

# FURTIVE SUBSIDIES: REFRAMING FOSSIL FUEL’S REGULAOTRY EXCEPTIONALISM

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“*Furtive*: . . . done by stealth: surreptitious.”<sup>1</sup>

“*Subsidy*: . . . a grant by a government to a private person or company to assist an enterprise deemed advantageous to the public.”<sup>2</sup>

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## I. INTRODUCTION

The energy sector, and the fossil fuel industry in particular, has long enjoyed a kind of special solicitude under our nation’s most important environmental laws. This privileged status cuts across environmental media. Exemptions and other special provisions lighten the regulatory burden for fossil fuels in the context of clean air regulation, water resource protection, and solid waste disposal requirements.<sup>3</sup> Collectively, these various provisions exclude certain commercial and industrial activity from regulatory obligations across the fossil fuel life cycle. These

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<sup>1</sup> MERRIAM WEBSTER’S COLLEGIATE DICTIONARY 473 (10th ed. 2001).

<sup>2</sup> *Id.* at 1170.

<sup>3</sup> Several critical regulatory exceptions are specifically identified below. *See infra* notes 4–13 and accompanying text. Part III of this Article includes a detailed discussion of two such exclusions, under the Clean Air Act’s hazardous air pollutant program and the Resource Conservation and Recovery Act (“RCRA”). *See infra* Part III.

exemptions sanction the externalization of certain environmental costs; that is to say, they often operate to shift a portion of the true costs of the industrial activity from the commercial actor onto an unsuspecting public (often onto specific and identifiable communities). Accordingly, such regulatory exclusions should be viewed as a special and distinct class of industry subsidy—one which, because of its potentiality for mischief and its inconsistency with well-established ethical principles, should be viewed as inherently suspect and subject to special scrutiny.

Among some of the most significant exclusions, exemptions, and special conditions for fossil fuels are:

- The initial (and ongoing) exclusion of fossil fuel fired electric generating units (“EGUs”) from the Clean Air Act’s (“CAA”) provisions targeting hazardous air pollutant (“HAP”) emissions.<sup>4</sup>
- The special treatment with regard to the aggregation of HAP emissions from oil and gas exploration and production activities under the Clean Air Act’s definition of a “major source.”<sup>5</sup>

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<sup>4</sup> See Clean Air Act of 1963 § 112(n)(1), 40 C.F.R. § 7412(n)(1) (2015). As discussed at length in Part III of this Article, EPA recently promulgated regulations that would function to pull EGUs within the regulatory scope of § 112. However, EPA’s rule was successfully challenged, see *Michigan v. EPA*, 135 S. Ct. 2699 (2015), and sources are not yet obliged to control emissions under CAA § 112. Thus, as a result of the sector-specific statutory exclusion embodied in § 112(n), the utility sector has enjoyed two decades of special treatment under a clean air program that applies to virtually every other industry sector. See generally National Emission Standards for Hazardous Air Pollutants from Coal- and Oil-Fired Electric Utility Steam Generating Units and Standards of Performance for Fossil-Fuel-Fired Electric Utility, Industrial-Commercial- Institutional, and Small Industrial- Commercial-Institutional Steam Generating Units, 77 Fed. Reg. 9304 (Feb. 16, 2012) [hereinafter “2012 EGU MACT Rule”].

<sup>5</sup> CAA § 112(n)(4), 40 C.F.R. § 7412(n)(4) (2015). Under § 112, the EPA sets uniform federal emission standards for major sources of HAPs on a source category by source category basis. See Clean Air Act §§ 112(c)(1), (d)(1)–(3), 40 C.F.R. §§ 7412(c)(1), (d)(1)–(3). Individual sources are only subject to the standards, however, if they qualify as “major sources;” that is, if they emit at least ten tons per year of any individual HAP or twenty-five tons per year of any combination of HAPs. CAA § 112(a)(1). Ordinarily, for purposes of calculating tons per year of emissions, EPA looks at all buildings, structures, facilities, or installations (or groups of such sources) that are “located within a contiguous area and under common control,” thus *aggregating* the emissions from multiple individual emission units to determine major source status. *Id.* For oil and gas facilities, however, the statute states:

Notwithstanding the provisions of subsection (a) of this section, emissions from any oil or gas exploration or production well (with its associated equipment) and emissions from any pipeline compressor or pump station shall not be aggregated with emissions from other similar units, whether or not such units are in a contiguous area or under common control, to determine whether such units or stations are major sources, and in the case of any oil or gas exploration or production well (with its associated equipment), such emissions shall not be aggregated for any purpose under this section.

