Sprawl and Climate Catastrophe: Normative Challenges in Zoning for Decarbonization

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I. INTRODUCTION

Climate change "challenges the capacity of law,"[1] and invites opportunities for destabilization by increasing the risk of disasters both "normal" and "catastrophic."[2] Like the September 11, 2001 terrorist attacks, the financial collapse of 2008, and the global COVID-19 pandemic, the warnings and predictions by knowledgeable observers

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1. R. Henry Weaver & Douglas A. Kysar, *Courting Disaster: Climate Change and the Adjudication of Catastrophe*, 93 NOTRE DAME L. REV. 295, 296 (2017); *cf.* Christopher R. Rossi, *The Nomos of Climate Change and the Sociological Refugee in A Sinking Century*, 50 GEO. WASH. INT'L L. REV. 613, 635 (2018) ("Climate-induced migration confronts fundamental issues of sovereignty as encased in the shell of statehood.").

2. Weaver & Kysar, *supra* note 1, at 296.

regarding the probability of catastrophic harm are "not easily assimilated into our safety protocols and risk models," but occupy a space where decisionmakers are required to make difficult cost benefit analyses on the strength of complex information where positive action necessitates its own difficult cost.[3]

Effectively stabilizing climate change requires a reduction of U.S. greenhouse gas (GHG) emissions by sixty to eighty percent by 2050,[4] and consequences of failing to achieve requisite GHG emissions through rapid decarbonization are immense.[5] "[W]e have a narrow window of time—the next decade—to make the bold decisions needed to change our climate trajectory and reach a turning point," according to Deloitte Deputy CEO Alicia Rose.[6] The reform of zoning and land use policies is of particular importance in ensuring GHG emission reduction goals are met and catastrophic climate fallout is avoided. However, significant tensions between longstanding zoning policy and avenues of reform serve as an obstacle in achieving decarbonization goals. How can the policy reforms necessary to avoid climate catastrophe be achieved without upsetting norms and preserving institutional legitimacy?

This Comment first highlights the importance of centering zoning reform in decarbonization policy and considers the role of the American zoning regime in the nation's GHG emission output. Next, it discusses normative difficulties in the use of preemption and administrative agencies to reform zoning. Finally, this Comment emphasizes the necessity in developing a normative framework to ensure the legitimacy of reforming zoning policy while still achieving decarbonization goals.

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3. Benjamin Ewing & Douglas A. Kysar, *Prods and Pleas: Limited Government in an Era of Unlimited Harm*, 121 YALE L.J. 350, 352-53 (2011) (using the opacity in mechanistic understanding amongst climate scientists for ocean acidification as an example of this, where effects are readily understood but causes are not; resulting in certainty amongst policymakers that something *should* be done and uncertainty about *what* should be done).

4. REID EWING ET AL., GROWING COOLER: THE EVIDENCE ON URBAN DEVELOPMENT AND CLIMATE CHANGE 110 (Nancy H. Stewart ed., 2007), chrome-extension://bdfcnmeidppjeaggnmidamkiddifkdib/viewer.html?file=https://www.nrdc.org/sites/default/files/cit_07092401a.pdf.

5. *See* DELOITTE, THE TURNING POINT: A NEW ECONOMIC CLIMATE IN THE UNITED STATES 6 (2022), https://www2.deloitte.com/us/en/pages/about-deloitte/articles/economic-cost-climate-change-turning-point.html.

6. *Deloitte Report: Inaction on Climate Change Could Cost the US Economy $14.5 Trillion by 2070*, DELOITTE (Jan. 25, 2022), https://www2.deloitte.com/us/en/pages/about-deloitte/articles/press-releases/deloitte-report-inaction-on-climate-change-could-cost-the-us-economy-trillions-by-2070.html.

II. SPRAWL, ZONING, AND DECARBONIZATION

A. The Impact of Climate Change on the Urban Environment

Urban developments—namely residential housing along seashores, commercial and industry facilities, and their connective transportation networks—are particularly susceptible to the negative consequences of climate change's encroaching consequences.[7] Substantial swaths of urban communities located in the nation's coastal zones, many of which are the most populous and population-dense localities in the nation,[8] will continue to be subject to rising sea level submersion.[9] The United States, one of the most at risk countries for sea level rise, stands to lose over one thousand towns and cities to coastal submersion by 2100.[10]

Accompanying risks with long-term sea level rise include erosion-caused infrastructural damage, compromised drinking water supply, and severe floods.[11] Warmer ocean temperatures are likely to increase and

7. Alice Kaswan, *Climate Adaptation and Land Use Governance: The Vertical Axis*, 39 COLUM. J. ENV'T L. 390, 400 (2014) (citing U.S. GLOB. CHANGE RSCH. PROGRAM, GLOBAL CLIMATE CHANGE IMPACTS IN THE UNITED STATES 47, 62, 103 (2009); ERIC S. BLAKE ET AL., NAT'L HURRICANE CTR., TROPICAL CYCLONE REPORT: HURRICANE SANDY 9, 16-18 (2013), http://www.nhc.noaa.gov/2012atlan.shtml.).

8. *Id*. ("[O]ver half of the U.S. population lives within the 17% of land that is coastal, with some states maintaining over half of their population in the coastal zone."); Blake Hudson, *Coastal Land Loss and the Mitigation-Adaptation Dilemma: Between Scylla and Charybdis*, 73 LA. L. REV. 31, 37 (2012) (citing KRISTEN M. CROSSETT ET AL., NAT'L OCEANIC & ATMOSPHERIC ADMIN., POPULATION TRENDS ALONG THE COASTAL UNITED STATES: 1980-2008 6 (2004), http://oceanservice.noaa.gov/programs/mb/pdfs/coastal_pop_trends_complete.pdf.); *see also* Julia Toscano, *Climate Change Displacement and Forced Migration: An International Crisis*, 6 ARIZ. J. ENV'T L. & POL'Y 457, 465 (2015) ("Florida, Louisiana, and New York have been identified as the top three states with risk to properties along coastlines.").

9. Kaswan, *supra* note 7, at 399-400 (citing U.S. CLIMATE CHANGE SCI. PROGRAM, IMPACTS OF CLIMATE CHANGE AND VARIABILITY ON TRANSPORTATION SYSTEMS AND INFRASTRUCTURE: GULF COAST STUDY, PHASE I 3-18-3-23 (2008), http://downloads.global change.gov/sap/sap4-7/sap4-7-final-all.pdf); U.S. GLOB. CHANGE RSCH. PROGRAM, GLOBAL CLIMATE CHANGE IMPACTS IN THE UNITED STATES 62 (2009), http://www.globalchange.gov/what-we-do/assessment/previous-assessments/global-climatechange-impacts-in-the-us-2009); Robert J. Nicholls et al., *Sea-Level Rise and Its Possible Impacts Given a 'Beyond 4 C World' in the Twenty-First Century*, 369 PHIL. TRANS. R. SOC. 161, 162 (2011).

10. *See, e.g*., Toscano, supra note 8, at 465 (citing Benjamin Strauss, *Rapid Accumulation of Committed Sea-Level Rise From Global Warming*, 101 PROC. NAT'L ACAD. SCI. OF THE U.S. at 13700 (2014), http://www.pnas.org/content/110/34/13699.full.pdf.).

11. Kaswan, *supra* note 7, at 400 (citing U.S. GLOB. CHANGE RSCH. PROGRAM, GLOBAL CLIMATE CHANGE IMPACTS IN THE UNITED STATES 62-64 (2009), http://www.globalchange.gov/what-we-do/assessment/previous-assessments/global-climate-change-impacts-in-the-us-2009).

intensify hurricane and storm intensity, exacerbating the negative consequences of higher regional flooding instances.[12]

The effects of climate change are likely to trigger mass human migration globally, with an estimated displacement of 50 million to 200 million people by 2050.[13] Crucially, most migration will involve net rural-to-urban flows,[14] further stressing the density and capacity of metropolitan areas. Large segments of the current U.S. population will be forced to flee and relocate to new areas;[15] an estimated $1.5 trillion in residential real estate in just fifteen populous metropolitan areas will be exposed to storms.[16] Climate change, already a contributing factor in the mass flow of non-national migrants arriving at the southern border,[17] is likely to further incentivize and compound future mass migration to the United States.[18]

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12. *See id*. at 476 n.29 (citing U.S. GLOB. CHANGE RSCH. PROGRAM, GLOBAL CLIMATE CHANGE IMPACTS IN THE UNITED STATES 35-36, 149 (2009), http://www.globalchange.gov/what-we-do/assessment/previous-assessments/global-climate-change-impacts-in-the-us-2009); Toscano, *supra* note 8, at 466 ("If climate change is not mitigated, storms like Hurricane Sandy and the damage caused by them will be more commonplace.").

