INTRASTATE PREEMPTION IN THE SHIFTING ENERGY SECTOR

UMA OUTKA*

The United States energy sector is in a state of transition, at once moving toward cleaner energy resources, but also expanding the use of fossil fuels with new access to oil and gas plays. Although federalism concerns have dominated the literature, I argue here that the state-local relationship and intrastate preemption are shaping energy policy in important and under-examined ways. The energy transition to date has been marked by growth centered on hydraulic fracturing (fracking) and commercial wind development, both of which are mostly regulated at the state level. Local governments have exerted authority over both forms of energy production, although state-local tensions in the fracking context have been especially pronounced. Hundreds of localities have opposed or sought to contain the effects of fracking through official action, including bans and moratoria.

This striking trend, considered alongside local responses to wind development, provides a fresh lens through which to assess the role of intrastate preemption in the shifting energy sector. By approaching fracking and wind together, this Article represents a departure from the largely resource-segregated literature in favor of greater scholarly coherence on energy transition. As this Article explains, the doctrine of intrastate preemption, though it hews closely to its federal analogue, is uniquely nuanced by the variability of state-local power structures. I develop the claim that the unpredictable legal environment resulting from this

* Associate Professor, University of Kansas School of Law. This Article benefited from feedback following presentations on various aspects of the project at the University of Oregon School of Law, the University of Idaho School of Law, the Louisiana State University Law Center, and the Association for Law, Property, and Society Conference. I am especially grateful for helpful comments from Paul Diller and from my colleagues at KU Law, and for research assistance from Kim Condon, JD (KU Law, 2013) and Michelle Fuchs, JD candidate (KU Law, 2015). Contact: uoutka@ku.edu.

variability works to enhance the prospects for local governments, and even more localized property interests, to inform national energy discourse.

INTRODUCTION

The United States energy sector is in a state of transition, at once moving toward cleaner energy resources, but also expanding the use of fossil fuels with new access to oil and gas plays. Dramatic growth in natural gas and commercial wind development is a hallmark of this shift. Observers have called the spike in natural gas a "game-changer" resulting from the expanded use of horizontal drilling with hydraulic fracturing (fracking).[1] Electricity generation from renewable resources

1. *See, e.g.*, Interview by Kimberly Strassel with T. Boone Pickens, Chairman, BP Capital Mgmt., and Edward G. Rendell, Partner, Ballard Spahr, in Santa Barbara, Cal. (Mar. 26, 2012), WALL ST. J., http://online.wsj.com/articles/SB10001424052702304636404577299682719190576, *archived at* http://perma.cc/WBE5-Y5HU. In keeping with the focus here on the shifting energy sector for

has increased four-fold since 1990, and most of that trend represents recent growth in wind power.[2]

Wind projects have often been contentious for host communities, and fracking has proven even more controversial. States are the primary regulators over both forms of energy production, and local governments have exerted authority in both contexts. Tensions over local regulation of fracking have been especially pronounced—hundreds of localities have opposed or sought to contain the effects of fracking through official action, including bans and moratoria.

This striking trend, considered alongside local responses to wind development, provides a fresh lens through which to assess the role of intrastate preemption in the shifting energy sector. Although federalism concerns have dominated the literature,[3] I argue that the state-local relationship—contextualized as it is by intrastate preemption principles—is shaping energy policy in important and under-examined ways. This Article explains how, in contrast to federal preemption, the doctrine of intrastate preemption is uniquely nuanced by the variability of state-local power structures. I develop the claim that the unpredictable legal environment resulting from this variability works to enhance the prospects for local governments, and even more localized property interests, to inform national energy discourse.

By approaching fracking and wind together, this Article represents a departure from the largely resource-segregated literature in favor of greater scholarly coherence on energy transition.[4] Most of the literature on renewable energy reflects

electricity generation, the discussion of fracking in this Article (and most of the legal literature on fracking) is focused on natural gas, though the extraction technique is also used for oil.

2. *Energy in Brief*, U.S. ENERGY INFO. ADMIN. (Apr. 14, 2014), http://www.eia.gov/energy_in_brief/Article/renewable_electricity.cfm, *archived at* http://perma.cc/C3KL-TCBT.

3. *See, e.g.*, David B. Spence, *Federalism, Regulatory Lags, and the Political Economy of Energy Production*, 161 U. PA. L. REV. 431 (2013) (focusing on federal-state relationship and arguing for continued state regulatory primacy); Robin Kundis Craig, *Hydraulic Fracturing (Fracking), Federalism, and the Water-Energy Nexus*, 49 IDAHO L. REV. 241 (2013) (focusing on federal-state relationship and arguing water quality and quantity issues are national in scope, warranting greater federal engagement); Elizabeth Burleson, *Cooperative Federalism and Hydraulic Fracturing: A Human Right to a Clean Environment*, 22 CORNELL J.L. & PUB. POL'Y 289 (2012) (focusing on federal-state sharing of regulatory responsibility).

4. Of the handful of recent articles that address fracking and renewables

a common ideal: a federalism model that will more effectively promote rapid policy and infrastructure development.[5] The fracking literature reflects less normative consensus, with debate continuing over the appropriate extent, form, and balance of regulation by states and the federal government.[6] The integrated approach I take here reveals that a shift in focus from federalism to intrastate dynamics and their implications is overdue. Although federalism has long structured energy's regulatory environment, the federal government is notably disengaged from direct regulation of the production of natural gas and wind, the fastest growing energy resources.[7] With their rapid and geographically dispersed proliferation, unconventional gas wells have inevitably touched many localities. Local regulation more commonly raises state rather than federal preemption issues, and in states with local fracking bans and moratoria, intrastate preemption questions have become dominant energy policy themes. All of this is taking place against a backdrop of risk that remains, for many, unsatisfactorily quantified. The risk of fracking to groundwater, for example, remains the subject of heated

together to some extent, none have done so for purposes of reconciling state-local dynamics and intrastate preemption across contexts. *See, e.g.*, Joseph P. Tomain, *Shale Gas and Clean Energy Policy*, 63 CASE W. RES. L. REV. 1187 (2013) (cautioning against relying on natural gas to the detriment of renewable energy development); Hannah J. Wiseman, *Urban Energy*, 40 FORDHAM URB. L.J. 1793 (2013) (observing that gas drilling and distributed renewable energy are both encroaching on populated areas previously distanced from energy production modes).

5. *See, e.g.*, Hannah J. Wiseman, *Expanding Regional Renewable Governance*, 35 HARV. ENVTL. L. REV. 477 (2011) (arguing that regional governance is needed to facilitate large scale renewable energy projects); Patricia E. Salkin & Ashira Pelman Ostrow, *Cooperative Federalism and Wind: A New Framework for Achieving Sustainability*, 37 HOFSTRA L. REV. 1049 (2009) (arguing federal intervention is needed to prevent local opposition from slowing renewable energy siting); Ronald H. Rosenberg, *Making Renewable Energy A Reality–Finding Ways to Site Wind Power Facilities*, 32 WM. & MARY ENVTL. L. & POL'Y REV. 635, 642 (2008) (arguing state-level officials should make wind siting decisions following a public interest standard). My own work reflects this normative goal of supporting rapid renewable energy deployment through effective governance. *See, e.g.*, Uma Outka, *The Renewable Energy Footprint*, 30 STAN. ENVTL. L.J. 241 (2011) [hereinafter Outka, *Footprint*] (advancing governance approaches to minimize land impact of renewable energy facilities); Uma Outka, *Siting Renewable Energy: Land Use and Regulatory Context*, 37 ECOLOGY L.Q. 1041 (2010) [hereinafter Outka, *Siting*] (discussing state reforms for improved siting approaches).

6. *See* sources cited *supra* note 3.

7. *See generally infra* Part II.

debate, and the water consumption required for fracking presents risks in western states where water resources have long been strained, and in areas plagued with recurring droughts.[8] Toxic air emissions at the wellhead present local health hazards, while the greenhouse gas emissions profile of natural gas, both in isolation and relative to other fossil fuels, raises important policy questions that are national in scope about the role of natural gas in a clean energy transition.[9] Although the federal government is poised to exert increased authority over environmental impacts of natural gas production, this will not materially alter the basic state regulatory structures.[10]

Renewable energy projects and the challenges associated with finding suitable development sites have also highlighted persistent intrastate preemption questions. As the Article details, the siting process for electric power facilities on private land is typically either locally controlled or addressed by state power plant siting statutes that articulate a strong local role.[11] Intrastate preemption questions can be expected to remain relevant here as well, with no sign of a turn toward federal preemption of energy land use authority at the local level.[12] In both contexts, it is clear that empowered local governments have the potential to enhance protections for locally important natural resources, as well as to facilitate or destabilize energy development plans.

With its emphasis on the state-local relationship, this Article makes several contributions to the literature on energy transition. First, it articulates the doctrinal importance of intrastate preemption to United States energy policy. In turning attention to intrastate dynamics, it highlights a governance nexus often overlooked but highly relevant to fast

8. Mark Koba, *Severe Water Shortage in West Fails to Stop Fracking at Gas Wells*, NBC NEWS (June 10, 2014, 9:56 AM), http://www.nbcnews.com/business/energy/severe-water-shortage-west-fails-stop-fracking-gas-wells-n127416, *archived at* http://perma.cc/7NJ8-C5VA.

9. *See infra* Part I.

10. *See generally* U.S. DEP'T OF ENERGY, MODERN SHALE GAS DEVELOPMENT IN THE UNITED STATES: A PRIMER (2009), *available at* http://energy.gov/sites/prod/files/2013/03/f0/ShaleGasPrimer_Online_4-2009.pdf, *archived at* http://perma.cc/F4DF-SJLW (providing a general overview of federal law affecting shale gas development).

11. *See infra* Part IV.A.

12. I have discussed the bases for this expectation at greater length elsewhere. *See* Outka, *Footprint*, *supra* note 5, at 286–92.

growing segments of the energy sector. Importantly, this sheds new light on local governments' role in energy transition beyond the purely local setting—a role in which they can assist in bridging persistent structural divisions between energy and environmental concerns.

Second, it brings a new depth of analysis to the scholarship on evolving natural gas law by evaluating the form and variability of local government action, state legislative responses, and the role of the courts. Local governments have been uniquely assertive in their resistance to the fracking boom—a resistance which, in its scope and consistency, suggests an important milestone in the historical arc of local environmental regulation. Others have addressed the trend summarily,[13] or addressed case law in one or more states,[14] but the richer implications of these state-local dynamics have yet to be explored.

Third, this Article makes the first attempt to reconcile the trend with similar tensions in the renewable energy context. This integrated approach probes the extent to which resource-divergent policy preferences may be justified. Is there a reasoned basis, for example, for a "fracking bans good/wind bans bad" position in the shifting energy sector? Can points of difference in local governments' response to each resource

13. *See, e.g.*, Jarit C. Polley, Comment, *Uncertainty for the Energy Industry: A Fractured Look at Home Rule*, 34 ENERGY L.J. 261, 264–66 (2013). *See generally* Keith B. Hall, *When Do State Oil and Gas or Mining Statutes Preempt Local Regulations?*, 27 NAT. RESOURCES & ENV'T, Winter 2013, at 13 (outlining preemption issues that arise with fracking regulations); Sorell E. Negro, *Fracking Wars: Federal, State and Local Conflicts over the Regulation of Natural Gas Activities*, 35 PLAN. & ZONING L. REP. 1, 4–5 (2012); Shaun A. Goho, *Municipalities and Hydraulic Fracturing: Trends in State Preemption*, 64 PLAN. & ENVTL. L. 3, 4 (2012) (providing a brief overview of fracking preemption cases).

14. *See, e.g.*, David J. Klein, *Home Sweet Home: Clarifying and Reinforcing a Municipality's Authority to Regulate Natural Gas Activities in its Corporate Limits,* 14 TEX. TECH. ADMIN. L.J. 339 (2014) (Texas); Jonas Armstrong, *What the Frack Can We Do? Suggestions for Local Regulation of Hydraulic Fracturing in New Mexico*, 53 NAT. RESOURCES J. 357 (2014); W. Devin Wagstaff, *Fractured Pennsylvania: An Analysis of Hydraulic Fracturing, Municipal Ordinances, and the Pennsylvania Oil and Gas Act*, 20 N.Y.U. ENVTL. L.J. 327 (2013); Joshua P. Fershee, *The Oil and Gas Evolution: Learning from the Hydraulic Fracturing Experiences in North Dakota and West Virginia,* 19 TEX. WESLEYAN L. REV. 23 (2012); Ford J.H. Turrell, *Frack Off! Is Municipal Zoning a Significant Threat to Hydraulic Fracturing in Michigan?*, 58 WAYNE L. REV. 279 (2012) Nancy D. Perkins, *The Fracturing of Place: The Regulation of Marcellus Shale Development and the Subordination of Local Experience*, 23 FORDHAM ENVTL. L. REV. 44 (2012).

inform governance quandries across contexts?

In what follows, Part I provides a brief overview of natural gas production and wind development and their importance within the shifting United States energy sector. Part II situates the intrastate preemption doctrine as both defined by and defining state-local power structures. In doing so, it clarifies how these influences analytically differentiate intrastate preemption from federal preemption, its doctrinal counterpart, with implications for national policy anchored to state law.

Part III surveys the scale and scope of local government action related to fracking, drawing from a Food and Water Watch compendium of over 400 localities, and situates the trend in local fracking governance as part of a continuum of local environmental regulation. This research shows a variety of discrete forms of local resistance coalescing around fairly consistent political, if not theoretical, themes. It then turns to state legislative responses and recent high-profile litigation for their lessons about the function of intrastate preemption in this evolving field.

Part IV turns to commercial wind development, which has shown the highest growth among renewable resources to date. In 2012 alone, 143 wind farms were newly constructed or added capacity; there are now over 800 wind farms nationwide, with the capacity to power roughly 15 million homes.[15] Wind projects—like natural gas wells—are very often sited on private land pursuant to lease agreements between developers and private landowners.[16] Private land transactions involve

15. U.S. Dep't of Energy, *Wind Farm Growth Through the Years*, ENERGY.GOV (Aug. 6, 2013, 8:32 AM), http://energy.gov/Articles/wind-farm-growth-through-years, *archived at* http://perma.cc/GG7A-HGYM.

16. Federal land is also leased for private natural gas and renewable energy development, including wind, presenting a separate set of legal issues in a distinct regulatory context beyond the scope of this Article. As of December 2012, the Bureau of Land Management had leased 37,792,212 onshore acres of federal land for oil and gas development and authorized 32 wind energy development projects with an installed capacity of 581 megawatts (MW); had approved 170 wind energy site testing authorizations; and had 40 pending wind energy development applications with a potential capacity of over 7,500 MW. *See* BUREAU OF LAND MGMT., U.S. DEP'T OF INTERIOR, OIL AND GAS STATISTICS BY YEAR FOR FISCAL YEARS 1988–2012, tbl.1 (Dec. 23, 2013), *available at* http://www.blm.gov/style/medialib/blm/wo/MINERALS__REALTY__AND_RESOURCE_PROTECTION_/energy/oil___gas_statistics/data_sets.Par.77170.File.dat/all_og_statistics_by_year_by_state_to_be_posted_to_the_blm_web_site_fy2013.xlsx.pdf, *archived at* http://perma.cc/AK7X-4ZW6; BUREAU OF LAND MGMT., U.S. DEP'T OF INTERIOR, BLM FACT SHEET–RENEWABLE ENERGY: WIND (2014), *available at* http://www.blm.gov/

localities in both forms of energy development due to the threshold importance of land use law to siting.[17] Because wind bans and moratoria present preemption questions similar to those facing fracking states, they afford a fruitful contrast for analysis.

Part V considers differential treatment of local authority across contexts—by courts applying the intrastate preemption doctrine, or by state legislatures making a policy judgment to preempt local government action. Differences between fracking and wind power create divergent policy considerations bearing on whether and how broadly states exert legislative preemption in each context. Yet as 2013's landmark *Robinson Township* case reiterated with considerable force, even express preemption must yield to intrastate power structures.[18] It is becoming clear that intrastate preemption's heterogeneity across the states creates a legal environment in the shifting energy sector that has increased attention to the impacts of energy development. Buoyed by the legal, political, and institutional posture of local governments, as distinct from community and environmental groups, this attention is spurring substantative responses to these impacts at both state and federal levels. In this way, intrastate preemption as a legal doctrine, in resisting a single definition that can be applied one state to the next, has enhanced local governments' collective contribution to national discourse on energy transition. The benefits of this productive dialogue in the shifting energy sector caution states to avoid broad preemption in favor of engaging local governments in resolving the concerns they raise.

I. NATURAL GAS AND WIND IN THE SHIFTING ENERGY SECTOR

Production of natural gas and wind energy has been steadily increasing, and projections show this trend is likely to continue.[19] Hydraulic fracturing, combined with improved

pgdata/etc/medialib/blm/wo/MINERALS__REALTY__AND_RESOURCE_PROTECTION_/energy/solar_and_wind.Par.38552.File.dat/Wind_12_2012.pdf, *archived at* http://perma.cc/78EB-2RSW.

17. *See infra* Part III.

18. Robinson Township v. Pennsylvania, 52 A.3d 463, 485 (Pa. Cmmw. Ct. 2012), *aff'd in part, rev'd in part*, 83 A.3d 901 (2013). *See* discussion *infra* Part III.B.

19. *See* U.S. ENERGY INFO. ADMIN., ANNUAL ENERGY OUTLOOK 2013 WITH PROJECTIONS TO 2040 75–76 (2013), *available at* http://www.eia.gov/forecasts/

horizontal drilling technology, has been central to this growth for natural gas. According to the American Petroleum Institute, over a million wells have been hydraulically fractured in the United States already, and over 80 percent of wells drilled over the next decade will also be fractured.[20] The practice involves injecting millions of gallons of water, proppant, and chemical lubricants into deep shale formations to release oil and/or natural gas through pressure fractures in the shale.[21] Natural gas is expected to surpass coal as the leading fuel used for electricity generation in the United States by 2035.[22]

Renewable energy has increased from the single digit percentages only a few years ago to providing 13 percent of United States electricity in 2013, and this percentage is rising.[23] To drive project development, more than half of the states have set renewable portfolio standards (RPS) that require utilities to derive a percentage of total electricity sold at retail from renewable energy sources, increasing the share of renewable energy over time.[24] The United States Energy Information Administration projects growth for wind energy will continue, with the share of electricity generation from renewable sources rising to 16 percent in 2040 assuming status

aeo/pdf/0383(2013).pdf, *archived at* http://perma.cc/KGD4-WTXN. [hereinafter ANNUAL ENERGY OUTLOOK].

20. *Hydraulic Fracturing Q & A*, AM. PETROLEUM INST., http://www.api.org/oil-and-natural-gas-overview/exploration-and-production/hydraulic-fracturing/hydraulic-fracturing-qa.aspx(last visited Jan. 25, 2015), *archived at* http://perma.cc/SR7M-Q844.

21. For technical information on fracking, see generally *The Process of Hydraulic Fracturing*, U.S. ENVTL. PROT. AGENCY (Aug. 11, 2014), http://www2.epa.gov/hydraulicfracturing/process-hydraulic-fracturing, *archived at* http://perma.cc/C932-J9NY and *Hydraulic Fracturing*, U.S. GEOLOGICAL SURVEY (Jan. 27, 2014), http://energy.usgs.gov/OilGas/UnconventionalOilGas/HydraulicFracturing.aspx, *archived at* http://perma.cc/9LKJ-NFSH.