CAA § 112(n)(4)(A), 42 U.S.C.A. § 7412(n)(4)(A) (2015). See also, Steven H. Lord Jr., *Aggregation Consternation: Clean Air Act Source Determination Issues in the Oil & Gas Patch*, 29 PACE ENVTL. L. REV. 645 (2012). The Act also prevents EPA from regulating smaller oil and

- The initial exclusion of wastes from oil fields and the combustion of coal (referred to herein as “coal ash”) from the regulatory provision of the Resource Conservation and Recovery Act (“RCRA”), the federal statute addressing the management and disposal of hazardous and non-hazardous solid waste.<sup>6</sup>
- The exemption for natural gas drilling and extraction from the Safe Drinking Water Act’s Underground Injection Control (“UIC”) program.<sup>7</sup>
- The exclusion of oil and gas exploration and extraction from the Emergency Planning and Community Right-to-Know Act (“EPCRA”), including the Toxics Release Inventory (“TRI”) reporting obligations.<sup>8</sup>

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gas sources (so called “area sources”) as it has the authority to do for other industries. CAA § 112(n)(4)(B).

<sup>6</sup> RCRA §§ 3001(b)(2), (b)(3), 40 U.S.C. §§ 6721(b)(2), (b)(3) (the latter section is often referred to as the “Bevill Amendment”). The EPA has codified these exemptions at 40 C.F.R. § 261.4(b)(7). *See also*, U.S. ENVIRONMENTAL PROTECTION AGENCY, EXEMPTION OF OIL AND GAS EXPLORATION AND PRODUCTION WASTES FROM FEDERAL HAZARDOUS WASTE REGULATIONS (2002).

<sup>7</sup> 42 U.S.C. § 300h(d)(1)(B) (The exclusion provides: “The term ‘underground injection’ . . . excludes . . . the underground injection of fluids or propping agents (other than diesel fuel) pursuant to hydraulic fracturing operations related to oil, gas, or geothermal production activities.”). This is often referred to as the “Halliburton Loophole” because it was adopted during the tenure of former Vice President Dick Cheney, who had served earlier as CEO of Halliburton, the company that invented hydraulic fracturing. *See also* William J. Brady & James P. Crannell, *Hydraulic Fracturing Regulation in the United States: The Laissez-Faire Approach of the Federal Government and Varying State Regulations*, 14 VT. J. ENVTL. L. 39 (2012). The underground injection control (“UIC”) program is the regulatory instrument that seeks to prevent the underground injection of hazardous chemicals, in connection with industrial activity and waste disposal, from contaminating sources of underground and surface drinking water. “To protect . . . drinking water, Congress directed EPA to promulgate regulations governing the adoption of state-enforced UIC programs. As a part of these regulations, EPA was directed to establish minimum requirements that must be adopted and implemented by all EPA approved UIC programs.” *W. Nebraska Res. Council v. E.P.A.*, 793 F.2d 194, 195 (8th Cir. 1986) (citations omitted).

<sup>8</sup> By virtue of § 313(b)(1), oil and gas facilities are not subject to the toxic chemical release reporting requirements of EPCRA. *See* 42 U.S.C. §§ 11023(a)–(b) (1988). *See also* *Am. Chemistry Council v. Johnson*, 406 F.3d 738, 739 (D.C. Cir. 2005) (“[EPCRA] was intended to provide communities with information on potential chemical hazards within their boundaries and to facilitate awareness and planning for accidental releases. The Act establishes state emergency response commissions and local emergency planning committees, and requires certain facilities that manufacture, process, or use chemicals on the TRI to provide an estimate of the amount of the chemical present at the facility and the annual quantity of the chemical entering the environment. Such facilities report this information to EPA, which then makes the information available to the public.”) (citations and internal quotations omitted); Peter R. Nadel & Duane Woodard, *Environmental Audits—Can What You (Don’t) Know Hurt You?*, 39 ROCKY MT. MIN. L. INST. 6, n.27 (1993) (explaining that the TRI “requirements apply only to facilities in Standard Industrial Code Categories 20–39, whereas mining and oil and gas facilities fall into categories 10–14,” and noting that “the EPA Administrator has discretion to extend the requirements of § 313 to any particular facility if warranted by a variety of factors”). Without the information provided by the

