DEMOCRATIZING POWER TRANSMISSION

BY
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How can we achieve a just, timely, and clean energy transition? The scholarly and policy discourse has centered on fostering technological innovation in power generation, overlooking critical obstacles in the transmission sector. Neglecting transmission issues has caused a significant delay in the transition to a decarbonized economy, with hundreds of gigawatts in the queue waiting for connection.

One of the biggest hurdles to transmission deployment is the lack of public acceptance. Citizens often resist energy infrastructure projects when they are imposed on them by planners and developers with little to no prior consultation or dialogue. I argue that expedited power transmission development to further just transition governance should include broad deliberative dialogues that engage communities. I explore ways of integrating deliberative mechanisms into power transmission planning. I compare minimal and broad deliberative planning opportunities, and their implications for democratic and procedural justice goals.

This Article explores local communities' interests when their lives collide with plans for energy infrastructure. Throughout this Article, I emphasize the need for institutional decision-makers to break silos and recognize the lives of local communities as more than just technical data to be fed into a planning or pricing algorithm.

The Article begins by detailing the challenges to power transmission planning, such as transmission bottlenecks and remote renewable generation. Then I analyze emerging energy democracy theory and its relation to transmission planning and civic engagement. I explore the advantages of addressing technical and social issues together and

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whether their current procedural disconnection is impeding the timely implementation of energy infrastructure while affecting its legitimacy.

Then I examine power transmission planning structures and their institutional and decisionmaking arrangements. I focus on the dynamics of U.S. liberalized regional markets and regional transmission organizations as a case study. Using the U.S. example and drawing on literature from public policy and legal studies, I investigate how to increase public deliberation in power transmission planning. I raise instrumental, substantive, and normative considerations, such as who, what, and when to consult, how to increase transparency, and how to work within timing constraints. Through these proposals, I tailor and distill lessons for policymakers and citizens who wish to adapt these frameworks and recenter civic engagement on power transmission dynamics around the world.

Finally, I offer a research and dialogue agenda. Here I acknowledge the shortage in legal energy scholarship concerning case studies and practical outcomes of deliberative mechanisms across local, state, regional, and national perspectives. I also call for engaging in comparative work within the Global South for a better understanding of deliberative planning venues. Additionally, I urge further research on how to incorporate public engagement mechanisms into transmission planning from a legal perspective. For instance, I recommend exploring regulatory techniques such as experimentalism and other innovative mechanisms to include social and local issues.

I. INTRODUCTION

The world is currently undergoing significant disruptions due to energy sector transitions[1] and worsening environmental climate change impacts of human activity.[2] Certainly there is a widespread urgency to achieve a substantive emission reduction of greenhouse gases (GHGs) to ameliorate global warming and avoid a climate catastrophe.[3] This pressure is driving the need for substantial changes in energy law and

[1] Florian Kern & Jochen Markard, *Analyzing Energy Transitions: Combining Insights from Transition Studies and International Political Economy*, *in* THE PALGRAVE HANDBOOK OF THE INTERNATIONAL POLITICAL ECONOMY OF ENERGY 291, 291 (Thijs Van de Graff et al. eds., 2016). The idea of transition itself is disruptive. *See id.* ("[F]ar-reaching changes of entire sectors, in which new technologies, institutional structures and organizations emerge and existing ones change or decline, are typically referred to as socio-technical transitions.").

[2] *See* William Boyd, *The Poverty of Theory: Public Problems, Instrument Choice, and the Climate Emergency*, 46 COLUM. J. ENV'T. L. 399, 486 (2020) ("No doubt the accelerating impacts of climate disruption bring with them the possibility of more authoritarian forms of government. And there are plenty of signs that the climate crisis will further strain . . . the ability of democratic institutions to respond.").

[3] *See, e.g.*, INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, CLIMATE CHANGE 2023: SYNTHESIS REPORT 10–11 (2023), **h**ttps://perma.cc/PT3C-KF58 [hereinafter IPCC 2023 Synthesis Report] (noting "rising levels of national ambition" and highlighting progress, gaps, and challenges).

policy frameworks.[4] So, how do we decarbonize going forward? A critical mitigation activity is to electrify our energy systems while transitioning to cleaner energy sources.[5] Electrification, especially increased reliance on wind and solar energy, demands more transmission infrastructure to increase transfers from remote renewable generation sites to major load areas and address intermittency challenges.[6]

However, expanding transmission systems is not an easy task in any nation. Many hurdles can delay transmission expansion, such as securing funds, obtaining land access, training sufficient technical personnel, reducing excessive permitting bureaucracy, and—the focus of this Article— addressing strong local opposition or lack of public acceptance.[7] In the United States, there are plenty of examples.[8] For

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[4] *See* Eric Biber, *Law in the Anthropocene Epoch*, 106 GEO. L.J. 1, 8–25 (2017) (detailing the social and environmental impacts of climate change and the need for changes in the legal system); LINCOLN L. DAVIES ET AL., ENERGY LAW AND POLICY 280 (2d ed. 2018) ("[T]he fundamental purpose of the electricity industry has begun to change, and . . . utilities, under pressure from the public as well as new regulatory requirements, must now sell clean energy in addition to historically relatively cheap fossil fuel electricity."); *see also* JORGE E. VIÑUALES, THE INTERNATIONAL LAW OF ENERGY 28 (2022) (arguing that the many goals of current global energy governance have introduced new complexity "in the international legal norms and instruments that give expression to them"); TIMOTHY MITCHELL, CARBON DEMOCRACY: POLITICAL POWER IN THE AGE OF OIL 238 (2011) ("[T]he building of solutions to future energy needs is also the building of new forms of collective life.").

[5] *See* Masahiro Sugiyama, *Climate Change Mitigation and Electrification*, 44 ENERGY POL'Y 464 (2012) (discussing the role of electrification in climate change mitigation); PENELOPE CROSSLEY, RENEWABLE ENERGY LAW: AN INTERNATIONAL ASSESSMENT 216–17 (2019) (identifying a strategy to accelerate the deployment of renewable energies by using a process that anticipates transmission infrastructure before planners receive formal interconnection requests from generation project developers); IPCC 2023 Synthesis Report, *supra* note 3, at 52–53.

[6] Thomas Sattich, *Electricity Grids: No Decarbonization Without Infrastructure*, *in* DECARBONIZATION IN THE EUROPEAN UNION 70, 75 (2015) ("For decarbonization, the reorganization of power grids needs to focus on . . . [n]ew infrastructure to adapt to the power sector's changing topography" and "[a]daptations to compensate for growing network fluctuations caused by intermittent renewables."). In Europe there is an extensive body of literature acknowledging the relevance and discussing the role of power transmission development in the face of renewable electricity generation. *See* Rolf Golombek et al., *The Role of Transmission and Energy Storage in European Decarbonization Towards 2050*, ENERGY, Jan. 2022, No. 122159, at 2 (examining the "optimal mix" of electricity generation technologies, energy storage, and transmission grid in the European Union); Till Kolster et al., *The Contribution of Distributed Flexibility Potentials to Corrective Transmission System Operation for Strongly Renewable Energy Systems*, APPLIED ENERGY, Dec. 2020, No. 115870; Philipp Staudt et al., *Predicting Transmission Line Congestion in Energy Systems with a High Share of Renewables*, IEEE MILAN POWERTECH, 2019; Rolando A. Rodriguez et al., *Transmission Needs Across a Fully Renewable European Power System*, 63 RENEWABLE ENERGY 467 (2014).

[7] *E.g.*, INT'L ENERGY AGENCY, ELECTRICITY GRIDS AND SECURE ENERGY TRANSITIONS 52, 55 (2023) (describing an African high-voltage transmission "megaproject" which faced hurdles due to the withdrawal of initial investors and lack of local support, and a large intra-state Indian transmission system project which experienced "right-of-way issues, delays in substation land acquisition, court cases and forest clearances"); Leah C. Stokes

example the SunZia High-Voltage Direct Current (HVDC) line is a 550-mile project expected to interconnect renewable energy generation from New Mexico to the power grid in Arizona and Southern California.[9] The project took over seventeen years to pass the planning and permitting stages before beginning its construction in the summer of 2023.[10]

Opposition from local communities was a prominent factor in the project's delay.[11] In Socorro County, conservationists concerned with migratory birds joined cattle ranchers, chili farmers, and even the military—worried about missile range operations—in opposing its approval.[12] Still, after refiling for state approval, and changing the line route to address citizens' concerns, more hurdles arose. Residents of the San Pedro Valley in Arizona, concerned with the line impact on nearby wildlife corridors, filed another court challenge in January 2023.[13] However, the U.S. Bureau of Land Management issued its final decision on May 18, 2023, enabling the company to start building the project, which is expected to take three years to complete.[14]

Until recently, most energy regulatory reforms and legal frameworks worldwide have targeted power generation, overlooking the crucial role played by the transmission sector.[15] However, transmission

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et al., *Prevalence and Predictors of Wind Energy Opposition in North America*, PNAS, Sept. 2023, No. e2302313120, at 2 ("As wind energy has grown, so too has opposition to projects."); Sanya Carley et al., *Energy Infrastructure, NIMBYism, and Public Opinion: A Systematic Literature Review of Three Decades of Empirical Survey Literature*, ENV'T RSCH. LETTERS, Aug. 2020, No. 093007, at 12–13 (discussing public attitudes towards different kinds of energy infrastructure projects).

[8] *E.g.*, Daniel Moore, *The Bitter 17-Year Saga to Build a Power Line Critical to US Climate Action*, BLOOMBERG (Mar. 15, 2023), https://perma.cc/8K6E-QW5Z (listing key transmission projects in the U.S. hampered by "bureaucratic delays," including "the TransWest Express from Wyoming to Nevada; the Champlain Hudson Power Express from Quebec to New York City; and the Grain Belt Express from Kansas to Illinois"); INT'L ENERGY AGENCY, *supra* note 7, at 54 (providing examples of delayed transmission grid projects, including the SunZia HVDC line and another previously interrupted transmission line running from Canada to New England).

[9] *SunZia Wind and Transmission*, PATTERN ENERGY, https://perma.cc/SMF9-CEM7 (last visited Sept. 24, 2024); *CPA to Serve Southern California with Record Amounts of Wind Power Secured from Largest Renewable Energy Infrastructure Project in U.S. History*, PATTERN ENERGY (Nov. 6, 2023), https://perma.cc/MPS9-JVCL.

[10] Moore, *supra* note 8; INT'L ENERGY AGENCY, *supra* note 7, at 54.

[11] Sarah Raza & Felicity Barringer, *Transmission, Transmission, Transmission: What It Takes to Put Renewable Power on the West's Electrical Grids*, & THE WEST (Aug. 30, 2023), https://perma.cc/E67C-HM3W ("[O]ver the years of SunZia's development, local environmental opponents' lawsuits have added delays."); Rachel Giron, *Struggles on the Path to Renewable Energy: Lessons from SunZia*, 54 NAT. RES. J. 81, 82 (2014).

[12] Moore, *supra* note 8.

[13] Raza & Barringer, *supra* note 11.

[14] Ros Davidson, *US Gives SunZia Transmission Project Final Green Light*, WIND POWER MONTHLY (May 19, 2023), https://perma.cc/V3WF-45LX.

[15] *See* Sebastián Luengo-Troncoso, *The Chilean Case on Improving Power Transmission Within the Non-Conventional Renewable Energies Paradigm*, 43 ENERGY L.J. 267, 269, 269 n.12 (2022) (citing Sattich, *supra* note 6) (highlighting discussion of "'the

systems must be proactively expanded.[16] According to a recent report by the International Energy Agency (IEA), electric grids are becoming a bottleneck for clean energy transitions worldwide.[17] In the United States alone, transmission congestion costs paid by consumers due to the lack of capacity to transmit lowest-cost generation tripled between 2019 and 2022, resulting in extrapolated costs that totaled up to $20.8

role of electricity transmission infrastructure for the integration of renewables into the European power system in the context of the EU's decarbonization goals,' and the relatively low attention that this issue has been given compared to other renewable energy transition issues"); Karen Bickerstaff et al., *Introduction: Making Sense of Energy Justice*, *in* ENERGY JUSTICE IN A CHANGING CLIMATE: SOCIAL EQUITY AND LOW-CARBON ENERGY 4–5 (Karen Bickerstaff et al. eds., 2013) ("The bulk of attention has centred on the (social, spatial and temporal) distribution of costs and risks associated with the siting of infrastructures for power generation or for the disposal of waste residues (linked to extraction, generation or other phases of the energy system cycle)."); *cf.* MICHAEL S. HAMILTON, ENERGY POLICY ANALYSIS: A CONCEPTUAL FRAMEWORK 214 (2013) (explaining that among the most significant challenges to improving the transmission power grid infrastructure in the United States, the Department of Energy identified "[s]iting new transmission lines (obtaining approvals of a new route and needed land) when there is local opposition to construction"). *But cf.* Benjamin K. Sovacool, *What Are We Doing Here? Analyzing Fifteen Years of Energy Scholarship and Proposing a Social Science Research Agenda*, 1 ENERGY RSCH. & SOC. SCI. 1, 3 (2014) (arguing—without further distinction—that in recent energy scholarship, the "most favored technology investigated—by a wide margin—was electricity supply, transmission, and distribution").

[16] *See* P. DONOHOO & M. MILLIGAN, NAT'L RENEWABLE ENERGY LAB'Y, CAPRICIOUS CABLES: UNDERSTANDING THE KEY CONCEPTS IN TRANSMISSION EXPANSION PLANNING AND ITS MODELS 1 (2014), https://perma.cc/AY34-8D7H ("Solving the major issues facing the power system—such as continuing drought, climate change, and natural gas network coordination—will depend on wide-area coordinated planning of the transmission network."); MARCELINO MADRIGAL & STEVEN STOFT, THE WORLD BANK, TRANSMISSION EXPANSION FOR RENEWABLE ENERGY SCALE-UP: EMERGING LESSONS AND RECOMMENDATIONS 8–13 (2012) (discussing the need to scale up transmission when scaling up renewable energy); OFF. OF POL'Y, U.S. DEPT. OF ENERGY, QUEUED UP . . . BUT IN NEED OF TRANSMISSION: UNLEASHING THE BENEFITS OF CLEAN POWER WITH GRID INFRASTRUCTURE 1–3 (2022) (highlighting the existing queue of generation capacity waiting to receive transmission access); ERIC HIRST, U.S. TRANSMISSION CAPACITY: PRESENT STATUS AND FUTURE PROSPECTS 49 (2004) ("Transmission owners continue to add transmission capacity at a much lower rate than consumer demand is growing."); JOHANNES PFEIFENBERGER ET AL., TRANSMISSION PLANNING FOR THE 21ST CENTURY: PROVEN PRACTICES THAT INCREASE VALUE AND REDUCE COSTS 3–4 (2021) (discussing current transmission planning inefficiencies); Alexandra Klass et al., *Grid Reliability Through Clean Energy*, 74 STAN. L. REV. 969, 1022 (2022) (discussing the need for transmission expansion to enable a "clean, more reliable grid"); *cf.* Hugh Rudnick & Constantin Velásquez, *Transmission Investment and Renewable Integration*, *in* TRANSMISSION NETWORK INVESTMENT IN LIBERALIZED POWER MARKETS 417, 428 (Mohammad Resa Hesamzadeh et al. eds., 2020) ("When it comes to solutions, however, new wires are not everything. While spare capacities are needed for long-term planning, flexibility is paramount for short- and medium-term horizons.").

[17] INT'L ENERGY AGENCY, *supra* note 7, at 8.

billion.[18] To face this challenge, some estimate that the United States will have to double its transmission capacity in the next decade.[19]

Consequently, energy scholarship is now turning to the legal hurdles of improving energy transmission,[20] questioning energy law's traditional boundaries to analyze modern challenges.[21] In the United States, and many jurisdictions around the world, the biggest hurdle to energy infrastructure development is achieving public acceptance.[22] Broader acceptability can reduce social friction that delays the

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[18] *Id.* at 47; RICHARD DOYING ET AL., GRID STRATEGIES LLC, TRANSMISSION CONGESTION COSTS RISE AGAIN IN U.S. RTOS 1 (2023), https://perma.cc/26J2-ABX9.

[19] PAUL DENHOLM ET AL., NAT'L RENEWABLE ENERGY LAB'Y, EXAMINING SUPPLY-SIDE OPTIONS TO ACHIEVE 100% CLEAN ELECTRICITY BY 2035, at 45 (2022), https://perma.cc/69SF-X83M.

[20] *E.g.*, Liza Reed et al., *Expanding Transmission Capacity: Examples of Regulatory Paths for Five Alternative Strategies*, ELECTRICITY J., Apr. 2020, No. 106770, at 2–3; Noah Mitchell-Ward, *To Enable the Clean Energy Future, Electric Transmission Planning Needs an Upgrade*, YALE ENV'T REV. (Mar. 29, 2022), https://perma.cc/TFL6-ZZ5G; Patrick R. Brown & Audun Botterud, *The Value of Inter-Regional Coordination and Transmission in Decarbonizing the US Electricity System*, 5 JOULE 115, 131 (2021) ("Transmission lines typically require permits from multiple federal agencies and from each state and local jurisdiction within their path . . . ."); Alisha Kasam-Griffith et al., *Transmission Transition: Modernizing U.S. Transmission Planning to Support Decarbonization*, 1 MIT SCI. POL'Y REV. 87 (2020); Liza Reed et al., *How Are We Going to Build All that Clean Energy Infrastructure? Considering Private Enterprise, Public Initiative, and Hybrid Approaches to the Challenge of Electricity Transmission*, ELECTRICITY J., Nov. 2021, No. 107049, at 1–2 (summarizing relevant policy elements implicated by transmission development); JOHN G. KASSAKIAN ET AL., THE FUTURE OF THE ELECTRIC GRID: AN INTERDISCIPLINARY MIT STUDY 102 (2011), https://perma.cc/2T4A-LXWKf ("[T]he development—and utilization—of better planning methods is important and an attractive area for academic research."); Sovacool, *supra* note 15, at 8 (concluding that in energy scholarship, "there is also a need for articles to become more relevant to real world problems"); Ari Peskoe, *Replacing the Utility Transmission Syndicate's Control*, 44 ENERGY L.J. 447 (2023) (arguing that RTO governance stifles transmission expansion).

[21] Shelley Welton, *The Bounds of Energy Law*, 62 B.C. L. REV. 2339, 2373 (2021) ("If the challenge is decarbonization through and through, then the field [of energy law] can no longer focus only on physical and market challenges in energy extraction, movement, and distribution."); Eric Biber et al., *The Political Economy of Decarbonization: A Research Agenda*, 82 BROOK. L. REV. 605, 610 (2016); *see generally* Boyd, *supra* note 2 (arguing that the "instrument choice debate" has conceptually constrained the ways in which government responds to the climate crisis); Daniel E. Walters & Andrew N. Kleit, *Grid Governance in the Energy-Trilemma Era: Remedying the Democracy Deficit*, 74 ALA. L. REV. 1033, 1035 (2023) ("Energy policymakers speak of an 'energy trilemma' . . . where the goals of energy affordability (including equity), energy security, and energy sustainability are often in direct conflict with one another, such that trade-offs must be made.").

[22] INT'L ENERGY AGENCY., *supra* note 7, at 9; Raza & Barringer, *supra* note 11 ("Arguments between advocates of renewables and advocates of undisturbed ecosystems will only become more common as transmission companies attempt to strike a balance between moving full-steam ahead to deliver renewable energy and working with local communities to protect their interests."); Stokes et al., *supra* note 7; Lawrence Susskind et al., *Sources of Opposition to Renewable Energy Projects in the United States*, ENERGY POL'Y, Apr. 2022, No. 112922, at 2.

permitting and siting of transmission infrastructure.[23] Thus, public engagement is central to ensure durable transformational changes in a time where transmission deployment delays are critically slowing the transition to a decarbonized economy.[24]

Could greater civic engagement both expedite and lead to greater citizen acceptance of new power transmission initiatives?[25] This Article explores whether, and how, this counterintuitive proposal could be achieved.[26] I assess current regulatory approaches to power transmission planning and analyze ways to provide for public engagement and achieve a timely and clean energy transition.[27]

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[23] *E.g.*, Justin Worland, *Why Better Community Engagement Is Key to the Future of Clean Tech*, TIME (Oct. 23, 2023), https://perma.cc/2K4C-5WWM (discussing a 2022 study that attributed nearly 30% of proposed clean-energy project failures to "a lack of engagement with local community").

[24] Catherine Butler & Christina Demski, *Valuing Public Engagement with Energy System Transitions: The Importance of What Lies Beneath*, 4 CARBON MGMT. 659, 661 (2013) ("[P]ublic engagement is likely to be integral to the attainment of energy system change and associated aims of carbon management. Central to public engagement activities, in this regard, is a need to focus on the public concerns and values that underlie responses. Taking this as a starting point is more likely to produce dialogue processes that are both effective and satisfactory to all parties involved."); CHARLES SABEL ET AL., BEYOND BACKYARD ENVIRONMENTALISM 6 (Joshua Cohen & Joel Rogers eds., 2000) (explaining that complex environmental challenges demand durable alliances "that engage both the broad experience of professional practitioners and the contextual intelligence that only citizens possess").

[25] *See* discussion *infra* Part V.A.1 (discussing considerations for facilitating public participation in transmission planning).

[26] *But cf.* Kacper Szulecki & Indra Overland, *Energy Democracy as a Process, an Outcome and a Goal: A Conceptual Review*, ENERGY RSCH. & SOC. SCI., Sept. 2020, No. 101768, at 10 ("[I]t cannot be taken for granted that more energy democracy equates to better and faster decarbonization, energy access or societal wellbeing.").

[27] *See* Claire Haggett, *Public Engagement in Planning for Renewable Energy*, *in* PLANNING FOR CLIMATE CHANGE: STRATEGIES FOR MITIGATION AND ADAPTATION FOR SPATIAL PLANNERS 297, 297 (Simin Davoudi et al. eds., 2009) ("While fiscal regulations and subsidies, technical efficiency and political deliberations all affect the deployment of renewables, the stark fact remains that all of this matters little if there is no public support for a development."). The contours of energy democracy are analyzed in detail in Part III.B. However, for a comprehensive revision and explanation of recent scholarship on energy democracy, see Kacper Szulecki, *Conceptualizing Energy Democracy*, 27 ENVT' POL. 21 (2018). *See also* Shelley Welton, *Grasping for Energy Democracy*, 116 MICH. L. REV. 581, 584 (2017) [hereinafter Welton, *Grasping for Energy Democracy*] ("To better inject societal values and public opinions into these decisionmaking processes, there is a widening call among activists, scholars, and regulators for the 'democratization' of energy law and policy."); Alexander Dunlap, *Conclusion: A Call to Action, Toward an Energy Research Insurrection*, *in* ENERGY DEMOCRACIES FOR SUSTAINABLE FUTURES 339, 340 (Maija Nadesan et al. eds., 2022) ("Democratizing energy systems will make social and, potentially, ecological improvements, becoming indispensable for creating *real energy transitions*."). *But see* Sufyan Droubi et al., *A Critical Review of Energy Democracy: A Failure to Deliver Justice?*, ENERGY RSCH. & SOC. SCI., Dec. 2021, No. 102444, at 12 ("We rejected the naïve approach to democracy that assumes that democracy is inherently just and that more democracy automatically leads to some expected just outcomes for a low-carbon world.").

An increase in renewable energy generation and electrification will require expanding transmission infrastructure, especially high voltage lines which are needed for large-scale electrification.[28] This expansion is invasive, since it involves planning, permitting, and siting of large-scale infrastructure.[29] Indeed, conflicting interests are common in the execution of these projects and often threaten to, or delay, the implementation of transmission infrastructure.[30] In addition to discussing transmission line siting authority and other institutional questions, this Article focuses on the role of public engagement to ensure a timely and just transition.[31] I argue that to increase public acceptability and legitimacy of transmission expansion, there must be

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[28] INT'L ENERGY AGENCY*., supra* note 7, at 15.

[29] *See* Shelley Welton & Joel Eisen, *Clean Energy Justice: Charting an Emerging Agenda*, 43 HARV. ENV'T L. REV. 307, 360–61 (2019) (highlighting the community impacts of small- and large-scale renewables in discussion about justice challenges to siting clean energy); HAMILTON, *supra* note 15, at 214–20 (recounting the many costs of electric power transmission through its environmental impacts on protected species, water resources, wetlands, woodlands, archeological and historical resources, noise and light impacts, electromagnetic fields, and aesthetics); M. Majidi & R. Baldick, *Definition and Theory of Transmission Network Planning*, *in* TRANSMISSION NETWORK INVESTMENT IN LIBERALIZED POWER MARKETS, *SUPRA* note 16, at 17, 20 ("Environmental concerns/limitations may directly affect transmission planning especially for line routing in particular areas such as regions with wildlife and endangered species, wetlands, national parks, historic areas, and military areas."); Matthew Cotton & Patrick Devine-Wright, *Making Electricity Networks "Visible": Industry Actor Representations of "Publics" and Public Engagement in Infrastructure Planning*, 21 PUB. UNDERSTANDING SCI. 17, 18 (2012) (recounting the motivations of public opposition to power transmission infrastructure); LOUISE B. YOUNG, POWER OVER PEOPLE 188 (1973) (discussing the predatory nature of "[m]ulti-billion-dollar combines like the public utilities [with] the power to force upon people their goal of an all-electric mechanized megalopolis, fed and energized by an industrialized country side").

