

STATE STANDARDS FOR NATIONWIDE PRODUCTS REVISITED: FEDERALISM, GREEN BUILDING CODES, AND APPLIANCE EFFICIENCY STANDARDS

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This Article considers the federal preemption of state standards for building appliances and places the issue within the ongoing federalism debate over the role of state standards for “nationwide products” such as automobiles, drugs, medical devices, and other consumer products sold on a nationwide basis. Notably, residential, commercial, and industrial buildings make up approximately forty percent of total U.S. energy demand and the same percentage of U.S. carbon dioxide emissions, while the appliances within those buildings are responsible for seventy percent of building energy use, making appliance efficiency a central component of any national effort to reduce energy use and greenhouse gas (“GHG”) emissions. For decades now, states and local governments have been at the forefront of developing “green building codes” to reduce the energy use and GHG emissions associated with buildings. At the same time, however, states are extremely limited in their authority to mandate more energy efficient appliances in buildings because federal law preempts innovative state standards in this area. After providing a detailed discussion of state and local green building efforts and the history of federal preemption of appliance efficiency standards, this Article explores recent scholarly work in the area of “dynamic” or “polyphonic” federalism to argue for a new approach that allows for state innovation without disrupting the national market for appliances. This Article then suggests various options for revising the federal laws governing appliance efficiency standards; these options recognize and build on the expertise states have gained in reducing energy use and GHG emissions without creating an unworkable “fifty-state patchwork” of regulation.

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I. INTRODUCTION

Climate change dominates the news media and political agenda like never before, as illustrated by numerous international summits on the topic, state regulation of carbon dioxide (“CO₂”) emissions, and recent efforts at the federal level to enact new standards limiting CO₂ and other greenhouse gas (“GHG”) emissions from automobiles, power plants, and industry. There is a new national awareness of climate change, even if much disagreement remains on the need for and scope of the response. Significant scholarly work to date has discussed how local, state, federal, and international institutions should best respond to climate change. Many have noted that while climate change is national and international in scope, states and local governments in this country took the first and most important steps to recognize the problem and experiment with different ways to address it.¹ Until recently, this was because neither the Bush Administration nor Congress showed any willingness to take on the issue, leaving state and local governments to fill the void as best they could. Now that the Obama Administration and Congress have undertaken efforts to address climate change on a national level, this enhanced federal presence will likely increase the potential conflict between the federal government and the states in this area.

One area of increasing federal and state conflict involves efforts to control emissions from residential and commercial buildings, particularly through mandating increased efficiency of appliances such as heating and air conditioning systems, refrigerators, washers and dryers, dishwashers, and lighting. Notably, approximately forty percent of U.S. CO₂ emissions come from energy use in commercial, residential, and industrial buildings, with about seventy percent of those emissions generated primarily from lighting; heating, cooling, and ventilation systems; and other appliances.² Thus, efforts to make buildings and appliances more efficient can potentially have a major impact on the nation’s GHG emissions.³

¹ See, e.g., Alexandra B. Klass, *State Innovation and Preemption: Lessons from State Climate Change Efforts*, 41 *LOY. L.A. L. REV.* 1653, 1686–88 (2008) (citing scholarly articles and state regulatory developments).

² See OFFICE OF ENERGY EFFICIENCY & RENEWABLE ENERGY, U.S. DEP’T OF ENERGY, *BUILDINGS ENERGY DATA BOOK 1–21* (2009) [hereinafter *BUILDINGS ENERGY DATA BOOK*] (citing to data from 2006). Included in the “other appliances” category are refrigerators, basic electronics, motors, swimming pool heaters, and hot tub heaters.

³ See MCKINSEY & CO., *REDUCING U.S. GREENHOUSE GAS EMISSIONS*, at xiv–xv (2007), available at http://www.mckinsey.com/client/service/ccsi/pdf/US_ghg_final_report.pdf [hereinafter *MCKINSEY & CO., REDUCING*] (stating that improving energy efficiency in buildings and appliances could result in abatement of 710–870 megatons of CO₂ and could “offset some 85% of the projected incremental demand for electricity in 2030”); see also MCKINSEY & CO., *UNLOCKING ENERGY EFFICIENCY IN THE U.S. ECONOMY*, at iii (2009), available at http://www.mckinsey.com/client/service/electricpowernaturalgas/downloads/US_energy_efficiency_full_report.pdf [hereinafter *MCKINSEY & CO., UNLOCKING*] (stating that “[e]nergy efficiency offers a vast, low-cost energy resource for the U.S. economy” and that it could “reduce end-use energy consumption in 2020 by 9.1 quadrillion BTUs, roughly 23 percent of projected demand, potentially abating up to 1.1 gigatons of greenhouse gases annually”).

The history of federal-state regulation of buildings and appliances, however, differs significantly from the regulation of traditional pollutants from power plants, automobiles, and other industrial sources under the Clean Air Act (“CAA”). Specifically, for stationary sources, the CAA framework creates a federal “floor,” setting national minimum air quality standards; states are able to set more restrictive standards if they choose.⁴ For automobiles, the CAA prohibits states from setting their own standards except for California, which can apply to the U.S. Environmental Protection Agency (“EPA”) for a federal waiver to set more restrictive standards; if the waiver is granted, other states can choose to adopt the California standards.⁵ While EPA had always granted California’s waivers for non-GHG emissions, the state battled with the Bush Administration for years unsuccessfully to obtain a federal waiver to set limits on GHG emissions from automobiles within the state.⁶ In May and June 2009, however, the EPA granted the California waiver,⁷ and President Obama announced an agreement for national GHG emission standards on automobiles virtually identical to the California standards.⁸ This agreement may indicate a new approach toward federal-state cooperation in setting standards for GHG emissions. Thus, although there can be federal-state conflict in regulating air pollution from stationary sources and automobiles, as the recent California waiver dispute illustrates, there is also a long history of federal-state cooperation.

In contrast to the cooperative federalism models in the CAA, regulation of building codes and land use has long been within the almost exclusive purview of the states, which, in turn, have delegated their authority to local governments.⁹ Moreover, while local governments have enacted “green building codes” in recent years to require or incentivize new construction

⁴ See 42 U.S.C. §§ 7410–7411, 7416 (2006); ROBERT V. PERCIVAL ET AL., ENVIRONMENTAL REGULATION 115–16 (6th ed. 2009) (describing cooperative federalism approach of the CAA and other environmental laws with similar structures); Klass, *supra* note 1, at 1683–85 (discussing CAA federalism structure).

⁵ See 42 U.S.C. § 7543; Notice of Decision Granting a Waiver for California’s Greenhouse Gas Emission Standards, 74 Fed. Reg. 32,744, 32,747–48 (July 8, 2009) [hereinafter EPA Notice of Decision] (describing CAA waiver provision).

⁶ See EPA Notice of Decision, *supra* note 5, at 32,746–47; Klass, *supra* note 1, at 1691–92. See also *infra* notes 83, 138–40 (discussing California waiver request).

⁷ See EPA Notice of Decision, *supra* note 5; EPA, Transportation and Climate, California Greenhouse Gas Waiver Request, <http://www.epa.gov/otaq/climate/ca-waiver.htm> (last visited Mar. 9, 2010) (on file with the Harvard Law School Library).

⁸ John M. Broder, *Obama to Toughen Rules On Emissions and Mileage*, N.Y. TIMES, May 19, 2009, at A1. These standards were released by EPA and the Department of Transportation (“DOT”) on April 1, 2010, and increased the fleet-wide average requirement to 35.5 miles per gallon by 2016. See 40 C.F.R. pts. 85, 86, 600 (2010) (EPA Rules); 49 C.F.R. pts. 531, 533, 537, 538 (2010) (DOT Rules). See also John M. Broder, *U.S. Issues Limits on Greenhouse Gas Emissions from Cars*, N.Y. TIMES, Apr. 2, 2010, at B1.

⁹ See Sara C. Bronin, *The Quiet Revolution Revisited: Sustainable Design, Land Use Regulation, and the States*, 93 MINN. L. REV. 231, 266–68 (2008).

that reduces emissions from these sources, most of these programs are still voluntary rather than mandatory.¹⁰

For its part, while the federal government has mostly stayed out of regulating local land use and building codes, it has been active in regulating the energy efficiency of appliances within buildings. In this area, rather than leaving the issue to the states or setting a federal floor, existing federal legislation almost completely preempts state and local efforts to require more efficient building appliances. This approach reflects an oft-stated position that when it comes to “nationwide products” (whether they are automobiles, appliances, drugs, or medical devices) there is a significant economic benefit to uniformity that outweighs the benefits of state innovation, which may result in an unworkable fifty-state “patchwork” of regulation.¹¹ As a result of this approach, when it comes to buildings, we have a split system. State and local governments dominate building code issues but have very limited authority to set standards for the appliances within those buildings. Likewise, the federal government generally stays out of building code issues but puts a federal “ceiling” on appliance efficiency standards with no room for local or state innovation.

This Article questions this split of authority when it comes to building codes and appliance efficiency. We are now at a time in history when new, dynamic approaches to reducing GHG emissions are both possible and necessary for any robust response to climate change. Moreover, state and local governments have been focusing on the contribution of buildings and appliances to total GHG emissions for many years, gaining expertise that they can put to good use. In order to tap the full potential of state and local innovation and expertise, however, federal law expressly preempting more efficient state appliance standards should be revisited. Just as California’s ability to set standards for automobiles that go beyond federal standards has led to robust experimentation and innovation in that area, states have the potential to do the same with appliances, leading ultimately to better federal standards and a significant reduction in national energy use and GHG emissions.

President Obama’s May 2009 memorandum on federalism also supports such an increased role for the states. The memorandum directed federal agencies to ensure they have a sufficient legal basis for asserting federal preemption (or displacement) of state law, and noted that “[s]tate and local

¹⁰ See Clifford Krauss, *A New Enforcer in Buildings, the Energy Inspector*, N.Y. TIMES, July 18, 2009, at A1 (stating that building codes are out-of-date “across half the country” and that seven states have no state-wide mandatory codes, and citing opposition of the construction lobby to stricter energy efficiency codes).

¹¹ See J.R. DeShazo & Jody Freeman, *Timing and Form of Federal Regulation: The Case of Climate Change*, 155 U. PA. L. REV. 1499, 1507–09 (2007) (noting “that the economic argument for federal preemption is strongest” when state regulation is likely to interfere with national distribution of uniform products). See also PERCIVAL ET AL., *supra* note 4, at 117 (noting that preemption of state law is “usually reserved for regulation of products that are distributed nationally, as businesses favor nationally uniform regulation to avoid having to comply with balkanized regulatory standards”).

governments have frequently protected health, safety, and the environment more aggressively than has the national Government.”¹² This position on preemption is a significant reversal from the Bush Administration, which had taken strong positions in favor of federal regulations that preempted state common law and regulatory standards in the areas of public health, safety, consumer protection, and environmental protection.¹³ In light of these developments, the time may be right to give states a new role in setting appliance efficiency standards.

Part II of this Article shows how residential and commercial buildings, including their appliances, contribute to national GHG emission levels, and the current difficulties in incentivizing voluntary emissions reductions in this sector. Part III explains how local governments have come to dominate the regulation of building codes and what those local governments, with state assistance in some cases, have done to address GHG emissions from buildings. This Part discusses examples of the most innovative green building codes across the country, as well as the LEED and ENERGY STAR standards that many state and local governments have adopted for government buildings and private construction.

Part IV turns specifically to appliances, beginning with the history of federal legislation setting standards for appliances and preempting more efficient state appliance standards; it then discusses why greater regulatory flexibility for states in setting appliance efficiency standards is critical to national efforts to reduce energy demand and address climate change. This Part also includes a discussion of litigation by states and environmental groups to force the federal government to set appropriate standards for appliance efficiency as well as recent litigation over local government efforts to integrate appliance efficiency standards into green building codes.

