# Taking climate action to the next level

Three systemic energy interventions to turn the below 2° Celsius ambition into reality

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James Gustave Speth, Carla Santos Skandier, and Johanna Bozuwa in San Francisco on September 12, 2018, one goal will be to affirm that the world beyond the Trumpian miasma is "still in" the Paris Accords. But the Summit seeks also to "demonstrate that stronger commitments are necessary, desirable and achievable."

When the Global Climate Action Summit convenes

This convening is commendable and very important. It is also an opportunity for we, the people, to be crystal clear about what we expect of those in power: these "stronger commitments" must at long last be commitments to actions fully responsive to the desperate situation the world now confronts.

Many climate scientists and others have reached the conclusion that, because we have dithered so long, we now face the prospect of both extreme impacts from global warming and ocean acidification and, eventually, extreme rates of emission reduction. Every year of more procrastination makes both more difficult.

Major climate impacts are now inevitable. Global temperature has already increased by 1°C, with huge consequences. Another 0.5°C is essentially baked in. The odds are that we will easily exceed 2°C global average warming in this century. Right now, we have no means in place to prevent a warming of twice that.

We know what must be done if governments seriously want to halt warming at or below 2°C. Computer models indicate that to meet the goal of staying below 2°C warming, the United States should now be reducing its greenhouse gas (GHG) emissions somewhere between 7 percent and 15 percent a year, every year between now and mid-century. Such sustained declines are unprecedented, and the longer we wait to start, the steeper they must be.



At the now-famous climate conference in Paris in 2015 here is what the dean of climate science, Hans Joachim Schellnhuber, said must be done: "In order to stay below 2°C or even 3°C, we need to have something really disruptive, which I would call an induced implosion of the carbon economy over the next 20-30 years. Otherwise we have no chance of avoiding dangerous, perhaps disastrous, climate change."

American governments thus face a challenge on the scale of mobilizing to win World War II—perhaps bigger. Unprecedented measures must be put in place both to move completely out of fossil fuels well before mid-century and also to pursue far-reaching and costly adaptation.

For over forty years we have known that avoiding disastrous climate change requires breaking fossil fuel's hold on our economy and way of life. Decades of debate, negotiations, and actions have fallen short in triggering, never mind managing, an energy transition. In 1976, the year President Carter was elected, the United States relied on fossil fuels for 91 percent of primary energy consumption. In 2016, the year President Trump was elected, the United States was still overwhelmingly dependent on fossil fuels—81 percent. During this 40-year period, there could have been a smooth transition toward an outstanding US climate performance and global leadership in climate action. Instead, those years saw only negligible actual action to reduce US fossil emissions (which went up, not down, during this period) and only modest actions to promote alternatives. This failure of government over these decades is, in my view, the greatest dereliction of civic responsibility in the history of the Republic. And it is worse today than ever.

Tempting as Industrial Revolution thinking may be, purely technological fixes will not be sufficient. We gamely talk about meeting ambitious science-based targets without fully understanding the transformative societal shifts required. So why, it's high time to ask, despite years of climate advocacy and endless de-

bate and negotiations, are we still losing the effort to save the planet?

The answer, I believe, is that key features of our current system of political economy war successfully against effective climate action. Because our climate crisis is deeply rooted in defining features of today's political economy, system change is essential. Whatever short-term gains can be made working within the current system, lasting success will require transformations away from the following:

- An unquestioning commitment to economic growth at essentially any cost, including the costs of climate disruption;
- A measure of that growth, GDP, that includes as positives fossil industry growth, the costs of coping with climate change's effects, and much else;
- Powerful corporate interests whose overriding objective is to generate profit and grow, including profit from avoiding the costs of the climate change they cause;
- Markets that systematically fail to recognize those costs unless corrected by government;
- Government that is both subservient to corporate interests and wedded to GDP growth;
- Runaway consumerism spurred on endlessly by sophisticated advertising and gross disparities in status and lifestyle; and
- Social injustice, economic insecurities, and concentrations of wealth so vast that they paralyze effective political action.

The United States will never be able to go far enough, or fast enough, doing the right things on climate, as long as our systemic priorities are ramping up GDP, growing corporate profits, increasing the incomes of the already well-to-do, neglecting the half of America that is just getting by, feeding runaway consumerism, focusing only on the present moment, facilitating great bastions of corporate power, helping abroad only modestly or not at all, and so on.

Making the needed progress on climate change requires an escape from the fetters of today's system and an urgent transformation to a new—a next—political economy. (A more detailed account of the principal obstacles to be overcome in this transformation is given below in the preliminary section, "The Systemic Roadblocks to Climate Action.") So a two-pronged approach is needed—first, rapid deployment of technology and policy measures to reduce GHG emissions and to adapt to changes we cannot forestall. And second, beginning now to seriously change our system of political economy.

Real climate leadership means taking on the root causes of climate change and other societal ills to change the system before we breach critical thresholds in temperature rises. We need to start implementing energy interventions today in key points of the system with the aims of keeping fossil fuels in the ground, rapidly deploying renewable energy and energy efficiency, and changing our political economy to one that is truly just and democratic.

Three groundbreaking and complementary interventions, described below, could start transforming the power structures that promote and enable our problematic energy and economic systems: Quantitative Easing for the Planet charts ways to halt fossil fuel extraction and dissolve entrenched opposition from major fossil fuel companies at the federal level; Public Ownership for Energy Democracy investigates opportunities for putting electricity generation and distribution back into community hands while enhancing democratic governance starting at the local level; An Anchor Strategy for the Energy Transition spells out how large mission-driven energy consumers can help build community systems and local demand for renewable energy sources, jobs, and investments, creating alternatives to today's extractivist economy.

As developed here by Carla Santos Skandier and Johanna Bozuwa, these interventions work at varying governance levels and are aimed at different points in the energy system:

#### Quantitative Easing for the Planet

To keep carbon safely in the ground, the government should secure control of fossil fuel reserves by promoting a federal buyout of the top US-based, publiclytraded fossil fuel companies. Ownership could change hands without burdening taxpayers if the Federal Reserve Bank infuses new money through the monetary policy known as quantitative easing. By focusing on major companies in the first links of the fossil fuel supply-chain, the federal government could detach growth- and profit-driven interests from reserves and halt otherwise inevitable extraction. This action might represent our best chance to gain time and unlock a rapid but orderly energy transition, where wealth and benefits are no longer centralized in growth-oriented, undemocratic, and ethically dubious corporations, such as ExxonMobil and Chevron.

#### **Public Ownership for Energy Democracy**

Just like extraction companies, largely for-profit energy utilities exercise their political and economic power over their jurisdictions to roll back climate regulation. Transitioning energy utilities to public ownership could help dismantle barriers imposed by the current for-profit, fossil-fuel-based utility paradigm and catalyze the redesign of power generation and distribution. A movement could simultaneously harness the opportunity for more democratic engagement in public utilities to champion and accelerate energy democracy, while also taking for-profit utilities into community hands to reorient their focus towards the public good. A publicly-owned utility system operating throughout states and municipalities has the potential to reinforce and usher in renewable energy use, deep democracy, and wealth redistribution.

#### An Anchor Strategy for the Energy Transition

Anchor institutions are positioned to be a prime ally in enabling the energy transition at the local level. As large nonprofit or public institutions, like universities or hospitals, anchors' broader social mission roots them to a place and keeps them from abandoning local communities. To fully embrace their mission, anchors could align their power to rise to the energy challenge in three important ways: by furthering community-centered energy grids through community renewable energy projects, energy efficiency initiatives, and microgrids; by building a workforce compatible with a 1.5° Celsius society through education, training, and other programs that facilitate a just transition for affected and future workers; and by convening the financial capacity needed to support the transition and to overcome corporate bias in financial systems.

Together, these three energy solutions can contribute to meaningful progress in addressing the climate crisis while helping to lay the foundation for a new political economy. Based on interventions throughout the energy supply chain—extraction, generation, distribution, and demand—and presenting opportunities at all governance levels—federal, regional, and local—these complementary pathways combined would lead to practical results and also bring hope that sustainability, democracy, and equitability can become our common ground.

—James Gustave Speth, for the Next System Project

# THE SYSTEMIC ROADBLOCKS TO CLIMATE ACTION

#### by The Next System Project

The challenge of mounting an adequate response to climate change has to be understood within the context of the larger systemic crisis facing the United States. The 1972 *Limits to Growth*, published when environmental movements were forming in this country, emphatically explained that our economic system was incompatible in the long term with the health and productivity of our finite planet. As the ecological rift widens, we must recognize the incompatibility of three interconnected imperatives of the current system that both push us toward climate catastrophe and prevent meaningful action—the unrelenting pressure for economic growth, the outsized power of corporations, and the United States' extractive approach to resource use.