13. Mostafa Mahmud Naser, *Climate Change, Environmental Degradation, and Migration: A Complex Nexus*, 36 WM. & MARY ENV'T L. & POL'Y REV. 713, 713 (2012).

14. *See* Satchit Balsari et al., *Climate Change, Migration, and Civil Strife*, 7 CURRENT ENV'T HEALTH REPS. 404, 409-10 (2020) ("While transient shocks like the nationwide lockdown in India amidst the COVID-19 pandemic resulted in return migration to rural areas, we find that the current literature suggests overwhelming net rural to urban migration.").

15. *See* Toscano, *supra* note 8, at 465 (citing JOHN WALSH ET AL., CLIMATE CHANGE IMPACTS IN THE UNITED STATES: THE THIRD NATIONAL CLIMATE ASSESSMENT 45 (2014), http://s3.amazonaws.com/nca2014/low/NCA3_Full_Report_02_Our_Changing_Climate_LowRes.pdf?download=1.).

16. *Id*. (citing Sandra Fatorić, *Migration As A Climate Adaptation Strategy In Developed Nations*, THE CTR. FOR CLIMATE AND SEC. 1 (Nov. 25, 2014), https://climateandsecurity.files.wordpress.com/2012/04/migration-as-a-climate-adaptation-strategy-in-developed-nations_briefer-24.pdf); *id*. at 466 (citing FORBES TOMPKINS ET AL., SEA LEVEL RISE AND ITS IMPACT ON MIAMI-DADE COUNTY 2 (2014), http://www.wri.org/sites/default/files/sealevelrise_miami_florida_factsheet_final.pdf) ("Studies on climate change effects indicate that Florida is the most vulnerable state in the nation to sea level rise, with Miami having the largest amount of exposed assets and the fourth-largest population vulnerable to sea level rise in the world.").

17. *See* Sarah Bermeo & Mary Speck, *How Climate Change Catalyzes More Migration in Central America*, U.S. INST. OF PEACE (Sept. 21, 2022), https://www.usip.org/publications/2022/09/how-climate-change-catalyzes-more-migration-central-america#:~:text=People%20displaced%20due%20to%20climate,of%20viable%20internal%20migration%20options ("Droughts were likely a key driver of large increases in family migration from Honduras and Guatemala to the United States in 2018 and 2019."); Balsari et al., *supra* note 14, at 407 ("[The south] border [of the U.S.], historically the final destination and hopeful push-off point . . . for many [sic] [Central Americans] attempting to escape the worsening conditions to the south . . .").

18. *See*, *e.g.*, Balsari et al., *supra* note 14, at 410.

Significant costs to the national economy will also follow from current and impending damage sustained in the urban environment,[19] particularly to the diversion of investment into securing coastal resiliency.[20] According to a report by Deloitte, the U.S. economy stands to lose $14.5 trillion over the next fifty years, representing a lifetime income loss of nearly $70,000 in present-value terms.[21] The United States stands to lose nearly 900,000 jobs every year over the next fifty years due to climate change.[22]

B. Why is Addressing Climate Change Through Land Use Policy So Crucial?

Rapid and successful decarbonization efforts are necessary to avoid projected human losses of climate change.[23] While national policy discussions with respect to vehicle efficiency innovations and fuel alternatives are active, little to no attention has been placed on reducing the number of miles traveled by vehicles and the subsequent impact on reducing GHG emissions that would follow.[24] This is a crucial error, as GHG emissions from vehicles are immense, comprising twenty-seven percent of total GHG emissions in 2020, the largest portion of any sector.[25] The large share of GHG emissions attributable to the transportation sector, combined with its limited gains in energy

("A recent model . . . estimates that the number of migrants arriving at the US border from Central America and Mexico may rise to 1.5 million a year by 2050, from about 700,000 a year in 2025, in the absence of climate mitigation or adaptation strategies.").

19. *E.g.*, DELOITTE, THE TURNING POINT: A NEW ECONOMIC CLIMATE IN THE UNITED STATES 6 (2022), https://www2.deloitte.com/us/en/pages/about-deloitte/articles/economic-cost-climate-change-turning-point.html.

20. *See*, *e.g.*, Nicholls et al., *supra* note 9, at 163 ("[T]he main consequence of sea-level rise is the diversion of investment into new and upgraded coastal defences and other forms of adaptation (e.g. flood-warning systems).").

21. DELOITTE, *supra* note 5, at 6 ("Failing to take sufficient action could result in economic losses to the US economy of $14.5 trillion (in present-value terms) over the next 50 years. In this climate-damaged future, the economy would lose nearly 4% of GDP—$1.5 trillion in 2070 alone.").

22. *Id*. at 17.

23. *Id*. at 6 ("Deloitte's analysis shows . . . [through] rapid decarbonization, [the US] [sic] could avoid much of these economic losses and take advantage of entirely new economic opportunities that are likely to emerge.").

24. REID EWING ET AL., GROWING COOLER: THE EVIDENCE ON URBAN DEVELOPMENT AND CLIMATE CHANGE 110 (Nancy H. Stewart ed., 2007), chrome-extension://bdfcnmeidppjeaggnmidamkiddifkdib/viewer.html?file=https://www.nrdc.org/sites/default/files/cit_07092401a.pdf.

25. *E.g.*, *Fast Facts on Transportation Greenhouse Gas Emissions*, U.S. ENV'T PROT. AGENCY, https://www.epa.gov/greenvehicles/fast-facts-transportation-greenhouse-gas-emissions (Aug. 28, 2023).

efficiency,[26] means other sectors are not likely able to "eat the costs" of net rising transportation emissions.[27] Efficiency gains in alternative fuel sources, namely electricity, hydrogen, and biofuel options, while potentially playing an important role in vehicle emission reduction, most likely do not fully meet necessary reduction goals[28] due to their tendency to merely shift transportation GHG emissions to other sectors of the economy,[29] the low rate of alternative fuel vehicle adoption, and other limitations including the rate of progress and practical limitations in those technologies.[30] And while fuel efficient automobiles entering the national vehicle fleet are forecasted to increase fuel economy overall, the projected rise in vehicle CO2 emissions and vehicle miles traveled (VMT) in that same period far outpaces any resulting carbon emission reductions.[31] While efficiency innovations in the transportation sector continue,[32] reductions in travel demand, which is dependent on gains in sustainable development policy,[33] will be crucial to meeting carbon emission

26. *E.g.*, EWING ET AL., *supra* note 4, at 51 ("[C]urrent policy proposals on vehicle technology and fuels would leave passenger vehicle CO2 emissions well above 1990 levels in 2030, significantly off course for meeting the 2050 target.").

27. *Id.*

28. *Id.*

29. *Id.* ("Since electricity and hydrogen are energy carriers, they result in GHG savings only if their production and transportation processes are relatively more carbon efficient than the current approach. Thus, for electricity or hydrogen to result in GHG reductions, they must be generated via low-emitting processes. Three primary energy sources could generate low-GHG electricity or hydrogen. First, renewable sources such as solar, biomass, and wind have significant but limited potential. Although these sources could potentially provide a large amount of energy, issues such as intermittent generation and local resource availability present difficulties. Second, nuclear power has great potential as a low-GHG energy source, but faces significant cost and political barriers. Third, carbon capture and sequestration (CCS)—in which CO_2 is removed from a coal (or other) power plant smokestack and injected underground into geological formations such as oil fields, gas fields, or saline formations—offers the possibility of continued use of coal resources with a much improved GHG profile. There is active research on CCS to assess costs, permanence, and storage capacity. Each of these three low-GHG energy sources holds significant promise but can offer no guarantees.").