Finally, Part V places this issue within the broader context of federalism and explores recent scholarly work in the area of “dynamic” or “polyphonic” federalism. Building on this work, this Part suggests various ways to create a framework for appliance efficiency standards that recognizes and builds on the expertise states have gained in addressing GHG emissions, and encourages state innovation without creating an unworkable “patchwork” of standards.

¹² See Memorandum on Preemption, 74 Fed. Reg. 24,693 (May 22, 2009). See also *infra* notes 116–117 and accompanying text (discussing memorandum).

¹³ See Alexandra B. Klass, *Tort Experiments in the Laboratories of Democracy*, 50 WM. & MARY L. REV. 1501, 1557 (2009). See also Catherine M. Sharkey, *Preemption by Preamble: Federal Agencies and the Federalization of Tort Law*, 56 DEPAUL L. REV. 227, 229–42 (2007).

II. BUILDINGS, APPLIANCES, AND GHG EMISSIONS

Despite a growing body of scientific evidence linking GHG emissions (particularly CO₂ emissions) with climate change,¹⁴ until recently, neither Congress nor EPA had taken any major action on GHG emissions. In 2009, however, major developments in Congress and at EPA placed climate change in the political spotlight. First, in May 2009, President Obama announced an agreement between the auto industry, California, environmental groups, EPA, and others, to set the first federal GHG emission standards for automobiles.¹⁵ This agreement, along with EPA's subsequent approval of California's GHG emission limits on automobiles, ended years of conflict over California's efforts to obtain a federal preemption waiver.¹⁶

Then, in June 2009, the U.S. House of Representatives passed the American Clean Energy and Security Act¹⁷ (known as the Waxman–Markey bill), comprehensive energy legislation that would place federal limits on GHG emissions. While the future of the bill is uncertain, it at least shows that Congress is attempting to address climate change issues in a concrete manner. What is most notable about the bill for the purposes of this Article is that it contains significant provisions that attempt to increase energy efficiency in buildings, appliances, transportation, and industry.¹⁸ For instance, Title II, Subtitle A covers “Building Energy Efficiency Programs” and provides for the Secretary of Energy to establish, for the first time, “national building code energy efficiency targets” contained in “national energy efficiency building codes” that states and local governments must adopt.¹⁹

With so much of the focus on emissions from automobiles and power plants, it can be easy to lose sight of the fact that buildings account for approximately forty percent of total U.S. energy consumption (costing over \$390 billion per year) and forty percent of total U.S. CO₂ emissions.²⁰ Within the commercial and residential sectors, appliances produce a significant portion of those emissions. The U.S. Department of Energy (“DOE”) estimates that appliances such as heating and cooling systems, washing ma-

¹⁴ The term “climate change” refers to “any significant change in measures of climate (such as temperature, precipitation, or wind), lasting for an extended period (decades or longer).” EPA, Climate Change, Basic Information, <http://www.epa.gov/climatechange/basicinfo.html> (last visited Feb. 16, 2010) (on file with the Harvard Law School Library).

¹⁵ See Broder, *supra* note 8.

¹⁶ See EPA Notice of Decision, *supra* note 5, at 32,746–47.

¹⁷ American Clean Energy and Security Act, H.R. 2454, 111th Cong. (2009). See also John M. Broder, *With Something for Everyone, Climate Bill Passed*, N.Y. TIMES, July 1, 2009, at A20 (describing bill as “the most ambitious energy and climate-change legislation ever introduced in Congress”).

¹⁸ See H. COMM. ON ENERGY & COMMERCE, 111TH CONG., DISCUSSION DRAFT SUMMARY, THE AMERICAN CLEAN ENERGY AND SECURITY ACT OF 2009 (2009), available at http://energycommerce.house.gov/Press_111/20090331/acesa_summary.pdf.

¹⁹ See H.R. 2454, 111th Cong. §§ 201–209 (2009).

²⁰ See BUILDINGS ENERGY DATA BOOK, *supra* note 2, at 1-1, 1-12, 1-20.

chines and dryers, and refrigerators account for more than seventy percent of the total GHG emissions from buildings.²¹

Studies show that dramatic improvements in appliance efficiency, resulting in significant reductions in GHG emissions, are technologically and economically feasible.²² As Energy Secretary Steven Chu has stated, “energy efficiency isn’t just low-hanging fruit; it’s fruit lying on the ground.”²³ Market forces have not always driven such improvements, however, because of a disconnect between entities constructing residential and commercial buildings and entities purchasing the properties.²⁴ In many cases, the homebuilder purchases low-cost appliances, which tend to have low energy efficiency ratings, in order to maximize her profit when she sells the house.²⁵ Moreover, consumers often desire a short payback period and may be averse to the investment costs necessary to purchase high-efficiency appliances.²⁶ These problems highlight the difficulty of allowing the market alone to dictate increases in appliance efficiency.²⁷ Thus, Parts III and IV turn to how federal, state, and local regulation of GHG emissions generally and appliance efficiency standards specifically have attempted to address these market failures.

III. STATE AND LOCAL INNOVATION AND GREEN BUILDING CODES

Land use regulation is generally considered part of a state’s inherent police powers.²⁸ Historically, however, states have delegated virtually all of that authority to local governments.²⁹ This began in the 1920s, after the fed-

²¹ See *id.* at 1-21 (including both direct emissions and “indirect” emissions from generating the electricity used by the buildings). On a related note, a recent *New York Times* article reported on the increasing power demand from personal computers, iPods, cellphones, game consoles, and the like, which constitute the fastest-growing source of power demand in the world, now representing fifteen percent of that demand, but expected to triple in the next two decades. See Jad Mouawad & Kate Galbraith, *Plugged-In Age Feeds a Hunger for Electricity*, N.Y. TIMES, Sept. 20, 2009, at A1.

²² See MCKINSEY & CO., REDUCING, *supra* note 3, at xiv, 34.

²³ See News Release, U.S. Dep’t of Energy, Obama Administration Launches New Energy Efficiency Efforts (June 29, 2009), <http://www.energy.gov/news2009/7550.htm>.

²⁴ See Krauss, *supra* note 10 (noting that stricter energy efficiency building codes “have been fought bitterly by politically powerful builders’ lobbies”).

²⁵ See MCKINSEY & CO., UNLOCKING, *supra* note 3, at 24 (describing “ownership transfer issues” that can involve builders and buyers); MCKINSEY & CO., REDUCING, *supra* note 3, at xii (describing mismatches between builders who pay for the cost of an option and homebuyers who gain the benefit).

²⁶ See MCKINSEY & CO., REDUCING, *supra* note 3, at xii.

²⁷ See STEVEN NADEL ET AL., LEADING THE WAY: CONTINUED OPPORTUNITIES FOR NEW STATE APPLIANCE AND EQUIPMENT EFFICIENCY STANDARDS 6-9 (2006), available at <http://www.aceee.org/pubs/a062.pdf> (discussing “demand-side” and “supply-side” market barriers to the purchase of more energy efficient products).

²⁸ See *Euclid v. Ambler Realty Co.*, 272 U.S. 365 (1926); see also DAVID L. CALLIES, ROBERT H. FREILICH & THOMAS E. ROBERTS, CASES AND MATERIALS ON LAND USE 19, 768 (5th ed. 2008).

²⁹ CALLIES ET AL., *supra* note 28, at 19. See also Jerold S. Kayden, *National Land-Use Planning in America: Something Whose Time Has Never Come*, 3 WASH. U. J.L. & POL’Y 445,

eral government published a Standard State Zoning Enabling Act³⁰ which states subsequently adopted and which granted local governments the exclusive power to zone and to set building and development standards.³¹ While a few states subsequently took back some of that delegated authority to avoid parochial decisions, protect natural resources, or address other statewide issues, the bulk of land use and zoning authority has remained with local governments.³² Moreover, while the federal environmental laws place some restrictions on land use to the extent those uses may adversely affect air quality, water quality, or endangered species, Congress has been very careful to stay away from the direct regulation of land use. Indeed, in the 1970s, when EPA attempted to impose land use and transportation controls in the Los Angeles area to address air pollution, Congress quickly responded to strong political and public backlash by stripping EPA of any authority to include such controls in plans to address statewide air quality.³³

This dominance of local control over land use and zoning is beginning to change as states attempt to respond to climate change. State efforts to reduce GHG emissions include (1) putting in place state-wide caps on emissions and mandating that electric distribution utilities obtain renewable energy, (2) promoting or mandating “green buildings,” and (3) overriding local zoning restrictions that limit the ability of landowners to use solar panels, wind turbines, and other sources of renewable energy.³⁴ In many cases, local governments have been as active as state governments in this area, using their zoning authority to mandate green building development and eliminate barriers to renewable energy.³⁵ But states are beginning to override local zoning laws that interfere with green development, and this indicates a shift away from local governments as the sole authority for land use.³⁶

449 (2000) (stating that “states have played only a supporting role to local governments, which exercise the greatest de jure and de facto control over the use and development of the majority of land holdings in the United States”).

³⁰ ADVISORY COMM. ON ZONING, U.S. DEP’T OF COMMERCE, A STANDARD STATE ZONING ENABLING ACT (rev. ed. 1926), available at <http://myapa.planning.org/growingsmart/pdf/SZEnablingAct1926.pdf>.

³¹ See CALLIES ET AL., *supra* note 28, at 33–36, 767–69. See also Bronin, *supra* note 9, at 237.

³² See CALLIES ET AL., *supra* note 28, at 767–69.

³³ See 42 U.S.C. § 7431 (2006) (“Nothing in [the CAA] constitutes an infringement on the existing authority of counties or cities to plan or control land use, and nothing in [the CAA] provides or transfers authority over such land use.”); PERCIVAL ET AL., *supra* note 4, at 588–89 (discussing hostile state and public reaction to EPA’s efforts and Congressional response).

³⁴ See, e.g., DeShazo & Freeman, *supra* note 11, at 1523; Klass, *supra* note 1, at 1689–90; Alexandra B. Klass, *Climate Change and Reassessing the “Right” Level of Government: A Response to Bronin*, 93 MINN. L. REV. HEADNOTES 15 (2009).

³⁵ See Bronin, *supra* note 9, at 247–48, 251, 253–57.

³⁶ Even the federal government may assert some control over land use in this area. See American Clean Energy and Security Act of 2009, H.R. 2454, 111th Cong. § 209 (2009) (prohibiting private or local government restrictions on residential installation of solar energy systems).

States and cities have committed to various GHG emission-reduction goals through caps or mandates on power plants. For instance, California adopted a statewide cap on GHG emissions in 2006, setting a goal of reducing state emissions to their 1990 levels by 2020,³⁷ a cut of twenty-five percent. Legislatures in at least twenty-two states require electric utilities to obtain some of their electricity supply from renewable sources.³⁸ Massachusetts, New Hampshire, Oregon, and Washington have emission caps and offset programs for new and existing power plants.³⁹ Ten northeastern states are currently signatories to the Regional Greenhouse Gas Initiative (“RGGI”), which establishes limits on CO₂ emissions from fossil fuel-fired electricity generation, and states in other regions are in the process of establishing similar programs.⁴⁰

Efforts by state and local governments to encourage or require “green” construction are also widespread. Green buildings are “high performance buildings that (1) use energy, water, and materials more efficiently and (2) use measures relating to siting, design, construction, operation, maintenance, and removal to reduce the building’s impact on . . . the environment.”⁴¹ The benchmark for green buildings today is the nonprofit U.S. Green Building Council’s Leadership in Energy and Environmental Design (“LEED”) program.⁴² The LEED program evaluates the sustainable features of new construction through a point system, focusing on factors such as location and siting, water efficiency, energy and atmosphere, materials and resources, indoor environmental air quality, and innovation in design.⁴³ Property owners can petition the U.S. Green Building Council for certification at a silver, gold, or platinum level.⁴⁴ Several states, including California, Washington, and Connecticut, mandate that all state government buildings meet LEED criteria, and over seventy local governments, most notably Boston, Chicago, and New York City, have implemented green building requirements for mu-

³⁷ See California Global Warming Solutions Act of 2006, CAL. HEALTH & SAFETY CODE § 38,550 (Deering 2009).