#### THE GROWTH IMPERATIVE

Constant growth, fundamental to the capitalist economy, drives climate change and environmental degradation. All capitalist businesses embrace a "grow or die" imperative, constantly pursuing rising sales to accumulate wealth (or profit maximization). Capitalism's embedded growth imperative exploded when banks started creating money by expanding credit, and, therefore, increasing interest rates. That move forced companies to impress financial markets by showing a growing profit. Companies that couldn't sustain internal growth started merging with

or acquiring other companies to grow, in turn creating a small number of mega-corporations. No longer just optional, as neoclassical monetary theory held, growth in a 21<sup>st</sup> century financialized and globalized economy has become the norm.

#### The country has doubled down on the growth imperative by making GDP the end-all indicator of our society's "well-being."

Just as companies look to their balance sheets to ensure that profits are maximized, the United States uses the gross domestic product (GDP) to evaluate performance and to guide national policies—neither of which the GDP was originally designed to do.<sup>2</sup> Gradually, the capitalist firm has become our economy's core institution, and the country has doubled down on the growth imperative by making GDP the end-all indicator of our society's "well-being."

This obsession with growth as the ultimate solution to all of our societal problems—full employment, an end to poverty, better education, health nationwide, more muscle to solve environmental degradation, and so on—has led our economic and political leaders astray. Yes, the average yearly growth of 3 percent over the past 70 years has made us the world's richest country,<sup>3</sup> but economic growth at any cost has also made climate change spiral upward and American communities and civil liberties decay. In Pope Francis' words: "[t]he exploitation of the planet has already exceeded acceptable limits and we still have not solved the problem of poverty." Notwithstanding the voluminous evidence of growth's shortcomings in promoting equitable prosperity society-wide, our government continues to undermine effective action to limit fossil fuel production, pursuing short-term economic "health" instead.

# In a constant-growth society where bigger is always better, a self-selected elite of winners has been able to amass ever more power and wealth—a feedback loop that further magnifies inequality in the country.

The environmental perils of unrestrained profit maximization by corporations are exacerbated by "share-holder primacy." A prime example: Fossil fuel companies keep adding new reserves to their portfolios to "prove to their shareholders that they have fresh carbon reserves to exploit after they exhaust those currently in production." To keep the extractive machinery going, companies take on more new loans and investments, and any promises of future extraction that materialize amount to guarantees that more greenhouse gases will be released into the atmosphere.

For energy companies, this preoccupation with growth creates a dangerous bubble in the financial markets. Continuous expansion and the overestimation of fossil fuel reserves and infrastructure will backfire if their capacity and assets can't be used—whether for environmental reasons, such as stronger regulations,

or economic reasons, such as changed market conditions—and eventually become stranded, showing up as losses on ledger sheets.<sup>6</sup> Imposing huge risks on the US economy and the companies themselves in the long run, the hyper-focus on short-term growth blinds our government and companies to the ripening possibility of the fossil fuel industry's own demise.

#### THE CORPORATE POWER IMPERATIVE

Capitalist markets further racism, classism, and sexism by privileging those who have inherited access to capital and wealth.<sup>7</sup> In a constant-growth society where bigger is always better, a self-selected elite of winners has been able to amass ever more power and wealth—a feedback loop that further magnifies inequality in the country. Remarkably, three individuals heading major American corporations now own more wealth than the bottom half of the country (160 million people) combined.<sup>8</sup> The energy sector fits the trend. As Oxfam pointed out few years back, 88 billionaires with interests in fossil fuel activities made the Forbes 400 list in 2015 (against 54 in 2010) with the size of their combined fortunes expanding to over \$300 billion (roughly a 50 percent increase since 2010)."9

By leveraging their economic status, corporations, executives, and shareholders—the ultimate wealth holders—have gained unchecked power over politics in our increasingly winner-take-all system. Our government's reliance on companies to promote growth to raise the GDP has left them beholden to shareholder interests. With government's blessing, then, corporations push for profit-maximization, often sacrificing workers' wages, communities' well-being, and environmental protections.

As documented in such exposés as Naomi Klein's *This Changes Everything*, some large corporations and their beneficiaries leverage their political power in diverse ways and have built a rewarding political machine of campaign contributions, post-retirement jobs for politicians, and other perks to politicians willing to champion their interests.<sup>10</sup> Energy companies

have used this machine particularly adeptly. The sheer magnitude of lobbying for oil and gas—\$126 million in 2017 alone<sup>11</sup>—and the continuous revolving door for fossil fuel executives and government officials have shaped the American climate debate to corporations' advantage across the political aisles.

In 2010, the Supreme Court further opened the influence floodgates by allowing an unlimited influx of money from corporations to support political campaigns.<sup>12</sup> Early in the 2016 presidential election campaign, corporate and individual donations from the finance and energy sectors comprised more than half of candidates' funding.<sup>13</sup> For the 2018 election cycle, oil and gas corporations, electric utilities, natural gas pipelines and coal mining companies had already shelled out close to \$33 million in the first seven months of the year.<sup>14</sup>

Even such government-regulated monopolies as energy utilities, in charge of energy generation and distribution, have mustered their consolidated power to "regulate [their] regulators" and rigged the market to favor fossil fuels. In Virginia, the privately owned utility Dominion Energy notoriously limits meaningful action on climate change or environmental protection statewide, mainly through strategic philanthropic donations and political contributions. Now the state's biggest corporate donor to political campaigns, 16 Dominion Energy has been allowed to dump coal ash into Black neighborhoods, 17 strip residents' backyards for unnecessary natural gas pipelines, 18 and stint on help for those in energy poverty.

This powerful apparatus of permissive activities, combined with well-organized, capital-intensive, and highly-valuable assets, enable energy companies to protect their business model at all costs to the public and to thrive in an era where eliminating fossil fuel use is paramount. Our political oligarchy has no interest in going after climate culprits. Instead, the US government protects energy corporations by focusing, at most, on demand-side reduction, putting the onus on consumers. This piecemeal strategy can never undo the systemic problems of the energy sector and

our political economy that are costing people and the planet so much.

#### THE EXTRACTIVISM IMPERATIVE

The imperative of extractivism is deeply rooted in US colonial history. For centuries, rich white settlers extracted vital resources from indigenous land and free labor from African slaves, decimating communities in the process. Today, true to capitalist form, corporations continue to extract as much of a resource as they can get away with at the lowest cost and greatest profit, particularly in places without the political or economic capital to object. The many consequences of the extraction ethos include below-living wages, unpaid care and housework, overexploited environments, and even the manipulation of democracy for corporate gain.

Extractivism is strikingly evident within the energy sector: Companies simply don't pay the true costs of fossil fuel extraction, including ill health and climate change. Typically, dirty power plants, fracking waste sites, and gas pipelines are located in underprivileged communities. Slightly more than one in three people in the US live near a coal plant; of those, 39 percent are people of color.<sup>20</sup> Especially egregious are discriminatory energy projects that seek to profit from indigenous peoples' land resources and well-being, thus furthering tribes' economic alienation. Think here of Line 3 in Minnesota and the Dakota Access pipeline fights. The Couchiching First Nation's Tara Houska, the national campaign director for Honor the Earth, describes the impetus for the Standing Rock movement:

"It's always this extractive project contaminated our drinking water; this industry is preventing us from exercising our rights to hunt and fish; our traditional foods are dying; our children are sick; our elders are sick; we have cancer clusters. Standing Rock has become for Indigenous people this moment where they're all standing together because they all know what happens when something like this is allowed to happen to them and to their communities."<sup>21</sup>

All forms of extractivism reduce resources to simple commodities—there to be conquered and having no value apart from their potential to be transformed in wealth. People and places without the potential to transform their resources into valuable commodities are not able to participate in society, and are reduced to throwaway objects. Deeply immoral, treating people and communities as worthless objects is also profoundly impractical in today's carbon-constrained society since we need all people and places to stop greenhouse gas emissions and build the 21st century political economy we so desperately need.

# OUR LAST AND BEST OPPORTUNITY FOR CLIMATE ACTION: A NEW POLITICAL ECONOMY

Growth mania, unchecked corporate license, and extractivism together ensure that our current energy economy works for the elite but not for the well-being of all people, all places, and the planet. Within the system we have, we will never be able to push the needle far or fast enough toward a renewable energy system. Experience now shows that without system change entrenched extractive energy corporations can't be coaxed into public-minded and pro-environment behavior except as public relations gimmicks. Experience also counsels that imperatives running this deep can't be wished or reformed away. Instead, headway against the root causes of our climate-change and societal problems requires transforming the system before temperature rises breach critical thresholds.

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## QUANTITATIVE EASING FOR THE PLANET

#### Keeping Carbon in the Ground & Dissolving Climate Opposition

#### BY CARLA SANTOS SKANDIER

Across the political spectrum, conventional wisdom holds that technology and finance remain the greatest obstacles to moving society beyond fossil fuel dependency. Yet, neither is the real reason why progress on climate action has stalled for decades. Solar applications alone have the technical potential to provide 100 times more electricity than the United States currently consumes, as concluded by the Department of Energy's National Renewable Energy Laboratory in 2012. In the world's richest nation, the same one that created trillions of dollars to save banks between 2008 and 2014, financing is not the problem either.<sup>2</sup> The United States can wield its sovereign monetary power to finance and encourage investment in nonextractive energy projects. Why, then, do oil and gas companies still seek new reserves, governments still license dangerous infrastructure, banks still finance carbon-intensive projects, and investors still embrace fossil fuel companies?