22. *See* ANNUAL ENERGY OUTLOOK, *supra* note 19, at 72–73; U.S. ENERGY INFO. ADMIN., ANNUAL ENERGY REVIEW 2011, at 222 fig.8.2a (2011), *available at* http://www.eia.gov/totalenergy/data/annual/perspectives.cfm, *archived at* http://perma.cc/ZS7U-8Y9P.

23. *See How Much U.S. Electricity is Generated from Renewable Energy?*, U.S. ENERGY INFO. ADMIN. (Apr. 14, 2014), http://www.eia.gov/energy_in_brief/Article/renewable_electricity.cfm, *archived at* http://perma.cc/DZM8-9FQ8.

24. *See* U.S. DEP'T OF ENERGY, RENEWABLE PORTFOLIO STANDARD POLICIES (2014), *available at* http://www.dsireusa.org/documents/summarymaps/RPS_map.pdf, *archived at* http://perma.cc/DY2C-3MV4 (showing 29 states and Washington D.C. with renewable energy standards and 8 with renewable energy goals); *see also* ANNUAL ENERGY OUTLOOK, *supra* note 19, at 13–17 (discussing role of RPS in energy projections, detailing qualifying resources, and describing recent changes to state programs).

quo policy and technology.[25] By contrast, alternative scenarios reflecting sustained support for renewables and other greenhouse gas emission reduction policies indicate renewable energy could account for almost twice as much electricity generation, exceeding 30 percent in the same timeframe.[26] President Obama's Climate Change Plan, announced in June 2013, affirms support for the upward trend in renewables with plans to permit 10 gigawatts (GW) of renewable energy projects on public lands, install 100 megawatts (MW) of renewable energy capacity on federally assisted housing, and shift 20 percent of the federal government's energy use to renewables, all by 2020.[27]

Most of the growth in United States renewables to date is the result of new commercial-scale wind power facilities. Wind projects accounted for 42 percent of all new electric generating capacity added in 2012, exceeding every other fuel source used for electricity, including natural gas.[28] With commercial-scale wind installations now generating electricity in thirty-nine states, the American Wind Energy Association counted "61,946 MW of installed wind capacity in the United States and over 46,300 wind turbines" midway through 2014.[29]

Looking forward, the interaction between increased reliance on natural gas and renewable energy development at the national and international scale raises important policy questions with implications for climate change mitigation

25. *See* ANNUAL ENERGY OUTLOOK, *supra* note 19, at 5. These projections employ the Reference Case, which "is a business-as-usual trend estimate, given known technology and technological and demographic trends." *Id.* at ii.

26. *Id.* at 5–6. Other projects suggest even more rapid growth potential for renewables. *See, e.g.*, U.S. DEP'T OF ENERGY, 20 PERCENT WIND POWER BY 2030: INCREASING WIND ENERGY'S CONTRIBUTION TO U.S. ELECTRICITY SUPPLY 6–8 (2008), *available at* http://www.nrel.gov/docs/fy08osti/41869.pdf, *archived at* http://perma.cc/WZZ9-YP3G (describing potential growth scenario for wind alone).

27. *See* EXEC. OFFICE OF THE PRESIDENT, THE PRESIDENT'S CLIMATE ACTION PLAN (2013), *available at* http://www.whitehouse.gov/sites/default/files/image/president27sclimateactionplan.pdf, *archived at* http://perma.cc/8BL2-E5BJ.

28. AM. WIND ENERGY ASS'N, AWEA U.S. WIND INDUSTRY ANNUAL MARKET REPORT YEAR ENDING 2012 EXECUTIVE SUMMARY 8 (2013), *available at* http://awea.files.cms-plus.com/images/AWEA_USWindIndustryAnnualMarketReport2012_ExecutiveSummary%282%29.pdf, *archived at* http://perma.cc/FRU3-QXQM (showing 41.6 percent of new installations from wind compared with 31.5 percent for natural gas).

29. AM. WIND ENERGY ASS'N, U.S. WIND INDUSTRY SECOND QUARTER 2014 MARKET REPORT 3 (2014), *available at* http://awea.files.cms-plus.com/FileDownloads/pdfs/2Q2014%20AWEA%20Market%20Report%20Public%20Version%20.pdf, *archived at* http://perma.cc/DB4G-HSFD.

goals. On the one hand, using more natural gas to produce electricity is often credited with driving down coal consumption and reducing emissions of carbon dioxide (CO_2), the greenhouse gas (GHG) most affecting the climate today.[30] At the same time, natural gas emits the potent GHG methane (CH_4), which climate scientists warn could speed the pace of climate disruption.[31] In a 2010 analysis of the future of natural gas, researchers at Massachusetts Institute of Technology (MIT) concluded that "a combination of demand reduction and displacement of coal-fired power by gas-fired generation is the lowest-cost way to reduce CO_2 emissions by up to 50 percent."[32] These conclusions supported what has become a common view of natural gas as a "bridge" to a low-carbon future.[33] Yet this view is being called into question, by MIT researchers and others, as subsequent estimates of methane leakage rates "have challenged the benefits of switching from coal" to natural

30. *See, e.g.*, CTR. FOR CLIMATE & ENERGY SOLUTIONS, LEVERAGING NATURAL GAS TO REDUCE GREENHOUSE GAS EMISSIONS vii (2013) (noting how "[t]he substitution of gas for coal in the power sector, for example, has contributed to a recent decline in U.S. greenhouse gas emissions," yet highlighting that "[a]part from the emissions released by its combustion, natural gas is composed primarily of methane (CH_4), a potent greenhouse gas, and the direct release of methane during production, transmission, and distribution may offset some of the potential climate benefits of its expanded use across the economy").

31. Natural gas is mostly methane, which is emitted into the atmosphere during production, processing, and transportation. Compared to carbon dioxide, methane's "lifetime in the atmosphere is much shorter," but because it is "more efficient at trapping radiation" than CO_2, it has higher impact on climate change—"pound for pound . . . over 20 times greater than CO_2 over a 100-year period." EPA, *Overview of Greenhouse Gases*, U.S. ENVTL. PROT. AGENCY, http://epa.gov/climatechange/ghgemissions/gases/ch4.html (last visited Oct. 31, 2014), *archived at* http://perma.cc/4JEW-MS6X. Unlike coal, natural gas does "not emit significant sulfur dioxides, particulates, or mercury." JURGEN WEISS ET AL., THE BRATTLE GRP., PARTNERING NATURAL GAS AND RENEWABLES IN ERCOT 24 (2013), *available at* http://www.texascleanenergy.org/Brattle%20report%20on%20renewable-gas%20FINAL%2011%20June%202013.pdf, *archived at* http://perma.cc/3N6D-PBFJ.

32. MIT ENERGY INITIATIVE, THE FUTURE OF NATURAL GAS: AN INTERDISCIPLINARY MIT STUDY 2 (2011). This research has been criticized as insufficiently independent of oil and gas industry financial support and other ties. *See* PUB. ACCOUNTABILITY INITIATIVE, INDUSTRY PARTNER OR INDUSTRY PUPPET? (2013), *available at* http://public-accountability.org/2013/03/industry-partner-or-industry-puppet, *archived at* http://perma.cc/8GSW-WB3L.

33. *See, e.g.*, MIT ENERGY INITIATIVE, *supra* note 32, at 1; A.R. Brandt et al., *Methane Leaks from North American Natural Gas Systems*, 343 SCIENCE 733 (2014), *available at* http://www.novim.org/images/pdf/ScienceMethane.02.14.14.pdf, *archived at* http://perma.cc/QN3X-UMYX (describing the role of natural gas in bridging the gap to a low-carbon future).

gas.[34] Researchers reviewing available data warn that "[i]f natural gas is to be a 'bridge' to a more sustainable energy future, it is a bridge that must be traversed carefully . . . to ensure that leakage rates are low enough to achieve sustainability goals."[35] Moreover, there is common agreement that even optimistic GHG reduction from substituting natural gas for coal is not a long-term mitigation strategy—cleaner alternatives are critical.[36] The bridge-fuel potential of natural gas is further complicated by the risk that increased production will lead to cheap prices undercutting renewable energy development, the linchpin of emissions reduction from the electricity sector.[37] For these reasons, energy law scholar Joseph Tomain cautions against legal classification of natural gas as "clean" energy, warning that the shale gas boom risks "further strengthening our traditional hydrocarbon economy while threatening the growth of the clean energy sector."[38] The

34. Brandt et al., *supra* note 33, at 733; *see also* Ramón A. Alvarez et al., *Greater Focus Needed on Methane Leakage from Natural Gas Infrastructure*, 109 PROC. NAT'L ACAD. SCI. 17, 6435 (2012), *available at* http://www.pnas.org/content/109/17/6435.full, *archived at* http://perma.cc/Q2KY-N955 (discussing the environmental impact of increased natural gas usage).

35. Brandt et al., *supra* note 33, at 735. Environmental Defense Fund, which participated in the research producing Alvarez, *supra* note 34, summarized a key finding: "Assuming the Environmental Protection Agency's (EPA) 2009 leakage rate of 2.4% (from well to city), new natural gas combined cycle power plants reduce climate impacts compared to new coal plants; this case is true as long as leakage remains under 3.2%." Envtl. Def. Fund, *What Will It Take to Get Sustained Benefits from Natural Gas?*, EDF.ORG, http://www.edf.org/methaneleakage (last visited Nov. 2, 2014), *archived at* http://perma.cc/U58P-2KF2.

36. *See, e.g.*, INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, CLIMATE CHANGE 2014: MITIGATION OF CLIMATE CHANGE: SUMMARY FOR POLICY MAKERS, 9–13 (2014) (discussing the impending effects on the environment without the implementation of mitigation strategies).

37. *See* ANNUAL ENERGY OUTLOOK, *supra* note 19, at 5 (2013) (noting "the rate of growth in renewable electricity generation is sensitive to several factors, including natural gas prices"); INT'L ENERGY AGENCY, GOLDEN RULES FOR A GOLDEN AGE OF GAS: WORLD ENERGY OUTLOOK SPECIAL REPORT ON UNCONVENTIONAL GAS (2012) (discussing the costs and benefits of increased natural gas usage); Henry D. Jacoby et al., *The Influence of Shale Gas on U.S. Energy and Environmental Policy,* 1 ECON. ENERGY & ENVTL. POL'Y 1 (2012), *available at* http://www.iaee.org/eeep/EEEP01_01_A05_Jacoby-EPUB/eeepissue.aspx, *archived at* http://perma.cc/2FZJ-MGY8 (observing that "cheaper gas serves to reduce the rate of market penetration of renewable generation"); MIT ENERGY INITIATIVE, *supra* note 2, at 2 (finding that "in the U.S., natural gas sets the cost benchmark against which other clean power sources must compete to remove the marginal ton of CO_2").

38. Tomain, *supra* note 4, at 1193; *see also* Patrick Parenteau & Abigail Barnes, *A Bridge Too Far: Building Off-Ramps on the Shale Gas Superhighway*,

proliferation of new pipelines to accommodate increased oil and gas production underscores this concern, locking in new fossil-based infrastructure for decades to come.[39]

It is possible that, if well orchestrated, competition between natural gas and renewable energy might be minimized. Indeed, the two resources may be mutually supportive in the near term. Research produced for the Texas Clean Energy Coalition, for example, highlights opportunities for gas-renewables complementarity, for both energy policies and relative fuel prices.[40] As renewable production increases, it feeds at least short-run demand for natural gas as a balancing fuel, as renewable energy production increases and decreases with wind flow and sunshine.[41] As reliance on natural gas increases, wind power may also serve to balance natural gas supply prices and insulate the impact of price spikes.[42] The International Energy Agency, while citing natural gas as a threat to renewable energy, also notes that "expansion of gas in the global energy mix can . . . facilitate greater use of renewable energy, if policies are in place to support its

49 IDAHO L. REV. 325 (2013) (cautioning against overreliance on natural gas because it can only delay, not avoid, dangerous climate disruption).

39. *See, e.g.*, Peter Moscowitz, *With the Boom in Oil and Gas, Pipelines Proliferate in the U.S.*, YALE ENV'T 360 (Oct. 6, 2014), http://e360.yale.edu/feature/with_the_boom_in_oil_and_gas_pipelines_proliferate_in_the_us/2811, *archived at* http://perma.cc/Z2W6-BV96.

40. *See* WEISS ET AL., *supra* note 31; *see also* LISA HUBER, ROCKY MOUNTAIN INST., UTILITY-SCALE WIND AND NATURAL GAS VOLATILITY: UNCOVERING THE HEDGE VALUE OF WIND FOR UTILITIES AND THEIR CUSTOMERS (2012), *available at* http://www.rmi.org/Knowledge-Center/Library/2012-07_WindNaturalGas Volatility, *archived at* http://perma.cc/AV3F-7CX8 (demonstrating stabilizing potential of long-term wind power purchase agreements against price volatility of natural gas).

41. WEISS ET AL., *supra* note 31, at 7. Renewable energy cannot be dispatched (turned on or off, or increased or decreased on command) like fossil-fired power plants, but minute by minute, based on their variable costs, renewables are the lowest cost source of electricity because there is no fuel cost. *Id.* at 6–8. Natural gas is presently the most cost-effective fossil fuel to back up renewables. *Id.* at 8, 11; *see also* Josie Garthwaite & Christina Nunez, *New "Flexible" Power Plants Sway to Keep Up with Renewables*, NAT'L GEOGRAPHIC (Oct. 31, 2013), http://news.nationalgeographic.com/news/energy/2013/10/131031-flex-power-plants-california, *archived at* http://perma.cc/2KKG-S39T (on trends associated with managing renewables' intermittency with natural gas power plants).

42. WEISS ET AL., *supra* note 31, at 10–11; *see also* JAQUELIN COCHRAN ET AL., JOINT INST. FOR STRATEGIC ENERGY ANALYSIS, EXPLORING THE POTENTIAL BUSINESS CASE FOR SYNERGIES BETWEEN NATURAL GAS AND RENEWABLE ENERGY (2014) (outlining possibilities for hybrid systems, transmission corridors, and other compatibilities), *available at* http://www.windpoweringamerica.gov/filter_detail.asp?itemid=4149, *archived at* http://perma.cc/S2GR-TH8Z.

deployment."[43]

As the relationship between natural gas and renewables clarifies, United States energy policy will have to account for their interaction—something the Obama Administration seems to recognize, despite its generalized "all of the above" energy policy stance.[44] Against the backdrop of these national and international policy questions, landowners and energy developers face issues of compatibility between natural gas and wind development at the local land use scale.[45]

At the state and local level, however, implications of gas-renewables competition or complementarity are less pronounced. Instead, present state-local tensions in the energy sector mostly center on whether, where, and how to erect a wind farm or drill for oil or gas. Tensions over fracking at the local level, though often intertwined with environmental concerns, are strongly rooted in property interests. In the wind context, property values are frequently cited as the basis for project opposition.[46] In the fracking context, property law regimes governing split estates have produced confusion and conflicts between surface owners and mineral rights holders, and between mineral rights holders and neighbors whose subsurface land may be affected by horizontal drilling.[47]

43. INT'L ENERGY AGENCY, *supra* note 32, at 80.

44. E. Donald Elliott, *Obama Administration Proposes New Federal Role in Siting Shale Gas Development in Combination with Renewables*, 44 ENVL. L. INST. 10185 (2014). The "all of the above" meme is the Obama Administration's catch-phrase for United States energy policy. "[W]e can't have an energy strategy for the last century that traps us in the past. We need an energy strategy for the future–an all-of-the-above strategy for the 21st century that develops every source of American-made energy." President Barack Obama, Remarks by the President on Energy (Mar. 15, 2012), *available at* http://www.whitehouse.gov/energy, *archived at* http://perma.cc/FZ6L-2QLM.

45. *See, e.g.*, Osage Nation v. Wind Capital Group, LLC, 2011 U.S. Dist. LEXIS 135069 (N.D. Okla. 2011) (denying declaratory and injunctive relief under federal and state law when the Osage Nation sought to halt a wind farm project overlaying the subsurface Osage Mineral Estate held in tribal trust ownership by the US). Professor K.K. DuVivier has detailed the potential for coordination as well as conflict between wind development and subsurface activities like natural gas development. *See* K.K. DuVivier, *Animal, Vegetable, Mineral–Wind? The Severed Wind Power Rights Conundrum*, 49 WASHBURN L.J. 69, 98 (2009); *see also* K.K. DuVivier, *Jousting at Windmills: When Wind Power Development Collides with Oil, Gas, and Mineral Development*, 55 RMMLF–INST 9–1 (2009).

46. See *infra* Part IV.

47. An Emmy-award winning documentary film—"Split Estate"—addresses this subject from the perspective of unsuspecting surface owners in Garfield County, Colorado. *See* SPLIT ESTATE, http://www.splitestate.com/index.html (last visited Nov. 30, 2014), *archived at* http://perma.cc/G4M6-9XRX; *see also*

Residents and local officials find themselves in the position of weighing promises of environmental safety and economic growth against risks of environmental and economic damage that cannot easily be undone.

II. INTRASTATE PREEMPTION DOCTRINE

The doctrine of preemption provides the legal infrastructure for rationalizing relative powers across levels of government. Lawmaking authority of lower levels of government may be limited when courts invalidate a law as expressly or impliedly preempted by existing law at a higher level of government. Likewise, legislative action by a higher level of government may affirmatively preempt regulation by a lower level of government.[48] Although federal and state preemption are often regarded as analytically interchangeable, the shifting energy sector unsettles this assumption by highlighting important differences between the two. As this section explains, the contours of local power fundamentally frame the intrastate preemption doctrine as courts apply it to resolve state-local disputes. This framing creates doctrinal variability across jurisdictional lines that reinforces heterogeneous lawmaking and is not mirrored in federal

Christopher S. Kulander, *Common Law Aspects of Shale Oil and Gas Development*, 49 IDAHO L. REV. 367, 369 (2013) (noting that "in many places . . . the mineral estate owner and the surface owner would be completely unknown to one another"); Rachel Heron et al., *The Interpretation of Surface Easements in Severance Deeds as a Limit on Hydraulic Fracturing Practices*, 19 BUFF. ENVTL. L.J. 73, 104 (2012) (analyzing split estates in the Marcellus Shale and concluding that "[o]wners of surface estates have relatively few legal options available to minimize surface damage from oil and gas operations"); *see also* Paige Anderson, Note, *Reasonable Accommodation: Split Estates, Conservation Easements, and Drilling in the Marcellus Shale*, 31 VA. ENVTL. L.J. 136 (2013) (arguing for adoption of the accommodation doctrine in Pennsylvania and other Marcellus Shale states to mitigate unfair results for surface estate owners).

48. A third way, less relevant to this Article and subject to more debate, is by preemption through agencies of a higher level of government acting within the scope of their legislatively delegated authority. *See, e.g.*, Thomas W. Merrill, *Preemption and Institutional Choice*, 102 NW. U. L. REV. 727, 759–78 (2008) (discussing federal agencies as a source of preemption, noting "[t]hey can make federal law, by rulemaking for example, that a court later concludes is in sufficient tension with state law that the state law must be declared preempted. Or, a federal agency can issue a proclamation declaring state law preempted on its own authority."). In the federal-state context, there are also examples of preemption by federal common law and preemption by the Dormant Commerce Clause. *See* Viet D. Dinh, *Reassessing the Law of Preemption*, 88 GEO. L.J. 2085, 2107–18 (2000).

preemption law.