[30] *See* KASSAKIAN ET AL., *supra* note 20, at 22, 103 (discussing how conflicting interests hinder the development of such multistate projects); Klass et al., *supra* note 16, at 1001–02,1039 (discussing how conflicting interests within the framework of states' authority hinder interstate transmission line siting); Carley et al., *supra* note 7, at 5 ("Studies of transmission and distribution lines tend to find more opposition than support . . . ."); *cf.* Nadejda Komendantova & Antonella Battaglini, *Beyond Decide-Announce-Defend (DAD) and Not-in-My-Backyard (NIMBY) Models? Addressing the Social and Public Acceptance of Electric Transmission Lines in Germany*, 22 ENERGY RSCH. & SOC. SCI. 224, 229 (2016) ("[N]owadays people want to participate not only in the identification of the need for the project but also in discussion about its location and impacts on local communities."); *Conclusion*, *in* SHARING THE COSTS AND BENEFITS OF ENERGY AND RESOURCE ACTIVITY: LEGAL CHANGE AND IMPACT ON COMMUNITIES 429, 430 (Lila Barrera-Hernández et al. eds., 2016) ("[M]any citizens, local communities, and indigenous peoples now call for explicit economic and social benefits from energy project development . . . , through partnerships and collaboration, rather than merely seeking legal protection from the adverse impacts of projects.").

[31] *Cf.* Patrick Devine-Wright, *Public Engagement with Large-Scale Renewable Energy Technologies: Breaking the Cycle of NIMBYism*, 2 WIREs: CLIMATE CHANGE 19, 23 (2011) ("Rather than seeking acceptance by the public of pre-ordained technical solutions deemed to be in the national interest, this requires a two-way process of participation that better connects policy on energy and sustainability and enables a dialogue between different values.").

broader civic engagement in the planning process, which could eventually expedite overall transmission development.[32]

Essentially, I argue that incorporating new public engagement mechanisms at the transmission planning level is crucial for energy transition and democratic governance for two reasons.[33] First, because public engagement entails a deliberative approach to reconcile opposing views, it could incentivize early participation and agreements that address opposition concerns.[34] Second, public engagement will increase

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[32] *See* discussion *infra* Part III.B. There are three reasons to encourage public participation in environmental policy-making and management. First, "public involvement will assist with the effective implementation of policy: when 'users' are consulted they are more likely to lend their support to (or at least, not to oppose) policy measures"; second, "in democratic societies, people simply have a right to a participatory role"; and third, "lay people may have access to knowledge which is unknown to officially sanctioned experts." Steve Yearley et al., *Participatory Modelling and the Local Governance of the Politics of UK Air Pollution: A Three-City Case Study*, 12 ENV'T VALUES 247, 248 (2003); *cf.* Stokes et al., *supra* note 7; GREG PALAST ET AL., DEMOCRACY AND REGULATION: HOW THE PUBLIC CAN GOVERN ESSENTIAL SERVICES 186 (2003) (contesting the notion that including more public engagement will make the procedures more "litigious, adversarial, lengthy, and complex," suggesting instead that it "is quite easy for a government bureaucrat, a utility executive and a consultant from an international bank to reach agreement swiftly in private, undisturbed by the objections of the public"); Iñigo del Guayo et al., *Conclusion: Energy Law and Justice for a Better World*, *in* ENERGY JUSTICE AND ENERGY LAW 349, 350 (Iñigo del Guayo et al. eds., 2020) ("[L]aws are needed worldwide to ensure that energy decisions are subject to a procedure in which all stakeholders 'have a say.'"); Richard Cowell et al., *Acceptance, Acceptability and Environmental Justice: The Role of Community Benefits in Wind Energy Development*, 54 J. ENV'T PLAN. & MGMT. 539, 543 (2011) (suggesting that rapid expansion of renewables in Germany and Denmark was due to involvement of local communities and their participation in development of projects rather than just the "potential profits of ownership" through shares in those projects); Welton & Eisen, *supra* note 29, at 365 (discussing methods of citizen participation); Matthew Cotton & Patrick Devine-Wright, *NIMBYism and Community Consultation in Electricity Transmission Network Planning*, *in* RENEWABLE ENERGY AND THE PUBLIC: FROM NIMBY TO PARTICIPATION 115, 118 (Patrick Devine-Wright ed., 2010) (explaining that one of the "socio-cultural factors that motivate public opposition" to transmission infrastructure is the "lack of expectation amongst local residents that network operators will implement community involvement in planning processes").

[33] For an in-depth analysis of these reasons as well as their counterarguments, see discussion *infra* Part V.

[34] Winter has argued that there could be two distinctive objectives: "Is the participation aimed at precluding concerns from later litigation, or is it a way to enhance the quality of the discourse?" Gerd Winter, *Theoretical Foundations of Public Participation in Administrative Decision-Making*, *in* ENVIRONMENTAL DEMOCRACY AND LAW: PUBLIC PARTICIPATION IN EUROPE 22, 24 (Gyula Bándi ed., 2014). I disagree since it is not an "either or" question and, as it will be developed throughout this piece, both goals can be validly pursued at the same time. *Cf.* Raymond J. Burby, *Making Plans that Matter: Citizen Involvement and Government Action*, 69 J. AM. PLAN. ASS'N 33, 44 (2003) ("With broader participation in plan making, planners develop stronger plans, reduce the potential for latent groups who oppose proposed policies to unexpectedly emerge at the last moment, and increase the potential for achieving some degree of consensus among affected interests."); John M. Bryson et al., *Designing Public Participation Processes*, 73 PUB. ADMIN. REV. 23, 28 (2013) (suggesting that public participation can "limit delays, mistakes, and lawsuits").

the democratic legitimacy of transmission infrastructure development.[35] In addition, I suggest that incorporating deliberative venues in the energy planning sphere is a good policy for its own sake.[36] Indeed, we must overcome the procedural disconnection between social and technological concerns.[37]

In exploring the benefits and limits of democratizing transmission planning, I use an interdisciplinary approach, combining literature review and cases, legal studies, public policy, economics, sociology, and psychology.[38] With this comprehensive view, I aim to contribute to a "more eclectic set of theoretical tools to deploy [for] critical scrutiny of the dynamics driving, as well as consequences of, energy system transformations."[39]

The Article is structured as follows. First, I examine the theoretical background of transmission planning, and its regulatory and practical challenges. Second, I examine the contours of energy democracy and its relation to transmission planning through public engagement

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[35] Cotton & Devine-Wright, *supra* note 29, at 19 (highlighting the "controversial nature of infrastructure siting" and proposing that "[w]here such opposition occurs, one oft-cited solution is to improve the level of direct community and stakeholder involvement in the processes and outcomes of decision-making").

[36] *See* SIMON RETALLACK & MATTHEW LOCKWOOD, INST. FOR PUBLIC POL'Y RSCH., POSITIVE ENERGY: HARNESSING PEOPLE POWER TO PREVENT CLIMATE CHANGE, A SUMMARY 4 (2007) ("[E]mpowering people to exert control and resolve problems for themselves is a good in its own right: improving governance, deepening democracy and rebuilding trust."); Haggett, *supra* note 27, at 298 (discussing the benefits of public engagement); *see also* A.R. Ciupuliga & E. Cuppen, *The Role of Dialogue in Fostering Acceptance of Transmission Lines: The Case of a France–Spain Interconnection Project*, 60 ENERGY POL'Y 224, 231 (2013) (discussing ways to successfully consider public input when "fostering acceptance").

[37] PEADAR KIRBY & TADHG O'MAHONY, THE POLITICAL ECONOMY OF THE LOW-CARBON TRANSITION: PATHWAYS BEYOND TECHNO-OPTIMISM 57 (2018) ("In how we conceive of, and address the challenge and opportunity of delivering a sustainable low-carbon world, the importance of society, as social, cultural and governance factors, and the environment as our life-support system, require much more prominent roles.").

[38] *See* BENJAMIN K. SOVACOOL & MICHAEL H. DWORKIN, GLOBAL ENERGY JUSTICE: PROBLEMS, PRINCIPLES, AND PRACTICES 25 (2014) ("[A]n understanding of philosophy, law, and ethics, along with politics, economics, sociology, psychology, and history, is elemental in ensuring that decision-makers comprehend the depth and range of their energy actions."); *cf.* Paul Dolan et al., *It Ain't What You Do, It's the Way that You Do It: Characteristics of Procedural Justice and Their Importance in Social Decision-Making*, 64 J. ECON. BEHAV. & ORG. 157, 167 (2007) ("[L]iterature from a range of other disciplines, notably social psychology and legal studies, has provided substantial empirical evidence that suggests individuals have preferences for the characteristics of allocation mechanisms in a wide variety of areas."); Caroline Kuzemko et al., *Governing for Sustainable Energy System Change: Politics, Contexts and Contingency*, 12 ENERGY RSCH. & SOC. SCI. 96, 104 (2016) ("[I]nterdisciplinary analysis, although often difficult to pursue, can . . . provide us with a more nuanced and inter-connected account of types of governance and of energy system change").

[39] Karen Bickerstaff, *Justice in Energy System Transitions: A Synthesis and Agenda*, *in* THE ROUTLEDGE HANDBOOK OF ENVIRONMENTAL JUSTICE 388, 396 (Ryan Holifield et al. eds., 2018).

mechanisms. Third, I analyze the presence—or lack of—deliberative venues in the transmission planning sphere, both from a theoretical perspective and through a U.S. case study in liberalized regional markets. Fourth, I propose instrumental, substantive, and normative elements to consider when incorporating public engagement mechanisms into transmission planning. Finally, I set a research agenda for more in-depth case analysis and comparative work, in which I also call for an exploration of new regulatory techniques that increase flexibility during power transmission planning, such as experimentalism, to expand the frontiers of the energy law discipline.

II. DELINEATING TRANSMISSION EXPANSION AND PLANNING

To electrify broadly, we need to increase the extension and flexibility of transmission systems. This is a worldwide challenge.[40] For instance, over the past decade, China increased its transmission capacity by constructing one-third of the world's transmission lines, while India expanded its power transmission capacity by sixty percent in the same period.[41] Meanwhile, during the same period, the United States increased its transmission infrastructure by three percent, while ongoing discussions in Congress focus on the need to expedite the permitting process for transmission infrastructure.[42]

Consequently, to achieve a timely decarbonization of our energy systems we need innovative regulatory frameworks that support modern transmission planning.[43] This section reviews transmission planning fundamentals and recounts current transmission planning scholarship. Then I examine the current dilemmas of power transmission for a just, clean, and timely energy transition.

A. What is Transmission Planning?

Transmission expansion planning refers to the process of deciding whether, where, and when to install new transmission infrastructure to meet incoming loads of electricity.[44] Transmission planning relies on

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[40] *E.g.*, INT'L ENERGY AGENCY*., supra* note 7, at 8–9.

[41] *Id.* at 17–18.

[42] *Id.* at 18; Maxine Joselow, *Why Lawmakers Want to Save Snot Otters*, WASH. POST (Apr. 5, 2023), https://perma.cc/CJY5-SKYR ("[T]he Clean Electricity Transmission Acceleration Act[] seeks to accelerate the permitting process for renewable energy projects and the transmission lines needed to carry clean electricity nationwide.")

[43] *See* Hadi Sadeghi et al., *The Energy Hub: An Extensive Survey on the State-of-the-Art*, APPLIED THERMAL ENG'G, July 2019, No. 114071, at 2 (explaining that "in realizing the concept of green economy," energy planners seek "better measures" as opposed to "passed ways and implemented approaches").

[44] Shelley Welton, *Non-Transmission Alternatives*, 39 HARV. ENV'T L. REV. 457, 472–74 (2015); Sara Lumbreras & Andrés Ramos, *The New Challenges to Transmission Expansion Planning. Survey of Recent Practice and Literature Review*, 134 ELEC. POWER SYS. RSCH.

models that tend to focus on reducing the operational costs of transmission networks.[45] Thus, the essence of the problem remains how to optimize the cost of power transmission investments while ensuring reliability,[46] yet without dismissing consideration of broader public policy benefits and possible tradeoffs.[47]

So, why analyze transmission planning? Because the social and local concerns of energy infrastructure have been traditionally raised during project siting, too late for serious reconsideration, often perpetuating the uneven distribution of its impacts.[48] That's why the intervention at upstream stages of energy infrastructure development,[49] such as the planning sphere, is critical.[50] This could help to ameliorate the persistent "inequitable siting burdens."[51]

Transmission planning's usual attention to costs is explained by the nature of infrastructure investments. These investments are capital-

19, 20 (2016) ; Majidi & Baldick, *supra* note 29, at 19; *see also* Ari Peskoe, *Is the Utility Transmission Syndicate Forever?*, 42 ENERGY L.J. 1, 32 (2021) (discussing aims of transmission planning and relevant considerations); Jean-Claude Kaltenbach et al., *A Mathematical Optimization Technique for the Expansion of Electric Power Transmission Systems*, 89 IEEE TRANSACTIONS ON POWER APPARATUS & SYS. 113, 113 (1970) (describing the importance of planning procedures "to achieve the desired level of reliability and quality of service at the lowest cost over a long range"); MADRIGAL & STOFT, *supra* note 16, at 42–44 (discussing the role of a regional transmission organization in transmission expansion planning); Omar J. Guerra et al., *An Optimization Framework for the Integrated Planning of Generation and Transmission Expansion in Interconnected Power Systems*, 170 APPLIED ENERGY 1, 4 (2016) (discussing the transmission capacity expansion problem and the use of integrated planning).

[45] DONOHOO & MILLIGAN, *supra* note 16, at 2; Line A. Roald et al., *Power Systems Optimization Under Uncertainty: A Review of Methods and Applications*, ELECTRIC POWER SYS. RSCH., Jan. 2023, No. 108725, at 17–18 (analyzing the many challenges of transmission expansion planning and optimization models in the face of increasing renewable energy generation).

[46] WENYUAN LI, PROBABILISTIC TRANSMISSION SYSTEM PLANNING 1 (Mohamed E. El-Hawary ed., 2011); DONOHOO & MILLIGAN, *supra* note 16, at 2 ("A planning model is naturally framed as an optimization: minimize the cost required for a system to operate subject to physical and institutional constraints.").

[47] *See* KASSAKIAN ET AL., *supra* note 20, at 35 (explaining the importance of considering broadly all benefits, costs, and risks of project approaches in the planning process); PFEIFENBERGER ET AL., *supra* note 16, at 31 (emphasizing the current disregard for "broader economic and public policy benefits provided by the [transmission] project").

[48] Welton & Eisen, *supra* note 29, at 367.

[49] *See* Cotton & Devine-Wright, *supra* note 32, at 121 ("Citizens from affected site communities are excluded from 'upstream' decision-making at the 'high' level because they are characterized as concerned by the proximity of the line to their town/village and incapable of input into the broader strategic planning processes . . . ." (citation omitted)).

[50] *Cf.* DAVIES ET AL., *supra* note 4, at 435 (in the United States, the "combined lack of investment in the grid and the thorny mess of roadblocks that fracture siting authority has erected barriers to new transmission projects—particularly for high-voltage, cross-jurisdictional lines").

[51] Welton & Eisen, *supra* note 29, at 367.

intensive,[52] and the expected lifespan of transmission infrastructure extends for many decades.[53] Consequently these investments can shape power systems for decades,[54] establishing a path dependency.[55]

Similarly, these long-term investments have a strong influence on carbon lock-ins.[56] Carbon lock-in refers to a phenomenon in which industries rely heavily on fossil fuel power systems as the result of institutional frameworks shaped by a strong path dependency.[57] Poor planning could produce market failures that impede the advancement of clean energy technologies.[58] Therefore, planning transmission must avoid carbon lock-ins by incentivizing and facilitating decarbonization.[59]

Finally, there are two further distinctive elements to consider in transmission planning analysis. First, most scholarship on power transmission problems analyzes these issues through sophisticated algorithms focused on costs and pricing, which makes this area highly

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[52] Lumbreras & Ramos, *supra* note 44; *see also* Emily Hammond & Jim Rossi, *Stranded Costs and Grid Decarbonization*, 82 BROOK. L. REV. 645, 645–46 (2016) ("[S]ome industry investors and analysts have even raised concerns that the impending disruptions of change could lead to financial distress, hardship, and, at the extreme, catastrophe.").

[53] Lumbreras & Ramos, *supra* note 44; Hammond & Rossi, *supra* note 52, at 645–46; M. Lu et al., *Transmission Expansion Planning Flexibility*, INT'L POWER ENG'G CONF., 2005, at 1, 6, https://perma.cc/3SNH-YHXR.

[54] Lumbreras & Ramos, *supra* note 44; *see also* Hammond & Rossi, *supra* note 52, at 645–46.

[55] *See* Amy L. Stein, *Breaking Energy Path Dependencies*, 82 BROOK. L. REV. 559, 564–70 (2016) (discussing the relation of path dependency characteristics to energy transition infrastructure); *see also* Hammond & Rossi, *supra* note 52, at 645–46 (connecting "industry's immobile capital assets" with long lives and path dependency); William Boyd, *Public Utility and the Low-Carbon Future*, 61 UCLA L. REV. 1614, 1624 (2014) ("[T]he $1.1 trillion invested in the current electric power system in the United States, combined with the multi-decade lifetimes of many of these assets, and a constellation of deeply entrenched political and economic interests, makes the system very resistant to change.").

[56] Hammond & Rossi, *supra* note 52, at 646 ("Path dependency threatens 'carbon lock-in,' which could thwart any successful transition to a low-carbon energy system." (quoting Gregory C. Unruh, *Understanding Carbon Lock-In*, 28 ENERGY POL'Y 817, 817 (2000)). *See generally* Gregory C. Unruh, *Understanding Carbon Lock-In*, 28 ENERGY POL'Y 817 (2000) (exploring how "industrial economies have become locked into fossil fuel-based technological systems through a path-dependent process"); Stein, *supra* note 55, at 565–66 (describing energy infrastructure's reflection of path dependence characteristics).

[57] Unruh, *supra* note 56, at 817.

[58] *Id.* at 826–27; *see also* Hammond & Rossi, *supra* note 52, at 646 (highlighting path dependency's potential ability to frustrate the "successful transition to a low-carbon energy system").

[59] The competitive political process of developing and implementing policies that support decarbonization could incentivize actors to invest in "renewable energy production or transmission infrastructure in order to lock-in decarbonization policy before political power shifts." Biber et al., *supra* note 21, at 628–29; Michaël Aklin & Johannes Urpelainen, *Political Competition, Path Dependence, and the Strategy of Sustainable Energy Transitions*, 57 AM. J. POL. SCI. 643, 643–44, 655–66 (2013); MICHAËL AKLIN & JOHANNES URPELAINEN, RENEWABLES: THE POLITICS OF A GLOBAL ENERGY TRANSITION 230–36 (2018) [hereinafter AKLIN & URPELAINEN, RENEWABLES].

technical.[60] Second, there is already a transition underway from the linear model of transmission planning, which focused solely on transmission excluding power generation, to a more holistic approach that integrates considerations beyond transmission itself into the planning process.[61]

Indeed, many energy scholars agree that isolated transmission planning without integrating the generation sector impedes an efficient power system's operation.[62] This need for holistic investment planning and coordination is one of the most significant contemporary challenges of the energy transition.[63] This move to a more comprehensive approach

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[60] *See, e.g.*, Len L. Garver, *Transmission Network Estimation Using Linear Programming*, PAS 89 IEEE TRANSACTIONS POWER APPARATUS & SYS. 1688 (1970) (presenting the use of linear programming for transmission planning); R. Romero et al., *Test Systems and Mathematical Models for Transmission Network Expansion Planning*, 149 IEE PROC.-GENERATION, TRANSMISSION & DISTRIB. 27, 27, 35 (2002) (presenting multiple mathematical models used for transmission planning); Gerardo Latorre et al., *Classification of Publications and Models on Transmission Expansion Planning*, 18 IEEE TRANSACTIONS ON POWER SYS. 938 (2003) (reviewing methods and models utilized for transmission planning); Lumbreras & Ramos, *supra* note 44 (evaluating modeling decisions and methods utilized for transmission planning in the context of conditions and challenges of transmission expansion planning); L. Gacitua et al., *A Comprehensive Review on Expansion Planning: Models and Tools for Energy Policy Analysis*, 98 RENEWABLE & SUSTAINABLE ENERGY REV. 346, 347 (2018) (describing long-term planning models); LI, *supra* note 46, at 3 (characterizing transmission planning as "an extremely complicated problem"); Reza Hemmati et al., *State-of-the-Art of Transmission Expansion Planning: Comprehensive Review*, 23 RENEWABLE & SUSTAINABLE ENERGY REV. 312, 313–18 (2013) (identifying more than fourteen approaches to transmission expansion planning from a technical or economical perspective).

[61] Shiwei Yu et al., *Layout Optimization of China's Power Transmission Lines for Renewable Power Integration Considering Flexible Resources and Grid Stability*, INT'L J. ELEC. POWER & ENERGY SYS., Aug. 2021, No. 107507, at 1; *see also* KASSAKIAN ET AL., *supra* note 20, at 102 (emphasizing that "[t]o produce coherent outcomes, transmission regulation has to be a conceptually integrated system" because "[p]lanning, business models, cost allocation, and siting are all interrelated"); PFEIFENBERGER ET AL., *supra* note 16, at 1 (arguing for the need to "improv[e] the analyses of transmission solutions and their costs and benefits to determine the which [sic] are most effective from a total system-wide cost perspective"); Claudia Kemfert, Friedrich Kunz & Juan Rosellón, *A Welfare Analysis of Electricity Transmission Planning in Germany*, 94 ENERGY POL'Y 446, 452 (2016) (arguing for an integrated optimization of generation dispatch and transmission investments).

[62] *See, e.g.*, Yu et al., *supra* note 61, at 1 ("Therefore, to obtain a safe, reliable, and economic operation of power system, many optimization models focus on integrated generation and transmission expansion planning.").

[63] *See* Building for the Future Through Electric Regional Transmission Planning and Cost Allocation and Generator Interconnection, 18 C.F.R. § 35 (2024) (amending FERC regulations to improve regional transmission and cost allocation requirements); *see also* Barbara Tyran, *A Transmission Boom is Needed to Realize the Inflation Reduction Act's Benefits, and It Will Pay for Itself*, UTIL. DIVE (Oct. 6, 2022), https://perma.cc/U52B-HM3R (identifying challenges to transmission planning, including planning that is "too often focused on local reliability, not holistic system performance"); *see* Luengo-Troncoso, *supra* note 15, at 270 n.19 (highlighting the challenge of the need for holistic investment

could improve the transmission planning goal of minimizing operational costs as well as ensuring the reliable and feasible operation of the energy grid.[64] Certainly, beyond technical planning issues, transmission planning could also engage with social considerations.[65] Consequently, my research investigates how to integrate broader considerations into transmission planning, especially social concerns of affected localities.

B. Current Dilemmas of Transmission Planning

As renewable energy production continues to increase worldwide, transmission systems are experiencing unprecedented levels of demand for new lines and new linkages of energy and transmission.[66] Indeed, besides the frenzied growth of renewable energy generation, a broader electrification of the energy matrix[67] demands increasing power transmission.[68] Currently, there is not enough capacity to conduct

planning (citing GLEN ANDERSEN ET AL., NAT'L CONF. OF STATE LEGISLATURES, MODERNIZING THE ELECTRIC GRID: STATE ROLE AND POLICY OPTIONS 1 (2019)).

[64] *Cf.* Jae Hyung Roh et al., *Market-Based Generation and Transmission Planning with Uncertainties*, 24 IEEE TRANSACTIONS ON POWER SYS. 1587, 1588–89 (2009) (proposing coordinated approach to generation and transmission planning through "a joint energy and transmission market and a capacity payment mechanism for both transmission and generation facilities"); Reza Hemmati et al., *Comprehensive Review of Generation and Transmission Expansion Planning*, 7 IET GENERATION, TRANSMISSION & DISTRIB. 955, 955–56 (2013) (highlighting that the multi-objective optimization problem of expansion planning "cannot be solved effectively by traditional planning methods"); Nikolaos E. Koltsaklis & Athanasios S. Dagoumas, *State-of-the-Art Generation Expansion Planning: A Review*, 230 APPLIED ENERGY 563, 563–4, 583–84 (2018) (characterizing the challenges of expansion planning as "multi-dimensional," requiring proper planning and additional policy measures).

[65] *See* Hemmati et al., *supra* note 60, at 318 (concluding after a thorough literature review of the existing transmission expansion planning approaches that "[i]t is seen that the researchers have focused on the market type, uncertainty, reliability and congestion").

[66] Shannon Osaka, *This Little-Known Bottleneck is Blocking Clean Energy for Millions*, WASH. POST (Dec. 20, 2022), https://perma.cc/L27Z-K7EY; Abdulaziz Almalaq et al., *Towards Increasing Hosting Capacity of Modern Power Systems Through Generation and Transmission Expansion Planning*, SUSTAINABILITY, Mar. 2022, No. 2998, at 1–2 (2022); M.R. Hesamzadeh et al., *An Introduction to Transmission Network Investment in the New Market Regime*, *in* TRANSMISSION NETWORK INVESTMENT IN LIBERALIZED POWER MARKETS, *SUPRA* note 16, at 1, 2.

[67] DAVID GARCÍA HOWELL, POLICY BRIEF ON TRADE AND ENVIRONMENT NO. 13: ARE WE ADVANCING IN THE TRANSITION OF THE ENERGY MATRIX IN LATIN AMERICA? ANALYSIS AND CONSIDERATIONS 3 (2021), https://perma.cc/C4XK-3FKZ ("The term 'energy matrix' can be defined as the combination of diverse primary energy sources used to satisfy the energy needs in a geographic region.").