30. *Id.*

31. *Id.* at 52; *cf.* Alejandro E. Camacho & Nicholas J. Marantz, *Beyond Preemption, Toward Metropolitan Governance*, 39 STAN. ENV'T L.J. 125, 181 (2020) (citing Amber E. Crabbe et al., *Local Transportation Sales Taxes: California's Experiment in Transportation Finance*, 25 PUB. BUDGETING & FIN. 91 (2005)) ("California has attempted to secure transportation-sector emissions reductions via standards for vehicle fuel economy, low-carbon fuel, and electric vehicles.").

32. *See*, *e.g.*, Brad Plumer, *Cars in the U.S. are More Fuel-Efficient than Ever. Here's How It Happened.*, WASH. POST, (Dec. 13, 2013), https://www.washingtonpost.com/news/wonk/wp/2013/12/13/cars-in-the-u-s-are-more-fuel-efficient-than-ever-heres-how-it-happened/.

33. *See*, *e.g.*, Grant Glovin, *A Mount Laurel for Climate Change? The Judicial Role in Reducing Greenhouse Gas Emissions from Land Use and Transportation*, 49 ENV'T L. REP. NEWS

reduction goals.[34] The very GHG emissions resulting from high travel demand, while not solely resulting from average citizens, are in large part a result of the high rate of automobile use in the U.S., itself a result from the pattern of land use development prevalent in most of the country.[35] More than fifty percent of U.S. GHG emissions attributable to the transportation sector were emitted by passenger cars, light-duty trucks, and motorcycles in 2020.[36] This is in large part attributable to the low-density, "sprawling" form of development prevalent in much of the nation.[37]

While the phenomenon of "sprawl" as a spatial pattern of development does not bare an entirely uniform definition,[38] it is often characterized by: (1) unplanned, scattered development arranged in a disconnected, "leapfrog" pattern; (2) prevalent commercial strip development; and (3) low-density, often single-use expanses of land.[39] Sprawl development patterns necessarily alter urban transportation infrastructure as well, consequently associating sprawl with low rates of public transport investment and high rates of automobile dependency.[40]

& ANALYSIS 10938, 10939 (2019) (citing John W. Neff, *Estimating Values of the Transit Land-Use Multiplier Effect From Published Federal Highway Administration and Federal Transit Administration Data*, PROC. OF THE 54TH ANN. TRANSP. RSCH. F. 196, 196 (2013); Edward L. Glaeser, *Green Cities, Brown Suburbs*, CITY J., Winter 2009, https://www.city-journal.org/html/green-cities-brown-suburbs-13143.html) ("Greater transit use would have multiplicative benefits in reducing VMT, and thus GHG emissions, but is impossible to achieve without high residential density.").

34. EWING ET AL., *supra* note 4, at 51.

35. *See*, *e.g.*, Glovin, *supra* note 33, at 10938-39 ("Sprawl leads to higher VMT by pushing places further apart, lengthening commutes and other trips.").

36. U.S. ENV'T PROT. AGENCY, FAST FACTS: US TRANSP. SECTOR GREENHOUSE GAS EMISSIONS 1990-2021 2 tbl. (2023).

37. *See*, *e.g.*, *Urban Sprawl Responsible for 30% of All Greenhouse Gases,* TUDELFT (Nov. 2015), https://www.tudelft.nl/en/architecture-and-the-built-environment/research/research-stories/urban-sprawl-responsible-for-30-of-all-greenhouse-gases ("Urban sprawl accounts for a third of all greenhouse gas emissions, and curbing this urban sprawl could be key to slowing down climate change . . . Low-density construction requires more infrastructure than in a compact city, which also means more roads and more kilometers travelled per resident.").

38. Robert D. Bullard et al., *The Costs and Consequences of Suburban Sprawl: The Case of Metro Atlanta*, 17 GA. ST. U.L. REV. 935, 936 (2001) ("Ask ten people to define sprawl, and you will probably get ten different definitions.").

39. Reid Ewing & Shima Hamidi, *Compactness Versus Sprawl: A Review of Recent Evidence from the United States*, 30 J. PLAN. LITERATURE 413, 413 (2015); Bullard et al., *supra* note 38, at 936; Ewing & Hamidi, *supra* note 39, at 413-14 ("Even this [three-part] definition [of sprawl] has its limitations and was expanded to include any development pattern characterized by poor accessibility and lack of functional open space.").

40. Bullard et al., *supra* note 38, at 937; *see* REID EWING ET AL., GROWING COOLER: THE EVIDENCE ON URBAN DEVELOPMENT AND CLIMATE CHANGE 57 (Nancy H. Stewart ed., 2007),

Sprawl as a development pattern pushes out subdivisions, office parks, malls, strip malls, gated communities, law offices, medical groups, car lots, and restaurants beyond existing cities and towns, resulting in zones of high economic and traffic activity occurring in peripheral locations.[41] Negative consequences of sprawl include air pollution, increasingly "thinned out" distribution of government services,[42] rising commuting times and traffic congestion, and diminished green areas.[43]

Sprawl development is often contrasted with "compact" development, characterized by spatial contiguity,[44] mixed and varying land uses, and proportionally higher density.[45] Sprawl's negative consequences are not a sudden catastrophe like an industrial accident resulting in environmental damage.[46] Sprawl development emerges from a confluence of private and government decision making, spurred by the benefits enjoyed by some in maintaining low-density development[47] as well as a response to incentives from disparate government policies bereft of a sprawl-oriented intent.[48]

As sprawl development increases, average vehicle ownership and daily vehicle miles traveled (VMT) per capita increase, while trips by transit and walking decrease significantly.[49] Energy consumption and GHG emissions associated with transportation are most dependent on VMT and to a lesser extent traffic congestion,[50] both of which are

chrome-extension://bdfcnmeidppjeaggnmidamkiddifkdib/viewer.html?file=https://www.nrdc.org/sites/default/files/cit_07092401a.pdf ("For decades, it has been known that compact areas have lower levels of automobile use per capita and greater use of alternative modes of transportation than do sprawling areas.").

41. ROBERT BURCHELL ET AL., SPRAWL COSTS: ECONOMIC IMPACTS OF UNCHECKED DEVELOPMENT 2-3 (2005).

42. *See id*. at 3 ("Sprawl creates a never-ending upward spiral of costs.").

43. William W. Buzbee, *Urban Sprawl, Federalism, and the Problem of Institutional Complexity*, 68 FORDHAM L. REV. 57, 63 (1999).

44. Ewing & Hamidi, *supra* note 39, at 414 ("Spatial contiguity refers to the state of bordering or being in direct contact with existing development.").

45. *Id*.

46. Buzbee, *supra* note 43, at 63.

47. *Id.* (citing ROBERT G. HEALY & JOHN S. ROSENBERG, LAND USE AND THE STATES 18 (2d ed. 1979)) (explaining that to accurately evaluate the causes of sprawl, one must consider its "baseline market, legal, and social influences.").

48. *Id*.

49. Ewing et al., *supra* note 4, at 63; *see* Glovin, *supra* note 33, at 10938 ("The root problem is that the low-density suburban sprawl promoted by local zoning makes Americans dependent on automobiles.").

50. Ewing & Hamidi, *supra* note 39, at 420.

positively correlated to low-density development.[51] A sizeable body of literature indicates a close correspondence between low-density residential zones and increased GHG emissions, with one study suggesting that transportation fuel consumption per capita declines between fifty percent and sixty percent as urban density rises from four to twelve persons per acre.[52]

Low-density urban development is not only correlated with rising GHG emissions with respect to transportation.[53] Sprawl development supplants organic surface areas, such as wetlands, forests, and farmland, with impervious surfaces that increase urban runoff and create an urban "heat island" effect.[54] Coastal counties under high rates of population growth and land development[55] are losing 2,000 acres of farmland per day to urbanization, a circumstance exacerbated by sprawl development.[56]

C. Zoning's History, Facilitation of Sprawl, and Unfortunate Incentives

Traditional land use regulations, namely zoning ordinances and design controls, are by and large controlled at the local level, delegated as

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51. *See*, *e.g.*, Urban Sprawl Responsible for 30% of All Greenhouse Gases, TUDELFT (Nov. 2015), https://www.tudelft.nl/en/architecture-and-the-built-environment/research/research-stories/urban-sprawl-responsible-for-30-of-all-greenhouse-gases ("Low-density construction requires more infrastructure than in a compact city, which also means more roads and more kilometres travelled per resident.").