- The exemption from the Clean Water Act (“CWA”) National Pollution Discharge Elimination System (“NPDES”) permitting program for storm water runoff from mining operations and oil and gas exploration, production, processing, or treatment. In addition, certain regulatory actions by Environmental Protection Agency (“EPA”) and the Army Corp of Engineers have significantly undermined the effectiveness of the CWA protections as they relate to mining activities, including surface coal mining.<sup>9</sup>
- The exclusion of natural gas and petroleum from the definition of “hazardous substance” under the Comprehensive Environmental Response, Compensation, and Liability Act (“CERCLA” or “Superfund”).<sup>10</sup>
- Modifications to NEPA adopted as part of the Energy Policy Act of 2005 that allow the Bureau of Land Management (“BLM”) to use “categorical exclusions” to avoid robust analyses of the environmental impacts of oil and gas activities on Federal Lands.<sup>11</sup>

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TRI provisions, communities do not know what toxic chemicals may be present in their environment, and are less able to plan appropriately for accidental releases.

<sup>9</sup> These actions include an Army Corps of Engineers interpretation of the CWA that allows for the creation of “waste treatment systems” in waterways, effectively allowing mining operations to use mountain streams as waste disposal facilities. *See* *Ohio Valley Env'tl. Coal. v. Aracoma Coal Co.*, 556 F.3d 177, 209 (4th Cir. 2009) (“We conclude that stream segments, together with the sediment ponds to which they connect, are unitary ‘waste treatment systems,’ not ‘waters of the United States,’ and that the Corps’ has not exceeded its § 404 authority in permitting them.”). This also includes the regulatory redefinition of “fill material” under the CWA, which allows EPA and the Army Corps to treat the mining “overburden” (the waste material left over from surface coal mining) as “fill” (subject to permitting under § 404 of the Act) rather than as “waste” (subject to the more stringent CWA § 402 permitting requirements). *See* *Final Revisions to the Clean Water Act Regulatory Definitions of “Fill Material” and “Discharge of Fill Material,”* 67 Fed. Reg. 31129 (May 9, 2002); *Kentuckians for Commonwealth Inc. v. Rivenburgh*, 317 F.3d 425, 432 (4th Cir. 2003).

<sup>10</sup> 42 U.S.C. § 9601(14) (“The term [hazardous substance] does not include petroleum, including crude oil or any fraction thereof which is not otherwise specifically listed or designated as a hazardous substance . . . and the term does not include natural gas or synthetic gas usable for fuel (or mixtures of natural gas and such synthetic gas.”).

<sup>11</sup> Energy Policy Act of 2005, § 390, Pub. L. No. 109–58, 42 U.S.C.A. §15942 (Aug. 8, 2005). The section provides:

(a) NEPA REVIEW—Action by the Secretary of the Interior in managing the public lands, or the Secretary of Agriculture in managing National Forest System Lands, with respect to any of the activities described in subsection (b) shall be subject to a *rebuttable presumption that the use of a categorical exclusion under the National Environmental Policy Act of 1969 (NEPA) would apply* if the activity is conducted pursuant to the Mineral Leasing Act for the purpose of exploration or development of oil or gas.

(b) ACTIVITIES DESCRIBED—The activities referred to in subsection (a) are the following:

- The limited application of NEPA to mountain top removal mining.<sup>12</sup>

The legislative origins of these exemptions are, not surprisingly, shrouded to some degree by the vagaries of the inside-the-beltway lawmaking process. It is evident, however, that helping commercial interests obtain special treatment in Washington is a practice area awash in money.<sup>13</sup> According to the Center for Responsive Politics, the oil and gas, and electric utilities industries paid more than \$248 million for

(1) Individual surface disturbances of less than 5 acres so long as the total surface disturbance on the lease is not greater than 150 acres and site-specific analysis in a document prepared pursuant to NEPA has been previously completed.

(2) Drilling an oil or gas well at a location or well pad site at which drilling has occurred previously within 5 years prior to the date of spudding the well.