[68] *E.g.*, ERIC LARSON ET AL., NET-ZERO AMERICA: POTENTIAL PATHWAYS, INFRASTRUCTURE, AND IMPACTS 108–12 (2021); Mitchell-Ward, *supra* note 20; Thomas-Olivier Léautier, *Regulated Expansion of the Power Transmission Grid*, *in* TRANSMISSION NETWORK INVESTMENT IN LIBERALIZED POWER MARKETS, *supra* note 16, at 69, 69; Alexandra B. Klass, *Transmission, Distribution, and Storage: Grid Integration*, *in* LEGAL PATHWAYS TO DEEP DECARBONIZATION IN THE UNITED STATES (Michael B. Gerrard & John C. Dernbach eds., 2019) 527, 529–30; DENHOLM ET AL., *supra* note 19, at xix (concluding

electricity to load centers in most of the world.[69] As a result, there is an increasing loss of energy caused by bottlenecks in critical transmission infrastructure.[70] The energy transition is testing transmission infrastructure worldwide, demanding agile planning procedures that meet the electrification pace.[71]

The crux of the matter is that the planning, permitting, and siting of transmission lines takes more than three or four times as long as is required to build a renewable generation project.[72] Moreover, the generation project cannot receive financing if it does not have transmission access.[73] In turn, the transmission line cannot be sited without security that the costs can be recovered, which requires approved generation projects.[74]

Meanwhile, countries are expanding their transmission capacity to match the pace of growing power generation by investing in new infrastructure or adapting existing projects.[75] These expansion decisions could contribute to additional transmission linkages to energy from a wide geographical area, which would be available at critical periods of

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that to achieve a timely decarbonization in the United States would require to double or even triple the existing transmission capacity).

69 *See* HIRST, *supra* note 16, at 49 ("[T]he transmission investments planned for the next several years may not even be enough to replace today's aging infrastructure let alone meet growing demand.").

70 *See* INT'L ENERGY AGENCY, *supra* note 7, at 8 ("At least 3000 gigawatts (GW) of renewable power projects, of which 1500 GW are in advanced stages, are waiting in grid connection queues – equivalent to five times the amount of solar PV and wind capacity added in 2022."); HAMILTON, *supra* note 15, at 214 (discussing congestion in the system, stating that "the existing transmission system was not designed to meet present demand," and noting the dangers of increased costs to consumers and risks of blackouts). In the United States, "[a]lready, a lack of transmission capacity means that thousands of proposed wind and solar projects are facing multiyear delays and rising costs to connect to the grid." Nadja Popovich & Brad Plumer, *Why the U.S. Electric Grid Isn't Ready for the Energy Transition*, N.Y. TIMES (June 12, 2023), https://perma.cc/5D9C-GS4E. *But see* MADRIGAL & STOFT, *supra* note 16, at 92–93 ("[T]ransmission for renewable energy does not necessarily need to be built to transport all wind power output, specially [sic] peaks during short periods. This will depend on the value of such extra power and the cost of extra transmission.").

71 *See* Klass et al., *supra* note 16, at 1022 (calling for a change in federal authority to take on the project of "planning for a new, nationally interconnected network of transmission lines across existing 'seams'"); NAT'L ACADS. OF SCIS., ENG'G, & MED., THE FUTURE OF ELECTRIC POWER IN THE UNITED STATES 13 (2021) (highlighting the "pressing need for flexible, adaptive, and credible planning"); MADRIGAL & STOFT, *supra* note 16, at 8–13 (discussing the need to scale up transmission and the accompanying implications on needed investment and updated planning and regulatory models).

72 INT'L ENERGY AGENCY., *supra* note 7, at 9, 51.

73 *E.g.*, J. Charles Smith et al., *Transmission Planning for Wind Energy in the United States and Europe: Status and Prospects*, WIRES ENERGY & ENV'T 1 (2013) ("A remote wind project cannot be financed until the transmission access is provided . . . .").

74 *E.g.*, *id.* ("[T]he transmission line cannot be built with cost recovery certainty until the need for service from the wind plant is shown . . . .").

75 ALANA RAWLINS BILBAO, INT'L ENERGY AGENCY, BUILDING THE FUTURE TRANSMISSION GRID 12–14 (2025).

demand.[76] Besides expansion itself, countries are also exploring alternatives to adapt their transmission systems, optimizing the use of national grids by developing a dynamic and efficient use of existing transmission capacity limits.[77]

The integration of renewables adds new layers of complexity.[78] Some of the particularities of renewable generation that challenge existing transmission schemes are remote locations, intermittency, and low predictability.[79] For instance, generation infrastructure must be sited where renewable resources can be found and are economically feasible, which can be in remote places.[80] Moreover, the production

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[76] *See* Kolster et al., *supra* note 6, at 2 (providing a quantifiable method of determining flexibility of new renewable resources to meet demand); Sattich, *supra* note 6, at 72 (explaining how electricity grids must be optimized with interregional power lines providing system operators with the flexibility needed to keep the network stable despite local load changes). The main challenge is to reach an adequate balance because an overbuilding of transmission capacity could be equally economically inefficient. *Cf.* F.F. Wu et al., *Transmission Investment and Expansion Planning in a Restructured Electricity Market*, 31 ENERGY 954, 961 (2006) ("[O]ne must pay attention to the issue of cost recovery or cost allocation in transmission investment that may be based on embedded cost, incremental cost, or both.").

[77] Léautier, *supra* note 68, at 72–73; Luengo-Troncoso, *supra* note 15, at 272; Klass, *supra* note 68, at 531–32 (recounting adaptive technologies literature to enhance power transmission without expanding infrastructure.).

[78] *See* DAVIES ET AL., *supra* note 4, at 411 (contextualizing transmission in transition by stating that U.S. "transmission regulation at the beginning of the 21st century looks very much like it did throughout the 20th"); Phillipe Vilaca Gomes & João Tomé Saraiva, *State-of-the-Art of Transmission Expansion Planning: A Survey from Restructuring to Renewable and Distributed Electricity Markets*, 111 INT'L J. ELEC. POWER & ENERGY SYS. 411, 413 (2019) ("[T]he intermittent nature combined to the low predictability and controllability of RES represent additional challenges to grid planners and operators to maintain acceptable levels of reliability and security of supply."); Roald et al., *supra* note 45, at 1 (highlighting the uncertainty of parameters utilized in optimization models for planning).

[79] Gomes & Saraiva, *supra* note 78, at 413; Roald et al., *supra* note 45, at 1; *cf.* Lumbreras & Ramos, *supra* note 44, at 21–22 (identifying the following contemporary challenges affecting transmission expansion planning: deregulation, renewable penetration, large-scale generation projects, market integration and regional planning and long permitting processes.); Rudnick & Velásquez, *supra* note 16, at 418 (describing the new challenges posed by renewables to transmission systems).

[80] *See* Rudnick & Velásquez, *supra* note 16, at 418 ("Unlike coal and gas, wind and sun cannot be transported to more convenient locations . . . . Regions with high-quality renewable resources are often far away from load centers."); Luengo-Troncoso, *supra* note 15, at 272 (highlighting such challenges presented by widely distributed generation); Lumbreras & Ramos, *supra* note 44, at 21 (identifying typical locations of renewable generation as part of the challenges to renewable penetration); Michel Rivier et al., *Electricity Transmission*, *in* REGULATION OF THE POWER SECTOR 251, 252 (Ignacio J. Pérez-Arriaga ed., 2013) ("The anticipated enormous growth of generation from renewable sources . . . is pushing the current paradigm of transmission regulation to its limits."); Alexandra B. Klass & Jim Rossi, *Revitalizing Dormant Commerce Clause Review for Interstate Coordination*, 100 MINN. L. REV. 129, 144 (2015) (recognizing the challenge posed by renewable energy's need to be "transported to load centers through transmission lines . . . often far from population centers"); Alexandre Moreira et al., *Reliable Renewable*

variability of renewables affects transmission planning, since many renewables will only work when the sun is shining and the wind is blowing.[81] These renewable energy challenges demand innovative frameworks such as more planning webs of interconnected transmission lines that enable operational flexibility.[82]

Therefore, the expansion and adaptation of transmission capacity is critical to achieve a timely and clean energy transition.[83] Indeed, broad electrification and renewable generation growth are in dire need of expedited transmission planning.

III. EMPOWERING THE PUBLIC: ENERGY DEMOCRACY AND ENGAGEMENT MECHANISMS

I now turn to explore the challenges to deliberation in transmission planning.[84] In doing so, I delve into the contours of energy democracy

Generation and Transmission Expansion Planning: Co-Optimizing System's Resources for Meeting Renewable Targets, 32 IEEE TRANSACTIONS ON POWER SYS. 3246, 3247 (2016); Kassakian et al., *supra* note 20, at 22; Smith et al., *supra* note 73, at 2; INT'L PANEL ON CLIMATE CHANGE, RENEWABLE ENERGY SOURCES AND CLIMATE CHANGE MITIGATION 14 (2011), https://perma.cc/FJV6-6ZJL (providing range of energy costs for renewable resources compared to nonrenewable resources).

[81] BENT SORENSEN, ENERGY INTERMITTENCY 5–12 (2015); AKLIN & URPELAINEN, RENEWABLES, *supra* note 59, at 26–27; Gautam Gowrisankaran, Stanley S. Reynolds & Mario Samano, *Intermittency and the Value of Renewable Energy*, 124 J. POL. ECON. 1187, 1188 (2016); I. U. Rakhmonov & K. M. Reymov, *Statistical Models of Renewable Energy Intermittency*, E3S WEB CONFS., 2020, No. 01167, at 1; Lumbreras & Ramos, *supra* note 44, at 21; Frank A Wolak, *Transmission Planning and Operation in the Wholesale Market Regime*, *in* TRANSMISSION NETWORK INVESTMENT IN LIBERALIZED POWER MARKETS, *SUPRA* note 16, at 101, 104.

[82] *See* Marco Nicolosi, *Wind Power Integration and Power System Flexibility—An Empirical Analysis of Extreme Events in Germany Under the New Negative Price Regime*, 38 ENERGY POL'Y 7257, 7257 (2010) (discussing use of wind power in Germany and its relationship with conventional power leading to lower prices); Hannele Holttinen et al., *The Flexibility Workout: Managing Variable Resources and Assessing the Need for Power System Modification*, 11 IEEE POWER & ENERGY MAG. 53, 53 (2013) (highlighting the flexibility afforded by combinations of hydro and thermal generation used to manage variability in the system); R.P. O'Neill, *Transmission Planning, Investment, and Cost Allocation in US ISO Markets*, TRANSMISSION NETWORK INVESTMENT IN LIBERALIZED POWER MARKETS, *SUPRA* note 16, at 171, 178–79; Karl-Kiên Cao et al., *Incorporating Power Transmission Bottlenecks into Aggregated Energy System Models*, SUSTAINABILITY, June 2018, No. 1916, at 2; Rudnick & Velásquez, *supra* note 16, at 418; KASSAKIAN ET AL., *supra* note 21, at 22; Lu et al., *supra* note 53, at 6.

[83] Léautier, *supra* note 68, at 69; ROB GRAMLICH & JAY CASPARY, AMS. FOR A CLEAN ENERGY GRID, PLANNING FOR THE FUTURE: FERC'S OPPORTUNITY TO SPUR MORE COST-EFFECTIVE TRANSMISSION INFRASTRUCTURE 89–95 (2021), https://perma.cc/5QJY-7WRC; Klass et al., *supra* note 16, at 1023; Klass, *supra* note 68, at 529–31.

[84] I also attempt to confront procedural questions posed by energy justice scholars such as: "Who gets to decide and set rules and laws? Which parties and interests are recognized in decision-making? By what process do they make such decisions? How impartial or fair are the institutions, instruments, and objectives involved?" SOVACOOL & DWORKIN, *supra* note 38, at 208. *See also* Welton & Eisen, *supra* note 29, at 342–57 (recounting the

and public engagement theory. I analyze the underlying regulatory dynamics of transmission planning and new legal pathways to expand deliberative opportunities.

A key premise of this Article is that the impacts of siting power transmission infrastructure are shaped "by the nature of decision-making around line route selection and the attitudes of network industry actors towards opposition groups, local communities affected by line siting, and the stakeholder networks involved in planning."[85] One project that exemplifies this premise is the TransWest Express (TWE), a power transmission project extending for 732 miles across Wyoming, Colorado, Utah, and Nevada in the United States.[86] The project, which has taken over 18 years to be approved and required the support of hundreds of government actors at all levels,[87] aims to connect massive wind farms in Wyoming to load demand centers in Nevada and California.[88]

Most of the opposition to the project comes from local residents who are concerned with the proximity of these energy projects to their homes.[89] TWE will run along two other transmission lines that are under construction.[90] Residents' participation is mostly restricted to public hearings, where their concerns are not always heard.[91] As Sue Jones, Carbon County commissioner from one of the affected areas, puts it: "You really have no idea what that's like until it's there. And then you go, wow. It's an industrial area. A different kind of industry, but an industrial area."[92]

This case, and the SunZia line, provide examples of local opposition to power transmission energy projects and a lack of advanced deliberative planning.[93] Therefore, I explore whether the impacts of transmission infrastructure, which cause opposition and delayed deployment, are preceded by a disconnection between technical and social concerns. Here I build the theoretical foundation of a deliberative planning approach that reunites both interests.

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contemporary facets of procedural energy justice within public participation in energy proceedings and other venues such as litigation).

85 Cotton & Devine-Wright, *supra* note 32, at 118.

86 *FERC Facts*, TRANSWEST EXPRESS, https://perma.cc/Y5EB-KTV8 (last visited Oct. 19, 2024).

87 Jason Plautz, *Western Transmission Line Breaks Ground After 18-Year Wait*, E&E NEWS (June 21, 2023, 6:42 AM), https://perma.cc/FZA2-AXVW.

88 *FERC Facts*, *supra* note 86.

89 Mead Gruver, *Build Begins on Wyoming-to-California Power Line amid Growing Wind Power Concern*, ASSOCIATED PRESS NEWS (June 20, 2023, 5:52 AM), https://perma.cc/DT8W-3K7Z.

90 *Id.*

91 *Id.*

92 *Id.*

93 *See* Raza & Barringer, *supra* note 11 (detailing the background of the SunZia High-Voltage Direct Current transmission line project and local opposition to it).

A. The Role of Democratic Legitimacy in Transmission Planning

In the last few decades there has been increased advocacy among scholars and additional provisions in legal frameworks aimed at increasing public participation in administrative venues.[94] However, there are still regulatory spaces that adhere to traditional governance models.[95] In these traditional regulatory schemes, governmental agencies, assisted by experts, set policies by themselves without broad meaningful public intervention.[96] Most of these regulatory approaches persist without deliberative public engagement under the banner of technocracy.[97] The underlying belief behind technocratic governance is

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[94] *See generally* George K. Foster, *Community Participation in Development*, 51 VAND. J. TRANSNAT'L L. 39 (2018) (explaining a global trend of community participation in development projects through the legal recognition of procedural rights in domestic and international law); Welton, *Grasping for Energy Democracy*, *supra* note 27, at 623 ("Across subject areas, scholars and regulators have been devoting increased attention in the last several decades to more effectively engaging in a wider range of citizens in governmental decision making processes."); David Arkush, *Democracy and Administrative Legitimacy*, 47 WAKE FOREST L. REV. 611 (2012) (arguing that making administrations more democratic is the most useful path as an administrative legitimacy model, since their main hurdles are of practical design instead of conceptual flaws).

[95] Analyzing public participation in new electricity regulatory regimes, Palast et al. conclude that "[e]specially in those nations with newly privatized infrastructure, governments still turn to expert consultants, specialist civil servants, industry managers, international agencies, their accountants and advisors to share information and decide in secret on standards of service, price limits and terms of foreign ownership. It is a system controlled by a *nomenklatura* of specialists and functionaries." PALAST ET AL., *supra* note 32, at 185. At this point, this can also be explained as Boyd puts it because of "[t]he relentless promotion of markets and competition in virtually every sphere of society over the last half century [that] has left us in an intellectual cul de sac. As with much of our politics, our thinking about climate change often seems trapped in a reflexive skepticism toward the state and a widespread denial of the possibility of any coherent notion of the public interest." Boyd, *supra* note 2, at 485.

[96] SOVACOOL & DWORKIN, *supra* note 38, at 212; Orly Lobel, *The Renew Deal: The Fall of Regulation and the Rise of Governance in Contemporary Legal Thought*, 89 MINN. L. REV. 342, 373 (2004); Daniel J. Fiorino, *Citizen Participation and Environmental Risk: A Survey of Institutional Mechanisms*, 15 SCI., TECH., & HUM. VALUES 226, 229 (1990) ("'Expert' perceptions of problems (e.g., the nature of risk and priorities for collective action) are judged to be more rational than the 'subjective' perceptions of the less technically sophisticated public."); Mark Pennington, *A Hayekian Liberal Critique of Collaborative Planning*, *in* PLANNING FUTURES: NEW DIRECTIONS FOR PLANNING THEORY 187, 187 (Philip Allmendinger & Mark Tewdwr-Jones eds., 2002) ("'Rationalist' models of land use planning are often based on a technocratic conception of decision-making, whereby public managers in possession of objective knowledge, make decisions on the basis of 'maximizing' social welfare."); *see also* Gene Rowe & Lynn J. Frewer, *A Typology of Public Engagement Mechanisms*, 30 SCI., TECH., & HUM. VALUES 251, 254–255 (2005) (differentiating between passive "public communication" and active "public participation").

[97] *See* FRANK FISCHER, *Democracy at Risk: From Citizen Activism to Techno-Environmentalism*, *in* CLIMATE CRISIS AND THE DEMOCRATIC PROSPECT: PARTICIPATORY GOVERNANCE IN SUSTAINABLE COMMUNITIES 44, 44–66 (2017) (recounting the "evolution of technocratic practices in the development of modern-day environmentalism," and for a "specific examination of the basic arguments for technocratic policymaking, in particular

that experts should guide transmission planning with a focus on making efficient decisions.[98]

as a call for an apolitical alternative to democratic policymaking"); *see also* PALAST ET AL., *supra* note 32, at 186 ("The first industry argument is that utility regulation is an experts' game and members of the public lack the highly technical and economic knowledge needed to make technical decisions."); Lobel, *supra* note 96, at 373 ("Administrative law was developed under the idea that the regulatory policymaking powers of administrative agencies are based on their superior knowledge, information, and expertise."); Fiorino, *supra* note 96, at 227–28 (providing arguments and reasoning for the technocratic orientation); STUART BELL ET AL., ENVIRONMENTAL LAW 786 (9th ed. 2017) (discussing the role of scientific evidence and expertise and procedures of risk assessment in the development of regulation and regulatory decisions).

[98] *See* Shelley Welton, *Decarbonization in Democracy*, 67 UCLA L. REV. 56, 59 (2020) [hereinafter Welton, *Decarbonization in Democracy*] (arguing that decarbonization is usually analyzed as a "technocratic endeavor" and that it would be better to conceive it as a "suite of complex choices about the future shape of our communities and economy"); Roger E. Kasperson & Bonnie J. Ram, *The Public Acceptance of New Energy Technologies*, 142 DAEDALUS 90, 90–91 (2013); Welton, *Grasping for Energy Democracy*, *supra* note 27, at 582 ("Americans have long treated energy law as predominantly an exercise in expert technological management, requiring limited citizen participation."); Shelley Welton, *Electricity Markets and the Social Project of Decarbonization*, 118 COLUM. L. REV. 1067, 1093–97 (2018) [hereinafter Welton, *Electricity Markets and the Social Project of Decarbonization*]; Jedediah Britton-Purdy et al., *Building a Law-and-Political-Economy Framework: Beyond the Twentieth-Century Synthesis*, 129 YALE L.J. 1784, 1831 (2020) ("If purportedly neutral and technocratic visions for rationalizing governance are neither neutral nor, in practice, rationalizing, we need new conceptions of how to democratically discipline administrative decisions."); Majia Nadesan et al., *Introduction to Collection*, *in* ENERGY DEMOCRACIES FOR SUSTAINABLE FUTURES, *supra* note 27, at xxxvii, xliii ("By delimiting energy as the domain of engineers . . . and scientists . . . , traditional energy approaches *exclude* broad political participation in energy planning . . . ."); PALAST ET AL., *supra* note 32, at 186; Bickerstaff et al., *supra* note 15, at 6 ("[W]hile government requires developers to consult local communities over major proposals before planning applications are submitted, the implementation of projects such as wind farms and nuclear power stations is being speeded up, with decisions being taken by ministers rather than local planning authorities . . . . However, concerns have been raised that economically disadvantaged communities are most likely to volunteer and that siting decisions are being made increasingly on social (acceptability) rather than physical suitability criteria—leading to the concentration of risk in socially, politically and economically vulnerable places . . ."). *Compare* DEREK BELL & FRANCES ROWE, JOSEPH ROWNTREE FOUNDATION, ARE CLIMATE POLICIES FAIRLY MADE? 1–2 (2012) (recommending "the principle of proportionality" to ensure "greater fairness in decision-making," and discussing a new policy framework that aims to give "local communities more power to determine the future of their areas via a new system of neighbourhood planning"), *with* RICHARD K. LESTER & DAVID M. HART, UNLOCKING ENERGY INNOVATION: HOW AMERICA CAN BUILD A LOW-COST, LOW-CARBON ENERGY SYSTEM 138–40 (2012) (arguing that the role of the public in the improvement of the transmission and distribution sector is merely to access the information provided by the industry, which should be more accessible and transparent to build confidence in the necessary innovations, but without any influence in the decision-making process of the infrastructure improvement), *and* Cotton & Devine-Wright, *supra* note 32, at 122 (observing after interviewing many transmission system operators in the United Kingdom, that regarding transmission planning and their observations "[t]hese characterizations display 'deficit model' thinking, which portrays citizens as passive, ignorant and worried, and technical specialists as knowledgeable experts").

However, public engagement mechanisms remain essential.[99] Solid economic and science-based decisions must include robust technical and economic analysis, but value-based questions cannot be answered on technical expertise alone.[100] The benefits of public engagement are many, and include correcting distributional inequities, increasing support (which could be decisive in the deployment of energy infrastructure),[101] providing new knowledge,[102] building institutional

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[99] *See* NICK GARSIDE, DEMOCRATIC IDEALS AND THE POLITICIZATION OF NATURE: THE ROVING LIFE OF A FERAL CITIZEN 145 (2013) (discussing a democratic approach to public engagement that seeks to "encourage a greater degree of political dissent; to stimulate political discussion; and to draw attention back onto the political sphere"); Dolan et al., *supra* note 38, at 167 ("[L]iterature from a range of other disciplines, notably social psychology and legal studies, has provided substantial empirical evidence that suggests individuals have preferences for the characteristics of allocation mechanisms in a wide variety of areas . . . ."); SOVACOOL & DWORKIN, *supra* note 38, at 213 ("[W]hen aggregated and applied to the domain of energy, a procedurally just world would provide meaningful involvement and access to the decision-making process. It would ensure the availability of information about energy, a condition of participation and informed consent. It would seek to include and represent minorities and all stakeholders in decision-making, at all stages of the energy process, from agenda setting and formulation to siting and evaluation.").

[100] Welton, *Decarbonization in Democracy*, *supra* note 98, at 60 ("Is it worth paying more to have solar on every roof to avoid huge solar arrays and transmission lines taking up open space?"); *see* Matthew J. Burke, *Shared Yet Contested: Energy Democracy Counter-Narratives*, FRONTIERS COMMC'N., June 2018, at 2 (2018) ("As with the democratic paradigm more broadly, energy democracy would therefore appear to hold as a central concern not only technological change but also a creative transformation of social relations."); BELL ET AL., *supra* note 97, at 756 ("[D]espite repeated attempts to demarcate politics from science, scholars in science and technology studies . . . have shown that there is no clear boundary between the two. They illustrate how claims about the 'objectivity' and 'non-political' nature of regulatory science are flawed, because scientific enterprise is never value-free but depends on the political, social, and regulatory context."); Cynthia R. Farina et al., *Knowledge in the People: Rethinking Value in Public Rulemaking Participation*, 47 WAKE FOREST L. REV. 1185, 1240 (2012) (questioning what we consider as valuable public participation, and arguing to discover "the value added by experiential accounts of situated knowledge"); Fiorino, *supra* note 96, at 228 ("[E]ffective lay participation in risk decisions makes them more legitimate and leads to better results. The lay public is unwilling to delegate important decisions to experts and administrative authorities simply because those decisions are technical in basis. If we lack mechanisms for lay participation, then the current crisis of confidence afflicting risk institutions can only deepen. In addition, broader participation may contribute to better decision-making, incorporate a broader range of values into decisions, and reduce the probability of error." (citation omitted)); Haggett, *supra* note 27, at 298 (highlighting the valid approach of encouraging participation of the public "because their rich and full understanding of their local environmental may differ from an outside 'expert' view").

[101] *See* Haggett, *supra* note 27, at 297–305 (explaining many reasons on why public involvement could ensure or at least substantially improve the support and success of the siting process of energy projects); Benjamin K. Sovacool & Michael H. Dworkin, *Energy Justice: Conceptual Insights and Practical Applications*, 142 APPLIED ENERGY 435, 441 (2015); Duncan McLaren et al., *Justice in Energy System Transitions: The Case of Carbon Capture and Storage*, in ENERGY JUSTICE IN A CHANGING CLIMATE: SOCIAL EQUITY AND LOW-CARBON ENERGY 158, 160 (Karen Bickerstaff et al. eds., 2013); Bickerstaff, *supra* note 41, at 391 ("Recent UK and international experience with the development and deployment of carbon capture and storage has similarly suggested that local concerns

trust,[103] and ultimately building a better democracy.[104] Consequently, scholars argue for increasing democratic legitimacy by recentering the role of non-scientific insights and values.[105] If the planning, permitting,

about the risks of infrastructure may be intensified by their perceived imposition through inaccessible or prejudiced decision-making with poor or limited opportunities for participation.").

102 IAN G. BARBOUR, TECHNOLOGY, ENVIRONMENT, AND HUMAN VALUES 204 (1980); Brian Wynne, *Sheepfarming After Chernobyl: A Case Study in Communicating Scientific Information*, ENV'T: SCI. & POL'Y FOR SUSTAINABLE DEV., Mar. 1989, at 10, 37–38; SOVACOOL & DWORKIN, *supra* note 38, at 210.

103 SOVACOOL & DWORKIN, *supra* note 38, at 210; Sanford Lewis, *The Precautionary Principle and Corporate Disclosure*, *in* PROTECTING PUBLIC HEALTH & THE ENVIRONMENT: IMPLEMENTING THE PRECAUTIONARY PRINCIPLE 241–51 (Carolyn Raffensperger & Joel A. Tickner eds., 1999).

