ARTICLES

IMPLEMENTING "ENERGY COMMUNITIES"

by Uma Outka

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SUMMARY

President Biden's 2021 Executive Order No. 14008 created a new federal legal concept of "energy communities." The Infrastructure Investment and Jobs Act (IIJA) and Inflation Reduction Act (IRA) further defined this term, with an emphasis on historical dependence on fossil energy industries. This Article summarizes and assesses current law for "energy communities" in the United States, with an emphasis on recent developments and early implementation efforts. Following a brief overview, it explains how this conception of "energy communities" overlaps with, but is distinct from, other closely related definitions of communities in need of socioeconomic supports or revitalization. It then assesses the complexity, challenges, and progress to date toward implementation of the newly defined concept. With the recent election, many speculate about the durability of the IIJA and the IRA, but it is noteworthy that "energy communities" and their need for economic revitalization have enjoyed bipartisan recognition.

In 2021, shortly after taking office, President Joseph R. Biden signed Executive Order No. 14008, Tackling the Climate Crisis at Home and Abroad.[1] The Order opened with a "necessary and urgent" renewed commitment to "international engagement to address climate change."[2] This far-reaching Executive Order included a dedicated provision, §217, to address the policy priority of supporting what it termed "energy communities." In doing so, Executive Order No. 14008 created a new legal conception within U.S. federal law, soon reinforced by the U.S. Congress in major federal legislation—first in the Infrastructure Investment and Jobs Act of 2021 (IIJA),[3] and soon after in the Inflation Reduction Act of 2022 (IRA), which further defined the term "energy community."[4]

This Article recounts recent developments in U.S. law and policy related to the newly defined "energy communities." It is noteworthy that this conception is markedly different from the European Union's (EU's) approach of establishing new legal entities in the form of "citizen energy communities" and "renewable energy communities" within EU Member States. Rather, in the United States, "energy communities" are now defined mostly by their entwined social and economic history with fossil energy industries in decline.[5]

Policy implementation to promote social and economic stability for "energy communities" in the United States is ongoing, and it builds on prior federal efforts to support communities affected by economic change. For this reason, the developments described here can be understood through the lens of "just energy transition," a practical and theoretical framing that centers concern for workers and their wider communities within efforts to drive or respond to evolving global energy markets.

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1. Exec. Order No. 14008, 86 Fed. Reg. 7619 (Feb. 1, 2021).
2. *Id.* §101.
3. IIJA, Pub. L. No. 117-58, 135 Stat. 429 (2021).
4. IRA, Pub. L. No. 117-169, §13101(g), 136 Stat. 1818, 1910-12 (2022).
5. For my comparative work on this subject, see Uma Outka, *Evolving Legal Conceptions of "Energy Communities,"* 78 Miami L. Rev. 471 (2024) (addressing new developments in the United States and drawing international comparisons); Annalisa Savaresi & Uma Outka, *Energy Communities: Comparative Perspectives From the EU and the US*, *in* Handbook on Energy Law in the Low-Carbon Transition 497 (Guiseppe Bellantuono et al. eds., De Gruyter 2023) (comparing "energy communities" in the EU and the United States).

In what follows, the Article situates the focus on "energy communities" within the changing energy sector and provides an overview of relevant developments in U.S. law to date. It then offers an early assessment of benefits and challenges stemming from relevant legal definitions, and tracks initial implementation of new law for "energy communities."

With the recent presidential election, many speculate about the durability of the IIJA and, in particular, the IRA in the years ahead. Although only time will tell, it is noteworthy that "energy communities" and their need for economic revitalization have enjoyed bipartisan recognition. Accordingly, a continued focus on "energy communities" may reasonably be anticipated.

I. Overview: Energy-Sector Transition Away From Coal Dominance

The energy sector, especially the electric power industry, is in dynamic flux in the United States. Even as recent presidential administrations have taken widely divergent positions on climate and energy policy, the past 25 years have substantially reshaped U.S. electricity generation.

A. *Renewable Energy and Fossil Energy Trends in U.S. Electric Power Production*

Perhaps the most marked change in the U.S. energy sector is coal's sharp fall from dominance in the national electricity portfolio. Coal constituted more than 50% of electricity generation as recently as the early 2000s, but it provides only about 16% of electricity today.[6] This shift is the result of a massive and rapid buildout of gas infrastructure, as hydraulic fracturing opened new shales to extraction, combined with significant new renewable energy development. As of 2023, gas and zero-carbon resources (renewable energy and nuclear combined) each accounted for roughly 40% of U.S. electricity generation.[7] The U.S. coal industry is now increasingly focused on coal exports, as projections show coal will only decline further as a resource for electricity on the U.S. grid.[8]

Although some coal plants slated for retirement have had closure dates postponed while new infrastructure comes online,[9] all new planned utility-scale power generation additions in 2024 were either for renewable energy (58% solar, 13% wind) or battery storage (23%), followed by gas (4%) and nuclear (2%).[10] Overall, demand for electricity is expected to rise in the coming years, and that growth is expected to be met mostly with renewables, energy storage, and gas, as these resources compete for emphasis in an increasingly partisan policy environment.

B. *Past Federal Efforts to Help Communities Affected by Coal Industry Decline*

When Barack Obama was elected president in 2008, the U.S. commitment to climate action was renewed after eight years of inaction under President George W. Bush.[11] Although Congress failed to pass comprehensive climate legislation in the early years of the Obama Administration, many states filled the gap by enacting renewable energy standards that spurred wind and solar development across the nation.[12] At the same time, the shale boom was rapidly expanding the gas industry.[13] The decline of the coal industry brought economic suffering to many communities, as mines reduced production or closed outright.[14] It was obvious that new jobs associated with renewables and gas would not automatically be available to those who were out of work in coal communities, and targeted policy supports would be needed.