(3) Drilling an oil or gas well within a developed field for which an approved land use plan or any environmental document prepared pursuant to NEPA analyzed such drilling as a reasonably foreseeable activity, so long as such plan or document was approved within 5 years prior to the date of spudding the well.

(4) Placement of a pipeline in an approved right-of-way corridor, so long as the corridor was approved within 5 years prior to the date of placement of the pipeline.

(5) Maintenance of a minor activity, other than any construction or major renovation or a building or facility.

*Id.* NEPA is intended to foster better decision-making and facilitate informed public participation with respect to actions affecting peoples' environment. *See Idaho Sporting Cong. v. Thomas*, 137 F.3d 1146, 1149 (9th Cir. 1998) *overruled by* *The Lands Council v. McNair*, 537 F.3d 981 (9th Cir. 2008) ("NEPA imposes a procedural requirement that an agency must contemplate the environmental impacts of its actions. NEPA 'ensures that the agency . . . will have available, and will carefully consider, detailed information concerning significant environmental impacts; it also guarantees that the relevant information will be made available to the larger [public] audience.'") (quoting *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349 (1989)). This statutory provision effectively shifts the burden of proving environmental safety away from industry with respect to oil and gas development. *See also* U.S. GENERAL ACCOUNTING OFFICE, ENERGY POLICY ACT OF 2005: BLM'S USE OF SECTION 390 CATEGORICAL EXCLUSIONS FOR OIL AND GAS DEVELOPMENT, <http://www.gao.gov/products/GAO-11-941T>.

<sup>12</sup> The federal action that typically triggers NEPA for mountain top removal projects is the Army Corps' issuance of a CWA § 404 permit for the discharge of "fill material" into waters of the United States. *See generally Ohio Valley Env'tl. Coal. v. Aracoma Coal Co.*, 556 F.3d 177. Despite the fact that issuance of a permit will enable the creation of an entire valley fill, with numerous attendant environmental consequences, the Corps limits its NEPA analysis only to those environmental effects that occur within the bed and banks of any filled waterway, thus ignoring the vast majority of the environmental consequences that flow directly from creation of a valley fill. *Id.* at 194 ("The specific activity that the Corps is permitting when it issues a § 404 permit is nothing more than the filling of jurisdictional waters for the purpose of creating an underdrain system for the larger valley fill.").

<sup>13</sup> One analysis shows that the top twenty lobbying firms in Washington, D.C. spent more than \$400 million lobbying dollars in 2015. *Top Lobbying Firms 2015*, CENTER FOR RESPONSIVE POLITICS OPEN SECRETS.ORG, <http://www.opensecrets.org/lobby/top.php?showYear=2016&indexType=s>. The Center for Responsive Politics calculates total lobbying in 2015 at about \$3.22 billion. *Id.*

lobbying in 2015, placing fossil fuel interests among Washington's biggest spenders.<sup>14</sup>

As illustrated by the above list of fossil fuel exemptions, successful lobbying efforts can dramatically influence the nature and scope of our regulatory system. Unsurprisingly, provisions such as these can be incredibly valuable for their industry beneficiaries.<sup>15</sup> In most instances, however, these industry benefits are accompanied by environmental and public health consequences.<sup>16</sup> The costs associated with these consequences are largely borne by the communities exposed to pollution; costs that the industrial actor responsible would, in the absence of the special regulatory status, have to control, remediate, or avoid. These costs are also borne by local jurisdictions that provide safety net services to members of receptor communities, who require such services as a result of their exposure to industrial pollutants. And by taxpayers in general through social welfare programs such as Medicaid and the Supplemental Nutrition Assistance Program ("SNAP").<sup>17</sup>

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<sup>14</sup> *Top Industries 2015*, CENTER FOR RESPONSIVE POLITICS OPEN SECRETS.ORG, <http://www.opensecrets.org/lobby/top.php?indexType=i&showYear=2015>. The energy and natural resources sector more generally (including utilities, oil and gas, mining, miscellaneous energy, environmental services, waste management, and fisheries and wildlife) ranks among the top five sectors for lobbying dollars (spending more than \$328 million in 2015). *Ranked Sectors 2015*, CENTER FOR RESPONSIVE POLITICS OPEN SECRETS.ORG, <http://www.opensecrets.org/lobby/top.php?indexType=c&showYear=2015>.