The short answer is that our government has no interest in going after the fossil fuel industry, the source of the climate mess. Call it dependency on corporations to sustain a "healthy" economy or call it pure political oligarchy, the reality is that governments bend over backwards to help this industry. At best, politicians and officials find ways to deflect attention from root causes, focusing on only one side of the climate equation: demand. Demand-side initiatives aim to decrease our use of fossil fuel products by, for example, giving tax breaks to companies that make more effi-

cient light bulbs or by supporting renewables. By free market logic, decreased demand for fossil fuel equals a decrease in supply so focusing on demand-side initiatives is the "logical" way to advance climate action while not directly confronting the fossil fuel industry.

But is it really? First and foremost, ours is not a free market. Beyond that, we lack the time to use only indirect measures to keep carbon in the ground, and we lack the "carbon budget" needed to allow fossil fuel companies to continue to lock-in assets and infrastructure. Real solutions to the unfolding climate crisis must include the supply-side of the climate equation. As time runs out for mitigating the worst that is yet to come, pace will have to equal scale. Without undermining all-important complementary state and local initiatives, we need to reclaim political will at the highest level: the federal government.

# UNTANGLING GOVERNMENT THROUGH THE FEDERAL RESERVE (AND QUANTITATIVE EASING)

Fossil fuel companies' domineering political influence is the real problem here. Oil and gas industry lead the energy and natural resources sector in both campaign contributions and lobbying expenses.<sup>3</sup> Add these activities to the mingling of personnel between the energy industry and government agencies<sup>4</sup>—which both amplify the potential for regulatory capture and back-room negotiations, it makes crystal clear how

entangled public officials and fossil fuel interests are. "Something must be done as a matter of urgency to keep unburnable carbon in the ground—in spite of and indeed because of the political power of the fossil fuel companies." To get the government to serve all the people once again, we need to dismantle this powerful roadblock to an environmentally viable energy system and have a plan for managing this industry's decline. Strong regulations just won't do it. If reserves stay largely under private control, the regulatory approach would be too complicated and time-consuming. Unchecked, fossil fuel companies' opposition machinery could hold back progress indefinitely.

The complexity of the energy transition makes stalling all too easy. Since 85 percent of the known fossil fuel reserves need to remain unburned, we must figure out how best to use the other 15 percent to support a clean equitable energy transition. With reserves placed in many different hands, and with diverse private interests at play, this already tough question becomes harder to answer. Even if we could surmount the corporate roadblock, government would still have trouble effectively and independently choosing the industry's winners and losers.

The most effective, and timely, way to untangle the paralyzing relationship between government and industry is through a federal buyout of the fossil fuel companies that control these noxious assets. And how would that work? In brief, the federal government would acquire 51 percent or more of the shares of such major US-based, publicly-traded fossil fuel companies as ExxonMobil, Chevron, and ConocoPhillips. By securing the control over these companies' decisions, the federal government would shift majority control of fossil fuel reserves away from profit-driven, short-minded shareholders to the public interest, winding down production and locking up the vast majority of fossil fuel reserves in the ground—all while deflating fossil fuel companies undue political influence.

Skeptics may question the need for such a drastic initiative. But practitioners and scholars are once again

showing that the belief that private ownership is inherently superior to public ownership "remains hotly contested."7 Relying mainly on private interests to meet people's basic needs and find solutions to social and environmental illnesses has proven especially wrongheaded in our approach to energy and the environment. By any reckoning, 20th Century society saw material quality-of-life improve greatly thanks to the services and products provided by fossil fuel companies. But such gains didn't come without sacrifices. On top of inevitable accidents, many dangerous spills were allowed to happen on grounds that it's more profitable to pay for damages later than to prevent them now, and owners were allowed to walk away from numerous wells and sites leaving remediation and decommissioning procedures and costs to the next generation.8 Other deceptive tactics deployed to seed and fan doubt about climate change, including Exxon's efforts to spread misinformation by emphasizing climate uncertainty along with other industry-wide coordinated deception campaigns, disqualify these extraction companies for the task ahead.9

This sorry record shows that we cannot transform fossil fuel producers quickly enough; instead our best chance is for the government to intervene in the form of nationalization. If government controls fossil fuel reserves, extraction decisions will not be made in lobbying wars and in closed-door negotiations. Instead, decisions will center on what really matters: emissions, resource intensity, and how to mitigate social impacts on low-income people, workers, and communities. If we don't have the luxury of time and carbon budgets to give fossil fuel pro-

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ducers another chance to serve their customers' best interests, the remaining option is to become their bosses. With the fossil fuel industry out of the way, the government would be able to start the real work of rationally planning and implementing an orderly transition plan that marries the wind down of fossil fuel production with the ramp up of renewable energy, without leaving anyone behind.

#### Unusual Suspect: The Federal Reserve Bank's Role in Mitigating Climate Change

Without the political spine to implement even simpler market-based mechanisms, how will government ever be energized to take over fossil fuel companies? Quite simply, it might have no other option. Many fear that the fossil fuel sector could be instigating the next financial crisis. In 2008, the US economy neared collapse when the mortgage market was overestimated. The same peril is mounting again, but this time in the shape of fossil fuel reserves and infrastructure that will no longer be needed—and so won't provide the expected financial returns. Fear of stranding assets in this way has grown among financial regulators and investors. 10 As nations committed to limiting temperature increases to "well-below 2°C above pre-industrial levels and pursu[ing] efforts to limit the temperature increase to 1.5°C above preindustrial levels,"11 environmental regulations across the world have since tightened and civil society has started to revoke some of these organizations' social license through growing lawsuits, divestment movements, and protests. If these actions succeed even partially, reserves and supply infrastructures will be retired "prematurely," stranding vast fossil fuel assets and inviting market chaos.

Estimates around the size of the fossil fuel threat in the global financial market vary widely. The highest number so far, presented by CitiGroup in 2015, is US\$100 trillion¹2—significantly more than the total losses from the 2008 financial crisis.¹³ Mirroring the previous crisis, both the responsible sector and millions of workers and companies outside the fossil fuel

market would feel the pain. Bank of England's (BoE) Governor Mark Carney contends that up to one-third of global wealth may be at risk due to fossil fuel stranded assets, <sup>14</sup> including that of pension funds that hold the retirement of teachers, veterans, and nurses.

Companies have brushed off these concerns because they don't believe that countries will adopt policies to prevent climate change. This rationale has hardened into doctrine in the United States, where fossil fuel-friendly policies and market conditions remain the norm. As a result, day-in and day-out the number of at-risk assets in the financial markets only grows, with companies further exploring and adding new reserves to their portfolio so they can cash out as much money as possible. By 2025, fossil fuel companies betting against climate action are expected to waste another US\$1.6 trillion globally in fossil fuel infrastructure.<sup>15</sup> Clearly, market trauma is in store "irrespective of whether or not new climate policies are adopted."16 The United States, a fossil fuel exporter and late adopter of climate policy, stands to be a clear loser in this dangerous game of betting against the planet's future.

#### With the fossil fuel industry out of the way, the government would be able to start the real work of rationally planning and implementing an orderly transition plan.

As it did in 2008, the Federal Reserve Bank (Fed) could play a crucial role in diffusing this impending catastrophe, this time in a preventive and positive way. The century-old agency has under its current functions to ensure the stability of the financial system and minimize systemic risks through active monitoring and engagement.<sup>17</sup> The systemic threat imposed by irresponsible fossil fuel companies should be enough to trigger the Fed to intervene now. Other

central banks around the world have already started to act on their responsibility to better understand and try to avoid a financial crisis caused by the fossil fuel industry's stranded assets. The most vocal among central banks is the Bank of England. Since 2015, when BoE Governor Carney alarmed investors in the famous speech "Breaking the Tragedy of the Horizon," the bank has started a research agenda, a working group, and a coalition with seven other central banks to clarify their role in addressing systemic environmental risks.<sup>18</sup>

Besides anticipating and managing threats to the financial system, the Fed wields the monetary tool needed to pull off a federal buyout of top fossil fuel majors without burdening taxpayers or fueling inflation. Its monetary sovereignty over the creation of money enables this agency to literally create money out of thin air (aka computer keystrokes). The fancy term for this process, "quantitative easing" (QE), has two parts: "quantitative" in relation to the large amount of money that can be created and "easing" in reference to the ultimate goal of the process—help the economy through money injection. This tool was used during the latest financial crisis by the Fed, the European Central Bank, the Bank of Japan, and other central banks. In the US alone, the Fed created over US\$3.5 trillion between 2008 and 2014 to bail out bankers and financial institutions—without materializing the traditional concern of runaway inflation.<sup>19</sup> Now it's time for the Fed to act on behalf of people and planet.