Concern for these communities' distress grew in policy circles. In 2015, the Obama Administration established the federal Partnerships for Opportunity and Workforce Economic Revitalization (POWER) Initiative to accelerate investment and economic diversification in legacy coal communities in Appalachia, the mountainous and coal-rich region of the mid-Atlantic interior.[15] Appalachia has long struggled economically. Nearly 60 years ago, the federal government established the Appalachian Regional

6. *See* U.S. Energy Information Administration (EIA), *Electricity Explained*, https://www.eia.gov/energyexplained/electricity/ (last visited Nov. 16, 2024) (see figure "Sources of US electricity generation, 2023" (citing EIA's *Electric Power Monthly*, Feb. 2024)).
7. Nuclear energy generated 18.2% of U.S. electricity and renewables generated 21.5%; gas accounted for 43.1%. *See* EIA, *supra* note 6.
8. According to the EIA, about 100 million short tons of U.S. coal was exported to more than 70 countries in 2023, with the top five destinations being India, Japan, the Netherlands, Brazil, and China. *See* EIA, *Frequently Asked Questions (FAQs): How Much Coal Does the United States Export and to Where?*, https://www.eia.gov/tools/faqs/faq.php?id=66&t=2 (last updated Apr. 2, 2024).
9. EIA, *Retirements of U.S. Electric Generating Capacity to Slow in 2024*, Today Energy (Feb. 20, 2024), https://www.eia.gov/todayinenergy/detail.php?id=61425 (but predicting increase again in 2025). *See also* Dennis Wamsted, *Delayed U.S. Coal Plant Closures Are Bumps in the Road, Not U-Turns for Energy Transition*, Inst. for Energy Econ. & Fin. Analysis (July 21, 2022), https://ieefa.org/resources/delayed-us-coal-plant-closures-are-bumps-road-not-u-turns-energy-transition.
10. EIA, *Solar and Battery Storage to Make Up 81% of New US Electric-Generating Capacity in 2024*, Today Energy (Feb. 15, 2024), https://www.eia.gov/todayinenergy/detail.php?id=61424.
11. President Bush rejected the Kyoto Protocol under the United Nations Framework Convention on Climate Change as a structure for international climate cooperation. For a brief summary of this history, see Daniel Bodansky, *The United Nations Climate Change Regime Thirty Years On—A Retrospective and Assessment*, 62 Washburn L.J. 1 (2022).
12. *See* Galen L. Barbose, U.S. Department of Energy, U.S. State Renewables Portfolio & Clean Electricity Standards: 2024 Status Update (2024), https://emp.lbl.gov/publications/us-state-renewables-portfolio-clean-0 (surveying historical trends in evolution of state renewables portfolio standard/clean electricity standard policies and addressing impact of these laws on renewable energy development).
13. EIA, *Natural Gas Explained*, https://www.eia.gov/energyexplained/natural-gas/where-our-natural-gas-comes-from.php (last updated Dec. 21, 2023) (includes graphic depiction of U.S. dry shale natural gas production drawn from EIA's *Short-Term Energy Outlook* from August 2024).
14. EIA, *The Number of Producing U.S. Coal Mines Fell in 2020*, Today Energy (July 30, 2021), https://www.eia.gov/todayinenergy/detail.php?id=48936 (showing shrinking mine count between 2008 and 2020).
15. *See* Appalachian Regional Commission, *Partnerships for Opportunity and Workforce and Economic Revitalization Initiative*, https://www.arc.gov/grants-and-opportunities/power/ (last visited Nov. 16, 2024).

Commission to strengthen economic development in the region, but the energy transition was exacerbating existing problems with new challenges.[16]

The POWER Initiative channels federal resources through the commission for the purpose of helping "communities and regions that have been affected by job losses in coal mining, coal power plant operations, and coal-related supply chain industries due to the changing economics of America's energy production."[17] Seeing the promise of the new POWER Initiative, a network of private foundations established the Just Transition Fund to help local organizations access this new source of funding.[18] The fund later expanded its support efforts to coal-dependent communities in the West and Midwest regions.[19]

After Donald J. Trump took office in 2017, despite his professed support for a strong coal industry, coal mining jobs continued to erode. The U.S. Department of Energy (DOE) reported that the number of coal mine workers shrunk by more than one-half between 2012, the start of President Obama's second term, and 2020, the end of President Trump's term.[20]

The Obama-era POWER Initiative carried forward through the Trump presidency and has continued during the Biden presidency, reportedly investing more than $420 million in more than 500 projects across 365 coal-impacted counties in Appalachia since 2015.[21] Nonetheless, research at the end of the Trump Administration found that "existing transition assistance policies do not align with the needs and capacity of transitioning coal communities," made worse by "the absence of a national energy transition policy."[22] Consistent with these observations, the Biden Administration sought to pair its ambition to accelerate clean energy with stronger supports across all coal-impacted regions in decline.

II. Executive Order No. 14008: Empowering Workers Through Revitalizing Energy Communities

With Executive Order No. 14008, President Biden articulated ambitious policy aims related to international and domestic climate action, conservation, clean energy jobs, and environmental justice. Section 217, a key provision of the Executive Order, explicitly addressed communities that have been economically dependent on legacy fossil energy industries, acknowledging "mining and power plant workers" who "drove the industrial revolution and . . . have been essential to the growth of the United States."[23] Accordingly, the Order stated, "As the Nation shifts to a clean energy economy, Federal leadership is essential to foster economic revitalization of and investment in these communities . . . ."[24]

To that end, §217 directs all executive federal agencies to work together to advance the goal of "Empowering Workers Through Revitalizing Energy Communities" (the section title).[25] This critical reference to "energy communities" gains meaning as §217 goes on to instruct federal agencies to "coordinate investments and other efforts to assist coal, oil and gas, and power plant communities."[26] Thus, under Executive Order No. 14008, "energy communities" are "coal, oil and gas, and power plant communities," but are not further defined.