<sup>15</sup> See *infra* Part III (further discussing the value and costs of furtive subsidies). For example, EPA estimated that compliance with the 2012 final rule setting hazardous air pollutant standards for coal and oil fired electric generating units ("EGUs"), after nearly twenty years of exemption under CAA § 112(n), would cost the industry approximately \$9.6 billion dollars annually. See 2012 EGU MACT Rule, *supra* note 4, at 3505–06 (EPA provides cost estimates in 2007 dollars). At that rate, assuming consistency over time, the twenty-year regulatory exemption might be roughly valued at more than \$190 billion to the industry.

<sup>16</sup> See *infra* Part III (discussing EPA's analysis of benefits from regulating formerly exempt activities of the fossil fuel industry, including, according to EPA's numbers, benefits to society of \$37 to \$90 billion per year in connection with regulating EGUs under CAA § 112, which might be roughly valued at between \$740 billion and \$1.8 trillion over the twenty years of the regulatory exclusion).

<sup>17</sup> See generally Paul R. Epstein et al., *Full Cost of Accounting for the Life Cycle of Coal*, ANN. N.Y. ACAD. SCI. 1219 (2011) (monetizing the externalized life cycle costs of coal, which society absorbs as increased public health costs, fatalities, lost productivity, and reduced property values, among other things). The costs imposed on the communities injured the Kingston Fossil Plant's coal ash impoundment failure in other furtive subsidies have garnered recent attention in the mainstream media. For example, some box stores and fast-food chains have been criticized for paying workers unlivable wages, and then referring those same workers to social welfare programs to make ends meet. See e.g., Barry Ritholtz, *How McDonalds and Wal-Mart Became Welfare Queens*, BLOOMBERG NEWS (Nov. 13, 2013), <http://www.bloomberg.com/news/2013-11-13/how-mcdonald-s-and-wal-mart-became-welfare-queens.html>. These situations are similar in that both constitute, in effect, a profit-making business model designed around a significant public subsidy that is not overtly acknowledged in public discourse or in policy-making discussions.

This Article argues that sector-specific exemptions from environmental laws are best characterized as a distinct class of industry subsidy.<sup>18</sup> Because such provisions are rarely described, discussed, valued or scrutinized as subsidies openly, this Article characterizes them as “*furtive subsidies*”—government grants to assist specific industries that reflect an undisclosed choice to allocate the cost of controllable pollution to bystanders and communities rather than to industrial polluters (or to some other group such as taxpayers generally or consumers of some particular good or service). Because the fossil fuel industry benefits considerably from such exemptions,<sup>19</sup> and because it has, in the aggregate, a profound and far-reaching impact on public health, the extension of such subsidies to this industry is of special significance. Nonetheless, there is scant evidence that policy-makers are inclined to even acknowledge the subsidizing effects of such exemptions, let alone confront the problematic economic, social, public health, and justice issues they necessarily raise.

As a matter of policy, exemptions for the fossil fuel industry are typically adopted and persist, by and large, based on economic considerations that attend almost exclusively to burdens on the industry itself, without reference to, or meaningful exploration of, the costs imposed on communities and the general public.<sup>20</sup> Nor is such special treatment typically based on compelling arguments that the activities of the fossil fuel sector are categorically less harmful than are the activities of other industrial sectors.<sup>21</sup> Second tier justifications tend to focus on the social value of the energy sector—for example, the broad social benefits of inexpensive and reliable electricity supplies—and potential impacts on U.S. global competitiveness.<sup>22</sup> The rationale looks something like this:

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<sup>18</sup> NORMAN MYERS & JENNIFER KENT, *PERVERSE SUBSIDIES: TAX \$\$ UNDERCUTTING OUR ECONOMIES AND ENVIRONMENTS ALIKE* 2–3 (1998), [http://dieoff.org/\\_Economics/perverse\\_subsidies.pdf](http://dieoff.org/_Economics/perverse_subsidies.pdf) [hereinafter *PERVERSE SUBSIDIES*] (“A subsidy is a form of government support to an economic sector (or institution, business, individual), generally with the aim of promoting an activity that the government considers beneficial to the economy and to society at large . . . . Alternatively defined, a subsidy amounts to any government expenditure that makes a resource such as energy or water cheaper to produce than its full economic cost, or makes a product . . . cheaper to consumers.”).