A. Contours of Local Power

State preemption of local law performs hierarchical enforcement similar in concept and analytical terms to federal preemption of state law. Nonetheless, the doctrinal underpinnings for state-local preemption are distinct from those defining the federal-state relationship. Although the United States Constitution is not the source of states' power, the states' position within the federal system is constitutionally articulated and recognized as equivalent across all fifty states.[49] The Tenth Amendment provides that "powers not delegated to the United States by the Constitution . . . are reserved to the States respectively, or to the people"—this is known as the states' general "police power."[50]

Local governments are not identified by nor do they derive power from the United States Constitution.[51] In the early *Hunter v. City of Pittsburgh* case, the Supreme Court famously clarified local governments' lack of federal constitutional legal status.[52] There, the Court described local authority as fundamentally insecure, explaining that the "number, nature, and duration" of their powers "rests in the absolute discretion of the state," and that such state discretion may be exercised

49. *See* Nat'l Fed'n of Indep. Bus. v. Sebelius, 132 S. Ct. 2566, 2578 (2012) (discussing local powers exercised by all states).

50. U.S. CONST. amend. X; *Nat'l Fed'n of Indep. Bus.*, 132 S. Ct. at 2578 (explaining that "state governments do not need constitutional authorization to act. The States thus can and do perform many of the vital functions of modern government . . . even though the Constitution's text does not authorize any government to do so. Our cases refer to this general power of governing, possessed by the States but not by the Federal Government, as the 'police power.'").

51. Matthew J. Parlow, *Progressive Policy-Making on the Local Level: Rethinking Traditional Notions of Federalism*, 17 TEMP. POL. & CIV. RTS. L. REV. 371, 372 (2008) ("Local governments are not mentioned or even considered in the United States Constitution."); *see also* Terrance Sandalow, *The Limits of Municipal Home Rule: A Role for the Courts,* 48 MINN. L. REV. 643, 644 n.2, 646 n.11 (1964) (discussing lack of federal constitutional status for municipalities). *But see* Annie Decker, *Preemption Conflation: Dividing the Local from the State in Congressional Decision Making*, 30 YALE L. & POL'Y REV. 321, 329 (2012) (arguing that "local governments have more of a constitutional presence than that story suggests," pointing to the 10th amendment language declaring "'powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the States respectively, or to the people.' The 'to the people' clause was not mere surplusage.").

52. 207 U.S. 161 (1907).

"conditionally or unconditionally, with or without the consent of the citizens" and "unrestrained by any provision of the Constitution of the United States."[53]

The relationships between states and their local governments have evolved significantly in the century since *Hunter*, however. Numerous scholars have recounted the historical accretion of local authority, from the early Dillon's Rule era, in which courts construed local government powers as only those narrowly and explicitly assigned by a state, to the rise of home rule, which expanded and strengthened local governance.[54] I will not repeat that history here, but instead will highlight several features that are especially important to understanding modern intrastate preemption. The first is that the legal doctrines used to structure local power developed ex post—that is, local governments were performing governance functions before the precise contours of that authority were clarified.[55] Professor James Herget examined this facet of local government history over thirty years ago, showing how legal doctrine developed as a response, in part, to the early divergence between weak legal recognition for localities—"original state constitutions did not allocate any governmental power to local governments"—and the practical reality that local governance was nonetheless occurring.[56]

The second important historical feature, which follows the first, is that as states formalized legal status for local governments, they did so in varied ways. Some afforded state

53. *Hunter*, 207 U.S. at 178–79.

54. For more on Dillon's Rule, see DALE KRANE ET AL., HOME RULE IN AMERICA: A FIFTY-STATE HANDBOOK 9–10 (2001). For more on home rule, see, for example, Paul Diller, *Intrastate Preemption*, 87 B.U. L. REV. 1113, 1122–27 (2007) (a concentrated summary of the historical development of modern local governments); Richard Briffault, *Home Rule for the Twenty-first Century*, 36 URB. LAW. 253 (2004) (proposing presumption in favor of local power in most instances); David J. Barron, *Reclaiming Home Rule*, 116 HARV. L. REV. 2255, 2277–334 (2003) (more detailed historical account of the Home Rule movement, advancing an argument that this history undercuts common notions of Home Rule as providing local legal autonomy); Gerald E. Frug, *The City as a Legal Concept*, 93 HARV. L. REV. 1057, 1080–120 (1980) (providing a multi-century historical account framing an argument that liberal theory was instrumental in preserving local powerlessness).

55. James E. Herget, *The Missing Power of Local Governments: A Divergence between Text and Practice of Our Early State Constitutions*, 62 VA. L. REV. 999, 1002 (1976).

56. *Id.*

constitutional status to one or more classes of localities.[57] Others recognized local power by statute, detailing with varying degrees of specificity the subjects to which local authority could be applied.[58] Some states did both, providing constitutional recognition to some localities and statutory authority to others.[59]

The legal source of a local government's power has important ramifications in at least two respects. First, it dictates how states can limit or alter the scope of local authority. Even in *Hunter,* the Court qualified state supremacy by noting that the legislative body of a state must conform "its actions to the state Constitution."[60] If localities have state constitutional powers, the scope of those powers cannot, for example, be altered by legislative action.[61] In contrast, authority derived from a statute can be more readily withdrawn or changed by amendment or repeal of statutory provisions. Second, the legal source of local authority may influence the application of preemption principles by courts. Constitutional empowerment may preclude preemption, for example, if the state law asserted to preempt local action infringes a locality's constitutionally-defined scope of authority.[62] Alternatively, where local power is defined by statute, courts may seek to harmonize its meaning with the legislative intent of a purportedly preempting statute.

A third historical feature of the modern state-local relationship is the diversity and distribution of shared governance structures that obtain under the umbrella term "home rule."[63] The concept of home rule captures the generic ideal, as one reference work puts it, of a local government's ability "to act and make policy in all areas that have not been

57. KRANE ET AL, *supra* note 54, at 476–78 (presenting summary tables with lists of enabling authority and providing in depth information in individual chapters for each state).

58. *Id.*

59. *See id.*

60. Hunter v. City of Pittsburgh, 207 U.S. 161, 179 (1907).

61. *See* Decker, *supra* note 51, at 350.

62. According to Diller, "[o]nly in the few states with imperio regimes, where the subject matter concerned is deemed 'local' will the state legislature lack the power to expressly preempt." Diller, *supra* note 54, at 1138 n.111. *But see id.* at 1126–27 nn.63–65 (noting the difficulty of characterizing imperio regimes).

63. *See* Sandalow, *supra* note 51, at 645 ("As a legal doctrine . . . home rule does not describe the state or condition of local autonomy, but a particular method for distributing power between state and local governments . . . .")

designated to be of statewide interest through general law, state constitutional provisions, or initiatives or referenda."[64] David Barron's historical account demonstrates that a range of countervailing aims besides increased local autonomy drove the home rule movement, including substantive social, administrative, and political goals.[65] Home rule doctrine emerged and developed across the states in ways reflective of this variability.[66] Thus, he explains, home rule is not equivalent to "local legal autonomy. Rather, it is a mix of state law grants of, and limitations on, local power that powerfully influences the substantive ways in which cities and suburbs act."[67]

In some instances, granting limited local authority has meant demarcating certain sub-state entities, even within a single state, as home rule localities or general law entities, separated by the degree to which local authority is constrained.[68] The Kansas Constitution, for instance, grants Kansas cities home rule powers in article 12, section 5.[69] Subsection (b) empowers cities to "determine their local affairs and government," and subsection (d) states that the powers granted to cities are to be "liberally construed for the purpose of giving cities the largest measure of self-government."[70] Counties, however, are treated very differently, deriving more limited home rule powers from statute.[71] Section 19-101 of the Kansas statutes establishes counties as corporate and political bodies authorized "to determine their local affairs and government" consistent with section 19-101a.[72] Section 19-101a, in turn, empowers counties to "transact all county business and perform all powers of local legislation and administration it deems appropriate" subject to over thirty

64. KRANE ET AL., *supra* note 54, at 2.

65. *See* Barron, *supra* note 54, at 2291, 2291–322 (describing "three distinct (and even contradictory) visions of home rule" that drove early reformers, with conservative, social and administrative variants on the theme).

66. *Id.*

67. *Id.* at 2263; *see also* GERALD E. FRUG & DAVID J. BARRON, CITY BOUND: HOW STATES STIFLE URBAN INNOVATION 60–61 (2008) (discussing varied formulations of home rule authority across the states).

68. General law entities are also referred to as general-purpose entities.

69. KAN. CONST. art. 12, § 5.

70. KAN. CONST. art. 12, §§ 5 (b), (d).

71. KAN. STAT. ANN. § 19-101 et seq. (2014).

72. *Id.*

enumerated exceptions.[73] One such exception constraining counties but not cities and especially pertinent here is subsection (a)(19), which specifically prohibits counties from "regulat[ing] the production or drilling of any oil or gas well in any manner which would result in the duplication of regulation by the state corporation commission and the Kansas department of health and environment . . . ."[74] The statute likewise precludes counties from requiring any license or permit or imposing any fee for the drilling or production of oil and gas wells.[75] Kansas cities are afforded extraterritorial powers that counties are denied, such as the power to purchase property outside city boundaries if the purchase serves a public purpose.[76]

In Colorado, similarly, a so-called "home-rule municipality" has "inherent powers," but a county, by contrast, "is not an independent governmental entity existing by reason of any inherent sovereign authority of its residents; rather, it is a political subdivision of the state, existing only for the convenient administration of the state government, created to carry out the will of the state."[77] Similar distinctions between substate governing bodies, including cities and counties, but also special districts, exist in many states.[78] Whatever precise form it takes, home rule is, as Professor Laurie Reynolds has put it, a "political choice" by the state "to respect intermunicipal variation in degree, scope, and amount of local regulation."[79] The durability of this respect in any given state will depend, in turn, on how effectively and cohesively local governments participate in state lawmaking to defend or advance their autonomy.[80]

73. *Id.* § 19-101a(a).

74. *Id.* § 19-101a(a)(19).

75. *Id.*

76. KRANE ET AL., *supra* note 54, at 159. For a summary of states that provide municipal extraterritorial jurisdiction for a variety of limited purposes, see *id.* at 482.

77. Bd. of Cnty. Comm'rs, La Plata Cnty. v. Bowen/Edwards Associates, Inc., 830 P.2d 1045, 1055 (Colo. 1992) (citing Bd. of Cnty. Comm'rs of Dolores Cnty. v. Love, 470 P.2d 861, 862 (Colo. 1970)).

78. See KRANE ET AL., *supra* note 54, at 476–78, for reference showing variability among municipal and county government home rule across the states.

79. Laurie Reynolds, *A Role for Local Government Law in Federal-State-Local Disputes*, 43 URB. LAW. 977, 996 (2011).

80. Daniel B. Rodriguez, *Localism and Lawmaking*, 32 RUTGERS L.J. 627, 627–28 (2001) (observing that "local governments have unstable legal protections from state control, but they make up for some of that by deploying political power

Variability resulting from the political choices that comprise a state's sovereign posture can be further compounded by judicial norms within the state courts. As courts make "[d]ecisions about the level of judicial intervention," Professor Clayton Gillette has observed, they shape "the allocation of decisionmaking authority, and, thus, the configuration of institutional design."[81] The possibility of what Professor Ethan Lieb terms "localist statutory interpretation" by local judges in state court systems presents an additional point of divergence that may enhance doctrinal difference across jurisdictions.[82] Indeed, as he observes, there is potential for reciprocal influence between how states' *sui generis* legal cultures express state-local dynamics and "the degree to which local interpretation of statewide law may be tolerated."[83]

The contours of intrastate preemption, therefore, interweave the legal status of local governments, the sources of legal authority, and the judicial decisions interpreting the scale and scope of that power as they have evolved in each state. Today, despite common doctrinal underpinnings, each state has its own legal framework for local authority and its own preemption jurisprudence.[84] If this evolution has not called *Hunter*'s basic precept into question—as the 10th Circuit recently noted, "the core holding of *Hunter* has retained its vitality"[85]—it is fair to say it substantially oversimplifies modern state-local relations. Generic notions of state sovereignty may be convenient touchstones, but they ignore how states have actually allocated intrastate power—allocations that developed over time, and were solidified by governmental and judicial decisions, as well as by events, problems, and political contexts particular to the individual state.[86]

in the state lawmaking process," and "local governments act as interest groups as well as official authorities and representatives of citizens at the local level").

81. Clayton P. Gillette, *Expropriation and Institutional Design in State and Local Government Law*, 80 VA. L. REV. 625, 627 (1994).

82. Ethan Lieb, *Localist Statutory Interpretation*, 161 U. PENN. L. REV. 897, 917 (2013).

83. *Id.* at 924.

84. *See generally* KRANE ET AL., *supra* note 54 (offering a fifty-state survey of the various structures of the political relationships between state and local governments).

85. City of Herriman v. Bell, 590 F.3d 1176, 1185 (10th Cir. 2010).

86. Reynolds, *supra* note 79, at 999; *see also* Rodriguez, *supra* note 80, at 627

B. Relationship to Federal Preemption Analysis

Federal law can preempt state or local laws in equal measure.[87] Consistent with a view of local governments as arms of the state, the doctrine of federal preemption can invalidate state or local action that offends the Supremacy Clause of the United States Constitution.[88] The law of federal preemption, as it has developed in the federal courts, provides the framework for analyzing conflicts between federal authority and sub-federal governmental action. Although there may be differences between state and local governments for purposes of federal preemption, the Supreme Court has typically applied the doctrine uniformly in both contexts,[89] anchored with a set of now-familiar doctrinal principles.[90] Sub-federal action is precluded where federal law expressly preempts it.[91] Absent express preemption, courts may imply preemption when sub-federal action infringes on an area of law in which Congress intended to occupy the field or when implementation of the sub-federal law would conflict with

("While it is common place to note the subservience of local governmental units, including cities and counties, to state authority given our theory of state constitutionalism, the reality of state and local relationships paints a more complicated picture.").

87. *See, e.g.*, New York SMSA Ltd. P'ship v. Town of Clarkstown, 612 F.3d 97, 103 (2d Cir. 2010) ("Under the Supremacy Clause of the Constitution, state and local laws that conflict with federal law are 'without effect.'" (quoting Altria Group, Inc. v. Good, 555 U.S. 70 (2008))).

88. *See* Merrill, *supra* note 48, at 733 (noting and citing cases in which "[t]he Supreme Court has repeatedly identified the Supremacy Clause as the source of its authority to declare state law displaced (preempted)").

89. *See* Wisconsin Pub. Intervenor v. Mortier, 501 U.S. 597, 605 (1991) ("It is . . . axiomatic that 'for the purposes of the Supremacy Clause, the constitutionality of local ordinances is analyzed in the same way as that of statewide laws.'" (quoting Hillsborough Cnty. v. Automated Med. Labs., Inc., 471 U.S. 707, 713 (1985))). *But see* Decker, *supra* note 51, at 323–24 (noting tendency to conflate federal preemption of state and local law but arguing that Congress differentiates more frequently than is generally acknowledged and urges more systematic consideration of "state-local differences . . . when drafting preemption provisions"); Reynolds, *supra* note 79, for a discussion of differential treatment of states and localities where federal preemption applies to one but not the other level of government.

90. *See, e.g.*, Mount Olivet Cemetery Ass'n v. Salt Lake City, 164 F.3d 480, 486 (10th Cir. 1998) (holding that local zoning ordinance was preempted by federal law).

91. *Id.* (citing Barnett Bank of Marion Cnty., N.A. v. Nelson, 517 U.S. 25, 31 (1996) ("[E]xpress preemption . . . occurs when the language of the federal statute reveals an express congressional intent to preempt state law . . . .").

federal law.[92] This triumvirate of analytic touchstones—express, field, and conflict preemption[93]—has proved enduring, if not reliable, for predicting outcomes of cases applying the federal doctrine.[94] Under the Supremacy Clause, the relative position of sub-federal governments is structurally uniform from one state to the next, absent unique statutory treatment in a particular context.[95]

In the context of energy transition, the ubiquitous "shadow" of preemption by state law is closer to home for local governments than the possibility of federal preemption.[96] Considering the doctrine more closely, intrastate preemption differs from its federal counterpart in at least two ways that inflect state-local dynamics in this transition.

First, just as federal preemption is contextualized by federalism principles, intrastate preemption aligns with the contours of local power as defined by a state's constitution or

92. *Id.* ("[F]ield preemption . . . occurs when the federal scheme of regulation is so pervasive that Congress must have intended to leave no room for a State to supplement it" or "conflict preemption . . . occurs either when compliance with both the federal and state laws is a physical impossibility, or when the state law stands as an obstacle to the accomplishment and execution of the full purposes and objectives of Congress.").

93. *See, e.g.*, New York SMSA Ltd. P'ship v. Town of Clarkstown, 612 F.3d 97, 104 (2d Cir. 2010) ("In general, three types of preemption exist: (1) express preemption, where Congress has expressly preempted local law; (2) field preemption, 'where Congress has legislated so comprehensively that federal law occupies an entire field of regulation and leaves no room for state law'; and (3) conflict preemption, where local law conflicts with federal law such that it is impossible for a party to comply with both or the local law is an obstacle to the achievement of federal objectives." (citing Wachovia Bank, N.A. v. Burke, 414 F.3d 305, 313 (2d Cir. 2005); English v. Gen. Elec. Co., 496 U.S. 72, 78–79 (1990))). Some scholars break conflict preemption down further to separate conflicts based on state laws that present obstacles to implementation of federal law and those that frustrate the overall purpose of a federal law. *See, e.g.*, Gregory M. Dickinson, *An Empirical Study of Obstacle Preemption in the Supreme Court*, 89 NEB. L. REV. 682, 685 (2011) (breaking preemption doctrine into express, field, impossibility, and obstacle); Merrill, *supra* note 48, at 739 (breaking preemption doctrine into express, field, obstacle, or frustration).

94. As Professor Daniel Meltzer notes at the opening of a recent article on the topic, "[f]ederal preemption doctrine has few fans . . . ." Daniel J. Meltzer, *Preemption and Textualism*, 112 MICH. L. REV. 1, 2 (2013) (citing Thomas W. Merrill, *Preemption in Environmental Law: Formalism, Federalism Theory, and Default Rules*, *in* FEDERAL PREEMPTION 166, 187 (Richard A. Epstein & Michael S. Greve eds., 2007)). The opening to Meltzer's article offers a useful summary of the common critiques of federal preemption.

95. *See, e.g.*, Clean Air Act, 42 U.S.C. § 7543 (2012) (allowing California to request a waiver from otherwise applicable prohibition on state emissions standards for motor vehicles).