52. Michael W. Mehaffy, Urban Form and Greenhouse Gas Emissions 37 (2015) (Ph.D. dissertation, Delft University of Technology) (on file with Delft University of Technology, Department of Architecture and the Built Environment).

53. *See*, *e.g. id.*; *see also* Alejandro E. Camacho, *infra* note 79, at 10474 (citing Edward L. Glaeser & Joseph Gyourko, *The Impact of Building Restrictions on Housing Affordability*, 9 ECON. POL'Y REV. 21, 35 (2003)); CAL. AIR RESOURCE BD., PROGRESS REPORT: CALIFORNIA'S SUSTAINABLE COMMUNITIES AND CLIMATE PROTECTION ACT 64 (2018), https://ww2.arb.ca.gov/sites/default/files/2018-11/Final2018Report_SB150_112618_02_Report.pdf ("Local zoning rules, parking requirements, minimum lot sizes, height restrictions, historic preservation rules, and other land use policies can limit the supply of housing, driving up its cost.").

54. Camacho & Marantz, *supra* note 31, at 132 (citing BURCHELL ET AL., *supra* note 42, at 42-43).

55. Blake Hudson, *supra* note 8, at 37 ("Not only are absolute population numbers in the coastal zone disproportionate to total U.S. population, but so too is the rate of population growth."); Dana Beach, *Pew Oceans Comm'n, Coastal Sprawl: The Effects of Urban Design on Aquatic Ecosystems in the United States* ii (2002), https://www.pewtrusts.org/-/media/legacy/uploaded files/wwwpewtrustsorg/reports/protecting_ocean_life/envpewoceanssprawlpdf.pdf (explaining that some coastal metropolitan areas, despite their rapidly growing population, "are consuming land ten times as fast as they are adding new residents.").

56. *See*, *e.g.*, Ginger Rowsey, *Urban Sprawl Erodes Rural Lands*, FARMPROGRESS (May 17, 2022), https://www.farmprogress.com/business/urban-sprawl-erodes-rural-lands.

police powers by state authorities.[57] In a modern metropolitan area, regulatory authority implicating the regulation of land is spread across a large number of local, state, and federal government bodies.[58] The foundational land use case in the United States corpus is *Village of Euclid v. Ambler Realty Co.*, which found local zoning use to be a permissible exercise of the local police power.[59] *Village of Euclid*'s subsequent effect on the urban landscape of the United States has been immense, serving as foundational law in fractured American land use policy[60] that remains tied to low-density urban development.[61]

Zoning is often characterized as the "quintessential local government power" alongside education,[62] and remains one of the most significant strongholds following historical patterns of federal, state, and local regulatory uptake.[63] Local zoning laws and ordinances emerged in the early republic[64] as a means to address particularized concerns about

57. Sara C. Bronin, *The Quiet Revolution Revived: Sustainable Design, Land Use Regulation, and the States,* 93 MINN. L. REV. 231, 233 (2008) (citing A. Dan Tarlock, *Land Use Regulation: The Weak Link in Environmental Protection*, 82 WASH. L. REV. 651, 652-53 (2007).

58. Camacho & Marantz, *supra* note 31, at 137 (citing G. ROSS STEPHENS & NELSON WIKSTROM, METROPOLITAN GOVERNMENT AND GOVERNANCE: THEORETICAL PERSPECTIVES, EMPIRICAL ANALYSIS, AND THE FUTURE 29-46 (2000)).

59. Vill. Euclid v. Ambler Realty Co., 272 U.S. 365, 397 (1926); *see* Kevin Perron, *"Zoning Out" Climate Change: Local Land Use Power, Fossil Fuel Infrastructure, and the Fight Against Climate Change*, 45 COLUM. J. ENV'T L. 573, 591 (2020) ("*Village of Euclid v. Amber Realty Co.* laid the legal framework for zoning, describing the sources of zoning law power and its underlying justifications."); John Infranca, *The New State Zoning: Land Use Preemption Amid a Housing Crisis*, 60 B.C.L. REV. 823, 832-33 (2019) ("The extent of local control over land use regulation in the United States is quite unique in comparison with other nations.").

60. Infranca, *supra* note 58, at 832 (citing Bronin, *supra* note 57, at 233) ("Currently, much of what can be called traditional land use regulation—zoning ordinances and design controls, but not environmental management, building code, endangered species, or housing laws—occurs at the local level.")); *see* Craig Anthony Arnold, *The Structure of the Land Use Regulatory System in the United States*, 22 J. LAND USE & ENV'T L. 441, 509 (2007) ("[T]he legal, political, and administrative units of land management fragment land use decisions and actions by individual parcels and discrete local units of government.").

61. *See*, *e.g.*, Note, *Addressing Challenges to Affordable Housing in Land Use Law: Recognizing Affordable Housing as a Right*, 135 HARV. L. REV. 1104, 1104 (2022).

62. Infranca, *supra* note 59, at 825 (citing Richard Briffault, *Our Localism: Part I—The Structure of Local Government Law*, 90 COLUM. L. REV. 1, 3 (1990) ("[E]ducation and zoning are the principal operations of local governments.")); *see* Carol M. Rose, *Planning and Dealing: Piecemeal Land Controls As Problem of Local Legitimacy*, 71 CALIF. L. REV. 837, 839 (1983) ("Land use control in America has always been an intensely local area of the law.").

63. DANIEL P. SELMI ET AL., LAND USE REGULATION: CASES AND MATERIALS 478 (5th ed. 2017) ("Land use authority is the most important power remaining at the local level . . . .").

64. John F. Hart, *Land Use Law in the Early Republic and the Original Meaning of the Takings Clause*, 94 NW. U. L. REV. 1099, 1107-16 (2000) (making an insightful reference to early land use regulation ordinances on private property, with early examples including: (1) a 1787 New

safety and health, such as ensuring fire safety in buildings and capping building heights to ensure air-and-light quality.[65] Unlike later forms of zoning, these early land use control laws were particularized and only intended to address given city sections.[66]

Zoning as it is now known became popular as an efficient yet highly decentralized[67] solution to problems associated with industrialization and radical rates of urbanization between the 1910s and 1970s,[68] replacing other legal remedies such as nuisance laws, private deed restrictions, and informal norms.[69] The increasing size and density of urban communities[70] rendered nuisance suits an obtuse land management regulation method in the face of comprehensive zoning ordinances, which served as convenient tools for standardization in the regulation of rapidly expanding urban environments.[71]

By the time of *Village of Euclid*[72] in 1926, over 400 municipalities had zoning ordinances in place, and by 1930, forty-seven of the forty-

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York land use act; (2) New Haven, Connecticut byelaws enacted in 1790; and (3) Georgia state land use regulations enacted by statute in 1780, amongst many other examples).

65. William A. Fischel, *An Economic History of Zoning and a Cure for Its Exclusionary Effects*, 41 URB. STUD. 317, 318 (2004).

66. *Id*.

67. Camacho & Marantz, *supra* note 31, at 137 ("[L]ocal authority over land use regulation was highly decentralized because state zoning enabling legislation gave local governments substantial authority to establish and implement standards for land development.").

68. Arnold, *supra* note 60, at 505; *see* Bronin, *supra* note 57, at 237; 3 ARDEN H. RATHKOPF ET AL., RATHKOPF'S THE LAW OF ZONING AND PLANNING § 36:2 (4th ed.) ("New York City passed the first citywide zoning ordinance in 1916."), https://1.next.westlaw.com/Document/Id7d60910b27011d9ba83bd74cc486321/View/FullText.html?originationContext=typeAhead&transitionType=Default&contextData=(sc.Default).