## STRATEGIC BREAKTHROUGHS AND OUTCOMES OF A FEDERAL BUYOUT

The potential benefits of a QE-financed federal buyout are manifold. Besides neutralizing fossil fuel opposition to climate action, which few other meaningful supply-side proposals could do, a federal buyout has two other selling points. It would leapfrog critical shortcomings of standard supply-side initiatives—namely, lock-in infrastructure and green paradox—and clear the path for a just energy transition for fossil fuel workers and communities.

## Leapfrogging Lock-in Infrastructure and the Green Paradox

Once certain infrastructure is in place, decrease in demand and other changes in market conditions alone won't stop production. This so-called infrastructure lock-in particularly dogs the fossil fuel industry, where the bulk of investment capital is sunk in the project's first years to build needed structures and facilities. Once infrastructure is in place, "producers will ignore sunk costs and continue to produce as long as the market price is sufficient to cover the marginal cost (but not the average cost) of production."20 Both well-established infrastructure and new projects are subject to infrastructure lock-ins. Investors might, for instance, invest in a new coal mine if convinced that "the short-term value of the profits that can be earned under current policy settings ... [exceed] the long-term (risk-adjusted) cost of detrimental policy change."21 Policy uncertainty thus reinforces this climate-hostile rationale.

#### The systemic threat imposed by irresponsible fossil fuel companies should be enough to trigger the Fed to intervene now.

The green paradox occurs when companies accelerate fossil fuel production in anticipation of future policy and market trends.<sup>22</sup> Fearing asset devaluation, producers speed up extraction and production to cash out profit as quickly as possible. Like infrastructure lock-in, the green paradox also invites greenhouse gas emissions and severely diminishes our chances to plan and implement an orderly transition to renewables in two ways. First, it shortens the already scarce time we have left to decrease fossil fuel production and ramp up renewable infrastructure. Second, it deepens fossil fuel dependency as people continue to buy carbonintensive assets, such as cars and far-away homes,

without taking climate change impacts—physical and financial—into consideration.<sup>23</sup>

Unlike either regulatory demand or such supply-side proposals as carbon pricing, ending fossil fuels' subsidies, production quotas, etc., a federal buyout of fossil fuel companies would skirt both infrastructure lockins and the green paradox. That's because producers would no longer financially benefit from short, medium, or long-term fossil-fuel production. Shortening the renewable-energy investment gap, a federal takeover would also send a clear signal that the future is renewable, channeling investors' decisions away from fossil fuels and toward projects aligned with the goals of a 1.5° Celsius society.

The proposal's true game-changer, however, is making climate action attractive to fossil fuel companies facing endless negotiation and litigation. As an alternative to "produce all now or lose most later" (catchwords often used to tar climate policies), a federal buyout affords a reasonable exit option to fossil fuel companies by giving investors a return without having to keep up production. Given the future prospects of fossil fuel companies' stocks, investors might even take legal action on the basis of a breach of fiduciary duty if managers refuse to sell their companies for a fair enterprise value. This open door is a key way out of our current roadblock and a way to bring investors and companies on board sooner rather than later.

## Clearing the Path for a Just Transition for Fossil Fuel Workers and Communities

A buyout proposal also potentially allows government to devise and activate a comprehensive, orderly transition plan that marries fossil fuel production with renewable capacity rise, all while leaving no dependent worker or community behind.

As it is now, the private companies that lead present and future energy generation treat workers and communities as the inevitable collateral damage of misguided judgments and maximization of private

interests. General Electric, for example, in late 2017 announced 12,000 job cuts in its fossil-fuel-heavy power department, a decision made to right-size the business amid a decline in fossil fuel use. Just two years earlier, the company had decided to *double* its inventory of large coal turbines.<sup>24</sup>

#### The proposal's true gamechanger, however, is making climate action attractive to fossil fuel companies facing endless negotiation and litigation.

Treating those who helped build the 20th century American society as collateral damages isn't only immoral, but also economically damaging. This callous approach could also undermine a successful transition to clean energy. The recent US Presidential election made it clear how easy and crowd-pleasing it is to make promises to revive dying industries even when the facts and larger context don't augur well. Often, when company towns vie to remain standing, lastminute decisions set off a wave of job losses and revenue decline that can damage or ruin the community's structure. From a climate perspective, throwing away communities translates into "empty houses, halfempty schools, roads, hospitals, public buildings, etc., [that we must] rebuild in a different location, with all the associated carbon costs."25

Federal government can help keep "right-sizing" decisions from decimating communities and local jobs while it also speeds the transition away from fossil fuel use. Its role should be securing fossil fuel reserves through a federal buyout of major companies *and* implementing a cohesive, orderly, and just transition plan that supports, builds on, and lifts workers and communities along the way. And that plan must leave room for those directly affected to participate in and guide a future away from the extractive economy.

#### Workers' New Roles and Meaning

An undeniable consequence of de-carbonization will be job losses in the fossil fuel sector. With 1.1 million workers employed in carbon-intensive electric power generation and fuels in 2017,<sup>26</sup> government must figure out a way to keep these people employed. The good news is that the energy transition requires a lot of workers. An investment of US\$ 200 billion annually in renewable energy and energy efficiency, as estimated by economist Robert Pollin and others, could create 4.2 million jobs in the US, a net gain of 2.7 million when jobs lost from the fossil fuel sector are counted.<sup>27</sup> The bad news is that matching new jobs and displaced workers will not be simple. Many jobs will appear in new locations and require new expertise.

That said, creating a comprehensive, coordinated federal transition plan from the get-go can prevent unnecessary and permanent disruption of fossil fuel workers and their families. Looking at lessons learned from coal communities in six countries, researchers concluded that failure to anticipate, accept, and prepare for the transition is a key difference between securing workers a continuous path in workforce and falling into long-term unemployment.<sup>28</sup>

The transition plan's first goal must be to avoid large-scale, last-minute layoffs. Quite simply, workers leaving current carbon-intensive work need a safe passage into jobs with a future. The way could be paved with a clear climate policy so young adults could compare the odds of specializing in various fossil fuel sectors and workers already employed by the industry could get trained for new roles.

Workers leaving current carbonintensive work need a safe passage into jobs with a future. But the government must also adopt "emergency measures" in anticipation of the disruptive impacts the transition will inevitably have on some workers and their families. A standard income for workers and families, for instance, would enable them to weather surprises or changes without compromising their health and the assets built by their hard work. Other forward-looking policies, such as relocation assistance and counselling, could also be considered.<sup>29</sup>

The government can also guarantee full-employment to workers, stabilizing their income during the transition and preserving the meaning that employment provides to life for many. Meaningful labor is particularly important for fossil fuel workers, whose jobs provide a living and also an inheritance maintained over generations. In that vein, government should also find ways to keep at least some workers in the "same" industry, albeit with an evolved purpose and vision. Instead of coal mining, for instance, why couldn't at least some former miners continue reporting to the same locations, with the same company, to revitalize the compromised land and waters for the benefit of their communities and neighbors? After all, workers who helped build and maintain fossil fuel projects are often best qualified to decommission facilities, clean up, and otherwise revitalize old sites.

## Communities' Diversification and Economic Renewal

In many cases, communities across the country will need to diversify and renew their economy. No one knows better than each community how to determine and evaluate what comes next. Local people are the experts at identifying their historical, cultural, and available potential and capacity. As explored in "An Anchor Strategy for the Energy Transition," such anchor institutions as hospitals, universities, and public departments have a unique opportunity and powerful capacity to lift their communities and people both sooner and later.

#### Government must intervene to help communities feeling cut off at the knees with a robust plan to stabilize their economic base.

But what happens in the many small rural communities that have depended heavily on the fossil fuel industry but lack anchor institutions or alternative industries to support their transition? Here, government must intervene to help communities feeling cut off at the knees with a robust plan to stabilize their economic base. One of many options is to identify and recognize affected communities as Opportunity Zones, an economic development tool created in 2017 to spur economic development and job creation in distressed communities.<sup>30</sup> Investors, including former fossil fuel backers looking for new opportunities, would be encouraged through tax preferences to put their money in these areas to support economic diversification and equitable opportunities for displaced workers.

