



Energy Democracy: A Primer

Matthew N. O. Sadiku¹, Uwakwe C. Chukwu², Sarhan M. Musa¹

¹Roy G. Perry College of Engineering, Prairie View A&M University, Prairie View, TX, USA

²Department of Engineering Technology, South Carolina State University, Orangeburg, SC, USA

Abstract Energy democracy demands that people come together to solve local, national, and global energy problems. It seeks transition from energy monopoly to energy democracy. It intends to bring about system change, breaking the hegemony of big transnational corporations over the global economy and democratizing the energy sector. The concept of energy democracy is strongly rooted in the ideas of sovereignty and self-determination. This paper provides a primer on energy democracy.

Keywords democracy, energy democracy, democratized energy

Introduction

As a nation, our commitment to democracy is an enduring feature of America. We exercise our democratic rights when we vote in elections and speak our opinions.

Many Americans are disgusted and concerned about the dysfunction from Washington, D.C. and are committed to change the system by taking action that will work. Democracy offers the potential to turn things around by collectively finding ways for us to solve our problems.

The global community is going through a crisis. It is the crisis of a way of life, a pattern of consumption, exploitation, inequalities, and climate change. As global temperatures rise, the threats of climate change leave our children with an uncertain future. Energy has always been a terrain of struggle and its governance is at a crossroads. People across the world are left unable to meet basic energy needs. From energy access to climate justice, people across the world are beginning to see the need for a global “energy transition” from fossil fuels to renewable energy sources, from an extractive energy economy to a sustainable regenerative economy. As shown in Figure 1, renewable energy sources such as wind, water, sun and biomass are an alternative to fossil fuels such as coal, oil, uranium, and gas [1]. A renewable energy revolution is essential for helping us create a better planet for our children.

People around the world are taking back control over the energy sector and reimagining how energy might be produced, distributed, and used. They seek for collective control over the energy sector, in contrast with the dominant neoliberal culture of marketization, individualization, and corporate control. For movements involved in struggles around energy, the concept of energy democracy (ED) is emerging as a useful means of bringing about an alternative concept to alter conditions of neoliberalization and uneven development. It is also growing social movement that prioritizes for redistributing power to the people through renewable transformation. ED involves a shifting power over all aspects of the sector – from production to distribution and supply, from finance to technology and knowledge [2]. In order to see the connection between energy production and democracy, we should view ED in relation to other forms of democracy.





Figure 1: Renewable energy for energy democracy [1]

Types of Democracy

In the modern age, there are several forms of democracy [3]. These include delegative democracy, deliberative democracy, digital democracy, direct democracy, representative democracy, food democracy, biodemocracy, and energy democracy.

- Direct democracy: This is a form of democracy in which all citizens decide by voting on policy initiatives directly. People may vote on every law, public policy, and issue of justice.
- Representative democracy: This is perhaps the most popular type of democracy. Virtually all democratic governments around the world are representative. Representative democracy allows people to vote for candidates (or political parties) that best represent their views through free and fair elections. The elected candidates become leaders that make decisions on behalf of the people.
- Delegative democracy: This is also known as "liquid democracy." The purpose of delegation is that it allows everyone (including individuals with intellectual disabilities) to participate in votes and hold ultimate control. It may be unrealistic to expect every citizen to have the time or interest to be sufficiently informed and vote competently on every issue. This is why delegation is necessary. Each member of the public can either be a passive role as an individual or an active role as a delegate.
- Deliberative democracy: In order for the public to make good decisions when they vote, there needs to be a process of "deliberation." Deliberation means the public should have an opportunity to learn about a topic, discuss it with others, question experts, and have an equal say before exercising their vote. One form of deliberation is to have in-person meetings of randomly selected and demographically representative members of the public, operated by trained moderators to arrive at the "will of the people."
- Digital democracy: This is also known as e-democracy or cyber democracy. The Internet is making significant changes in all levels of government—federal, state, and local. The free flow of information through the Internet has encouraged freedom and human development. The digital government uses the Internet to promote human rights, including free speech, religion, expression, and peaceful assembly. These rights support democracy. Digital democracy involves using the Internet and mobile computing to share and communicate views with each other online almost without limitations. You express your concerns, your issues, your ideas, and your decisions and expect reaction from others [4].
- Food democracy: This type of democracy demands a transformation of the food industry, so that people can have control over what they produce and eat. It also requires a fair access to land to grow



food and fair return for those who produce it. The Food Democracy movement in America poses several important political, economic, and social questions, which will shape our food future [5].