96. Barron, *supra* note 54, at 2366.

statutes. The United States Supreme Court has reiterated the "two cornerstones" of its federal preemption jurisprudence: "[T]he purpose of Congress," and "the assumption that the historic police powers of the States were not to be superseded by the Federal Act unless that was the clear and manifest purpose of Congress."[97] Hence, federal preemption case law recognizes a presumption against preemption of state law in areas traditionally subject to police powers, reinforcing, in Professor Mary Davis's words, "the federal nature of our system of government."[98] As Professor Daniel Meltzer recently summarized, the presumption is invoked on several related grounds: "that Congress did not intend to displace historic police powers of the States; that Congress did not intend to displace state law; or sometimes that the presumption can be overcome only when preemption was the clear and manifest purpose of Congress."[99]

As this Part described, the legal status of local governments is fundamentally different from states' position relative to the federal government. This difference inheres as an important component in the judicial review of state preemption claims as courts interpret the posture and scope of authority defined by state law. Importantly, the presumption against preemption, with its federalism-based justifications, is not a uniform element of intrastate preemption. Some state constitutional or statutory home rule provisions direct courts to liberally construe local authority; others continue to apply the narrowing Dillon's Rule as a statutory rule of construction.[100] The differential scope of authority across sub-state entities found in some states, such as in the Kansas example, likewise creates potential for legislative control over some entities more than others.[101] Even for express preemption, the area of

97. Wyeth v. Levine, 555 U.S. 555, 565 (2009) (internal citations and quotation marks omitted).

98. Mary J. Davis, *Unmasking the Presumption in Favor of Preemption*, 53 S.C. L. REV. 967, 1014 (2002).

99. Meltzer, *supra* note 94, at 52 (internal citations omitted). *Cf.* Davis, *supra* note 98, at 971 (arguing recent Supreme Court preemption decisions suggest a shift toward presumption in favor of preemption, "contrary to the Court's oft-quoted dicta that there is a presumption against preemption of historic state police powers").

100. States that still apply Dillon's Rule in at least some circumstances include Alabama, Connecticut, Hawaii, Idaho, Nebraska, Nevada, North Carolina, Virginia, and West Virginia. *See* KRANE ET AL., *supra* note 54, at 476–78.

101. *Id.* at 159.

clearest commonality between the federal and intrastate frameworks, there are points of divergence. Just as with federal preemption, state courts will typically preclude a local government action if state law expressly preempts it.[102] However, if local governments are constitutionally empowered to act independently within certain spheres, then a state law purporting to prevent local action would be deemed unconstitutional.[103] Congress, on the other hand, may not preempt state law by means that exceed the scope of its enumerated powers.[104] For example, a federal law purporting to preempt states will be invalidated if it is deemed to transgress the limits of the Interstate Commerce Clause and is not otherwise justified by another enumerated power.[105] Conversely, however, federal preemption can result from the dormant Commerce Clause, which "forbids [s]tates and their subdivisions to regulate interstate commerce."[106] No such parallel legal principle obtains in the state-local relationship.[107]

Second, although state courts hew closely to the federal framework analytically, state preemption principles are sufficiently nuanced by variable state-local relationships to produce different outcomes. In a recent dissenting opinion, then-Colorado Supreme Court Justice Martinez pointed to sources for this diversity:

> "Preemption" is a concept used, somewhat confusingly, to

102. *See, e.g.*, *In re* Wallach v. Town of Dryden, 23 N.Y.3d 728, 743 (N.Y. 2014) ("Under the preemption doctrine, a local law promulgated under a municipality's home rule authority must yield to an inconsistent state law as a consequence of 'the untrammeled primacy of the Legislature to act with respect to matters of State concern.'" (citation omitted)).

103. See, for example, the discussion of *Robinson Township*, *infra* Section III.

104. *See* Nat'l Fed'n of Indep. Bus. v. Sebelius, 132 S. Ct. 2566, 2577 (2012) ("The Federal Government is acknowledged by all to be one of enumerated powers." (internal citations and quotation marks omitted)).

105. *Id.* at 2579–80 ("[T]here can be no question that it is the responsibility of this Court to enforce the limits on federal power by striking down acts of Congress that transgress those limits." (citing Marbury v. Madison, 1 Cranch 137 (1803))).

106. C & A Carbone, Inc. v. Town of Clarkstown, N.Y., 511 U.S. 383, 402 (1994) (O'Connor, J., concurring).

107. *See, e.g.*, Brown v. Hovatter, 561 F.3d 357, 364 (4th Cir. 2009) ("[I]t is a trade barrier to the free flow of goods, materials, and other articles of commerce across state lines that violates the dormant Commerce Clause. The Clause does not purport to restrict or limit intrastate commerce, nor protect the participants in intrastate or interstate markets, nor the participants' chosen way of doing business.").

> describe a variety of analyses undertaken to resolve conflicts of law. There are three types of preemption analyses; federal preemption, found in the United States Constitution; home-rule preemption, based on the Colorado Constitution; and statutory preemption, which is not a constitutional analysis at all, but rather is a specialized rule of statutory construction, concerned with the legislative intent behind conflicting state and county laws. Each type of preemption commences with its separate premise and utilizes its own distinctly different analysis.[108]

In Colorado, there are "the three basic ways in which a state statute can preempt a county ordinance or regulation[:] express preemption, implied preemption, and operational preemption."[109] Although Colorado's preemption scheme closely tracks federal law, the third basis for preemption—conflict based on "operational effect"—emphasizes the degree to which "effectuation of a local interest would materially impede or destroy the state interest."[110] As Part III will indicate, this has proved a key test in the state's oil and gas cases.

State formulations of the doctrine also differ in the degree courts will imply preemption, relative to other states and the federal framework. The Kansas courts, for example, have rejected invitations to imply preemption of local law.[111] Preemption occurs only where the legislature makes a clear statement within a statute that it intends to reserve the jurisdiction to regulate exclusively in the state.[112] The doctrine is nuanced further by a Kansas Supreme Court "court-imposed exception to constitutional and statutory home rule" that allows a municipality "to legislate by ordinary ordinance or

108. Colo. Mining Ass'n v. Bd. of Cnty. Comm'rs of Summit Cnty., 199 P.3d 718, 737 (Colo. 2009) (Martinez, J., dissenting).

109. *Id.* at 724; *see also* Bd. of Cnty. Comm'rs, La Plata Cnty. v. Bowen/Edwards Assocs., Inc., 830 P.2d 1045, 1057 (Colo. 1992) ("[A] local law may be partially preempted where its operational effect would conflict with the application of the state statute." (internal citations and quotation marks omitted)).

110. *Bowen/Edwards Assocs.*, 830 P.2d at 1059.

111. Zimmerman v. Bd. of Cnty. Comm'rs of Wabaunsee Cnty. (Zimmerman I), 218 P.3d 400, 429 (Kan. 2009) (citing City of Junction City v. Griffin, 607 P.2d 459 (Kan. 1980); City of Junction City v. Lee, 532 P.2d 1292 (Kan. 1975)).

112. *Id.*; *see also* 143rd St. Investors, L.L.C. v. Bd. of Cnty. Comm'rs of Johnson Cnty., 259 P.3d 644, 655 (Kan. 2011) (reiterating the idea that field preemption requires express statutory language).

resolution non-conflicting local police powers even though there are state laws on the subject uniformly applicable to all municipalities."[113] In contrast to this posture of restraint in the Kansas doctrine, intrastate preemption can lean against local authority, as it does, for example, in West Virginia. The West Virginia Supreme Court has held that "[i]f any reasonable doubt exists as to whether a municipal corporation has a power, the power must be denied."[114]

The influence of state-local structures on state court approaches to implied preemption may combine with "pragmatic considerations" courts bring to the analysis.[115] Professors Daniel Rodriguez and Lynn Baker have offered several pertinent insights with respect to courts' role in state-local conflicts regarding the contours of home rule. In deciding whether home rule precludes preemption by state law, they observe, "courts make what are fundamentally distributive decisions involving the quantum of state and local power"—at once allocating authority and, inevitably, making substantive policy choices.[116]

Finally, intrastate preemption may turn on rules designed to take the subject of local regulation into account. Looking again to Colorado as an example, "in a matter of a purely local concern an ordinance of a home-rule city supersedes a conflicting state statute," but in "a matter of purely statewide concern a state statute or regulation supersedes a conflicting ordinance of a home-rule city."[117] Alternatively, if a matter reflects "mixed local and state concern, a home-rule municipal ordinance may coexist with a state statute as long as there is no conflict between the ordinance and the statute," but the local ordinance gives way in the event of a conflict.[118] The legal

113. Blevins v. Hiebert, 795 P.2d 325, 330 (Kan. 1990).

114. Davidson v. Shoney's Big Boy Rest., 380 S.E.2d 232, 235 (W. Va. 1989); *see also* Diller, *supra* note 54, at 1123 (discussing early restrictions on municipalities' power and lawmaking authority generally).

115. Rodriguez, *supra* note 80, at 639–40 (commenting that implied preemption is "entirely judge-made" and "enables courts to curtail local powers by introducing pragmatic considerations into the question whether the state has properly displaced local power with state control").

116. Lynn Baker & Daniel Rodriguez, *Constitutional Home Rule and Judicial Scrutiny*, 86 DENV. U. L. REV. 1337, 1345 (2009).

117. Voss v. Lundvall Bros., Inc., 830 P.2d 1061, 1066 (Colo. 1992). *See generally* 2 MCQUILLIN, THE LAW OF MUNICIPAL CORPORATIONS § 4:78 (3d ed. Oct. 2014) (providing citations to cases across the states on this distinction).

118. *Voss*, 830 P.2d at 1066

status of the locality, combined with the characterization of the nature and scale of the regulated concern, thus shapes state preemption analysis here in ways distinct from federal preemption.

III. THE STATE-LOCAL DYNAMICS OF FRACKING

Dryden, New York, is among the hundreds of localities that have expressed opposition to fracking through official governmental channels. Residents and local officials faced the specter of fundamental and unwelcome change in their community when they learned that Anschutz Exploration Corp. had leased two-thirds of the land area within the town's borders to drill for natural gas.[119] Oil and gas drilling is an industrial land use that can dramatically alter a landscape.[120] The impact of this activity, combined with the unique features of the fracking process, raises concerns that residents bring to their local governments.[121] They may worry about negative effects on the existing local economy, and on quality of life and property values.[122] They may be concerned about impacts to local environmental resources, to local air quality, and to roads and other infrastructure.[123] The risk of water contamination has been a special concern in areas where local residents draw

119. Anschutz Exploration Corp. v. Town of Dryden, 940 N.Y.S.2d 458, 461 (Sup. Ct. 2012), *aff'd sub nom.* Norse Energy Corp. USA v. Town of Dryden, 964 N.Y.S.2d 714 (App. Div. 2013), *leave to appeal granted*, 995 N.E.2d 851 (N.Y. 2013).

120. For industry photographs documenting various stages of the drilling process and proximity of fracking operations to residences, see John Imse, Powerpoint Presentation, *Tight Oil and Gas Development: A Geologist's View of Hydraulic Fracturing* (Idaho Law Review Symposium, Mar. 29, 2013), *available at* http://www.uidaho.edu/~/media/Files/orgs/Law/law-review/2013-symposium/Imse.ashx, *archived at* http://perma.cc/A7JS-VFNE.

121. *See, e.g.*, Thomas W. Merrill, *Four Questions About Fracking*, 63 CASE WEST. RES. L. REV. 971, 981–85 (2013) (observing that although many of the local impacts associated with hydraulic fracturing operations are no different from conventional oil and gas production, fracking poses unique risks and local concerns: water consumption, water contamination, and earthquakes).

122. *See, e.g.*, Jeff MacMahon, *Pollution Fear Crushes Home Prices Near Fracking Wells*, FORBES (Apr. 10, 2014, 5:09 PM), http://www.forbes.com/sites/jeffmcmahon/2014/04/10/pollution-fears-crush-home-prices-near-fracking-wells, *archived at* http://perma.cc/M8RN-XHEH.

123. *See, e.g.*, W. RESOURCE ADVOCATES, FRACKING OUR FUTURE: MEASURING WATER AND COMMUNITY IMPACTS FROM HYDRAULIC FRACTURING (2012), *available at* http://www.westernresourceadvocates.org/frackwater/ WRA_Fracking OurFuture_2012.pdf, *archived at* http://perma.cc/23MQ-P22Y (focusing on concerns for local impacts in Colorado).

household water from wells and where water is scarce.[124] Although debate continues over the extent of the risk, there appears to be broad consensus among experts from a range of pertinent disciplines that water contamination is a legitimate basis for concern.[125] Surface waters can be contaminated by spills at the drilling site, at wastewater storage pits or tanks, or from wastes discarded improperly on the surface.[126] Groundwater contamination may occur where gas escapes at a faulty well, or it can result from the underground disposal of fracking wastewater, containing fracking chemicals along with naturally occurring subsurface contaminants that are released in the extraction.[127] Even the 2010 MIT analysis, which concluded with some optimism that environmental impacts of fracking are "manageable but challenging," premised its conclusion on the yet-to-be-achieved conditions that "both large and small companies follow industry best practices, that water supply and disposal are coordinated on a regional basis, and that improved methods are developed for recycling of returned fracture fluids."[128] The Rocky Mountain Institute predicts that "[i]t will probably take a decade to resolve fracking controversies, reform bad operators, and build a stable

124. This is the central focus of Food & Water Watch in its effort to drive support for local, state, and national fracking bans. *See Why Fracking is Dangerous*, FOOD & WATER WATCH, http://www.foodandwaterwatch.org/water/fracking/why-fracking-is-dangerous (last visited Nov. 30, 2014), *archived at* http://perma.cc/UW8N-NYWN.

125. ALAN KRUPNICK ET AL., PATHWAYS TO DIALOGUE: WHAT THE EXPERTS SAY ABOUT THE ENVIRONMENTAL RISKS OF SHALE GAS DEVELOPMENT, 18, 64, 62 (2013), *available at* http://www.rff.org/Documents/RFF-Rpt-PathwaystoDialogue_FullReport.pdf, *archived at* http://perma.cc/43XZ-AH5U (showing consensus on the risks among experts at page 18, useful visuals at page 54, and providing additional detail on consensus risk pathways appendix B at page 62).

126. Hannah J. Wiseman, *Fracturing Regulation Applied*, 22 DUKE ENVTL. L. & POL'Y F. 361, 374 (2012) (reporting on violations involving pit construction and maintenance, and surface water spills).

127. For more on water concerns and related legal frameworks, see generally Craig, *supra* note 3; Thomas W. Merrill & David M. Schizer, *The Shale Oil and Gas Revolution, Hydraulic Fracturing, and Water Contamination: A Regulatory Strategy*, 98 MINN. L. REV. 145 (2013) (considering regulatory options for managing risks to water from fracking); Abrahm Lustgarten & ProPublica, *Are Fracking Wastewater Wells Poisoning the Ground Beneath Our Feet?*, SCI. AM. (June 21, 2012), *available at* http://www.scientificamerican.com/article/are-fracking-wastewater-wells-poisoning-ground-beneath-our-feeth, *archived at* http://perma.cc/XAE7-8FHF.

128. AMORY B. LOVINS & ROCKY MOUNTAIN INST., REINVENTING FIRE 233 (2011) (citing MASS. INST. OF TECH., THE FUTURE OF NATURAL GAS: AN INTERDISCIPLINARY MIT STUDY (2010)).

regulatory regime that earns public confidence."[129]

Lack of public confidence in existing regulatory regimes provides the backdrop for the trend in local government trepidation about fracking. Recent reports of state shale gas regulation reveal that significant differences in scope and approach persist in areas with genuine local effects, such as surface water storage and enforcement.[130] In tracing state agency enforcement activity at hydraulically fractured well sites, Professor Hannah Wiseman has shown that a too-narrow focus on groundwater and injection wells has led other serious risks to be under-scrutinized, such as the risk of chemical and other surface spills, leaking disposal wells, and water withdrawals.[131] Her work also shows that response efforts across the states have varied widely.[132] As individual property owners sign leases for exploration and production on their land, local governments consider possible effects of those private transactions on the rest of the community.

In what follows, this section charts the state-local dynamics of hydraulic fracturing. It first details the spectrum of local responses to fracking, and then considers the role of intrastate preemption in this context.

A. Official Local Responses to Fracking

The public interest non-profit Food & Water Watch (FWW) has cataloged anti-fracking action by over 400 local governments.[133] Working with the FWW collection as a

129. *Id.*

130. RESOURCES FOR THE FUTURE, A REVIEW OF SHALE GAS REGULATIONS BY STATE (2012) (report and interactive maps detailing variable status of fracking regulation across states), *available at* http://www.rff.org/centers/energy_economics_and_policy/Pages/Shale_Maps.aspx, *archived at* http://perma.cc/MCB5-PEXW; NATHAN RICHARDSON ET AL., THE STATE OF STATE SHALE GAS REGULATIONS (May 2013), *available at* http://www.rff.org/RFF/Documents/ RFF-Rpt-StateofStateRegs_Report.pdf, *archived at* http://perma.cc/5H4J-DBEY.

131. Hannah J. Wiseman, *Risk and Response in Fracturing Policy*, 84 COLO. L. REV. 729 (2013) (arguing for an immediate shift in regulatory attention to these risks).

132. *See generally* Wiseman, *supra* note 126 (discussing variability in application of state law to hydraulic fracturing operations as well as enforcement of those laws).

133. *The Anti-Fracking Movement*, FOOD & WATER WATCH, http://www.foodandwaterwatch.org/water/fracking/fracking-action-center/map (last visited Nov. 30, 2014), *archived at* http://perma.cc/M96N-FPAC. FWW advocates for a national ban on fracking. *See Fracking*, FOOD & WATER WATCH,

starting point for research, together with other sources, this Article is the first to articulate the spectrum of approaches that comprise the trend of local government resistance to fracking. The spectrum includes (1) outright bans on fracking, in at least three forms; (2) moratoria on fracking pending development of local parameters or safety assurances; (3) resolutions staking a position regarding the regulatory future of fracking at the state or federal level; (4) localized compatibility requirements or restrictions; and (5) generic existing powers applied in the fracking context.

Before considering these local responses in more depth, several aspects and limits of the FWW compilation are worth noting. First is geographic: the FWW data clearly show the trend in local fracking resistance measures is most pronounced in the eastern United States, though it extends across the nation.[134] Second, and almost as noteworthy, is what does not show up in the compilation. The FWW data include bans, moratoria, and resolutions, but do not account for local ordinances in the fourth category, designed to conform fracking activity to locally acceptable parameters. Although not resisting the practice per se, these ordinances are nonetheless critically important in the intrastate preemption context. Accounting for these ordinances would show local activity to be occurring less dominantly in the east, but also across central and western parts of the United States, including traditional oil and gas producing states like Texas, where local governments in highly populated areas have set restrictions for urban drilling,[135] or Kansas, where local governments have long imposed local requirements on oil and gas practices that may also apply to fracked wells.[136] Local actions in the fifth category, pursuant to generic powers, are also not reflected in the FWW data. Moreover, the compilation's focus on local measures captures very little of the flurry of legislative activity at the state level that directly addresses fracking but either fails to pass or does not at least temporarily limit or prohibit fracking. In 2013, for example, state legislatures considered

http://www.foodandwaterwatch.org/water/fracking (last visited Nov. 30, 2014), *archived at* http://perma.cc/62FH-N9KP.

134. *The Anti-Fracking Movement*, *supra* note 133.

135. *See infra* Part III.A.4.

136. *See, e.g.*, Bohrer v. Ramsey Petroleum Co., 44 P.2d 239 (Kan. 1935) (involving city ordinance limiting number of oil wells to one per block and requiring that royalties be paid to other lot owners in the block).

over 300 bills addressing natural gas in some respect.[137] Some of that activity, which I discuss below, is directly on point to local authority over fracking.

In short, the representation of state-local dynamics offered by the FWW is extremely useful but not comprehensive of all local activity on fracking—there is a bigger story still. Bearing this broader context in mind, this section considers how local responses obtain in the ordinances themselves, beginning with the most controversial: the fracking ban.

1. Fracking Bans

Local bans on fracking tend to take one of three forms, depending on whether they are drafted to derive from (a) land use regulatory authority, (b) local police power authority to protect public health and safety, or (c) community rights.