104 PALAST ET AL., *supra* note 32, at 189; Archon Fung, *Varieties of Participation in Complex Governance*, 66 PUB. ADMIN. REV. (SPECIAL ISSUE) 66, 74 (2006) ("[P]articipation serves three particularly important democratic values: legitimacy, justice, and the effectiveness of public action."); Kamariah Dola & Dolbani Mijan, *Public Participation in Planning for Sustainable Development: Operational Questions and Issues*, INT'L J. ON SUSTAINABLE TROPICAL DESIGN RSCH. & PRAC., Dec. 2006, at 1, 3 ("Participation can serve three purposes: consensus and stability; conflict reduction and increase consciousness; and containment and bargaining."); LARRY N. GERSTON, PUBLIC POLICYMAKING IN A DEMOCRATIC SOCIETY: A GUIDE TO CIVIC ENGAGEMENT 166–67 (3d ed. 2022); Andrew Thornley, *Theoretical Perspectives on Planning Participation*, PROGRESS PLAN., 1977, at 1, 3; Haggett, *supra* note 27, at 298 (concluding that the "involvement of the public may be an end in itself, rather than being intended to deliver better decisions"); Maria Lee & Carolyn Abbot, *The Usual Suspects? Public Participation Under the Aarhus Convention*, 66 MOD. L. REV. 80, 82–88 (2003).

105 *See* Biber et al., *supra* note 21, at 642 (expressing the idea of exploring "the extent to which changes in social norms about the use of fossil fuels may shape what is politically possible, and reciprocally the extent to which changes in law and policy may shape those norms"); *see also* Kelly Levin et al., *Overcoming the Tragedy of Super Wicked Problems: Constraining Our Future Selves to Ameliorate Global Climate Change*, 45 POL'Y SCI. 123, 146 (2012) (elaborating further on the connection between shifting social norms and combating climate change); Majia Nadesan, *Introduction to Part III: Energy Risks*, *in* ENERGY DEMOCRACIES FOR SUSTAINABLE FUTURES, *supra* note 27, at 207, 207 ("Democratizing energy will require broad-scale institutional and cultural changes in energy ownership, energy production, and cultural attitudes toward energy security, access, and consumption."); Britton-Purdy et al., *supra* note 98, at 1831 ("What would processes of administrative accountability look like if they were wise to dynamics of power and animated by a commitment to more genuine equality? There is a dynamic scholarly agenda here, already under construction. We might explore, for example, means to bring representatives of affected communities to participate in administrative decision-making, aiming at modalities of democratic voice that could meet our needs for both (a broadened conception) of expertise and for institutionalized forms of countervailing power."); Cristina Crespo Montañés et al., *Enabling and Centering Equity and Justice in Clean Energy Transition Research*, 7 JOULE 437, 438 (2023) (stating "[M]ost researchers have coalesced around three tenets of energy justice: the distribution of (dis)benefits of energy systems (distributional justice); the inclusivity and representativeness of decision-making practices in energy policy (procedural justice); and what sectors of society are ignored in such processes (recognition justice)"); Lee & Abbot, *supra* note 104, at 83 ("As well as potentially improving results, public participation might be used to improve procedural legitimacy, tempering unease with the democratic condition of environmental decision-making.").

and siting of transmission infrastructure manages to accommodate citizens' concerns, it could face less opposition and increase its overall regulatory effectiveness.[106]

Therefore, along with the tendency to recenter non-technical knowledge and its many benefits,[107] this Article aligns with academics calling for including local voices into infrastructure planning structures.[108] This is what the public policy field generally identifies as collaborative planning,[109] which contrasts with a strict rationalist approach to technocratic decision-making.[110] The latter often disregards public non-expert or technical knowledge in policymaking through a top-down approach.[111]

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[106] *See* Rivier et al., *supra* note 80, at 291 ("If transmission planning has followed a well designed and transparent process, the risk of building non-beneficial lines is minimized."); Donald D. Zillman et al., *Small Towns, Big Projects*, *in* SHARING THE COSTS AND BENEFITS OF ENERGY AND RESOURCE ACTIVITY: LEGAL CHANGE AND IMPACT ON COMMUNITIES, *supra* note 30, at 411, 428 ("[T]he growth of public participation means that a 'Big Project' needs to secure more than just the approval of governments. The project is also best served by a super-majority of popular support cultivated early and built through open factual disclosures to and discussions with citizens, not just with their governments.").

[107] *E.g.*, Sebastián Luengo Troncoso, *From a Top-Down Perspective to Collaborative Management: The Kawésqar People's Role in Their National Park and Reserve*, 18 MCGILL J. SUSTAINABLE DEV. L. 97, 107 (2022) (reflecting on the biodiversity conservation knowledge from indigenous communities); L. Failing et al., *Integrating Science and Local Knowledge in Environmental Risk Management: A Decision-Focused Approach*, 64 ECOLOGICAL ECON. 47, 48–49 (2007) (discussing the intersection of climate change and localized knowledge); R. D. K. Herman, *Traditional Knowledge in a Time of Crisis: Climate Change, Culture and Communication*, 11 SUSTAINABILITY SCI. 163, 164 (2016) (reframing climate change as a social and behavioral issue); John Parrotta et al., *Traditional Knowledge for Sustainable Forest Management and Provision of Ecosystem Services*, 12 INT'L J. BIODIVERSITY SCI., ECOSYSTEM SERVS. & MGMT., 1, 1–4 (2016) (explaining the reconceptualization of climate change within traditional, indigenous knowledge frameworks.).

[108] *E.g.*, Judit Lienert et al., *Stakeholder Analysis Combined with Social Network Analysis Provides Fine-Grained Insights into Water Infrastructure Planning Processes*, 125 J. ENV'T MGMT. 134, 134–35 (2013) ("Environmental policy processes in general, and infrastructure planning and implementation in the water sector in particular, are characterized by collaborative modes that integrate local actors and different sectors."); Vierikko Kati & Niemelä Jari, *Bottom-Up Thinking—Identifying Socio-Cultural Values of Ecosystem Services in Local Blue–Green Infrastructure Planning in Helsinki, Finland*, 50 LAND USE POL'Y 537, 538 (2016) (stating that conflict surrounding a storm-water management plan arose due to a failure to "identify and manage the plurality of socio-cultural meanings and values by residents"); Cotton & Devine-Wright, *supra* note 29, at 18–20 (stating that success for infrastructure siting is "dependent upon generating support . . . from local communities, public planning bodies, the regulator[s] . . . and numerous stakeholder groups").

[109] *E.g.*, Haggett, *supra* note 27, at 299 ("Collaborative planning . . . regards knowledge as being socially situated, not objective or solely the preserve of the scientific or technical domain. Such a focus values rather than ignores tacit understandings and everyday knowledge.").

[110] Pennington, *supra* note 96, at 187–88.

[111] *See id.* at 188 (describing the distinction between collaborative planning and a rationalist approach).

A regulatory approach that often incorporates local concerns and values is an environmental impact assessment (EIA).[112] In an EIA, public participation from potentially affected communities is encouraged, and many regulatory amendments to include EIA consultation mechanisms have been passed worldwide.[113] Indeed, public participation mechanisms are considered core substantive requirements of EIAs.[114]

There are also international and regional instruments addressing public participation requirements for the development of environmental policy.[115] A recent example is the Regional Agreement on Access to Information, Public Participation and Justice in Environmental Matters in Latin America and the Caribbean (Escazú Agreement) signed by 24 Latin American and Caribbean countries.[116] This multilateral environmental agreement establishes a set of rules to empower individuals and communities to participate in environmental decision-making processes,[117] by focusing on four key pillars: access to information,[118] public participation in decision-making,[119] access to justice,[120] and human rights defenders in environmental matters.[121]

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112 *See* Foster, *supra* note 94, at 57–67 (describing EIA requirements and implications); ENERGY LAW IN EUROPE: NATIONAL, EU AND INTERNATIONAL REGULATION 112–115 (Martha M. Roggenkamp et al. eds., 3d ed. 2016) (analyzing some general implications of energy projects EIA); *see generally* BELL ET AL., *supra* note 97, at 306–07, 324–25 (describing trends related to disclosure and public access of environmental information and enforcement among public authorities and corporations).

113 *See* Benjamin J. Richardson & Jona Razzaque, *Public Participation in Environmental Decision Making*, *in* ENVIRONMENTAL LAW FOR SUSTAINABILITY 165, 179–81 (Benjamin J. Richardson & Stepan Wood eds., 2006); Anne Shepherd & Christi Bowler, *Beyond the Requirements: Improving Public Participation in EIA*, 40 J. ENV'T PLAN. & MGMT. 725, 726–27 (1997) (exploring idea that in the United States under the National Environmental Policy Act, "public participation in environmental planning became institutionalized in the federal government").

114 BELL ET AL., *supra* note 97, at 334–36.

115 *E.g.*, Lee & Abbot, *supra* note 104, at 97 (noting interesting examples that could be drawn from the environmental law field such as the early participation mechanisms within the Aarhus Convention, which as these authors highlight, provide that "'the public concerned shall be informed, either by public notice or individually as appropriate, early in an environmental decision-making procedure, and in an adequate, timely and effective manner.'").

116 Press Release, U.N. Econ. Comm'n for Latin Am. & the Caribbean, Escazú Agreement Enters into Force in Latin America and the Caribbean on International Mother Earth Day (Apr. 22, 2021), https://perma.cc/V9R5-8H3S.

117 Regional Agreement on Access to Information, Public Participation and Justice in Environmental Matters in Latin America and the Caribbean, pmbl., Mar. 4, 2018, 3388 U.N.T.S. [hereinafter Escazú Agreement].

118 *Id.* arts. 5–6.

119 *Id.* art. 7.

120 *Id.* art. 8; *see also* U.N. Econ. Comm'n for Eur., *Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters*, U.N. Doc. ECE/CEP/43 (June 25, 1998).

121 Escazú Agreement, *supra* note 117, art. 9.

For instance, the parties to the Escazú Agreement must develop "open and inclusive participation in environmental decision-making processes based on domestic and international normative frameworks."[122] The agreement establishes EIA obligations such as disseminating information,[123] and developing extensive public engagement throughout the whole decision-making process.[124] This Article addresses some of these procedural concerns within the energy law discussion and, in a latter section, discusses how to incorporate public engagement mechanisms into the planning sphere.[125]

B. The Contours of Energy Democracy

As Shelley Welton suggests, "it is time to reexamine the assumption that the people are necessarily a barrier to climate progress."[126] Indeed, despite the need for more technological innovation to achieve a deep decarbonization,[127] the main challenge is reforming political institutions for a just transition.[128] Within deep decarbonization plans, energy democracy has three goals: build a decarbonized energy agenda, promote public control in the energy sector, and "restructure the energy sector to better support democratic processes, social justice and inclusion, and environmental sustainability."[129] Accordingly I explore

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122 *Id.* art. 7.

123 *Id.* art. 6.3.h.

124 *Id.* arts. 7.2, 7.9, 7.17.

125 *See* discussion *infra* Part V.

126 Welton, *Decarbonization in Democracy*, *supra* note 98, at 59 ("[T]here are underappreciated ways in which well-designed and broad-based citizen input and control could be powerful steps in crafting a more durable U.S. decarbonization strategy.").

127 *See* Frank W. Geels et al., *Sociotechnical Transitions for Deep Decarbonization*, 357 SCIENCE 1242, 1242 (2017) ("Rapid and deep decarbonization requires transformation of sociotechnical systems—the interlinked mix of technologies, infrastructures, organizations, markets, regulations, and user practices that together deliver societal functions . . . .").

128 *See* Martin J. Pasqualetti, *Introduction to Part II: Energy Futures*, *in* ENERGY DEMOCRACIES FOR SUSTAINABLE FUTURES, *SUPRA* note 27, at 117, 117–18 (describing the institutional changes necessary to increase energy democracy); Jedediah Purdy, *The Politics of Nature: Climate Change, Environmental Law, and Democracy*, 119 YALE L.J. 1122, 1137 (2010) ("By [participating] in the forum of democratic politics, [people] can expand the set of viable alternatives, the range of paths a country might take. There is, of course, no guarantee that Americans will do so in connection with climate change. But we might."); *cf.* Geels et al., *supra* note 127 ("The case also demonstrates that acceleration [toward deep decarbonization] depends heavily on country-specific dynamics in political coalitions, industry strategy, cultural discourses, and civil society pressures. There is no "one-size-fits-all" blueprint for accelerating low-carbon transitions.").

129 Matthew J. Burke & Jennie C. Stephens, *Energy Democracy: Goals and Policy Instruments for Sociotechnical Transitions*, 33 ENERGY RSCH. & SOC. SCI. 35, 37 (2017). *But cf.* Droubi et al., *supra* note 27, at 1 ("On the streets, in the hands of non-governmental organizations (NGOs) and activists, the idea of energy democracy plays two very important roles: a teleological one—as it is used to promote participation in decision-making and decision-implementing processes; and a deontological one—as it is used as a

how to incorporate these goals into power transmission planning frameworks.[130]

Energy democracy is a structural pillar to increase citizen engagement in the energy system[131] by incorporating a wide range of socio-economic values from the public opinion into decision-making.[132] However, the notion of energy democracy itself can be somewhat vague.[133] The concept has been systematically used in two ways, from both a normative decarbonization perspective and to describe ongoing decentralized bottom-up public energy enterprises.[134] Furthermore, energy democracy has many reformational goals from consumer advocacy to deliberative governance,[135] demanding more conceptual clarity.[136]

Energy democracy is different from energy justice. Energy democracy concentrates on the political consequences, such as decision-making and governance questions, while justice focuses on the moral side of energy decisions such as "the social and spatial distribution of energy poverty and the justice dimensions of particular . . . energy technologies or system components,"[137] including their environmental

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reason for demanding more participation."). The authors also recount the problems emerging from the disciplinary crossing of the concept of energy democracy—and its goals—from social movements' claims to academic literature. *Id.*

130 Russell J. Dalton et al., *New Forms of Democracy? Reform and Transformation of Democratic Institutions*, *in* DEMOCRACY TRANSFORMED?: EXPANDING POLITICAL OPPORTUNITIES IN ADVANCED INDUSTRIAL DEMOCRACIES 1, 1–2 (Bruce E. Cain et al. eds., 2003) ("[T]he public's preferred mode of democratic decision-making is moving toward new forms of more direct involvement in the political process."), *cited in* Welton, *Grasping for Energy Democracy*, *supra* note 27, at 591.

131 For a comprehensive revision and explanation of the contemporary scholarship on energy democracy, see Szulecki, *supra* note 27, at 21–37. *See also* Welton, *Grasping for Energy Democracy*, *supra* note 27, at 593 (characterizing citizen and consumer participation in energy decisionmaking as "energy democracy"); Bregje van Veelen & Dan van der Horst, *What is Energy Democracy? Connecting Social Science Energy Research and Political Theory*, 46 ENERGY RSCH. & SOC. SCI. 19, 24 (2018) (identifying "associative democracy" as the "most clearly promoted by energy democracy proponents . . . through its promotion of local, civil society organisations as key actors to foster engagement"); Craig Morris & Arne Jungjohann, ENERGY DEMOCRACY: GERMANY'S ENERGIEWENDE TO RENEWABLES (2016).

132 Welton, *Grasping for Energy Democracy*, *supra* note 27, at 584; Burke & Stephens, *supra* note 129, at 35.

133 Burke & Stephens, *supra* note 129, at 45 ("[T]he energy democracy movement is not necessarily unified across all actors adopting the term; differences in framing and emphasis exist within the energy democracy movement.").

134 Szulecki, *supra* note 27, at 23; *see* Welton, *Grasping for Energy Democracy*, *supra* note 27, at 590–91 ("[T]he push for 'energy democracy' focuses on methods of citizen-state interaction that go beyond enhancing representative democracy . . .").

135 Welton, *Decarbonization in Democracy*, *supra* note 98, at 65; Welton, *Grasping for Energy Democracy*, *supra* note 27, at 585.

136 *See* Szulecki & Overland, *supra* note 26.

137 Bickerstaff, *supra* note 39, at 388; *accord* Szulecki, *supra* note 27, at 26 ("Where energy justice concentrates on 'the moral implications of our collective energy decisions,' energy democracy is focused on political implications." (citation omitted)); Sovacool &

burdens. However, this is not clear in the literature, since the concept of energy democracy is still nascent.[138] In fact, there is an ongoing discussion about the broadness of energy justice and its interchangeable use with energy democracy.[139] For example, regarding the procedural contours of planning regulations, energy justice also intersects with energy democracy, hindering their differentiation.[140] Hence, energy justice and its scholarship also inform the theoretical framework in this Article.[141]

I embrace the definition of energy democracy as "an ideal political goal, in which the citizens are the recipients, stakeholders . . . and

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Dworkin, *supra* note 101, at 436; *see also* DARREN MCCAULEY, ENERGY JUSTICE: RE-BALANCING THE TRILEMMA OF SECURITY, POVERTY AND CLIMATE CHANGE 11–13 (2018) (discussing further differences relevant when assessing separate theories of justice); BENJAMIN K. SOVACOOL, ENERGY & ETHICS: JUSTICE AND THE GLOBAL ENERGY CHALLENGE 218–20 (2013) (arguing that the main features of energy justice are availability and affordability).

138 Droubi et al., *supra* note 27, at 1–2.

139 Sovacool, Dworkin, Jenkins, and Heffron (among other authors) seem to lean toward a broader definition of energy justice in contrast to other authors such as Szulecki, Del Guayo, Godden, and Zillman (among others), who seem to agree on a narrower moral approach of the justice notion in contrast with the energy democracy concept. For discussion supporting a broader definition, see SOVACOOL & DWORKIN, *supra* note 38, at 13–18, Kirsten Jenkins et al., *Energy Justice: A Conceptual Review*, 11 ENERGY RSCH. & SOC. SCI. 174, 180 (2016), and Raphael J. Heffron, *Applying Energy Justice into the Energy Transition*, RENEWABLE & SUSTAINABLE ENERGY REVS., Dec. 2021, No. 111936, at 4. For discussion supporting a narrower moral approach, see Iñigo del Guayo et al., *Introduction*, *in* ENERGY JUSTICE AND ENERGY LAW, *supra* note 32, at 3, 5–8; Droubi et al., *supra* note 27, at 2, 31; Sarah Marie Hall, *Energy Justice and Ethical Consumption: Comparison, Synthesis and Lesson Drawing*, 18 LOCAL ENV'T 422, 434 (2013). *See also* Szulecki, *supra* note 27, at 25–26 (discussing various perspectives in determining the meaning of energy justice); Szulecki & Overland, *supra* note 26, at 10; Iñigo del Guayo, *Energy Poverty and Energy Access: A Legal Analysis*, *in* ENERGY JUSTICE AND ENERGY LAW, *supra* note 32, at 31 (highlighting the difference between energy justice and energy poverty).

140 *See* SOVACOOL & DWORKIN, *supra* note 38, at 191–222. This intersection between energy justice and energy democracy not only occurs in the procedure of planning regulations but also in identifying the issues that call to increase public participation in the energy sphere. *Id.* Regarding the procedural justice side of the energy sector, the authors identify "four primary types of injustice: unfair negotiations involving energy and climate change, involuntary resettlement and lack of consent, improper licensing of energy facilities, and the marginalization of communities living near energy infrastructure." *Id.* at 193. *See also* Szulecki, *supra* note 27, at 25–26 ("From the justice theory side [writing about energy justice] there is a visible focus on rights and entitlements, while the procedural side leans on politics. It is here that energy justice and energy democracy potentially meet." (citation omitted)).

141 Another energy justice perspective that relates to the idea of including more public engagement mechanisms in the transmission expansion planning sphere is that "an ethical and social equitable review of energy technologies and policies is needed for applying technological solutions to avoid either reproducing old or producing new social disparities caused by the energy transition." Manuela Hartwig et al., *Normalized Injustices in the National Energy Discourse: A Critical Analysis of the Energy Policy Framework in Japan Through the Three Tenets of Energy Justice*, 174 ENERGY POL'Y, Jan. 2023, No. 113431, at 3.

accountholders of the entire energy sector policy."[142] Given its wide scope, I identify the specific implications upon which to build the case for public engagement mechanisms within transmission planning. So what would governance look like under an energy democracy framework?[143]

Democratic energy governance entails broad deliberative venues, where informed citizens participate "in an inclusive and transparent decision-making process relating to energy choices, with the public good as its goal."[144] Indeed, energy democracy scholars foresee a decision-making structure that embraces—rather than excludes—local community values over mechanisms such as cost-benefit analysis.[145] Consequently, democratic energy governance aims to broaden the access to energy procedures and enhance value-based deliberation.[146] These ideas are essential to analyze how transmission planning should be reformed through public engagement.[147]

Nonetheless, it is not all rainbows and sunshine; participatory venues are not the panacea to solve every energy problem. There are many limitations to democratic mechanisms in the energy transition.[148] For instance, decision-making must improve accountability and meaningfully include underrepresented groups.[149] Moreover, direct democracy can perpetuate colonizing ideologies, since racial inequalities can persist in these deliberative venues if not explicitly addressed.[150]

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[142] Szulecki, *supra* note 27, at 35; *see* Burke & Stephens, *supra* note 129 at 35 (stating that, among other things, the energy democracy movement seeks to "replac[e] monopolized fuel systems with democratic and renewable structures").

[143] Existing scholarship provides some guidance. *See* Szulecki, *supra* note 27, at 35; ANNE METTE KJAER, GOVERNANCE 2 (John Wiley & Sons 2023) ("The usage of the concept of governance, then, is applied in many different contexts and with as many different meanings. There is not one coherent body of governance theory, and it is difficult to get a clear picture of what governance theory is about."); DANIEL KAUFMANN ET AL., WORLD BANK DEV. RSCH. GRP., GOVERNANCE MATTERS 1 (1999). Kuzemko et al., *supra* note 38, at 104 ("[I]nterdisciplinary analysis, although often difficult to pursue, can indeed provide us with a more nuanced and interconnected account of types of governance and of energy system change.").

[144] Szulecki, *supra* note 27, at 35.

[145] Burke & Stephens, *supra* note 129, at 38.

[146] Welton, *Grasping for Energy Democracy*, *supra* note 27, at 623; Burke & Stephens, *supra* note 129, at 38.

[147] *See* discussion *infra* Part III.C.

[148] For a detailed account, see *infra* Part V.B.

[149] *See* Bregje Van Veelen, *Negotiating Energy Democracy in Practice: Governance Processes in Community Energy Projects*, 27 ENV'T POL. 644, 658 (2018) ("[N]ominal inclusion of (previously) underrepresented groups in decision-making does not automatically guarantee a transfer of power, as internal forms of exclusion may remain . . . ."); Droubi et al., *supra* note 27, at 8 (emphasizing that the relationship between energy democracy and procedural and distributive justice must be critically examined, and that more participation does not necessarily lead to more justice).

[150] Dunlap, *supra* note 27, at 345; Myles Lennon, *Energy Transitions in a Time of Intersecting Precarities: From Reductive Environmentalism to Antiracist Praxis*, 73 ENERGY RESEARCH & SOCIAL SCIENCE 101930, 4 (2021); *see generally* Adrian A. Smith &

There is also a perception that democratic mechanisms would perfect rather than replace energy institutions, which has been questioned as an underestimation of direct democracy's potential.[151]

Energy democracy should also consider restorative justice concerns.[152] Restorative justice suggests that when a crime or wrongdoing is committed, it affects the victim, offender, and the broader community in which it occurs.[153] Only through the lens of restorative justice can some of the most critical shortcomings of energy democracy be solved. For instance, energy democracy could lack sufficient comprehension of damaging outcomes from deliberative venues, such as unsound environmental decisions and "impact[s] on the social fabric of trust among stakeholders, on which energy democracy processes rely."[154] Still, despite its limitations, energy democracy invites policy designers and stakeholders to recenter public deliberation, especially in broad value-laden decisions. Thus, democratic governance can be a prime framework to increase participation by a wider spectrum of stakeholders in the energy decision-making sphere.

C. Public Engagement Mechanisms

What is public engagement and what are some of its contemporary mechanisms? What are the underlying ideals of public participation? And how do they connect to transmission planning and energy democracy?

A first step is looking at the relationship between public engagement and energy democracy. As explained, I focus on the role of energy democracy governance in developing broad deliberative transmission planning.[155] The goal of this project is to include the non-

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Dayna Nadine Scott, *Energy Without Injustice?: Indigenous Participation in Renewable Energy Generation*, *in* THE CAMBRIDGE HANDBOOK OF ENVIRONMENTAL JUSTICE AND SUSTAINABLE DEVELOPMENT 383 (Sumudu A. Atapattu et al. eds., 2021) (reflecting on the relation between Indigenous communities and environmental justice concerns); FERIT GÜVEN, DECOLONIZING DEMOCRACY: INTERSECTIONS OF PHILOSOPHY AND POSTCOLONIAL THEORY 11–12 (2015) (critiquing democracy from a postcolonial perspective).

151 Burke & Stephens, *supra* note 129, at 45 ("[A]ssessing whether a given instrument could reasonably be expected to influence the achievement of an outcome requires making an assumption regarding whether a reform could be expected to either add to or replace the existing regime."). *But see* Dola & Mijan, *supra* note 104, at 3 (highlighting that "one must caution that increase participation does not necessarily equal to increase in public benefits by stating "genuine common interest may clash with social justice or economic efficiency").

152 Droubi et al., *supra* note 27, at 18.

153 Carrie Menkel-Meadow, *Restorative Justice: What Is It and Does It Work?*, 3 ANN. REV. L. & SOC. SCI. 161, 162 (2007).

