales (local, state, and federal) should start to think about alternative ways to fund energy infrastructure beyond consumer fees.[94] Such support, which could come in the form of grants, no-cost loans, alternative sources of revenue (such as progressive taxation), and the overhaul of burdensome or restrictive regulations, could provide community utilities with the financial space to begin shifting their business model to accommodate distributed renewables. As one anonymous employee at the Costa Rican Electricity Institute (which has, in recent years, helped the country transition to nearly 100% renewable energy) puts it, community utilities are "not necessarily obstacles to distributed [renewable] energy."[95] Rather these utilities are often "trying to understand it and adapt to the new reality," including both the technical requirements of such programs and the effects on utility finances. With the help of supportive public policy and regulations, the employee continues, community utilities can and will gradually adapt, both technically and financially, to distributed renewable energy.[96]

Going further, David McDonald from the Municipal Services Project in Canada suggests that the involvement of community utilities (especially publicly owned utilities) is actually critical to ensure

that distributed renewable energy (and other energy transition activities) does not simply benefit wealthier and whiter communities. "Unfortunately, some of the [decentralized] community stuff gets romanticized a bit," McDonald contends.[97] Often "it is a kind of privileged middle-class clustering of people" that benefit from such strategies while indigenous groups, low-income families, and "racialized communities in inner cities are left out."[98] For that reason, along with the urgent need for more centralized planning and economies of scale with regards to renewable energy investment, McDonald believes that "democratic, accountable, and equity oriented publicly owned electricity operators" are the best option to advance distributed renewable programs in a way that is both equitable and in accordance with climate change imperatives.[99]

Procurement

All utilities, regardless of ownership type, must procure a variety of goods and services – everything from pens and paper to wind turbines components and electric meters. Many community utilities already attempt to direct some percentage of their purchasing power to local businesses and/or women-, minority-, and veteran-owned businesses. These may be voluntary programs or, as is often the case in publicly owned utilities, required by local or state laws. One example is the Fayetteville Public Works Commission (PWC) in North Carolina. In 2016, this publicly owned utility began a strategic planning process to increase the amount of its procurement from local and minority-owned businesses. Five years later, in 2021, PWC hired outside consultants to perform an in-depth analysis of the utility's procurement programs and policies, as well as survey local businesses to identify needs and challenges they have experienced related to working with the utility. The report is due to be completed in the Summer of 2022 and PWC "expects the study to reveal more about local business community needs, what demand there might be for using more local, minority and women owned businesses, and if it can target specific areas for improvement."[100] In this regard, PWC's efforts are also an example of how community utilities can commit to continual monitoring and evaluation of their economic development programs to ensure effectiveness and accountability.

Stronger procurement policies and greater intentionality about how said policies can be used to create more equitable, democratic, and ecologically sustainable local communities is a key part of the anchor mission concept. While local and Minority/Women owned Business Enterprises (MWBE) are a good start, utilities could and should consider involving and supporting other types of businesses that may deliver greater community benefit. For instance, John Farrell states that "in the same way that you have women and minority owned businesses as a category for procurement support, you could have things like worker co-ops and other structures that you see as important to the community."[101]

LADWP

The Los Angeles Department of Water and Power (LADWP) is one of the largest publicly owned electric utilities in the United States, providing power to around 1.4 million electric customers.[102] Each year the joint utility (water and power) procures around $1 billion of goods and services from vendors.[103] These purchases are authorized and governed by the Los Angeles City Charter, and in particular the city requires that local businesses receive bidding preferences on contracts, that environmental factors are considered when making purchases, and that most suppliers pay their workers a living wage (among other requirements).[104]

To meet (and exceed) these requirements, LADWP operates a number of intersecting local business procurement programs and efforts. This includes:

The Local Business Preference Program (LBPP), which offers certified local businesses an 8 percent preference on prime contract bids and a 5 percent preference on subcontract bids for all contracts over $150,000.

The Small Local Business Program (SLBP), which offers a 10 percent preference to small local businesses (those with less than $3 million in annual receipts) on all contracts of less than $100,000.[105]

The SBE/DVBE Participation Program, which seeks to provide opportunities for Small Business Enterprises (SBEs), Disabled Veteran Business Enterprises (DVBEs), Women-Owned Business Enterprises (WBEs), Minority-Owned Business Enterprises (MBEs), Emerging Business Enterprises (EBEs), and Disadvantaged Business Enterprises (DBEs) to access LADWP procurement contracts.[106]

LADWP has set an annual goal SBE/DVBE goal of 25 percent participation, lists all of its contract awards publicly, and requires all contractors to comply with numerous city-required social and environmental regulations.

Employment

Community utilities directly employ hundreds of thousands of people across the United States. As of 2017, electric cooperatives directly employed 68,200 people, and in total, their operations supported around 612,000 jobs.[107] Similarly, publicly owned electric utilities directly employ around 96,000 people.[108] These workers tend to be drawn from local communities and in turn they buy homes and cars, pay taxes, and engage in a host of other activities that generate and support local economic development. "In an era of globalization, public power utilities stand out in that every employee is a member of the community," APPA writes.[109]

By contrast, due to the fact that investor-owned utilities are larger and often provide service over a wide geographic area (which in some cases can include many different jurisdictions), employees are often not necessarily members of the local community. For instance, when Jefferson County, Washington municipalized its electric utility in 2008, one of the prime motivations was to increase local employment and reduce reliance on utility workers from out of town. "One thing almost everyone in Jefferson County can agree on is the need for more family-wage jobs," Commissioner Barney Burke said at the time.[110]

While investor-owned utilities undoubtedly also employ hundreds of thousands of people in the United States, there is some evidence that these jobs are less stable, equitable, and secure than those provided by publicly owned and cooperative utilities (all of which has an effect on the economic development impacts of that employment). First, pay inequality in investor-owned utilities appears to be far greater than in publicly owned or cooperative utilities. Recently, the Energy and Policy Institute found pay ratios (between the CEO and the median employee salaries) of between 98 to 1 and 168 to 1 for the top 10 largest investor-owned utilities.[111] While comparable data isn't readily accessible for publicly owned and cooperative utilities, for both, executive pay is usually far less than that of investor-owned utilities.[112] Moreover, it is well known that paying high salaries to the already super rich does not have the same local economic development effects as if that money was more widely dispersed to lower and middle class workers (especially if those wealthy executives do not live in the local community).

Second, unionization in the utility sector (which includes electric utilities, gas, and water) is associated with higher employee pay, with data from the Bureau of Labor Statistics (BLS) suggesting that median weekly earnings for unionized workers is around $200 higher than non-unionized workers.[113] Yet, as a whole unionization rates in the private sector are significantly lower than those in the public sector. Overall, public sector unionization rates are around 5 times higher than private sector rates (34.8 percent vs. 6.3 percent in 2020).[114] Moreover, in recent years these percentages have continued to fall in the private sector while generally holding steady in the public sector. Utilities have one of the higher rates of unionization in the private sector, at around 20.6 percent. However, this is around half of the unionization rate of local government workers (41.7 percent).[115]

Related to higher levels of unionization, public sector employment is often more stable and provides stronger pension and medical benefits (among others). For instance, in a 2020 report discussing how public sector work specifically benefits BIPOC people, the Center for American Progress found that "public jobs provide good wages, better benefits, and greater job security, all of which are critical components of

economic security and help families build wealth."[116] However, it is important to recognize that union rights and benefits are not the same across various economic sectors (and across geographies) and, as John Farrell points out, because of legislative and judicial decisions (such as Janus v. AFSCME) workers and unions may be justifiably reluctant to convert from an investor-owned utility to a community utility.[117] For instance, one anonymous California-based International Federation of Professional and Technical Engineers (IFPTE) member suggests that public pension reforms signed into law in that state in 2013 (known as PEPRA) are a major reason why some electric sector unions are opposed to public ownership.[118] Specifically, the "reforms" put caps on public sector pension contributions and, thus, limit what unions can achieve through collective bargaining. More generally, due to California's unique and highly restrictive regulations around local taxation (including the infamous 1978 voter approved referendum known as Proposition 13), localities in the state go through "boom and bust" cycles, with the busts associated with public sector pay freezes and layoffs. As such, the IFPTE member states, in general public sector employment in the state is no longer seen as a better or more secure place to work than the private sector (removing such artificial legal and regulatory restraints on community utilities will be discussed in Part II).[119]

Despite these constraints, the potential economic development benefits of well-paid, union jobs can sometimes be a strong motivator for community utilities, local public officials, and organized labor alike to support energy transition activities. For instance, with regards to the aforementioned northern California community choice energy program, Tovar states that "wanting to create clean energy jobs was the big piece that really got the attention of our union allies and we were able to create a unity position around that."[120] In turn, that helped convince elected officials, enticed by the prospect of greater job creation, to put up money for a "Local Development Business Plan" that was then adopted and has had some success – although it has also faced challenges around implementation and accountability.

Lastly, local public sector employment can also be a vehicle to advance other equity goals with regards to employment and economic development. For instance, Shahrzad Habibi, Research and Policy Director at In the Public Interest (ITPI), shares the example of the Chicago Transit Authority's highly successful "Second Chance Program" which provides training, education, and jobs to returning citizens, abuse victims, and other residents experiencing barriers to employment.[121]

Additional services

Community electric utilities can, and often do, provide additional services beyond electricity related activities that have an economic development impact in local communities. For instance, some publicly owned electric utilities also provide water and/or gas services. One example is LADWP which, as already discussed, provides both electricity and water. Another is Memphis Light, Gas, and Water (MLGW), which as the name suggests, provides all three services. There is some evidence that the combination and/or integration of utility services with other municipal functions can yield cost savings and efficiencies, leading to increased local economic development. For instance, APPA states that "municipal utilities can also create new efficiencies in local government. Some utility operations may overlap with other services the municipality is already providing; when these can be combined, the result is a leaner, more efficient operation that benefits everyone. For example, a city providing multiple utility services (electric, water, wastewater, natural gas, and telecommunications services) may combine billing and metering operations and share a 24-hour emergency call center."[122] However, unless these efficiency savings are directly passed on to residents in the form of lower bills, combined billing can also lead to affordability challenges for struggling families since they are unable to stagger payments to multiple providers.

It is important to note, however, that in the long run fossil-fuel gas must be phased out if the world is to meet its climate goals, and community utilities that provide household gas services must ultimately shift their business models in a fundamental way. Standalone publicly owned gas utilities in particular are especially

problematic, and some have actively fought against climate action in the past.[123] For example, the Philadelphia Gas Works (PGW) – the largest publicly owned gas utility in the country – is increasingly putting that city's climate change commitments at risk by fighting against reform efforts.[124] Moreover, as Mitch Chanin from POWER (a Pennsylvania-based multi-racial, interfaith organization) explains, the corporatized governance and management structure of PGW is extremely convoluted and complex, making it difficult for advocates to suggest changes and bring pressure to bear on the utility.[125]

Despite this, POWER and other advocates in the city recognize both the importance and potential of PGW as a community utility, especially its roughly 1,100 unionized workers (along with retirees) and the importance of those jobs to the community. Rather than dismantle PGW and lose its economic and community development benefits, they want to transform the utility in a way that "upholds everyone's right to affordable heating and cooling, protects and expands living wage union jobs, protects public health, and eliminates greenhouse gas emissions."[126] Specifically, they have suggested that PGW remain a publicly owned utility, provide an alternate and reliable heating and cooling service based on thermal energy (which does not emit greenhouse gases and create toxic air pollution), and guarantee equity, accessibility, and affordability for residents. This new service, Chanin contends, would retain many advantages of public ownership (including access to low-cost municipal bonds and network effects) and could bring significant economic benefits to the utility and city alike.[127] However, whether or not such a service would need to be performed by a separate community utility or could be integrated into the activities of a community electric utility is up for debate (although in the Philadelphia case, electricity is currently provided by an investor-owned utility, so keeping PGW as a separate, community utility with a different business model makes considerable sense).