A. *Assembling an Interagency Working Group to Advance Revitalization of "Energy Communities"*

To advance the goal articulated in §217—"Empowering Workers Through Revitalizing Energy Communities"—§218 of Executive Order No. 14008 established the Interagency Working Group (IWG) on Coal and Power Plant Communities and Economic Revitalization.[27] The IWG is jointly chaired by the national climate advisor and the assistant to the president for economic policy, and comprises the top leadership of DOE, the U.S. Departments of the Interior (DOI), Treasury, Agriculture, Commerce, Labor, Health and Human Services, Transportation, and Education, as well as the U.S. Environmental Protection Agency (EPA), Office of Management and Budget (OMB), Domestic Policy Council, Council on Environmental Quality (CEQ), and the Appalachian Regional Commission.[28]

The IWG, housed within DOE, is charged with coordinating "the delivery of Federal resources to revitalize the economies of coal, oil and gas, and power plant communities" and consulting with "State, local, and Tribal officials; unions; environmental justice organizations; [and] community groups" on revitalization strategies.[29] Implementation of the IWG's charge is discussed in Part V.

16. *See* Appalachian Regional Commission, *About the Appalachian Regional Commission*, https://www.arc.gov/about-the-appalachian-regional-commission/ (last visited Nov. 16, 2024). For more on early federal efforts to support legacy coal communities, see Ann M. Eisenberg, *Transitions in Energy Communities*, 12 Geo. Wash. J. Energy & Env't L. 103, 106-07 (2021).
17. Appalachian Regional Commission, *supra* note 15.
18. *See* Just Transition Fund, *About Us*, https://justtransitionfund.org/about/ (last visited Nov. 16, 2024).
19. *Id.*
20. Bethel W. Tarekegne et al., U.S. Department of Energy, Coal-Dependent Communities in Transition: Identifying Best Practices to Ensure Equitable Outcomes 2 (2021), https://www.osti.gov/servlets/purl/1821478.
21. Appalachian Regional Commission, *supra* note 15.
22. Kelli F. Roemer & Julia H. Haggerty, *Coal Communities and the U.S. Energy Transition: A Policy Corridors Assessment*, 151 Energy Pol'y 112112 (2021).
23. Exec. Order No. 14008, §217, 86 Fed. Reg. 7619, 7627-28 (Feb. 1, 2021).
24. *Id.*
25. *Id.*
26. *Id.*
27. *Id.* §218, 86 Fed. Reg. at 7628.
28. *Id.* §218(a), 86 Fed. Reg. at 7628.
29. *Id.* §218(c)-(d), 86 Fed. Reg. at 7628.

B. *Advancing Revitalization of "Energy Communities" Through Other Provisions of Executive Order No. 14008*

Additional provisions in Executive Order No. 14008 are relevant to the same "energy communities" identified as needing revitalization in §217. Perhaps most noteworthy in this regard is §223, which established the Justice40 Initiative. With Justice40, the president set a goal for federal agencies to direct "40 percent of the overall benefits" of certain federal investments to "disadvantaged communities," such as grants or procurement spending, under a Justice40-covered program related to climate, energy, environmental remediation, water infrastructure, and more.[30]

The Order charged the chair of CEQ, the director of OMB, and the national climate advisor to develop recommendations for how federal agencies can meet the "40-percent goal" using existing legal authority, as well as any new legislation that may be necessary to achieve the goal.[31] To help in the identification of "disadvantaged communities" for purposes of Justice40, §222 of the Order directs CEQ to create "a geospatial Climate and Economic Justice Screening Tool."[32] The purpose of the tool is to "publish interactive maps highlighting disadvantaged communities" on an annual basis.

Guidance for Justice40 instructs federal agencies that, in general, a "community" is recognized in terms of geographic proximity using census tracts (a small unit of geography with population usually between 1,200 and 8,000 people).[33] A community is "disadvantaged" based on the cumulative burden across categories that combine low household income with high vulnerability to climate change impacts, high energy cost burden and air pollution, negative health metrics, poor housing, legacy pollution, transportation barriers, linguistic isolation, and other factors.[34] It is also possible to regard "a geographically dispersed set of individuals" as a "community" based on a "common condition" such as among "migrant workers or Native Americans."[35]

Although neither §223 nor §222 addresses "energy communities" specifically, both are relevant to them for at least the following reasons. First, because the recognition of "energy communities" in the Executive Order is so closely tied to economic distress, there is potential for overlap between communities characterized as "energy communities" based on proximity to legacy fossil energy industries in decline and "disadvantaged communities" as conceived for purposes of Justice40 implementation. The categories related to low-income, legacy pollution, and negative health metrics, for example, can often point to communities with both statuses.

Second, the goal of spurring economic opportunity and revitalization is aligned across both sets of communities, unifying the focus on support in economic terms, and in both instances linking that support to the goal of a clean energy transition. As discussed below, these connections reflect the interrelated concepts of just transition, energy justice, and environmental justice.

C. *"Energy Communities" and the Interrelated Concepts of Just Transition, Energy Justice, and Environmental Justice*

The Biden Order offers a primary source example of how concepts of just transition, energy justice, and environmental justice intersect in mutually constitutive ways. Executive Order No. 14008 expressly states: "We must deliver environmental justice to all communities all across America."[36] It further articulates the policy of the Administration "to secure environmental justice and spur economic opportunity for disadvantaged communities that have been historically marginalized and overburdened by pollution and underinvestment in housing, transportation, water and wastewater infrastructure, and health care."[37]

Environmental justice conceptually recognizes the historic and ongoing disproportionate effect of pollution on low-income communities and people of color. In the United States, environmental injustice is integrally tied to the racist history of segregated land use, the effects of which continue to cause harm via close proximity from these communities to polluting industry, landfills, and transportation corridors.[38] Exposure to environmental harm can also be in the workplace, such as for workers in the coal industry.[39]