³⁸ See DeShazo & Freeman, *supra* note 11, at 1523.

³⁹ See 310 MASS. CODE REGS. 7.29(1) (2007); N.H. REV. STAT. ANN. § 125-O:3 (2005); OR. REV. STAT. § 469.501 (2009); WASH. REV. CODE § 80.70.020(4) (2008).

⁴⁰ The ten signatories of RGGI are Delaware, New Jersey, New York, Connecticut, Rhode Island, Massachusetts, Vermont, New Hampshire, Maine, and Maryland. REG’L GREENHOUSE GAS INITIATIVE, RGGI FACT SHEET (2009), available at http://www.rggi.org/docs/RGGI_ExecutiveSummary_4.22.09.pdf.

⁴¹ Edna Sussman, *Reshaping Municipal and County Laws to Foster Green Building, Energy Efficiency, and Renewable Energy*, 16 N.Y.U. ENVTL. L.J. 1, 8 (2008).

⁴² See U.S. Green Building Council, <http://www.usgbc.org/DisplayPage.aspx?CMSPageID=1988> (last visited Mar. 9, 2010) (on file with the Harvard Law School Library).

⁴³ See U.S. Green Building Council, *What LEED Measures*, <http://www.usgbc.org/DisplayPage.aspx?CMSPageID=1989> (last visited Mar. 9, 2010) (on file with the Harvard Law School Library).

⁴⁴ U.S. GREEN BLDG. COUNCIL, LEED 2009 FOR NEW CONSTRUCTION AND MAJOR RENOVATIONS, at xiii (2009), available at <http://www.usgbc.org/ShowFile.aspx?DocumentID=5546>.

municipal government buildings.⁴⁵ Overall, forty-five states and numerous school districts and universities have adopted various LEED initiatives in the form of legislation, executive orders, resolutions, ordinances, policies, and incentives.⁴⁶ Experts estimate that if today's best building practices were applied in all new buildings across the United States, the country could cut its total projected CO₂ emissions by approximately eleven percent by 2030.⁴⁷

While adoption of LEED standards for government buildings is now widespread, requiring LEED certification or other green building requirements for private construction is not. To be sure, some localities have made efforts to require either LEED certification or other forms of energy efficiency or use of recycled materials in all new buildings over a certain size.⁴⁸ So far, however, mandatory green building requirements at the state and local level remain rare, largely because they impose additional costs on developers and reduce a developer's ability to obtain benefits from the local government in exchange for implementing green building features.⁴⁹

With regard to energy efficient appliances, some states and municipalities have adopted the federal ENERGY STAR program sponsored by EPA and DOE to help save energy costs and reduce GHG emissions through energy efficient products and practices.⁵⁰ In 1992, EPA introduced ENERGY STAR, a voluntary labeling program to identify and promote energy efficient products.⁵¹ EPA has since partnered with DOE to certify and label products including computers, major appliances, office equipment, and lighting, as well as new homes and commercial and industrial buildings.⁵² Many states and municipalities have enacted ordinances encouraging or requiring that appliances in new construction or new buildings themselves be certified as ENERGY STAR, and at least forty states have enacted building energy codes requiring new and existing buildings undergoing major renovations to

⁴⁵ See Bronin, *supra* note 9, at 247–48; see also U.S. GREEN BLDG. COUNCIL, LEED INITIATIVES IN GOVERNMENTS AND SCHOOLS (Dec. 2009), available at <http://www.usgbc.org/ShowFile.aspx?DocumentID=691> (detailing federal, state, and municipal utilization of LEED building standards).

⁴⁶ See U.S. GREEN BLDG. COUNCIL, *supra* note 45.

⁴⁷ See Krauss, *supra* note 10. Although this may argue in favor of federalizing green building standards for maximum reduction of GHG emissions nationwide, such federal standards, if enacted, should only be a regulatory floor, not a regulatory ceiling, in order to ensure states and local governments can go beyond those federal standards to achieve increased GHG emissions reductions.

⁴⁸ See Bronin, *supra* note 9, at 255–56 (detailing such efforts in four cities); see also David J. Freeman & Jesse Hiney, *New York City Adds to Growing Tide of Green Buildings Legislation*, Daily Env't Rep. (BNA) No. 39, at B-1 (Mar. 2, 2010) (describing new regulations adopted by New York City requiring, among other things, energy audits, lighting and other energy-related improvements, and public disclosure of energy use for all existing and new buildings of a certain size and type in both the public and private sectors).

⁴⁹ *Id.* at 256. See also Krauss, *supra* note 10 (noting strong opposition of the builders' lobby to stricter energy efficiency codes).

⁵⁰ See EPA, History of ENERGY STAR, http://www.energystar.gov/index.cfm?c=about.ab_history (last visited Mar. 10, 2010) (on file with the Harvard Law School Library).

⁵¹ *Id.*

⁵² *Id.*

meet minimum energy efficiency requirements.⁵³ EPA estimates that ENERGY STAR and similar state and federal programs have resulted in \$19 billion in cost savings to consumers in 2009 alone.⁵⁴

Additionally, in recent years states have taken some steps to prevent local governments from discouraging or prohibiting property owner efforts to implement renewable-energy or green building practices that conflict with land use restrictions. Some states, notably California, Connecticut, and Arizona, have prohibited local governments from using aesthetic zoning to prevent the use of solar panels or other energy efficient or water efficient improvements.⁵⁵ Likewise, a Washington court recently upheld the application of a state law allowing the governor to override local zoning decisions that prohibit wind turbines.⁵⁶ These developments are significant in that they show states taking back some authority from local governments in the area of land use and zoning for purposes of implementing policies to promote sustainable development and renewable energy.

As these examples demonstrate, over the past decade, states have gained significant expertise in creating policies to address climate change and reduce energy demands, whether it is setting caps on total emissions, mandating renewable energy requirements, supporting and implementing green building policies, or beginning to take back some authority from local governments when aesthetic or other land use regulation interferes with state efforts. States have received help in this area from the American Recovery and Reinvestment Act of 2009⁵⁷ (the federal stimulus package), which provided a recent influx of millions of dollars in federal funding earmarked for energy efficiency efforts, and states may receive more federal assistance if federal climate change legislation moves forward.⁵⁸ In order to assist states

⁵³ See EPA, *THE CLEAN ENERGY-ENVIRONMENT GUIDE TO ACTION: POLICIES, BEST PRACTICES, AND ACTION STEPS FOR STATES 4-37 TO 4-39* (2006) [hereinafter EPA, *GUIDE TO ACTION*]. Building energy codes generally specify requirements for thermal resistance in the building shell and windows, maximum air leakage, and minimum heating and cooling equipment efficiencies, which can result in reducing energy use by thirty percent or more. See EPA, *STATE AND LOCAL GOVERNMENTS LEVERAGING ENERGY STAR* (2010), available at http://www.energystar.gov/ia/business/government/State_Local_Govts_Leveraging_ES.pdf (tracking state statutes and municipal regulations requiring or encouraging ENERGY STAR or other tools in construction or energy savings).

⁵⁴ EPA, *supra* note 50. See EPA, *ENERGY STAR AND OTHER CLIMATE PROTECTION PARTNERSHIPS: 2008 ANNUAL REPORT 1* (2009), available at http://www.energystar.gov/ia/partners/annualreports/annual_report_2008.pdf. For recent criticism of the ENERGY STAR program, see Matthew L. Wald, *Audit Finds Vulnerability of EnergyStar Program*, N.Y. TIMES, Mar. 26, 2010, at A14, available at <http://www.nytimes.com/2010/03/26/science/earth/26star.html>. For efforts to improve the ENERGY STAR program, see News Release, EPA, *EPA, DOE Announce New Steps to Strengthen Energy Star* (Mar. 19, 2010) (on file with the Harvard Law School Library).

⁵⁵ See Bronin, *supra* note 9, at 270-72.

⁵⁶ See Residents Opposed to Kittitas Turbines v. State Energy Facilities Site Evaluation Council, 197 P.3d 1153 (Wash. 2008).

⁵⁷ Pub. L. No. 111-5, tit. IV, 123 Stat. 115, 134-48 (2009).

⁵⁸ News Release, U.S. Dep't of Energy, *supra* note 23 (announcing a \$346 million investment of federal stimulus funds "to expand and accelerate the development, deployment, and

in their climate change efforts, however, the federal government should share some of its authority over appliance efficiency standards with the states, so that the states can assist both the federal government and local governments in gathering some of the “fruit lying on the ground” associated with curbing energy use and GHG emissions.⁵⁹ Part IV provides a history of federal involvement in setting appliance efficiency standards in order to set the stage for Part V, which discusses options for greater state input in this area as well as the theoretical and policy bases for doing so.

IV. FEDERAL APPLIANCE EFFICIENCY STANDARDS AND PREEMPTION

For decades now, federal law has almost completely preempted (i.e., prohibited) states from setting appliance efficiency standards.⁶⁰ Specifically, through federal legislation, Congress has chosen to expressly preempt state efficiency standards where Congress or DOE has set a federal efficiency standard for the appliance in question.⁶¹ This Part first discusses the history of federal regulation of appliance efficiency standards. It then turns to disputes between DOE, industry, states, and local governments over preemption of state and local standards.

A. Federal Legislation and DOE Action

Congress first enacted energy efficiency legislation in 1975 in the form of the Energy Policy Conservation Act⁶² (“EPCA”).⁶³ Prior to that time, states, most notably California, had begun to regulate appliance efficiency.⁶⁴

use of energy efficient technologies” in residential and commercial buildings); Ari Natter, *Renewable Projects, Energy Efficiency Would Receive Billions Under Climate Bill*, 40 *Env’t Rep.* (BNA) 1549 (July 3, 2009).

⁵⁹ See MCKINSEY & CO., *REDUCING*, *supra* note 3, at 35–36, ex. 21 (analyzing cost of CO₂ reductions associated with increased building efficiency); News Release, U.S. Dep’t of Energy, *supra* note 23.

⁶⁰ Federal preemption occurs when (1) Congress preempts state law by saying so in express terms (express preemption), (2) Congress and federal agencies create a sufficiently comprehensive federal regulatory structure in an area where the federal interest is so dominant that it requires the inference that Congress left no room for state law (implied field preemption), or (3) Congress does not completely displace state regulation but the state law actually conflicts with federal law or “stands as an obstacle” to achieving the full purposes and objectives of Congress (implied conflict preemption). The doctrine of federal preemption is based on the Supremacy Clause in the U.S. Constitution, which states that the Constitution and U.S. laws “shall be the supreme Law of the Land” notwithstanding any state law to the contrary. U.S. CONST. art. VI, cl. 2. See *Hillsborough County v. Automated Med. Labs., Inc.*, 471 U.S. 707, 713 (1985) (citing *Hines v. Davidowitz*, 312 U.S. 52, 67 (1941)); Caleb Nelson, *Preemption*, 86 VA. L. REV. 225, 226–28 (2000) (describing the three types of preemption).

⁶¹ See 42 U.S.C. § 6297(c)(2006).

⁶² Pub. L. No. 94-163, 89 Stat. 871 (1975) (codified as amended at 42 U.S.C. §§ 6201–6422).

⁶³ See *Natural Res. Def. Council v. Herrington*, 768 F.2d 1355, 1364 (D.C. Cir. 1985) (discussing the history of EPCA).

⁶⁴ See Ann E. Carlson, *Energy Efficiency and Federalism*, 107 MICH. L. REV. FIRST IMPRESSIONS 63, 65 (2008).