Another service that has become increasingly important to the economic development activities and prospects of many local communities in recent years has been telecommunications – and specifically broadband/fiber internet networks. Currently, there are around 900 community broadband networks in the United States – with about 560 of these being publicly owned and another 300 or so being cooperatives.[128] These networks provide affordable, high speed internet access to communities that are underserved by the traditional for-profit telecommunications companies and help local communities attract and retain jobs and workers given that economic activity has become increasingly reliant on reliable internet access.[129]

Many of these community broadband networks are operated by publicly owned and cooperative electric utilities since they are a logical outgrowth of their existing operations, expertise, and community-serving mission – specifically, installing and maintaining cables and other physical infrastructure, providing billing and customer support, operating a local networked service, and accessing low-cost financing. In Washington, for example, Amy Wheeless of the NW Energy Coalition states that community utilities – and in particular the Public Utility Districts (PUDs) – have been driving the broadband conversation at the state legislature, seeing it both as a source of revenue and a critical community need (especially given the impact COVID-19 has had on both work and education).[130]

Chattanooga, Tullahoma, & VMDABC

In Chattanooga, Tennessee, the city's publicly owned electric utility (Electric Power Board) has been operating a high-speed fiber network for more than a decade. It was the first location in the United States to offer 1 Gbps service and it subsequently upgraded to 10 Gbps. It is estimated that the network is responsible for adding around 2,800 new jobs and $1 billion to the local economy, and many companies have specifically credited affordable, high speed internet as one of the reasons they have moved to the city or expanded.[131] It is also one of the larger publicly owned broadband networks in the country, serving not only the roughly 180,000 residents of Chattanooga, but also those in the neighboring jurisdictions of East Ridge, Ridgeside, Signal Mountain, Lookout Mountain, Red Bank, Rossville (Georgia), Flintstone (Georgia) and

Wildwood (Georgia).[132]

In neighboring Tullahoma, Tennessee civic leaders and economic development officials have also credited their municipal broadband network LightTUBe (run by the publicly owned Tullahoma Utilities Authority, which is also responsible for the city's water, electricity and wastewater services) for significant economic development. According to Lisa Gonzalez, "before the city invested in the network, job growth in Tullahoma lagged behind the rest of the state, but within two years after the city began offering broadband, that statistic changed. Job growth in the city doubled Tennessee's statewide rate."[133]

VMDABC – the Virginia, Maryland & Delaware Association of Broadband Cooperatives – is a new trade association of electric cooperatives that own and operate broadband internet networks. Founding members include: the Prince George Electric Cooperative in Waverly, Virginia (and its broadband network, RURALBAND); the BARC Electric Cooperative in Millboro, Virginia (and its broadband network, BARC Connects); the Central Virginia Electric Cooperative in Arrington, Virginia (and its broadband network, Firefly Fiber Broadband); the Choptank Electric Cooperative in Denton, Maryland (and its broadband network, Choptank Fiber LLC); and the Mecklenburg Electric Cooperative in Chase City, Virginia (and its broadband network, EMPOWER Broadband). The association plans to coordinate around legislation, communication, and marketing as it relates to electric cooperatives and broadband internet services. This includes a focus on the social and economic benefits of community owned broadband networks. "Broadband access is something our members desperately need, as many rural areas are once again being left behind," John C. Lee Jr., CEO of Mecklenburg Electric Cooperative states. "Generations of future Virginians and Marylanders will have opportunities to learn, to work, to communicate and to enjoy benefits long available to those in cities and suburbs, thanks to the efforts of our group of broadband cooperatives."[134]

Integrating economic development & environmental justice

As has been previously discussed, many community utilities have renewable energy/energy efficiency programs and many also engage in a number of economic development activities. Some even integrate these two approaches together by, for instance, using renewable energy to incentivize economic development or assisting businesses and residents with energy efficiency to lower both costs and consumption. Beyond this, there are also promising signs that some utilities are seriously starting to consider how to integrate economic development not only with energy efficiency, but with environmental *justice*.

One prominent example is the City of Seattle's "Duwamish Valley Action Plan." The plan was created by a Departmental Action Team (DAT) comprised of 18 city departments, including the publicly owned electric utility (Seattle City Light) and water/sewer utility (Seattle Public Utilities). The plan centers efforts to clean up the polluted Duwamish River and address longstanding health and economic inequities in the area. Specifically, DAT is working "to better align and coordinate efforts to advance environmental justice, address racial and neighborhood-level disparities, reduce health inequities, build community capacity, create stronger economic pathways and opportunity, and build trust in government."[135]

The plan includes several strategies related to energy. These include having Seattle City Light: A) partner with or fund community-based renewable energy and energy efficiency projects; B) provide support and technical assistance to area businesses (especially small businesses and those owned by people of color) so that they are better able to participate in existing city energy efficiency and building retrofit programs; C) fund a variety of new pilot projects around weatherization, oil heat conversion, and renewable energy deployment; D) ensure community representation in the development of a "100% Equitable and Renewable Energy Roadmap and Strategy"; E) link local residents and women- and minority-owned businesses with community solar pro-

grams; F) fully fund (through rebates) the conversion of oil heating to electric heating for all homes in the area, with a primary focus on communities of color, immigrants, refugees, and people with health needs; G) provide incentives for businesses in the area to convert to electric vehicles; H) install electric vehicle charging stations in the area; and I) develop a citywide Just Transition Plan to "proactively mitigate potential negative impacts from fleet electrification on residents and workers whose livelihood depends on heavy-duty fleet vehicle repairs and maintenance."[136]

Moreover, due to its holistic and integrated nature, the plan anticipates and tries to mitigate potential unintended consequences related to pollution clean-up and economic development. Specifically, it emphasizes expanding affordable housing and preventing displacement. It also centers community participation, engagement, and control in all aspects of the plan's implementation strategies. Recently, the city has begun to move forward on aspects of the plan, including purchasing land for 70 to 120 units of affordable housing to be built by non-profit housing developers. The units will be designed to accommodate multi-generational families, will "utilize Community Preference to support those most impacted by displacement," and will incorporate water and energy sustainability practices.[137]

Challenges & limitations

While community utilities already undertake a range of local economic development and have significant direct and indirect impact, considerable improvement and intentionality will be needed in order to truly embrace the anchor mission. First and foremost, for many community utilities economic development is something of a secondary concern and important opportunities for impact can be missed. For instance, Hatlestad laments that electric cooperatives "have access to billions of dollars from rural development loan programs that they could make available for economic development in the form of grants or very low interest loans," but they often are not taking advantage of these opportunities.[138] Similarly, Ashura Lewis of One Voice in Jackson, Mississippi, explains that in the Delta region, electric cooperatives have significant economic development power but, they have mostly stayed out of this arena and left larger-scale economic development activities to private, for-profit utilities like Entergy (which, in turn, supports large corporate developments like a multi-million dollar Nissan plant).[139]

Secondly, related to this, the intentional economic development activities of community utilities are often relatively conventional – in many cases limited mostly to traditional business attraction and retention activities such as providing lower cost energy to entice for-profit businesses to locate to a community – and often do not address root causes of local economic instability and inequality. While these are undoubtedly important, they just scratch the surface of what is possible if community utilities begin looking holistically at community needs. "If we are thinking about solving community needs," Hatlestad suggests, "why not have an electric cooperative put money on the ground for cooperative housing? Housing is a huge need in rural communities as it is everywhere. We have all these tools out there that they can use to help solve community problems. But they just aren't."[140] Similarly, with regard to Eskom in South Africa, van Niekerk recalls that in the past the publicly owned utility has focused its efforts on big industry by providing very preferential rates and access to electricity, while generally ignoring the economic and social benefits of providing similar subsidies to the predominately Black working class (including better education, increased gender equality, opportunities for entrepreneurship, etc.).[2]/[141]

Third, some community utilities – especially in more politically conservative areas – are almost exclusively focused on providing the lowest rates possible for electricity, which sometimes can come at the expense of considering other economic development activities and/or investing renewable energy transition activities.

[2] Similarly, with regards to TVA (which, as far as this report is concerned is a public power generator, rather than a community utility), Jason Carney states that the organization is far more concerned with the needs of large businesses than it is with local communities. "We've got big companies like Facebook and Google who demand 100% renewable energy, and they get it," Carney explains. "But then you have cities like Nashville who have made a commitment to 100% renewable energy, but we are not getting it as quickly, even though in aggregate we are a larger customer than Facebook or Google." Jason Carney. Interview by Johanna Bozuwa. Videoconference. July 29, 2021.

This is the case in eastern parts of Washington State, where community utilities have some of the lowest rates for electricity in the country due to their ability to access cheap hydropower from the BPA. According to Joni Bosh of the NW Energy Coalition, "there's almost no appetite or interest in the community utilities that I've worked with up here to encourage distributed solar on homes and businesses because the power is so cheap. The same goes for energy conservation and efficiency. All that a lot of the smaller utilities on the east side care about is getting enough revenue to run their distribution systems, and that is it."[142] Similarly, some of these community utilities have resisted efforts (such as the 2019, state-level Clean Energy Transformation Act) to develop programs that could have an economic and community development impact (such as bill assistance and weatherization for low-income communities). Their position, Bosh explains, is that their low rates bring jobs to the community, and this alone should be sufficient; and secondly, as far as the PUDs go, they feel that they do not need any additional citizen engagement and participation since their boards are directly elected by the local population.[143]

Fourth, while many community utilities have supplier diversity and other local procurement, investment, and workforce policies, the strength and efficacy of these efforts can vary greatly across jurisdictions based on the type of utility (i.e. publicly owned or cooperative), state, local, and/or federal regulations, and community power. While acknowledging that this report does not consider the TVA to be a community utility, it does nonetheless provide certain important lessons on this point. Specifically, TVA has a supplier diversity program which, ostensibly, delivers positive results for equitable economic development in the region.[144] However, according to Carney, the perspective of local residents and activists is that the TVA's supplier diversity efforts are wholly underwhelming and unambitious – especially with regards to renewable energy programs.[145] Moreover, the TVA has been accused of stoking – rather than alleviating – regional imbalances when it comes to its economic development activities generally, and its workforce policies specifically given that there are wide disparities in terms of where its staff are located.[146]

1.3 Community Utilities & Democracy

Local control and democracy are part of the reason why community utilities are considered important actors in the energy transition. By and large, the executives and managers of investor-owned utilities are ultimately beholden (and responsive) to the corporation's shareholders – which tend to be wealthy individuals and large institutions which prioritize short-term financial returns and do not necessarily have any connection to (or interest in) the communities which the utilities proport to serve. This creates a powerful structural impediment to an IOU's ability to respond effectively to local needs and concerns, especially if they require the utility to forgo short-term profits or shift their business model (an impediment that public regulations and requirements are only partially able to correct for). For instance, the large regulated California for-profit utility Pacific Gas & Electric (PG&E) distributed $4.5 billion in profits to shareholders over just five years, while simultaneously failing to invest in equipment maintenance and upgrades leading to the devastating "2018 Camp Fire" which killed dozens of Californians.[147] Moreover, while surrounding publicly owned utilities like the Sacramento Municipal Utility District (SMUD) have invested in mitigation and reliability measures and are able to keep power on for customers even during the most extreme weather events, PG&E routinely suffers blackouts that affect hundreds of thousands of residents.