Dryden, New York's zoning amendment on "prohibited uses" exemplifies the local fracking ban based on land use authority.[138] The ordinance, challenged in *Anschutz v. Town of Dryden,* was clearly framed as land use regulation—"No land in the Town shall be used . . . "[139]—and precluded land use for natural gas or petroleum exploration; land use for the storage, treatment and disposal of exploration and production materials or wastes; and land use for support activities.[140] The validity of local land use ordinances is typically reinforced both by the local government's home rule, or other generically defined powers, and an enabling statute specific to zoning.[141]

137. *See* CTR. FOR THE NEW ENERGY ECON., 2013 YEAR IN REVIEW: STATE ADVANCED ENERGY LEGISLATION (2013), *available at* http://www.aeltracker.org/graphics/uploads/CNEE-2013-Year-in-Review-State-Advanced-Energy-Legislation_December-2013.pdf, *archived at* http://perma.cc/H9FM-HLMR.

138. Town of Dryden, N.Y., Zoning Ordinance (July 19, 2012) [hereinafter Dryden Zoning Ordinance], *available at* http://dryden.ny.us/Planning-Department/ZoningLaw/Zoning_Ordinance_Amendments_adopted_7_19_2012.pdf, *archived at* http://perma.cc/9C89-KNAA.

139. *Id.* at art. V, § 502; *see also infra* Part III.B (discussing the *Town of Dryden* litigation).

140. Dryden Zoning Ordinance, at art. V, § 502. Additionally, most of the documents referenced can be retrieved in some form via Food and Water Watch's website. *See Local Actions Against Fracking*, FOOD & WATER WATCH, http://www.foodandwaterwatch.org/water/ fracking/fracking-action-center/local-action-documents (last visited Nov. 30, 2014), *archived at* http://perma.cc/Y32P-MCS2.

141. For a succinct history of local land use regulation in the United States, see John R. Nolon, *Historical Overview of the American Land Use System: A*

In contrast to land use-based bans, the health-safety-welfare variation is not couched in zoning authority but frames ordinances in terms of more generalized public protections. Creedmoor, North Carolina, for example, relied on state statutory authority to prohibit fracking within its borders and within a one-mile radius, declaring fracking to be a public nuisance and threat to public health that may adversely impact the citizens, drinking water supply, and property within the city.[142]

Finally, contrast the first two traditional forms with the community rights-based approach. This variation reflects a set of ordinances that assert community members' right to health, safety, and a clean environment and the value of holding community rights above corporate interests. The Community Environmental Legal Defense Fund (CELDF) has assisted over 140 local governments in drafting community rights ordinances to oppose polluting activities, including fracking.[143] An early fracking example was enacted in Pittsburgh, Pennsylvania, and titled "Pittsburgh's Community Protection from Natural Gas Extraction Ordinance."[144] The ordinance banned commercial extraction of natural gas within the City and purported to create a "bill of rights" for the residents of the City and remove "certain legal powers from gas extraction corporations operating within the City."[145] This model consistently emphasizes the goal of reordering power in the jurisdiction to favor citizens over corporate entities. Under the Pittsburgh ordinance, for example, it is "unlawful for any

Diagnostic Approach to Evaluating Governmental Land Use Control, 23 PACE ENVTL. L. REV. 821, 847–48 (2006).

142. Creedmoor, N.C., Ordinance to Prohibit Oil and Gas Drilling Which Involve Horizontal Drilling with Fracturing Within the Corporate Limits of the City of Creedmoor and Its Extraterritorial Jurisdiction (Sept. 27, 2011), *available at* http://documents.foodandwaterwatch.org/doc/Frack_Actions_CreedmoorNC.pdf, *archived at* http://perma.cc/EY6S-XQJL.

143. CMTY. ENVTL. LEGAL DEF. FUND, FRACKING: FACT SHEET (2012–2013), *available at* http://celdf.live2.radicaldesigns.org/downloads/Fact_Sheet_Fracking.pdf, *archived at* http://perma.cc/P56S-LU5Q.

144. Pittsburgh, Pa., Ordinance to Protect the Health, Safety, and Welfare of Residents and Neighborhoods of Pittsburgh by Banning the Commercial Extraction of Natural Gas Within the City; Establishing a Bill of Rights for Pittsburgh Residents; and Removing Legal Powers from Gas Extraction Corporations Within the City (Nov. 16, 2010), *available at* http://www.celdf.org/downloads/Ordinance%20-%20Pittsburgh%20Protection%20from%20Gas%20Drilling.pdf, *archived at* http://perma.cc/HV2S-FP67.

145. *Id.* § 3.

corporation to engage in the extraction of natural gas within the City of Pittsburgh," and the bill of rights articulates a right to water, rights of natural communities, and rights of self-government.[146] Similar ordinances passed in Mora, New Mexico and Lafayette, Colorado.[147] To date, there is little case law on this variation of the fracking ban. In *Range Resources-Appalachia, LLC v. Blain Township,* a Pennsylvania state court rejected local efforts to constrain corporate rights under this model, concluding that "the Township does not have the legal authority to annul constitutional rights conferred upon corporations by the United States Supreme Court."[148] Nonetheless, the movement to adopt this approach continues, with an emphasis on its communicative content, as numerous localities across several states are working to adopt rights-based ordinances to prevent fracking.[149] CELDF is now working to advance model state legislation and state constitutional amendments to reinforce local government authority and preclude state preemption of local control.[150]

146. *Id.* § 5.1.

147. *See Local Actions Against Fracking*, *supra* note 140. For more on the community rights-based fracking ban model in New Mexico, see Jonas Armstrong, *What the Frack Can We Do? Suggestions for Local Regulation of Hydraulic Fracturing in New Mexico*, 53 NAT. RESOURCES J. 357 (2013).

148. Range Res.-Appalachia, LLC v. Blaine Twp., 649 F. Supp. 2d 412, 418 (W.D. Pa. 2009) (holding that the Blaine Township Corporate Disclosure and Environmental Protection Ordinance were preempted by state law); *see also* Range Res.-Appalachia, LLC v. Blaine Twp., 2009 U.S. Dist. LEXIS 100932 (W.D. Pa. Oct. 29, 2009) (involving same parties and same ordinances); Penn Ridge Coal, LLC v. Blaine Twp., 2009 U.S. Dist. LEXIS 84428 (W.D. Pa. Sept. 16, 2009) (different plaintiff, same Township defendant and substantive legal questions).

149. *See, e.g.*, *City of Lafayette "Community Rights Act" Fracking Ban Amendment, Question 300 (November 2013)*, BALLOTPEDIA, http://ballotpedia.org/City_of_Lafayette_%22Community_Rights_Act%22_Fracking_Ban_Amendment,_Question_300_%28November_2013%29 (last visited Nov. 30, 2014), *archived at* http://perma.cc/HSH2-2ZUU (discussing Lafayette, Colorado's Community Rights Act, which was enacted in November 2013 but subsequently struck down by a court ruling in August 2014); Mora, N.M., Ordinance 2013-01 (Apr. 29, 2013), *available at* http://www.celdf.org/downloads/Mora_Co_Community_Rights_Ordinance_042913.pdf, *archived at* http://perma.cc/3DJC-HMR3. For others, see *Ordinances*, CMTY. ENVTL. LEGAL DEF. FUND, http://www.celdf.org/section.php?id=39 (last visited Nov. 30, 2014), *archived at* http://perma.cc/ 9GDV-2LDV (with links to rights-based ordinances that CELDF has drafted for local governments).

150. *See State Law Center*, CMTY. ENVTL. LEGAL DEF. FUND, http://www.celdf.org/community-rights-state-law-center (last visited Nov. 30 2014), *archived at* http://perma.cc/PCJ6-H4VY.

2. Moratoria

Fracking moratoria have typically been premised on the need for more time to establish permitting standards or other governance infrastructure in the interest of protecting public health and safety. Localities have long used moratoria as a means of ensuring sufficient time for public deliberation to inform local governance of a wide range of issues that confront communities.[151] The potential for moratoria to burden property rights, however, raises the risk of constitutional challenges. United States Supreme Court precedent dictates that the validity of moratoria cannot be analyzed according to a bright-line rule.[152] In 2010, a California state court upheld Culver City's moratorium of new oil and gas wells in an active oil and gas field.[153] The city cited a compelling need to update its local regulations in light of environmental and health concerns, and the court deferred, rejecting the driller's vested rights claim.[154] Subsequently, Culver City took the moratorium further as it contemplated a ban on fracking.[155]

Moratoria do not necessarily correspond with wholesale opposition to fracking, yet they do, at minimum, represent opposition to immediate use of the practice and register concern that state and federal regulation is insufficient to

151. *See, e.g.,* Laura Hurmence McKaskle, *Land Use Moratoria and Temporary Takings Redefined After Lake Tahoe?*, 30 PEPP. L. REV. 273, 278–83 (2003) (describing purposes of moratoria ordinances).

152. *See* Tahoe-Sierra Pres. Council, Inc. v. Tahoe Reg'l Planning Agency, 535 U.S. 302, 306 (2002) (holding that a "moratorium on development imposed during the process of devising a comprehensive land-use plan" does not constitute "a *per se* taking of property requiring compensation under the Takings Clause of the United States Constitution"). The Court rejected a bright-line rule and applied the balancing factors outlined in *Penn Cent. Trans. Co. v. New York City*, 438 U.S. 104, 123–30 (1978). *Id.* at 321; *see also* Rebecca Nowak-Doubek, *A Victory for Property Rights: How State Courts Have Interpreted and Applied the Decision from* Tahoe-Sierra Preservation Council, Inc. v. Tahoe Regional Planning Agency, 36 U. TOL. L. REV. 405 (2005) (examining how state courts interpret and apply *Tahoe-Sierra*).

153. Plains Exploration & Prod. Co. v. City of Culver City (L.A. Cnty. Super. Ct. Mar. 26, 2010) (holding that the city had the authority to issue the moratorium through its zoning powers), *available at* http://www.cityprojectca.org/blog/wp-content/uploads/2010/03/decisionpxpvculvercitymoratorium20100326.pdf (last visited Dec. 2014), *archived at* http://perma.cc/G7DR-8P89.

154. *Id.* at 16–18.

155. *See* Lynne Bronstein, *Council Proceeds Cautiously on Fracking Ban*, CULVER CITY OBSERVER (Apr. 3, 2014), http://www.culvercityobserver.com/story/2014/03/27/news/council-proceeds-cautiously-on-fracking-ban/3677.html, *archived at* http://perma.cc/DSW2-KY3F.

protect local interests.[156] For example, Colorado Springs, Colorado, passed an emergency six-month moratorium on processing applications for oil and gas activities within the City limits to allow it time to develop rules to control local impacts.[157] Similarly, Kent County, Michigan, alert to the intrastate preemption issues arising across the country, voted to impose a six-month moratorium on oil and gas drilling specifically to develop protective regulations that would not be preempted by broad state jurisdiction over oil and gas wells.[158] Compatibility restrictions, fourth on the spectrum described here, are typically expected to follow after a moratorium expires.

3. Resolutions

A third approach on the spectrum is the local resolution, typically expressing local government support or opposition to federal or state fracking legislation. Looking to proposed federal regulation, Berkeley, California, like a number of other localities, passed a resolution supporting specific bills in Congress—the Fracturing Responsibility and Awareness of Chemicals Act (FRAC Act), and Bringing Reductions to Energy's Airborne Toxic Health Effects Act—that would curb environmental harm from fracking.[159] In an expression of opposition to the state of North Carolina lifting a de facto statewide ban on fracking, Stokes County, North Carolina, passed a resolution formally urging "the North Carolina General Assembly to take no action and pass no legislation that would legalize hydraulic fracturing or horizontal drilling" until

156. Matthew G. St. Amand & Dwight H. Merriam, *Defensible Moratoria: The Law Before and After the* Tahoe-Sierra *Decision*, 43 NAT. RESOURCES J. 703, 742–44 (2003).

157. Cathy Proctor, *Colorado Springs Imposes Oil and Gas Moratorium*, DENV. BUS. J. (Nov. 30, 2011, 3:14 PM), http://www.bizjournals.com/denver/news/2011/11/30/colorado-springs-takes-up-oil-and-gas.html, *archived at* http://perma.cc/67CU-87U8.

158. Jim Harger, *Fearful of 'Fracking,' Kent County Township Adopts Moratorium on Oil and Gas Drilling*, MLIVE (May 16, 2013, 2:37 PM), http://www.mlive.com/business/west-michigan/index.ssf/2013/05/fearful_of_fracking_kent_count.html, *archived at* http://perma.cc/PLU3-YTFA.

159. *See* Letter from Kriss Worthington, Councilmember, City of Berkeley, to Honorable Mayor and Members of the City Council, Ordinance to Ban Hydraulic Fracturing and Oil Extraction in Berkeley (June 10, 2014), *available at* http://www.ci.berkeley.ca.us/councilitems2014.aspx, *archived at* http://perma.cc/79XB-SGTW.

and unless it could be "fully demonstrated that North Carolina public health, waters, land, air, economy, and quality of life can be fully protected from the impacts of allowing shale gas development in the State."[160]

Resolutions are primarily communicative, but that communication can have a powerful effect.[161] A resolution expresses the sentiments of a community through its elected officials. In the context of this trend, resolutions convey solidarity with other local governments in resistance to fracking, reinforcing the message of concern and trepidation that other localities send using the more forceful fracking ban or moratorium. The FWW compilation of bans, moratoria, and resolutions suggests localities have adopted these measures in close to equal parts, with the largest group by a small margin being resolutions.[162]

4. Compatibility Restrictions

This fourth approach, compatibility restrictions enacted through zoning ordinances or otherwise, neither bans fracking nor overtly discourages drilling. Indeed, they may be designed to facilitate fracking in ways acceptable to local residents. They are part of this spectrum of local responses, however, because in working to minimize local impacts, such restrictions can, deliberately or inadvertently, lead to conflicts with fracking operations, depending on their stringency. Local governments have enacted ordinances addressing matters ranging from well protections to noise controls, local permitting, and notice provisions.

160. *See* Stokes Cnty., N.C., Resolution in Opposition to Hydraulic Fracturing or Fracking in North Carolina (June 11, 2012), *available at* http://documents.foodandwaterwatch.org/doc/Frack_Actions_StokesCountyNC.pdf, *archived at* http://perma.cc/XGS3-GNDZ.

161. Advocates for various causes advance local resolutions to build community consensus, educate local officials and residents about an issue, show solidarity with others supporting a shared goal, and send a message to higher levels of government. For example, in the same vein as the community rights-based fracking bans, Move to Amend is an organization focused on building support to amend the United States Constitution to eliminate "corporate personhood," which was solidified by a divided Supreme Court in the *Citizens United* case. *See* MOVE TO AMEND: PASS A RESOLUTION, https://movetoamend.org/pass-local-resolution (last visited Mar. 2014), *archived at* https://perma.cc/R8DD-96YT.

162. Special thanks to Michelle Fuchs for this diligent research, which analyzed the local actions against fracking listed by Food and Water Watch. *See Local Actions Against Fracking*, *supra* note 140.

Compatibility restrictions are common in urban areas of Texas, notably Dallas, and other areas affected by urban drilling.[163] As drilling encroaches on population centers, the possibility of harmful impacts becomes relevant to more people and property interests. Dallas, Texas, bordering the Barnett Shale formation and with a population of 1.2 million, enacted an ordinance in 2013 imposing restrictions such as a 1,500-foot setback from drilling pads to property lines of neighboring homes or businesses.[164] The move was criticized by oil and gas industry representatives as effecting a functional ban on drilling in city limits, and was especially controversial in light of the fact that an energy firm paid millions to the city for mineral rights only two years earlier.[165] In a similar vein, Los Angeles, California, with a population nearing four million, is crafting a prohibition against "well stimulation" practices that would effectively ban fracking, as residents worry about the effects of more than 1,800 active oil and gas wells and nearly 3,000 abandoned wells within city limits.[166] Compatibility concerns also arise in low population areas, however. In southwest Kansas, for example, local planners are concerned about the need to restrict water use for fracking in drought conditions to ensure compatibility with other water-dependent land uses.[167]

163. *See, e.g.*, Fort Worth, Tex. Ordinance No. 18449-02-2009 (Feb. 3, 2009), *available at* http://fortworthtexas.gov/uploadedFiles/Gas_Wells/gasdrilling_ordinance.pdf, *archived at* http://perma.cc/QNM3-RRYG (amending Gas Drilling and Production chapter of the Fort Worth Code of Ordinances in light of increased drilling in densely populated portions of the city); *see also* Colleyville, Tex., Land Development Code, Ch. 3.1 Oil and Gas Well Drilling and Production (Jan. 1, 2012), *available at* http://www.colleyville.com/images/content/files/community development/ch._03.1_gas_and_oil_well_drilling_and_production_fifth_revision.pdf, *archived at* http://perma.cc/J5EH-PGT7.

164. Randy Lee Loftis, *Dallas City Council Passes Restrictive Gas Drilling Ordinance*, DALL. MORNING NEWS (Dec. 11, 2013, 1:57 PM), http://cityhallblog.dallasnews.com/2013/12/council-now-tackling-gas-drilling-for-the-last-time.html, *archived at* http://perma.cc/K52P-E3GK.

165. *Id.*

166. Emily Alpert Reyes, *L.A. City Council Takes Step Toward Fracking Ban*, L.A. TIMES (Feb. 28, 2014, 8:44 PM), http://www.latimes.com/science/la-me-0301-fracking-ban-20140301-story.html, *archived at* http://perma.cc/F6CT-66CA.

167. *See, e.g.*, Ellen M. Gilmer, *KANSAS: County Planners Address Fracking Regs in Workshop*, ENERGYWIRE/E&E PUBL. (Aug. 20, 2012), http://www.eenews.net/energywire/2012/08/20/stories/1059968979, *archived at* http://perma.cc/RWS8-YNN5 (on file with author) (discussing counties welcoming the oil and gas industry but recognizing the need to address water usage and "protect our citizens").

5. Generic Powers

Finally, the fifth approach captures local governments' role in issuing special or conditional use permits, variances, and related permissions for fracking operations under the auspices of generic land use authority. In these instances, the local government has not enacted local law specific to fracking, but simply applies existing powers to preclude drilling or other fracking related activities. Special or conditional use permitting can preserve local siting control, allowing for a reasoned rejection of an individual permit based on aesthetic or other compatibility issues.[168] For example, several months after an energy firm signed an oil and gas lease on sixty-seven unincorporated acres in Clinton County, Illinois, and obtained a state permit to drill, the City of Carlyle, Illinois, annexed the land.[169] The effect was to automatically reclassify the land into the residential district where the zoning code does not allow drilling for oil and gas.[170] In this way, the city used its neutral annexation powers in a way that had the indirect effect of expanding the area where drilling was prohibited, without reliance on a jurisdiction-wide ban.[171]

Similar issues have arisen in connection with fracking support industries, such as in the northern Midwest where demand has increased for sand used as a proppant in fracking fluids.[172] The Minnesota town of St. Charles, for example, rejected a request for annexation to accommodate a plant that would have processed and supplied proppant to the fracking industry.[173]

This spectrum of approaches reveals strong trepidation

168. *Cf.* Jennifer R. Andriano, *The Power of Wind: Current Legal Issues in Siting for Wind Power*, 61 PLANNING & ENVTL. L. 3, 4 (2009) (discussing special use permitting in the wind context).