By 1975, however, the oil embargo imposed against the United States by certain foreign countries had placed national political attention on the economic and national security problems connected with relying on foreign energy sources, and resulted in the first comprehensive federal energy conservation policy.⁶⁵ EPCA contained provisions designed to improve appliance energy efficiency through testing, labeling, and voluntary energy conservation standards, with the idea that mandatory efficiency standards would be unnecessary given manufacturers' voluntary efforts and more fully informed consumers.⁶⁶ Congress made the Federal Trade Commission responsible for appliance labeling and directed the newly created DOE to implement the remainder of the program.⁶⁷

Section 323 of EPCA authorized DOE to develop test procedures to measure the energy efficiency, energy use, or estimated annual operating cost of "covered products," consisting of specified major home appliances and certain other consumer products.⁶⁸ Congress required that manufacturers label appliances and directed the Secretary of Energy to implement energy efficiency standards if the labeling program was ineffective.⁶⁹ EPCA's express preemption provisions at that time dealt only with the possibility that states would adopt different test procedures or consumer labeling requirements, but "allowed state regulations that differed from the federal regulations if the state regulations were justified by a substantial state or local need, did not interfere with interstate commerce, and were more stringent than the federal standard."⁷⁰

Congress amended EPCA in 1978 through the National Energy Conservation Policy Act⁷¹ ("NECPA"). Pursuant to the amendments, Congress directed DOE to set efficiency standards for thirteen residential appliances (described as "covered products"), and provided specific criteria for doing so.⁷² Under the new law, any new or amended standard for a covered product had to be designed to achieve the maximum improvement in energy efficiency that was technologically feasible and economically justified.⁷³ While DOE at first concluded that creating standards was not economically justified, this "no standard" determination was overturned in subsequent litigation.⁷⁴ Ultimately, trade associations and the Natural Resources Defense

⁶⁵ See *Air Conditioning & Refrigeration Inst. v. Energy Res. Conservation & Dev. Comm'n*, 410 F.3d 492, 498 (9th Cir. 2005) (describing the history and background of federal energy efficiency legislation).

⁶⁶ H.R. REP. NO. 94-340, at 95 (1975), reprinted in 1975 U.S.C.C.A.N. 1762, 1857.

⁶⁷ *Herrington*, 768 F.2d at 1365.

⁶⁸ See S. REP. NO. 94-516, at 173 (1975), reprinted in 1975 U.S.C.C.A.N. 1956, 2014.

⁶⁹ See H.R. REP. NO. 94-340, at 99 (1975), reprinted in 1975 U.S.C.C.A.N. 1762, 1857.

⁷⁰ *Air Conditioning & Refrigeration Inst.*, 410 F.3d at 499 (citing Pub. L. No. 94-163, § 327(b)(2), 89 Stat. 871, 927 (1975)).

⁷¹ Pub. L. No. 95-619, 92 Stat. 3206 (1978) (codified as amended in scattered sections of 42 U.S.C.).

⁷² See *id.* § 422 (requiring standard-setting for products covered in EPCA § 322(a)(1)-(13), 89 Stat. 871 (1975)).

⁷³ 42 U.S.C. § 6295(o)(2)(A) (2006).

⁷⁴ *Natural Res. Def. Council v. Herrington*, 768 F.2d 1355, 1433 (D.C. Cir. 1985).

Council negotiated a compromise solution, which Congress enacted as the National Appliance Energy Conservation Act of 1987⁷⁵ (“NAECA”). NAECA established federal energy efficiency standards for the covered residential appliances⁷⁶ and also amended the law’s preemption provisions, which remain in effect today.

EPCA’s preemption provision, as amended by NAECA, states that “no State regulation, or revision thereof, concerning the energy efficiency, energy use, or water use of [a product covered by a federal efficiency standard] shall be effective with respect to such covered product.”⁷⁷ Although a state may request a preemption waiver,⁷⁸ the request must be based on “unusual and compelling State or local energy or water interests” that are “substantially different in nature or magnitude than those prevailing in the United States generally.”⁷⁹ Further, they must be such that the “costs, benefits, burdens, and reliability of energy or water savings resulting from the State regulation make such regulations preferable or necessary [relative to other approaches].”⁸⁰ To date, DOE has never granted a preemption waiver to a state wishing to set more stringent standards, and California is the only state that has even attempted to seek a waiver.⁸¹ Indeed, up until now, most states and energy efficiency advocates have considered obtaining a preemption waiver to “verge on the impossible.”⁸²

⁷⁵ Pub. L. No. 100-12, 101 Stat. 103 (1987) (codified at 42 U.S.C. §§ 6291–6309); *see* S. REP. NO. 100-6, at 4–5 (1987), *reprinted in* 1987 U.S.C.C.A.N. 52, 54–55.

⁷⁶ NAECA § 5, 101 Stat. at 107–17 (codified at 42 U.S.C. § 6295).

⁷⁷ 42 U.S.C. § 6297(c). States remain free to set standards for products not yet covered by federal standards. *See* EPA, GUIDE TO ACTION, *supra* note 53, at ES-15 (noting that “[t]en states [including California and New York] have adopted standards for a total of thirty-six types of appliances”).

⁷⁸ In addition to the CAA, several other federal laws allow states to obtain exemptions from federal standards through a statutory waiver process. *See* Michele Goodwin, *Rethinking Federal Organ Transplantation Policy: Incentives Best Implemented by State Governments*, in *WHEN ALTRUISM ISN’T ENOUGH* 111, 116 (Sally Satel ed., 2008) (noting that the federal government has “considerable experience” with state waiver programs).

⁷⁹ 42 U.S.C. § 6297(d)(1)(B), (d)(1)(C)(i).

⁸⁰ *Id.* § 6297(d)(1)(C)(ii).

⁸¹ In 2006, DOE denied the California Energy Commission’s petition for a waiver for residential clothes washers. DOE found that the Commission had failed to provide sufficient data to determine whether the state had “unusual and compelling water interests” to justify granting the petition under the statute. *See* California Energy Commission Petition for Residential Clothes Washers, 71 Fed. Reg. 78,157 (Dec. 28, 2006). Notably, in October 2009, the Ninth Circuit remanded the matter to DOE for reconsideration. *See* Cal. Energy Comm’n v. Dep’t of Energy, 585 F.3d 1143 (9th Cir. 2009).

⁸² *See American Clean Energy and Security Act of 2009: Hearing on H.R. 2454 Before the Subcomm. on Energy and the Env’t of the H. Comm. on Energy and Commerce*, 111th Cong. 4 (2009) [hereinafter deLaski Testimony], available at http://energycommerce.house.gov/Press_111/20090424/testimony_delaski.pdf (statement of Andrew deLaski, Executive Director, Appliance Standards Awareness Project). Outside obtaining a preemption waiver, the only option state and local governments have is to create building codes for new construction that contain multiple paths to compliance, one or more of which, but not all, may require installation of products with energy efficiency ratings above the federal standard. *See* 42 U.S.C. § 6297(f)(3)(E). As this option is limited to new construction, however, it applies almost exclusively to “space conditioning” appliances that are built into a building, such as boilers, furnaces, air conditioners and water heaters. *See* 10 C.F.R. § 430.32 (2009). To date, only

This statutory scheme stands in contrast to the much more deferential preemption waiver provision in the CAA that has resulted in EPA granting all of California's fifty-four preemption waiver requests in full or in part.⁸³ Thus, even though California had the same history of regulating appliance efficiency prior to federal legislation as it did with regulating auto emissions, Congress's decision in the 1980s to create a stricter standard for waivers in EPCA than in the CAA has resulted in almost no room for any state to encourage stricter efficiency standards.

Congress added new appliance efficiency standards in the Energy Policy Acts of 1992⁸⁴ and 2005⁸⁵ ("EPACT 1992" and "EPACT 2005") and the Energy Independence and Security Act of 2007⁸⁶ ("EISA 2007"). In these laws, "Congress [generally] established initial standards [for certain appliances] by statute and directed [DOE] to review standards on a set schedule, increasing to higher efficiency levels [when] technically feasible and economically justified."⁸⁷ The 2005 and 2007 laws together included more than twenty new standards.⁸⁸ In many cases, these Acts federalized standards previously created by the states.⁸⁹

While this top-down, federal approach may result in more uniformity, many of the DOE efficiency standards for appliances are extremely out-of-date,⁹⁰ resulting in a situation where there is no regulatory incentive for industry to increase energy efficiency and extremely limited tools for the states to use more stringent energy efficiency standards as part of green building efforts. Moreover, DOE's track record in standard setting leaves much to be desired. As of 2007, DOE had missed all thirty-four statutory deadlines for setting energy efficiency standards.⁹¹ DOE ultimately issued late efficiency

Minnesota and Oregon have pursued this compliance option, and only with respect to natural gas furnaces. See MINN. R. 1322.1102 (2009); BLDG. CODES DIV., OR. DEP'T OF ENERGY, SIMPLE OVERVIEW OF 2008 RESIDENTIAL ENERGY CODE REQUIREMENTS (2008), available at http://www.oregon.gov/ENERGY/CONS/Codes/docs/Overview_0208.pdf.

⁸³ See *infra* notes 138–140 and accompanying text (discussing CAA preemption waiver provisions).

⁸⁴ Pub. L. No. 102-486, 106 Stat. 2776 (1992) (codified as amended in scattered sections of 16, 25, 26, 30, and 32 U.S.C. (2006)).

⁸⁵ Pub. L. No. 109-58, 119 Stat. 594 (2005) (codified as amended in scattered sections of 16, 22, 26, and 42 U.S.C. (2006)).

⁸⁶ Pub. L. No. 110-140, 121 Stat. 1492 (2007) (codified in scattered sections of 2, 15, 42, and 46 U.S.C. (Supp. I 2007)).

⁸⁷ deLaski Testimony, *supra* note 82, at 2, 7. EPACT 1992 set initial standards for various commercial products such as heat pumps, water heaters, and commercial lighting products; EPACT 2005 set initial standards for commercial refrigerators, commercial clothes washers, and additional commercial lighting appliances; and EISA 2007 set initial standards for walk-in refrigerators and freezers. See Appliance Standards Awareness Project, Federal Standards, <http://www.standardsasap.org/federal.htm> (last visited Mar. 9, 2010) (on file with the Harvard Law School Library) (listing appliances covered under each statute).

⁸⁸ See Appliance Standards Awareness Project, *supra* note 87.

⁸⁹ See EPA, GUIDE TO ACTION, *supra* note 53, at ES-15 (noting that "[s]tates . . . can enact standards for products that are not yet covered by federal law (which in many cases emerged from state-standard-setting activities)").

⁹⁰ See NADEL ET AL., *supra* note 27, at v, 12, 44–45.

⁹¹ U.S. GOV'T ACCOUNTABILITY OFFICE, GAO-07-42, ENERGY EFFICIENCY: LONG-STANDING PROBLEMS WITH DOE'S PROGRAM FOR SETTING EFFICIENCY STANDARDS CONTINUE TO

standards for eleven products, and failed completely to issue standards for the other twenty-three products.⁹² Further, during the Clinton and Bush Administrations, DOE completed only twelve new major standards.⁹³

DOE has attributed these delays to overly ambitious statutory rulemaking schedules, while stakeholders attribute the delays to DOE's insufficient allocation of resources and overly lengthy review by DOE's General Counsel.⁹⁴ Another study notes that the DOE rulemaking process can be "contentious and long" and that processes designed to take three years have taken ten years.⁹⁵ Indeed, in EPCA 2005 and EISA 2007, Congress ordered DOE to report to it on a regular basis regarding setting standards for appliances because of DOE's failure to meet congressional deadlines.⁹⁶ Moreover, in 2005, fourteen states and various organizations sued DOE for failure to comply with deadlines in EPCA and subsequent legislation, which resulted in a November 2006 consent decree in which DOE agreed to publish final rules regarding twenty-two efficiency standards by specific deadlines.⁹⁷ In February 2009, President Obama issued a memorandum to the Secretary of Energy on the topic of appliance efficiency standards, directing DOE to take "all necessary steps" to comply with the consent decree and federal statutes and to finalize the legally-required efficiency standards.⁹⁸

DOE's consistent inability to set appropriate appliance efficiency standards over the years provides a good argument in favor of delegating some authority to the states to do so, or at least relaxing the strict waiver standards under EPCA. DOE has made some recent statements suggesting a potentially increased role for states in the standards-setting process. For instance, in a Notice of Proposed Rulemaking on energy efficiency standards for residential boilers in 2006, DOE responded to comments regarding whether the agency could set different standards for furnaces and boilers in different re-

RESULT IN FORGONE ENERGY SAVINGS 5 (2007), available at <http://www.gao.gov/new.items/d0742.pdf>.