69. *E.g*., Arnold, *supra* note 60, at 505 (explaining that while informal norms may not be typically conceptualized as legal in nature, institution-minded legal theorists have considered local norms, such as the sort that would be adhered to in pre-or early-industrial urban communities, as norms necessarily implicated in a legal order); *see generally* Anna di Robilant, *Genealogies of Soft Law*, 54 AM. J. COMP. L. 499 (2006) (detailing the history of "soft law" in European private law, which is defined as category of tools that obligate legal actors to some normative degree without being supported by binding or formal rules).

70. Camacho & Marantz, *supra* note 31, at 137 n.62 ("The U.S. population in 1920 was 106,021,537, of which 51.2% resided in urban areas, marking the first decennial census in U.S. history when the urban population predominated over the rural population . . . [b]y 1970 . . . [76.6% of] the U.S. population . . . resided in urban areas.") (citing U.S. CENSUS BUREAU, 1990 CENSUS OF POPULATION AND HOUSING: POPULATION AND HOUSING UNIT COUNTS – UNITED STATES 37 (1993), https://www.census.gov/prod/cen1990/cph2/cph-2-1-1.pdf.).

71. Bronin, *supra* note 57, at 237 ("[W]ithout uniform rules, outcomes were uncertain . . . [z]oning ordinances emerged as a means of handling land use decisions in a more comprehensive and orderly way.").

72. Vill. Euclid v. Ambler Realty Co., 272 U.S. 365, 365 (1926).

eight states had zoning enabling acts utilized by over nine hundred cities.[73] A broad regulatory land use category, zoning grants a body (typically a local municipality) authority to dictate permitted uses of land in a given area.[74] Municipalities are granted the authority to specify permitted land uses in districts as well as development requirements that regulate minimum lot sizes, building height, and others.[75] Named for the aforementioned case, Euclidean Zoning is the dominant arrangement that has resulted amongst municipal enabling acts and ordinances regulating land use, wherein residential, business, and commercial use buildings are separated entirely.[76]

Prominent urbanists have argued low-density zoning "locks in" sprawl development where otherwise more open transparency to consumer preferences would result in denser development.[77] Local governments are empowered, and often incentivized,[78] to enact land policies which further decrease the density of their respective zoning jurisdictions, compounding climate-exacerbating land use practices.[79]

73. RATHKOPF ET AL., *supra* note 68.

74. Bronin, *supra* note 57, at 233.

75. *E.g.*, Camacho & Marantz, *supra* note 31, at 131 (citing STEWART E. STERK ET AL., LAND USE REGULATION 23-25 (2d ed. 2016)).

76. Patricia E. Salkin, *Squaring the Circle on Sprawl: What More Can We Do? Progress Toward Sustainable Land Use in the States*, 16 WIDENER L.J. 787, 788, 837 n.3 (2007); *see* Ashira Pelman Ostrow, *Preempting Zoning*, 36 J. LAND USE & ENV'T L. 91, 99 (2020) ("In upholding Euclid's zoning scheme, the Supreme Court validated a regulatory framework that idealized detached single-family housing and protected it from potentially disruptive uses (apartment houses) and users (poor people and racial minorities).").

77. Ewing & Hamidi, *supra* note 39, at 418 (summarizing recent literature on urban sprawl characteristics and methods of measurement, as well as its causes, impacts, and remedies).

78. *Cf.*, *e.g.*, Infranca, *supra* note 59, at 833-34 (citing WILLIAM A. FISCHEL, THE HOMEVOTER HYPOTHESIS: HOW HOME VALUES INFLUENCE LOCAL GOVERNMENT TAXATION, SCHOOL FINANCE, AND LAND-USE POLICIES 4 (2001)) ("As William Fischel's influential "homevoter hypothesis" posits, 'homeowners, who are the most numerous and politically influential group within most localities, are guided by their concern for the value of their homes' when making decisions about matters including local zoning."); *see* Camacho & Marantz, *supra* note 31, at 127-28 (citing Laura Bliss, *The NIMBY Principle*, BLOOMBERG (July 26, 2019), https://www.citylab.com/equity/2019/07/nimby-vs-yimby-single-family-zoning-laws-california-housing/594373/) (providing an exemplary example of the homevoter hypothesis in action) ("Kirsch[, a homeowner in the City of Mill Valley,] supports the Sierra Club and drives a Prius, but she adamantly opposed a project that would add multifamily housing in Mill Valley, despite evidence that such housing could mitigate both climate change and the rapid escalation of housing costs in the region.").

79. *See*, *e.g.*, Alejandro E. Camacho et al., *Mitigating Climate Change Through Transportation and Land Use Policy*, 49 ENV'T L. REP. NEWS & ANALYSIS 10473, 10474 (2019) ("[T]he delegation of significant regulatory authority to local governments often empowers local landowners and residents to block infill development."); *see also* Kenneth A. Stahl, *Local Home*

The majority of residentially zoned land in the United States exclusively permits the development of single family homes,[80] a form of development that contributes to urban sprawl.[81]

III. PREEMPTION, THE ADMINISTRATIVE STATE, AND LEGITIMACY

A. Preemption

The decentralized nature of American zoning is often framed as an obstacle to achieving a land use policy conducive to decarbonization,[82] leading many to consider the intervention by state legislatures into local zoning authority as an important, if not essential, prerogative.[83] The most ambitious of these suggestions is the preemption of local zoning authorities by state legislatures, wherein state authorities take back planning authorities from localities.[84]

As skepticism towards the adequacy of local zoning authority amongst judges, legal scholars, and urbanists has grown over many

Rule in the Time of Globalization, 2016 BYU L. REV. 177, 183 (2016) (explaining that encompassing, cross-national initiatives to mitigate the impacts of climate change face challenges thanks to "[t]he ability of local governments to regulate land use without regard to extraterritorial impacts," who are incentivized to implement zoning policy encourages "in narrowly self-interested ways[,] [sic] [which] often prevent[sic] them from cooperating to address global concerns."); Arnold, *supra* note 61, at 446; *see* John Harte, *Land Use, Biodiversity, and Ecosystem Integrity: The Challenge of Preserving Earth's Life Support System*, 27 ECOLOGY L.Q. 929, 964-65 (2001) ("[I]mplementation of regional-scale planning with voluntary compliance and public purchase of rural enclaves and interstitial lands will not adequately solve the larger challenge . . . only a "sea change" in attitudes about private property will suffice."); *see* Ostrow, *supra* note 76, at 93.

80. Recent Developments, *Chapter Three State Preemption of Local Zoning Laws as Intersectional Climate Policy*, 135 HARV. L. REV. 1592, 1593 (2022) (hereinafter Recent Developments).

81. Higher emissions from road transport and loss of open space and environmental amenities in suburban areas are well-established environmental consequences of urban sprawl. *See*, *e.g.*, Daniel Thomas Mollenkamp, *Single-Family Zoning: Definition, History, and Role in Racial Segregation*, INVESTOPEDIA, https://www.investopedia.com/single-family-zoning-5192299#:~:text=Single%2Dfamily%20zoning%20allows%20only,because%20it%20encourages%20urban%20sprawl. (last updated Sept. 6, 2023).

82. *See* Camacho & Marantz, *supra* note 31, at 127-28.

83. *See*, *e.g.*, *id*.