30. *Id.* §223, 86 Fed. Reg. at 7631-32. To implement the Executive Order, federal agencies surveyed their programs and released a list of Justice40-covered programs within their respective purviews. *See* The White House, Justice40 Initiative Covered Programs List (Version 2.0) (2023), https://www.whitehouse.gov/wp-content/uploads/2023/11/Justice40-Initiative-Covered-Programs-List_v2.0_11.23_FINAL.pdf.
31. Exec. Order No. 14008, §223, 86 Fed. Reg. at 7631-32.
32. *Id.* §222, 86 Fed. Reg. at 7631.
33. Memorandum from Shalanda D. Young, Acting Director, OMB et al., to Heads of Departments and Agencies, Interim Implementation Guidance for the Justice40 Initiative (M-21-28) (July 20, 2021), https://www.whitehouse.gov/wp-content/uploads/2021/07/M-21-28.pdf [hereinafter Interim Implementation Guidance for the Justice40 Initiative]. On census tracts, and their use in this context, see CEQ, *Climate and Economic Justice Screening Tool*, https://screeningtool.geoplatform.gov/ (last visited Nov. 16, 2024).
34. CEQ, *supra* note 33.
35. Interim Implementation Guidance for the Justice40 Initiative, *supra* note 33.
36. Exec. Order No. 14008, §201, 86 Fed. Reg. at 7622.
37. *Id.* §219, 86 Fed. Reg. at 7632.
38. On the early history of the environmental justice movement in the United States, see generally Luke Cole & Sheila Foster, From the Ground Up: Environmental Racism and the Rise of the Environmental Justice Movement (2001) (a classic early account of the movement). *See also* Paul Mohai & Robin Saha, *Which Came First, People or Pollution? Assessing the Disparate Siting and Post-Siting Demographic Change Hypotheses of Environmental Injustice*, 10 Env't Rsch. Letters 115008 (2015) (showing a community's racial composition to be more significant a factor in polluting facility siting than economics).
39. *See, e.g.*, Caitlyn Greene & Patrick Charles McGinley, *Yielding to the Necessities of a Great Public Industry: Denial and Concealment of the Harmful Health Effects of Coal Mining*, 43 Wm. & Mary Env't L. & Pol'y Rev. 689 (2019) (drawing attention to the environmental health harms to coal mine workers in legal context). *See also* IWG on Coal and Power Plant Communities and Economic Revitalization, Initial Report to the President on Empowering Workers Through Revitalizing Energy Communities 5 (2021), https://energycommunities.gov/wp-content/uploads/2021/11/

Although the terms "just transition" and "energy justice" do not appear in the Order, these themes run prominently throughout. Recent calls for energy justice grow out of the environmental justice movement and both limit and expand the movement's traditional scope. On the one hand, rather than focus on disproportionate impacts of all polluting activities, energy justice focuses on the impacts of environmental harms resulting from energy industry operations, infrastructure, and legal regimes.[40]

On the other hand, energy justice expands to also include access to the benefits associated with a clean energy transition, including not only cleaner energy resources and the potential for reduced local pollution, but also reduced energy cost burden, new employment, and access to capital for wealth creation in burgeoning new industries.[41] All these aspects of energy justice are expressed in the Order's emphasis on advancing renewable energy and supporting new jobs in clean energy industries while decreasing dependence on fossil fuels and cleaning up legacy pollution from energy industries.

The goal of just transition is not limited to the energy context. Rather, historically it has been a labor-driven concept, rooted in low-income communities of color, that centers on concern for workers in industries as they contract due to economic trends or increased environmental regulation, undercutting workers' livelihoods.[42] The Executive Order's use of the term "energy communities" as shorthand to describe "coal, oil and gas, and power plant communities" draws on the just transition theme, acknowledging the historic role of workers in fossil energy industries driving economic growth and the need to support economic transitions for current workers in waning energy industries.

At the same time, advocates in the United States blend this goal with broader justice objectives to express just transition as a broader framework for progressive change. For example, the Climate Justice Alliance explains that "Just Transition is a vision-led, unifying and place-based set of principles, processes, and practices that build economic and political power to shift from an extractive economy to a regenerative economy."[43] Similar adaptations for the modern context are being made internationally as well.[44]

As this brief discussion conveys, the interrelated concepts of just transition, energy justice, and environmental justice each relate to aspects of "energy communities" in U.S. law, in Executive Order No. 14008, as well as in new federal legislation—the IIJA, discussed in Part III, and the IRA, discussed in Part IV below.

III. "Energy Communities" Under the IIJA

Nine months after President Biden signed Executive Order No. 14008, Congress enacted the IIJA.[45] This major bipartisan legislative package authorized funds for a wide range of infrastructure projects, including for highways, transit, energy, and environmental remediation (the legislation is commonly referred to as the Bipartisan Infrastructure Law).[46]

The term "energy communities" appeared in this legislation once, in new 23 U.S.C. §173(h), which elevated for consideration how a surface transportation project eligible for grant funding under the law will "address economic development and job creating challenges, including energy sector job losses in energy communities."[47] However, several provisions target benefits to communities where coal mines or coal-fired power plants have closed, in this way advancing the goal of "Revitalizing Energy Communities" as articulated in the Executive Order.

Most notably, the legislation authorized an unprecedented $11 billion for the heretofore underfunded Abandoned Mine Reclamation Fund[48] administered by DOI's Office of Surface Mining Reclamation and Enforcement (OSM).[49] In a similar vein, the legislation promoted clean energy demonstrations "on current and former mine land," with $500 million intended to, among other things, provide the greatest job creation and economic development for "economically distressed areas" and for "dislocated workers who were previously employed in manufacturing, coal power plants, or coal mining."[50] In connection with oil and gas, the IIJA authorized DOI to issue $4.3 billion in grants to states for orphaned well plugging, remediation, and restoration.[51] According to the Administration, the environmental remediation provisions of the IIJA taken together make it "the largest investment in addressing legacy pollution in American history."[52]

Initial-Report-on-Energy-Communities_Apr2021.pdf [hereinafter IWG, Initial Report].