⁹² *Id.* at 9 tbl.2. Of the twenty-three standards which had yet to be issued, eight were between five and ten years late, with an additional twelve more than ten years late. *Id.* The GAO estimated that this delay will cost at least \$28 billion in forgone energy savings by 2030. *Id.* at 11.

⁹³ deLaski Testimony, *supra* note 82, at 7.

⁹⁴ U.S. GOV'T ACCOUNTABILITY OFFICE, *supra* note 91, at 14-15.

⁹⁵ Steven Nadel, *Appliance and Equipment Efficiency Standards*, 27 ANN. REV. ENERGY & ENV'T 159, 182 (2002).

⁹⁶ Pub. L. No. 109-58, § 141, 119 Stat. 594, 648 (2005) (codified at 42 U.S.C. § 15834 (2006)); Pub. L. No. 110-140, § 305, 121 Stat. 1492, 1553 (2007) (codified at 42 U.S.C. § 6295(m) (Supp. I. 2007)).

⁹⁷ Consent Decree at 2-4, *New York v. Bodman*, No. 05-7807 (S.D.N.Y. Nov. 1, 2007), 2007 LEXIS 80980, available at http://www.fypower.org/pdf/DOE_Appliances_Decree.pdf.

⁹⁸ Memorandum on Appliance Efficiency Standards, 74 Fed. Reg. 6537 (Feb. 9, 2009). See also *President Obama Orders Swift Action on Appliance Efficiency Standards*, EERE NETWORK NEWS (U.S. Dep't of Energy), Feb. 11, 2009, http://apps1.eere.energy.gov/news/news_detail.cfm/news_id=12234 (reporting on President Obama's statement that the efficiency standards "will avoid the use of tremendous amounts of energy," resulting in a savings "over the next thirty years, [of] the amount of energy produced over a two-year period by all the coal-fired power plants in America").

gions of the country.⁹⁹ DOE stated that EPCA did not allow it to set regional standards, only national standards, but that the states could rely on regional differences as evidence of the need for a preemption waiver.¹⁰⁰ Specifically, DOE stated that in the context of residential boilers and furnaces, “where regional climatic effects can have significant impact on whether a specified energy conservation standard would be technologically feasible and economically justified in that region, such regional climatic effects will be important in DOE’s assessment of whether there are ‘unusual and compelling State or local energy interests.’”¹⁰¹

DOE then focused on the situation of states within a region with significantly higher heating requirements (and thus significantly higher furnace use) and the circumstances under which they could show that higher state standards would be cost-effective and provide considerably more energy savings than the federal standards. DOE suggested that states could increase the likelihood of receiving a waiver if they could identify the saturation of homes that already met the proposed state standard, identify incentives being offered for the higher efficiency appliances, demonstrate the extent to which high-efficiency equipment had already achieved significant market share in that state, and demonstrate “the extent to which [the state had] chosen identical standard levels as other [s]tates that [had] developed proposed regulations.”¹⁰² DOE also encouraged states to “coordinate among themselves the submission of any waiver petitions they [wished] to file,” with the implication that petitions from groups of states attempting to set identical standards and thus lessen the burden on manufacturers might be met with less resistance.¹⁰³

The next year, in EISA 2007, Congress expressly granted DOE authority to create regional standards for climate-sensitive products (such as heating and air conditioning equipment) and also created a region-based Energy Efficiency and Conservation Block Grant Program for climate-sensitive products, authorizing \$2 billion for such grants over five years.¹⁰⁴ Under the grant program, states, localities, tribes, and territories will receive formula grants based on population and energy consumption levels.¹⁰⁵

Thus, since 2006 there has been at least some recognition at the Congressional and agency levels that there may be room for state or regional standards for climate-sensitive appliances. This recognition, however, has not yet yielded any regional standards, any preemption waivers for states, or any modification to the very strict waiver language in EPCA. As shown

⁹⁹ See Energy Conservation Standards for Residential Furnaces and Boilers, 71 Fed. Reg. 59,204, 59,209 (proposed Oct. 6, 2006).

¹⁰⁰ *Id.* at 59,209–10.

¹⁰¹ *Id.* at 59,209.

¹⁰² *Id.* at 59,210.

¹⁰³ *Id.*

¹⁰⁴ Pub. L. No. 110-140, §§ 541–548, 121 Stat. 1492, 1667–74 (2007) (codified at 42 U.S.C. §§ 17151–17158 (Supp. I 2007)).

¹⁰⁵ *Id.*

below, there are strong arguments in favor of a new approach to setting appliance efficiency standards.

B. Uniformity, Regulatory Ossification, and Setting the Right Balance

Granting states the right to innovate in this area can result in optimal energy efficiency standards for appliances without producing an unworkable fifty-state patchwork of regulation. Increasing appliance efficiency standards can result in a dramatic reduction in GHG emissions from a sector of the economy (buildings) that is a major contributor to global climate change without the major policy shifts necessary to accomplish similar reductions from other stationary sources or the transportation sector. Some states, particularly California, are eager to take the lead in this area, and other states are willing to follow California's regulatory course.¹⁰⁶

One can argue, of course, that the current preemption framework under EPCA already achieves an appropriate balance between state innovation, on the one hand, and uniformity and certainty on the other. EPCA allows states to set standards for appliances DOE has not yet regulated, and thus states can innovate in those areas, creating energy efficiency as well as engaging in experiments DOE and Congress can draw upon in later regulation.¹⁰⁷ Thus, states are able to fill the gaps in appliance efficiency that DOE has not yet addressed, and the federal government can then adopt those standards on a nationwide basis.

This argument fails, however, if one accepts that the dangers of climate change or the need to reduce dependence on foreign sources of energy require even more reductions and a faster timetable. The Obama Administration has made energy efficiency from buildings a priority, and acknowledges the difficulty DOE has had in keeping up with those efficiency standards mandated by Congress, not to mention more stringent standards that may be both technically and economically feasible.¹⁰⁸ Under these circumstances, states can help.

Furthermore, even when DOE and Congress adopt innovative state standards for newly-regulated products at the federal level, the well-documented concern regarding "regulatory ossification"¹⁰⁹ remains for those

¹⁰⁶ See Multi-State Appliance Standards Collaborative, <http://appliancestandards.org/states> (last visited Mar. 29, 2010) (on file with the Harvard Law School Library) (discussing multi-state alliance for appliance efficiency standards). See also News Release, Cal. Energy Comm'n, California Approves New Energy Efficient TV Regulations (Nov. 18, 2009), available at http://www.energy.ca.gov/releases/2009_releases/2009-11-18_tv_regulations.html (announcing adoption of the first state energy efficiency standards for new television sets).

¹⁰⁷ See EPA, GUIDE TO ACTION, *supra* note 53, at ES-15 (noting that many current federal standards emerged from state standard-setting activities); NADEL ET AL., *supra* note 27, at iv-v (same).

¹⁰⁸ See *supra* notes 23, 98 and accompanying text (discussing Obama and Chu statements on energy efficiency from buildings).

¹⁰⁹ "Regulatory ossification" describes the slow pace of agency rulemaking where developing regulatory standards can take decades as a result of required regulatory impact and cost-benefit analyses, lack of agency resources, "a risk-averse bureaucratic culture and the knowl-

products where federal standards exist but were either set too low initially or have not been appropriately updated.¹¹⁰ For instance, according to the Alliance to Save Energy, setting a ninety percent Annual Fuel Utilization Efficiency (“AFUE”) rating for gas furnaces would reduce global warming emissions by approximately 141 million metric tons over twenty-four years.¹¹¹ Congress, however, first set a standard of seventy-eight percent AFUE in 1987, DOE did not update the standard until 2007, and that update (which does not go into effect until 2015) requires only eighty percent AFUE.¹¹² This new standard will result in virtually no additional energy savings because ninety-nine percent of furnaces already meet the new standard.¹¹³ If the federal government is lagging behind, perhaps it is time to allow states to help using one of the approaches discussed in Part V.B rather than requiring strict uniformity.

Likewise, improved appliance efficiency standards may be the only practical means of achieving substantial GHG reductions through stricter green building codes. With approximately seventy percent of building emissions attributable to appliances, green building efforts will not be successful without significant increases in appliance efficiency. With the current EPCA preemption standard in place, all regulatory control will be in the hands of DOE, which has not achieved rapid change in this area. Allowing states to innovate can help fill that regulatory gap and provide just the type of positive regulatory redundancies that spur innovation and achieve results at the local and national levels.¹¹⁴

Moreover, giving states the authority to innovate in this area will allow much greater collaboration between states and local governments in establishing green building codes that both reduce GHG emissions and are consistent with federal law. If states were given more authority to develop appliance efficiency standards for the major appliances that contribute to GHG emissions, such as heating and cooling systems and lighting, they could work more closely with local governments to integrate those new standards into green building codes, or propose model building codes that local governments could then adopt. California, not surprisingly, has already been

edge that innovation carries significant costs in time and resources.” Michael A. Livermore, *Reviving Environmental Protection: Preference-Directed Regulation & Regulatory Ossification*, 25 VA. ENVTL. L.J. 311, 337 (2007). See also Thomas O. McGarity, *Some Thoughts on “Deossifying” the Rulemaking Process*, 41 DUKE L.J. 1485 (1992).

¹¹⁰ See NADEL ET AL., *supra* note 27, at 12 (discussing heavy pressure on DOE to update standards); *id.* at 26 (noting that the federal standard for commercial boilers has not been updated since 1992).

¹¹¹ This is more or less the amount emitted by twenty-five million cars driven 12,000 miles each. News Release, Alliance to Save Energy, New U.S. Standard for Home Furnaces Is a “Turkey”; Missed Opportunity to Cut Energy Bills and Global Warming Emissions (Nov. 19, 2007), available at <http://ase.org/content/news/detail/4103>.

¹¹² *Id.*

¹¹³ *Id.*

¹¹⁴ See Krauss, *supra* note 10 (citing California reports that the state has cut energy use in new buildings by seventy-five percent over the thirty years that stricter codes have been in place).

a leader in this area, working closely with local governments on green building codes and other land use and climate change innovations.¹¹⁵ Shifting some authority from the federal government to the states in this area may also serve as a model for a new approach to federalism issues across the board. President Obama's recent memorandum on federalism stated clearly that federal agencies must have a sufficient legal basis for asserting federal preemption (or displacement) of state law and that agencies must refrain from writing preemption clauses into the preambles of agency rules and standards.¹¹⁶ He went on to note that "State and local governments have frequently protected health, safety, and the environment more aggressively than has the national Government" and, quoting Justice Brandeis, that "[i]t is one of the happy incidents of the federal system that a single courageous state may, if its citizens choose, serve as a laboratory; and try novel social and economic experiments without risk to the rest of the country."¹¹⁷ With federal policy now expressly endorsing state innovation when it comes to public health, safety, and environmental protection, the federal-state relationship with regard to appliance efficiency standards appears ripe for change.

This is not to say that California (or a group of states) should be granted a preemption waiver in all circumstances or that the federal government should get out of the appliance efficiency business. There can and should remain a significant role for the federal government in setting national standards and reviewing state efforts that may balance product efficiency and cost in ways that are not appropriate for the rest of the country. There should, however, be more express congressional support for an integrated system that recognizes state expertise in this area and the greater ability of states to work with local governments. To date, this type of integration is not found in any relevant federal laws, nor in the recent Waxman–Markey bill.

For instance, the Waxman–Markey bill provides for the establishment of national energy efficiency building codes, and provides for assistance to "recognized developers of national energy codes and standards" to develop and disseminate such codes.¹¹⁸ The bill goes on to establish how state and local governments should implement the national code and to describe funding associated with that implementation, but does not provide for *states* to help in developing these national codes. While the development of a na-

¹¹⁵ See, e.g., K Kaufmann, *State Upping Mandates for Green Buildings: Most Rigorous Code Requirements for Energy-Efficiency Take Effect Aug. 1*, DESERT SUN (Palm Springs, Cal.), June 21, 2009, at A1 (describing 2009 update to state requirement for energy efficient construction "which is already recognized as the most rigorous in the United States"); News Release, Cal. Energy Comm'n, Energy Commission Approves New Energy Efficient Measures for California Homes and Businesses (Apr. 23, 2008), available at http://www.energy.ca.gov/releases/2008_releases/2008-04-23_2008_standards.html.