169. Tri-Power Res., Inc. v. City of Carlyle, 967 N.E.2d 811, 812 (Ill. App. Ct. 2012).

170. *Id.* (upholding the city's annexation).

171. *Id.* at 817. The court did not decide whether Tri-Power had a takings claim. *Id.*

172. For a visual representation of the geographic distribution of mines and industrial facilities that support the fracking boom, see *Frac Sand Industry Map*, FRACTRACKER ALLIANCE, http://maps.fractracker.org/latest/?webmap=2f382d5fcdb748deba89e6104b59551d (last visited Nov. 30, 2014), *archived at* http://perma.cc/GQP3-5C37.

173. Tony Kennedy, *St. Charles Denies a Major Frac Sand Project*, STAR TRIB. (Mar. 14, 2013, 10:11 PM), http://www.startribune.com/blogs/197707171.html, *archived at* http://perma.cc/4CPL-GGPH.

about local impacts from fracking, a lack of confidence among local officials in state regulatory regimes for oil and gas drilling, and uncertainty about whether and how a local government can avoid preemption in efforts to manage local impacts.

B. Intrastate Preemption in the Fracking Context

Most official local fracking measures, including bans, have not been challenged in court, but the varied results in state courts to date comprise a growing body of case law that teaches more than the current status of individual state law. Reinforcing the central claim of this Article, the interactions between state-local power structures, judicial interpretations of the preemptive effect of existing oil and gas statutes, and the policy questions for legislatures that the cases raise, show that intrastate preemption law, in its variability, is enhancing local governments' ability to participate in national energy transition.

The most important intrastate preemption controversies decided by courts to date underscore this dynamic. This section provides texture and content to the doctrine as it has been applied in pertinent case law. It then takes up intrastate preemption in the legislative context—how states have responded to assertive local governments, in ways directly addressing state-local dynamics as well as ways responsive to local government concerns.

Among the localities challenged in court on preemption grounds is Dryden, New York. Dryden's ordinance, noted earlier as an example of a land use-based fracking ban, was at the center of state court litigation closely watched across the nation.[174] Anschutz Exploration Corp., the company holding leases to a third of the town's land area, sued to invalidate Dryden's ordinance as preempted by the New York Oil, Gas and Solution Mining Law's supersedure clause, which provided "[t]he provisions of this article shall supersede all local laws or ordinances *relating to the regulation of the oil, gas and solution*

174. *See, e.g.*, *The Story of Dryden: The Town That Fought Fracking (And is Winning)*, EARTH JUSTICE, http://earthjustice.org/features/the-story-of-dryden-the-town-that-fought-fracking-and-is-winning (last visited Sept. 14, 2014), *archived at* http://perma.cc/7LH9-FYX9.

mining industries."[175] The court framed the issue as one of first impression in land use terms: "whether a local municipality may use *its power to regulate land use* to prohibit exploration for, and production of oil and natural gas."[176] The Superior Court held Dryden could regulate *where* drilling operations could occur, but not *how* operations could occur.[177]

The New York Appellate Division affirmed the ruling in favor of the local government, explaining that "[t]he zoning ordinance at issue . . . does not seek to regulate the details or procedure of the oil, gas and solution mining industries. Rather, it simply establishes permissible and prohibited uses of land within the Town for the purpose of regulating land generally."[178] Finding no "clear expression of legislative intent to preempt local control over land use" in the statute or legislative history, the appellate court declined to construe the statute as preempting "the authority traditionally delegated to municipalities to establish permissible and prohibited uses of land within their jurisdictions."[179] The New York Court of Appeals, the state's highest court, heard the appeal under the case name *Wallach v. Town of Dryden* in 2014 and affirmed that the statewide law did not preempt the home rule authority vested in municipalities by the state constitution and by statutory authority to regulate local land use.[180] In regards to the "regulation of land use through zoning ordinances as one of the core powers of local governance," the court clarified that it only invalidates a zoning law "where there is a clear expression of legislative intent to preempt local control over land use."[181] Although the court was clear that the state legislature has the right to eliminate "the home rule capacity of municipalities to pass zoning laws that exclude oil, gas and hydrofracking activities," preemptive intent is not expressed in the existing

175. Anschutz Exploration Corp. v. Town of Dryden, 940 N.Y.S.2d 458, 466 (Sup. Ct. 2012) (emphasis in case, but not in statute), *aff'd sub nom.* Norse Energy Corp. USA v. Town of Dryden, 964 N.Y.S.2d 714 (App. Div. 2013), *leave to appeal granted*, 995 N.E.2d 851 (N.Y. 2013).

176. *Id.* at 461.

177. *Id.* at 467–71; *see also* Cooperstown Holstein Corp. v. Town of Middlefield, 64 N.Y.S.2d 431(App. Div. 2013) (holding that local fracking ban was not preempted by state law).

178. Norse Energy Corp. USA v. Town of Dryden, 964 N.Y.S.2d 714, 719 (App. Div. 2013).

179. *Id.* at 721.

180. Wallach v. Town of Dryden, 23 N.Y.3d 728 (N.Y. 2014).

181. *Id.* at 743 (internal citations and quotation marks omitted).

statute.[182]

In avoiding intrastate preemption absent express legislative intent, the New York courts' restraint stands in contrast with the analytical approach taken by the West Virginia courts. When an energy firm challenged a Morgantown, West Virginia ordinance that banned horizontal drilling with hydraulic fracturing within the city limits as a nuisance, a state court declared the measure invalid and preempted by state law.[183] In *Northeast Natural Energy, LLC v. City of Morgantown*, the court reasoned that "the State's interest in oil and gas development and production throughout the State as set forth in the [West Virginia Code] provides for the exclusive control of this area of law to be within the hands of the [West Virginia Department of Environmental Protection]."[184] In drawing this conclusion, the court emphasized the narrow scope of local authority in the state, citing the West Virginia Supreme Court for the proposition that "municipal corporation powers are so narrowly proscribed that . . . 'if any reasonable doubt exists as to whether a municipal corporation has a power, the power must be denied.'"[185] Accordingly, the court held that state law did "not provide any exception or latitude to permit the City of Morgantown to impose a complete ban on fracking or to regulate oil and gas development and production."[186]

In Colorado, prior preemption case law specific to the oil and gas context is being revisited as the City of Longmont faces lawsuits from two directions—the Colorado Oil and Gas Association ("COGA"), representing drilling interests, and the Colorado Oil and Gas Conservation Commission ("COGCC"), a division of the state's Department of Natural Resources.[187] The lawsuits challenge Longmont ordinances regulating drilling

182. *Id.* at 754–55.

183. Ne. Natural Energy, LLC v. City of Morgantown, No. 11-C-411, 2011 WL 3584376, at *9 (W. Va. Cir. Ct. Aug. 12, 2011).

184. *Id.*

185. *Id.* at *7.

186. *Id.* at *9.

187. Order Granting Motions for Summary Judgment, Colo. Oil & Gas Ass'n v. City of Longmont, No. 13CV63, 2014 WL 3690665 (Colo. Dist. Ct. July 24, 2014), *appeal filed sub nom.* City of Longmont v. Colo. Oil & Gas Ass'n; *see also* Juan Carlos Rodriguez, *Enviros Take Fracking Ban Fight to Colo. Appeals Court*, LAW360 (Sept. 11, 2014, 4:01 PM), http://www.law360.com/articles/576276/enviros-take-fracking-ban-fight-to-colo-appeals-court, *archived at* http://perma.cc/A39P-A94D.

and a ballot measure that banned drilling in residential areas. Both suits allege the state Oil and Gas Conservation Act preempts the measures.[188] Preemption precedent in the state includes two cases from the 1990s: *Board of County Commissioners v. Bowen/Edwards Associates, Inc.* and *Voss v. Lundvall Brothers, Inc.*[189] The Colorado courts have applied the doctrine with emphasis on the potential for implied preemption if local regulations pose operational conflicts with state objectives. In *Bowen/Edwards*, the court rejected the claim that the Conservation Act "implied total preemption of a county's authority to enact land-use regulations for oil and gas developmental and operational activities within the county."[190] In *Voss*, however, the court held "that the state's interest in efficient development and production of oil and gas in a manner preventative of waste and protective of the correlative rights of common-source owners and producers . . . preempts a home-rule city from totally excluding all drilling operations within the city limits."[191]

Subsequent cases in lower state courts have explored the boundaries of operational conflicts. In *La Plata County v. Colorado Oil & Gas Conservation Commission*, the Colorado Court of Appeals invalidated a COGCC rule providing that a "permit-to-drill shall be binding with respect to any conflicting local governmental permit or land use approval process."[192] The court sided with the county, which attacked the rule for expanding the *Bowen/Edwards* operational conflict standard to "*any*" conflict to preempt "local government actions beyond those that materially impede or destroy the state interest," effectively giving "oil and gas operators license to disregard local land use regulation."[193] In a consistent holding on reverse facts, the Court of Appeals in the *Town of Frederick v. North American Resources Co.* granted the town an injunction against an energy firm for drilling in violation of a local ordinance.[194] Rejecting the firm's argument that the ordinance was wholly

188. *See* Order Granting Motions for Summary Judgment, *supra* note 187.

189. Bd. of Cnty. Comm'rs, La Plata Cnty. v. Bowen/Edwards Assocs., Inc., 830 P.2d 1045 (Colo. 1992); Voss v. Lundvall Bros., Inc., 830 P.2d 1061 (Colo. 1992).

190. *Bd. of Cnty. Comm'rs, La Plata Cnty.*, 830 P.2d at 1059.

191. *Voss*, 830 P.2d at 1069.

192. Bd. of Cnty. Comm'rs, La Plata Cnty. v. Colo. Oil & Gas Conserv. Comm'n, 81 P.3d 1119, 1122–25 (Colo. App. 2003).

193. *Id.* at 1125.

194. Town of Frederick v. N. Am. Res. Co., 60 P.3d 758, 764 (Colo. App. 2002).

preempted by state law, the court held that provisions such as "building permits for above-ground structures, access roads, [and] emergency response costs" for which the court "found no corresponding state rule that gave rise to an operational conflict" were not preempted and could be enforced.[195] However, provisions regulating "technical aspects of drilling," or conflicting with state regulations, were deemed unenforceable.[196]

This legal precedent looms large over Longmont and other localities concerned about fracking impacts, including two other localities COGA has sued, Lafayette and Fort Collins, for taking official steps to control drilling.[197] Nonetheless, even as this litigation appears to be having a chilling effect on localities, as recently as March 2014 a fracking ban by ballot initiative in Broomfield, Colorado survived a legal challenge to the initiative process.[198] In July 2014, a Colorado district court rejected Longmont's ban as preempted by state law, but stayed the decision pending appeal.[199] Fort Collins's five-year moratorium was also rejected, and the court did not stay the decision pending appeal.[200]

State-local dynamics have perhaps been most contentious in Pennsylvania. In 2009's *Huntley & Huntley v. Borough of Oakmont,* the Pennsylvania Supreme Court ruled that a residential zoning ordinance affecting the location of a well was

195. *Id.*

196. *Id.* at 763, 766.

197. *See* Mark Jaffe, *Oil and Gas Industry Sues Lafayette and Fort Collins on Fracking Bans*, DENV. POST (Dec. 3, 2013, 9:48 PM), http://www.denverpost.com/business/ci_24649775/oil-and-gas-industry-sues-lafayette-and-fort, *archived at* http://perma.cc/497B-R2HX.

198. Megan Quinn, *Judge Upholds Broomfield Election; Fracking Ban Remains in Effect*, DAILY CAMERA (Feb. 27, 2014, 7:07 PM), http://www.dailycamera.com/broomfield-news/ci_25243782/judge-upholds-broomfield-election-fracking-ban-remains-effect, *archived at* http://perma.cc/GT8Y-X9U4.

199. Colo. Oil & Gas Ass'n v. City of Longmont, No. 13CV63, 2014 WL 3690665 (Colo. Dist. Ct. July 24, 2014). At the time of this writing, the case is on appeal and the City of Boulder is filing an amicus brief in support of Longmont and Fort Collins. *See* John Fryar, *Boulder County to Side with Longmont in Case Over Fracking Ban*, TIMES-CALL (Nov. 14, 2014, 6:12 PM), http://www.timescall.com/longmont-local-news/ci_26941307/boulder-county-side-longmont-case-over-fracking-ban, *archived at* http://perma.cc/SWA8-JLNM.

200. *See* Jim Magill, *Judge Overturns Fort Collins, Colorado, Fracking Ban*, PLATTS (Aug. 8, 2014, 3:17 PM), http://www.platts.com/latest-news/natural-gas/houston/judge-overturns-fort-collins-colorado-fracking-21048030, *archived at* http://perma.cc/9JSG-FXUP.

not preempted by the state Oil and Gas Act.[201] Key to its analysis was that "zoning controls are both broader and narrower in scope" than the state statute.[202] The court explained, "[t]hey are narrower because they ordinarily do not relate to matters of statewide concern, but pertain to the specific attributes and developmental objectives of the locality in question."[203] They are simultaneously broader, however, "in terms of subject matter, as they deal with all potential land uses and generally incorporate an overall statement of community development objectives that is not limited solely to energy development."[204] The court recognized localities' "unique expertise" in making siting decisions that account for "the community's development objectives, its character, and the suitabilities and special nature of particular parts of the community"—an expertise reinforced by state law enabling local land use planning.[205]

This reasoning led the court to conclude that "absent further legislative guidance . . . the Ordinance serves different purposes from those enumerated in the Oil and Gas Act, and hence, its overall restriction on oil and gas wells in [residential] districts is not preempted by that enactment."[206] In contrast, the court issued another oil and gas opinion on the same day, *Range Resources-Appalachia, LLC v. Salem Township*, which held that local regulation *was* preempted when held to be regulating aspects of oil and gas operations rather than land use.[207] This where-how distinction is similar to the New York state courts' analysis of local bans and moratoria under New York law.

In response to Pennsylvania towns' success in court, the state legislature sought to provide the "further legislative guidance" previously unavailable to the state courts. In 2010, the Pennsylvania General Assembly passed Act 13 to promote shale gas drilling by, among other things, prohibiting local government bans on fracking within the state.[208] The statute

201. Huntley & Huntley, Inc. v. Borough of Oakmont, 964 A.2d 855 (Pa. 2009).
202. *Id.* at 865.
203. *Id.*
204. *Id.*
205. *Id.* at 866 (internal citations and quotation marks omitted).
206. *Id.*
207. Range Res.-Appalachia, LLC v. Salem Twp., 964 A.2d 869, 875–77 (Pa. 2009).
208. Act No. 13 of Feb. 14, 2012, P.L. 87 (codified as amended at 58 PA. CONS.

preempted local authority with a far-reaching affirmative requirement that localities amend zoning ordinances to include oil and gas operations in all zoning districts.[209]

Local governments challenged Act 13 and prevailed.[210] The Pennsylvania Commonwealth Court invalidated Act 13's preemption provision on state constitutional grounds, holding in pertinent part:

> [B]y requiring municipalities to violate their comprehensive plans for growth and development [Act 13] violates substantive due process because it does not protect the interests of neighboring property owners from harm, alters the character of neighborhoods and makes irrational classifications—irrational because it requires municipalities to allow in all zones, drilling operations and impoundments, gas compressor stations, storage and use of explosives in all zoning districts, and applies industrial criteria to restrictions on height of structures, screening and fencing, lighting and noise.[211]

The Pennsylvania Supreme Court affirmed the key preemption question in the local governments' favor on different grounds.[212] In a lengthy opinion, a plurality of the court analyzed the constraints of the Environmental Rights Amendment to the Pennsylvania Constitution—a strong but underutilized formulation of the public trust doctrine.[213] The court reiterated a critical constraint on intrastate preemption, explaining that "constitutional commands regarding municipalities' obligations and duties to their citizens cannot

STAT. §§ 2301–3504 (2014)).

209. Robinson Twp. v. Commonwealth, 52 A.3d 463, 485 (Pa. Commw. Ct. 2012), *aff'd in part, rev'd in part*, 83 A.3d 901 (2013).

210. *Id.*

211. *Id.* at 484.

212. Robinson Twp. v. Commonwealth, 83 A.3d 901, 977 (Pa. 2013).

213. The Pennsylvania Constitution provides:

> The people have a right to clean air, pure water, and to the preservation of the natural, scenic, historic and esthetic values of the environment. Pennsylvania's public natural resources are the common property of all the people, including generations yet to come. As trustee of these resources, the Commonwealth shall conserve and maintain them for the benefit of all the people.

PA. CONST. art. I, § 27.

be abrogated by statute."[214] Moreover, the court observed, "the General Assembly has no authority to remove a political subdivision's implicitly necessary authority to carry into effect its constitutional duties."[215] Guided by these principles, the court held that "although the Commonwealth purports to preempt the regulatory field to the exclusion of all local environmental legislation that might be perceived as affecting oil and gas operations . . . the General Assembly transgressed its delegated police powers which, while broad and flexible, are nevertheless limited by constitutional commands, including the Environmental Rights Amendment."[216]

The opinion has prompted a flurry of analysis about its implications. One commentator, summarizing "what we think we know about *Robinson Township*," goes so far as to assert "it may be difficult, perhaps impossible, to regulate land use on a statewide basis" and the "ruling effectively gives counties, cities and boroughs independent status as equal sovereigns."[217] Others celebrate the opinion for reinvigorating state constitutional environmental law and the public trust doctrine—a common law articulation of governments' responsibility, varying by state, to treat water resources as held in trust for the public.[218] At the very least, it is now clear that in Pennsylvania the state constitution is an active

214. *Robinson Twp.*, 83 A.3d at 977.

215. *Id.*

216. *Id.* at 978. Among the Act 13 provisions held unconstitutional were section 3304, mandating that "all local ordinances regulating oil and gas operations shall allow for the reasonable development of oil and gas resources," and section 3303, providing:

> Notwithstanding any other law to the contrary, environmental acts are of Statewide concern and, to the extent that they regulate oil and gas operations, occupy the entire field of regulation, to the exclusion of all local ordinances. The Commonwealth by this section, preempts and supersedes the local regulation of oil and gas operations regulated by the environmental acts, as provided in this chapter.

58 PA. CONS. STAT. §§ 3303, 3304 (2012).

217. Paul Stockman, Robinson Township v. Commonwealth*: What Does it Mean for Oil and Gas Development and Land Use Regulation?*, 32 No. 2 WESTLAW J. TOXIC TORTS 12, at *4 (2014).

218. *See, e.g.*, John Dernbach, *The Pennsylvania Supreme Court's Robinson Township Decision: A Step Back for Marcellus Shale, a Step Forward for Environmental Rights and the Public Trust*, WIDENER ENVTL. L. CTR. (Dec. 21, 2013, 9:39 AM), http://blogs.law.widener.edu/envirolawcenter/2013/12/21/the-pennsylvania-supreme-courts-robinson-township-decision-a-step-back-for-marcellus-shale-a-step-forward-for-article-i-section-27, *archived at* http://perma.cc/4EB5-55A6.

constraint on legislative preemption of local environmental regulation.