40. For an in-depth discussion of the connection between energy justice and environmental justice, see my prior work, Uma Outka, *Fairness in the Low-Carbon Shift: Learning From Environmental Justice*, 82 Brook. L. Rev. 789 (2017).
41. *See, e.g.*, Benjamin Sovacool et al., Energy Security, Equality, and Justice 23-29 (2014) (explaining "energy justice" as including both "the distribution of energy services as a social good" and "harms of energy production" not limited to "environmental harms per se").
42. *See, e.g.*, Ann M. Eisenberg, *Just Transitions*, 92 S. Cal. L. Rev. 273 (2019) (relating the concept from early articulations to modern energy contexts).
43. Climate Justice Alliance, *Just Transition*, https://climatejusticealliance.org/just-transition/ (last visited Nov. 16, 2024).
44. The United Nations Development Programme, for example, cites the International Labour Organization's definition—"Greening the economy in a way that is as fair and inclusive as possible to everyone concerned, creating decent work opportunities and leaving no one behind."—while also acknowledging that the perceptions of just transition "vary between countries and regions." *See What Is Just Transition? And Why Is It Important?*, United Nations Dev. Programme (Nov. 3, 2022), https://climatepromise.undp.org/news-and-stories/what-just-transition-and-why-it-important.
45. IIJA, Pub. L. No. 117-58, 135 Stat. 429 (2021).
46. Most of the IIJA is beyond the scope of this Article, which narrowly focuses on the provisions relevant to directing benefits to "energy communities." For a guide to the legislation, see The White House, Building a Better America: A Guidebook to the Bipartisan Infrastructure Law for State, Local, Tribal, and Territorial Governments, and Other Partners (2022), https://www.whitehouse.gov/wp-content/uploads/2022/05/BUILDING-A-BETTER-AMERICA-V2.pdf [hereinafter BIL Guidebook].
47. IIJA §11132.
48. *Id.* §§40701-40703.
49. *Id.* §40802.
50. *Id.* §40342. For a summary of this provision, for which funds are available through 2026, see BIL Guidebook, *supra* note 46, at 377.
51. IIJA §40601.
52. BIL Guidebook, *supra* note 46, at 369.

Further, the IIJA created an "advanced energy manufacturing and recycling grant program" that authorized DOE to issue $750 million in grants for "qualifying advanced energy projects" in census tracts where either a coal mine has closed in the past 25 years or a "coal-fired electricity generating unit has been retired" (and adjacent tracts) in fiscal years 2022-2026.[53] Grant applications receive "higher priority" if they reduce greenhouse gases and create jobs in "low-income communities" or in support of "dislocated workers who were previously employed in manufacturing, coal power plants, or coal mining."[54]

In these ways, without further defining "energy communities," the IIJA aligned with the goal of Executive Order No. 14008 to channel substantial benefits to "coal, oil and gas, and power plant communities."

IV. Defining "Energy Communities" Under the IRA

In 2022, Congress narrowly passed the IRA, another massive legislative package that has been called the most significant climate legislation in the United States to date.[55] Notably, the IRA went further than Executive Order No. 14008 or the IIJA to specifically define the term "energy community."[56]

The definition offers essentially three sub-definitions that can be used to identify an "energy community" for purposes of the IRA and key financial incentives it offers to qualifying projects.[57] Two relate specifically to legacy fossil energy industries. One defines "energy community" with reference to specific employment and unemployment metrics related to fossil energy industries and updated annually.[58] The other uses the same basic coal mine and power plant closure language as the IIJA.[59]

The third sub-definition of "energy community" turns simply on a property's status as a "brownfield."[60] According to EPA, there are more than 450,000 brownfields, which are properties "where expansion, redevelopment or reuse may be complicated by the presence or potential presence of a hazardous substance, pollutant or contaminant."[61] The unlimited inclusion of brownfields notably expands the scope of "energy communities" initially mapped in general terms under the Executive Order. This definition is the furthest removed from common conceptions of "community," given that brownfields can vary substantially in size and often are much smaller than a census tract and may only affect a limited number of properties.

Key provisions of the IRA benefit "energy communities," notably a bonus tax credit of 10% for production of electricity from "a qualified facility" (such as a renewable energy project) if it is "located in an energy community" and certain conditions are met.[62] The same bonus is offered for technology-neutral production of clean electricity.[63]

Another key provision provides "advanced energy" project tax credits, funded up to $10 billion, with 40% reserved for "energy communities."[64] With the inclusion of brownfields, in effect, the IRA promotes development in legacy fossil "energy communities," which are concentrated in mostly rural regions, but also redevelopment of languishing, contaminated properties nationwide. Brownfields may be just as readily located in urban areas, and may or may not have ties to the energy sector.[65]

The IRA also established the new Energy Infrastructure Reinvestment Financing Program within DOE.[66] The purpose of this new program is to facilitate loans for repowering, repurposing, or replacing shuttered energy infrastructure (like a former coal-fired power plant), or retrofitting energy facilities still in operation to reduce greenhouse gas emissions with new pollution controls. Although the program is not limited to "energy communities," it offers benefits very likely to align with the needs of "energy communities." Similarly, provisions of the IRA directing beneficial investment to low-income or otherwise "disadvantaged communities"—most notably the IRA's landmark $27 billion Greenhouse Gas Reduc-