In contrast, the managers and executives of community utilities are at least nominally beholden to the local community since they are the ultimate owners (either directly or indirectly). The effects of this local control can, in some cases be powerful. For instance, after community advocates and stakeholders raised concerns about the lack of equity considerations in the LA100 study (discussed above), LADWP – at the insistence of Board President Cynthia McClain-Hill – launched a second, parallel study called "LA100 Equity strategies." Not only will the study focus on the equity issues raised by community stakeholders, it will also be designed so that community groups and

environmental justice advocates will direct and drive the research process. "LA100 Equity Strategies is a critical next step on the path to 100% renewables, with the goal of lifting up all Angelenos so that everyone will share in the benefits of clean energy," McClain-Hill stated when launching the effort.[148] Inasmuch as the results of this study are ultimately integrated into the overall LA100 effort (and LADWP's energy transition activities generally), this experience could be a powerful example of how to integrate both equity and participatory planning into a community utility's energy transition efforts.

Similarly, in Memphis, Tennessee MLGW and the city council have taken several measures to involve the public in their deliberations on whether to separate from TVA (although, as Pearl Walker – Civic Engagement Coordinator at the Southern Alliance for Clean Energy and Chair of Memphis NAACP's Environmental Justice Committee – states, significantly more intentionality around community engagement and participation is needed).[3]/[149] Moreover, Ashura Lewis states that around the country some communities have had success in shifting the practices and programs of electric cooperatives by securing direct representation on the board.[150]

More generally, because of their ownership structure, community utilities such as LADWP can be more accessible and responsive to organizing and the concerns of the community and customers than investor-owned utilities or larger-scale power generators like TVA. For instance, Sandra Upchurch, a retired leader of the Southern Alliance for Clean Energy, notes a marked difference between the accessibility, responsiveness, and trustworthiness of MLGW and TVA. Whereas TVA responded to community organizing around energy poverty and pollution issues with fear, heightened security, and an overt suppression of public comments, Upchurch recalls, MLGW has been more receptive and respectful (as well as accessible via supportive city council members).[151] Compared to TVA, "I trust MLGW," Upchurch states.[152]

This sentiment is echoed by Cabrera, who states that if LADWP itself is not being responsive to community concerns, or is dragging its feet on certain actions, organizers and residents can go to their elected representatives and attend city council meetings, which is a far more accessible space than the state-level utility commissions which regulate investor-owned utilities.[153] This is because these commissions are often highly technical spaces with atomized proceedings that prevent cross-cutting issues from being addressed and require teams of lawyers to navigate. Moreover, "ultimately as rate payers we are also voters," Cabrera reminds us. "So we vote on who is on the city council, and we vote in the mayor who appoints the commissioners of LADWP."[154] Ramirez agrees with this perspective, adding that an additional problem for local community groups related to public utility commissions is that the investor-owned utilities they regulate often cover multiple jurisdictions across a wide geographic area and one particular community's concerns and input may not be valued as much as at the city council and executive level in their particular jurisdiction.[155]

Likewise, despite the corporatized nature of PGW in Philadelphia, Mitch Chanin sees opportunities to influence the utility's direction through the mayor and elected representatives on the city council (some of whom also serve on the Philadelphia Gas Commission).[156] Katrina Peterson also points out that one of the reasons for Seattle City Light's effectiveness and progressive disposition is its accountability to elected representatives on the City Council, who in general have a relatively broad and intersectional understanding of what the city needs. "At the end of the day, the utility is accountable to Seattle's elected officials. And this has really powerful implications when compared to other models – including direct elections to utility boards."[157] While this conventional approach to community participation and democratic accountability is not without its limitations and difficulties, especially with regards to such old, powerful, and large institutions as LADWP and PGW and more politically conservative areas, it demonstrates some of the baseline democratic

[3] With regard to LADWP, Ramirez has similar concerns, stating that "they don't think about how to make things accessible, and how to use accessible language so that the vast majority of people who are not trained as engineers can understand. They have good intentions when they create these programs, but they don't understand that accessibility is a challenge for folks in our community." Andres Ramirez. Interview by Johanna Bozuwa and Raj Rao. August 30, 2021.

opportunities that exist with community utilities.

However, it must be reiterated that in many community utilities participation and democratic accountability, along with the progressive principles that in many cases animated their creation, have atrophied over the decades (or never existed to begin with) – replaced in many instances by increased corporatization and a lack of accountability. For instance, speaking about electric cooperatives in the Midwest, Hatlestad states that "as you lose both the political center and the historical perspective of what a cooperative is and what it's supposed to be, you start having these organizations look more and more like the organizations they were created to subvert. Especially when you have a lot of managers and staff at co-ops who are not coming from the cooperative movement or with cooperative values. They are being trained at normal business schools and they are going to apply the same kind of tactics that you would see in any other kind of for-profit businesses."[158] For electric cooperatives to fulfill their potential, Hatlestad continues, there needs to be "a reclaiming of the democratic principles...and actually living up to those, rather than simply a PR statement about 'how much we care about our members.'"[159]

Similarly, Ashura Lewis reveals that in the Delta region, the boards of electric cooperatives are not only unrepresentative of the communities they serve (i.e. board members are primarily white, male, and rich, while residents are mostly lower income people of color), but also hostile to democratization efforts. Specifically, discussing three efforts to have local residents elected to cooperative boards, Lewis explains that in each case the utility barred the prospective nominee on a technicality before the election could take place. "The current entity had no interest in giving up power," she states, "and we underestimated some of the tactics and sneakiness they used."[160] "It's so frustrating," Lewis continues, "because if you actually have a co-op that follows their seven cooperative principles, they become powerful economic engines for change and social justice...we just have to find ways to get them to actually follow their own rules."

Also, in some cases, community utilities have used the existence of democratic structures (specifically directly elected boards) to justify their unwillingness to consider increased transparency and more direct forms of community participation. Equally problematic is a general lack of introspection among some of these utilities regarding how democratic those structures are to begin with. For instance, many of the aforementioned utilities in Washington State only have three seats on their board, limiting how well they can truly represent the interests of a local population. Related to this, in some cases the demographics of board members no longer match those of the communities they represent (i.e. areas with majority younger, Hispanic populations represented by older, white men), and the utilities have often done little to change this situation (for instance by doing targeted outreach or making specific information about the utility available in Spanish). These democratic deficiencies, Bosh and Wheeless contend, make it difficult to organize for energy transition activities at the local community utility level. By comparison, they point to some of the successes they have had organizing at the PUC level (Washington Utilities and Transportation Commission (UTC)) with regards to investor-owned utilities (both in terms of participation and accountability), and make the case for the creation of similar, larger-scale regulatory and oversight structures for community utilities.[161]

While NW Energy Coalition's experiences with the Washington UTC may not be typical – for instance, Cabrera, Ramirez, and Chanin all suggest that their state's PUC is less accessible than their local utility and/or city council; Patrick Robbins states that the Public Service Commission in New York severely lacks "structural accountability to the people" and is, by design, captured by the investor-owned utilities; and Walker, Carney, and Upchurch all maintain that the TVA is not accountable to community concerns[4] – many of the people interviewed for this study nonetheless make the case that community utilities need some form of higher-level coordination, accountability, and oversight.[162] For instance, Habibi warns that in the coming period of transition, a lack of state or national

[4] While the TVA is not a regulatory body like the PUCs and PSCs in Washington, Pennsylvania, New York, and California, it is a public higher-level coordinating and planning entity, so its democratic structures, opportunities, and deficiencies are relevant to this conversation.

oversight could open the door to privatization in the form of private operating contracts (similar to what has occurred in the water sector).[163] This is especially concerning with regards to smaller, economically challenged publicly owned utilities, where there would be considerable power imbalances between local citizens and stakeholders, on the one hand, and private companies on the other. Similarly, Ashura Lewis suggests that in order to overcome the entrenched white supremacy and "old boys club" mentality that dominates some electric cooperatives (especially in the deep south), larger scale oversight and intervention is necessary. Community control is powerful and "when at all possible, you want give people the most amount of freedom they can stand," she contends. "But, similar to desegregation, at a certain point, when you have too many bad actors abusing [community control], there needs to be some kind of failsafe overarching structure."[164]

On the other hand, however, some interviewees expressed concern that higher level regulatory structures (especially in politically conservative states) may constrain or imperil more progressively inclined community utilities. Specifically, as previously mentioned, Nebraska's major community utilities have all recently agreed to decarbonize by mid-century despite hostility from the state government. This was achieved because these utilities are both relatively democratic (with directly elected boards) and independent from conservative dominated state structures. However, Wishart notes that there is a fear amongst staff and board members at certain community utilities, including the Omaha Public Power District, that if they move too fast on energy transition and energy justice efforts, the Republican-dominated state government may use it as an excuse to try and erode local control or, worse, attempt to privatize the utility.[165] This suggests that in some cases, federal regulations and policy could be useful in protecting local community utilities from hostile state governments. In Part II, we will interrogate some of these tensions further and suggest several recommendations for how to reinvigorate, extend, and enhance participation, transparency, and democratic accountability, both inside community utilities and in the wider regulatory and political ecosystem.

PART II: RECOMMENDATIONS & SUGGESTIONS

By many measures, the United States has a relatively decentralized electricity system, especially when compared with some other advanced nations. This approach to electricity generation, transmission, and service has some concrete benefits, especially given the incredible size and scale of the country. Perhaps most importantly, it allows community-scale utilities to exist and thrive – providing some US residents with a local alternative to both unaccountable corporate power and national-scale government bureaucracies (and demonstrating to others what could be possible if they created similar institutions). Related to this, it allows these local utilities, and the communities that own them, to experiment with different models and approaches based on local needs, priorities, and material realities (albeit within certain larger systemic constraints and frameworks) – and for this experimentation to, potentially, become the basis for wider adoption and adaptation.

However, this decentralized approach is not without its challenges, especially related to the rapidly shrinking time frames to confront climate change and the pressing need to address social, economic, and geographic inequality. Additionally, another side effect of this approach is that there is not and cannot be a "one size fits all" model of community utilities as it relates to integrating energy transition and economic development activities and embracing the anchor mission. Specifically, social, economic, and geographic context is critical, and what works or is needed in one place may not necessarily be the same as what works or is needed in another. As such, what follows is not intended to be a prescriptive formula or list of requirements. Rather, with some notable exceptions (i.e. inviolable concepts and structures), these recommendations should be considered more as a menu of options at different scales for advocates, policymakers, and utility workers/leaders to consider, discuss, and further refine as they are implemented.

1. Resisting privatization

One of the aforementioned "inviolable concepts" is the requirement that community utilities remain publicly or cooperatively owned. In other words, the entire concept of community utilities becoming powerful anchor institutions by integrating and enhancing their economic development and energy transition activities is predicated on those utilities retaining their democratic, not-for-profit ownership structure. For-profit utilities simply do not have the same incentives or local accountability to play this role, and across the world utility privatization has had a decidedly checkered history (to put it mildly) – especially as it relates to addressing climate change and social and economic equality.[166]

Unsurprisingly, none of the people interviewed for this project advocated for privatization of community utilities (or de-mutualization, in the case of cooperatives), and most understood that despite many challenges with community utilities, the corporate investor-owned alternative would be far worse. This was the case even with larger-scale energy generators such as TVA – which was roundly criticized by several interviewees for numerous failings related to accountability, transparency, inequality, and climate change/pollution. The answer for TVA, some of the interviewees suggest, is not privatization but rather a thorough process of de-corporatization and democratization coupled with an end to its monopoly on energy generation in the region so that community utilities can start to chart their own renewable energy future.

Although in some areas there may be a legitimate discussion around the concept of converting from one form of community utility to another (i.e. from a publicly owned enterprise to a cooperative, or vice-versa), in general privatization at all levels of the electric system should be opposed. Moreover, legislation could and should be advanced at the local, state, and/or federal level banning or setting a high bar for electric utility

privatization (as has happened in some localities where water privatization has been preemptively banned).[167] In some areas, this could have the effect of removing an implicit or explicit threat hanging over the heads of community utilities and their leaders and allow them to implement progressive programs without fear of reprisal.