154 Droubi et al., *supra* note 27, at 18.

155 Komendantova & Battaglini, *supra* note 30, at 225 ("The integration of views of lay people and public values, and not only from 'educated experts', can lead to enhanced legitimacy of decision-making process and trust."); Lee & Abbot, *supra* note 104, at 82

technical values of affected communities and citizens with the planning process.[156] I now turn to exploring whether public engagement mechanisms could enhance the recognition of non-technical values and potentially expedite transmission permitting and siting by increasing its legitimacy and reducing confrontation.[157] I argue that public engagement mechanisms are essential means to incorporate public concerns into transmission planning.[158]

Since Arnstein's work on citizen participation,[159] some of the most prominent voices writing on public engagement mechanisms in the social sciences are Rowe and Frewer.[160] Despite the methodological proposals by energy scholars,[161] I use these authors' categories for major conceptual clarity given its widespread influence.[162] Rowe & Frewer

("The incorporation of different perspectives may aim at improving substantive outcomes and/or improving the procedural legitimacy of these decision-making procedures."); *cf.* Szulecki & Overland, *supra* note 39, at 10 (identifying one pathway to respond to "the most important challenge for future research on energy democracy . . . [by] specifying what precisely is democratic in the proposals being made, how it affects the status quo, and whether it actually constitutes value added . . . . [which] requires both greater theoretical sophistication and more specific empirical study of the impacts emergent 'democratized' governance networks have on energy policy").

156 One of the aims of this research is to address Bickerstaff's critique that "the policy and research emphasis on promoting (more) participation remains distant from procedural justice issues such as power, voice, access to early decision-making and recognition of difference in fundamental values and beliefs." Bickerstaff, *supra* note 41, at 392; *see also* Lobel, *supra* note 96, at 379 ("A shift from adversarial legalism to collaboration entails a move from an image of win-lose situations to a win-win environment . . . . [S]uch an environment heightens the need to include procedures that ensure that parties' interests and externalities are taken into account, negotiation processes are adequately structured, and the bargaining power of stakeholders is addressed").

157 *Cf.* Haggett, *supra* note 27, at 297–98 (contesting the vagueness of the literature relying on NIMBYism as the reason for increasing public and local opposition to energy infrastructure in their vicinities, and noting that "a growing body of research from around Europe has indicated that the reasons for protest might not be so straightforward and crucially, . . . they depend on where, when and how people are able to engage effectively in the planning processes for renewable energy.").

158 *See* Joseph P. Tomain, *The Democratization of Energy*, 48 VAND. J. TRANSNAT'L L. 1125, 1144 (2015) (describing the role and advantages of citizen participation to improve the development of governance and legal institutions in the clean energy transition).

159 Sherry R. Arnstein, *A Ladder of Citizen Participation*, 35 J. AM. INST. PLANNERS 216 (1969).

160 *E.g.*, Gene Rowe & Lynn J. Frewer, *Public Participation Methods: A Framework for Evaluation*, 25 SCI., TECH., & HUM. VALUES 3 (2000); Gene Rowe & Lynn J. Frewer, *Evaluating Public-Participation Exercises: A Research Agenda*, 29 SCI., TECH., & HUM. VALUES 512 (2004); Rowe & Frewer, *supra* note 96.

161 *E.g.*, Welton, *Decarbonization in Democracy*, *supra* note 98, at 65–67 (arguing for citizen engagement and citizen empowerment as categories of citizen involvement in the energy sphere); Cotton & Devine-Wright, *supra* note 29, at 23 (exploring how "network actors construct identities for non-industry affiliated groups and individuals" and assessing how these labels "inform the rationales, methods and practices of 'engagement' that occur").

162 However, in Part V when analyzing specific proposals to incorporate and improve public engagement mechanisms within transmission expansion planning, I refer to other

propose three public engagement categories depending on how information flows among participants.[163] They differentiate among communication, consultation, and participation.[164]

Public communication is the first degree of engagement, where information is conveyed to the public in a one-way direction without feedback.[165] One method is the decide-announce-defend (DAD) approach.[166] Basically, DAD follows the traditional regulatory and policymaking approach wherein experts and institutional actors adopt policies and regulations which then are merely communicated to the citizens, without their input.[167] This could be the case when transmission planning decisions are based solely on technical criteria.

Public consultation takes it one step further and involves a policy-setting organization—which structures the process—eliciting and receiving information from the public in an informal dialogue.[168] This dialogue is critical. For instance, Haggett recounts literature on the role of public consultation to gather information from affected communities.[169] She analyzes local communities who might approve energy infrastructure projects in their surroundings if certain conditions are met, in what is called qualified support.[170] Here, consultation procedures increase public engagement.[171]

Finally, public participation, which represents the apex of civic engagement, involves bidirectional information exchange between the organization and the public in a formal dialogue.[172] Despite its many

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prominent scholars in the public policy arena and their categorizations. *E.g.,* Fung, *supra* note 104.

163 Rowe & Frewer, *supra* note 96, at 254.

164 *Id.*; *cf.* Fung, *supra* note 104, at 68–69 (going one step further and detailing more specific contours on institutional design and the different mechanisms in which the participants can interact) For this, Fung proposes six categories of modes of communication and decision that range from 'listen as spectator' (less intense) to 'deliberate and negotiate' or 'deploy technique and expertise' (most intense). *Id.*

165 Rowe & Frewer, *supra* note 96, at 254–55; Haggett, *supra* note 27, at 300 ("[T]his form of consultation is the most frequently used, by both government and industry, when attempting to engage the public about renewable energy.").

166 SOVACOOL & DWORKIN, *supra* note 38, at 212 ("[A]ttempting to inform and even educate the public on energy issues . . . keeps in line with the traditional 'decide, announce, defend' mentality of informing people of plans that have been made . . . ."); Haggett, *supra* note 27, at 299.

167 Komendantova & Battaglini, *supra* note 30, at 225.

168 Rowe & Frewer, *supra* note 96, at 255 ("The information elicited from the public is believed to represent currently held opinions on the topic in question.").

169 *See* Haggett, *supra* note 27, at 300.

170 *Id.*; Derek Bell et al., *The 'Social Gap' in Wind Farm Siting Decisions: Explanations and Policy Responses*, 14 ENV'T POL. 460, 463 (2005).

171 *See* Haggett, *supra* note 27, at 300 ("Engagement as 'consultation' provides the opportunity to discuss with people what their reasons for 'qualified support' are.").

172 Rowe & Frewer, *supra* note 96, at 255; BELL ET AL., *supra* note 97, at 774 ("Public dialogue exercises may be used as a means to 'democratize' science and technology, by developing a two-way engagement between experts, decision-makers, and the public.").

configurations, this dialogue normally takes place in group settings with representatives from both sides, where all opinions potentially change.[173] Hence, participative approaches entail a move from competition to collaboration.[174] Ideally, consultation and participation could take place in transmission planning procedures, with citizens contributing to inform the decision-making process for energy infrastructure.

Thus, public engagement mechanisms are essential to convey public considerations into decision-making procedures.[175] Underlying the differences between each public engagement form, there are different instrumental, substantive, and normative rationales.[176] These rationales diverge based on the level of influence that the participants can have on public policies.[177] For example, the mere communication of a decision reveals an instrumental rationale, discarding any chance of public feedback. On the other hand, consultation or participation mechanisms embrace a more substantive rationale, comprising a dialogue that could inform the decision.

Current scholars and public decisionmakers throughout the world are moving toward participative mechanisms that privilege deliberation and reciprocal learning.[178] This departure involves an eclectic comprehension of public policy-making that harmonizes technical and social concerns. This is also a way of refraining from the DAD approach, which is widely used throughout transmission planning frameworks.[179]

In the remaining sections I argue that current standard transmission planning procedures already incorporate public

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173 Rowe & Frewer, *supra* note 96, at 255–56; Burby, *supra* note 34, at 44.

174 Haggett, *supra* note 27, at 302; *see also* SABEL ET AL., *supra* note 24 ("[D]etermining what the tolerable activities are . . . requires them to transform their traditionally antagonistic relationships with experts into partnerships . . . .").

175 Rowe & Frewer, *supra* note 96, at 254; *cf.* Lobel, *supra* note 98, at 373 ("The new governance model . . . broadens the decision-making playing field by involving more actors in the various stages of the legal process. It also diversifies the types of expertise and experience that these new actors bring to the table.").

176 Anna Wesselink et al., *Rationales for Public Participation in Environmental Policy and Governance: Practitioners' Perspectives*, 43 ENV'T. & PLAN. 2688, 2690 (2011) (recounting the existing literature on public participation rationales); Fiorino, *supra* note 96, at 227–28; Heather Campbell & Robert Marshall, *Public Involvement and Planning: Looking Beyond the One to the Many*, 5 INT'L. PLAN. STUD. 321, 324 (2000) ("Much of the discussion surrounding public involvement avoids or overlooks the question of the rationale [or rationales] underlying calls for greater participation and therefore what benefits are likely to result.").

177 Wesselink et al., *supra* note 176 .

178 *See, e.g.*, Butler & Demski, *supra* note 24, at 659 ("In debates around public engagement, a shift has been identified from an early focus on providing knowledge to more participatory and inclusive processes.").

179 Haggett, *supra* note 27, at 300 (acknowledging DAD as the most used approach in energy planning, and that it is "unlikely to be effective in terms of encouraging public support and trust, both for the particular proposals, and for the planning process as a whole").

communication mechanisms. Therefore, I investigate whether this one-way conveyance of information should be abandoned in favor of a more collaborative approach within policy-setting organizations, aiming to strike a balance between technical and social considerations.

IV. A LACK OF PARTICIPATIVE TRANSMISSION PLANNING

The energy transition poses a series of regulatory challenges to transmission planning, demanding innovative frameworks for a speedy infrastructure expansion.[180] Accordingly, we must restructure transmission planning procedures if we want to match the pace of electricity generation, as well as address energy democracy concerns.[181] In this section I analyze current transmission planning approaches.[182] I explore the dominant institutional approaches to transmission planning, identifying who normally plans and makes decisions about power transmission infrastructure. I explore the underlying criteria of expansion planning regulations, specifically whether these embrace a fully technocratic approach or if they also incorporate public engagement considerations. For example, I comment on U.S. liberalized regional markets and the extent to which they address the energy democracy concerns and goals described in Part III.

This section does not expand on the ongoing discussions about planning technical methodological differences, cost-allocation mechanisms, permitting or siting issues.[183] Energy law scholars have

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[180] *See infra* Part II.B (discussing the current dilemmas associated with expansion and transmission planning).

[181] *Id.*

[182] The analysis in this section of institutional authority and decision-making procedures is central in transmission expansion planning. *See* Rivier et al., *supra* note 80, at 283 ("The design of a framework for grid expansion entails the designation of the entity or entities responsible for planning the new grid investments, for authorising such investments and for building these new facilities and operating them.").

[183] These issues have already been addressed and are being discussed by many other authors. *E.g.*, Klass et al., *supra* note 16, at 1028–38 (discussing the shortcomings of existing federal and state transmission planning regulation in the United States regarding where the planning authority resides, coordination challenges, and methodological differences between them.); Alexandra B. Klass & Jim Rossi, *Reconstituting the Federalism Battle in Energy Transportation*, 41 HARV. ENV'T L. REV. 423 (2017); Elena P. Vekilov, *If It's Broke, Fix It: Federal Regulation of Electrical Interstate Transmission Lines*, 2013 U. ILL. L. REV. 695 (2013); Lumbreras & Ramos, *supra* note 44, at 22 (discussing transmission expansion planning practice); Uma Outka, *Siting Renewable Energy: Land Use and Regulatory Context*, 37 ECOLOGY L. Q. 1041 (2010); Uma Outka, *Renewable Energy Siting for the Critical Decade*, 69 U. KAN. L. REV. 857 (2021); Dan Van der Horst, *NIMBY or Not? Exploring the Relevance of Location and the Politics of Voiced Opinions in Renewable Energy Siting Controversies*, 35 ENERGY POL'Y 2705 (2007); Jim Rossi, *The Trojan Horse of Electric Power Transmission Line Siting Authority*, 39 ENV'T. L. 1015 (2009); Jody Freeman, *The Uncomfortable Convergence of Energy and Environmental Law*, 41 HARV. ENV'T. L. REV. 339, 371–78 (2017) (discussing modernizing transmission planning); LESTER & HART, *supra* note 98, at 136–38 (recommending that "[r]egulators

not addressed in depth the role of public engagement mechanisms in transmission planning, neither its consequences on ensuring a timely transmission expansion.[184] Hence, one of the novelties of this research is to draw from contemporary political theory and public policy fields to enrich an interdisciplinary analysis of transmission issues.

A. Institutional Planning Authority Models

At the end of the nineteenth century, electricity generation, transmission, and distribution were characterized by locality, competitiveness, and lack of regulation.[185] However, given electricity's rapid proliferation by developers who seized economies of scale, governments began to regulate to avoid corporate abuses in the electricity sector worldwide, such as the abuse of monopoly power to set prices.[186] Indeed, along with the expansion of the electricity sector, vertically integrated firms usually dominated the market, controlling power generation, transmission, and distribution.[187]

This changed with the growth of the sector and the unbundling of the industry.[188] In the last five decades, many countries around the

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should allow distribution (and transmission) utilities to recover the cost of appropriately justified investment in the utility-side smart grid"); Miriam Sowinski, *Practical, Legal, and Economic Barriers to Optimization in Energy Transmission and Distribution*, 26 J. LAND USE & ENV'T L. 503, 520–28 (2011) (discussing the challenge of estimating transmission construction costs when accommodating renewable energy expansion); Ioannis N. Kessides, *The Impacts of Electricity Sector Reforms in Developing Countries*, 25 ELEC. J. 79 (2012); Jody Freeman & David B. Spence, *Old Statutes, New Problems*, 163 U. PA. L. REV. 1, 43–63 (2014) (discussing management of evolving electricity markets under the Federal Power Act).

184 However, there are scholars framing these challenges in recent pieces. Walters & Kleit, *supra* note 21; *e.g.,* Shelley Welton, *Rethinking Grid Governance for the Climate Change Era*, 109 CALIF. L. REV. 209 (2021) [hereinafter Welton, *Rethinking Grid Governance for the Climate Change Era*] (identifying an accountability gap in grid governance).

185 *See* JOSEPH P. TOMAIN & RICHARD D. CUDAHY, ENERGY LAW IN A NUTSHELL 375 (3d ed. 2017); DAVIES ET AL., *supra* note 4, at 263; Welton, *supra* note 21, at 2348–61 (providing a brief and comprehensive review of the evolution of the electricity industry in the United States); Boyd, *supra* note 55, at 1628–32 (discussing institutional and regulatory diversity in the traditional U.S. electric power system); William Boyd & Ann E. Carlson, *Accidents of Federalism: Ratemaking and Policy Innovation in Public Utility Law*, 63 UCLA L. REV. 810, 822 (2016) (discussing the traditional regulatory framework).

186 *See* DAVIES ET AL., *supra* note 4, at 263; Majidi & Baldick, *supra* note 29, at 22 ("Transmission system operation and expansion are heavily regulated because of their critical role in power system reliability and their natural monopoly.").

187 DAVIES ET AL., *supra* note 4, at 264.

188 *See generally* Michael G. Pollitt, *Vertical Unbundling in the EU Electricity Sector*, 42 INTERECONOMICS 292 (2007) (analyzing the impacts of ownership unbundling, regarded in the regulatory reform of the European electricity sector as an effective mechanism to separate the transmission segment to promote infrastructure investment among other benefits); HAMILTON, *supra* note 15, at 213 (detailing changes resulting from such growth); Ana Stanič, *An Overview of EU Energy Law, in* LEGAL ASPECTS OF EU ENERGY

world liberalized their electricity sectors.[189] This meant, in most cases, the end of the vertically integrated model, giving way to control by different generation, transmission, and distribution companies.[190] Consequently, the generation sector increased its competitiveness, while transmission and distribution segments remained under regulating agencies and operators.[191] These operators were public or private,[192] and more or less competitive.[193] Hence, existing transmission networks are the result of interconnected lines which are owned by different companies, thus creating the need for greater coordination to operate, maintain, and expand.[194]

Besides the vertically integrated model, there are two broad transmission models: Transmission System Operators (TSO), widely used in Europe, and Independent System Operators (ISO), popular in America.[195] The TSO presupposes a separation between generation, transmission, and distribution, where the TSO owns and operates the transmission infrastructure, and oversees its expansion.[196] On the other hand, the ISO model—widely applied through Regional Transmission Organizations (RTOs) in the U.S.—goes one step further, and besides requiring the prior division it also separates transmission operation from ownership.[197] Thus, the ISO does not own the transmission system

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REGULATION: THE CONSOLIDATION OF ENERGY LAW ACROSS EUROPE 32, 38–40 (Peter D. Cameron & Raphael J. Heffron eds., 2d ed. 2016) (describing legal framework for unbundling); Rivier et al., *supra* note 80, at 251 (contrasting the traditional system from the "new free market context"); Boyd, *supra* note 55, at 1686 (discussing deregulation and unbundling).

189 Hesamzadeh et al., *supra* note 67, at 1; Kessides, *supra* note 183, at 79; Michael G. Pollitt, *Lessons from the History of Independent System Operators in the Energy Sector*, 47 ENERGY POL'Y 32, 32 (2012).

190 Hesamzadeh et al., *supra* note 67, at 1.

191 MOHAMMAD REZA HESAMZADEH ET AL., *An Introduction to Transmission Network Investment in the New Market Regime*, *in* TRANSMISSION NETWORK INVESTMENT IN LIBERALIZED POWER MARKETS 1, 1–2 (2020).

192 JIM LAZAR, REGUL. ASSISTANCE PROJECT, ELECTRICITY REGULATION IN THE US: A GUIDE 11 (2016), https://perma.cc/7RF4-E678.

193 *See generally* Peskoe, *supra* note 44 (contesting the idea that current transmission planning in the United States under the Investor Owned Utility model allows a competitive and modern grid expansion).

194 Majidi & Baldick, *supra* note 29, at 22; Rivier et al., *supra* note 80, at 251–53.

195 Majidi & Baldick, *supra* note 29, at 22; LEGAL ASPECTS OF EU ENERGY REGULATION: THE CONSOLIDATION OF ENERGY LAW ACROSS EUROPE, *supra* note 173, at 39; Pollitt, *supra* note 188, at 33; Kemfert et al., *supra* note 61, at 447 n.3.

196 Majidi & Baldick, *supra* note 29, at 22; *see* VIÑUALES, *supra* note 4, at 284–85.

197 *See* Pollitt, *supra* note 174 ("Transmission assets may still be owned by a single generation company or retailer, but real time control of their operation is vested in the ISO. This separation of control aims to ensure that the ownership of transmission assets does not facilitate market foreclosure or other anti-competitive behavior by integrated generators or retailers."); *see generally* Welton, *Rethinking Grid Governance for the Climate Change Era*, *supra* note 184 (providing an extensive and critical account of RTO's history and development in the US).

it operates and is only required to operate the power system, oversee its resource adequacy, and coordinate transmission expansion planning.[198]

B. Transmission Planning Decision-Making

There are many arrangements establishing key players in transmission expansion planning within these legal structures.[199] These models differ based on whether the operator—a vertically integrated entity, TSO, or ISO—plans by itself through centralized planning or in collaboration with other interested stakeholders in a decentralized approach.[200] Initially, within the vertically integrated model, the controlling company or government would plan transmission expansion by itself without external feedback.[201]

Consequently, in a centralized model, there is a deficiency in addressing social issues within the realm of power transmission planning. The underlying belief among planners that decisions about whether and where to expand transmission should rely on technical criteria leaves aside the social concerns of the public for a later period, or so called down-stream stages.[202] The problem is that at a later stage, the role of public engagement mechanisms is solely informative, neglecting any opportunity to influence the decision. This preempts any meaningful dialogue as well as a deeper understanding of the publicly collected feedback.[203]

However, in a liberalized energy market, with TSOs or ISOs, decentralized alternatives emerged.[204] A first alternative is a mixed planning setting where regulators encourage some degree of collaboration with market actors or independent institutions.[205] A second alternative is a completely liberalized planning process where market agents decide transmission expansion based on market signals.[206]

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198 Majidi & Baldick, *supra* note 29, at 22.

199 *See* Carlota Cagigas & Marcelino Madrigal, *Centralized vs. Competitive Transmission Expansion Planning: The Need for New Tools*, 2003 IEEE Power Engineering Society General Meeting (IEEE Cat. No. 03CH37491) 1012, 1013 (IEEE 2003); Lumbreras & Ramos, *supra* note 44, at 22 (discussing centralized and decentralized transmission extension planning).

200 *See* Cagigas & Madrigal, *supra* note 199, at 1013.

201 *Id.*

202 *E.g.*, *id.* at 252 (arguing that transmission planning aims to "identify the most suitable reinforcements of the network," and that is more closely related to network cost allocation problems). Consequently, the authors indicate that siting of transmission lines "is more of a social, environmental and political nature." *Id.*

203 *See generally* discussion *infra* Part V.A.2.

204 *See id.*; Rivier et al., *supra* note 80, at 286–91 (detailing transmission network business models).

205 *See* Cagigas & Madrigal, *supra* note 199, at 1013.

206 *See id.*; Rivier et al., *supra* note 80, at 290–91 (merchant lines approach); *cf.* Lumbreras & Ramos, *supra* note 44, at 22 ("Although merchant lines can be interesting in

Most modern regulatory frameworks around the world embrace a nuanced centralized planning approach to transmission expansion.[207] This means that the entity in charge of operating the transmission system, usually a TSO or an ISO, works on an expansion plan that it later submits for approval to its regulator.[208] Then, this regulator determines whether and how such plans are to be executed.[209] In this scenario, it is worth exploring how influential public engagement mechanisms are and to what extent these procedures rely on the technical expertise of system operators and agency counterparts.

C. From Market-based Solutions to Participative Energy Systems

The centralized approach, where the system operator makes transmission planning decisions by itself, has mainly been criticized for economic reasons. For instance, the centralized model would discourage competition among market agents, since it does not allow them to maximize their individual goals.[210] Hence, some scholars are analyzing alternatives from an economic analysis perspective, delving into game theory,[211] and agent-based modelling.[212]

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some cases, mainly for the development of high-risk investment projects, they can only be considered a complement to national-wide central planning.").

[207] *See* Lumbreras & Ramos, *supra* note 44, at 22 ("Most regulations acknowledge that only centralized planning
results in building all necessary transmission investments."); Rivier et al., *supra* note 80, at 287 (describing the supervised centralized planning approach).

[208] Lumbreras & Ramos, *supra* note 44, at 22; Rivier et al., *supra* note 80, at 286.

[209] Lumbreras & Ramos, *supra* note 44, at 22; Rivier et al., *supra* note 80, at 287. For example, the implementation could be through a "competitive bidding to assign their construction. Alternatively, the regulator can award transmission licenses to private companies and consider them a monopoly." Lumbreras & Ramos, *supra* note 44, at 22.

[210] Gacitua et al., *supra* note 60, at 355 (recounting recent literature on this critique and the emergence of agent-based modelling and game theory as alternative transmission planning approaches the centralized one).

[211] *See generally* Angela S. Chuang et al., *A Game-Theoretic Model for Generation Expansion Planning: Problem Formulation and Numerical Comparisons*, 16 IEEE TRANSACTIONS ON POWER SYSTEMS 885 (2001) (applying a noncooperative game theory to generation expansion planning).

[212] *See generally* Jae Hyung Roh et al., *Market-Based Coordination of Transmission and Generation Capacity Planning*, 22 IEEE TRANSACTIONS ON POWER SYS. 1406 (2007) (proposing a new market-based model on transmission planning to coordinate the process of merchant transmission and even generation capacity planning through market signals); Daniel J. Veit et al., *Simulating the Dynamics in Two-Settlement Electricity Markets via an Agent-Based Approach*, 1 INT'L J. MGMT. SCI. & ENG'G MGMT. 83 (2006) (suggesting the use of strategic forward contracts in the spot market to incentivize competition in the generation sphere); Gacitua et al., *supra* note 60, at 355 (describing agent-based modelling); P.J. Thimet & G. Mavromatidis, *Review of Model-Based Electricity System Transition Scenarios: An Analysis for Switzerland, Germany, France, and Italy*, 159 RENEWABLE & SUSTAINABLE ENERGY REVS. 112102, 1–2 (2022).

Thus, current power transmission scholars are not focused on decentralizing decision-making and increasing civic engagement.[213] Most scholars in the field approach the transmission problem from a technocratic perspective, relegating social considerations to a later stage.[214] At most, there is some recognition of the feedback that market actors can deliver, such as network commercial users or investors.[215] As Boyd suggests, due to the entrenchment of market-based regulatory approaches in the United States during the eighties, we inherited an "intellectual cul de sac."[216] These approaches have led to distrust of state agencies and resistance to efforts aimed at developing new perspectives on what public interest consideration in utility regulation should encompass.[217] Even more, current legal perspectives on climate change are shaped by this normative framework of law and economics, often reducing any discussion to economic efficiency terms.[218]

Hence, the underlying rationale of traditional electricity regulation is mainly economic. For instance, the reason for regulating power transmission infrastructure is its natural monopoly dynamic, given its substantial economies of scale.[219] Consequently, electricity regulation in the United States. has been dominated by this economical perspective about efficiency, price, and ratemaking.[220]

Regarding the role of public engagement, energy legal frameworks in the United States have mainly considered citizens from a consumer perspective.[221] Thus, the prominence of consumer advocacy organizations, which concentrate on ratemaking and cost allocation.[222] However, U.S. consumer advocacy organizations, which assume public interest representation, do not have the required expertise nor the interest in pushing for transformational changes in our power systems.[223] Traditional consumer entities are not fit to push for a clean

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213 *E.g.*, Hemmati et al., *supra* note 64, at 318 (stating that planning "should be studied with considering different aspects," including reactive power planning).

214 Dolan et al., *supra* note 38, at 167 ("Standard economic theory operates on a narrow consequentialist foundation that has little to say about alternative mechanisms for decision-making."); see *supra* Parts II and III.