- **Biodemocracy:** This refers to a balance between political and ecological democracy. It is all about the responsibility of all engaged citizens to respect the environment. It involves the prevention of all forms of ecological degradation such as noise and physical pollution and support of environmentally friendly practices and policies. Biodemocracy is a way of thinking about the relationship between science, religion, and the environment in the twenty-first century.
- **Energy democracy:** This refers to the institutionalization of more participatory forms of energy provision and governance. Since energy production affects everybody, its production, distribution, and consumption should be regulated in a collective, political, and public effort. Energy democracy movement offers a type of effective and comprehensive agenda for renewable energy transitions. It is an organizing principle as well as a social movement. It advocates that everyone should have access to enough energy. More about this will be discussed in the next section.

Concept of Energy Democracy

The concept of “energy democracy” grew out of grassroots activists in the United States and parts of Europe around 2010. It is a call for social justice and economic equity with renewable energy transitions [6]. It is related to be an ongoing decentralization of energy systems. It is a call for a 100% transition to renewable energy as soon as feasible. Its three overarching goals are resist, reclaim, and restructure. Thus, energy democracy advances renewable energy transitions by resisting fossil fuel exploitation like coal while reclaiming and democratically restructuring energy regimes. Renewable energy can be produced locally and made available to everyone in the community. The concept of energy democracy is illustrated in Figure 2 [7].



Figure 2: The concept of energy democracy [7]

Energy democracy is an emergent social movement advancing renewable energy transitions based on the combined goals of resist-reclaim-restructure, while simultaneously resisting and restructuring or replacing the existing dominant energy systems. It came out popular movements which address climate and economic crises, resist fossil fuel expansion, and encourage transition to renewable energy. The movement links social justice and equity with energy innovation. It connects energy infrastructural change with the possibilities for deep political, economic, and social change [8].

Energy democracy (ED) refers to democratization as a political call to open up energy systems to participation. This will create an opening that allows alternative forms of social relations to emerge and replaces existing structures of domination [9]. ED advances a vision that includes communities and demands that the major decisions about energy choices should be made by citizens, not a few large corporations. It aims at shifting control over all stages of the energy sector, from production to distribution. Advocates of ED argue that all citizens need to participate in the processes of energy transition and decisions about future energy. Participation makes for better governance and better citizens. Participation also includes education and technical assistance [8].



Social movements are using “energy democracy” to signify the emancipatory energy transitions they desire. Social groups have taken up related terms such as energy justice and energy sovereignty. Energy sovereignty is connected to other approaches such as food sovereignty that strive for autonomy regarding food supplies. Energy justice demands a socially just energy system, with universal access, fair prices, unionized and well-paid jobs. Mobilization of activists unites diverse peoples and institutions, including citizens, landowners, indigenous and environmental organizations, communities, organizations, cities, states, nations, farmers, artists, students, researchers, religious leaders, labor unions, and institutional investors [10]. With the Paris Agreement, local and global networks of social movements promote energy democracy. For example, Energy Democracy for All is an interactive communities across America that are innovating how to build their local economies.

Pillars of Energy Democracy

As mentioned before, ED is a movement that advances renewable energy transitions by resisting the fossil-fuel-dominant energy agenda while reclaiming and democratically restructuring energy regimes. As we transition from energy monopoly to energy democracy, the four Ds of energy democracy — distributed power, decentralization, democracy from ownership, and disruptive technology — constitute the pillars of ED and have the potential to put energy users in charge and allow them to reap the economic benefits [11].

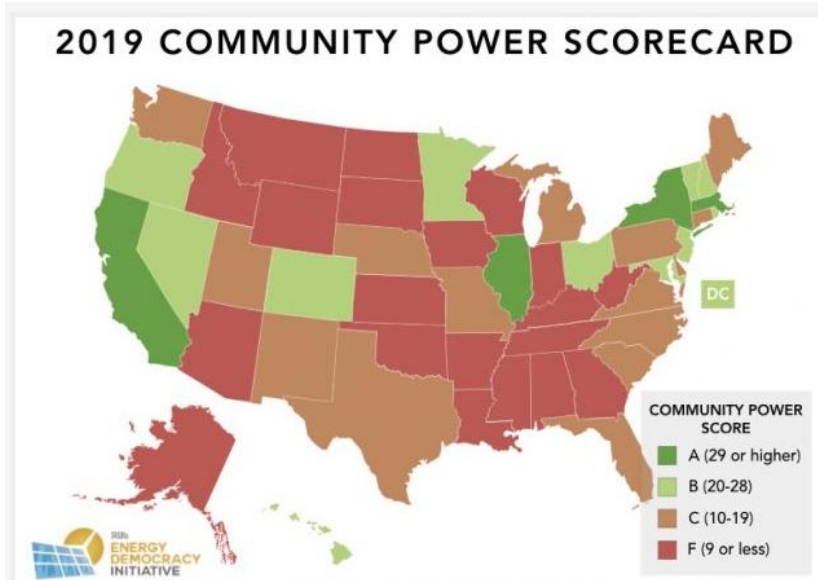


Figure 3: Community energy generation [12]