Another suggestion builds on the idea that fossil fuel companies, now under public control, could be transformed into "environmental revitalization" enterprises. Some examples show how. With a lignite (brown coal) economy in full force in 1985, East Germany saw both production and workforce in the sector decline by almost two-thirds within a decade.31 The City of Leipzig, the region industrial center, alone lost 100,000 people in a ten-year timeframe. Looking to provide a brighter future to the region, the government, through the federallyowned Lausitz and Middle Germany Mining Administrative Company (LMBV), started the revitalization process of former open mines (employing 20,000 people along the way).32 The result: the region, the "largest artificial lakeland" in Europe, is today a tourist destination with 26 lakes providing a variety of recreational activities, including canoeing, kayaking scuba diving, triathlon competitions, restaurants and party spaces.<sup>33</sup> Although the region's redevelopment is more complex than exposed here, the revitalization of "once one of the dirtiest areas in East Germany" into a pristine landscape of "soaring pine forests, glistening lakes and immaculate asphalt cycle paths," shows that providing old fossil fuel communities a new, better meaning is possible.<sup>34</sup>

# CONCLUSION: 51 PERCENT SOLUTION FOR THE CLIMATE CRISIS

There is no easy fix that would free us from the climate mess we are in, but a federal takeover of major fossil fuel companies in the first links of the supply chain could turn the tide. If fossil fuel reserves were under popular control, their future could be decided for and by the people, instead of by profit-driven, shortsighted shareholders. Only democratic government can ensure the planned wind-down of fossil fuel production in accordance with climate safety goals. With room for private profit cut out of fossil fuel extraction and production, the powerful entrenched opposition of the energy sector would crumble. And with government and fossil fuel industry interests untangled, complementary climate initiatives could be adopted and implemented. So could a cohesive, orderly, and just transition plan that leaves no one behind. The transition to a sustainable, renewable, non-extractive economy requires nothing less.

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## PUBLIC OWNERSHIP FOR ENERGY DEMOCRACY

# Opportunities for publicly-run energy utilities to revolutionize generation and the grid

#### BY JOHANNA BOZUWA

Energy democracy—a new idea from the ranks of community organizers, labor, and renewable energy advocates who see our current energy system as broken and destructive—seeks to take on the political and economic change needed to tackle the energy transition holistically. A democratic energy system powered by renewables (and free of fossil fuels) would distribute wealth, power, and decision-making equitably. But, practically speaking: How can we redesign our energy system with energy democracy at its core?

A first step is to stop exploiting fossil fuel reserves, as Quantitative Easing for the Planet proposes. Another imperative is to shift ownership of the generation, transportation, and distribution of energy. Restructuring and democratizing our electric systems through public ownership—whether government or cooperative—can help transition the United States away from fossil fuel production and toward a renewable future built with communities in mind instead of profits.<sup>1</sup>

Public ownership of utilities can accelerate the renewable energy transition at the scale needed to meet our closing climate deadline for action. It's simply too late to provide piecemeal incentives and then wait expectantly for a market controlled by fossil fuel interests to voluntarily deploy more renewables. Energy utilities' control over so much of the energy supply chain make these entities a strategic platform for bringing energy democracy tactics to scale. Harnessing energy utilities for the people could fuel projects from expansive low-income housing efficiency projects (such as PUSH Buffalo),<sup>2</sup> to community solar programs (such as the solar gardens of Cooperative Energy Futures

in Minnesota),<sup>3</sup> to stopping gas pipelines (such as the resistance to Dominion Power's Mountain Valley Pipeline in Virginia).<sup>4</sup>

Public ownership of energy is nothing new in the United States. American communities have exercised the right to own and operate a municipal utility since the 1880s.<sup>5</sup> In the 1930's, a federal loan fund for rural electrification started, and farmers ignored by forprofit utilities banded together to create rural electric cooperatives to serve their communities.<sup>6</sup> Publiclyowned utilities now serve cities as small as Hammond, Wisconsin and as big as Los Angeles and Nashville. In Nebraska, *only* publicly-owned utilities are allowed to operate.<sup>7</sup> Still, some of these utilities lack the ample democratic oversight or access to investment needed to become effective envoys for energy democracy.

## CENTERING PUBLIC OWNERSHIP ON ENERGY DEMOCRACY

Public ownership is poised to subvert the current energy paradigm, but the institution must first transform to center on a rapid transition to renewables, deep democratic governance, and equitable distribution of wealth—both embodying and promoting energy democracy.

#### Rapid Transition to Renewables

Electricity generation makes up about 40 percent of all energy use and currently relies heavily on fossil fuels. Both investor-owned and publicly-owned utilities have vested interests in fossil fuels. For example, rural

electric cooperatives still rely on coal, oil, and gas for 90 percent of their generation. They have also similarly made dubious decisions on where to dump toxic byproducts from the extractive process, like coal ash.<sup>10</sup> However, publicly-owned utilities don't have the same motivations and incentives to continually expand energy production since they don't have to generate a profit for shareholders. This freedom gives them more flexibility to respond to their customer-owners' needs, as their charters require (either directly or through elected representatives). 11 Therefore, a publicly-owned utility is more likely to yield to public pressure to eliminate fossil fuels than investor-owned utilities. Furthermore, if a publicly-owned utility shift came at the same time as a sweeping buyout of the fossil fuel industry (see QE for the Planet), it could help catalyze the shift.

Given their purpose and lack of any imperative for growth, publicly-owned utilities could be major players in the rapid expansion of decentralized energy from individual solar to community wind farms. What's more, renewable-energy projects financed by local municipal utilities could be deployed on a larger scale since municipal bonds afford them cheaper access to capital than companies or individuals enjoy. Tax-exempt municipal bonds have financed \$96 billion in new public utility investments over the past decade.<sup>12</sup> By involving the community in the process of renewable energy projects and sourcing related jobs locally, utility-financed projects could build community wealth.<sup>13</sup> In other words, economic development would localize investment and provide broad-based ownership. Considering publicly owned utilities' sunk investments in infrastructure like natural gas plants, transitioning towards a renewable energy system will still take time and require active community participation, investments to alleviate the burden of stranded assets, and increased investments in renewables.

#### **Democratic Governance**

Right now oligarchic for-profit utilities make decisions about most of the power grid, based on their vested interest in the energy status quo and the need

for shareholder profits—not the common good. Frequently, such decisions are made far from the communities where their repercussions play out.

Regulators across the country also bend to the powerful influence of the wealthy industry they regulate. For instance, a burst gas pipeline in California in 2010 exposed an all-too snug relationship that allowed lax implementation of safety standards between California for-profit utility, PG&E, and its regulator—with devastating results both for neighborhoods along the spill's path and for climate generally. In Texas, the Association of Electric Companies of Texas met privately with state regulators to revise pollution permits that nullified the Clean Air Act for their coal plants. Documents later revealed that regulators implemented new environmentally devastating regulation lifted verbatim from trade group proposals. This type of corporate capture has left people feeling unheard and unprotected.

In contrast, community members served by a publicly-owned utility act as owners and decision makers. Instead of controlling large swaths of the country that may not even be contiguous, publicly-owned utilities are rooted to place—owned and operated by their community. Although publicly-owned utilities reflect democratic principles, in practice some still suffer from a lack of community representation. For instance, a 2016 survey of over 300 rural electric cooperatives in Southern states showed that only 90 of more than 3,000 board members were Black residents. 16 Structural problems like racism and sexism, in turn, can destroy community spirit and create power imbalances. In contrast, reorienting utilities toward democratic governance for the 21st century would redistribute power by giving communities more energy decision-making opportunities.

One such mechanism is the multi-stakeholder board where elected workers, community members, and local officials make decisions together. Switched On London, a campaign for a municipal utility, proposes a governing Board of Directors composed of one third London public officials, one third energy company

employees elected by the company workforce, and one third ordinary London residents—regardless of citizenship—elected by peers.<sup>17</sup> Half of all positions must be held by women.<sup>18</sup>

Participation should go beyond representative systems of democracy. Opportunities for direct engagement should span such institutions as public forums, neighborhood assemblies, and online engagement. For example, the municipal utility in Cadiz, Spain set up a bimonthly roundtable where it invites environmental advocates, community members, experts, and businesses to discuss milestones toward 100 percent renewable energy.<sup>19</sup>

To substantiate opportunities for direct engagement and rid the publicly-owned system of vestigial self-serving interests or elitism, utilities need to make decision-making and operations transparent and accessible. Since the energy sector tends to be technocratic, eliminating communication barriers and using straightforward language are crucial for equipping community members to engage in decision making. Accessible information is not enough though. Communities will have to grapple with their specific barriers to participation—from lack of accessible public forums to exclusive decision-making structures. For instance, attending public forums during the day can be highly prohibitive to those community members who work in inflexible circumstances.

#### **Equitable Distribution of Wealth**

Currently, low-income neighborhoods and communities of color without political or economic influence shoulder the burden of energy infrastructures' negative consequences and pay more for energy because their housing stock is old and inefficient.<sup>20</sup> These people and places will be hurt the most by climate change's extreme weather events.<sup>21</sup> To make such inequitable burdens things of the past, we need to de-consolidate power, make extraction unprofitable, and redistribute wealth and ownership in the energy economy while providing a just transition for workers in the current

energy industry. Investor-owned utilities' prime motivator is consolidating wealth as a for-profit company, whereas those owned by the public are designed to serve the public. Below describes some of the important ways to distribute wealth equitably in a new energy era, investigating how publicly-owned utilities may already give back to their communities as well as additional strategies to better deliver.