While the threat of outright privatization and de-mutualization (via asset sales to the private sector) is not high in the US at the current moment, there is a concern amongst activists and experts like Shahrzad Habibi that privatization in the form of "public-private partnerships" may increase in the coming period. As APPA notes, while public private partnerships in the form of outsourced contracts are relatively common in the electricity sector "some want the private sector more integrally involved...in management and even ownership. Much of this discussion is being driven by private investors wanting a steady stream of revenue from management or ownership and not just a one-time payment for construction or repair. This move to privatization provides no additional funding for investments and will not change who ultimately pays the price for facilities and services."[168] Moreover, from the perspective of democracy and local control, empirical research has consistently demonstrated public private partnerships and contracting reduces community voice and power.[169]

Not only should more expansive public-private partnerships be resisted, but wherever possible services and contracts that are already outsourced to the private sector should be brought back in-house or re-contracted to another public or community provider (e.g. public-public partnerships). Related to this, as was detailed in Part I, community utilities face certain obstacles (such as an inability to access tax credits) pertaining to development of their own renewable energy generation capacity, which forces them into more expensive contractual relationships with private companies. As will be recommended below, making the necessary legislative changes to remove these obstacles and allow renewable energy generation to be brought in-house in various ways should be considered a high priority.

2. Supporting (re) municipalization/ mutualization

The next step beyond resisting privatization is supporting (re)municipalization – an umbrella term for the concept of bringing services that were formerly for-profit into public ownership or creating new publicly owned enterprises – and mutualization (the process of creating or converting to a cooperative). Due to the failures of privatization, the intransigence of corporate utilities on climate change issues, and an increasing awareness that publicly owned and cooperative utilities are important institutions in the energy transition, there has been growing interest in, and cases of, remunicipalization and mutualization around the world in recent years. This includes the aforementioned "Energiewende" in Germany and many other examples.[170] In the United States, public and cooperative power campaigns are underway in many jurisdictions as climate and community activists seek to regain control of their electric systems from large for-profit corporations.

However, these campaigns are generally under resourced and at a significant disadvantage compared to the large corporations they are up against.[171] Moreover, remunicipalization and mutualization processes are often drawn out and highly technical affairs, especially if they are contested by the incumbent investor-owned utility. Given the urgent need to scale up energy transition and economic development activities – and the demonstrated potential of community utilities to do so – advocates, policymakers, and residents in areas with an already existing community utility should engage with and support these movements and campaigns (this includes the community utilities themselves and their trade associations). This legal, technical, and legislative expertise, along with knowledge of both best practices and challenges, could be invaluable to public and cooperative power campaigns – especially in their formative stages as they develop strategy and build public support. Moreover, development of a national pro-public movement or network consisting of both established community

utilities (and their trade associations and unions) and prospective campaigns could become a powerful forum to begin sharing resources, discussing and overcoming challenges and impediments, and setting standards and principles around the anchor mission as it relates to the intersections of the energy transition and community economic development.

Lastly, advocates and policymakers should consider establishing "community ownership of power administrations" at the state-level (and, perhaps, passing legislation at the federal level to fund and support such agencies). As described in a new report by the Institute for Policy Studies focusing on New Mexico, such programs would "help communities transition to a new energy system based on local, community benefit. It would provide legal, technical, and other assistance for communities to take over the ownership of utilities — and create mechanisms for new community-owned utilities and existing rural electric coops to access finance to invest in their infrastructure."[172]

3. Democratization

Almost universally, the organizers and activists interviewed for this project advocated for strengthening democratic structures and accountability within community utilities and in the surrounding ecosystem. A general sentiment was that existing democratic structures (such as city councils, elected public power and cooperative boards, and public consultation processes) were a good baseline, but significant improvements could and should be made, especially around issues of racial and economic justice. Moreover, while only a few interviewees specifically mentioned corporatization by name, there was a commonly articulated viewpoint that in order to live up to their potential, community utilities must commit (or re-commit) to democracy, equity, public benefit, and ecological sustainability as their primary objectives and values rather than simply economic efficiency, profit/revenue maximization, or other private sector principles. In addition to the recommendations below, in general we suggest that all community utilities and/or the institutions responsible for regulating and overseeing them, should regularly implement "democracy audits" to ensure that governance, accountability and transparency, and values and culture are meeting established benchmarks.[173]

Governance boards

In many community utilities, appointed or directly elected boards (often called boards of directors or commissioners) play a critical role in governance, planning, and oversight. In others, especially smaller publicly owned utilities, these functions are undertaken directly by elected representatives on the city/town/county council.[174] In either model, however, the composition and competency of the governing entity is crucially important and, as discussed above, unrepresentative governance structures (specifically around race and class) as well as misalignments in expertise, understanding, priorities, and ideology between boards or city councilors, on the one hand, and utility management and or staff, on the other, can severely hamper energy transition/justice and community economic development efforts.

In order to address these issues, several steps could be taken depending on the specific governance structure in question. In the case of either appointed or elected boards, specific seats could be reserved for community and worker representatives and robust guidelines could be put in place to ensure that those members are both genuinely representative of their constituencies and elected/appointed in a fair and transparent manner. For example, if an appointed board of a publicly owned utility hypothetically has ten seats, three could be reserved for worker representatives (who could be elected or appointed by the workers' union), and three could be reserved for community representatives (who could be appointed from lists provided by approved community groups and/or who meet certain criteria – such as being from an under-represented population).[5]

For elected boards, both the board size and electoral process should be consistently reviewed to ensure that they are genuinely democratic and leading to repre-

[5] For a more detailed proposal about how this could work in practice in a publicly owned enterprise, see: Michael Brennan, Constructing the Democratic Public Bank: A Governance Proposal for Los Angeles (Washington, D.C.: The Democracy Collaborative, 2021).

sentative outcomes. If, for instance, the elected board of an electric cooperative is all wealthy, white men; but the membership is predominately lower income families and/or people of color, this suggests that there may be democratic deficiencies in the electoral process. While these deficiencies could, and probably should, be identified and corrected by the utility itself in a transparent way and in collaboration with the membership or community, outside institutions such as local and state governments, utility commissions, or utility associations should step in to mandate and/or oversee democratic reforms (discussed further below) when there are entrenched power structures, hierarchies, and structural impediments to democracy (as in aforementioned examples of the Delta region of Mississippi or eastern Washington).

When there is direct city council oversight of a utility, the council should ensure that there is resident and worker representation on the committees responsible for overseeing the utility. In many jurisdictions, this already occurs with various local government committees (i.e. arts commissions, environmental sustainability commissions, parks and recreation commissions, etc.). However, it is critical to ensure that these representatives have real power and decision-making authority. This is also the case for elected and appointed boards since, as the autonomous IFPTE member warned, without genuine power, worker and community representation can become a way for utilities to simply whitewash their poor record on numerous issues; and worse, make workers and residents complicit in the utility's failings.

Lastly, in all cases board members – especially worker and community representatives – should be provided with robust training and support services to allow them to quickly build their knowledge and expertise around both energy and governance/management issues. This might include: a pre-training program for prospective board members before they are appointed/take their elected seats; ongoing support or mentorship from outgoing board members; and appropriate compensation to allow full participation (e.g. travel expenses, childcare, stipends, etc.)

Accountability & transparency

While making boards and other governance structures of community utilities more representative and participatory is important, it is insufficient. This is because even the most democratic boards can atrophy over time (as seen with many electric cooperatives) and/or succumb to institutional pressures – especially if there are continued misalignments in expertise and knowledge between board members and utility staff. To ensure genuine and enduring democratic accountability and transparency, additional structures outside of the community utility itself are likely needed. As discussed above, many interviewees suggested the need for higher-level outside structures – often in the form of some sort of state or national government regulatory and oversight body – in order to ensure community utilities meet (and are held to) certain standards as it relates to both democracy and the energy transition. Others, however, cautioned that in some places such structures might reduce local democracy and accountability and limit or inhibit community utilities from undertaking innovative programming.

While not discounting the potential need for higher-level government regulation and oversight of community utilities in some areas, especially around ensuring equitable and ambitious standards (see more on this below), one alternative – drawn from emerging international practice in the water sector – is the establishment of autonomous community "observatories." These observatories are community-based institutions that are independent of the utility itself and distinct from existing rate-payer advocacy offices and community oversight boards organized around or through local governments or utility commissions. They would have certain rights and responsibilities related to oversight, planning, transparency, and engagement, which may include: doing research into the needs of community members and making recommendations to the utility, facilitating community engagement and participatory planning processes with the utility (i.e. arranging meetings, public consultations, and events), and regularly inspecting and commenting on financial documents, strategic plans, and other utility records.

In order to ensure that these observatories are not toothless and simply ignored by the utilities, they must be empowered in various ways. In the case of Paris, the observatory elects representatives to the water utility board;[175] and in the case of Terrassa (Catalonia, Spain), the observatory is affiliated with the local city council and has the power to draft proposals related to the water utility that must be considered by the council.[176] For community electric utilities in the United States, these observatories would need to be created by local governments (and/or state governments, depending on the specific legal and regulatory context) in the community utility's service area and vested with certain powers and responsibilities to ensure both genuine autonomy and long-term stability. However, if this is not possible, it is conceivable that in some cases the community utility itself may choose to establish such an institution and grant it both autonomy and responsibility via amendments to the utility's bylaws (although this is not preferable since the observatory would still, ultimately, be at the mercy of the utility itself).[177]

Values & culture

A key component of democratization is establishing a core set of values and goals (sometimes called mandates or mission) for a community utility through some form of a participatory or democratic process. This is important because these values and goals: a) guide the utility's activities with regards to democracy, the energy transition, economic development, and other activities; b) provide a set of benchmarks (beyond simple financial metrics) against which communities can measure progress (or lack thereof); and c) provide a degree of popular and democratic legitimacy to the decisions made by the utility provided they are in accordance with the values and goals. Traditionally, values and goals for a utility are established at the board or city council level, often with little meaningful direct public or member participation. Moreover, utility managers often play a major role by setting the parameters of what they think is possible or impossible. In some jurisdictions (Seattle, for instance) this may be a sufficient process for establishing values and goals given the progressive credentials of the elected city council representatives and/or utility leaders, but in others it can open the door to inertia, corporatization, and resistance to change.

In general, we recommended that community utilities regularly engage in public planning processes with residents, members, and stakeholder groups to establish and update what community needs and priorities might be for the coming period. This includes a clear and specific focus on increasing both utility and community climate resiliency and preparedness. These processes should be robust, participatory, and binding in some form or another, rather than simply consultative or perfunctory – and this will require that specific care and attention is paid to making these spaces broadly accessible and ensuring that all residents have the tools, resources, and training necessary for genuine participation. These participatory planning processes could be carried out by various institutions in the community utility ecosystem, including: by the utilities themselves (as was the case when some investor-owned utilities in Texas undertook deliberative polling around wind energy investments in the late 1990s);[178] by special committees established by city councils (as is the case with the Energy Transition and Energy Poverty Committees in Cadiz, Spain);[179] or in the observatories (if they exist). While there is obviously a danger that in some jurisdictions democratic planning processes may lead to outcomes that are suboptimal from the perspective of the energy transition and community economic development, evidence from Texas, Cadiz, and elsewhere suggests that if these processes are intentionally designed to foster deep and meaningful engagement with the issues, the outcomes are often positive with regards to renewable energy, equity considerations, and public service.[180]

Equally important as democratically establishing values and goals is socializing them throughout the community utility. Several interviewees highlighted the importance of changing the internal culture of their community utility and ensuring that all parts of the organization (staff, management, board, city council, etc.) are in alignment around goals. While this may be difficult, especially in utilities where managers and staff have been trained to embrace private sector-stye

principles, structures, and management approaches, it is not impossible. In particular, if staff at the utility have been meaningfully involved in developing values and goals from the start, this should make the adoption and socialization process easier. Beyond this, community utilities should make it a priority to work with employees and their unions to ensure that there is sufficient education and training around values and goals, especially when they require new ways of working and/or engaging with the community (e.g. if a goal is to undertake more participatory forms of planning and community engagement, utility staff should be given training in both cultural competency and democratic practice). Lastly, if utility executives or managers are reluctant or refusing to implement democratically established goals and values, the board or city council should be open to replacing them with people who will.