53. IIJA §40209(a)(2). What counts as a "qualifying advanced energy project" is enumerated in some detail, generally emphasizing renewable resources, energy efficiency, recycling, and greenhouse gas reduction or capture. *Id.* §40209(a)(6).
54. *Id.* §40209(b)-(c).
55. IRA §13101(g). Most of the IRA is beyond the scope of this Article, which narrowly focuses on the provisions relevant to defining and directing benefits to "energy communities." For a guide to the legislation's climate and clean energy provisions, see The White House, Building a Clean Energy Economy: A Guidebook to the Inflation Reduction Act's Investments in Clean Energy and Climate Action (2023), https://www.whitehouse.gov/wp-content/uploads/2022/12/Inflation-Reduction-Act-Guidebook.pdf [hereinafter IRA Guidebook].
56. IRA §13101(g)(2), see new paragraph (11).
57. The term "energy community" is defined in the legislation as follows:
[T]he term "energy community" means—
(i) a brownfield site [defined with reference to the Comprehensive Environmental Response, Compensation, and Liability Act of 1980];
(ii) a metropolitan statistical area or non-metropolitan statistical area which—
(I) has (or, at any time during the period beginning after December 31, 2009, had) 0.17 percent or greater direct employment or 25 percent or greater local tax revenues related to the extraction, processing, transport, or storage of coal, oil, or natural gas (as determined by the Secretary), and
(II) has an unemployment rate at or above the national average unemployment rate for the previous year (as determined by the Secretary), or
(iii) a census tract—
(I) in which—
(aa) after December 31, 1999, a coal mine has closed, or
(bb) after December 31, 2009, a coal-fired electric generating unit has been retired, or
(II) which is directly adjoining to any census tract described in subclause (I).
Id. §13101(g)(2), see new paragraph (11)(B).
58. *Id.* §13101(g)(2), see new paragraph (11)(B).
59. *Id.*
60. *Id.*
61. U.S. EPA, *Brownfields—About*, https://www.epa.gov/brownfields/about (last updated Aug. 2, 2024).
62. IRA §13101. *See also* IRA Guidebook, *supra* note 55, at 12-13.
63. *Id.* §13701.
64. *Id.* §13501.
65. Interactive mapping from EPA shows brownfields across all states, and concentrations in the Northeast, which is not a legacy coal industry region. *See* U.S. EPA, *EnviroAtlas Interactive Map* (with brownfields layer), https://enviroatlas.epa.gov/enviroatlas/interactivemap/?eaLayer=eaLyrNum_769 (last visited Nov. 16, 2024).
66. IRA §50144. The provision provides up to $250 billion in loan guarantees while appropriating $5 billion in credit subsidies to support the loans. For a summary, see IRA Guidebook, *supra* note 55, at 31.

tion Fund—may also benefit "energy communities" that qualify for these designations.[67]

V. Revitalizing "Energy Communities"—Implementation to Date

The emergence of "energy communities" within U.S. law is so recent that it is too soon to fully assess its impact at the community scale. The IWG on Coal and Power Plant Communities and Economic Revitalization published an initial report of its activities and goals soon after it convened and has continued work on its charge into what is now year three of its existence. In addition, federal agencies responsible for provisions of the IIJA and IRA related to "energy communities" are at work on implementation. This part summarizes the progress on implementation to date.

A. *IWG Implementation of the "Energy Communities" Charge*

The IWG's initial report, which preceded passage of both the IIJA and the IRA, clarified starting objectives consistent with its charge under Executive Order No. 14008. First, it tightened the meaning of "energy communities" to focus on coal, making the "25 most impacted regions for coal-related decline" its initial priority.[68] Most of these regions are rural, with limited job prospects if a mine closes, and are consolidated in Appalachia, the Northern Rocky Mountains, Alaska, the Four Corners in the Southwest, the Mid-Continental Gulf Coast, and the Illinois Basin.[69] The IWG also identified "a broader set of energy-impacted communities" exposed to anticipated declines over the long term as a result of the clean energy transition.[70]

Second, it surveyed and summarized then-existing federal programs available for "immediate investments" across "energy communities."[71]

Third, it set goals for the year to align its work "with other federal efforts to direct investment to disadvantaged and environmental justice communities"—acknowledging the interrelationship between just transition, energy justice, and environmental justice noted earlier—to meet with constituencies, and create a "one-stop shop" that would connect "energy communities" with existing federal resources through the Departments of Commerce, Energy, Treasury, Interior, Agriculture, Labor, Health and Human Services, and Transportation, as well as EPA and the Appalachian Regional Commission.[72] Broadly, the IWG's near-term goals focused on staffing, strengthening agency coordination, and community engagement.[73]

By the time the IWG published its "Two-Year Report to the President," both pieces of legislation—the IIJA and the IRA—had been enacted into federal law.[74] In the interim, the IWG reported engaging with "more than 9,000 stakeholders" through more than 25 workshops, stressing "a place-based effort" to gather feedback on local needs and experience in coal-impacted communities.[75] In light of the IIJA's coal closure references and the IRA's definition of "energy communities," the IWG has aligned its work with these legal provisions and established "rapid response teams" to assist in connecting communities with resources under the new laws.[76]

B. *Implementation of the IIJA for "Energy Communities"*

As noted in Part III, the IIJA contains several provisions targeted to revitalize communities affected by recent coal mine or coal-fired power plant closures. The following recounts progress in connecting some of the most important of these resources with "energy communities" to date:

– *Advanced Energy Manufacturing and Recycling Grants*. As of this writing, DOE's Office of Manufacturing and Energy Supply Chains continues to receive applications for the advanced energy manufacturing and recycling grants. Under this IIJA provision, an express goal is to invest the program's $750 million in communities that have had coal mine or coal plant closures.[77] Notably, DOE requires community benefits plans to be submitted with funding applications.[78] As the IWG heard clearly from communities, they want to lead economic development at the local level. In the evaluation of grant applications, community benefits plans require applicants to engage communities, and the plans constitute 20% of the merit review. Elevating the importance of the plans in funding decisions is meant to ensure grants will advance projects that actually meet local needs.