¹¹⁶ See Memorandum on Preemption, 74 Fed. Reg. 24,693 (May 22, 2009).

¹¹⁷ *Id.* (quoting *New State Ice Co. v. Liebmann*, 285 U.S. 262, 311 (1932) (Brandeis, J., dissenting)).

¹¹⁸ H.R. 2454, 111th Cong. § 201 (2009) (proposing a new 42 U.S.C. § 6833(b)(3)(A)).

tional energy efficiency building code may go a long way toward reducing GHG emissions on a national level, meeting ambitious GHG reduction goals may require a more central role for states. If history is any guide, states working together with local governments can often move more quickly, and more nimbly, in this area. Under the current regulatory structure, however, states and local governments are unable to use their strengths in the context of appliance efficiency standards.

C. Appliance Preemption Litigation

As a result of EPCA's preemption provisions, states have a very limited ability to innovate in the area of appliance efficiency. Coupled with DOE's continued delays in setting regulatory policy consistent with federal law, this limitation has resulted in efficiency standards lagging far behind what they could be. Moreover, the preemption provision has prevented local governments from being able to use appliance efficiency as part of their efforts to develop green building codes.

Courts have enforced EPCA's preemption provision when states and local governments have attempted to incorporate stricter appliance efficiency standards into their green building efforts. For instance, in 2007, Albuquerque formed a task force to reduce GHG emissions by developing changes to the city's building regulations. This resulted in the city enacting the Albuquerque Energy Conservation Code.¹¹⁹ These green building provisions applied to new residential and commercial buildings, additions to existing buildings, and alterations to existing buildings. The Code generally provided three options for compliance: (1) LEED certification at the silver level; (2) efficiency thirty percent greater than that of a prominent national code; or (3) compliance with prescriptive standards for individual building components, such as heating, ventilation, air conditioning, and water heaters.¹²⁰

In 2008, the Air Conditioning, Heating, and Refrigeration Institute challenged the Code in federal court, arguing that the Code's prescriptive alternatives for compliance were preempted under EPCA because they were regulations that "concern" the energy efficiency of products for which DOE had set standards. The court agreed, observing that "if a homeowner [chose] to replace an existing furnace with a federally-compliant furnace, [the] homeowner must make other revisions to the home to make up the energy differential between a federally-compliant furnace and a furnace that meets the requirements of the Code."¹²¹ The court found "Congress in-

¹¹⁹ ALBUQUERQUE, N.M., ENERGY CONSERVATION CODE (2007), available at <http://www.cabq.gov/albuquerquegreen/pdf/volumeI.pdf>.

¹²⁰ Air Conditioning, Heating & Refrigeration Inst. v. City of Albuquerque, No. 08-633, 2008 WL 5586316, at *2-3 (D.N.M. Oct. 3, 2008).

¹²¹ *Id.* at *8. While Albuquerque's approach may seem similar to the approach described *supra* note 82, regarding the use of 42 U.S.C. § 6297(f)(3)(E) to avoid preemption, the court determined that this option was not applicable due to the inclusion of a prescriptive measure in

tended to preempt state regulation of the energy efficiency of certain building appliances in order to have uniform, express, national energy efficiency standards;¹²² that the Code was subject to the federal statute's preemption provision; and that even though Albuquerque provided three alternatives for compliance, each alternative was subject to federal preemption.¹²³ The court found that although some elements of the Code might be valid, enough of the Code appeared to violate the federal preemption provisions to justify an injunction while the case went forward on the merits.¹²⁴ Thus, federal law currently presents potential roadblocks to municipal green building codes that include increased appliance efficiency standards.¹²⁵ The next Part places this current tension in the broader context of federalism and suggests some policy approaches to move forward on this issue.

V. FEDERALISM PRINCIPLES AND STATE STANDARDS FOR APPLIANCES

Appliance efficiency standards in the United States must contend with a system of dual sovereignty: the federal government's supreme but limited powers and the states' broad and plenary residual powers interact to produce many areas subject to concurrent and overlapping federal and state regulation.¹²⁶ This Part first explores recent scholarly work on federalism, particularly in the area of environmental law, and how the concept of federalism has changed as both state and federal regulation has become more complex and interdependent. It then proceeds to apply recent approaches to federalism to the question of whether states can play a more robust role in setting standards for appliances than Congress envisioned nearly thirty years ago.

A. *Theories of Federalism*

Scholars have noted that until the New Deal, the idea of "dual federalism" was the "dominant judicial conception of the relationship of the states and the national government."¹²⁷ Dual federalism was based on the idea that "the states and the federal government exercised exclusive control over non-overlapping regions of authority" (such as national security on the federal side and land use control on the state side), and that it was up to the courts to

the Code, along with the fact that Volume II of the Code does not actually set forth one or more optional combinations of items.

¹²² *Id.* at *7.

¹²³ *Id.* at *8.

¹²⁴ *Id.* at *12.

¹²⁵ *But see supra* note 82 (discussing ways in which states can encourage installation of appliances that exceed federal standards in new construction).

¹²⁶ *See Nelson, supra* note 60, at 225 ("The powers of the federal government and the powers of the state overlap enormously. Although the Constitution makes a few of the federal government's powers exclusive, the states retain concurrent authority over most of the areas in which the federal government can act.")

¹²⁷ Robert A. Schapiro, *From Dualism to Polyphony*, in *PREEMPTION CHOICE* 33, 34 (William W. Buzbee ed., 2009).

define and monitor these exclusive spheres of federal and state control.¹²⁸ Since the rise of the federal regulatory state, however, many argue that the lines between federal and state authority have become mostly blurred, with the federal government and the states engaging in overlapping regulation of a wide range of subjects including education, public health and safety, transportation, and environmental protection.¹²⁹

In recent years, there has been significant scholarly work documenting and theorizing this new brand of federalism, using labels such as “polyphonic federalism,” “dynamic federalism,” “empowerment federalism,” “cooperative federalism,” and “interactive federalism.”¹³⁰ While these labels describe concepts of federalism that are not identical, they all describe a situation where federal and state regulation are no longer separate spheres but instead exist as independent, but interacting, sources of authority. Such concurrent federal and state regulation results in a regulatory regime superior to what could be achieved by the independent activity of either one. The benefits that flow from this new type of federalism include plurality, dialogue, positive redundancy, greater regulatory competition, policy innovation, and resistance to monopolization and group capture.¹³¹

In the context of environmental law, this overlapping jurisdiction may allow one level of government to step in when the other has failed to act, as has happened over the last decade as states responded to climate change in the face of federal inaction. Moreover, if industry groups are successful in capturing one level of government, opposing interest groups can seek regulation at another level of government. In this way, states can act as “laboratories of democracy” in the best sense, which is particularly important when it comes to concerns involving “nonrenewable and irreplaceable resources.”¹³²

B. Federalism and Appliance Efficiency: A New Approach

These arguments in favor of a “dynamic” or “polyphonic” approach to federalism resonate in the area of appliance efficiency. Many states, particularly California, are motivated to reduce state energy needs and GHG emissions, and seek to do so through stricter building codes and appliance efficiency standards.¹³³ Allowing states to set such standards encourages them to be responsive to local concerns and assist local governments with their efforts. Likewise, most of the federal standards Congress has adopted

¹²⁸ See *id.* at 34–35.

¹²⁹ See, e.g., *United States v. Morrison*, 529 U.S. 598, 646–47 (2000) (Souter, J., dissenting); Schapiro, *supra* note 127, at 40–41 (stating that “overlapping state and federal regulation has become the norm for many, if not most” areas of regulation).

¹³⁰ See, e.g., Kirsten H. Engel, *Harnessing the Benefits of Dynamic Federalism in Environmental Law*, 56 EMORY L.J. 159, 176 (2006) (citing articles). See also Erwin Chemerinsky, *Empowering States: The Need to Limit Federal Preemption*, 33 PEPP. L. REV. 69 (2005).

¹³¹ See Engel, *supra* note 130, at 177–83; Schapiro, *supra* note 127, at 43–44.

¹³² See Engel, *supra* note 130, at 179, 182–83.

¹³³ See Krauss, *supra* note 10 (noting cities like Austin, Texas, and the entire State of California as governmental entities that have adopted tough new building codes).

are based on standards first developed and implemented by state regulators.¹³⁴ This has worked well in terms of developing standards for appliances not yet subject to federal regulation but less well with existing federal standards. Indeed, DOE continues to face criticism from states, Congress, and environmental groups for its inadequate or outdated standards. Granting states additional authority to set standards in this area would allow them to help address these regulatory failures at the federal level.

There are also good arguments, however, in favor of federal uniformity when it comes to setting standards for appliance efficiency. First, a unitary federal standard saves resources as “only one government, the federal government, [will] invest its resources in developing regulatory standards.”¹³⁵ This is particularly true for standards that will influence a product’s design on a nationwide basis, such as automobile emissions standards, labels for pesticides and pharmaceuticals, or, of course, appliances.¹³⁶ In these circumstances, industry understandably fears a fifty-state “patchwork” of regulation that will require different designs for the same product to meet different state standards. Manufacturer desires for certainty, uniformity, and economies of scale argue in favor of a uniform standard, and Congress has been receptive to those arguments.

Despite these historical arguments in favor of “ceiling preemption,”¹³⁷ recent developments in the area of climate change generally, and appliances specifically, provide some new responses for products that contribute to GHG emissions. In the context of automobiles, the CAA has always allowed California to set its own standards if it obtains a federal waiver from EPA. Unlike the waiver for state appliance efficiency standards which is considered “impossible” to obtain,¹³⁸ EPA has granted California numerous preemption waivers over the years to meet state air pollution needs, leading up to the most recent (and most contentious) waiver granted in June 2009.¹³⁹ Prior to that waiver being granted, however, at least thirteen states had adopted the California standards, and the federal government relied heavily on those standards in developing the federal GHG auto emission limits that followed.¹⁴⁰ Thus, a structure that allowed two standards (the federal stan-

¹³⁴ See *supra* note 89 and accompanying text.

¹³⁵ Robert R.M. Verchick & Nina Mendelson, *Preemption and Theories of Federalism*, in *PREEMPTION CHOICE*, *supra* note 127, at 13, 19.

¹³⁶ See Robert L. Glicksman & Richard E. Levy, *A Collective Action Perspective on Ceiling Preemption by Federal Environmental Regulation: The Case of Global Climate Change*, 102 *Nw. U. L. REV.* 579, 598–600, n.100 (2008).

¹³⁷ “Floor preemption” describes the situation where the federal government sets a “floor” by preempting less stringent state standards, but allowing the states to raise the floor by enacting more protective laws. “Ceiling preemption” describes where federal law preempts more stringent state standards, thus establishing a “ceiling” above which states cannot go. See William W. Buzbee, *Federal Floors, Ceilings, and the Benefits of Federalism’s Institutional Diversity*, in *PREEMPTION CHOICE*, *supra* note 127, at 98 (discussing “floor” and “ceiling” preemption); see also Glicksman & Levy, *supra* note 136, at 583.

¹³⁸ See deLaski Testimony, *supra* note 82.

¹³⁹ See *supra* notes 5–8 and accompanying text.

¹⁴⁰ See EPA Notice of Decision, *supra* note 5, at 32,754; *supra* notes 6–8 and accompanying text.

dard and the California standard) has allowed California to lead the way for other states and the federal government while avoiding a multiplicity of standards for the industry.