Although Pennsylvania's Act 13 has received by far the most press, it is not the only state legislation proposed or enacted for the purpose of curtailing local authority in the fracking context. In 2012, Idaho enacted H.B. 464 in response to local government activity, clarifying that "it is the intent of the legislature to occupy the field of the regulation of oil and gas exploration and production."[219] Notwithstanding this preemptive language, the statute conceded to "the limited exception of the exercise of planning and zoning authority granted cities and counties."[220] Under the new law, no ordinance may "actually or operationally prohibit the extraction of oil and gas," but "extraction may be subject to reasonable local ordinance provisions . . . which protect public health, public safety, public order or which prevent harm to public infrastructure or degradation of the value, use and enjoyment of private property."[221]

In North Carolina, where drilling has been prohibited, the legislature cleared the way in 2012 for fracking to begin in the near future with S.B. 820, establishing a new Mining and Energy Commission and directing it to develop the regulatory framework needed for oil and gas development.[222] With an eye toward potential conflicts with local governments, the law directs the Commission to recommend how it might "allow for reasonable local regulations, including required setbacks, infrastructure placement, and light and noise restrictions, that *do not prohibit or have the effect of prohibiting* oil and gas exploration and development activities, and the use of horizontal drilling and hydraulic fracturing for that purpose, or otherwise conflict with State law."[223] It remains to be seen how well the "modern regulatory program" and "appropriate environmental standards" the Commission develops will address local governments' concerns.[224] In the interim, fracking

219. IDAHO CODE ANN. § 47-317(9) (West 2012).
220. *Id.*
221. *Id.* § 47-317(10)(b).
222. N.C. GEN. STAT. § 143B-293.1 (2013).
223. Act of June 21, 2012, No. 820, 2012 N.C. Sess. Laws 143 (emphasis added).
224. Act of July 29, 2013, No. 76, 2013 N.C. Sess. Laws 365 (to be codified at N.C. GEN. STAT. § 113B-30).

is still prohibited statewide.[225] Until last year, only Vermont had passed a statewide ban on hydraulic fracturing, but at the end of 2014, Governor Cuomo of New York announced a ban on fracking based on potential health risks, resolving—at least in the short term—the uncertainty created by a multi-year moratorium.[226] Bans have also been proposed in several more states, including California and New Mexico, and a statewide moratorium is being lifted in Maryland following the development of fracking rules.[227]

This account of litigation and legislation touching on the state-local control over fracking is not exhaustive, and with each passing month, the body of law on this issue continues to grow.[228] Taken together, the case law applying intrastate preemption, combined with legislative activity adjusting the contours of state-local preemption, underscores that local governments' legal authority over fracking remains in flux, remains a source of uncertainty and controversy, and will likely continue to vary meaningfully state by state. Similar legal issues are spilling over from the fracking context to local efforts to control aspects of oil and gas support industries, such as sand mining.[229]

225. *Id.*

226. *See* Thomas Kaplan, *Citing Health Risks, Cuomo Bans Fracking in New York State*, N.Y. TIMES (Dec. 17, 2014), http://www.nytimes.com/2014/12/18/nyregion/cuomo-to-ban-fracking-in-new-york-state-citing-health-risks.html, *archived at* http://perma.cc/TBG2-W274.

227. For links to state bills proposing bans, see *Local Actions Against Fracking*, *supra* note 140; *see also* ADVANCED ENERGY LEGISLATION TRACKER, http://www.aeltracker.org (last visited Jan. 24, 2015) (searchable database for current legislative session); John Wagner, *O'Malley Says He is Ready to Allow 'Fracking' in Western Maryland, with Strict Safeguards*, WASH. POST (Nov. 25, 2014), http://www.washingtonpost.com/local/md-politics/omalley-says-he-is-ready-to-allow-fracking-in-western-maryland-with-strict-safeguards/2014/11/25/3623 4f34-74b9-11e4-9d9b-86d397daad27_story.html, *archived at* http://perma.cc/ZQE8-Y7M5.

228. For a useful resource on fracking litigation, addressing challenges to municipal actions as well as other controversies, see *Hydraulic Fracturing*, ARNOLD & PORTER, LLP (last updated Nov. 12, 2014), http://www.arnoldporter.com/resources/documents/Hydraulic%20Fracturing%20Case%20Chart.pdf, *archived at* http://perma.cc/VY9U-N44B. For a useful resource on state fracking legislation, see ADVANCED ENERGY LEGISLATION TRACKER, *supra* note 227.

229. *E.g.*, E. Star, LLC v. Cnty. Comm'rs, 38 A.3d 524 (Md. Ct. Spec. App. 2012) (holding state law impliedly preempted local ordinance to control sand mining for fracking industry).

IV. THE STATE-LOCAL DYNAMICS OF WIND POWER

With over 850 utility-scale wind farms across the country, wind energy is now part of the American landscape.[230] This development is supported by the RPSs now enacted in the majority of states.[231] Although they vary in form, these laws typically require electric utilities to supply an increasing percentage of electricity with renewable resources, creating a market for renewable electricity without addressing specific siting issues.[232] Instead, siting a wind project depends on a range of factors, such as resource intensity, land availability and proximity to transmission lines, and the state-local relationship in siting decisions.[233]

Recent wind growth highlights the important role of local governments in energy transition. As this Part details, local governments exert substantial control over the siting of onshore wind farms. With this authority, local governments have responded to wind proposals with cooperation as well as with opposition.

In ways similar to natural gas drilling, wind projects represent an intensive land use with localized impacts that can be lost in the broader energy dialogue.[234] In contrast to

230. *See U.S. Wind Energy State Facts*, AM. WIND ENERGY ASS'N, http://www.awea.org/resources/statefactsheets.aspx (last updated Sept. 2014), *archived at* http://perma.cc/9CEU-YB2C; *U.S. Wind Farm Map*, WINDPOWER ENG'G & DEV., http://www.windpowerengineering.com/wind-project-map (last visited Nov. 30, 2014), *archived at* http://perma.cc/G4J6-E6N5. Offshore wind development, on the brink of commercialization, will involve local governments to a lesser degree and is beyond the scope of this paper. For more on this important subject, see NAT'L WILDLIFE FED'N, CATCHING THE WIND: STATE ACTIONS NEEDED TO SEIZE THE GOLDEN OPPORTUNITY OF ATLANTIC OFFSHORE WIND POWER (2014), *available at* http://www.nwf.org/~/media/PDFs/Global-Warming/Reports/Offshore-Wind/NWF-2014_CatchingTheWind-7_15.pdf, *archived at* http://perma.cc/62Z4-5AVA.

231. *See Database of State Incentives for Renewables and Efficiency*, DSIRE, www.dsireusa.org (last visited Jan. 24, 2015), *archived at* http://perma.cc/5FGV-TQ7F.

232. *Id.* (providing links and summary information for individual state RPS provisions); *see also* Lincoln L. Davies, *State Renewable Portfolio Standards: Is There a "Race" and Is It "To the Top"?*, 3 SAN DIEGO J. CLIMATE & ENERGY L. 3, 13–16 (2011) (describing RPS basics).

233. For more on factors affecting wind siting, see generally AM. WIND ENERGY ASS'N, WIND ENERGY SITING HANDBOOK 2.1–5 (2008), *available at* http://awea.files.cms-plus.com/AWEA_Siting_Handbook_Feb2008.pdf, *archived at* http://perma.cc/9S2M-6CKL. The state-local relationship is addressed in this Part.

234. PAUL DENHOLM ET AL., NAT'L RENEWABLE ENERGY LAB, LAND-USE REQUIREMENTS OF MODERN WIND POWER PLANTS IN THE UNITED STATES (2009), *available at* http://www.nrel.gov/docs/fy09osti/45834.pdf, *archived at* http://perma

environmental risk-based objections to fracking, however, a predominant local objection to wind farms is aesthetic.[235] A 1980 study surveying state law highlighted a trend toward increased acceptance of aesthetic regulation by state courts: at that time, sixteen states authorized regulation solely on the basis of aesthetics, while another ten states allowed aesthetic regulation when combined with other factors.[236] In over half the states, however, there were no reported cases where aesthetic regulation remained an "open question."[237] Revisiting the status of aesthetic regulation across the states over twenty-five years later, researchers confirmed that the trend had continued but that states still vary in the degree to which regulation based on aesthetics is permissible.[238] They found that all states now allow "regulation based on aesthetics combined with other factors."[239] Although not every jurisdiction had clarified the "aesthetics alone issue," the highest courts of twenty-three states approved regulation based on aesthetics alone, while ten had rejected this.[240]

This case law suggests that, absent express preemption of local authority, intrastate preemption could potentially yield different results for local regulation of fracking and wind development. Local regulation tends to address a combination of aesthetic concerns and other factors. Opposition to wind development also commonly concerns the possibility of excessive noise, safety issues, shadow flickering, harm to migratory birds and—coextensive of the aesthetic—effects on property values.[241] Recent research shows no statistical evidence that commercial wind projects erode property values.[242] Still, the persistence of this concern underscores how

.cc/89DX-ZFXT.

235. *See generally* Avi Brisman, *The Aesthetics of Wind Energy Systems*, 13 N.Y.U. ENVTL. L.J. 1 (2005) (discussing aesthetic opposition to wind farms).

236. Kenneth Pearlman et al., *Beyond the Eye of the Beholder Once Again: A New Review of Aesthetic Regulation*, 38 URB. LAW. 1119, 1119–20 (2006) (citing Samuel Bufford, *Beyond the Eye of the Beholder: A New Majority of Jurisdictions Authorize Aesthetic Regulation*, 48 UMKC L. REV. 125 (1980)).

237. *Id.*

238. *Id.* at 1121–82 (reporting on individual state law status of aesthetic regulation).

239. *Id.* at 1180–81.

240. *Id.*

241. *See* Brisman, *supra* note 235; AM. PLANNING ASS'N, PLANNING FOR WIND ENERGY 35–52 (Suzanne Rynne et al. eds. 2011) (discussing local impacts and concerns relating to wind farms).

242. BEN HOEN ET AL., ERNESTO ORLANDO LAWRENCE BERKELEY NAT'L

individual property interests, in ways that parallel fracking opposition, anchor local government responses to proposed wind farms.[243] Unlike the discernable trend in the fracking context, however, official opposition to wind projects has been sporadic and geographically dispersed.

In what follows, this section offers points of comparison to the fracking context, looking first to local government responses to wind and then to the state-local relationship in large-scale wind development.

A. Official Local Responses to Utility-Scale Wind Projects

Most of the forms of local government action addressed in Part III also pertain to wind development. A number of localities have banned utility-scale wind farms. A 2007 ban in Waubaunsee County, Kansas was among a handful of similar bans that drew early attention to the potential for local governments to hinder wind energy, and localities continue to adopt wind bans.[244] Recent examples include Marshall County, Indiana; Piedmont, Virginia; Windham, Vermont; and Baldwin, Alabama.[245] In Falmouth, Massachusetts, residents came close

LABORATORY, A SPATIAL HEDONIC ANALYSIS OF THE EFFECTS OF WIND ENERGY FACILITIES ON SURROUNDING PROPERTY VALUES IN THE UNITED STATES (2013), *available at* http://emp.lbl.gov/publications/spatial-hedonic-analysis-effects-wind-energy-facilities-surrounding-property-values-uni, *archived at* http://perma.cc/D987-4WXN (analyzing more than 50,000 home sales in twenty-seven counties in nine states within ten miles of sixty-seven different wind facilities and finding no statistical evidence that home values were affected pre- or post-construction).

243. For more on property rights in connection with wind and other renewable energy development, see Alexandra B. Klass, *Property Rights on the New Frontier: Climate Change, Natural Resource Development, and Renewable Energy*, 38 ECOLOGY L.Q. 63, 84, 102 (2011) (observing that "[i]n the late nineteenth and early twentieth centuries, courts in natural resource-dependent states protected mineral development rights as both a matter of public interest as well as state and national economic development," but also noting how few states have reinforced property rights in wind in contrast to solar easements or mineral and surface rights regimes in state with extractive industries).

244. *See, e.g.*, Waubaunsee County, Kansas discussed *infra* Part IV.B.

245. Mark Peterson, *Marshall County First to Ban Wind Farms*, WNDU (May 20, 2013), http://www.wndu.com/home/headlines/Marshall-County-first-to-ban-wind-farms--208208491.html, *archived at* http://perma.cc/XX4W-22YQ; Steve Shaw, *Piedmont City Council Votes Against Building Wind Turbines*, NEWS 9 (Aug. 26, 2013, 11:33 PM), http://m.news9.com/story/23262134/piedmont-city-council-votes-against-building-wind-turbines, *archived at* http://perma.cc/5VEW-RQ5S; Mike Faher, *Developer: Windham's Wind Ban Not Absolute*, BRATTLEBORO REFORMER (Sept. 29, 2012), http://www.reformer.com/ci_21597388/developer-windham-rsquo-s-wind-ban-not-absolute, *archived at* http://perma.cc/2BGF-

to passing a measure to dismantle "two wind turbines that were once the pride of the area" after noise complaints.[246]

In addition to bans, local governments have imposed time-limited moratoria, even after a project has been proposed.[247] These moratoria, as in the fracking context, may be used to allow the locality to prepare to accommodate wind development responsibly—the local government may have had no regulations in place in advance of a project being proposed. For example, the Town of Italy, New York, imposed a moratorium prohibiting the "construction or erection of wind turbine towers, relay stations and/or other support facilities" after Ecogen had purchased property rights and easements for a wind farm.[248] The moratorium's stated purpose was to prohibit wind projects "for a reasonable time pending the completion of a plan for control of construction of such structures in the Town of Italy as part of the adoption of comprehensive zoning regulations . . . ."[249] The company challenged the moratorium in federal court, but its request for a preliminary injunction was denied and the moratorium was deemed facially valid.[250]

In the neighboring Town of Prattsburgh, however, Ecogen challenged a moratorium under a different set of facts that altered the result.[251] There, the town had signed an agreement with Ecogen that stipulated "no building permit [could] be required by the Town for [petitioners' proposed wind energy project]" as "[t]here are no Town laws or ordinances which prevent [petitioners] from proceeding with construction."[252] After an election replaced most of the town's board, the town imposed a moratorium on wind development. In this case, the

RV5M; *Baldwin County Commission Votes to Ban Wind Farms*, ALA. PUB. RADIO & ASSOC. PRESS (Aug. 7, 2013), http://apr.org/post/baldwin-county-commission-votes-ban-wind-farms, *archived at* http://perma.cc/WA8T-3KDE.

246. Jay Lindsay, *Falmouth Votes Against Dismantling 2 Wind Turbines*, ASSOCIATED PRESS (Apr. 10, 2013), http://www.wbur.org/2013/04/10/falmouth-turbine-vote, *archived at* http://perma.cc/W695-W879.

247. Salkin & Ostrow, *supra* note 5, at 1068 (discussing examples of communities adopting moratoria on siting wind turbines after project developers expressed interest in the areas); Jennifer R. Andriano, *The Power of Wind: Current Legal Issues in Siting for Wind Power*, 61 PLAN. & ENVTL. L. 3, 5–7 (2009) (discussing wind moratoria and bans).

248. Ecogen, LLC v. Town of Italy, 438 F. Supp. 2d 149 (W.D.N.Y. 2006).

249. *Id.* at 152–53.

250. *Id.* at 161–62.

251. Ecogen Wind LLC v. Town of Prattsburgh Town Bd., 112 A.D.3d 1282 (N.Y. App. Div. 2013).

252. *Id.* at 1283.

court rejected the moratorium, finding the agreement to be valid and enforceable.[253]

Although some localities have used generic powers to reject unwelcome projects,[254] many have worked to craft local compatibility restrictions in, it would seem, a genuine effort to harmonize wind energy with the local environment, sometimes with the help of state-developed model ordinances.[255] In a rare state-level response, Connecticut imposed a three-year moratorium on large-scale wind development statewide, which concluded in 2014 with the release of compatibility regulations addressing setbacks, noise, and other impacts.[256]

A notable difference in local responses to wind and fracking is that resolutions, widely used among local governments to express anti-fracking policy preferences, do not appear to have been used in parallel ways to oppose wind. Rather, research shows there is widespread support for renewable energy development, and that opposition is much more localized to particular projects.[257] A number of scholars

253. *Id.* at 1283, 1285.

254. *See, e.g.*, PPM Atl. Renewable v. Fayette Cnty. Zoning Hearing Bd., 13 Pa. D. & C. 5th 458, 480 (Pa. Ct. Com. Pl. June 17, 2010) (reversing conditions imposed by zoning board on a wind farm proposal, declaring them unreasonable in light of limits of local authority, clarifying that "a zoning hearing board's jurisdiction is limited to enforcement of the zoning ordinance . . . [and the board] does not enjoy broad, inchoate powers to advance its members' visions of what constitutes the public welfare") (internal citations omitted); Optiwind v. Planning & Zoning Comm'n of Goshen, No. LLICV084007819S, 2010 WL 4070580 at *2 n.3 (Conn. Super. Ct. Sept. 15, 2010) (considering challenge to zoning commission decision to deny company wind farm permit based on finding that proposed wind farm did not meet requirement that "there will be no adverse effects upon the existing and future character of the neighborhood or its property values"); Johnecheck v. Bay Twp., 119 F. App'x 707, 710 (6th Cir. 2004) (upholding denial of a conditional use permit and finding "Bay Township has a legitimate interest in regulating the location and size of three hundred-foot [wind turbine generators] within the Township's Agricultural District").

255. *See, e.g.*, *Wind Energy Ordinances*, U.S. DEP'T ENERGY, http://www.windpoweringamerica.gov/policy/ordinances.asp (last updated July 11, 2014), *archived at* http://perma.cc/C9UP-TT5R (listing small and large scale ordinances); James M. McElfish, Jr. & Sara Gersen, *Local Standards for Wind Power Siting: A Look at Model Ordinances*, 41 ENVTL. L. REP. 10825, 10828 (2011) (highlighting elements of model ordinances).

256. Connecticut Siting Council, Wind Regulations, 2012-054E, *available at* http://www.cga.ct.gov/aspx/CGARegulations/CGARegulations.aspx?Yr=2014&Reg=2012-054&Amd=E, *archived at* http://perma.cc/ZJ85-ALX9 (amending CONN. AGENCIES REGS. §§ 16-50j-2a, 16-50j-18, 16-50j-92–96 (2015)).

257. Salkin & Ostrow, *supra* note 5, at 1062; *see also* Joanna Schroeder, *Poll: Americans Want More Wind Power*, DOMESTICFUEL.COM (Dec. 1, 2014), http://domesticfuel.com/2014/12/01/poll-americans-want-more-wind-power,

have argued for more centralized siting regimes for wind out of concern that local governments may stymie renewable energy development with NIMBY ("not in my backyard") regulation.[258] The overview in Part III and the wind-focused literature on local barriers need not be repeated here. However, the state and local roles in wind siting frameworks, discussed below, offer another distinct view of the role of intrastate preemption in the shifting energy sector.

B. Intrastate Preemption in the Wind Context

State-local dynamics in the wind context provide a useful counterpart to the discussion in Part III. Recent research by the Environmental Law Institute (ELI) verifies that in forty-eight of the fifty states, local governments still exert significant control over the siting of commercial-scale wind facilities.[259] ELI describes five basic models of state-local interaction in wind siting, ranging from the greatest to the least local influence: (1) local siting with local autonomy, (2) local siting with a defined scope, (3) dual authority with independent decisions, (4) dual authority with state preemption, and (5) state siting that incorporates local requirements and limits local discretion.[260] A handful of states have preempted local governments and site wind facilities at the state level.[261]

The models most states employ are the most locally empowering, the first and third: autonomous local siting and dual authority with independent decisions. Well over half the states—ELI counts thirty-four—take the first approach, with

archived at http://perma.cc/U7FJ-CY3W (summarizing results from several polls of showing over 70 percent of Americans support expanding wind power). *But see* Richard Nemec, *Dueling Polls Cloud Post-Election Analysis of Oil/Gas Issues*, NAT. GAS INTELLIGENCE DAILY GAS PRICE INDEX (Nov. 13, 2014), http://www.naturalgasintel.com/articles/100407-dueling-polls-cloud-post-election-analysis-of-oilgas-issues, *archived at* http://perma.cc/9HAD-JUDG (citing Pew surveys reflecting waning public support below 50% for fracking).