215 *E.g.*, Rivier et al., *supra* note 80, at 286–91.

216 Boyd, *supra* note 2, at 485.

217 *Id.*

218 *See generally id.*

219 Rivier et al., *supra* note 80, at 264 (summarizing the many reasons that justify regulating the power transmission sector as a natural monopoly.); Boyd, *supra* note 55, at 1700; *see also* discussion *supra* Section IV.A.

220 *E.g.*, James McCalley et al., *Wide-Area Planning of Electric Infrastructure: Assessing Investment Options for Low-Carbon Futures*, IEEE POWER & ENERGY MAG., Nov.–Dec. 2017, at 83, 84 ("In the United States, tariffs determine the economic criteria for planning the transmission system as well as how transmission costs are recovered."); Welton & Eisen, *supra* note 29, at 313.

221 Welton & Eisen, *supra* note 29, at 313, 350.

222 *E.g.*, Walters & Kleit, *supra* note 21, at 1065–67.

223 Welton & Eisen, *supra* note 29, at 350; Walters & Kleit, *supra* note 21, at 1065.

energy transition or to adequately reflect concerns of potentially affected communities regarding energy infrastructure planning and development.[224]

Despite this long-lived regulatory background, energy law and public policy scholars are pushing to bring other policy goals into consideration, such as deep decarbonization, energy justice, and energy democracy.[225] Even from an economic perspective, public engagement could help avoid the pitfalls of market domination and state capture in transmission planning. Thus, our regulatory frameworks should move to a comprehensive energy system that engages early with social concerns heard through more public engagement strategies.[226]

D. The U.S. Regional Transmission Planning Case

The preceding sections provided a critical narrative of regulatory approaches to transmission expansion, categorized into three groups: institutional planning authority, decision-making process, and the economic underpinnings of energy law. In this section, I address these elements by exploring regional transmission planning in U.S. liberalized energy markets.[227] The aim of this section is to delineate broad practical implications of the presence—or absence—of public engagement mechanisms on transmission planning. Furthermore, I aim to investigate the relationship between decentralized planning approaches and the concept of energy democracy.

Across the world, there are numerous decentralized planning practices complementing centralized approaches to transmission planning.[228] However, very little research explores the presence and extension of public engagement mechanisms. Furthermore, because of the contingent nature of planning regulations, case studies need regular updating, especially given the rapid development and enactment of

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224 Even when pursuing a timely, democratic, and clean energy transition, the economic perspective is always present as "this work demands that they focus dogmatically on the minimization of renewable energy costs and carbon emissions while dealing pragmatically with renewable energy markets." Myles Lennon, *Energy Transitions in a Time of Intersecting Precarities: From Reductive Environmentalism to Antiracist Praxis*, ENERGY RSCH. & SOC. SCI., Feb. 2021, No. 101930, at 4.

225 *E.g.*, GARSIDE, *supra* note 99, at 145 ("[T]he theory and practice of feral citizenship that I offer is intended . . . to stimulate political discussion; and to draw attention back onto the political sphere and its relevance vis-a-vis the proliferation of social movements, the loss of the markers of certainty, and the predominance of democratic regimes, discourses, and forms of legitimacy").

226 MITCHELL, *supra* note 4, at 238; Biber, *supra* note 4, at 8–25; *see* DAVIES ET AL., *supra* note 4, at 280 (discussing changes in the electric industry that led to regulatory scrutiny).

227 *See* Boyd & Carlson, *supra* note 185, at 837, for a discussion on the role of Retail Electricity Providers in liberalized energy markets under the "restructured" model of regulation.

228 Lumbreras & Ramos, *supra* note 44, at 22.

energy regulation. Thus, there is limited literature gathering up-to-date data to facilitate research on transmission planning regulations from the institutional approach suggested here.

1. Electricity System Framework

The configuration of electricity systems in the United States varies across states but can be grouped into three separate grids.[229] Most of the U.S. electricity market is liberalized, resulting in two thirds of the U.S. population residing under restructured electricity market systems, where the grid assets are managed by RTOs.[230] Within these restructured markets, the generation, transmission, and distribution sectors have been unbundled, allowing for the development of competitive wholesale power markets and retail electric competition.[231] Conversely, the remaining third still preserves a vertically integrated investor-owned utility (IOUs) approach, where the same utility holds control over generation, transmission, and distribution.[232] Here, I will focus on the liberalized markets.

2. American Transmission Planning Approaches

Traditionally, transmission expansion planning was conducted within each utility following the vertically integrated model.[233] However, following the liberalization of the electricity market the Federal Energy Regulatory Commission (FERC) issued a series of orders to open access to transmission.[234] FERC also used these orders to

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[229] Welton, *Decarbonization in Democracy*, *supra* note 98, at 107; Boyd & Carlson, *supra* note 185, at 835; Klass & Rossi, *supra* note 183, at 141.

[230] *See Electric Power Markets*, FERC, https://perma.cc/Y9PB-2E58 (May 16, 2023); Alexandra B. Klass & Elizabeth J. Wilson, *Interstate Transmission Challenges for Renewable Energy: A Federalism Mismatch*, 65 VAND. L. REV. 1801, 1805–08 (2012). As Shelley Welton has pointed out, I also use RTOs as to include ISOs, since the current difference would only be semantic. *See* Welton, *Rethinking Grid Governance for the Climate Change Era*, *supra* note 184, at 212 n.8.

[231] Boyd & Carlson, *supra* note 185, at 837–38; Klass et al., *supra* note 16, at 991; *see* David B. Spence, *Can Law Manage Competitive Energy Markets?*, 93 CORNELL L. REV. 765, 767–90 (2007).

[232] Peskoe, *supra* note 44, at 32–33.

[233] Welton, *supra* note 44, at 475; Freeman, *supra* note 184, at 372; Peskoe, *supra* note 20, at 476.

[234] *E.g.*, Order Promoting Wholesale Competition and Recovery of Stranded Costs (FERC Order No. 888), 61 Fed. Reg. 21,540, 21,540–41 (May 10, 1996) (codified at 18 C.F.R. pts. 35, 385) [hereinafter Order 888]; Preventing Undue Discrimination and Preference in Transmission Service (FERC Order No. 890), 72 Fed. Reg. 12,266, 12,326 (Mar. 15, 2007) (codified at 18 C.F.R. pts. 35, 37) [hereinafter Order 890]; Transmission Planning and Cost Allocation by Transmission Owning and Operating Public Utilities (FERC Order No. 1000), 76 Fed. Reg. 49,842, 49,842 (Aug. 11, 2011) (codified at 18 C.F.R. pt. 35) [hereinafter Order 1000]; Regional Transmission Organizations (FERC Order No. 2000), 65 Fed. Reg. 810, 829 (Jan. 6, 2000) (codified at 18 C.F.R. pt 35 (2019)) [hereinafter

encourage the voluntary formation of RTOs, increasing coordination through regional transmission planning.[235] The most recent FERC orders regarding transmission planning are numbers 890, 1000, and 1920.[236] Through these orders, FERC imposed on all transmission companies the duty to participate in regional transmission planning, whether they were part of an RTO or not, plus the need to conduct long-term regional planning.[237]

However, FERC does not have the power to preempt state and local regulations of transmission infrastructure siting; each state controls its own project approval process.[238] This creates a tension between federal and state regulations, which has not been solved, although many reforms have attempted to reconcile the two legal regimes.[239] Consequently, FERC's authority over transmission siting remains judicially and legislatively constrained.[240] The same tensions have

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Order 2000]; Building for the Future Through Electric Regional Transmission Planning and Cost Allocation (FERC Order No. 1920), 89 Fed. Reg. 49,280, 49,284 (June 11, 2024) (codified at 18 C.F.R. pt. 35) [hereinafter Order 1920]; *see* Klass et al., *supra* note 16, at 1024–27.

235 Klass, *supra* note 68, at 535; Klass & Rossi, *supra* note 183, at 443–44; Peskoe, *supra* note 44, at 34.

236 *See* Order 890, *supra* note 234; Order 1000, *supra* note 234; Klass et al., *supra* note 16, at 1025–27.

237 *See* Klass, *supra* note 68, at 535–36; Klass & Rossi, *supra* note 183, at 489; Welton, *supra* note 44, at 478–79; Boyd, *supra* note 55, at 1696–97 ("FERC has also pushed for a more expansive approach to regional transmission planning and cost allocation that explicitly takes account of the transmission needs associated with public policy objectives . . . ."). *But cf.* Klass et al., *supra* note 16, at 1024–28 ("[D]espite FERC's efforts, transmission planning continues to be done primarily at the local level, and cost allocation does not reflect the full benefits of HVDC lines. . . . [B]ecause RTOs and utilities allow a bottom-up approach to planning, RTOs or individual transmission owners often undertake haphazard, localized transmission upgrades rather than more cost-effective regional and interregional solutions.").

238 Klass & Rossi, *supra* note 183, at 130–31 ("[A]ny project spanning multiple jurisdictions depends on the coordination of multiple states."); *cf.* Klass, *supra* note 68, at 535 ("[A]ll the regional planning in the world cannot overcome state siting procedures that focus narrowly on in-state need."); *see also* Klass et al., *supra* note 16, at 1039.

239 *See* 16 U.S.C. § 824p(i) (2012) (forming interstate compacts to manage transmission planning by allowing for the creation of regional siting agencies). Another solution was the renowned granting of a new backstop authority for FERC on transmission line siting. *See, e.g.*, Avi Zevin et al., *Building a New Grid Without New Legislation: A Path to Revitalizing Federal Transmission Authorities*, ECOLOGY L.Q., Jan. 2021 at 169.

240 Freeman & Spence, *supra* note 183, at 55; Klass & Rossi, *supra* note 183, at 146. However, there is an ongoing discussion on the possible advantages that recent legislative amendments could have on FERC's authority within siting and permitting. *See* Matt Lifson, *FERC's Backstop Siting Authority: Why Considering Emissions, EJ Will Get Transmission Built*, UTIL. DIVE (Jun. 8, 2023), https://perma.cc/2E8Z-69ZY; Ari Peskoe, *Can FERC Convince Utilities to Build Modern Transmission Systems?*, UTIL. DIVE (May 4, 2022), https://perma.cc/S6XT-TTVH.

arisen in relation to FERC overseeing RTOs.[241] Thus, state authority prevails on transmission siting and permitting.[242]

In the United States there is no mandatory national transmission planning.[243] Consequently, transmission planning remains under local control, rendering "regional planning little more than gap-filling."[244] At the same time, regional planning curtails interregional ambitions, making it almost nonexistent in 2024.[245] Hence, FERC is creating new market-based incentives to encourage transmission expansion and ensure a robust transmission system.[246]

RTOs are at the heart of transmission planning, under FERC's limited oversight.[247] In the liberalized U.S. electricity sector, transmission systems are coordinated by RTOs,[248] which do not own the infrastructure. Basically, RTOs are non-profit organizations integrated by the members of the electricity market they operate.[249] These entities oversee the grid balance, electricity markets, resource adequacy, transmission systems and planning, among other issues.[250] Consequently, the owners of transmission assets maintain and operate them under the direction of RTOs. However, these owners also

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241 *See* Welton, *Rethinking Grid Governance for the Climate Change Era*, *supra* note 184, at 232–34.

242 DAVIES ET AL., *supra* note 4, at 411; Freeman & Spence, *supra* note 183, at 54; Klass & Rossi, *supra* note 183, at 149–50; Klass, *supra* note 68, at 535.

243 *See* Klass et al., *supra* note 16, at 1035 ("Transmission planning and cost allocation should be national and mandatory. Utilities should not be able to avoid regional and interregional planning by relying on the local process."); JULIE LIEBERMAN, HOW TRANSMISSION PLANNING & COST ALLOCATION PROCESSES ARE INHIBITING WIND & SOLAR DEVELOPMENT IN SPP, MISO, & PJM 3 (2021).

244 Klass et al., *supra* note 16, at 1029; *see* Peskoe, *supra* note 44, at 50.

245 Klass et al., *supra* note 16, at 1030–31; Peskoe, *supra* note 20, at 462 ("[T]he U.S. has added almost no new interregional [transmission] capacity in the past decade."); McCalley et al., *supra* note 220, at 90–91 (noting the lack of sufficient interregional planning, despite the benefits of wide-area transmission planning in the United States).

246 *See* Freeman & Spence, *supra* note 183, at 56–58 (on FERC's role for incentivizing transmission expansion by focusing on cost allocation guidelines and expanding the consideration of public policy benefits.); Freeman, *supra* note 183, at 374; DAVIES ET AL., *supra* note 4, at 438–39.

247 Freeman, *supra* note 183, at 374; Klass et al., *supra* note 16, at 1058 ("RTOs design capacity markets, plan for transmission (often across state lines), and establish structures for financing new transmission needed for renewable energy and reliability, all under FERC oversight.").

248 *Cf.* Welton, *Rethinking Grid Governance for the Climate Change Era*, *supra* note 184, at 240 ("In their role as regional transmission planning coordinators, RTOs' willingness to enable maximum transmission expansion will help determine the viability of a renewables-heavy electricity sector.").

249 DAVIES ET AL., *supra* note 4, at 412.

250 Majidi & Baldick, *supra* note 29, at 22; Freeman & Spence, *supra* note 183, at 53 n.233; Welton, *Rethinking Grid Governance for the Climate Change Era*, *supra* note 184, at 230–32 (Discussing the expansive role of RTOs such as their control over resource adequacy.); Order 2000, *supra* note 234, at 829 (explaining that one of the advantages of RTOs is their ability to improve transmission planning at a regional level).

participate in the governance of RTOs and their transmission planning decision-making.[251]

In May 13, 2024, FERC issued Order 1920 to improve long-term transmission planning and cost allocation at the regional and local levels.[252] FERC imposed new requirements for long-term transmission planning, while recognizing the role of stakeholder engagement in shaping the long-term scenarios.[253] Indeed, FERC commissioners stated that transmission providers "must provide stakeholders with a meaningful opportunity to propose potential factors and to provide input on how to incorporate specific factors in the development of Long-Term Scenarios,"[254] which represents a significant step toward more energy democracy. Still, the term "stakeholder" also encompasses bigger actors, such as government actors, utilities, and federally recognized Tribes.[255] There is no specific mention in the order of local communities or citizens. Moreover, FERC did not advance public engagement for interregional transmission coordination; it only incorporated transparency requirements to make information publicly available.[256]

3. The Democratic Challenges of RTOs

Despite the advantages that RTOs offer in a liberalized market, they can be criticized for defending incumbents' interests and hindering the entrance of new transmission companies to build and expand transmission networks.[257] In fact, the influence of transmission owners over RTOs has led these entities to abstain from deciding questions that these owners deem harmful.[258] One example is avoiding long-term

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[251] Majidi & Baldick, *supra* note 29, at 23; *cf.* Freeman & Spence, *supra* note 183, at 54 (noting that RTOs can only incentivize their members to invest in transmission); Peskoe, *supra* note 44, at 30–36 (arguing for the separation of the ownership of transmission infrastructure from planning).

[252] *See* Order 1920, *supra* note 234, at 49,280.

[253] *Id.* at 49,351, 49,368.

[254] *Id.* at 49,369.

[255] *Id.* at 49,366, 49,368–69.

[256] *Id.* at 49,547–48.

[257] *See* Stephanie Lenhart & Dalten Fox, *Participatory Democracy in Dynamic Contexts: A Review of Regional Transmission Organization Governance in the United States*, ENERGY RSCH. & SOC. SCI., Dec. 2021, No. 102345, at 1, 4 (recounting the research on RTO governance and its main critiques); *e.g.*, Michael H. Dworkin & Rachel Aslin Goldwasser, *Ensuring Consideration of the Public Interest in the Governance and Accountability of Regional Transmission Organizations*, 28 ENERGY L.J. 543, 583–86 (2007); Welton, *Rethinking Grid Governance for the Climate Change Era*, *supra* note 184, at 245–46; Peskoe, *supra* note 44, at 48; Peskoe, *supra* note 20, at 492; *e.g.*, Walters & Kleit, *supra* note 21, at 1072–75 (analyzing a prime example in the PJM RTO where a merchant transmission developer has been persistently blocked by incumbents).

[258] LIEBERMAN, *supra* note 243, at x; Peskoe, *supra* note 20, at 459–61.

transmission projects and reforms to confront the challenges posed by renewables.[259]

As Walters and Kleit suggest, there is a corporatist design in RTO's governance that relies on a narrow universe of stakeholders to make decisions.[260] For example, environmental organizations and citizen ratepayers are excluded from RTO decision-making processes. Hence, Walters and Kleit argue for a pluralistic democratic approach that broadens access to RTO proceedings.[261] Incentivizing civic engagement to balance the interests of the public with those of transmission owners can be decisive in these cases.[262]

From a public engagement perspective, these issues exacerbate the lack of representation in RTO governance, granting incumbent industries supermajorities that preserve the status quo.[263] For instance, in Pennsylvania-New Jersey-Maryland Interconnection (PJM),[264] transmission owners dominate planning committees with their veto power.[265] Moreover, planning procedures within RTOs lack public representatives and operate "like secret cabals."[266] RTOs' "byzantine

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[259] Welton, *Rethinking Grid Governance for the Climate Change Era*, *supra* note 184, at 253; Hammond & Rossi, *supra* note 52, at 673 ("[I]t is important that new transmission lines do not help to prolong the asset life of older fossil fuel generation power plants that would otherwise be retired, thus exasperating the carbon legacy plant problem."); Peskoe, *supra* note 20, at 460–62; *see* discussion *supra* Sections II.A, II.B (discussing the relevance of avoiding carbon lock-ins and contemporary challenges); *e.g.*, Order 1920, *supra* note 234, at 49,295, 49,317.

[260] Walters & Kleit, *supra* note 21, at 1055–68.

[261] *Id.* at 1065–67, 1075–79.

[262] Peskoe, *supra* note 20, at 485–91 (analyzing how governance stagnation within RTOs, and especially PJM, still benefits incumbents disproportionately); Daniel E. Walters, *Symmetry's Mandate: Constraining the Politicization of American Administrative Law*, 119 MICH. L. REV. 455, 514 (2020).

[263] Welton, *Rethinking Grid Governance for the Climate Change Era*, *supra* note 184, at 253.

[264] *Who We Are*, PJM, https://perma.cc/V4DR-3MMK (last visited Oct. 9, 2024) ("PJM Interconnection is a regional transmission organization (RTO) that coordinates the movement of wholesale electricity in all or parts of Delaware, Illinois, Indiana, Kentucky, Maryland, Michigan, New Jersey, North Carolina, Ohio, Pennsylvania, Tennessee, Virginia, West Virginia and the District of Columbia.").

[265] Walters & Kleit, *supra* note 21, at 1064.

[266] Klass et al., *supra* note 16, at 1067; CHRISTOPHER A. PARENT ET AL., GOVERNANCE STRUCTURE AND PRACTICES IN THE FERC-JURISDICTIONAL ISOS/RTOS, at ES-2 tbl.ES-1, ES-3 tbl.ES-2 (2021), https://perma.cc/UZZ9-9JL6 (comparing the current governance practices regarding on the role of stakeholders and public accessibility of the transmission planning processes in all RTOs across the United States); Lenhart & Fox, *supra* note 257, at 6–7 ("Opportunities for civil and environmental organizations to participate in stakeholder engagement processes depend on formal membership requirements, access provided to meetings and information, and the ability to garner the resources and technical capacity to join and effectively engage in processes. These organizations may or may not be eligible to join as members and some meetings are open to the public, but others are not.").

decisionmaking processes"[267] have been criticized for impeding participation by interested non-members.[268]

Hence, a decentralized planning approach persists in liberalized markets in the U.S., in which each RTO develops its own transmission planning process in collaboration with traditional stakeholders, such as transmission owners.[269] Scholars argue that most of these procedures do not incorporate meaningful public engagement mechanisms and therefore are not susceptible to the influence of local communities and citizen priorities.[270] In this context, scholars advocate for more public engagement mechanisms in liberalized electricity markets.[271] Particularly compelling is a move to open decision-making procedures in venues such as public utility commissions (PUCs) or RTOs.[272] Nonetheless, PUCs, RTOs, and commenting scholars have focused mostly on participation in clean energy generation policies, sidetracking transmission.

Thus, based on a literature analysis of U.S. RTOs' planning approaches, a preliminary conclusion emerges: current transmission planning regulations lack a broader recognition of public insights. Citizens cannot regularly convey their opinions in a timely way to decisionmakers using institutionalized mechanisms. This could be explained by a general movement toward more expedited procedures that see public engagement as a barrier rather than as an opportunity. However, further research is needed for a more in-depth analysis of cases and innovative regulations on transmission planning throughout liberalized U.S. regional markets, at the state and regional levels.[273]

V. HOW TO DEMOCRATIZE POWER TRANSMISSION PLANNING

This section explores proposals for strengthening transmission planning through public engagement. Specifically, I discuss how to implement the previous theoretical pillars for regulatory design and

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267 Welton & Eisen, *supra* note 29, at 347–48.

268 *Id.*; Walters & Kleit, *supra* note 21, at 1036, 1085 (calling RTOs "obscure, esoteric, and clubbish entities").

269 Peskoe, *supra* note 20, at 461–62; Walters & Kleit, *supra* note 21, at 1044.

270 *See supra* notes 257–262 and accompanying text (referring to various works in which scholars argue these decentralized planning approaches do not incorporate public engagement meaningfully).

271 For the most comprehensive and thorough analysis of the current development of public engagement mechanisms within the U.S. electricity grid, see Welton, *supra* note 27, at 624–27; Welton, *Decarbonization in Democracy*, *supra* note 98, at 101–06.

272 Welton, *Decarbonization in Democracy*, *supra* note 98, at 101–06.

273 *Cf.* Lu Liu et al., *Public Participation in Decision Making, Perceived Procedural Fairness and Public Acceptability of Renewable Energy Projects*, ENERGY & CLIMATE CHANGE, Sept. 2020, No. 100013, at 1, 7 ("[E]xperimental studies . . . are rare in the literature, but are much needed in order to secure internal validity and to obtain insights in how public participation, perceived procedural fairness and project acceptability are causally related.").

decisionmakers.[274] To accomplish this, I identify key elements for designing deliberative transmission planning, drawing insights from energy law, public policy, and political theory scholarship, as well as case studies from all over the world.

I separate the proposals into two categories: those composed of instrumental-substantive elements, and those composed of normative elements.[275] This division is based on the rationales of public engagement mechanisms[276] and other public policy studies.[277] This research illuminates what we require to expand stakeholder participation in the energy governance sphere.[278] It is essential to reconsider the practical relations of civic engagement and timely transmission planning.[279] Although abundant scholarship illuminates modern public participation processes,[280] this section focuses on the transmission planning process and its alignment with energy democracy and procedural justice concerns.

A final caveat before delving into the analysis is that these public engagement proposals are situated within transmission planning in liberalized or unbundled markets, such as in the case of U.S. RTOs.[281] Thus, the proposals assume that transmission planning is conducted by a TSO or ISO, in a centralized or decentralized planning approach. Naturally these proposals are more feasible with a coordinating

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[274] Welton, *supra* note 27, at 629 ("One critical challenge for the access-to-process vision . . . will be to channel the strong feelings evinced in . . . protests into conversations within energy law's formalized governance processes.").

[275] Ciupuliga & Cuppen, *supra* note 36, at 231 ("[P]articipation in transmission line planning should not only be a means to get the transmission line accepted (i.e. the instrumental rationale), but also a goal in itself. That means that participation is a process in which new knowledge and insights can be produced (the substantive rationale) and that citizens have the right to be involved in planning projects that affect them and their living conditions (normative rationale).").

[276] *See* Wesselink et al., *supra* note 176, at 2690.

[277] *E.g.*, Ciupuliga & Cuppen, *supra* note 36, at 230–31; Cotton & Devine-Wright, *supra* note 29, at 31–33; *see* discussion *supra* Section III.C.

[278] Pasqualetti, *supra* note 128, at 118; *see also* Britton-Purdy et al., *supra* note 98, at 1831 ("Instead of viewing state bureaucracy as a domain of apolitical expertise (or of malevolent capture and corruption), we might reconceive regulatory bodies as sites of democratic contestation.").

[279] Pasqualetti, *supra* note 128, at 118; *see* Burke & Stephens, *supra* note 129, at 45 ("Additional work is needed to more precisely characterize what energy democracy looks like in practice. More attention is needed to understand the application and effectiveness of various instrument mixes for energy democracy within specific communities and across regions.").

[280] Luigi Bobbio, *Designing Effective Public Participation*, 38 POL'Y & SOC'Y 41, 43 (2019); Bryson et al., *supra* note 34, at 23; Habin Lee et al., *Embedding Persuasive Features into Policy Issues: Implications to Designing Public Participation Processes*, 34 GOV'T INFO. Q. 591, 592 (2017); Eric Gordon et al., *Immersive Planning: A Conceptual Model for Designing Public Participation with New Technologies*, 38 ENV'T & PLAN. B: PLAN. & DESIGN 505, 506 (2011).

[281] *See* discussion *supra* Section IV.A.

authority, in contrast with a completely liberalized planning process,[282] or planning conducted by an authoritarian government with low or non-existent democratic standards.

A. Instrumental-Substantive Elements

Instrumental elements encourage participation to increase institutional legitimacy and improve the results of a decision that otherwise cannot later be altered by the public.[283] Substantive elements, on the other hand, refer to facilitating public participation from a knowledge production perspective, where lay people can provide valuable nonexpert knowledge and influence the decision itself.[284] The following considerations combine instrumental and substantive rationales for public engagement, addressing concerns related to legitimacy, knowledge production, and influence on decision-making. Particularly I focus on four instrumental-substantial issues: context-dependency, content, transparency, and timing.