4. Organizing to contest for power and control

Although there may be some exceptions, in most cases it is probably unrealistic to assume that community utilities will democratize and/or significantly integrate and scale their energy transition and economic development activities by themselves. Likely, what will be needed is a combination of bottom-up and top-down pressure. With regards to the former, this involves concerted community organizing efforts to contest for power in, and control of, community utilities.

One of the main benefits of community utilities, as opposed to investor-owned utilities, is that their ownership structure, at least theoretically, provides established opportunities for communities to contest for power; and in Part I we reviewed several examples where such efforts have had some success (Los Angeles and Nebraska, for instance). However, interviewees for this project – the vast majority of whom are involved in such efforts in one form or another – also raised numerous challenges and impediments, including ossified democratic structures, entrenched and hostile utility leadership, corporatization, and bureaucratization.

First and foremost, we recommend making full use of existing democratic structures wherever possible. This includes: a) fielding and supporting aligned candidates for elected boards of community utilities and/or for city council seats – preferably candidates who understand and agree with the anchor mission generally, and the power of integrating energy transition activities and community economic development more specifically; b) suggesting potential aligned nominees for appointed boards, and organizing campaigns and efforts to support those nominees; c) organizing to attend annual member meetings, board meetings, city council meetings, or utility engagement meetings én masse to deliver and support certain proposals and demands around utility governance and operations; d) working directly with aligned staff through established community engagement channels (and pushing those staff to expand such opportunities); e) leveraging other institutions and opportunities in the community utility ecosystem (e.g. relationships with, and access to, supportive city councilors, state legislature representatives, trade associations, media, etc.); and f) proposing and supporting public referendums on community utility governance, accountability and transparency, and operations (where such opportunities exist).

Secondly, when opportunities to use existing democratic structures and approaches do not exist or are blocked, we recommend that advocates and activists organize pressure campaigns with democratization being a defining feature. Often, local activist groups are focused on numerous issues with regards to community utilities, and there can sometimes be a divide between those working on environmental issues (such as the energy transition) and those working on community and economic development issues. In such cases, centering democratization can be a way to bring a diverse array of community groups and actors together since, in an intransigent or hostile utility, it is likely critical to success on all other issues. Moreover, such campaigns could and should be targeted at different leverage points in the community utility ecosystem depending on where blockages are occurring and where opportunities may lie.

Lastly, as discussed above with regards to remunicipalization, activists and advocates organizing to contest for power in community utilities should consider starting or joining national and international pro-public networks. These networks could help provide material, technical, and moral support for local groups – including research and best practices on how to contest for power, funding for electoral and pressure campaigns, access to utility experts and experienced organizers, and publicity.

5. Establishing mandates & incentives

In addition to bottom-up pressure from local groups and advocates, there also needs to be top-down pressure on community utilities in the form of public mandates and incentives to invest in renewable energy and economic development with a strong racial and economic equity lens. This includes: a) enacting legislation at various scales that requires community utilities to meet certain goals and standards; b) providing community utilities with incentives and subsidies to meet those goals (especially with regards to renewable energy generation); c) linking community utilities to public sources of funding and investment at various scales; and d) removing legislative and regulatory barriers that prevent community utilities from scaling up renewable energy and economic development activities.

With regards to the first, community utilities are sometimes not covered by the state level standards around clean energy or economic development (particularly electricity rates) that otherwise apply to investor-owned utilities. For instance, in some states publicly owned and/or cooperative utilities are exempt from renewable portfolio standards (RPS) or clean energy standards (CES). In other states, these community utilities are covered, but with different targets or timelines.[181] While it is inadvisable to require community utilities to always meet the same standards as investor-owned utilities – due to the general size and resource differences between the two and the additional economic and social benefits derived from community ownership – some public standards and goals are nonetheless appropriate. As discussed above, these could be established locally through new or existing democratic structures (e.g. city council legislation mandating that the local public utility move towards 100% renewable energy); or, in the case of areas with reluctant or recalcitrant community utilities, through new or existing state or federal level programs.

While exact mandates and standards will likely vary from place to place and should be established through democratic processes at various levels, a few suggestions emerged from the interviews and literature review in Part I. In particular, in addition to standards around the energy transition, environmental justice, and economic development, we recommend that communities also focus on addressing energy poverty and racial and economic inequality. This could include, for instance, mandating that community utilities: a) enact progressive rate schedules based on resident income; b) develop programs specifically designed to assist low-income and frontline communities with access to distributed renewables, energy retrofits, etc.; c) create mandatory reserve funds to cover debt cancellation for low-income customers and/or shut-off moratoriums during times of crisis; or e) establish robust just transition programs (including training, new job opportunities, and financial assistance) for workers and families that may be adversely affected economically by the shut down or conversion of fossil fuel infrastructure in low income communities and/or communities of color.

In order to ensure that community utilities can deliver on these requirements and standards in the shrinking timelines required to deal with climate change and economic and social inequality various forms of public support will be necessary. Such support often comes in the form of incentives and subsidies, both of which have long been prominent features of both the US economic system generally, and the electricity system specifically. For instance, investor-owned utilities receive a number of incentives and subsidies, including investment tax credits which amount to a total benefit of around $5 billion a year.[182] As discussed in Part I, community utilities currently do not have access to some of the same public incentives and subsidies that private sector entities receive for the

development of renewable energy generation (specifically tax credits). This forces many community utilities to purchase their renewable energy from private actors rather than generating it themselves, which drives up costs for community utilities and their customers, slows the deployment of renewable energy generation, and forces some community utilities to double down on fossil fuel investments.[183] Remedying this situation by providing community utilities with an equivalent (or greater) incentive through direct pay (or other mechanisms) is a legislative priority for community utilities and a major recommendation in this report.[6] Beyond renewable energy, another recommendation is to focus on incentivizing community utilities to invest in or directly provide public broadband internet and public transportation services as part of their economic development activities. As detailed in Part I, such services have significant economic and social benefits; and providing them through, or in conjunction with, a community utility can be an efficient and effective way of delivery.

Implicit in the critique of the tax credit approach to renewable energy (see footnote 6) is the contention that it would be more efficient, cost effective, and economically equitable for the government to fund RE deployment directly. This could, and should, be done by directly linking community utilities (and other non-profit actors, such as community solar developers) to public sources of funding and investment. Around the world, public banks, government revolving loan funds, and other public financial institutions "have been at the forefront of renewable energy by providing the patient, affordable credit needed for these long-term projects," public banking expert Tom Marois explains.[184] "Moreover, these "public financial institutions 'have been pivotal in stabilizing the investment volume' in renewable energy," he continues.[185]

First and foremost, advocates and policymakers should focus on: a) ways to link community utilities to existing public funding mechanisms at various scales; and b) how to expand such programs. This may include, for instance, legislative or regulatory changes that expand the activities of state and federal revolving loan funds and loan guarantee programs (or create new ones) and/or new guidelines for local and state economic development lending. It may also include investigating ways in which public funding (as well as grants and subsidies) might be made available to help community utilities decommission fossil fuel infrastructure and extricate themselves from restrictive fossil fuel contracts with larger entities (more on this below). Beyond this, activists and community organizations that are working with and around community utilities should consciously link their organizing efforts to, and coordinate with, the rapidly expanding movement to create local and state public banks across the country (and vice versa).[186]

Lastly, advocates and policymakers should focus on removing some of the legislative and regulatory barriers that prevent or limit community utilities from scaling up and integrating their energy transition and economic development activities. As discussed in Part I, this includes legislation and regulations that limit union rights and benefits in public sector employment (thus incentivizing some workers and their unions to oppose public ownership). More specifically, as many of the interviewees for this project point out, it is critically important that advocates and policymakers working on issues related to community utilities and the energy transition understand and holistically integrate the needs and concerns of organized labor. This includes, but is not limited to, actively supporting the efforts of organized labor to overturn restrictive legislation and advance new organizing rights (e.g. the PRO Act), working with organized labor to develop and support project labor agreements on community utility projects,

[6] While it is somewhat beyond the scope of these recommendations, the entire tax credit approach to developing renewable energy generation capacity should likely be reconsidered. In addition to disadvantaging community utilities (as well as any non-profit RE developer), new research suggests that "renewables' two central credits, the Investment Tax Credit (ITC) and Production Tax Credit (PTC), generated as much as $18 billion in tax shelters in 2020 alone, almost all claimed by a handful of the US's largest banks. Moreover, these players, known as 'tax equity' investors, exert a troubling ability to extract rents for their capital, choose what types of renewable energy projects get built and by whom, and stall US renewables development altogether." See: Sarah Knuth, "Rentiers of the low-carbon economy? Renewable energy's extractive fiscal geographies," Environment and Planning A: Economy and Space, December 6, 2021, accessed December 17, 2021, https://journals.sagepub.com/doi/full/10.1177/0308518X211062601.

making conscious efforts to include workers and their unions in any pro-public networks and campaigns that might be developed, and listening to worker/union concerns around the potential employment and gird reliability impacts of certain energy transition activities and strategies (and working with workers and unions to solve those issues).

Beyond this, another prominent legislative barrier that should be dismantled are state-level pre-emption laws on municipal broadband development and expansion. These laws, which are on the books in 17 states, discourage or prevent local communities from setting up or expanding a community broadband network – and by extension, discourage or prevent local community utilities from providing this critical service.[187]

6. Creating "public" distributed renewable energy (PDRE) programs

One of the major concerns many interviewees had was ensuring that community utilities support, rather than hinder, the development of distributed renewable energy (specifically rooftop solar). As discussed in Part I, distributed renewables are a vitally important resource to address the energy transition needs associated with climate change and could – if they were deployed in a much more racially and economically equitable way – have significant effects on building community wealth and reducing social and economic inequality. However, as discussed in Part I, rapid widespread deployment of distributed renewables could, in the short-term, threaten the financial viability and grid reliability of some community utilities, imperiling both their economic development efforts and climate change mitigation and energy transition efforts. This includes the potential of rate increases on lower income families and the risk of destabilizing secure unionized utility jobs (replacing them with "green" jobs that often do not have the same benefits, wages, and worker protections).[188]

Moreover, as presently structured, many distributed renewable programs shift energy cost burdens onto lower income households who do not have the financial means or homeownership opportunities necessary to participate.[189] Lastly, under current conditions, and driven in part by government subsidies in the form of tax credits (see above), large corporations are moving aggressively into the distributed renewables sector. For instance, in 2019 it was announced that the giant financial investment company BlackRock had invested in General Electric's distributed renewable operations to form a company called "Distributed Solar Development."[190] Similarly, in 2021 EDF Renewables North America (a subdivision of the French state-owned company EDF Group) agreed to purchase the remainder of EnterSolar, a New York City based distributed renewable company.[191] If these trends continue, it seems likely that the distributed renewables installation and storage sector will experience significant corporate consolidation and concentration in the coming period – which could significantly reduce the economic and social development benefits of such activities for local communities.