84. *See*, *e.g.*, Ostrow, *supra* note 76, at 94-96 ("Where states do intervene in land use, they often do not eliminate local authority, but rather layer a state regulatory scheme on top of local regulations."); Ostrow, *supra* note 76, at 95-96 (citing Stewart E. Sterk, *Federal Land Use Intervention as Market Restoration*, 99 B.U. L. REV. 1577, 1589 (2019)).

decades, calls for reconsideration has grown,[85] often focusing on the possibilities of preemption.[86]

States that have managed to preempt local zoning authority for the purpose of reducing GHG emissions, namely California and Oregon, have seen progress in lowering emissions.[87] Many states have also preempted zoning authority to address the longstanding inability of various local municipalities to adequately address housing demand,[88] which is itself a cause of rising GHG emissions.[89] However, states have been reluctant to enact statutes that target the fundamental causes of GHG emissions such as sprawl development that fosters car dependency.[90]

Intervention by higher authorities into traditional localist zoning faces persistent perceptions of illegitimacy amongst resident stakeholders.[91] Delegated-zoning's long history has solidified a perception of land use controls within localist jurisdictions as fundamental, and remains a powerful bulwark against attempts at

85. Rose, *supra* note 62, at 839 ("[D]uring the last two decades, judges and legal scholars have shown increasing doubt that local governments make land development decisions fairly and rationally . . . .); Anika Singh Lemar, *The Role of States in Liberalizing Land Use Regulations*, 97 N.C. L. REV. 293, 304 (2019) ("While economists and local law scholars are increasingly cognizant of the ways in which local overregulation stymies the national economy, local control continues to dominate our country's approach to land use policy.").

86. *See*, *e.g.*, Recent Developments, *supra* note 80, at 1593 ("[S]tate preemption of restrictive local zoning policy is justifiable in ways that preemption of other local prerogatives, such as the regulation of hydraulic fracturing ('fracking') or antidiscrimination measures, is not."); Camacho & Marantz, *supra* note 31, at 127 ("[S]cholars and commentators have repeatedly called for state intervention in local policy, either via express legislative preemption or via judicial determination that state law implies the preemption of local regulation.").

87. Camacho et al., *supra* note 79, at 10473.

88. Recent Developments, *supra* note 80, at 1592; *see* Camacho et al., *supra* note 79, at 10474.

89. *See, e.g.*, Camacho et al., *supra* note 79, at 10474 (citing Edward L. Glaeser et al., *Urban Growth and Housing Supply,* NAT'L BUREAU OF ECON. RSCH., 13-14 (Jan. 2005), http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.407.2146&rep=rep1&type=pdf); Alois Stutzer & Bruno S. Frey, *Stress that Doesn't Pay: The Commuting Paradox*, 110 SCANDINAVIAN J. ECON. 339 (2008), https://onlinelibrary.wiley.com/doi/full/10.1111/j.1467-9442.2008.00542.x) ("Housing shortages force many people to . . . endure long commutes to access high-wage jobs. Those longer commutes, typically from neighborhoods that are not transit-accessible, increase GHG emissions and conventional air pollution . . . .").

90. *See*, *e.g.*, Glovin, *supra* note 33, at 10939.

91. *See* Camacho & Marantz, *supra* note 31, at 127 (citing Laura Bliss, *The NIMBY Principle*, BLOOMBERG (July 26, 2019), https://www.citylab.com/equity/2019/07/nimby-vs-yimby-single-family-zoning-laws-california-housing/594373/); Bronin, *supra* note 57, at 236 ("[T]he prevailing descriptive and normative view of land use involves, first and foremost, local control.").

reform.[92] Further, localist land use policy, while a generally uncommon legal regime globally,[93] provides tangible benefits to local residents. Local zoning grants residents a degree of democratic participation in the urban design and stratification of their communities.[94] Incoming individuals are given more preference in choosing where to live and work by being allowed to consider taxation regimes, regulation, and amenities in a given locality.[95] Local residents are also likely to possess particular knowledge material to land use control that faraway decisionmakers do not, no matter their level of expertise.[96]

States may be able to circumvent the inherent normative difficulties in preemption entirely by instead establishing grants and incentives to encourage local and regional governments to reduce GHG emissions through planning policy.[97] Even these programs, however, struggle to garner support to the degree they fail to meet local expectations of governance.[98]

B. Administrative Agencies

Much has been written on the general topic of climate change policy as it pertains to a traditional legislative process[99] and the inability of Congress to address such complex problems, no matter how critical,

92. *See*, *e.g.*, Glovin, *supra* note 33, at 10939 (citing Bronin, *supra* note 57, at 231-32, 235-39).

93. *See* Infranca, *supra* note 59, at 832-33 (citing SONIA HIRT, ZONED IN THE USA: THE ORIGINS AND IMPLICATIONS OF AMERICAN-USE REGULATION (2014)).

94. *See*, *e.g.*, *id.* at 834 (citing Gerald E. Frug, *The City as a Legal Concept*, 93 HARV. L. REV. 1057, 1072-73 (1980)).

95. *See*, *e.g.*, *id*. at 833 (citing Charles M. Tiebout, *A Pure Theory of Local Expenditures*, 64 J. POL. ECON. 416 (1956)).

96. *See*, *e.g.*, Bronin, *supra* note 57, at 238, 273 n.34 (quoting Eric T. Freyfogle, *The Particulars of Owning*, 25 ECOLOGY L.Q. 574, 580 (1999)) ("Sensible land use decisions require knowledge of the land itself, in its many variations. One can categorize land parcels based on slope, soil type, drainage, and vegetation, but no list of factors can ever capture the land's full diversity. Local people typically know the land better than outsiders.").

97. *See*, *e.g.*, Camacho et al., *supra* note 79, at 10481.

98. *See* Camacho & Marantz, *supra* note 31, at 128 ("[M]ost scholars and policymakers have neglected the potential for relying on discrete reallocations of authority that do not prescribe specific courses of action for local governments, but which instead unsettle, or destabilize, local expectations, thereby triggering policy experimentation in pursuit of regional goals.").

99. *See* Jody Freeman & David B. Spence, *Old Statutes, New Problems*, 163 U. PA. L. REV. 1, 20-21 (2014) ("[W]hile the House of Representatives passed the American Clean Energy and Security Act of 2009, which would have established an economy-wide cap-and-trade system to reduce GHGs, the bill floundered in the Senate.").

through their "radically compacted and constrained" agenda.[100] Where the zoning authority necessary to create climate-conscious sustainable development is returned to the legislature, weaknesses inherent to the legislative process present their own obstacles to effective climate policy,[101] as climate change entails a future set of circumstances that require fast, responsive policy decisions.[102] This raises the possibility of using state and federal administrative agencies to address challenges related to decarbonization arising from sprawl and dependence on vehicles.[103] Examples of agency efficacy in properly regulating land use for environment and climate-related reasons already exist. For example, California's clean air agency, the California Air Resources Board (CARB), provides technical assistance to municipal governments in preparing "Sustainable Communities Strategy" plans to ensure emission reduction targets are met.[104] Federal agency land use management exists

100. Adrian Vermeule, *Optimal Abuse of Power*, 109 NW. U. L. REV. 673, 684 (2015); *see also* Chris Cillizza, *The Least Productive Congress Ever*, WASH. POST (July 17, 2013), http://www.washingtonpost.com/blogs/the-fix/wp/2013/07/17/the-least-productive-congress-ever/, archived at http://perma.cc/J2XV-EJRH ("[T]he 112th Congress passed just 561 bills, the lowest number since they began keeping these stats way back in 1947.").

101. *See* Freeman & Spence, *supra* note 99, at 4 (2014) ("[B]ecause of its historical origins and the limitations of available institutional reforms, congressional paralysis is likely to be enduring."). *See e.g.*, David B. Spence, *Naïve Administrative Law: Complexity, Delegation and Climate Policy*, 39 YALE J. ON REGUL. 964, 987 (2022) ("If the Supreme Court is moving toward a model of modern administrative law that reserves all important policy choices to Congress, that poses a problem not only for the use of existing statutes to address important national problems, but also for the crafting of constitutionally-permissible responses to those problems in the future.").

102. *Cf.* Weaver & Kysar, *supra* note 1, at 305 ("We now face real but uncertain likelihoods of "abrupt climate change," in which "the climate system is forced to cross some threshold, triggering a transition to a new state at a rate . . . faster than the cause.") (quoting NAT'L RSCH. COUNCIL, COMM. ON ABRUPT CLIMATE CHANGE, ABRUPT CLIMATE CHANGE: INEVITABLE SURPRISES 14 (2002).