#### Renewables Ownership

Although publicly-owned utilities don't have to worry about turning profits, like for-profits, they historically rely on centralized energy systems and therefore are reticent to have their investments eroded by self-sufficiency through decentralized renewable energy use. In contrast, a strategy based on energy democracy should deliver renewable energy locally to the extent possible and insist on broad ownership—both individual or community-owned decentralized renewable energy and larger, utility-scale projects run by and within the municipality. Publicly-owned utilities will need to identify ways to balance centralized energy with a more decentralized grid.

When renewable energy is kept local, the economic returns to the community grow apace. Every megawatt of locally installed solar can add \$2.5 million and 20 construction jobs to the local economy. Locally owned projects can redirect an additional \$5.4 million of electricity spending locally over the project's 25year lifetime.<sup>22</sup> More particularly, the utility should get low-income residents' and communities of color's input and participation in rate design, financing, local job training and hiring, capacity-building, and the like for renewables projects. These energy consumers have customarily had the most to gain from, but the least access to, energy ownership's benefits. Strategies could also involve anchor institutions—such large-scale nonprofit entities as hospitals and universities, which are both big energy users and major recipients of substantial public resources. This approach would meet these institutions' energy needs, build jobs, and help finance and provide space for community renewable projects.<sup>23</sup>

#### Distribution of Wealth

Investor-owned utilities put the wealth of their stockholders and executives first. The CEO of FirstEnergy, for instance, makes 131 times the average lineman's salary.<sup>24</sup> In contrast, money made by a publicly-owned utility doesn't make the rich richer. Revenues are instead reinvested in such public goods as lowered costs and increased service quality for consumers, in efficiency upgrades for low-income households, or (for municipallyowned) in local schools and bridges through the city's General Fund. Publicly-owned utilities contributed around 6 percent of their revenues to local government in 2016, according to an American Public Power Association study—27 percent more than investor-owned utilities often paid in taxes.<sup>25</sup> Some such city-bound revenues could be taken to the next level and even fund, say, a city Green Bank that could in turn support energyefficiency upgrades for low-income housing or finance decentralized renewable energy within the community.

#### Energy Poverty

In some areas of the United States, low-income households pay around 35 percent of their income for energy, <sup>26</sup> forcing painful choices between a heated home and food on the table. Multiple utilities have become known for increasing their rates to make more profits.<sup>27</sup> Overall, publicly-owned energy has been proven to be cheaper than for-profit power across the United States.<sup>28</sup> While a positive trend, however, lower rates don't always mean less energy poverty. Instead, fair rates should come alongside robust and low-cost opportunities for energy efficiency projects and renewable ownership opportunities to cut the energy burden, disproportionately felt by Black or Latinx residents.<sup>29</sup> A public utility could also cap the percentage of anyone's income spent on their bills and eliminate energy cutoffs altogether. For example, Ohio, which has the nation's largest and oldest Percentage Income Payment Plan (PIPP), limits any one person's bill to 10 percent of their household income.<sup>30</sup> Access to energy is a human right, and nobody should be forced to choose between risking heat stroke or hypothermia or staying hungry.

#### A Just Transition

In the fight against fossil fuel infrastructure, unions and utilities have often been on the same side. Unions fear that their members will be left jobless if the industry declines.<sup>31</sup> In fact, they—not executives and shareholders—will bear the brunt if strategies are not implemented now to make the transition ahead work for them. Although imperiled by a mid-2018 Supreme Court decision making unions' "agency fees" optional for public union members,<sup>32</sup> the tradition of stronger unionization within the public sector<sup>33</sup> opens the possibility of working with unions to phase out current fossil fuel jobs and provide better, long term jobs in the reinvented energy sector. Adding participatory structures that give workers' more say can ensure that workers shape the transition, not get left behind.

Job creation is also on the energy democracy horizon. The massive investment needed for a new energy system could create huge numbers of jobs over the short and long terms. Publicly-owned utilities should establish robust labor practices as major players building and installing renewable energy and set the standard for job quality. They can also bridge the inequality gap by training and empowering the low-income and racial minority populations most harmed by climate impacts and underemployment.

#### A TWO-PRONGED STRATEGY

A two-pronged strategy for public ownership could simultaneously harness the opportunity of public utilities to champion and accelerate energy democracy, while also taking for-profit utilities into community hands to reorient their focus towards the public good.

Today, publicly-owned, democratically governed electrical utilities serve 28 percent of all US customers.<sup>34</sup> More agile and accountable, communities have more leverage to prompt wider shifts towards equitable renewables at these municipal utilities and rural electric cooperatives faster than what it possible with investor-owned utilities. To do so means transforming

the institutions so they better deliver on the values of energy democracy—such as better democratic procedures and equitable access to services.

A vibrant movement is already under way to reshape these publicly-owned energy utilities so that they operate for the people, by the people. Groups like Nebraskans for Solar have campaigned hard to shift the largest utility in Nebraska's publicly-owned electricity system toward larger renewable uptake. Running campaigns on green platforms, community organizers ousted incumbents, put teeth in sustainability directives, and, by tapping local wind farms, renewable energy is forecasted to provide over 40 percent of total use by 2019.<sup>35</sup> One Voice Electric Cooperative Leadership (ECLI) in Mississippi has worked for greater participatory democracy in rural electric cooperatives, supporting Southern Black and minority owner-members in historically racially segregated cooperatives and reversing miseducation.<sup>36</sup>

At the same time, through municipalization we need to take back those large swaths of our energy system captured by investor-owned utilities. These for-profits have employed many tactics to derail municipalization campaigns, particularly by discrediting publicly-owned power as inefficient or costly and spending millions of dollars to bankroll anti-municipalization efforts. Often, these scare tactics lack any factual basis. For instance, publicly-owned utilities consistently provide lower—not higher, as claimed—rates today than their for-profit counterparts.<sup>37</sup>

This onslaught can be beaten back. Xcel Energy spent \$1.7 million in local Boulder elections to stop the city's energy-municipalization campaign between 2011 and 2013—ten times what citizen advocates spent.<sup>38</sup> Even with all that cash, Xcel Energy is losing the local political battle, and Boulder has a clear path toward municipalization. A small but growing movement is fighting these utility Goliaths for public ownership.<sup>39</sup> In the process of ousting their unresponsive, and destructive, for-profit utility, communities can design their utility from the ground up with energy democracy as the taproot.

## CONCLUSION: REALIZING PUBLIC OWNERSHIP'S FULL POTENTIAL

Public ownership could usher in a foundational part of the next energy system and support energy democracy at a large scale in the United States through decentralized renewable energy adoption, deep democracy, and re-distributed wealth. The power we already have could be better leveraged, public ownership of utilities could be expanded, and our energy future could be removed from for-profit hands. Energy generation and distribution are key pressure points in wresting control of energy supplies from fossil fuels and backing renewables—and public ownership could make that transition a reality.

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# AN ANCHOR STRATEGY FOR THE ENERGY TRANSITION

Leveraging anchor institutions' power to build a local, sustainable, and inclusive energy system

#### BY JOHANNA BOZUWA AND CARLA SANTOS SKANDIER

While many cities and communities rely on a "smokestack chasing" approach to economic development, others are starting to focus on a new approach to economic development that centers people and place. Instead of measuring growth by just revenue, this approach, coined "community wealth-building," strengthens the local economy through broader democratic ownership and control of business and jobs.1 Rather than relying on (foreign) corporations to bring economic development to a region, community wealth building works to cultivate existing, local assets. Often, this includes working with anchor institutions, public and nonprofit entities rooted in place, such as hospitals, universities, cultural organizations, and local governments. 2 It can be a night and day difference. As PolicyLink's Tracey Ross explains, "General Motors in Flint, Michigan, picked up and left. And with it went all of these jobs, and that really decimated the economy. Wayne State University in Detroit? They're not going to be picking up and leaving."3

These large and economically vital entities are often driven by a broader mission than maximizing profits. For example, a non-profit or public hospital's main goal is to promote long-term health and well-being in the communities it serves. Similarly, most universities aim to provide education to foster people's productive and civic capacities. Given their social missions,

invested capital, and relationships to customers, employees, and vendors, these institutions are rooted in communities for the long run, and as such, don't have the same knee-jerk reaction as for-profit industries to fluctuating economic conditions. What's more, they often have a responsibility to their community as custodians of significant public resources in the form of tax exemptions or, in the case of public universities and hospitals, government grants.

Anchor institutions' jobs, capital, and stature translate into enormous power and influence—features that also elevate them to potential agents of systemic change.

Anchor institutions' jobs, capital, and stature translate into enormous power and influence—features that also elevate them to potential agents of systemic change. Defined as adopting the "anchor mission," anchors can intentionally apply their place-based economic power and human capital, in partnership with community, for the long-term wellbeing and mutual

benefit of of both. In the coming energy transformation, anchors have the opportunity to leverage their power and influence to accelerate the creation of an energy system that can both mitigate climate change and build community wealth—all while bringing them closer to their institutional missions.