67. IRA §60103 (creating $27 billion Greenhouse Gas Reduction Fund administrated through EPA as competitive grants to invest in clean energy and emissions-reduction projects, with an emphasis on low-income and disadvantaged communities). *See also id*. §13103 (creating the Low-Income Communities Bonus Credit Program for the energy investment credit applicable to certain solar and wind-powered electricity generation facilities).
68. IWG, Initial Report, *supra* note 39, at 1.
69. *Id*. at 6-7, 10.
70. *Id*. at 1.
71. *Id*. at 2.
72. *Id*. at 12-16.
73. *Id*. at 17-18.
74. IWG on Coal and Power Plant Communities and Economic Revitalization, Revitalizing Energy Communities: Two-Year Report to the President (2023), https://energycommunities.gov/wp-content/uploads/2023/04/IWG-Two-Year-Report-to-the-President.pdf.
75. *Id*. at 5.
76. *Id*. at 9-13.
77. For an overview of the program, including "synergies" within DOE's other programs and those of other federal agencies, see Office of Manufacturing and Energy Supply Chains, DOE, Advanced Energy Manufacturing & Recycling Grants Program (2023), https://www.energy.gov/sites/default/files/2023-03/MESC%2040209%20Factsheet%20-%20March%202023.pdf.
78. *See* Office of Manufacturing and Energy Supply Chains, DOE, Guidance for Creating a Community Benefits Plan (2023), https://www.energy.gov/sites/default/files/2023-04/MESC%20Community%20Benefits%20Plan%20Guidance_03132023-final.pdf.

– *Abandoned Mine Reclamation Fund*. According to June 2024 guidance from DOI, OSM will distribute more than $10 billion in grants to states and tribes for abandoned mine land—"on an equal annual basis—approximately $725 million per year—over a 15-year period."[79] With this grant funding, states and tribes may address a range of problems from "legacy coal mining" that threaten "public health, safety, and the environment within their jurisdictions."[80] The guidance outlines specific remedial, restorative, and emergency projects that are appropriate for the grants, all of which will directly benefit those places identified as "energy communities" based on their legacy coal industries. In addition, Justice40 further directs the agency to prioritize benefits for "disadvantaged communities," reflecting the partial overlap between these characterizations.

– *Orphaned Oil and Gas Wells*. The IIJA allocated $2B for states "to plug, remediate, and reclaim orphaned wells located on State-owned or privately owned land."[81] DOI reported that 24 states sought and received funds to address immediate needs at more than 10,000 high-priority orphaned wells posing hazards at the community scale and leaking methane, a potent greenhouse gas.[82]

C. Implementation of the IRA for "Energy Communities"

Implementation of the IRA, two years on at the time of this writing, is ongoing and remains a work in progress. To encourage uptake of the IRA's "energy community" tax credit bonuses, a DOE mapping tool highlights census tracts with a coal closure (and adjoining tracts) and areas with fossil fuel employment and unemployment rates that meet the IRA's "energy community" definitions.[83] This provides a starting point for firms pursuing qualifying projects to begin working with communities on proposals. Implementation efforts to date include:

– *Energy Community Bonus on Renewable and/or Clean Electricity Production Tax Credits*. Implementation of the "energy community" bonus credits depended on Treasury's Internal Revenue Service (IRS) crafting guidance for applicants, and quickly. Time was of the essence, especially for the credit bonus on electricity from renewable resources, due to a requirement that construction begin before the start of 2025.[84] Following public comments, the IRS published a notice in April 2023 clarifying the location-based categories of "energy communities."[85] Due to continuing confusion among potential applicants, supplemental guidance was issued in March 2024 and again in June 2024 to expand upon the rules for claiming the "energy communities" bonus.[86]

– *Advanced Energy Project Credit*. As with the bonus credits, implementation of the advanced energy project credit depended on Treasury guidance for applicants to submit project proposals. As with other major proposals, community benefits plans are required and figure heavily into DOE's scoring for merit review. Treasury issued initial guidance in early 2023, when approximately $1.6 billion worth of credits were allocated to projects in "energy communities."[87] Far more applications were submitted than could be awarded in the first round. In April 2024, the Departments jointly announced a second round of $2.5 billion for "energy communities"[88] and in May, an application portal was opened to better accommodate demand.[89]

– *Energy Infrastructure Reinvestment Financing*. This new program, now established, continues to receive applications for loan guarantees. Funds will remain available through September 2026.[90]

This snapshot is by no means exhaustive, and implementation by its nature is not fixed in time, but rather an ongoing and evolving process. The Sabin Center for Climate Change Law at Columbia Law School and the Environ-