103. The "practical understanding" observed by the court in *Mistretta v. United States* embodies a strong functionalist rationale for broad congressional delegation that finds support in the realities of governance in a complex, postindustrial society. *See* 488 U.S. 361, 372 (1989) ("[O]ur jurisprudence has been driven by a practical understanding that in our increasingly complex society, replete with ever changing and more technical problems, Congress simply cannot do its job absent an ability to delegate power under broad general directives."); *cf.*, *e.g.*, Vermeule, *supra* note 100, at 676 (2015) ("The main reason for the transformation of our government into an administrative state is that the rate of change in the policy environment, especially in the economy, is much greater than in the eighteenth and nineteenth centuries–so much greater that the state has been forced, willy-nilly, to speed up the rate of policy adjustment. And the main speeding-up mechanism has been ever-greater delegation to the executive branch . . . .").

104. Camacho et al., *supra* note 79, at 10478, 10482 (citing Rebecca Lewis et al., *Reducing Greenhouse Gas Emissions from Transportation and Land Use: Lessons from West Coast States*, 11 J. TRANSP. & LAND USE 343, 352 (2018); Act of Mar. 13, 2008, ch. 14, 2008 Wash. Laws 172 (codified as amended in scattered sections of WASH. REV. CODE tit. 28B, 43, 47, 70 (2018))).

as well with the Clean Air Act's regime regulating air pollution, including GHG emissions, in cooperation with state bodies.[105]

Administrative agencies both state and federal have faced skepticism since their emergence,[106] with longstanding accusations of agency capture[107] and fundamental unconstitutionality[108] persisting.[109] But the growth of the administrative state and authority-capture by agencies has also been the historical pattern in instances of dire threat to social welfare,[110] lending credence to the possibility of administrative agencies having an increased perception of legitimacy as climate change-related disasters become worse over time.[111]

Support for, and resistance to, regulation through the administrative state also hinges on perceptions and norms similar to those that influence zoning authority.[112] Local support for administrative decision-making rests in large part on the perceived legitimacy of that decision's process,[113]

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105. *E.g.*, Camacho & Marantz, *supra* note 31, at 181 (citing 42 U.S.C. §§ 7408, 7543 (2018)).

106. *E.g.*, Ryan Calo & Danielle Keats Citron, *The Automated Administrative State: A Crisis of Legitimacy*, 70 EMORY L.J. 797, 811 (2021) (citing Mark Seidenfeld, *A Civil Republican Justification for the Bureaucratic State*, 105 HARV. L. REV. 1511, 1513 (1992)).

107. *Id.* (citing PHILIP HAMBURGER, IS ADMINISTRATIVE LAW UNLAWFUL? 7-8 (2014)).

108. *Id.* (citing Adrian Vermeule, *The Administrative State: Law, Democracy, and Knowledge*, *in* THE OXFORD HANDBOOK OF THE U.S. CONSTITUTION 259, 261 (Mark Tushnet, Mark A. Graber & Sanford Levinson eds., 2015)).

109. *Id.*; *cf.*, *e.g.*, Noah Feldman, *Gorsuch v. the Administrative State Is Really Heating Up*, WASH. POST (Jan. 16, 2022 at 8:34 AM EST), https://www.washingtonpost.com/business/gorsuch-v-the-administrative-state-is-really-heating-up/2022/01/15/3d85b17a-760c-11ec-a26d-1c21c16b1c93_story.html (highlighting longstanding opposition to the constitutional authority of the administrative state through a recent illustrative example, Justice Gorsuch's concurrence in *Nat'l Fed'n Indep. Bus. v. Dep't Labor, Occupational Safety & Health Admin.*, 595 U.S. 109 (2022)) ("Yet Gorsuch is trying to constitutionalize ordinary administrative law decisions by transforming quotidian questions about whether Congress meant to give a certain power to a given agency into existential questions about whether Congress could do so even if it chooses.").

110. *See*, *e.g.*, William E. Scheuerman, *Emergencies, Executive Power, and the Uncertain Future of US Presidential Democracy*, 37 L. & SOC. INQUIRY 743, 743 (2012) ("Of course, the last century witnessed a series of major political and economic crises (e.g., the World Wars, the Great Depression, the Cold War). The massive growth of both the executive and administrative states during the twentieth century was fueled in part by them.").

111. *C.f.* Weaver & Kysar, *supra* note 1, at 305 (quoting NAT'L RSCH. COUNCIL, COMM. ON ABRUPT CLIMATE CHANGE, ABRUPT CLIMATE CHANGE: INEVITABLE SURPRISES 14 (2002)).

112. This is especially the case where state legislation uses administrative agencies to supplant, or overlap with, local authority. *See*, *e.g.*, Camacho & Marantz, *supra* note 31, at 187 ("Essentially, the state would be authorizing field preemption to reduce transportation-sector GHG emissions.").

113. *See*, *e.g.*, Ostrow, *supra* note 76, at 111 ("[Studies have] found that . . . individuals' judgments about the fairness of the government's decision-making process . . . [influence their] views on view of the legitimacy of government authorities") (citing Jessica Mantel, *Procedural*

a condition likely heightened in cases pertaining to the zoning process.[114] Citizens take particular interest in not just the outcomes of government process, but also the process itself, lending importance to decisionmakers achieving not just substantive legitimacy, but also procedural legitimacy as well.[115] Thus, mobilizing administrative agencies in the service of sprawl-reducing decarbonization efforts faces similar challenges to local governance expectations as zoning preemption.[116]

IV. NORMATIVE OBSTACLES AND LEGITIMACY

The current alignment of land use authority between governmental bodies, established through a historical preference for local zoning authority long prior to[117] and particularly after *Village of Euclid*,[118] is one that requires modification to avoid the worst impacts of environmental catastrophe while preserving institutional legitimacy.[119] Concerns for institutional legitimacy are especially prescient where possible

Safeguards for Agency Guidance: A Source of Legitimacy for the Administrative State, 61 ADMIN. L. REV. 343, 377-79 (2009)).

114. *See* Infranca, *supra* note 59, at 834 ("Local government autonomy, it is argued, facilitates democratic participation and the satisfaction of local preferences."); Rose, *supra* note 62, at 839 ("From the beginning . . . [local governments] were implicitly deemed the appropriate agencies for planning and ordering the physical development associated with their own startling growth[, a principle of organization with its roots in the City Beautiful movement at the turn of the twentieth century]."). Alongside historical preferences and rationale for local government bearing zoning authority, efficiency arguments also persist. *See* Eric T. Freyfogle, *The Particulars of Owning*, 25 ECOLOGY L.Q. 574, 580 (1999) ("Local people typically know the land better than outsiders. For land planning to prove successful, their knowledge is needed just as much as their cooperation."); Arnold, *supra* note 60, at 445-46 ("[S]ome of the most impressive legal and policy developments in ecosystem protection in recent years have occurred in the land use regulatory system.").

115. *See*, *e.g.*, Robert A. Mikos, *The Populist Safeguards of Federalism*, 68 OHIO ST. L.J. 1669, 1674 (2007) ("[Some] citizens care about government processes, and not just the outcomes of those processes.").

116. *See*, *e.g.*, Camacho & Marantz, *supra* note 31, at 167, n.259 ("An Achilles heel for green infrastructure can be its dependence on [sic] community cooperation in order to be successful.") (quoting CLEAN WATER AMERICA ALLIANCE, BARRIERS AND GATEWAYS TO GREEN INFRASTRUCTURE 28 (2015), http://uswateralliance.org/sites/uswateralliance.org/files/publications/Barriers-and-Gateways-to-Green-Infrastructure.pdf).

117. *See* Hart, *supra* note 64, at 1107; Bronin, *supra* note 57, at 236 ("For centuries now, land use regulation, administration, and enforcement has centered around localities.").

118. *See* Perron, *supra* note 59, at 591.