Trends in the area of appliance efficiency suggest a similar pattern. As discussed above, in 2006 DOE suggested that even though it could not set regional standards for appliances, states working together could apply for waivers that relied in part on regional climactic differences that justified stricter efficiency standards.¹⁴¹ According to DOE, such waiver applications would be bolstered by evidence that states within a region sought to set the same standards, thus creating uniformity.¹⁴² Congress, for its part, has now expressly authorized DOE to set such regional standards.¹⁴³ In the meantime, however, several states have begun work on their own. Congress could build on these developments in ways that allow state innovation while still addressing industry's concerns regarding uniformity and certainty. Several options, many of which are complementary, are set forth below.

1. *Multi-State Standards*

One option would be to build on the idea of state collaboration. States are already working together to set uniform standards for products not yet covered by federal standards. These standards help create uniformity rather than a fifty-state "patchwork."¹⁴⁴ Moreover, Congress and DOE have recognized a need for region-based standards for climate-sensitive products such as heating and air conditioning systems, and these regional differences are already driving markets by encouraging the sale of more efficient, climate-sensitive products to meet consumer desire for energy and cost savings.¹⁴⁵ Congress could amend EPCA to relax the waiver standards in situations where a group of states petitions together for a waiver to set a uniform, multi-state standard. These multi-state petitions could be based on geography, such as petitions for more efficient air conditioning systems in the South and West and heating systems in the North. Or they could be based on common political interests of states in different regions of the country that wish to place a premium on energy efficiency and GHG emission reductions. California, Massachusetts, and other states have already begun to collaborate on appliance efficiency standards for products not subject to preemption and, under the approach outlined here, these groups of states could apply for joint waivers for a single standard.¹⁴⁶

¹⁴¹ See *supra* notes 99–103 and accompanying text.

¹⁴² See *supra* note 102 and accompanying text.

¹⁴³ See *supra* note 104 and accompanying text.

¹⁴⁴ See Multi-State Appliance Standards Collaborative, *supra* note 106 (stating that Connecticut, Massachusetts, New York, Oregon, Rhode Island, and Washington have adopted appliance standards "the same as or similar" to California's for selected appliances not already subject to federal standards).

¹⁴⁵ Energy Conservation Standards for Residential Furnaces and Boilers, 71 Fed. Reg. 59,204, 59,209 (proposed Oct. 6, 2006).

¹⁴⁶ See Multi-State Appliance Standards Collaborative, *supra* note 106.

Once DOE grants a multi-state petition, states in other parts of the country could adopt that standard, thus creating even greater uniformity. To address concerns regarding a multi-state “patchwork” of regulation, Congress could provide that if DOE granted one multi-state petition and then another group of states filed a petition for a more restrictive standard, DOE could choose to grant the second petition, but only if that second standard would replace the first standard. This way, states could continue to innovate if they chose but industry would still be faced with only two standards: the federal standard and the most restrictive state-based standard.¹⁴⁷ Under such a proposal, a likely scenario would be that soon after DOE granted a waiver for a multi-state standard, many other states, and ultimately the federal government, would follow. This is precisely what has happened with the regular federal adoption of state appliance efficiency standards, as well as what has happened with the federal adoption of the California auto emission standards under the CAA.

Indeed, Ann Carlson has argued that Congress could build on the special statutory treatment for California in the CAA, by explicitly allowing that state to set more stringent energy efficiency standards for appliances under a relaxed waiver standard and then allowing other states to follow California.¹⁴⁸ California’s special treatment could be justified by its historic role as a regulatory leader in this area and its large consumer market.¹⁴⁹ In this way, industry would again avoid fifty different state standards because there would be a maximum of two — the federal standard and the California standard that other states could adopt.

Under these proposals, states would be able to innovate, experiment, and move forward on energy efficiency even in the face of federal inaction or delay. The fact is that DOE is not (and never has been) an exclusive source of authority or expertise when it comes to appliance efficiency standards or green technology. After nearly four decades of federal-state cooperation in the field of environmental law and over ten years of innovations in the area of climate change, many states have acquired significant policy,

¹⁴⁷ It is possible that some agreements between states, depending on their level of formality, would be subject to a constitutional challenge under the Compact Clause, or that state regulation on its own would be subject to a constitutional challenge under the dormant commerce clause. *See, e.g.*, U.S. CONST. art. I, § 8, cl. 3 (granting Congress the power to regulate commerce and by implication prohibiting the states from engaging in economic protectionism); *id.* art. I, § 10, cl. 3 (“No State shall, without the Consent of Congress, . . . enter into any Agreement or Compact with another State or with a Foreign Power . . .”). To avoid such problems, Congress should explicitly give states advance consent for compacts and expressly waive Commerce Clause restrictions in this area. *See* RONALD D. ROTUNDA & JOHN E. NOWAK, 2 TREATISE ON CONSTITUTIONAL LAW 183, 187, 316–20, 324–27 (4th ed. 2007) (discussing authority of Congress to authorize states to engage in regulation that would otherwise violate the dormant commerce clause or the Compact Clause).

¹⁴⁸ *See* Carlson, *supra* note 64, at 70–71.

¹⁴⁹ *See id.* at 68 (offering some of these justifications).

scientific, and technical expertise that rivals that of the equivalent federal agencies.¹⁵⁰

To implement these proposals, Congress could adopt waiver language similar to that contained in the CAA. For instance, currently under EPCA a state may obtain a waiver only if it can carry a significant burden of proof, both in terms of collecting the data necessary to show costs, benefits, burdens, and reliability — which are often in the sole hands of manufacturers — and in terms of showing “unusual and compelling” state or local interests.¹⁵¹ As a result, no state has ever received a preemption waiver under EPCA.¹⁵² By contrast, under the CAA, EPA must grant California a waiver if California determines that its standards are, in the aggregate, at least as protective of the public health and welfare as applicable federal standards. EPA may only deny the waiver if the EPA Administrator determines (1) the state determination is arbitrary and capricious, (2) the state “does not need” such “standards to meet compelling and extraordinary conditions,” or (3) the state “standards and accompanying enforcement provisions are not consistent” with other statutory requirements.¹⁵³ Although the “compelling and extraordinary circumstances” language in the CAA would appear to impose a strict burden, the CAA’s legislative history is clear that Congress intended a “narrow” review by EPA that would preserve “the broadest possible discretion” for California.¹⁵⁴

With regard to a California-specific preemption waiver for appliance efficiency standards, Congress could justify a more relaxed waiver standard for California based on the state’s long history of regulating appliance efficiency as well as the unique energy and water needs of California, which dwarf that of any other state. It is this unique history and unique need that led Congress to grant California special status with regard to auto emissions, and that same history and need support special status for California in the area of appliance efficiency.¹⁵⁵

¹⁵⁰ See, e.g., Richard L. Revesz, *Federalism and Environmental Regulation: A Public Choice Analysis*, 115 HARV. L. REV. 553, 626–30 (2001) (discussing relative competence of state and federal environmental officials).

¹⁵¹ See 42 U.S.C. § 6297(d) (2006); deLaski Testimony, *supra* note 82, at 4 (noting the “Catch-22” under EPCA where states need information for the waiver process but “manufacturers can deny petitioning states access” to the information needed); *supra* text accompanying notes 78–80.

¹⁵² See *supra* notes 81–82 and accompanying text.

¹⁵³ 42 U.S.C. § 7543(b)(1).

¹⁵⁴ See H.R. REP. NO. 95-294, at 23 (1977), *reprinted in* 1977 U.S.C.C.A.N. 1077, 1101; EPA Notice of Decision, *supra* note 5, at 32,747–48 (citing Motor & Equip. Mfrs. Ass’n v. EPA, 627 F.2d 1095, 1100 (D.C. Cir. 1979)). Consistent with this reading, prior to EPA’s most recent waiver grant in June 2009, EPA had granted all fifty-four preemption waivers in full or in part to California under the CAA. See JAMES E. MCCARTHY & ROBERT MELTZ, CONGRESSIONAL RESEARCH SERVICE, CALIFORNIA’S WAIVER REQUEST UNDER THE CLEAN AIR ACT TO CONTROL GREENHOUSE GASES FROM MOTOR VEHICLES 1 (2009), available at <http://ncseonline.org/NLE/CRSreports/09Mar/RL34099.pdf>.

¹⁵⁵ California also has a history of setting appliance efficiency standards (for those products not subject to preemption) pursuant to a process that is shorter and more efficient than the DOE process because “it includes less analysis, shorter comment periods, and ultimately a

2. Expanded Sunset Provisions

Another possible approach is to expand existing statutory sunset provisions in federal appliance efficiency legislation. Generally speaking, a sunset provision sets a termination date for a particular standard or law and is designed to “shift the burden of proof onto those seeking its extension.”¹⁵⁶ Thus, the threat of termination is designed to give agencies an extra incentive to analyze and update their regulations because there are more severe consequences that flow from the failure to do so.¹⁵⁷ Sunset provisions have been the subject of extensive scholarly, media, and political coverage in recent years due to the Bush Administration’s use of such provisions in controversial tax and privacy bills.¹⁵⁸ In the appliance efficiency realm, under EPACT 1992 (which set national standards for water use in toilets, faucets, and showerheads) and EISA 2007 (which set national standards for metal halide lamp fixtures) if DOE fails to set the required standards, the sunset provisions result in an automatic waiver of federal preemption for those products.¹⁵⁹ For instance, under EPACT 1992, if DOE fails to update efficiency standards for covered “water use” products over a period of five years, the federal preemption provision under 42 U.S.C. § 6297(c) is waived.¹⁶⁰ Such a failure has already occurred and Texas and California have subsequently implemented their own stricter standards for those products.¹⁶¹ The sunset provision in EISA 2007 regarding lamp fixtures is slightly different, in that if DOE fails to issue final rules containing revised standards by the congressional deadline, the preemption waiver expires six months later but only for California.¹⁶²

According to the Government Accountability Office, DOE delays in rulemaking will cost at least \$28 billion in forgone energy savings by 2030.¹⁶³ Regardless of whether the fault lies with DOE or with unreasonable expectations by Congress and energy efficiency advocates, these costs highlight the need for alternative methods of establishing efficiency standards. If

final decision by a five-member Board without going through a lengthy political decision-making process.” Nadel, *supra* note 95, at 182.

¹⁵⁶ Chris Mooney, *A Short History of Sunsets*, LEGAL AFF., Jan./Feb. 2004, at 67, 67–68.

¹⁵⁷ *Id.*

¹⁵⁸ See, e.g., Susan N. Herman, *The USA Patriot Act and the Submajoritarian Fourth Amendment*, 41 HARV. C.R.-C.L. L. REV. 67 (2006) (discussing the sunset provisions in the USA Patriot Act); Rebecca M. Kysar, *The Sun Also Rises: The Political Economy of Sunset Provisions in the Tax Code*, 40 GA. L. REV. 335 (2006); Mike Nichols, *Sunset Provision Brightens Patriot Act*, MILWAUKEE J. SENTINEL, Oct. 3, 2001, at B1.

¹⁵⁹ See 42 U.S.C. § 6295(j)(3)(C), (k)(3)(C) (2006); 42 U.S.C. § 6297(c)(9)(A) (Supp. I 2007).

¹⁶⁰ 42 U.S.C. § 6295(j)(3)(C) (2006) (stating that DOE must issue a final rule waiving such preemption standards).

¹⁶¹ See, e.g., CAL. HEALTH & SAFETY CODE §§ 17921.3(b), 17921.3(g)(2)(A)–(B) (Decring 2010); H.B. 2667, 79th Leg. Sess. (Tex. 2009) (signed into law on June 19, 2009); *Texas Joins California as First States to Require High Efficiency Toilets*, GREEN LODGING NEWS, Aug. 4, 2009, <http://www.greenlodgingnews.com/Content.aspx?id=3721>.

¹⁶² See 42 U.S.C. § 6297(c)(9)(A) (Supp. I. 2007).

¹⁶³ See U.S. GOV’T ACCOUNTABILITY OFFICE, *supra* note 91, at 11.

the federal preemption provisions were allowed to sunset for a wider range of appliances in response to DOE inaction, the savings would likely be significant. Such an approach would allow greater state authority in setting appliance efficiency standards, but only where DOE has already failed to comply with its statutory mandate. This would also encourage industry to work with DOE to avoid delays in rulemaking which, on its own, would significantly improve appliance efficiency.