258. *See, e.g.*, Salkin & Ostrow, *supra* note 5 (arguing for federal restraints on local wind siting, including precluding local governments from banning wind farms); Wiseman, *supra* note 5 (arguing fragmented federal, state, and local authority is a problem in siting large-scale renewable energy projects).

259. ENVTL. L. INST., STATE LEGISLATION FOR COMMERCIAL-SCALE WIND POWER SITING AND THE LOCAL GOVERNMENT ROLE (May 2011), *available at* http://www.eli.org/sites/default/files/eli-pubs/d21-02.pdf, *archived at* http://perma.cc/3EUE-FKW2.

260. *Id.* at 5.

261. *Id.*

local governments having "substantial autonomy over both the process and substantive requirements for siting commercial-scale wind facilities."[262] Roughly a quarter of the states use the third model, so that both levels of government have authority to approve or disapprove a wind facility.[263] A handful of states allow local authority over siting that is bounded in scope by "limitations defined by state law,"[264] while eleven states structure state-local relations on the basis of wind project size, shifting authority to state boards for facilities that exceed a certain MW-capacity threshold.[265] Importantly, only a few states have preempted local siting authority for all commercial-scale wind facilities in favor of state boards.[266]

This account of wind siting regimes shows that states have made wide-ranging political decisions balancing state interests in wind development with local interests in wind siting. Much as we have seen in the fracking context, legislative preemption is highly varied and legal challenges to official local action interact with state-specific local government and preemption doctrine.

In *Ecker Bros. v. Calumet County*, for example, a Wisconsin state court held a county ordinance that restricted construction of wind turbines was preempted, and therefore ultra vires, exceeding local authority.[267] According to the court, Wisconsin Statute § 66.0401(1) "expressly forbids political subdivisions from regulating solar and wind energy systems."[268] Although the scope of preemption allowed local control that met one of three conditions, the local restriction imposed on the project did not meet these standards and was void.[269]

Kansas provides an example of state-local dynamics that contrasts sharply with the Wisconsin regime. In *Zimmerman v.*

262. *Id.* at 6. For a list of states, see *id*.

263. *Id.* at 9–10.

264. *Id.* at i. These include Colorado, New Mexico, and Connecticut. *Id.* at 10–11.

265. *Id.* at i.

266. *Id.* at 13. These include New Hampshire, Vermont, Washington, and Ohio.

267. 772 N.W.2d 240, 243 (Wis. Ct. App. 2009).

268. *Id.* at 245 (citation omitted).

269. *Id.* at 246. The conditions were: "(a) Serves to preserve or protect the public health or safety. (b) Does not significantly increase the cost of the system or significantly decrease its efficiency. (c) Allows for an alternative system of comparable cost and efficiency." *Id.*

Board of County Commissioners of Wabaunsee County, the Kansas Supreme Court addressed state preemption of local regulation in the context of a ban on commercial wind energy development in the Flint Hills, one of the few tall grass prairies remaining in the United States.[270] Under the Kansas Electric Public Utilities Act, the court ruled that the Kansas Corporation Commission could only preempt local zoning in two circumstances: the siting of nuclear power plants,[271] and the siting of certain electricity transmission lines.[272] The case represents simple statutory interpretation inflected by state preemption law. The court emphasized its history of rejecting the notion that statutes can implicitly preempt local regulations.[273] Preemption occurs only where the legislature makes a clear statement within a statute that it intends to reserve the jurisdiction to regulate exclusively in the state.[274]

The Supreme Court of Washington considered a reverse set of facts, where parties opposed to a wind project argued against state preemption of a local government's opposition. These facts gave the court occasion to clarify the state-local relationship in wind siting under Washington law. In *Residents Opposed to Kittitas Turbines v. State Energy Facility Site Evaluation Council*, the court held that the state's Energy Facility Site Location Act (EFSLA) preempted a county land use decision affecting wind turbines.[275] Petitioners argued against preemption, positing that language in the subsequently enacted Growth Management Act (GMA) empowered local governments in land planning in ways that should be read as

270. Zimmerman I, 218 P.3d 400 (Kan. 2009); Zimmerman v. Bd. of Cnty. Comm'rs (Zimmerman II), 264 P.3d 989 (Kan. 2011). The Kansas Supreme Court addressed the lawfulness, reasonableness, and state preemption issues of this case in Zimmerman I.

271. KAN. STAT. ANN. § 66-1,162 (2014) (stating that, once the KCC has issued a permit for a nuclear power plant, no local ordinance, resolution, or regulation can prohibit construction of the plant, and the utility can proceed with construction regardless of any local ordinance, resolution, or regulation that would require the utility to obtain a building permit).

272. *Id.* § 66-1,182(b) (stripping cities and counties of jurisdiction to control the siting or construction of electric transmission lines over a certain size).

273. *Zimmerman I*, 218 P.3d at 429 (citing City of Junction City v. Griffin, 607 P.2d 459 (Kan. 1980); City of Junction City v. Lee, 532 P.2d 1292 (Kan. 1975)).

274. *Id.*; *see also* 143rd St. Investors, L.L.C. v. Bd. of Cnty. Comm'rs of Johnson Cnty., 259 P.3d 644, 655 (Kan. 2011) (reiterating that preemption of a field of regulation occurs only via express statutory language).

275. (*EFSEC*), 197 P.3d 1153, 1158 (Wash. 2008).

altering the preemption provisions of the EFSLA.[276] However, the GMA did not expressly override the preemption provisions, and state law in Washington resolved the ambiguity resulting from the statutes' overlapping scope in favor of the state.[277]

In another case considering the preemption effect of state land use laws, an Oregon state court considered in *Hatley v. Umatilla County* the pertinence of a statewide land use planning goal to protect natural resources and conserve scenic, historic, and open-space resources to local wind regulation.[278] The court held the state goal did not restrict the county in adopting protections for threatened and endangered fish and wind farm restrictions.[279] The court remanded without resolving whether a two-mile setback ordinance on wind development was preempted by state law supporting renewable energy.[280]

These cases and the siting regimes that structure wind siting across the states, like their fracking counterparts, reflect the inherent and context-specific variability of intrastate preemption—in judge-made doctrine and in legislative preemption decisions—interacting with the contours of local authority defined by state law.

V. IMPLICATIONS: COMPARING ACROSS CONTEXTS

Comparing across contexts clarifies the role of intrastate preemption in the shifting energy sector in at least three ways. First, it calls into question the common view that the primary effect of local government resistance is to frustrate development. Although local action is a barrier in individual instances—the *Zimmerman* case in the Kansas Flint Hills is a prime example—the overall trend of unprecedented growth in both fracking and wind belie the notion that local regulation is necessarily at odds with state objectives favoring energy development.

According to the data collected by ELI, states affording the greatest autonomy to localities—Texas, most notably, and even

276. *Id.* at 1169–70.
277. *Id.*
278. Hatley v. Umatilla Cnty., 301 P.3d 920, 922 (Or. Ct. App. 2013), rev. denied, 306 P.3d 639 (Or. 2013).
279. *Id.* at 928.
280. *Id.*

Kansas, post-*Zimmerman*—generate the most wind power.[281] Similarly, Pennsylvania—despite preserving local authority and despite numerous local fracking bans—is "the fastest-growing natural gas-producing state," jumping from the seventh to the third largest producing state between 2011 and 2012, and approaching second in 2013.[282] This suggests that the fear of local governments dramatically hampering nationwide development—the primary justification for backlash preemption of local control—may be overdetermined.

Rather, looking broadly across the states' legislative landscape, it appears that the trend in official local action on fracking coincides closely with state efforts that are responsive to local concerns. Since 2010, in response to worries about water contamination, for example, nearly half the states have enacted fracking-fluid composition disclosure laws, including in the major natural gas-producing states.[283] Recent state legislation has addressed not only local authority over where and whether fracking can occur, but also a broader set of issues to which local governments are attracting state attention. An analysis of states' 2013 legislative sessions by the Center for the New Energy Economy shows a prevalence of proposals pertaining to local impacts from oil and gas development, split estates, and regulation of fracking waste storage, transport, and disposal.[284] Local impact legislation addressed safety through spill reporting requirements and well inspections, noise concerns, air and water protections, as well as surface reclamation and local infrastructure.[285] The Center's analysis saw a "prevalence of local impact legislation" as representing "even clearer trend when also considering the twenty-five of fifty split estate bills that focus specifically on landowner rights."[286] Enacted legislation in 2013 included ten of fifteen split estate bills focused on surface owner rights, exceeding all

281. *See* ENVTL. L. INST., *supra* note 259, at 7.

282. U.S. ENERGY INFO. ADMIN., *Today in Energy: Pennsylvania is the Fastest-Growing Natural Gas-Producing State* (Dec. 17, 2013), http://www.eia.gov/todayinenergy/detail.cfm?id=14231, *archived at* http://perma.cc/CLQ8-RJ54.

283. Keith B. Hall, *Hydraulic Fracturing: Trade Secrets and the Mandatory Disclosure of Fracturing Water Composition,* 49 IDAHO L. REV. 399, 405–09 (2013).

284. CTR. FOR THE NEW ENERGY ECON., STATES SEEK TO BALANCE NATURAL GAS DEVELOPMENT WITH ENVIRONMENTAL AND LOCAL RIGHTS ISSUES 2–3 (2013), *available at* http://www.aeltracker.org/graphics/uploads/AEL-Tracker-Natural-Gas-Paper_Final-Draft.pdf, *archived at* http://perma.cc/4N6H-NTZ6.

285. *Id.* at 2.

286. *Id.* at 3.

other enacted natural gas legislation topics other than taxation.[287] These issues continued to garner legislative attention in the 2014 sessions.[288]

At the federal level, EPA has increased its scrutiny of environmental impacts from fracking, prompted in part by environmental and community groups that are supporting local government efforts to regulate fracking. In May 2014, for example, the agency issued an Advance Notice of Proposed Rulemaking under the Toxic Substances Control Act to determine what information should be disclosed for fracking chemical mixtures and "the mechanism for obtaining this information."[289] The agency took this action in response to a citizen petition filed by Earthjustice, which represented Dryden, New York, in its successful litigation.[290] EPA issued Oil and Natural Gas Air Pollution Standards under Clean Air Act authority in 2012[291] and is proposing to develop amended Effluent Limitations Guidelines for the Oil and Gas Extraction Category under its Clean Water Act authority.[292]

Similarly, in the wind context, local opposition prompted wind advocates and wind-supportive states to take affirmative steps toward facilitating local compatibility restrictions to protect local interests while advancing wind projects.[293] Indeed, according to the Center for the New Energy Economy,

287. CTR. FOR THE NEW ENERGY ECON., *supra* note 137, at 8.

288. *See* CTR. FOR THE NEW ENERGY ECON., 2014 YEAR-TO-DATE: ADVANCED ENERGY LEGISLATION (2014), *available at* http://www.aeltracker.org/graphics/uploads/CNEE-Trends-in-Advanced-Energy-Policy-Q1-2014-Summary.pdf, *archived at* http://perma.cc/UED7-SEXD.

289. U.S. EPA, Hydraulic Fracturing Chemicals and Mixtures, 79 Fed. Reg. 28,664–70 (May 19, 2014).

290. For more on Dryden's story and the role of Earthjustice in the litigation, see *NY Communities Triumph Over Fracking Industry in Precedent-Setting Case*, EARTHJUSTICE (June 30, 2104), http://earthjustice.org/news/press/2014/ny-communities-triumph-over-fracking-industry-in-precedent-setting-case, *archived at* http://perma.cc/VQK4-6YES.

291. U.S. Envtl. Prot. Agency, New Source Performance Standards and National Emission Standards for Hazardous Air Pollutants Reviews, 77 Fed. Reg. 49,490–600 (Aug. 16, 2012).

292. For information on this and other EPA activity related to fracking, see U.S. Envtl. Prot. Agency, *Natural Gas Extraction—Hydraulic Fracturing*, http://www2.epa.gov/hydraulicfracturing#outreach (last updated Oct. 2, 2014), *archived at* http://perma.cc/AK2N-HTK9.

293. *See* U.S. Dep't of Energy, *Wind Energy Ordinances* (compendium of nearly 350 state and local wind ordinances that provide examples for other localities), *available at* http://apps2.eere.energy.gov/wind/windexchange/policy/ordinances.asp (last updated Jul. 11, 2014), *archived at* http://perma.cc/94UY-JNEH.

"the overall impact" of recent renewable energy legislation at the state level has been to expand the state RPS market, despite concerted efforts to repeal RPSs in a number of states.[294]

Second, the doctrinal diversity inherent in intrastate preemption elevates the relevance of state-local dynamics to energy transition. A commentator on oil and gas regulation in Colorado observed over a decade ago that "the goal of local regulation advanced by many residents is to make oil and gas 'invisible.' Unfortunately, industrial development facilities are not invisible."[295] Although there may be truth in this assertion, the inverse may also be true. Localities' assertive engagement is making the impacts of fracking *visible* to the rest of the natural gas-dependent communities in their own states, as well as in non-producing states enjoying the benefits of gas production.

In this way, local governments—distinct from community and environmental groups—make a particularized contribution to the discursive environment of energy policymaking. The form and extent of local government engagement with fracking suggests that the communicative power of this lawmaking is a central force driving the continued trend. Indeed, local assertiveness can be seen as bridging a structural division between energy and environmental concerns. It helps shine a spotlight on the disaggregation of energy-resource selection and environmental harms that have long characterized United States energy policy. Local governments' trepidation makes visible a disconnection between state-defined objectives and local experience that points to the need for a more integrated assessment of United States energy choices. This is especially important given the increased role of natural gas in electricity generation across the United States, making it possible for national policy questions to be anchored by a clear understanding of local impacts.

Pivoting the particularities of the local context with the abstraction of national goals and projections supports a more complete conversation about energy, integrated across geographic and governance scales. This integration demands,

294. CTR. FOR THE NEW ENERGY ECON., *supra* note 137, at 3.

295. Michael J. Wozniak, *Home Court Advantage? Local Governmental Jurisdiction over Oil and Gas Operations,* 48 ROCKY MTN. MIN. L. INST. § 12.08[2] (2002).

for example, that value judgments about reliable and affordable electricity generated from natural gas be informed by the water constraints and risks of fracking. Local perspectives are also important because for many states, fracking is not a pressing concern due to the simple fact that they have no natural gas resources.[296] Most of those states invariably will be *using* natural gas for electricity, however. Even as hydraulic fracturing is affecting traditional natural gas markets, it is proving highly relevant to the electricity sector as more utilities turn to natural gas as a fuel source. Local government resistance communicates across city, county, and state borders what reliance on this resource across the nation means locally.

Third, the nuanced state-local dynamics for fracking and wind development show there is a risk of oversimplifying governance questions as a simple level-of-government choice. Local, state, and federal perspectives can overlap but also diverge, emphasizing matters of importance distinct to each scale. This can easily be missed in the federal-versus-state debate, as well as in the state-local context. New York courts have identified just the kind of how-where distinction that might easily be lost if states favor sweeping preemption in the mode of Pennsylvania's Act 13.[297] State aims in regulating and promoting oil and gas development are distinct from local interests in the provision of services, property rights, and specific natural resources. As Robert Freilich and Neil Popowitz explained in a recent article aimed at local officials, "only local regulation . . . can deal with the secondary impacts of fracking upon the communities' roads, schools, fire, police, and emergency response systems, as well as preserving offsite environmentally sensitive lands."[298] Using Santa Fe County, New Mexico's Oil and Gas Plan and Ordinance as a model, they show how state preemption risks missing a range of important

296. For a map depicting the location of natural gas resources, see *Shale in the United States*, ENERGY INFO. ADMIN, http://www.eia.gov/energy_in_brief/article/shale_in_the_united_states.cfm (last updated Sept. 4, 2014), *archived at* http://perma.cc/V63S-WHYS.

297. Wallach v. Town of Dryden, 23 N.Y.3d 728, 745 (2014) (highlighting precedent recognizing that "the distinction is between ordinances that regulate property uses and ordinances that regulate . . . activities" (internal citations omitted)).

298. Robert H. Freilich & Neil M. Popowitz, *Oil and Gas Fracking: State and Federal Regulation Does Not Preempt Needed Local Government Regulation,* 44 URB. LAW. 533, 542 (2012).

functions of local land use regulation, letting key local compatibility issues go unaddressed by states.[299]

CONCLUSION

The heterogeneity of intrastate preemption has preserved a legal environment of possibility for local influence in energy development beyond the purely local. For the many reasons considered here, there is no *one way* to characterize the legal validity of local regulation over fracking or wind power. This research suggests that the resulting uncertainty for legal actors in the fracking context has been productive—driving important environmental controls, data gathering, and enforcement. Likewise, it may be argued that local governments have, on the whole, been a force driving improved siting and compatibility for large-scale wind farms. At the same time, urgent demands of climate change mitigation present a point of departure across the fracking and renewable energy contexts. Recent research calling for "deep decarbonization" of the energy sector estimates wind and solar generation must be developed to thirty times present capacity by 2050.[300] To embrace such a goal creates intense pressure to further streamline renewable energy siting regimes at every level—pressure that runs counter to the corresponding call to reduce GHG emissions from fossil energy sources like oil and gas.[301]

Whatever normative conclusions one may draw with regard to the pace and direction of energy transition, this Article has shown how the dynamics of intrastate preemption have expanded the reach of local contributions. As local governments test the boundaries of authority in their own

299. *Id.*; *see also* John R. Nolon & Victoria Polidoro, *Hydrofracking: Disturbances Both Geological and Political: Who Decides?*, 44 URB. LAW. 507, 527 (2012) (urging local governments to develop gas drilling elements for their comprehensive plans to control for environmental harm as well as economic benefits of fracking not addressed by state law with locally-defined "goals, objectives, strategies, and implementation measures . . ."); AM. PLANNING ASS'N, *supra* note 241, at 89–108 (addressing planning needs and considerations for utility-scale wind at the local level).

300. JAMES H. WILLIAMS ET AL., ENERGY & ENVTL. ECON., INC., U.S. 2050 REPORT: PATHWAYS TO DEEP DECARBONIZATION IN THE UNITED STATES xiii (2014), *available at* http://unsdsn.org/wp-content/uploads/2014/09/US-Deep-Decarbonization-Report.pdf, *archived at* http://perma.cc/6U99-XWAB.

301. *Id.*

states with fracking bans, moratoria, and other local regulation, they frame local environmental and property interests as concerns state officials must reconcile with state goals. At the same time, they highlight the relevance of these interests to the role of natural gas and renewable energy across the United States. Advancing community-scale concerns through official governmental action pivots the specificities of the local—individual and community-based health, property, and environmental concerns—into state and national energy-policy spheres, where economic growth, energy security, and climate change are more dominant themes. In this way, local governments inhabit a unique policy space in the shifting energy sector, more prominent than acknowledged, and distinct in form and identity from community, environmental, or industry groups working to shape public opinion. From this space, buoyed by preemption diversity, localities have been an influence for a more responsible energy transition.