## ALIGNING ANCHORS' POWER TO MEET ENERGY CHALLENGES

Whether climate action is written into their mission statements or not, anchor institutions' goals and very existence depend on making energy systems work so as to mitigate climate change impacts. Take health, for example. Climate change affects basic determinants of health such as clean air and drinking water or access to food and shelter,<sup>5</sup> and it also exacerbates health inequalities due to the disproportionate exposure of poorer people to toxins, extreme weather events, and other assaults. 6 If the last hurricane season is any indication of what the future might look like, healthcare institutions will face one extreme public health crisis after another from now on. For instance, six months after Hurricane Maria made landfall, Puerto Rico saw "increases in incidences of cardiac arrests and intracranial hemorrhages, higher rates of waterborne disease, mushrooming suicides, and medical equipment and staff shortages."7 The droughts hitting the US Midwest are also taking a toll on health. By compromising the quantity and quality of drinking water and food, increasing heat levels, and degrading air quality, affected areas are seeing a rise in levels of anxiety, mosquito-borne diseases, and heat exhaustion.8

Although less obvious, the same holds true for education. Along with curriculum quality and teacher expertise, education's success depends on many other factors, such as safe school building conditions and student health. When hurricanes, thousand-year floods, or sea level rise force campuses to shut down, the disruptions can stymie or permanently damage human learning development. Consider Hurricane Katrina's long-lasting effects on Louisiana with "one-third of Katrina's displaced children [...] at least one

year behind in school for their age," five years after the Hurricane made its landfall in 2005. This is believed to contribute to New Orleans's having the nation's highest rate of young adults not in school or working, fueling the region's surging need for job training programs.<sup>10</sup>

Despite the rising threats of climate change to their mission and the communities they serve, anchor institutions themselves contribute to the climate problem through their large carbon footprints. In 2013, healthcare systems accounted for an estimated 10 percent of total greenhouse gas emissions in US.<sup>11</sup> If healthcare institutions stay on this carbon-intensive path, they could be responsible for as much as 381,000 years of healthy life loss ("disability-adjusted life years" in scientific terms) annually worldwide.<sup>12</sup>

Several anchors have already recognized the carbon footprint challenge and taken steps to green their operations, from switching to efficient light bulbs to procuring more local goods. Some anchors have gone even further and committed to divesting from fossil fuel projects or adopting climate action plans. Such actions are important steps in the right direction, but the magnitude of the climate problem means we need to go beyond standard approaches and beyond these institutions' own doors. Moving forward, anchors should embrace their social missions and their unique ability as knowledge centers to shape a new energy future. These community pillars should home-grow strategies and interventions that create and preserve environmental sustainability while enhancing local democracy and equity over the long-term, on and off campus.

# THREE STRATEGIES TO LEVERAGE ANCHORS' ROLE AS AGENTS OF SYSTEM CHANGE

The following sections outline three major leverage points for anchors in facilitating a sustainable and inclusive energy system: building the new grid, fostering a just transition for workers, and convening financial capacity.

#### Building the New Grid: Community Renewable Energy, Energy Efficiency and Microgrids

Anchor institutions can and should do more than mitigate their own carbon footprints. They can be leaders and exemplars in building renewable energy resources to promote climate benefits and empower local communities. Access to renewable energy is not evenly distributed in the US. For instance, close to 51 percent of people in the country lack access to solar because they rent their housing, can't cover the upfront costs, or live in locations with poor conditions to generate power.<sup>13</sup> Decentralized renewable energy can be particularly prohibitive for lower income households without the credit history or upfront cash needed to participate. Passing these households over would only widen the current gap between them and more affluent households and organizations able to make the upfront investment to reduce their longterm energy costs.<sup>14</sup> Anchors can tap their immense resources—investments, procurement capacity, land and facilities, technical expertise, convening power, etc.—to help build community projects, and energy efficiency initiatives, that close this gap.

# Community Renewable Energy and Energy Efficiency

Anchors can catalyze community renewable energy by advancing projects that not only supply their own campuses but also serve their communities, specifically low-income residents. By fronting the initial capital and initiating feasibility studies, developing equitable siting strategies, and leading third-party tenders for renewable projects, as well as facilitating community engagement along each step of the way, anchors can help to streamline large-scale community renewable energy projects on their own land or an underutilized local space, such as a brownfield site. Acting as "anchor tenants," anchors can take on most of the cost and risk associated with a renewable project (for instance, 70 percent of the costs and of the solar panels)

and allocate the rest of the energy shares to low-income residents.<sup>15</sup> Similarly, anchors can play a crucial role in overcoming financial barriers faced by lowincome residents and residents of color, whose credit scores average lower than white, high-income residents in part due to historical redlining policies. 16 To quell energy developers' fear of low-income residents defaulting on energy project's payments, anchors can take advantage of their good credit and significant investment in the project as "financial fiduciaries," and also promise to subscribe to more if the lower-income customers default.<sup>17</sup> To further help the low-income subscribers, anchors could lower the financial barrier to initial ownership by working alongside developers to create pay-as-you-go options, such as on-bill financing, which require no upfront investments.<sup>18</sup>

Anchor institutions could make similar strides in energy efficiency programs, particularly for low-income community members. By investing in energy efficiency, particularly at affordable housing sites, anchor institutions can limit emissions in their communities and increase the safety and well-being of tenants. The Bronx Healthy Buildings Program is a perfect example. Created by the grassroots Northwest Bronx Community and Clergy Coalition (NWBCCC), in partnership with local hospitals, a university team, and the municipal government, the program aims to tackle the social determinants of health that trigger medical problems, like poor housing conditions and costly energy bills that often take away people's income from other basic necessities.<sup>19</sup> To address these determinants, the Bronx Health Buildings Program leverages participant anchors' power to promote "education, organizing, workforce development, and building upgrades," pinpointing specific buildings that are "drivers for high rates of emergency room visits."20 The program then supports building inspections and tenant organizing to identify how to best implement energy efficiency improvements.<sup>21</sup>

#### Maintaining Microgrids

Anchors could also host *microgrids*—electrical subsystems designed to bring together local generation,

storage, and distribution in a unified and coordinated way. Microgrids connect to the main grid to receive energy generated elsewhere or to send back excess energy generated locally. They can also operate in "island mode," disconnected from the larger grid—which can be critical infrastructure when pieces of the main grid fail elsewhere. The integration of energy-storage capabilities at the microgrid level can help the grid with demand response and load management too, and increase local energy resilience.<sup>22</sup>

# As large energy producers, anchors are ideal hubs for microgrids.

As large energy producers, anchors are ideal hubs for microgrids. They have the internal capacity to manage the microgrids for efficiency. They are power centers during outages, and many already have the physical infrastructure already in place. In the wake of Hurricane Irene, the City of Rutland, Vermont and its residents worked with the utility, Green Mountain Power, to implement a microgrid structure. The result: a 2.5-MW solar array consisting of 7,700 solar panels and 4 MW of storage capacity built at the city's old dump. This project powers around 2,000 Rutland homes, and if disaster strikes again the array can be switch to island mode and supply power to the Rutland City High School, the area's designated public emergency shelter. The supplementary of the supplementary of the Rutland City High School, the area's designated public emergency shelter.

But there is a risk associated with microgrids. To the extent that large institutions and wealthier communities can peel off pieces of the grid, other communities may be left behind in a kind of piecemeal privatization. To keep this scenario from unfolding, anchor institutions must convene conversations around microgrid deployment to keep communities and local stakeholders at the table and honor principles of universal, equitable access. Anchors can work alongside the local community to build plans for a microgrid

together, figuring out how to integrate renewable and battery assets, designing plans for disaster relief, and creating community energy efficiency—all key to ensure they succeed in their broader social mission.

# Building a Labor Force for a New Energy Economy

Anchor institutions have many ways to leverage their power to develop a workforce for the new energy economy. The most obvious, especially for large institutions, is to use their purchasing power to generate a substantial number of new energy jobs locally. When implementing renewable energy, energy efficiency, and microgrid projects, anchor institutions can prioritize contracts with local vendors, including worker cooperatives or organizations with fair labor practices, enabling pathways for employment for local residents. Anchoring renewable energy development with local and community enterprises would make it hard for an extractive renewable energy sector to take hold, and would instead lift up workplaces in alignment with a local, sustainable, and inclusive system.

Besides procuring energy services from organizations with high-road business practices, anchor institutions can use their resources to prepare residents for green jobs or transition fossil fuel workers into new careers. As reported in the latest Solar Jobs Census, the solar workforce has increased by an astonishing 168 percent in last seven years—employing over 250,000 people in 2017.25 The result: the solar industry currently employs more workers than the coal industry (from mining to generation) and almost as many workers as the natural gas industry.<sup>26</sup> And the renewable energy sector will need to grow even more. Getting serious about mitigating climate change—and bringing renewable energy from a mere 11 to 100 percent-means hiring tens of thousands more new and retrained workers to serve the transition.