Rather than resisting distributed renewables for these reasons, one potential solution is to re-imagine them as a public good delivered directly by community utilities. In practice, this means developing programs in which the community utility directly plans, installs, and pays for the installation of distributed renewables like rooftop solar. Such programs could: a) mitigate socio-economic inequities in the proliferation of, and benefit from, distributed renewables by, for instance, subsidizing or prioritizing multi-family housing units or offering differentiated net energy metering rates/tariffs based on income status; b) allow the utilities to better plan how distributed renewables will impact their energy needs and capacity and plan deployment accordingly; and c) have important local economic development impacts by cutting out corporate middle-men and either employing residents directly – and creating pathways for low-income and frontline workers to get these new jobs within the community utility – or contracting to new and existing local firms, especially worker cooperatives, employee-owned businesses, and women- and minority-owned enterprises (which, ideally, would also be unionized, thus combining the wealth building benefits of ownership with the

standards and protections of organized labor).[192]

These PDRE programs could also include installing and operating community energy storage (CES) systems. CES systems are "a collection of two or more battery storage units connected to the low-level transformers that serve houses or small businesses," Kyle Flanegin explains. "These systems exist on the utility side of the meter, or 'in front' of customer meters, and are typically referred to as front-of-the-meter battery storage."[193] Such systems can provide a wide range of benefits to both consumers and utilities, including reliable back-up power, grid stability, additional capacity for renewables, and "peak demand shaving." Already, several community utilities have deployed CES systems, including United Power, an electric cooperative near Denver, Colorado. United installed its 4-megawatt storage system in 2018 primarily to deal with issues related to peak demand (e.g. the batteries discharge when demand and wholesale prices are high; and recharge when demand and wholesale prices are low) and with monthly savings of around $100,000 the utility expects the system to pay for itself within 8 years.[194]

Developing public distributed renewables programs will invariably depend on successfully enacting various other changes in the community utility ecosystem. Most prominent among these are the aforementioned reforms to the tax credit-based subsidy and incentive system for deploying renewable energy generation. Beyond this, democratization of community utilities will be important to ensure that communities play a leading role in determining how such programs operate and to ensure that they do not perpetuate – and actually correct for – racial and economic inequality in distributed renewable deployment.

7. Public-public and public-community partnerships

As discussed above, one of this report's recommendations is for community utilities to critically re-appraise any and all contracts with private sector companies (especially large corporations) to ensure that they are both cost effective and delivering maximum benefits (beyond cost) to the local community. Most often, these outsourced contracts involve power purchase agreements with wholesale generators (including private renewable energy companies), contracts for infrastructure construction and repair, and general procurement contracts for a wide variety of goods and services. Wherever possible, these contracts should be brought back "in-house," which could enhance local control and provide additional local employment opportunities, cost savings, and or/other energy transition or economic development effects. However, for some goods and services this may not be feasible or cost effective – especially for smaller community utilities. In such cases, there are a range of other options that could potentially deliver superior results than traditional private sector contracting and extractive public-private partnerships. These include public-public partnerships, public-community partnerships, community-community partnerships, and local/democratic procurement (which will be discussed in the next section).

Public-Public Partnerships

Public-public partnerships (PUPs) are when one publicly owned entity joins together with another publicly owned entity (or entities) to provide or enhance a service.[195] Around the world PUPs have been shown to deliver superior results when compared to PPPs, and they are commonplace in the United States due to the relatively decentralized nature of many public services.[196] Smaller public enterprises in particular often need to partner with other public entities to achieve economies of scale and coordinate services across distinct political jurisdictions. In the electricity sector, there are, and could be, at least four types of PUPs.

The first is regional cooperation, which can be seen most prominently with Joint Action Agencies – which are regional public agencies that are comprised of, and work with, local, publicly owned utilities. Traditionally, these JAAs focus on helping local publicly owned utilities purchase wholesale power and finance generation facilities. However, they also offer publicly owned utilities a range of other services that otherwise would have to be either outsourced or done in-house. This includes everything from "meeting new reliability

standards and environmental policies to purchasing, planning, program administration, training, and contract negotiation."[197] While JAAs are not without their limitations and challenges, they are nonetheless a proven model of how public-public partnerships can deliver a variety of benefits and services to community utilities (especially around issues of scale) without relying on more expensive and extractive contracts with the private sector; and they should be enhanced, supported, and replicated, especially as it relates to renewable energy generation.

The second form of public-public partnerships is when municipalities and publicly owned entities enter into direct "one-to-one" contractual relationships with other publicly owned entities (including utilities) to provide certain services for a fee. Often called "intermunicipal contracting" or "cooperation," these approaches have a mixed record but can, in some areas and circumstances, have certain benefits over private sector contracting.[198] For example, a large publicly owned utility with its own in-house maintenance and repair services could enter into a contractual relationship with a smaller publicly owned utility in the region that does not have this capacity. Theoretically, such a relationship could both lower costs for the smaller utility (compared to contracting such services to a private company) and generate revenue for the larger utility. However, design of these "market-based" contracts is critical to ensure genuine mutual benefit and added precautions need to be taken to ensure that the relationship is not extractive and exclusively profit-driven, on the one hand, and does not weaken community voice and power at either party, on the other.

The third form of public-public partnerships is when publicly owned utilities provide specific services to other public sector entities on a "not for profit" basis (i.e. to satisfy other goals and objectives beyond revenue generation). For instance, LADWP recently announced that it had renewed a partnership agreement with the Los Angeles Unified School District (LAUSD). Under the agreement, LADWP will provide the public school district with $72.5 million to undertake energy retrofits and water conservation activities. The partnership is mutually beneficial in that it will save the school district money on its electricity and water bills, and also help LADWP meet its renewable energy and water conservation goals.[199] Publicly owned utilities across the country could, and should, enter into similar agreements and partnerships with public transit, housing, and other local agencies with a focus on renewable energy generation, electrification of vehicle fleets, and building retrofits.

Lastly, the fourth form of public-public partnerships is when publicly owned utilities partner with their workers (and their unions) to deliver efficiencies, cost savings, and higher quality services rather than resorting to private sector contracting and outsourcing. This has occurred several times in the water sector, allowing utilities to reduce costs or deliver enhanced services without having to either privatize the service or layoff staff.[200] In general, frontline workers in public sector enterprises have a wealth of knowledge about how the service works and could be improved. Establishing formal methods and opportunities for workers to share this knowledge (such as works councils, board representation, and labor-management planning committees) can have numerous benefits – including innovative solutions to challenges and an engaged and productive staff – and is a key part of democratization.

Public-Community Partnerships

Public-community partnerships (PCPs) – sometimes also known as public community collaborations – are similar to PUPs in many ways, except that instead of another publicly owned entity the publicly owned enterprise enters into a partnership with residents in its service area (who are often organized through a community owned or controlled entity such as a cooperative or non-profit organization). These partnerships can range from traditional procurement contracts (discussed further below) all the way to innovative co-ownership and co-governance models.

One example of the latter in the electricity sector is Wolfhagen Energy in Germany. There, the energy grid was remunicipalized in 2005 and a new, publicly owned utility was established. However, rather than the local government being the sole owner of the company,

a resident cooperative was formed (BEG Wolfhagen) and took a 25% equity stake in the utility (along with two out of nine board seats). This allowed the utility to both overcome financing challenges without resorting to traditional private sector investment and provides residents with a powerful and direct way to participate in utility decisions (especially around energy transition activities).[201]

Another form of public-community partnership in the energy sector is when an electric cooperative (which is the community entity) or community group enters into a partnership or agreement with a public sector entity. One example is Greensburg, Kansas, which was mentioned in Part I with regards to its status as one of the first localities in the country to transition to 100% renewable energy. That transition was facilitated through partnerships and relationships between various cooperative, community, and public sector actors, including the town of Greenburg (public), Mid-Kansas Electric Corporation (cooperative; now called Sunflower Electric Power Corporation), the Kansas Power Pool (public), and Greensburg Green Town (community).[7]/[202]

Community-Community Partnerships

Lastly, community-community partnerships (CCPs) are when community-based groups, such as member-owned electric cooperatives, enter into partnerships and relationships with other community-based groups. Most typically, this involves Generation and Transmission (G&Ts) cooperatives which, as previously discussed, are essentially "cooperatives of cooperatives" that, like JAAs, exist to help individual cooperatives deal with issues of scale. Moreover, like JAAs, G&Ts provide cooperatives with a range of services (beyond just wholesale power) that would otherwise increase costs and/or have to be outsourced to for-profit companies.[203]

As discussed in Part I, there are numerous problems with the G&T model as presently structured and many advocates around cooperative utilities are interested in ways to exit G&T contracts and arrangements in order to achieve renewable energy goals. However, this does not mean that local cooperatives could, or should, avoid cooperating and partnering with other community entities. In fact, the challenges faced by individual cooperatives trying to exit or modify these contracts – and the solutions they have had to resort to, such as private equity backed buyouts – suggests that new forms of community-community (and public-community) partnerships are necessary. This could include: creating new networks (or G&Ts) comprised of electric cooperatives that are committed to the energy transition; enhancing partnerships with cooperative banks, credit unions, and public funding sources to finance fossil fuel contract buyouts; working with public agencies and programs to secure utility debt cancellation; and coordinating and developing partnerships with community-based organizing groups that can help to bring pressure on the G&Ts.

2.8 Procurement

Purchasing goods and services are a major source of private sector contracts for many community utilities and shifting these procurement contracts in ways that maximize community benefit and local economic development is a key cornerstone of the anchor mission approach. As discussed in Part I, many community utilities already recognize the power of procurement and have supplier diversity programs in place to direct contracts to women- and minority-owned businesses and smaller, local firms. However, in many cases, these programs are just the tip of what could be accomplished with an intentional focus on community utility procurement.

First and foremost, as some of the interviewees pointed out, these programs often lack accountability and accessibility. Contracts sometimes end up going to the same small handful of firms with the connections or capacity to navigate complex procurement processes. In other cases, the "local" or MWBE firms receiving contracts are little more than fronts for larger

[7] Although actual renewable energy generation – in the form of a 10-turbine wind farm near the town – is still owned and controlled by a for-profit corporation (Exelon). See: Annie Gowen, "The Town that Built Back Green," Washington Post, October 30, 2020, accessed 12/23/21, https://www.washingtonpost.com/climate-solutions/2020/10/22/greensburg-kansas-wind-power-carbon-emissions/.

businesses and corporations.[204] Beyond this, most supplier diversity programs focus almost exclusively on traditional for-profit business structures. While there are undoubtedly benefits of this approach (especially with regards to racial equity), community impact could be increased by including and prioritizing certain labor standards (such as firms that are unionized, pay above prevailing living wage standards, and provide retirement, medical, and other benefits) as well as alternative models of ownership such as worker cooperatives, employee-owned firms, and social enterprises linked to community-based non-profits. For instance, with all other things being equal, directing a procurement contract to a worker cooperative would likely have greater wealth building effects in a local community then directing that contract to a firm where one owner individually appropriates profits.

In general, we recommend that supplier diversity programs for procurement contracts be significantly expanded, both in terms of scope and scale. Community utilities – and the democratic structures that oversee them – should establish ambitious targets, incentives, preference standards, and community benefiting rules to encourage procurement from local, MWBE, and, particularly, democratically owned firms. In most cases, these could, and should, go above and beyond state or federal mandates. These contracts, and the contracting process in general, should be as transparent as possible and reviewed regularly by democratic structures outside of the utility itself. This would be an ideal function for the autonomous "observatories" (see the above section on democratization) if they were to be established.

Lastly, a variety of institutions in the community utility ecosystem – including the utility itself, state and local government agencies, unions, and community-based non-profits – should coordinate around building local capacity to respond to and fulfill these procurement contracts. This includes determining community utility needs, creating new community-based companies (and scaling up others), training or re-training local residents, workers, and business leaders, and streamlining procurement application processes. One way for this to work would be the creation of local or regional procurement boards or roundtables that would bring a variety of stakeholders together to plan and coordinate around community utility procurement and supplier diversity.