- *Distributed power:* This is the first line of democratization, brought on by the miniaturization of power plants. It puts the power of energy generation and energy storage into the hands of its users. The most critical and urgent strategy is to ensure that fossil fuels stay in the ground. Fossil fuel projects must be delayed, cancelled, or banned.
- *Decentralization:* The miniaturization of power generation allows for decentralization. Decentralization means that energy should be generated as close as possible to where it is consumed. It also means breaking with established centralized energy systems. Decentralized power generation usually utilize renewable energy sources such as wind, solar energy, or biomass.
- *Democracy from ownership:* This is also known as collective ownership, which promotes affordable services, and energy generation according to ecological standards and under democratic control. It also means mean breaking with the neoliberal logic of privatizations and not allowing the big transnational corporations privatise our collective renewable resources. When power plants are owned by ordinary citizens and can be located anywhere, ownership is no longer restricted to utility companies. Community-owned energy co-operatives are becoming increasingly common. Figure 3 illustrates a typical community energy generation [12].



- *Disruptive technology*: The democratization of energy encompasses access to new communications technology. Organizations are characterized by the types of renewable technologies they articulate. A lot can be achieved by smartphones and smart devices in the hands of ordinary individuals.

Transition narratives can be examined through the four constituent elements. Other terms can be used to describe ED: collective, cultural, consequential, co-produced, co-existent, and critical [13]. There's no question that the energy system is undergoing change. One need look no further than the 1 million solar rooftops in the U.S.

Benefits

Energy democracy has a comprehensive and effective agenda for driving deep sociotechnical change. It offers insights on policy mixes in the context of renewable energy transitions. The transition from fossil-fuel-dominated energy systems to renewable-based energy offers an opportunity for shifting technologies. It is amazing how ordinary people can challenge the monopoly of the energy companies worldwide by changing the system one city at a time. ED is a way of allowing community participation in energy project planning.

ED envisions that in the near future, utility will not build power plants any more or centrally control the grid; they will only manage the market and facilitate neighborhood transactions that serve the users. It aims to create green jobs. The energy democracy provides a valuable lens to guide participation, governance, and priorities of the renewable energy revolution. The ED movement recognizes that a future of distributed renewable energy generation is radically different from current energy system based on fossil-fuel-burning generation [14]. ED does not only seek to solve climate change; it also addresses entrenched systemic inequalities.

Challenges

Policies for resisting or replacing incumbent energy regimes have received less attention than policies for innovation. The ED resist-reclaim-restructure agenda appears to provide an approach for creative destruction and disruptive innovation. The biggest challenge to spreading renewable energy is its high up-front costs, although a homeowner will be paying less for electricity because the house is now getting some power from the solar panels on the roof. Other challenges include state laws and rules on interconnection procedures, metering laws, the ability of electric utilities to charge onerous standby charges, policy tradeoffs and conflicting goals.

Energy systems are complex, consisting of different interconnected parts and cables crossing national borders. It is important to be clear and specific which part of the energy system should be democratized. Energy democracy seems to be less relevant to developed countries where there is reliable access to electricity services and it would not be prudent to dismantle what is already in place. Not all human societies thrive in democratic spaces.

Conclusion

Energy democracy is an idea that has become prominent among energy-related grassroots activists. It is an umbrella term that encompasses various calls by social movements, critical think tanks, trade unions, and political parties for more just, democratic, and sustainable energy systems. It uses all-hands-on-deck approach and requires that we recognize that all Americans have a role to play in providing green energy solutions. The concept is increasing being embraced by several social, political, and environmental activists in US, Canada, and elsewhere, from Greece to Spain, from Germany to UK. It is already widely used by European activists, but not so much in Latin America and Africa. Energy democracy and its practices are dynamic, changing in interpretation in response to many entangled issues. More information on energy democracy can be found in the books in [15-19].

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About the Authors

Matthew N.O. Sadiku is a professor in the Department of Electrical and Computer Engineering at Prairie View A&M University, Prairie View, Texas. He is the author of several books and papers. His areas of research interests include computational electromagnetics and computer networks. He is a fellow of IEEE.

Uwakwe C. Chukwu is an associate professor in the Department of Industrial & Electrical Engineering Technology of South Carolina State University. He has published several books and papers. His research interests are power systems, smart grid, V2G, energy scavenging, renewable energies, and microgrids.

Sarhan M. Musa is a professor in the Department of Electrical and Computer Engineering at Prairie View A&M University, Texas. He has been the director of Prairie View Networking Academy, Texas, since 2004. He is an LTD Sprint and Boeing Welliver Fellow. His research interests include computer networks and computational electromagnetics.