Universities, community colleges, and other higher education institutions have a mission-minded role to play in developing a prepared workforce and lifelong

civic learners. Instead of prepping students for jobs that should no longer exist, such as a petroleum or coal mining engineers, these institutions should equip students for upcoming jobs in such burgeoning fields as solar energy and efficiency deployment by increasingly centering curriculum on a new energy and sustainable economic model.

Post-secondary schools should also commit to the just transition. For starters, they could host low- to no-cost training centers for fossil fuel workers, underemployed workers, returning citizens, and low-income residents. Universities in New York State have been working with The New York State Energy Research and Development Authority since 2010 to advance local green jobs, partly through partnership programs ranging from entry-level apprenticeships and internships to incremental certification and on-the-job training.<sup>27</sup>

Although universities and community colleges are a clear fit for transitioning the new and current workforce, other anchor institutions can engage in this area too. Some already do—the Bronx Healthy Buildings program mentioned earlier has a robust training component that recruits and trains workers from the neighborhood to provide educational information to area tenants and landlords.<sup>28</sup>

#### Convening Financial Capacity

Anchor institutions can also play a key role in consolidating financial capacity to help overcome some of the numerous—and onerous—financial obstacles that keep lower-income people from competing with wealthy individuals and corporations for ownership opportunities in the energy transition. As addressed in previous sections, using portions of their discretionary funding to cover the upfront costs of a community renewable energy project would provide community members and low-income residents' access to lending services and other financial incentives.

Anchors can also set examples in their communities, using their projects as visible and inclusive education-

al tools that invite broad participation in the renewable economy. Specifically, they could help churches, public schools, or other community-based institutions with a significant carbon footprint deploy renewable power. A great example of this strategy is Solar Holler, which has connected West Virginia's non-profits to financing programs for solar projects in highly visible community institutions like churches in Appalachian coal country, jumpstarting high levels of support and demand for renewables.<sup>29</sup>

Anchors also have invested assets, including endowments, that could advance energy democracy. Combined, US universities and healthcare systems hold investment portfolios nearing \$1 trillion. 30 Most of these institutions still have fossil fuel development projects in their investment portfolios. Anchors should divest from "brown" assets and invest in projects that align with their mission, including local green or renewable businesses. Specifically, anchors could leverage their assets to invest through community development financial institutions (CDFIs) targeting renewable or efficiency projects, increasing access to low-interest loan financing for projects. Besides setting these projects on a trajectory toward inclusive economic development from the get-go, this approach challenges traditional lenders and investors' misconceptions about non-extractive, community-owned, and locally-based projects' values and risks.

# CONCLUSION: CALLING ALL ANCHOR INSTITUTIONS

In the past couple decades, anchor institutions have increasingly recognized the systemic aspects of fulfilling their social mission and started greening their activities to mitigate the rising threats climate change poses to their goals. Moving forward, anchors can position themselves as agents of change by leveraging their power and resources away from the extractive economy and into a new energy system—one aligned with their social mission of promoting people and communities' health and well-being. While anchor institutions will have to tackle the climate crisis' many dimensions—

from water management to waste streams—one of the most pressing systemic climate issues is how we source our energy. Here we presented three strategies—building the new grid, fostering a just transition for workers, and convening financial capacity—for anchors to activate in the transition toward a regenerative energy system that builds community wealth.

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## **MORE RESOURCES**

#### **CLIMATE CHANGE**

# Building Community Capacity for Energy Democracy: A deck of strategies

Building Community Capacity for Energy Democracy provides an array of strategies—new institutions, new models for regulation, and new forms of distributed and public ownership—that can promote renewable energy capacity while building community power. This "deck of cards," developed in collaboration with People's Action, allows activists and on-the-ground practitioners to explore and remix the elements of an inclusive and sustainable energy system, grounded in the agency of communities to shape their own ecological and economic futures.

https://thenextsystem.org/learn/collections/building-community-capacity-energy-democracy-deck-strategies

# Systemic Crisis and Systemic Change in the United States in the 21st Century

#### Gar Alperovitz, Gus Speth, Ted Howard, and Joe Guinan

Prepared for the 2016 "After Fossil Fuels" conference held in Oberlin, Ohio, this working paper explores the intersections of systemic economic and ecological crisis, proposing that only a break with the mechanisms of corporate capitalism is capable of guaranteeing a sustainable future. Using examples from the burgeoning "new economy" as a guide toward the outlines of a true systemic alternative, the paper suggests that new understandings of monetary policy could be instrumental in the near term efforts needed to keep enough carbon in the ground and create the window we need to scale up the elements of the next system.

https://thenextsystem.org/framing-the-challengesof-a-next-system-after-fossil-fuels

# Stress Test: Democracy Meets Climate Change

Gus Speth

In this honest and necessary reflection, NSP co-chair Gus Speth concludes that "American democracy has failed the climate stress test." But "can American democracy still rise to the climate occasion?." Speth concludes that yes, it can. But to successfully do so we desperately need to change our polity, as well as our economy, our society, and their interactions with the polity. We need to move to the next system.

https://thenextsystem.org/learn/stories/stress-test-democracy-confronts-climate-change

#### Addressing the Systemic Challenges at the Heart of Escalating Inequality and Environmental Destruction

Ted Howard

In his remarks to the Environmental Funders Network's 2018 gathering in Cambridge, England, TDC's President Ted Howard makes the case that "we will never be able to go far enough, or fast enough, doing the right things on climate—or equality—without addressing the defining features of our political economic system, which continuously work against equitable, sustainable solutions."

https://thenextsystem.org/learn/stories/addressing-systemic-challenge-heart-escalating-inequality-and-environmental

#### THE DEMOCRATIC ECONOMY

# 8 Principles of Community Wealth Building Ted Howard

A one page guide that outlines the eight basic principles behind community wealth building—a transformative approach to local economic development that builds an economy that works for the many, not the few.

https://democracycollaborative.org/content/community-wealth-building-eight-basic-principles

# Principles of a Pluralist Commonwealth Gar Alperovitz

Principles of a Pluralist Commonwealth is an online book that provokes the needed discussion of practical new economic efforts and organizing strategies that can offer a trajectory and pattern to renew and rebuild the very concept of "community" as the foundation of a next American system. In chapter 3, "Climate Change," Gar Alperovitz addresses the threat of climate change by providing examples of promising on the ground developments that can point toward an ecologically sustainable pluralist commonwealth—a transformative vision beyond both corporate capitalism and traditional state socialism.

https://thenextsystem.org/principles

#### The Next System Podcast

#### Adam Simpson

The Next System Podcast, hosted by Adam Simpson, features guests discussing movements, models, and pathways toward a new system. Relevant episodes include interviews with Gus Speth about how climate change necessitates system change (Episode 7), Denise Fairchild about energy democracy (Episode 9), and Andrew Cumbers about 21st century public ownership (Episode 11).

https://thenextsystem.org/learn/collections/next-system-podcast

#### Elements of a Democratic Economy

This series distills a landscape of alternative economic institutions and models of ownership that could fundamentally alter patterns of ownership and wealth distribution into accessible, two page introductions. The series is intended as an entry point for all those looking to understand the various building blocks of the democratic economy currently being constructed from the ground up in communities across our nation and around the world, including institutions for climate action like green banks and electric utilities.

https://thenextsystem.org/elements

#### About the Authors

**James Gustave Speth** is a Senior Fellow at The Democracy Collaborative, and is Co-Chair of The Next System Project.

**Carla Santos Skandier** is a Senior Research Associate at The Next System Project, where her work focuses on the systemic financial and ecological risks posed by climate change.

**Johanna Bozuwa** is a Research Associate at The Next System Project, where her work focuses on energy democracy and public ownership.

#### The Next System Project

The Next System Project is an ambitious multi-year initiative housed at The Democracy Collaborative which is aimed at thinking boldly about what is required to deal with the systemic challenges the United States faces now and in coming decades. Responding to real hunger for a new way forward, and building on innovative thinking and practical experience with new economic institutions and approaches being developed in communities across the country and around the world, the goal is to put the central idea of system change, and that there can be a "next system," on the map. Working with a broad group of researchers, theorists, and activists, we seek to launch a national debate on the nature of "the next system" using the best research, understanding, and strategic thinking, on the one hand, and onthe-ground organizing and development experience, on the other, to refine and publicize comprehensive alternative political-economic system models that are different in fundamental ways from the failed systems of the past and capable of delivering superior social, economic, and ecological outcomes. By defining issues systemically, we believe we can begin to move the political conversation beyond current limits with the aim of catalyzing a substantive debate about the need for a radically different system and how we might go about its construction. Despite the scale of the difficulties, a cautious and paradoxical optimism is warranted. There are real alternatives. Arising from the unforgiving logic of dead ends, the steadily building array of promising new proposals and alternative institutions and experiments, together with an explosion of ideas and new activism, offer a powerful basis for hope.

Learn more at **thenextsystem.org**.