79. OSM, U.S. Department of the Interior, Guidance on the Bipartisan Infrastructure Law Abandoned Mine Land Grant Implementation 1 (2024), https://www.osmre.gov/sites/default/files/inline-files/FY24-BIL-AML-Guidance-06-03-24.pdf.
80. *Id. See also* BIL Guidebook, *supra* note 46, at 369-70.
81. IIJA §40601. *See also* U.S. Department of the Interior, Frequently Asked Questions: BIL Sec. 40601 Orphaned Well Plugging, Remediation, and Reclamation Large-Scale Initial State Grants (2022), https://www.doi.gov/sites/default/files/faqs-initial-grants-90-in-90-days-08.23.2022.pdf. States must use 90% of grant funds within 90 days of receipt. To "use" may mean issuing new contracts or grants for the work; it is not a requirement that all work be completed.
82. Press Release, U.S. Department of the Interior, Through President Biden's Bipartisan Infrastructure Law, 24 States Set to Begin Plugging Over 10,000 Orphaned Wells (Aug. 25, 2022), https://www.doi.gov/pressreleases/through-president-bidens-bipartisan-infrastructure-law-24-states-set-begin-plugging.
83. DOE, *Energy Community Tax Credit Bonus Map*, https://arcgis.netl.doe.gov/portal/apps/experiencebuilder/experience/?id=a2ce47d4721a477a8701bd0e08495e1d (last visited Nov. 16, 2024).
84. IRA §13101; IRA Guidebook, *supra* note 55, at 13. There is a longer time horizon for the technology-neutral clean electricity production tax credit. *See* IRA §13701.
85. Energy Community Bonus Credit Amounts Under the Inflation Reduction Act of 2022, I.R.S. Notice 2023-29 (Apr. 4, 2023).
86. Energy Community Bonus Credit Amounts Under the Inflation Reduction Act of 2022, I.R.S. Notice 2024-30 (Mar. 22, 2024); Energy Community Bonus Credit Amounts or Rates, Annual Statistical Area Category Update and Coal Closure Category Update, I.R.S. Notice 2024-48 (June 7, 2024).
87. *See* Initial Guidance Establishing Qualifying Advanced Energy Project Credit Allocation Program Under Section 48C(e), I.R.S. Notice 2023-18 (Feb. 13, 2023).
88. *Id.*; Guidance Regarding the 2024 Allocation Round of Qualifying Advanced Energy Project Credit Program Under Section 48C(e), I.R.S. Notice 2024-36 (Apr. 29, 2024).
89. Press Release, IRS, Department of Treasury, IRS, and Department of Energy Announce Opening Date for the Qualifying Advanced Energy Project Credit New Allocation Round (IR-2024-144) (May 22, 2024), https://www.irs.gov/newsroom/department-of-treasury-irs-and-department-of-energy-announce-opening-date-for-the-qualifying-advanced-energy-project-credit-new-allocation-round.
90. IRA Guidebook, *supra* note 55, at 31.

mental Defense Fund have jointly launched an IRA database and tracker to inform the public on federal agencies' IRA activities going forward.[91] Nonetheless, it will be years before it is possible to assess the full impact of the IRA in "energy communities" and more broadly.

VI. Conclusion

The durability of the IIJA and the IRA—including the IRA's three-part definition of "energy community"—was never a foregone conclusion, and the presidential transition inevitably raises many questions at this early point in time. Still, the linkage between the concept of "energy communities" and legacy fossil energy industries—coal, in particular—appears to be solidifying in the United States.[92] Bipartisan support for "energy communities" could prove important to preserving recent law making focused on their economic revitalization.

As I have noted with caution in prior work, tying the concept of "energy communities" too tightly to legacy fossil industries has potential risks.[93] From the perspective of energy justice, it is beneficial to avoid fostering competition between "energy communities" and other "disadvantaged communities" for scarce resources.[94] Certainly the goal, as articulated in Executive Order No. 14008, was for an influx of investment to flow in collaborative and creative ways that advance economic and environmental conditions as broadly as possible across this spectrum to advance a clean energy transition that benefits all.

The coal industry's decline in the United States has resulted in economic hardship for individuals and communities, and efforts to support worker transitions and community revitalization are essential to their well-being. The *idea* of an *energy community*, however, is not inherently rooted in the energy sector's past. Indeed, the historical basis for defining "energy communities" will inevitably begin to lose its significance over time if the IIJA and IRA are successful in spurring revitalization with clean energy projects.

Accepting, however, that at least for the foreseeable future the "energy communities" concept is linked to coal industry decline under U.S. law, it will be important not to discourage creative thinking about new community-based clean energy models or strategies. This is especially important for energy justice if, as anticipated, the new Trump Administration turns away from energy justice as a federal aim.[95] The U.S. understanding of "energy communities" is far from the only way to envision the connection between energy and communities.

The EU's renewable energy community and citizen energy community models underscore the point—they represent a wholly different and future-oriented conception focused on community-scale clean energy and local models of energy decisionmaking.[96] In contrasting EU, U.S., and other approaches, it is evident that the role for communities in global energy transitions is ripe for interpretive and imaginative policymaking and grassroots leadership. Even under the current U.S. conception of "energy communities," successful implementation of new law intended to advance their well-being will be measured by how well it is guided by those living and leading in affected communities.[97]

91. Sabin Center for Climate Change Law & Environmental Defense Fund, *Inflation Reduction Act Database*, https://iratracker.org/ira-database/ (last visited Nov. 16, 2024); Sabin Center for Climate Change Law & Environmental Defense Fund, *Inflation Reduction Act Tracker*, https://iratracker.org (last visited Nov. 16, 2024).
92. In addition to federal law, some states have incorporated the terminology with aligned meaning. *See* Outka, *supra* note 5 (discussing state examples).
93. *See id*.
94. Some observers have also raised concerns about the potential for "greenwashing" of just transition policies in ways designed to continue the use of fossil fuels, rather than phase out their use in favor of clean energy alternatives. *See* Raphael Heffron & Darren McCauley, *The "Just Transition" Threat to Our Energy and Climate 2030 Targets*, 165 Energy Pol'y 112949 (2022).
95. *See* Heritage Foundation, Mandate for Leadership: The Conservative Promise—Project 2025 Presidential Transition Project 370 (Paul Dans & Steven Groves eds., 2023), https://static.project2025.org/2025_MandateForLeadership_FULL.pdf (stating that "[t]he next Administration should stop using energy policy to advance politicized social agendas" and that "[p]rograms that sound innocuous, such as 'energy justice,' Justice40, and [diversity, equity, and inclusion (DEI)], can be transformed to promote politicized agendas").
96. For general information and links to relevant legal documents, see European Commission, *Energy Communities*, https://energy.ec.europa.eu/topics/markets-and-consumers/energy-consumers-and-prosumers/energy-communities_en (last visited Nov. 29, 2024). For a more in-depth overview of the EU concept, see Aura Caramizaru & Andreas Uihlein, European Commission, Energy Communities: An Overview of Energy and Social Innovation (2020), https://publications.jrc.ec.europa.eu/repository/handle/JRC119433.
97. *See* IWG on Coal and Power Plant Communities and Economic Revitalization, *Guiding Principles*, https://energycommunities.gov/guiding-principles/ (last visited Nov. 16, 2024).