3. A “Technology Ratchet/Top Runner” Approach

Another option is to adopt a system similar to that in Japan and Australia where, instead of using a “technical/economic” balancing test as required under EPCA, standards are set based on the highest level of efficiency achieved in the market to date. For instance, in 1999 Japan introduced a new philosophy toward appliance efficiency standards. While the old law had set standards based on the average efficiency of the product, the new law is set based on the highest efficiency product (the “top runner”) on the market in each product category, and takes effect several years later.¹⁶⁴ Thus, each manufacturer has an incentive to be the “top runner” as it then has an edge in the market because it is the first to meet the new standards. In Australia, states, rather than the federal government, set appliance efficiency standards, and many states now set modest initial standards but then revise them “based on the most stringent standards in use among [their] trading partners.”¹⁶⁵ This results in a “best in the world” standard.¹⁶⁶ Each of these approaches uses market leaders to help set an aggressive standard and then codifies those standards in regulations to ensure the rest of the industry follows suit, leading to higher standards across the board. This approach avoids the lengthy rulemaking processes that have plagued DOE over the years: complicated and data-intensive technical/economic balancing processes and political reviews that culminate in a standard industry leaders have already achieved, while still giving lagging manufacturers a number of years to catch up.

This “ratchet” approach could be implemented at the federal level, or Congress could create a structure where states could seek a DOE waiver (with more relaxed review) based on a market-driven approach. The legislation could provide that only one standard stricter than the federal standard could be in place at one time, once again avoiding the fifty-state patchwork of regulation. Allowing states to take the lead in this area would allow more innovation among states and more competition for stronger standards, but that competition would be grounded in what industry leaders have already achieved.

¹⁶⁴ See Nadel, *supra* note 95, at 163. These new standards take effect four to eleven years after adoption, depending on the product. *Id.*

¹⁶⁵ *Id.* at 164.

¹⁶⁶ *Id.* at 185.

4. A Non-Uniform Approach

The approaches outlined above all build off the implicit assumption that allowing states to set individual appliance efficiency standards will result in an unworkable fifty-state patchwork of regulation. Indeed, most of the approaches discussed so far result in a maximum of two standards. However, it is important to question whether individual state standards are really a problem in the context of appliance efficiency regulation.

Significantly, while industry often cites to consumer cost as being the limiting factor in improving appliance efficiency standards, studies tend to show that when industry increases appliance efficiency standards, costs do not go up significantly and in fact go up far less than generally predicted in DOE or industry advance estimates. For instance, average retail price did not change following the 1990 refrigerator efficiency standard while the price decreased fourteen percent following the 1993 standard.¹⁶⁷ Experts have concluded that price increases have not occurred because energy efficiency improvements are often coupled with cost reductions, quality improvements, and new features based on improvements in technology and market demands.¹⁶⁸ Requiring a redesign to achieve energy efficiency often provides an "extra impetus" for manufacturers to achieve these other cost reductions.¹⁶⁹

Thus, perhaps a situation where states compete for the highest standard against a backdrop of federal floor preemption will not produce the adverse impacts industry fears. This raises the broader question of whether there are certain criteria that can be developed to determine the circumstances under which it is preferable to allow states more leeway in regulating nationwide products and the circumstances under which ceiling preemption is preferable. Some factors to consider are as follows:

(1) Are there concerns regarding states acting in a protectionist manner at the expense of out-of-state industry?

(2) Will state regulation result in the product manufacturer being forced to create individualized products for each state, or can the manufacturer create a single product designed to comply with the strictest state standard and thus necessarily meet the standards of all other states?

(3) Will regulation by one state stifle rather than encourage innovation on a nationwide basis because of the influence a single state's regulation will have on the regulated party's activities in the rest of the country?

¹⁶⁷ See *id.* at 172-73 (citing studies).

¹⁶⁸ *Id.* at 173.

¹⁶⁹ *Id.*

(4) Will state-by-state regulation produce outcomes that are against the policy preferences of some states, or will all states see their policy preferences vindicated?

Applying these factors to the regulation of appliance efficiency standards demonstrates the benefit of additional state authority. First, there do not appear to be any obvious economic protectionist motives at work in setting appliance efficiency standards. Appliance manufacturers historically have not been concentrated in particular states (such as the auto industry in Michigan), and states have been motivated thus far to enact regulations based on efforts to achieve state energy efficiency goals or GHG reduction goals, not protecting local manufacturers. Moreover, stricter appliance efficiency regulations affect all manufacturers of that appliance equally and do not result in benefits for manufacturers in one state or another except to the extent one state's manufacturers are already producing more energy efficient products.

Second, allowing states to impose stricter appliance efficiency standards will generally allow manufacturers to comply with all state standards so long as they comply with the strictest state's standard, and will not necessarily result in separately designed products for each state. A helpful counterexample to this point is the federal preemption of state pesticide labeling requirements (one of the few examples of express preemption in environmental law). Under the federal pesticide law, Congress has expressly preempted state regulations governing the *labeling* of pesticides, instead placing authority for labeling within the exclusive control of EPA.¹⁷⁰ By contrast, states may impose additional requirements relating to the *sale or use* of pesticides.¹⁷¹ This distinction is significant. To allow states to impose different labeling requirements for pesticides or other similar products would mean that it would be impossible to design a single product to be distributed in multiple states. One state may require a particular phrasing for warnings or instructions while another state may require another type of phrasing. When states place limits on the sale or use of the product, however, the only question is whether the product can be sold or used in the state at all — the limits do not require the redesign of the product.

Appliance efficiency standards are arguably more like the regulation of product sale and use than they are like the regulation of product labeling. If there are different state efficiency standards in place, a manufacturer can distribute its product in all fifty states so long as it can comply with the strictest standard among the states.

¹⁷⁰ 7 U.S.C. § 136v(b) (2006) (providing that a state “shall not impose or continue in effect any requirement for labeling or packaging in addition to or different from those required under this subchapter”).

¹⁷¹ See *Nat'l Bank of Commerce v. Dow Chem. Co.*, 165 F.3d 602, 608 (8th Cir. 1999); Alexandra B. Klass, *Pesticides, Children's Health Policy and Common Law Tort Claims*, 7 MINN. J.L. SCI. & TECH. 89, 95 (2005).

Third, granting states more regulatory authority in this area is likely to encourage rather than stifle innovation in appliance efficiency. Currently, because DOE sets the standards, and often does so slowly, there is little reason for manufacturers to innovate in order to be a "top runner" for their product as it gives them no competitive advantage. If, on the other hand, states were able to set more aggressive efficiency standards, manufacturers would compete to meet and exceed those standards, knowing that even stricter standards were on the horizon.

Fourth, appliance efficiency standards are not generally "hot button" issues that generate significant policy disputes among the states. There is general agreement among state and federal policymakers that appliances should be more efficient;¹⁷² the only disagreements come in determining the aggressiveness of the schedule for such improvements based on technological feasibility and cost. Thus, the state with the most aggressive legislation will simply accelerate the achievement of policy goals most lawmakers already embrace. So long as each state's efforts are subject to DOE review through a more relaxed waiver process than exists today, there will always be some federal check to ensure the most aggressive state law will not put product manufacturers out of business or render appliances outside the economic reach of consumers.

In contrast, scholars have argued that the federal government should exclusively regulate the use of spyware and other Internet activities due to substantial policy differences among the states. They argue that current state regulation of Internet activities through consumer protection laws creates "an environment in which prudent Internet-related businesses must conform to every state unfair competition law, producing in effect a national policy based on the standards of the most restrictive state."¹⁷³ In this area, unlike appliance efficiency, there may be significant disagreement among states on the desirable level of Internet regulation: some may favor restricting spyware at all costs, while others may wish to encourage Internet advertising. Allowing one state to set a restrictive standard hinders Internet activity in all states, thus imposing externalities on other states and stifling innovation.¹⁷⁴

¹⁷² Indeed, energy efficiency legislation is generally subject to bipartisan support because even if some federal or state lawmakers question the seriousness of climate change and the need to reduce GHG emissions, virtually all lawmakers believe it is a good idea to conserve energy and reduce dependence on foreign energy sources. See News Release, Alliance to Save Energy, Alliance Praises Bipartisan Senate Energy Bill for Strengthening Building Energy Codes, Increasing Industrial Energy Efficiency (June 17, 2009), available at <http://ase.org/content/news/detail/5702>.

¹⁷³ See Peter S. Menell, *Regulating "Spyware": The Limitations of State "Laboratories" and the Case for Federal Preemption of State Unfair Competition Laws*, 20 BERKELEY TECH. L.J. 1363, 1372 (2005); see also Dan L. Burk, *Federalism in Cyberspace*, 28 CONN. L. REV. 1095 (1996) (arguing against state regulation of the Internet because its effects will spill over state borders and may negatively impact "the growth and productivity of the network").

¹⁷⁴ See Menell, *supra* note 173, at 1373 ("Heterogeneity among jurisdictions in terms of geography, demographics, economic infrastructure, and social values may well favor non-uniform policies attuned to local characteristics.").

Another example that stands in contrast with the regulation of appliance efficiency is the state adoption of textbooks. Currently, there is virtually no federal involvement in textbook adoption, which has resulted in the populous states of Texas and California unduly influencing the content of textbooks across the country. After California, Texas is the biggest buyer of textbooks in the country, accounting for nearly ten percent of the national market.¹⁷⁵ Because a statewide board chooses textbooks for the entire state (rather than leaving those decisions to local school districts as is done in most other states), if the board rejects a textbook because of alleged “bias” or because of positions on controversial issues such as evolution, textbook publishers respond. As a result, what is adopted in Texas is, as a practical matter, “what the rest of the country gets.”¹⁷⁶ Thus, Texas and California’s domination of the market results in de facto regulation that stifles innovation and creativity in textbooks. While this problem is not likely to result in federal regulation in this area anytime soon — Congress would undoubtedly like to avoid involving itself in textbook culture wars — it illustrates the problem of a single state’s domination in a particular market.

Thus, while there may be good reasons to create a single, federal standard in situations where there are concerns regarding economic protectionism, product innovation, conflicting state standards, or policy disputes among states, those concerns do not appear to be present in the area of appliance efficiency. Accordingly, policymakers should at least consider alternatives to the current approach used to regulate appliance efficiency standards. As shown above, modern principles of federalism, along with existing problems in the current framework for setting appliance efficiency standards, support a new approach to this area of regulation.

VI. CONCLUSION

This Article considers whether it is time to revisit the default assumption that the federal government should primarily control standards for nationwide products. In a world of “dual federalism,” with separate spheres of interest for state and federal regulation, perhaps that made sense. Today, however, there are many necessary, positive redundancies between state and federal regulatory authority, particularly in the areas of public health, safety, and environmental protection. This interconnectedness is highlighted in the area of appliance efficiency in buildings, which touches upon one area that is inherently state and local in nature (buildings and land use) and another area that has been inherently federal for several decades (setting appliance efficiency standards). With greater attention placed on efforts to combat climate

¹⁷⁵ See Connie Sadowski, *Textbook Ruling Handed Down in Texas*, SCH. REFORM NEWS, Nov. 2006, at 10 (reporting that Texas’s standards are “pivotal” for the rest of the country); Alexander Stille, *Textbook Publishers Learn: Avoid Messing with Texas*, N.Y. TIMES, June 29, 2002, at A1.

¹⁷⁶ See Stille, *supra* note 175.

change and reduce energy demands, and with building efficiency targeted as one of the most effective ways to make progress in both areas, it is time to consider new models of federalism. The range of options discussed in this Article provides a roadmap for scholars and policymakers to consider different approaches to promote innovation, such as allowing certain states (like California) to be path-breakers, encouraging multi-state coalitions, promoting technological advancement through regulatory “ratchets,” and rejecting the idea of ceiling preemption altogether. Any of these options will create a system that better reflects modern principles of federalism and will take larger steps toward reducing both GHG emissions and national energy demands.