1. Context Dependency

Solutions for democratic energy governance are highly context-dependent.[285] Consequently, this research does not aim to propose a one-size-fits-all solution, but rather to highlight considerations in the development of public engagement mechanisms in planning procedures.[286] Naturally, deliberative mechanisms require policy designers to carefully consider the political and administrative frameworks in which they operate.[287]

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[282] Argentina is a prime case in South America on exemplifying a fully liberalized approach, where market agents take the leading role in transmission planning. The country liberalized its electricity market in 1992 and contains one of the most liberalized decentralized transmission planning mechanisms in the region. *See* Paolo Mastropietro et al., *Power Transmission Regulation in a Liberalised Context: An Analysis of Innovative Solutions in South American Markets*, 33 UTILS. POL'Y 1, 2 (2015); J.P.M. SIJM, THE GOVERNANCE MODEL OF POWER TRANSMISSION IN ARGENTINA 7–9 (2015). *See generally* Stephen C. Littlechild & Carlos J. Skerk, *Transmission Expansion in Argentina 1: The Origins of Policy*, 30 ENERGY ECONS. 1367 (2008).

[283] Wesselink et al., *supra* note 176, at 2690.

[284] *Id.*; Ciupuliga & Cuppen, *supra* note 36, at 230 (recounting literature).

[285] Burke & Stephens, *supra* note 129, at 39; Patrick Bishop & Glyn Davis, *Mapping Public Participation in Policy Choices*, AUSTRALIAN J. PUB. ADMIN., Mar. 2002, at 14, 26; *cf.* Patsy Healey, *Consensus-Building Across Difficult Divisions: New Approaches to Collaborative Strategy Making*, 11 PLAN. PRAC. & RSCH. 207, 213 (1996) ("The challenge in contemporary urban regions is to develop collaborative approaches which work with multiple groups with diverse and differentiated concerns.").

[286] *See* Lenhart & Fox, *supra* note 257, at 4 ("[P]ublic decision-makers can (and should) design participatory governance arrangements to address particular substantive problems situated in specific contexts . . . .").

[287] *See* Hiro Saito, *The Developmental State and Public Participation: The Case of Energy Policy-Making in Post–Fukushima Japan*, 46 SCI., TECH., & HUM. VALUES 139, 156

Some of the institutional factors to consider while including public engagement in power transmission planning are as follows: First, determine whether the transmission planning is conducted by a TSO[288] or if it takes place under a fully liberalized process. Then, analyze whether the planning entails a centralized model or a collaboration of network actors through a decentralized perspective. Finally, elucidate the degree of participation that government members and stakeholders have in the planning procedure and whether they lead, oversee, or support the process.

Normally, as in the United States, the first proposal will be developed by the TSO in collaboration with network actors, and then submitted for approval to a governmental institution in charge of overseeing the process. Regulators must consider whether to include participatory procedures during the elaboration of the first proposal by the TSO or during its revision by a public institution. For this, the advantages, or drawbacks, of promoting a more centralized approach to public engagement should be weighed.[289]

Including public engagement in the first planning stage during the TSOs procedure could help to balance the influence of incumbent network actors, such as transmission infrastructure owners or local generators.[290] However further research is needed into the consequences of increasing the dialogue at this early opportunity. For instance, it could be possible that the interests of power generation facilities align with local communities. Both could oppose high voltage transmission infrastructure that increases competition and undesired environmental impacts among communities.[291]

Another context-specific variable to consider is the technical character of each transmission project. High voltage transmission lines that move across regions entail a wider geographical scope. Therefore, public engagement mechanisms should attempt to gather feedback from

(2021) ("Since public participation is always articulated with the existing institutions and situations of policy-making, an answer for the normative question 'Which form of public participation should be adopted, and how?' is bound to vary across nation-states."); Wesselink et al., *supra* note 176, at 2700 (arguing that policy designers must embrace a pragmatic approach and understand that "proposals for participation that do not align with the usual administrative and political procedures will stand little chance of being integrated in policy making").

288 From now on I refer indistinctly to TSO to include ISOs and RTOs.

289 Butler & Demski, *supra* note 24, at 660; *see* discussion *supra* Section IV.D.

290 *See* discussion *supra* Section IV.D.4.

291 *E.g.*, Shawn K. Olson-Hazboun, *"Why Are We Being Punished and They Are Being Rewarded?" Views on Renewable Energy in Fossil Fuels-Based Communities of the U.S. West*, 5 EXTRACTIVE INDUS. & SOC'Y 366, 370 (2018) (finding opposition to renewables among local communities in the United States given that "renewable energy represented a threat to the local economic structure, the perception that renewable energy was incongruent with local identity, and the belief that renewable energy has been given an unfair advantage overall [sic] fossil fuels via various policy mechanisms"); Klass & Rossi, *supra* note 183, at 464.

all potentially affected areas.[292] This goal requires balancing the advantages of developing small, local mechanisms that prioritize local engagement with the challenge of consulting all the localities affected by a project through a wider process simultaneously. For instance, a piecemeal approach could delay engagement procedures while gathering detailed local knowledge. Nonetheless, further research is needed to address the specific contours of each jurisdiction and mechanism.[293]

2. Deciding What and Whom to Consult: Laypeople Involvement

What and whom is consulted determines the degree of influence, engagement, and opposition of the public in decision making procedures.[294] Certainly, in some transmission expansion cases, allowing interested parties the opportunity to influence the project design is essential to reach agreements.[295] Thus, if transmission line routes, among other project characteristics, are open to comment, the chances of creating partnerships that lead to successful implementation are higher.[296]

A key part of public engagement mechanisms—that often arises in discussions regarding their value—is laypeople's capacity to understand and contribute to technical questions.[297] This is especially relevant to planning procedures. As described previously, planning transmission involves a highly technical process in which engineers, through sophisticated algorithms, define whether and which transmission infrastructure gets improved or expanded.[298] Certainly, the sheer technical complexity of the information itself could hinder public engagement.[299]

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292 Rowe & Frewer, *supra* note 96, at 266 (arguing that public engagement mechanisms should aim to elicit information from all members of the population of interested/affected individuals, but also recognizing that this is an "idealized state of affairs" from what actually happens in practice).

293 *See* discussion *infra* Section V.B.4.

294 Liu et al., *supra* note 273, at 1–2.

295 Ciupuliga & Cuppen, *supra* note 36, at 230 (exploring the positive implications of the "*Zaragoza* decision" and the initiative to genuinely accept local input for project design moving forward).

296 *Id.*; Liu et al., *supra* note 273, at 7 ("[H]aving influence over major aspects of a renewable energy project led to higher perceived procedural fairness, compared to having influence over only minor aspects of the project, and this, in turn, led to higher project acceptability.").

297 ERIC R.A.N. SMITH, ENERGY, THE ENVIRONMENT, AND PUBLIC OPINION 125 (2002).

298 *See* discussion *supra* Section II.A.

299 Welton, *supra* note 185, at 241; *See* Lenhart & Fox, *supra* note 257, at 4 ("[L]iterature recognizes the complexities of regional governance and democratic accountability in highly technical policy settings."); Welton, *Electricity Markets and the Social Project of Decarbonization*, *supra* note 98, at 1113 (recounting some of the literature on the challenges to participate in RTOs governance, such as the need to be "an economist and a math wizard" to fully participate).

However, there is still space for laypeople to participate, especially within the communities potentially impacted by transmission projects. Many studies have connected a greater public understanding of energy infrastructure projects with increased levels of support.[300] Public engagement practitioners and scholars therefore propose using a "big picture" approach.[301] Basically, this means that relevant information should be adapted for non-experts.[302] Despite skepticism about simplifying information for lay people,[303] scholars also criticize public engagement mechanisms that take a detailed technical approach.[304] Moreover, another challenge for regulators and policymakers is incorporating knowledge collected from the public into the planning decision itself.[305]

To face these hurdles, building public capacity to promote meaningful civic engagement can be decisive.[306] Indeed, in the transmission planning electricity sphere there are many resource imbalances between technical experts, grid operators, and local communities.[307] One solution to this imbalance could be increasing capacity building by leveling the playing field through public subsidies.[308] Public subsidies can balance the disparate resources of network industries and experts, incentivizing communities to provide informed observations. Therefore, providing community members with

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300 Carley et al., *supra* note 7, at 7 ("[I]n 95% of the cases being knowledgeable about an energy type is associated with an increase in support . . . ."); James S. Fishkin & Robert C. Luskin, *Experimenting with a Democratic Ideal: Deliberative Polling and Public Opinion*, 40 ACTA POLITICA 284, 293 (2005) ("[P]articipants learn quite a lot [in deliberative polls] and . . . opinion changes tend to be driven by that learning."); Burby, *supra* note 34, at 44. See discussion *supra* Part III.C on the benefits of non-technical public engagement.

301 BELL ET AL., *supra* note 97, at 776; SOVACOOL & DWORKIN, *supra* note 38, at 212.

302 SOVACOOL & DWORKIN, *supra* note 38, at 212.

303 Wynne, *supra* note 102, at 37 ("[A] deeply embedded scientific assumption—amounting to a general stereotype—about lay people is that they cannot handle uncertainty and risk and thus need to have technical information 'simplified.'").

304 BELL ET AL., *supra* note 97, at 776.

305 Farina et al., *supra* note 100, at 1187; Welton, *Grasping for Energy Democracy*, *supra* note 27, at 587.

306 Zoi Christina Siamanta, *Conceptualizing Alternatives to Contemporary Renewable Energy Development: Community Renewable Energy Ecologies (CREE)*, 28 J. POL. ECOLOGY 47, 64 (2021).

307 Dola & Mijan, *supra* note 104, at 4 ("Much has been written about devising and holding participation, but the inherent imbalances of power and resources are not always articulated."); *see* discussion *infra* Section V.B.2.

308 Wendy E. Wagner, *Administrative Law, Filter Failure, and Information Capture*, 59 DUKE L.J. 1321, 1416 (2010). *But see* Thomas O. McGarity, *Administrative Law as Blood Sport: Policy Erosion in a Highly Partisan Age*, 61 DUKE L.J. 1671, 1758 (2012) (arguing against public subsidies, given the difficulties on approving such subsidies and the unlikely chance that it could remediate the disparate differences between communities and prominent industry actors).

adequate resources, knowledge, and skills, would go a long way to compensate key deliberation constrains.[309]

3. Transparency

The amount of regulatory transparency varies across the institutional spectrum of public decision-making procedures.[310] This is relevant because the absence of sufficient information on what is consulted and the procedure itself curtails public scrutiny and calls into question the credibility of the process.[311] Thus, public engagement mechanisms must consider broad information accessibility to increase the legitimacy of the decisions.[312]

Transparency not only relates to the legitimacy of the results, but also to the accountability of the decision-making process itself.[313] If transparency safeguards are placed on the planning procedure, political and technical actors would be more accountable during the process.[314] Here, an essential pillar of legitimacy is public access to the procedure that led to the key decisions.[315]

Based on the U.S. experience, a first step towards increasing public engagement is more transparency.[316] This involves developing mechanisms to increase public scrutiny of the decision-making process. For instance, public representatives could be allowed into stakeholder meetings in RTOs when transmission decisions are being made.[317] Scholars even propose increasing public oversight and control of boundary organizations beyond RTOs.[318]

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309 Dola & Mijan, *supra* note 104, at 4 ("Calling for greater community involvement should be complemented with planners' professional ability to tolerate and handle the egregious consequences of empowering the public as well as equipping public with the right skills and knowledge to participate.").

310 Dolan et al., *supra* note 38, at 161.

311 *Id.*

312 SOVACOOL & DWORKIN, *supra* note 38, at 213–14. *But see* Deirdre Curtin & Albert Jacob Meijer, *Does Transparency Strengthen Legitimacy?*, 11 INFO. POLITY 109, 120 (2006) ("[T]ransparency . . . can only be a starting point in building public understanding, participation and involvement.").

313 *See* Vivien Schmidt, *Democracy and Legitimacy in the European Union Revisited: Output, Input and 'Throughput'*, 61 POL. STUD. 2, 14–15 (2013).

314 *See* Vivien Schmidt & Matthew Wood, *Conceptualizing Throughput Legitimacy: Procedural Mechanisms of Accountability, Transparency, Inclusiveness and Openness in EU Governance*, 97 PUB. ADMIN. 727, 732–33 (2019).

315 *Id.*

316 Klass et al., *supra* note 16, at 1067.

317 *Id.*

318 Welton, *Rethinking Grid Governance for the Climate Change Era*, *supra* note 184, at 267–70.

4. Timing

One of the substantive ideas this research presents is that public engagement mechanisms should move upstream in energy systems.[319] This is a key procedural consequence of energy justice and democracy.[320] Thus, deliberative mechanisms should not only communicate decisions but also influence the decision itself.[321] This would lead to more civic engagement, reducing social friction.[322]

Therefore, well-structured periods of public feedback are critical. Relatedly, one of the most widespread concerns with incorporating public engagement in decision making procedures is increased delays.[323] Indeed, the ghosts of bureaucratic foot-dragging and disorganized public commentary haunt calls for more public engagement. Hence, policy designers must incorporate measures to curtail unnecessary delays.[324]

For instance, regulators could limit participation periods to previously identified procedural milestones. Thus, public engagement could be channeled into specific time periods and stages of the planning process. This would prevent parties with opposing interests and agendas from delaying the process without affecting the outcome.

From the perspective of energy justice scholars there are also concerns with undemocratic practices related to timing.[325] For example, setting early public hearings can be a strategy to avoid public input or opposition at early stages; the public may lack information to evaluate the risks associated with the project, much like a narrow interpretation of the procedural rules can be a device to dismiss adverse evidence.[326] Consequently, policy designers should include enough time for the public to review the documents, and select dates and venues that

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319 Winter, *supra* note 34, at 31 ("Public participation is so important as a device both of the rule of law and democracy that there should be an early opportunity to comment when the options are still open, followed by a second one where details are clarified."); *see* Susskind et al., *supra* note 22, at 13.

320 *See* discussion *supra* Sections III.A, III.B.

321 *See* discussion *supra* Section III.C.

322 *See* discussion *infra* Section V.C.1.

323 One of the paradoxes of public participation literature is that "[p]articipation is the right thing to do, but it causes delays." Judith E. Innes & David E. Booher, *Reframing Public Participation: Strategies for the 21st Century*, 5 PLAN. THEORY & PRAC. 419, 421 (2004). In the United States since the early 70s there has been a concern on how to incorporate public engagement mechanisms in administrative procedures that don't necessarily end in excessively delaying the process. *E.g.*, Roger C. Cramton, *The Why, Where, and How of Broadened Public Participation in the Administrative Process,* 60 GEO. L.J. 525, 531, 547 (1971); Burby, *supra* note 34, at 36.

324 *But see* Winter, *supra* note 34, at 31 ("The time allowed for public participation should not be standardised in order to allow for differentiation according to the complexity of the issue.").

325 SOVACOOL & DWORKIN, *supra* note 38, at 199.

326 *Id.*

maximize broad participation, while still ensuring an expedited process.[327]

B. Limitations

After addressing the instrumental and substantive elements of public engagement within transmission planning, I delve into the main limitations of this approach. For this I engage with the literature about the perils of incorporating public engagement to increase democratic legitimacy.[328] Certainly, the implementation of public engagement mechanisms raises many practical and theoretical questions.[329] Throughout this Article I have addressed ongoing discussions about the tradeoffs of including public deliberation in transmission planning. Here I dig deeper into their analysis.

1. Delay of Transmission Planning Procedures

The main objection to public engagement in transmission planning is that it could overextend transmission development timelines.[330] However, despite how counterintuitive it sounds, public deliberative approaches might potentially contribute to timely energy infrastructure development.[331] Public engagement should be understood to be a key tool for developing a modern energy system, instead of a barrier to delay its progress.[332]

Current research, especially from the social sciences, questions whether public engagement is an inevitable or even likely source of procedural delay. Some studies explain how encouraging civic engagement during earlier stages of energy project development could improve overall infrastructure acceptability.[333] For instance, a careful

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[327] *Id.* at 212.

[328] Dola & Mijan, *supra* note 104, at 4; *e.g.,* Winter, *supra* note 34, at 23–24 (listing some of the key questions of design and practice of public participation in administrative decision-making).

[329] *See* BELL ET AL., *supra* note 97, at 776 ("[W]here participation levels are low, it can call into question the very purpose of consultation."); Welton, *Grasping for Energy Democracy*, *supra* note 27, at 633 ("Striking the right amount of access to process is thus a challenge that rarely will leave all sides satisfied."). *See* discussion *supra* Section III.B.

[330] *See* discussion *supra* Section V.A.4; Jim Rossi, *Participation Run Amok: The Costs of Mass Participation for Deliberative Agency Decisionmaking*, 92 NW. U. L. REV. 173, 214 (1997).

[331] *See* Butler & Demski, *supra* note 24, at 660 ("Previous experience teaches that as spaces for dialogue are closed down, so controversy opens up . . . ."); *e.g.*, INT'L ENERGY AGENCY, *supra* note 7, at 52 (identifying public opposition as one of the key causes of delay in planning and permitting of transmission infrastructure); *see* discussion *supra* Section III.A; discussion *infra* Section V.C.

[332] Butler & Demski, *supra* note 24, at 660.

[333] *E.g.,* Liu et al., *supra* note 273, at 3; Carol Mansfield et al., *The Efficiency of Political Mechanisms for Siting Nuisance Facilities: Are Opponents More Likely to Participate than*

preparation of early consultation mechanisms could be influential in speeding transmission line implementation in the U.S.[334] Particularly, early engagement could reduce litigation, which causes prolonged delays for transmission line development.[335]

Enhancing the role of the public in planning procedures and decision-making can increase public perceptions of procedural fairness.[336] This in turn is associated with higher democratic legitimacy, which could reduce persistent litigation from a wide range of stakeholders.[337] Therefore, even if the overall timetable of the transmission infrastructure increases because of new public engagement venues, it can still be a wise decision to smooth later implementation and strengthen democracy.

In the end, only through a case-by-case approach can it be truly assessed whether the inclusion of public participation will delay the planning and implementation of transmission infrastructure. Naturally, the institutional and organizational factors of each jurisdiction influence the outcome of these processes, such as pre-existing public participation, transparency laws, organizational and civic engagement culture, etc.[338]

2. Who Represents the Public?

Who is a stakeholder? Who represents the public?[339] Who gets to talk? Another limitation is the quest to define who gets to participate, and how representative the results of the process are, based on this definition.[340] Among the public representatives and stakeholders[341] are

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Supporters?, 22 J. REAL EST. FIN. & ECON. 141, 156 (2001) ("[M]ore accurate gauges of public opinion may reveal greater acceptance for siting [of noxious and nuisance facilities].").

334 Klass & Rossi, *supra* note 183, at 477–78.

335 *Id.*; *e.g.*, INT'L ENERGY AGENCY, *supra* note 7, at 52 (explaining transmission development procedures in the United States include "tools that can be used by stakeholders to legally oppose new infrastructure projects," which can delay projects).

336 *See* Liu et al., *supra* note 273, at 1–2 ("[P]ublic participation in decision making can enhance perceived procedural fairness . . . . In turn, perceived procedural fairness is positively associated with public acceptability of energy projects. That is, the more people perceive the decision making as fair, open, transparent and representing different interests, the more acceptable they find the related energy project.").

337 *Id.*; Klass & Rossi, *supra* note 183, at 477–78.

338 *See* discussion *supra* Section V.A.1.

339 SOVACOOL & DWORKIN, *supra* note 38, at 211–12.

340 *See* Droubi et al., *supra* note 27, at 8 (identifying the shortcomings of energy democracy such as the "inability to deal with problems respecting representation, actual participation, and accountability respecting energy community groups"); *see also* Samuel Bagg, *Two Fallacies of Democratic Design*, L. & POL. ECON. PROJECT (July 13, 2023), https://perma.cc/S5BW-N9EH ("[S]uspicion of participatory practices does not entail a lack of faith in the ability of ordinary people to understand complex issues, debate them intelligently, and make decent judgments, when placed in the right context. Rather, it follows from distrust in the elites who will inevitably shape the structure and outcomes of

potentially affected local individuals and their communities, politicians, traditional leaders, NGOs, private companies and associations, and government agencies.[342] Usually, public engagement mechanisms are not overly restrictive.[343] In fact, the aim of civic engagement, through the lenses of energy democracy and procedural justice, is to be as inclusive and representative as possible.[344]

Nonetheless, public engagement effectiveness has been widely criticized. Deliberative venues might promote interactions only between actors who are sufficiently organized.[345] Public choice scholars suggest that the outcomes of these deliberative processes are the result of bargains between interest groups who put their own benefit above the general welfare.[346] This approach questions citizens' capacity to intervene and be effective in decision-making venues through open deliberation.[347] Consequently, the challenge is how to ensure broader participation while avoiding interest group capture.[348]

Another critique is that public engagement mechanisms benefit all interested actors. This means that prominent private companies have the same rights as any other citizen to participate and question the process.[349] Therefore, designers of deliberative venues must

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participatory institutions in practice—by setting their scope and agenda, for instance, and providing the necessary expertise.").

341 SOVACOOL & DWORKIN, *supra* note 38, at 211–12. Here, I follow the description proposed by these authors.

342 PALAST ET AL., *supra* note 32, at 16–18 ("When we say that US law requires participation in regulation by 'the public,' who does that include? Any person, business or organization that pays for utility service, as well as others affected by utility practices, is invited to every public hearing and every meeting between the regulator and the utility.").

343 *Cf.* Burby, *supra* note 34, at 42. However, as Burby concludes, "participation often is limited to the iron triangle (businesses, neighborhood groups, and government officials)." *Id.*

344 SOVACOOL & DWORKIN, *supra* note 38, at 213; PALAST ET AL., *supra* note 32, at 19 ("Who is excluded? No one. The whole point of democracy is that it is open.").

345 *See* Cass R. Sunstein, *Consequences?*, *in* BEYOND BACKYARD ENVIRONMENTALISM, *SUPRA* note 24, at 94, 97 ("[S]urely many people are left out. Who are they, and with what consequences? Skeptics might fear that some of these processes are a form of environmental corporatism, reflecting not the outcomes of deliberative judgements of the citizenry, but negotiated solutions among visible well-organized actors.").

346 Welton, *Grasping for Energy Democracy*, *supra* note 27, at 629.

347 *Id.*; *see also* Garrick B. Pursley & Hannah J. Wiseman, *Local Energy*, 60 EMORY L.J. 877, 922–31 (2010) (recounting the public choice dynamics at the environmental governance debate in the United States).

348 Bagg, *supra* note 340 ("[I]t is not just a matter of getting ordinary people in the room: in fact, that is often the easy part. The more difficult task is to ensure those rooms are not manipulated by the powerful.").

349 PALAST ET AL., *supra* note 32, at 16. In the United States, as McGarity and Buzbee have researched, within regulatory procedures, the industries are deeply involved in the process, competing unevenly to shape the implementation of the legislative mandate. *See generally* McGarity, *supra* note 308, at 1675–76 ("The affected industries and the general public then provide comments and technical information to the agency during the comment period. . . . The regulated industry actively participates in this process by

acknowledge the uneven resources that each actor brings to the table.[350] Indeed, many scholars have raised concerns about who gets to meaningfully participate in these unbalanced public engagement arenas.[351] For instance, in the U.S. electricity space, scholars have already adverted the role of large organizations such as utilities, consumer protection advocates, clean energy companies,[352] and environmental groups.[353] All these entities might have conflicting positions with energy justice advocates and local communities.[354] For instance, carbon polluters such as fossil fuel power generation companies could seek to delay the procedure by intervening in the public participation process.

Public utilities and industrial customers will surely wield their power to influence if not dominate public engagement proceedings.[355] This is especially relevant in transmission planning procedures, where—given the technical complexity—local communities may find effective participation difficult.[356] Thus, public engagement venues could be controlled by actors whose interests disregard or antagonize local communities.

Even within local communities, there can be conflicting views among the citizens.[357] One cannot presume that with public engagement mechanisms, local participants would contribute with a unified position to perfect the project under scrutiny.[358] Certainly, participation does not imply that multiple local participants' interests convene and express a

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offering information and analysis to the agency staff . . . ."); WILLIAM W. BUZBEE, FIGHTING WESTWAY: ENVIRONMENTAL LAW, CITIZEN ACTIVISM, AND THE REGULATORY WAR THAT TRANSFORMED NEW YORK CITY 31–51 (2014) (tracing the "art of regulatory war" and how parties strategically operate in multiple venues to realize their goals and leverage regulatory vulnerabilities).

350 *See* discussion *supra* Section V.A.2.

351 *E.g.*, Welton & Eisen, *supra* note 29 (representing one of the most exhaustive theoretical and empirical studies on the role of the public in energy proceedings in the United States); PALAST ET AL., *supra* note 32, at 16–19; Dola & Mijan, *supra* note 104, at 3–4; Bagg, *supra* note 340.

352 Welton & Eisen, *supra* note 29, at 349 ("[U]nlike environmental justice, there is an enormous for-profit angle to clean energy advocacy . . . . But these companies are often not attuned to justice concerns related to clean energy, given that their aim is to maximize profits and create economic and job growth.").

353 *Id.* at 348.

354 *Id.*

355 *Id.*; Robert B. Leflar & Martin H. Rogol, *Consumer Participation in the Regulation of Public Utilities: A Model Act*, 13 HARV. J. ON LEGIS. 235, 241 (1976); PALAST ET AL., *supra* note 32, at 19 ("Among the most influential groups . . . are the large industrial and commercial customers.").

356 *See* discussion *supra* Section V.A.2.

357 Campbell & Marshall, *supra* note 176, at 330 ("The concept of community is also problematic in terms of its capacity to exclude."); Mark Tewdwr-Jones & Huw Thomas, *Collaborative Action in Local Plan-Making: Planners' Perceptions of 'Planning through Debate,'* 25 ENV'T & PLAN. B: PLAN. & DESIGN 127, 137–39 (1998).