2.9 Investment and asset management

In addition to procurement, a second important component of the anchor mission approach is asset management and investment policy. Community utilities collect revenue from customers and often have significant financial assets at their disposal. How these assets are used, or not used, can have a major impact on community economic development and the energy transition. For instance, in 2020 the power division of LADWP had on hand over $1 billion in unrestricted cash and cash equivalents as well as $653 million in various financial investments (including federal and state government securities and bonds, corporate notes, and commercial paper).[205] The bulk of the utility's cash (along with that of other municipal agencies) is deposited in various corporate banks by the city's Office of the Treasury – where that public money helps facilitate financialization of the economy, wealth extraction from local communities (through, for instance, financing speculative housing bubbles and overdraft fees on low-income residents), and harmful business practices (such as corporate bank investments in tobacco companies and oil pipelines).[206]

Shifting even a small percentage of community utility assets out of corporate banks and into local CDFIs and/or Community Development Credit Unions (CDCUs) could lead to significant public benefit in the form of increased lending to small, MWBE, and democratic local businesses, investments in genuine and long-term affordable housing, and increased access to banking services for lower-income communities. Beyond this, advocates and policymakers interested in unlocking the potential of community utility assets should consider joining with other social, environmental, and community activists and movements to create public banks (as is happening in Los Angeles and elsewhere across the country). Especially in larger jurisdictions, public banks can offer a way to provide

financial services to municipalities and community utilities at scale – something smaller, community-based financial institutions often cannot do – while still enabling significant local control over what those funds are used for (and not used for).

We also recommend that policymakers and advocates consider requiring community utilities to transfer a specified portion of their annual revenue to autonomous, community-controlled trust funds that would democratically decide how to invest those resources. This would at least partially address the concern raised by several interviewees about a lack of transparency and community participation with regard to how community utilities – and, in the case of publicly owned utilities, the municipalities that govern them – spend or allocate revenue derived from residents' bills. Moreover, there is national and international precedent for such an approach. In Wolfhagen, for example, an energy savings fund financed directly from utility revenue has been established. The fund is governed by an 11-member board – consisting of 9 members from the community cooperative (BEG Wolfhagen), 1 member from the utility, and 1 member from the municipality – and funds a variety of community-based initiatives and programs.[207] And in the United States, some community utilities already allocate a portion of their revenue to various trust funds. LADWP, for instance, operates several "special-purpose trust or escrow funds" outside of the investment pool program operated by the city. The trust funds each have a specific purpose – such as funding the required decommissioning of specific nuclear plants or as a rainy-day fund for the water system – and their investment decisions are overseen by an "investment committee" at the utility which, while not a democratized or community-based entity, still abides by certain standards with regards to public comment and open meetings.[208]

How such community-controlled trust funds should be organized – and how they make decisions on what to invest or support – is ultimately up to local communities and policymakers to decide, however there are several important models to draw from. One of these is participatory budgeting (PB). Originating in Porto Alegre, Brazil, participatory budgeting is an increasingly popular method of increasing resident participation in, and control over, public budgeting decisions. Typically, a municipality, city agency, or public enterprise (including utilities) will allocate some portion of its annual budget to a PB process. Residents will then participate in a series of meetings during which they will develop proposals for how to allocate that funding. The residents then vote on the proposals that they feel best align with community priorities, and the winning proposals are funded or implemented by the public entity. Since it first emerged in 1989, PB has proven to be wildly popular and successful, spreading to more than 7,000 jurisdictions around the world.[209] In addition to potentially being used for community-controlled trusts, there is also a case to be made for extending participatory budgeting processes to community utilities more generally as part of any democratization effort.

Lastly, advocates and policymakers should consider inventorying community utility owned land and facilities. In many cases, community utilities own parcels of land and/or buildings that are no longer needed, are currently being underused, or are being reserved for future purposes.[210] Moreover, in some cases, these utilities (and or their governing structures) may not even have a comprehensive understanding of what exactly they own and why. Once a comprehensive inventory has been established, the community could then (ideally through a participatory community-based planning process) recommend (or mandate) that certain parcels of land or facilities be provided to municipal agencies and/or non-profit community groups for housing, community space, or other publicly benefitting purposes. However, it is critical to ensure that such an inventory does not become a vehicle for land privatization by showing community utilities (and outside investors) what the utility owns and how much it could be worth if it was sold. As such, guidelines around how the inventory is constructed and what it can be used for is critical from the start.

CONCLUSION

The story that emerges from this project is one of immense possibility and potential, but also of significant challenges. The US energy system is entering into a moment of significant and necessary transformation, and community utilities are poised to play a leading role by integrating and significantly scaling up their energy transition and economic development activities. In fact, as Patrick Robbins contends, for this transformation to have any chance of success in the shrinking time frames dictated by climate change, community utilities must step up to the plate since "there will simply never be any compatibility between the exigencies of returning profit to shareholders and the basic principles of climate justice."[211] Relatedly, this period of transformation also provides the opportunity to build support for, and a strong movement around, community utilities as a vital component of our energy future. Just like in the early days of electrification, the current moment provides an opening to begin talking about the social, ecological, and economic benefits community utilities can provide and "getting people excited about engaging in their utilities," as Brianna Knisley puts it.[212]

However, this window of opportunity will likely be short and there are many factors impeding and limiting community utilities from living up to their potential as powerful engines for the energy transition and the anchor mission. Some of these are fully within the purview of the utilities and their consumer-owners to address. However, others are more complex and will require concerted and holistic public attention and action at various scales. Either way, there is significant work to be done since, as David McDonald states, "there is nowhere in the world that couldn't improve its public services" especially with regards to racial and gender equity, indigenous people's rights, and economic equality.[213] Lastly, there are numerous unresolved tensions and polarities on how best to address and overcome these challenges. Fortunately, the evidence also shows that there is already a rich diversity of models and innovative approaches being developed by, through, and around community utilities in the United States – and that solutions to many of these challenges may already exist in embryonic form.

LIST OF ABBREVIATIONS

AFSCME – American Federation of State, County and Municipal Employees
APPA – American Public Power Association
BLS – Bureau of Labor Statistics
BPA – Bonneville Power Administration
CCA – Community Choice Aggregation
CCP – Community-Community Partnership
CDCU – Community Development Credit Union
CDFI – Community Development Financial Institution
CES – Clean Energy Standard
CES – Community Energy Storage
COPA – Community Ownership of Power Administration
ConEd – Consolidated Edison
CURE – Clean Up the River Environment
DAT – Departmental Action Team (Seattle)
DBE – Disadvantaged Business Enterprise
DOE – Department of Energy
DVBE – Disabled Veteran Business Enterprise
EBE – Emerging Business Enterprise
EPA – Environmental Protection Agency
Eskom – Electricity Supply Commission (South Africa)
FOIA – Freedom of Information Act
G&T – Generation and Transmission cooperative
ICE – Costa Rican Electricity Institute (Costa Rica)
IDEP – Industrial Economic Development Program (NYPA)
IFPTE – International Federation of Professional and Technical Engineers
ILSR – Institute for Local Self Reliance
IOU – Investor Owned Utility
ITC – Investment Tax Credit
ITPI – In The Public Interest
JAA – Joint Action Agency
LAANE – Los Angeles Alliance for a New Economy
LADWP – Los Angeles Department of Water and Power
LAUSD – Los Angeles Unified School District
LBPP – Local Business Preference Program (LADWP)
MBE – Minority-Owned Business Enterprise
MLGW – Memphis Light, Gas, and Water
MOU – Municipally Owned Utility
MWBE – Minority/Women Owned Business Enterprises
NAACP – National Association for the Advancement of Colored People
NRECA – National Rural Electric Cooperative Association
PMA – Power Marketing Administration
NYCHA – New York City Housing Authority
NYPA – New York Power Authority
OPPD – Omaha Public Power District
PAYS – Pay As You Save
PB – Participatory Budgeting
PCP – Public-Community Partnership
PDRE – Public Distributed Renewable Energy
PEPRA – Public Employees' Pension Reform Act (California)
PFMC – Philadelphia Facilities Management Corporation
PG&E – Pacific Gas and Electric
PGW – Philadelphia Gas Works
PPP – Public-Private Partnership
PSC – Public Service Commission
PTC – Production Tax Credit
PUC – Public Utility Commission
PUD – Public Utility District
PUP – Public-Public Partnership
PWC – Fayetteville Public Works Commission
RE – Renewable Energy
RNY – ReCharge NY (NYPA)
RPS – Renewable Portfolio Standard
SBE – Small Business Enterprise
SLDP – Small Local Business Program (LADWP)
SMUD – Sacramento Municipal Utility District
TVA – Tennessee Valley Authority
VMDABC – Virginia, Maryland & Delaware Association of Broadband Cooperatives
WBE – Women-Owned Business Enterprise

APPENDIX A: INTERVIEWEES

Interviewee	Organization	Interview Date
Anonymous	ICE (Costa Rica)	October 10, 2021
Anonymous	IFPTE (California)	August 12, 2021
Joni Bosh	NW Energy Coalition (Washington)	August 30, 2021
Agustin Cabrera	LAANE (California)	August 18, 2021
Jason Carney	Energy Electives (Tennessee)	July 29, 2021
Mitch Chanin	POWER (Pennsylvania)	July 26, 2021
John Farrell	ILSR (Minnesota)	August 12, 2021
Shahrzad Habibi	ITPI (Washington, D.C.)	July 26, 2021
Erik Hatlestad	CURE (Minnesota)	July 29, 2021
Brianna Knisley	Appalachian Voices (North Carolina)	August 11, 2021
Ashura Lewis	One Voice (Mississippi)	July 27, 2021
David McDonald	MSP (Ontario)	August 24, 2021
Katrina Peterson	Puget Sound Sage (Washington)	July 26, 2021
Andres Ramirez	Pacoima Beautiful (California)	August 30, 2021
Patrick Robbins	JFI/NY Energy Democracy Alliance (New York)	August 10, 2021
Jessica Tovar	Local Clean Energy Alliance (California)	July 26, 2021
Sandra Upchurch	SACE (Tennessee)	July 20, 2021
Sandra van Niekerk	PSI (South Africa)	August 4, 2021
Pearl Walker	SACE/NAACP (Tennessee)	July 29, 2021
Amy Wheeless	NW Energy Coalition (Washington)	August 30, 2021
Ryan Wishart	Creighton University (Nebraska)	July 27, 2021

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[2] In 2019, coal accounted for around 24% of electricity generation and natural gas accounted for 37%. "Sources of Greenhouse Gas Emissions," US Environmental Protection Agency, accessed October 27, 2021, https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions.

[3] In 2018, the US produced a total of 4,981,300 kilotons of CO2, of which around 25% (1,245,325 kilotons) can be directly attributed to the electricity sector. This amount is higher than all but the top 4 emitting countries (China, US, India, and Russia), and almost as much as all of Latin America and the Caribbean put together (1,689,187 kilotons). See: "CO2 Emissions (kt)," World Bank, accessed October 27, 2021, https://data.worldbank.org/indicator/EN.ATM.CO2E.KT?name_desc=false.

[4] While this report focuses primarily on the need to rapidly increase renewable sources of energy (e.g. solar, wind, hydro, tidal), we appreciate that other sources of low or no emitting energy (e.g. nuclear) may have an important role to play in the energy transition, at least in the short term, due to important considerations around speed of decarbonization, gird reliability, and labor organizing. When considering the deployment of any clean energy technologies, however, it is critically important to holistically compare the environmental and human rights implications and effects. For a recent discussion about the pros and cons of nuclear energy as a tool to fight climate change, see: Samuel Miller McDonald, "Is Nuclear Power Our Best Bet Against Climate Change?" Boston Review, October 12, 2021, accessed October 27, 2021, https://bostonreview.net/science-nature/samuel-miller-mcdonald-nuclear-power-our-best-bet-against-climate-change.