119. "Legitimacy" here is used to refer to the perception of trustworthiness amongst people generally for their government, i.e. in a "trustee paradigm," to function democratically, be justified in their authority and ability to govern, and exercise care and loyalty to the common good. *See*, *e.g.*, Jessica Mantel, *Procedural Safeguards for Agency Guidance: A Source of Legitimacy for the Administrative State*, 61 ADMIN. L. REV. 343, 347 (2009).

consequences for governmental failure are catastrophic (i.e., where decisionmakers fail to implement decarbonization policy and worst-case climate catastrophe occurs).[120] In the words of legal scholars R. Henry Weaver and Douglas A. Kysar, "[c]atastrophes, rather, create situations of misalignment, where a void opens between normative structure and cognizable fact."[121]

In *Village of Euclid*, the Court proposed that "the village, though physically a suburb of Cleveland, is politically a separate municipality, with powers of its own and authority to govern itself as it sees fit within the limits of the organic law of its creations and the State and Federal Constitutions."[122] In doing so, the Court has condoned, in the words of legal scholar Ashira Pelman Ostrow, "an intentionally parochial system that relies upon local political boundaries, rather than natural geographic boundaries, to determine the scope of land-use regulatory authority."[123] This "parochial system," where the interests of a locality with delegated zoning authority are prioritized over the expansive interests of other stakeholders,[124] highlights the faulty norms of present land use that permit a heterogeneity of interests[125] to prevent necessary action. But while

120. "Richard Posner, in his distinctive and provocative treatment of catastrophe, focused on those events marked by 'utter overthrow or ruin' that 'threaten the survival of the human race.' Such empirical approaches attempt to describe disaster as a particular set of observable circumstances." Weaver & Kysar, *supra* note 1, at 297 (quoting RICHARD A. POSNER, CATASTROPHE: RISK AND RESPONSE 6 (2004)).

121. Weaver & Kysar, *supra* note 1, at 300; *see also* Roberto Frega, *The Normative Structure of the Ordinary*, 7-1 EUR. J. PRAGMATISM & AM. PHIL. 49, 49 (2015) ("Normativity is concerned with justifying (or it is that which justifies) a given course of action by referring to its rational content . . . normativity has to do with the constraining power of norms . . . and with the accordance of actions to rules.").

122. Ashira P. Ostrow, *Land Law Federalism*, 61 EMORY L.J. 1397, 1412 (2012) (quoting Village of Euclid v. Ambler Realty Co., 72 U.S. 365, 389 (1926)).

123. *Id*. at 1412 (citing Michael Allan Wolf, *The Zoning of America: Euclid v. Ambler* 143, 137 (2008)).

124. *See*, *e.g*., Brigham Daniels, *Emerging Commons and Tragic Institutions*, 37 ENV'T L. 515, 560 (2007) (citing Andrew Achincloss Lundgren, *Beyond Zoning: Dynamic Land Use Planning in the Age of Sprawl*, 11 BUFF. ENV'T L.J. 101, 128 (2004)) ("The strength of local government regulation—ability to hone in on local problems—does not add much when the problems are regional in nature and have dimensions that extend beyond the jurisdiction of the local government.").

125. Ewing & Kysar, *supra* note 3, at 353-54 ("[E]ffective public action may be thwarted by Madison's all-too-familiar nightmare, in which 'heterogeneity of interests . . . prevent[s] the majority coalition from doing anything at all—even just and useful things—while simultaneously facilitating the ability of self-interested minorities to loot the federal fisc.'" (quoting Roderick M. Hills, Jr., *Against Preemption: How Federalism Can Improve the National Legislative Process*, 82 N.Y.U. L. REV. 1, 10 (2007)).

perhaps parochial and faulty, the current arrangement of localist zoning policy is still one with a great deal of legitimacy amongst the populace.[126]

Thus, the choice of institutional decisionmakers to ensure land use policy aligns with decarbonization goals is a double-edged sword of legitimacy.[127] Upending traditional zoning and land use practices would necessarily offend entrenched practices that have existed for some time, potentially delegitimizing governmental authority and discouraging the normative commitments of individuals.[128] But failing to decarbonize, largely contingent on reducing GHG emissions facilitated by current zoning arrangements, will likely result in avoidable climate catastrophe, presenting further opportunities for perceptions of illegitimacy by virtue of governmental authorities failing to properly reduce GHG emissions and to adequately prepare for anticipated climate warming scenarios.[129]

To ensure the success of decarbonization policy goals, it is crucial to implement land use policies that not only prevent a crisis of legitimacy in the government's capacity to respond to emergencies, but also bring about normative changes[130] in land use policy to improve perceptions of the legitimate taking of local zoning authority.

V. CONCLUSION

Current normative challenges to decarbonization-minded zoning policy imply there is no guarantee that necessary reforms can take place easily or quickly, a concerning circumstance where reform is urgently necessary to avoid significant cost.

126. Localist zoning is historically entrenched and resistant to change. *See*, *e.g.*, Glovin, *supra* note 33, at 10939 (citing Bronin, *supra* note 57, 231-32, 235-39 (2008)).

127. *Cf.* Ewing & Kysar, *supra* note 3, at 353 ("Our 'preference for passivity,' built out of 'the idea that we are more endangered by government action than inaction,' has become a dangerously double-edged sword in some significant areas of law and policy, where threats to social welfare arise in substantial part from the nature of limited government itself.") (quoting Lisa Heinzerling & Frank Ackerman, *Law and Economics for a Warming World*, 1 HARV. L. & POL'Y REV. 331, 335 (2007)).

128. *See*, *e.g.* Weaver & Kysar, *supra* note 1, at 329 ("Climate change threatens to routinize catastrophe and bring . . . a 'permanent revolution' . . . ."); *see* Mantel, *supra* note 119, at 346 (citing TOM R. TYLER, WHY PEOPLE OBEY THE LAW 38 (2006)).

129. *Cf.* Weaver & Kysar, *supra* note 1, at 329 (referring to climate change catastrophe as "the disruption of an established normative order").

130. "Normativity" here refers to the comporting of action by authorities with underlying values in governance, like democracy, efficiency, and the common good. *See* Mantel, *supra* note 119, at 359 ("The normative debate considers whether the manner in which agencies exercise their discretion comports with the values underlying our collective system of governance.").

Statements by the Biden Administration referring to climate change as an "urgent national security threat"[131] indicate a view of climate change at the highest levels of governance as not just a problem to address, but also as an existential threat in need of urgency. But where popular views of legitimacy in favor of localist zoning are prevalent, and skepticism towards quickly responding to climate change persists,[132] underlying norms that do not support decarbonization as preserving the interests of the populace for the common good and interest will obstruct legitimacy in zoning reform policy.[133] Institutional decisionmakers should not assume their pitch to the American people is merely one of policy most efficient at addressing climate change consequences, but also one that can be normatively justified to ensure the preservation of legitimacy.

131. Jess Bidgood, *Biden Links Climate Change to National Security as He Taps John Kerry for Climate Czar Role*, BOSTON GLOBE (Nov. 24, 2020), https://www.bostonglobe.com/2020/11/23/nation/john-kerry-join-biden-administration-national-security-council-official-dedicated-climate-change.

132. Kenton de Kirby, *The Largest-Ever Opinion Poll on Climate Change Is Also One of the Worst*, BREAKTHROUGH INST. (Feb. 16, 2021), https://thebreakthrough.org/issues/energy/largest-climate-opinion-poll-also-one-of-the-worst?gclid=CjwKCAjw586hBhBrEiwAQYEnHY8eyM6teYYU6HC9OT0P-UW4JlL_SOpTyCrTgemMJnxSCTMwEGtfoBoCMn8QAvD_BwE (explaining that when asked "'what should the world do about it,' over 40% of respondents who answered 'Yes' to the climate emergency question said that they thought the world should 'act slowly while we learn more about what to do,' that 'the world is already doing enough,' or should 'do nothing.'").

133. *Cf.* Gregory S. Alexander, *The Social-Obligation Norm in American Property Law*, 94 CORNELL L. REV. 745, 759 (2009) ("[W]hat motivates the self to act as a member of one or more communities is preference maximization. Individuals associate with each other in groups in order to maximize their own personal welfare. Individuals choose to act with others, to participate as members, if they hold . . . "convergent" goods . . . .) (citing 2 CHARLES TAYLOR, *Social Theory as Practice*, *in* PHILOSOPHICAL PAPERS: PHILOSOPHY AND THE HUMAN SCIENCES 96 (1985)).