358 Dola & Mijan, *supra* note 104, at 3.

single stance.[359] In fact, it is possible that participating members focus on their own concerns instead of the collective interest.[360] In this environment, the participation of multiple groups could turn civic engagement into a stark interest competition.[361]

An interesting case within transmission planning is the role of potentially affected landowners. If the land to be crossed by high voltage lines is private, the owners might not have incentives to participate or even contribute to wide agreements. Landowners might want to negotiate with developers themselves, or plainly oppose line development, delaying the whole process.

In summary, many questions remain regarding the representativeness of public engagement mechanisms. Policy designers and regulators must acknowledge the many resource imbalances in participatory procedures and work on incentives that correct or ameliorate these disproportionalities.[362] Only then could a public engagement procedure truly reflect energy democracy principles.

3. Limited Amount of Participation

Once public engagement mechanisms are in place, what happens if participation levels are low? How legitimate or representative are the results if there is low participation?[363] After scrutinizing who gets to participate in public engagement procedures, the next limitation on democratizing transmission planning is what proportion of the objective population engages.[364]

In the near future of U.S. liberalized energy markets, communities might not participate more than they already do.[365] This could be partially due to the frustration caused by procedural barriers to civic engagement. Among those barriers are short deliberation time—when

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[359] *See* RICHARD A. POSNER, LAW, PRAGMATISM, AND DEMOCRACY 387 (2003) ("Conditions[] such as democracy and free markets . . . push [ordinary people] to focus on their material concerns, personal interests, and opinions rather than on spiritual concerns, group interests, and the quest for truth.").

[360] Dola & Mijan, *supra* note 104, at 3.

[361] Emily Y. Soh & Belinda Yuen, *Government-Aided Participation in Planning Singapore*, 23 CITIES 30, 30–31 (2006); *see* Dola & Mijan, *supra* note 104, at 3; Bregje Van Veelen, *Negotiating Energy Democracy in Practice: Governance Processes in Community Energy Projects*, 27 ENV'T POL. 644, 647 (2018).

[362] *See* discussion *supra* Section V.A.2.

[363] Van Veelen, *supra* note 366, at 651 ("[A]ctive participation is often limited, raising questions about leaders' representativeness of the wider community."); BELL ET AL., *supra* note 97, at 776.

[364] The "proportion of the sample that is actively engaged," meaning the number of people who actually "process information or respond" is the most relevant factor to assess the effectiveness of the specific public engagement exercise. Rowe & Frewer, *supra* note 96, at 267.

[365] Welton & Eisen, *supra* note 29, at 365.

periods are too brief to process all the information—or even limited information delivery, which impedes informed judgements.[366]

Emerging studies disentangle the roots of the low participation problem. For instance, people disengage if the issues under consultation are hard to understand or if there is a low procedural fairness perception.[367] These findings reaffirm the idea of using a 'big picture' approach and capacity building to drive meaningful public participation.[368] Indeed, the discussion returns to how to design public engagement mechanisms that ensure balanced participation opportunities for all interested parties.

A recent question is how to build deliberative mechanisms beyond the traditional in-person group meeting. One rapidly spreading idea for enhancing civic engagement is the incorporation of digital platforms.[369] This could increase collaboration and dialogue between a wider spectrum of interested parties.[370]

Nonetheless, there are still many questions about the effectiveness of digital participation. A key concern is that digitalization could disincentivize people to participate by adopting a sit-and-wait approach.[371] Another objection points out the digital divide and the uneven technological competences and resources among participants that could negatively impact the final numbers.[372] Moreover, polarization, one of our biggest societal challenges, could be aggravated through these new venues.[373] Thus, the advantages and setbacks of building digital frameworks for deliberation are still uncertain.

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366 *Id.*; SOVACOOL & DWORKIN, *supra* note 38, at 199 (suggesting examples of procedural barriers).

367 *See* discussion *supra* Section V.B.1.

368 *See* discussion *supra* Section V.B.2.

369 Hollie Russon Gilman & Tiago Carneiro Peixoto, *Digital Participation*, *in* HANDBOOK OF DEMOCRATIC INNOVATION AND GOVERNANCE 105, 105 (Stephen Elstub & Oliver Escobar eds., 2019); Dmitry Epstein et al., *Not by Technology Alone: The 'Analog' Aspects of Online Public Engagement in Policymaking*, 31 GOV'T INFO. Q. 337, 337 (2014); MATTI NELIMARKKA ET AL., CTR. FOR INFO. TECH. RSCH. IN THE INT. OF SOC'Y, COMPARING THREE ONLINE CIVIC ENGAGEMENT PLATFORMS USING THE 'SPECTRUM OF PUBLIC PARTICIPATION' FRAMEWORK 2–3 (2014).

370 *E.g.*, Gene Rowe & John G. Gammack, *Promise and Perils of Electronic Public Engagement*, 31 SCI. & PUB. POL'Y 39, 43–44 (2004); *see* Oren Perez, *Collaborative E-Rulemaking, Democratic Bots, and the Future of Digital Democracy*, DIGIT. GOV'T: RSCH. & PRAC., Jan. 2020, No. 8, at 1, 3–4. *But see* Epstein et al., *supra* note 369, at 342 ("[W]hile information and communication technology is indeed an enabling tool . . . it is not sufficient to ensure effective public participation.").

371 *See* Epstein et al., *supra* note 369, at 340–41 (discussing motivation of laypeople to participate in online government decision-making); Perez, *supra* note 370, at 4 ("The public good feature of deliberative e-rulemaking means that people have a strong incentive to sit on the fence and let others do the job.").

372 Epstein et al., *supra* note 369, at 341–42; Perez, *supra* note 370, at 5.

373 Rowe & Gammack, *supra* note 370, at 51.

4. Geographic Scale of Public Engagement

This Article concentrates on high voltage transmission lines at a regional, interregional, and national scale. In this context, an ongoing discussion revolves around what is the most effective scale for participative venues in energy infrastructure and policymaking. Recent scholarship argues for developing an optimal local regulatory approach, whereas others recognize the importance of broader scales of participation.

Among the authors arguing for localism, Tomain suggests that providing for public participation in the U.S. energy sphere is more effective within local regulations.[374] Indeed, the cost of capital for local-scale project development and speediness of institutional local arrangements would make it more efficient.[375] This is in line with public choice literature arguing that civic engagement through political action at the local level is less costly, encourages participation by addressing free-riders, and narrows the discussion to specific issues.[376] Besides local governments, which still hold influence in the power transmission deployment process in the United States, would be more receptive in attending the issues raised at this level.[377]

Despite these advantages, it is important to prioritize public engagement mechanisms beyond the local scale,[378] as planning high-voltage transmission lines at a regional or national level will involve numerous localities. Consequently, a broader mechanism that encompasses all or a significant part of the line projected could go a long way to expedite the process. As Welton warns, without expanding participation beyond the local level, deliberative energy systems could remain scaled-down experiments.[379]

5. From General Support to Local Opposition

Another challenge to transmission planning is wide support for renewable energy infrastructure, but fierce local opposition to particular siting choices. This paradox has been researched extensively by energy

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374 Tomain, *supra* note 158, at 1140*; see also* David B. Spence, *The Political Economy of Local Vetoes*, 93 TEX. L. REV. 351, 378 (2014) (arguing that local interests are more intense than non-locals, which could imply higher mobilization); Hannah J. Wiseman, *Governing Fracking from the Ground Up*, 93 TEX. L. REV. 29, 34–35 (2014) (commenting on Spence's approach regarding fracking regulatory venues and participation at the local level).

375 Tomain, *supra* note 158, at 1144.

376 Pursley & Wiseman, *supra* note 347, *passim*; Tomain, *supra* note 158, at 1144 (summarizing and commenting the analysis of Pursley and Wiseman).

377 Pursley & Wiseman, *supra* note 347, at 940–46.

378 Welton, *Grasping for Energy Democracy*, *supra* note 27, at 628 ("[T]he activist community clearly recognizes the benefits of organizing at a scale larger than the local, and of attempting to have more plural voices injected into major policy debates over the future of our energy system").

379 *Id.* at 620.

scholars in recent years.[380] The usual explanation to this phenomenon is a Not-In-My-Backyard (NIMBY) attitude, where people recognize the need to expand the electricity grid but oppose the local installation of transmission lines that cut across their neighborhoods.[381] Scholars critique this oversimplification, suggesting that locals may have stronger preferences about the siting of energy infrastructure based on their values.[382] Indeed, the inhabitants of an specific locality care more intensely about the impacts and risks of infrastructure to be placed in their neighborhood.[383]

This dilemma of whether and how to incorporate different local interest preferences into decision-making processes is essential to consider.[384] Public engagement mechanisms should recognize these intensities in preference as much as possible, while striving for a balanced procedure that is not overtly burdensome. A balanced procedure would entail giving due consideration to local concerns while also avoiding the exclusion of infrastructure solely based on local opposition preferences.[385] Certainly, the public interest behind transmission infrastructure must shape a regulatory framework that enhances rather than obstructs its development.

C. Normative Elements

Normative considerations also weigh in favor of promoting the meaningful participation of potentially affected populations in the decision-making process.[386] These differ from the prior instrumental and substantial elements by embracing more ambitious goals to reshape the role of public engagement.[387] I argue that normative elements push for a deeper understanding of public participation by encouraging a more comprehensive model of meaningful citizen involvement.

In this section I reflect on two issues pertaining to the democratization of the transmission planning sphere. The first is how affected communities and citizens engage in the development of

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380 Jørgen K. Knudsen et al., *Local Perceptions of Opportunities for Engagement and Procedural Justice in Electricity Transmission Grid Projects in Norway and the UK*, 48 LAND USE POL'Y 299, 299 (2015).

381 Komendantova & Battaglini, *supra* note 30, at 225; *see* Maarten Wolsink, *Wind Power and the NIMBY-Myth: Institutional Capacity and the Limited Significance of Public Support*, 21 RENEWABLE ENERGY 49, 56 (2000) (explaining that the NIMBY approach is "a very poor explanation for the opposition against wind power developments").

382 Spence, *supra* note 374, at 378 & n.129; Wolsink, *supra* note 381, at 56.

383 Spence, *supra* note 374, at 412.

384 *Id.* at 378.

385 *See* discussion *infra* Section V.C.1.

386 *See* Ciupuliga & Cuppen, *supra* note 36, at 230 (discussing instrumental, substantive, and normative elements in the public engagement process).

387 *Id.* at 231 ("[C]itizens have the right to be involved in planning projects that affect them and their living conditions.").

transmission infrastructure beyond the deliberative process itself. The second is a call to reconsider the areas where transmission infrastructure is planned as more than a dot on a map.

1. More Than Spectators

Within the ideals of energy democracy lies the need for new theoretical perspectives that redefine transmission planning. Indeed, to achieve a timely development of critical transmission infrastructure, there must be a change in the conception of the role of public citizens.[388] In this context, scholars from many disciplines are working to address the most relevant non-technical hurdle in the energy transition: public opposition.[389]

The proposals developed throughout this Article embrace a progressive development of public engagement mechanisms.[390] Certainly, the vision behind these proposals is to increase civic engagement and democratic legitimacy of transmission projects.[391] Deliberation allows public scrutiny as well as broader influence of transmission planning decision-making.[392] Local communities must be more than spectators.[393]

Energy projects are more likely to be accepted by communities if projects avoid harms where possible and if people access deliberative mechanisms, thereby increasing the perception of fair decision-making.[394] Consequently, to increase procedural fairness there must be

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[388] *Id.* at 231 ("The challenge is to engage in a true dialogue between stakeholders about the project, its design and conditions, in order to find a robust outcome that can be supported by all.").

[389] SOVACOOL, *supra* note 137, at 221 ("From an energy justice [and democracy] perspective, due process seeks to ensure stakeholder participation in the energy policymaking process. . . . [C]ommunities must be involved in deciding about projects that will affect them; they must be given fair and informed consent; environmental and social impact assessments must involve genuine community consultation . . . .").

[390] *See generally* Burke & Stephens, *supra* note 129, at 42; Klass, *supra* note 68, at 544–45; Brandon Gerstle, *Giving Landowners the Power: A Democratic Approach for Assembling Transmission Corridors*, 29 J. ENV'T L. & LITIG. 535, 538 (2014).

[391] Zillman et al., *supra* note 106, at 428 ("Integrating with a community can mitigate negative impacts and ensure that the benefits of the project outweigh any negative results.").

[392] Komendantova & Battaglini, *supra* note 30, at 229 ("[I]nhabitants would like to understand better what are the reasons and what are the alternative options of a given project and embed this information into the decision-making process.").

[393] Campbell & Marshall, *supra* note 176, at 327 ("[P]articipants should not see themselves as engaged in a battle of interests in which their role is to champion a particular cause, rather they should act as deliberators being prepared to learn from the input of others."); Rossi, *supra* note 330, at 205.

[394] Liu et al., *supra* note 273, at 7; *see also* Lee & Abbot, *supra* note 104, at 83 ("[P]ublic participation might be used to improve procedural legitimacy, tempering unease with the democratic condition of environmental decision-making."); Komendantova & Battaglini, *supra* note 30, at 225; Burby, *supra* note 34, at 44.

a legal reform to increase public influence in decision-making.[395] In other words, the legitimacy of transmission planning can be linked to robust public engagement mechanisms that incorporate procedural energy justice and democracy concerns.[396]

The all-affected-parties principle enriches the foundations of why these communities should be involved in the planning process. Basically, this principle suggests that all the persons affected by a decision should be provided opportunities to be included in the decision making process.[397] This principle has had a pervasive influence on democratic theory in recent decades.[398] Among the many fine-tuned approaches to this principle, one potentially applicable to transmission planning issues is territoriality.[399] This implies that transmission planning should attend the concerns of people potentially affected by the projected lines within clear territorial boundaries. Thus, deliberative mechanisms should remain vigilant of the public interest involved in the timely development of power transmission.

Despite the many practical configurations of civic participation, these measures should not grant veto power to their participants.[400] This would hinder critical infrastructure development. Indeed, given the time constraints of climate change, it does not seem reasonable to concede the final veto power of any project to a group of stakeholders.[401]

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395 *But cf.* Liu et al., *supra* note 273, at 7 ("[A]lthough public participation in decision making has been widely considered beneficial for developing more socially acceptable renewable energy projects, our results suggest that involving people in decision making and particularly in influencing major aspects, may not always enhance project acceptability."); *see* Healey, *supra* note 285, at 213 ("[T]he key to effective institutional design includes . . . finding ways of conducting discussion and shifting decisional power as close as possible to those who will experience, and 'live with' the consequences of strategic choices.").

396 *E.g.,* Catherine Gross, *Community Perspectives of Wind Energy in Australia: The Application of a Justice and Community Fairness Framework to Increase Social Acceptance*, 35 ENERGY POL'Y 2727, 2736 (2007) ("The empirical research found that the procedural justice principles . . . *were* considered important by interviewees in the case study. Interviewees came up with their own suggestions for improvements to the process to confer greater legitimacy on the outcome and these were in line with the general principles of procedural justice." (emphasis in original)).

397 Mark E. Warren, *Equity, Social Justice, and the All-Affected Principle, in* EMPOWERING AFFECTED INTERESTS: DEMOCRATIC INCLUSION IN A GLOBALIZED WORLD 38, 40–41 (Archon Fung & Sean W. D. Gray eds., 2024); Robert E. Goodin, *Enfranchising All Affected Interests, and Its Alternatives*, 35 PHIL. & PUB. AFFS. 40, 47–51 (2007).

398 David Owen, *Constituting the Polity, Constituting the Demos: On the Place of the All Affected Interests Principle in Democratic Theory and in Resolving the Democratic Boundary Problem*, 5 ETHICS & GLOB. POL. 129, 130 (2012).

399 Goodin, *supra* note 397, at 64.

400 Klass et al., *supra* note 16, at 1035 ("A national grid [in the United States] requires a federalized planning process that includes local and state stakeholders but does not allow them full veto authority").

401 Bishop & Davis, *supra* note 285, at 16 ("Is it participation when government seeks citizen views but still makes an unpalatable decision? Or does meaningful participation

This would only perpetuate some of the current problems arising from a closed transmission planning deliberation.[402]

2. Changing Perspectives: From Sites to Places

A second normative consequence of this analysis is that public engagement mechanisms must embrace a reconstructive vision of localities. As Devine-Wright puts it, "[l]ocalities are not just 'sites' that can be objectively assessed and altered by experts but are 'places' that residents feel emotionally attached to, and which can become an important element of their sense of identity."[403] This idea resounds with scholars critiquing the vagueness of NIMBY as a comprehensive explanation for any local opposition[404] in energy generation projects.[405]

We must develop a comprehensive understanding of localities when planning for energy infrastructure, including a deeper analysis of citizens' concerns by institutional decisionmakers. As a result, throughout this Article I echo the call to break silos and consider localities as more than physical data to feed into a planning algorithm.[406]

Literature on the opposition to energy infrastructure reflects this idea and agrees that policy designers and energy companies must work on developing infrastructure and proceedings that enhance the development of places in alignment with their local values.[407] This would increase support and improve conflict management, respectful of local emotional considerations and sense of belonging.[408] In the end, a better understanding of the underlying dynamics of localities and place identity could make a long way to avoid antagonistic decision-making.[409]

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require a community veto over policy choices? And if so, who defines the relevant community?").

402 *See* discussion *supra* Section IV.D.4.

403 Cotton & Devine-Wright, *supra* note 29, at 24.

404 Gross, *supra* note 396, at 2728; Butler & Demski, *supra* note 24, at 660 ("This view of public engagement with energy developments [(NIMBYism)] has been widely critiqued, with several authors demonstrating that responses are rooted in a much broader range of concerns."). *See* discussion *supra* Section V.B.5.

405 *E.g.*, Wolsink, *supra* note 381, at 51–54; Gross, *supra* note 396, at 2727–28; Haggett, *supra* note 27, at 298; Patrick Devine-Wright, *Rethinking NIMBYism: The Role of Place Attachment and Place Identity in Explaining Place-Protective Action*, 19 J. CMTY. & APPLIED SOC. PSYCH. 426, 430–32 (2009); Jeffrey Swofford & Michael Slattery, *Public Attitudes of Wind Energy in Texas: Local Communities in Close Proximity to Wind Farms and Their Effect on Decision-Making*, 38 ENERGY POL'Y 2508, 2508–10 (2010).

406 Welton, *supra* note 21, at 2373–82.

407 Devine-Wright, *supra* note 405, at 437.

408 *Id.*

409 Devine-Wright, *supra* note 31, at 24.

VI. RESEARCH AGENDA

This Article is a first exploration of incorporating energy democracy concerns into power transmission planning. Consequently, this piece only sets the foundations of a new theoretical background for democratizing the transmission planning sphere. More research is needed to explore the consequences of this approach through public engagement mechanisms in the United States and abroad. Therefore, I finalize this piece by briefly touching upon three of the most pressing issues on which further scholarship could be decisive.

A. Case Analysis and Comparative Research

There is a shortage of legal energy scholarship studying civic engagement cases within the transmission planning sphere from a local, state, regional, national, and comparative perspective. Certainly, by analyzing specific regulatory frameworks it is possible to assess both the particular advantages and setbacks of incorporating broader civic engagement into transmission planning. Only then could more concrete conclusions be drawn for better understanding and improving of power transmission regulations procedures.

With this lack of case-based analysis, there is also scarce research analyzing Global South experiences.[410] In fact, the limited literature on the Global South gets even more abbreviated when considering transmission planning and public engagement mechanisms. Accordingly, it is up to the academy to fill the gaps within the clean energy justice framework.[411]

To truly comprehend planning system reforms and achieve a sustainable transition it is essential "to track how opportunity structures are actually exploited, and not simply to refine methodologies for deliberative and inclusive participation."[412] Consequently, only further research into different regulatory frameworks, within the United States and abroad, would shed light on deliberative mechanisms addressing the concerns presented in this Article.[413]

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410 Johanna Höffken et al., *Energy Transitions in the Global South: Towards Just Urgency and Urgent Justice*, *in* DILEMMAS OF ENERGY TRANSITIONS IN THE GLOBAL SOUTH: BALANCING URGENCY AND JUSTICE 154, 154–60 (Ankit Kumar et al. eds., 2021).

411 Welton & Eisen, *supra* note 29, at 368.

412 Richard Cowell & Susan Owens, *Governing Space: Planning Reform and the Politics of Sustainability*, 24 ENV'T AND PLAN. C: GOV'T & POL'Y 403, 418 (2006).

413 RAPHAEL J. HEFFRON, *Energy Law Research and Conclusions, in* ENERGY LAW: AN INTRODUCTION 91, 91 (2d ed. 2021) ("Comparative energy studies are one of the main research methods in the study of energy law.").

B. Legal Technique

There is a need for further research on how to incorporate deliberative venues into transmission planning from a strict legal perspective. Certainly, technical experts and institutional planners would not look at social impacts and other concerns raised by citizens and local communities unless they were required to. Thus, the role of law in shaping the information that decisionmakers will have to consider is essential. This Article suggested many reasons from a legal and policy perspective to incorporate public engagement mechanisms in transmission planning. These legal entitlements that I suggest throughout the Article will hopefully shape future planning decisions.

Thus, scholars should assess the most feasible legal techniques to reform and incorporate public engagement mechanisms into planning processes around the world. As discussed here, a transition to participative planning mechanisms can only be operationalized through exhaustive studies dealing with the structural challenges posed by each legal framework. Performing this analysis in specific jurisdictions is vital, which speaks directly to the need of further case analysis.[414]

C. Experimentalist Approaches to the Energy Transition

The role of experimentalism has not been sufficiently researched within transmission planning and public engagement mechanisms. Transmission planning involves a lot of uncertainties,[415] and experimentalism can be a suitable regulatory technique for complex and variable regulatory spaces such as the energy transition sphere.[416] Moreover, experimentalism aims to materialize on-the-ground deliberation in decision-making procedures to strengthen decisions based on increased accountability at the local level.[417]

Accordingly, it might be interesting to explore the many ways in which experimentalist governance might enhance the transmission planning procedure itself. For instance, experimentalism could accommodate learning by monitoring transmission planning regulations, by shortening the timeline of deliberations and

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414 *See* discussion *supra* Section V.A.1.

415 DONOHOO & MILLIGAN, *supra* note 16, at 18 ("Given these uncertainties and the complexity of transmission expansion planning, models are needed to help inform and guide decision-making processes.").

416 SABEL ET AL., *supra* note 24, at 7–9; *e.g.*, Michiel A. Heldeweg, *Legal Regimes for Experimenting with Cleaner Production—Especially in Sustainable Energy*, 169 J. CLEANER PROD. 48, 59 (2017) ("[S]ustainability concerns, such as climate change, call for major innovations in technology and governance . . . .").

417 CHARLES F. SABEL & DAVID G. VICTOR, FIXING THE CLIMATE: STRATEGIES FOR AN UNCERTAIN WORLD 2 (2022); Michael C. Dorf & Charles F. Sabel, *A Constitution of Democratic Experimentalism*, 98 COLUM. L. REV. 267, 288–89 (1998).

institutionalizing the reviewing of decisions.[418] Furthermore, when deciding about the implementation of specific public engagement mechanisms in the energy sphere, experimentalism has a say about the industries' role.[419] For instance, experimentation would allow utilities to test and improve different deliberative venues and practices before widely imposing a specific method that would later have to be reversed at a greater cost.[420]

In consequence, I urge more research into the many implications of experimentalism and public engagement mechanisms within transmission planning, particularly since experimentalist governance challenges and reimagines the structure of democratic enterprises.[421] In the end, new scholarship will be required to elucidate the necessary regulatory and legal changes to acknowledge local concerns, which "will lead to changes in governance that spark new forms of democratic engagement."[422]

VII. CONCLUSION

"[D]eliberation lessens the collective confusions of mass democracy, creating a shared public space for public opinion."[423]

Current approaches to power transmission planning in the United States do not fully grasp the importance of involving all stakeholders and local communities in the decision-making process. This lack of recognition might be caused by a procedural disconnection between the social and technical concerns of energy transition. If we are to develop new institutional and regulatory frameworks to face the many challenges of a just energy transition, energy democracy and the underlying principles of public engagement mechanisms must be considered.

One of the essential premises of this Article is that if institutional arrangements for energy regulations and transmission planning, based solely on efficiency grounds, do not engage in a broad deliberative process, their legitimacy must be questioned.[424] Certainly, if transmission planning procedures and their later implementation do not reflect our democratic ideals, then we should rethink them. Hence, transmission planning must consider potentially affected communities. As Young puts it in her novel *Power Over People* (1973), "the whine of electricity passing overhead and the barred shadow of cold steel across

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418 SABEL & VICTOR, *supra* note 417, at 72.
419 Welton, *Decarbonization in Democracy*, *supra* note 98, at 106.
420 *Id.*
421 SABEL & VICTOR, *supra* note 417, at 150.
422 *Id.*
423 Fishkin & Luskin, *supra* note 300, at 293.
424 Fiorino, *supra* note 96, at 240.

the fields. These become part of us."[425] It is our responsibility then, to ensure local communities' concerns are properly considered through deliberative planning procedures.

In this piece I delved into energy democracy and how striking a balance between technical and social issues could allow transmission planning to redesign our infrastructure for the energy transition, both responsibly and expeditiously. Indeed, incorporating social considerations through public engagement in transmission planning can be transformational. This would enhance their efficacy by bolstering their democratic legitimacy and procedural justice. With this Article I aim to reconcile the fast-tracking of transmission infrastructure planning with public engagement that addresses the procedural disconnection of energy policy making and displaced local communities.[426]

Energy transition requires greater levels of public participation in the planning process. Greater citizen engagement will help achieve a just and timely transition by potentially reducing social friction. However, the challenges of ensuring citizen participation across energy's governing institutions are many.[427] Ultimately, democratizing the energy governance arena will not be easy, but the effort invested in achieving it will be worthwhile.

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425 YOUNG, *supra* note 29, at 188.

426 Devine-Wright, *supra* note 31, at 24.

427 Welton & Eisen, *supra* note 29, at 365.