[5] Thomas M. Hanna, "Community Wealth Building and Resilient Local Economies: The Role of Anchor Institutions," in Lavinia Stenfort and Satoko Kishimoto, eds., Public Finance for the Future We Want (Amsterdam: Transnational Institute, 2019).

[6] 27.4 percent as of 2018: APPA, "2020 Statistical Report," American Public Power Association, accessed May 5, 2021, https://www.publicpower.org/system/files/documents/2020-Public-Power-Statistical-Report_0.pdf.

[7] While some definitions of anchor institutions include for-profit corporations or are ambiguous on ownership, many specifically limit the concept to large, not-for profit organizations and enterprises. For instance, see: "Communities in Action: Pathways to Health Equity," National Academies of Sciences, Engineering, and Medicine, accessed 10 May 2021, https://www.nap.edu/resource/24624/anchor-institutions/.

[8] Meagan M. Ehlenz and Eugénie L. Birch, The Power of Eds & Meds: Urban Universities Investing in Neighborhood Revitalization & Innovation Districts (Philadelphia: University of Pennsylvania), accessed May 10, 2021, https://penniur.upenn.edu/uploads/media/Anchor-Institutions-PRAI-2014.pdf; Anchor Institutions Toolkit: A Guide for Neighborhood Revitalization (Philadelphia: Netter Center for Community Partnerships at the University of Pennsylvania, March 2008), accessed May 10, 2021, https://www.nettercenter.upenn.edu/sites/default/files/Anchor_Toolkit6_09.pdf.

[9] Joseph W. Kane, "Recognizing Infrastructure's Role as a Local Economic Anchor," Brookings, August 10, 2018, accessed May 10, 2021, https://www.brookings.edu/blog/the-avenue/2018/08/10/recognizing-infrastructures-role-as-a-local-economic-anchor/.

[10] "Enabling the Water Resources Utility of the Future," NACWA, January 23, 2018, accessed May 10, 2021, https://www.nacwa.org/docs/default-source/default-document-library/005_uotf-jan-23-webinar-registration-flyer_final.pdf?sfvrsn=d44f761_0.

[11] "Webinar: Water Utilities as Anchor Institutions," Urban Waters Learning Network, April 30, 2021, accessed May 10, 2021, https://urbanwaterslearningnetwork.org/event/webinar-water-utilities-as-anchor-institutions/.

[12] Debra Friedman, et al., "The Foundational Role of Universities as Anchor Institutions in Urban Development A Report of National Data and Survey Findings," Coalition of Urban Serving Universities and Association of Public and Land-Grant Universities, accessed May 10, 2021, https://www.tacoma.uw.edu/sites/default/files/sections/FacultyAssembly/Foundational%20Role%20of%20Us%20as%20Anchor%20Institutions%20in%20Urban%20Development.pdf.

[13] Corporatization can take many forms, but generally refers to the process of: A) running community utilities according to private sector principles, such as profit maximization; B) isolating community utilities from democratic oversight and accountability (for instance, by setting up separate agencies or municipal enterprises that operate completely independently of political structures); and/or C) applying New Public Management (or other neoliberal management theories) techniques to the internal structures and operations of community utilities (such as outsourcing to reduce labor costs and weaken unions).

[14] Lorrin Philipson and H. Lee Willis, Understanding Electric Utilities and De-Regulation (Boca Raton: CRC Press, 2006), pp. 87-89.

[15] Municipalization of utilities was often a demand of the many social and political movements of the era, including the Socialists, Progressives, and Populists. See: Thomas M. Hanna and David McDonald, "From Pragmatic to Politicized? The Future of Water Remunicipalization in the United States," Utilities Policy, vol. 72 (2021).

[16] Moreover, according APPA the bulk of privatizations have taken the form of conversion from a publicly owned utility to a cooperative. See: "Myths and Misinformation," American Public Power Association, accessed November 2, 2021, https://www.publicpower.org/system/files/documents/municipalization-myths_and_misinformation.pdf. For TVA privatization proposals, see: Gar Alperovitz and Thomas M. Hanna, "Socialism, American-Style," New York Times, July 23, 2015, accessed November 2, 2021, https://www.nytimes.com/2015/07/23/opinion/socialism-american-style.html.

[17] "2021 Statistical Report," American Public Power Association,

accessed November 2, 2021, https://www.publicpower.org/system/files/documents/2021-Public-power-Statistical-Report.pdf

[18] For the purposes of this literature review, we did not include nuclear or "other" – which includes solar alongside other technically renewable forms of energy, like landfill gas, black liquor, and wood. However, other than solar, these other forms of energy are not necessarily carbon neutral. If these were added, the totals change to: publicly owned utilities (20.1%), investor-owned utilities (10.86%), and cooperatives (2.9%). APPA, "2020 Statistical Report," American Public Power Association, accessed May 5, 2021, https://www.publicpower.org/system/files/documents/2020-Public-Power-Statistical-Report_0.pdf.

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[21] 2018 Generation by Public Power Utilities: 384,666,733 megawatt-hours (p.6); Sales to Ultimate Customers: 589,478,000 megawatt hours (p. 13). APPA, "2020 Statistical Report," American Public Power Association, accessed May 5, 2021, https://www.publicpower.org/system/files/documents/2020-Public-Power-Statistical-Report_0.pdf.

[22] 2017 Co-op Owned Generation: 219 million megawatt-hours (p.3); 2017 Co-op Retail Fuel Mix: 437 million megawatt hours. Joseph Goodenbery, et al., "Electricity Industry Generation, Capacity, and Market Outlook," NRECA, July 2019, accessed May 5, 2021, https://www.cooperative.com/programs-services/bts/resource-adequacy-markets/Documents/ram_outlook_report.pdf.

[23] Liz Veazey, "Overview of Generation & Transmission Co-ops & All Requirements Contracts," We Own It, accessed May 19, 2021, https://weown.it/resource-gnt-all-requirements-overview ; Sudip Mukherjee, et al, "Municipal Brief" Municipal electric utilities risk assessment framework," UBS, June 2019, accessed May 19, 2021, https://www.ubs.com/content/dam/assets/wma/us/shared/documents/electric-utilities-risk-assessment-framework.pdf.

[24] "2021 Statistical Report," American Public Power Association, accessed November 2, 2021, https://www.publicpower.org/system/files/documents/2021-Public-power-Statistical-Report.pdf.

[25] Agustin Cabrera. Interview by Johanna Bozuwa. Videoconference. August 18, 2021.

See also: "100% Renewable Energy Study," LADWP, accessed November 2, 2021, https://www.ladwp.com/ladwp/faces/ladwp/aboutus/a-power/a-p-cleanenergyfuture/a-p-renewableenergystudy?_afrLoop=117782648213626&_afrWindowMode=0&_afrWindowId=null#%40%3F_afrWindowId%3Dnull%26_afrLoop%3D117782648213626%26_afrWindowMode%3D0%26_adf.ctrl-state%3Dncm06pubi_17.

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[27] Adewale A. Adesanya, Roman V. Sidortsov, and Chelsea Schelly, "Act locally, transition globally: Grassroots resilience, local politics, and five municipalities in the United States with 100% renewable electricity," Energy Research & Social Science, vol. 67 (2020).

[28] The communities studied were the five that had so far achieved 100% renewable energy out of the 121 that had committed to 100% RE by a certain date. These five were: Rock Port, Burlington, Greensburg, Georgetown, and Aspen.

[29] David J. Hess and Haley Gentry, "100% renewable energy policies in U.S. cities: strategies, recommendations, and implementation challenges," Sustainability: Science, Practice and Policy, vol. 15, no. 1 (2019).

[30] While an impressive achievement, the plan falls short in some areas. In particular, it anticipates retaining some natural gas generation and "offsetting" these emissions by selling excess renewable energy to the Southwestern Power Pool. Ryan Wishart. Email correspondence with Raj Rao. January 20, 2022.

[31] Zoya Teirstein, "In a red-state first, Nebraska plans to decarbonize power sector by mid-century," Grist, December 10, 2021, accessed December 10, 2022, https://grist.org/energy/in-a-red-state-first-nebraska-plans-to-decarbonize-power-sector-by-mid-century/.

[32] Sören Becker, "Our City, Our Grid: The Energy Remunicipalisation Trend in Germany," in Kishimoto, S., et al. Reclaiming Public Services: How Cities and Citizens are Turning Back Privatization (Amsterdam: Transnational Institute, 2017), https://www.tni.org/files/publication-downloads/chapter_8_reclaiming_public_services_2908.pdf.

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[58] For several years, Memphis, Tennessee's publicly owned electric utility (Memphis Light, Gas, and Water) has been investigating the possibility of breaking away from the TVA. The utility's analysis suggests that they could save hundreds of millions of dollars annually by switching to another supplier have more control over their sources of energy, and significantly improve economic development in the city. Pearl

Walker. Interview by Johanna Bozuwa. Videoconference. July 29, 2021. See also: Dave Flessner, "Memphis to seek power proposals to potentially split with TVA," Chattanooga Times Free Press, April 8, 2021, accessed November 11, 2021, https://www.timesfreepress.com/news/business/aroundregion/story/2021/apr/08/memphis-seek-power-proposals-potentially-split-tva/544800/. TVA has responded to such pressure by slightly lowering wholesale rates and allowing local utilities to get up to 5% of their energy from other sources (such as solar). However, in order to do so, local utilities must enter into new contracts with TVA that renew each year automatically and require a 20-year notice for termination. Renewable energy advocates like the Southern Environmental Law Center have decried these changes, arguing that "these never-ending contracts threaten to prevent local distributors from ever renegotiating their contract with TVA, let alone consider leaving the utility if it continues to lag behind in transitioning towards cheaper, cleaner renewable energy." See: "SELC Challenges TVA's Long-term Contract Decision," Southern Environmental Law Center, August 18, 2020, accessed November 11, 2021, https://www.southernenvironment.org/press-release/groups-challenge-tvas-monumental-decision-to-lock-power-distributors-into-contracts/.

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[62] Erik Hatlestad. Interview by Johanna Bozuwa and Raj Rao. Videoconference. July 29, 2021.

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[68] Andres Ramirez. Interview by Johanna Bozuwa and Raj Rao. Videoconference. August 30, 2021.

[69] Ryan Wishart. Interview by Johanna Bozuwa. Videoconference. July 27, 2021.

[70] Brianna Knisley. Interview by Johanna Bozuwa. Videoconference. August 11, 2021.

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[72] However, around the same time, van Niekerk states, South Africa was also increasingly adopting neoliberal economic models and theories and Eskom was consistently under the threat of privatization. This resulted in a situation in which the government, anticipating a sale to the private sector, did not adequately invest in increasing electricity generation, leading to the electrification program stalling in the early 2000s and other difficulties. Growing adherence to market mechanisms and approaches also led to rising rates, which blunted the effects of the electrification program as families and businesses lacked the financial ability to use the newly accessible electricity. While privatization of Eskom never happened, the utility was essentially corporatized "which meant that it started acting like a private company…and it stopped playing that important role that a public utility should be playing in terms of ensuring access to electricity." Part of this process included replacing an existing multi-stakeholder board that included representatives from labor unions and communities with a traditional shareholder board. In recent years, and at least partially as a result of corporatization, Eskom has been plagued with problems related to both governance and service (and it, and South Africa's economy in general, remains heavily reliant on fossil fuels). Sandra van Niekerk. Interview by Raj Rao. Videoconference. August 4, 2021

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[81] Katrina Peterson. Interview by Johanna Bozuwa and Raj Rao. Videoconference. July 26, 2021.

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