<sup>19</sup> See Doug Koplow and John Dernbach, *Federal Fossil Fuel Subsidies and Greenhouse Gas Emissions: A Case Study of Increasing Transparency for Fiscal Policy*, 26 ANN. REV. ENERGY & ENV'T. 361, 365 (2001). See also, *infra* Part III.

<sup>20</sup> See *PERVERSE SUBSIDIES*, *supra* note 18, at 7–9, 14–24.

<sup>21</sup> Evidence merely raising some uncertainty is often sufficient for policy makers to effectively dismiss the potential for harmful (and costly) impacts on affected communities. See *infra* Part III.

<sup>22</sup> See, e.g., EPA'S RESPONSES TO PUBLIC COMMENTS ON EPA'S NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FROM COAL- AND OIL-FIRED ELECTRIC UTILITY STEAM GENERATING UNITS 352, 445, 452 (Vol. 1, U.S. EPA Dec. 2011) [hereinafter “EGU MACT RESPONSE TO COMMENTS”] (Discussing comments on EPA's proposed EGU MACT Rule

Our industry is already subject to a multitude of regulatory programs that impose a significant cumulative economic burden. Additional costs associated with environmental regulations would dramatically increase our cost of production, and would injure the economic health of the industry as a whole (and perhaps the entire U.S. economy). Moreover, in the face of such costs, the reliability of the services that we provide may be compromised, with unintended consequences for social wellbeing. In addition, requiring our industry to shoulder a burden of this magnitude would increase costs and decrease the competitiveness of U.S. industry in the global marketplace, giving foreign market participants a distinct competitive advantage.<sup>23</sup>

While the veracity of such claims is not the focal point of this Article, there are strong reasons to doubt the extent to which environmental and human health protections seriously limit either the health of the national economy or the competitiveness of U.S. industry in the international marketplace. EPA, for example, issued a 2011 report on the overall benefits and costs of major Clean Air Act programs from 1990 to 2020, and concluded that “[t]he direct benefits of the 1990 Clean Air Act Amendments and associated programs significantly exceed their direct

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suggesting that regulation would “deter investors, which will shrink the Indiana coal industry market, increase prices and jeopardize the country’s electricity reliability . . . that installation of costly control technology on [certain regulated] units to comply with the EGU MACT for the relatively short time frame before retirement would . . . represent significant economic inefficiency,” and that the rule would cause auto manufacturers to “consider expanding their operations elsewhere (and perhaps overseas rather than elsewhere in the U.S.).” See also Richard J. King, *Trade and the Environment: European Lessons for North America*, 14 UCLA J ENVTL. L. & POL’Y 209, 222 (1996) (observing that in the international context “[i]ndustrialists are concerned that the costs of more stringent environmental regulations make them uncompetitive in relation to foreign firms not held to the same standards”); Richard B. Stewart, *Environmental Regulation and International Competitiveness*, 102 YALE L.J. 2039, 2046 (1993); 126 Cong. Rec. H. 1086–1118 (Feb. 20, 1980) (congressional testimony from Rep. Beville on why excluding coal ash from regulation under RCRA was necessary in order to “encourage development of coal as a primary domestic source of energy” to help reduce reliance on foreign oil).

<sup>23</sup> See, e.g., EGU MACT RESPONSE TO COMMENTS, *supra* note 22, at 247 (one commenter arguing that EPA’s EGU MACT Rule “will cause irreparable harm to the nation’s economy and national security by increasing the cost of energy in the U.S, negatively impacting the nation’s ability to compete in the international marketplace, and increasing unemployment”). See also THE TRUTH ABOUT EPA’S COSTLY CARBON REGULATIONS, AMERICAN COALITION FOR CLEAN COAL ELECTRICITY, <http://www.americaspower.org/nera/> (One coal industry association summarizing the fossil fuel sectors argument against EPA’s Clean Power Plan: “Low-cost, reliable electricity from coal powers households and businesses across America but regulations from the Environmental Protection Agency jeopardize our access to affordable power and will cause electricity prices to skyrocket. New analysis from NERA Economic Consulting reveals significant negative economic impacts resulting from EPA’s carbon emissions regulations, as the costs to comply with the plan could total nearly \$300 billion from 2022 to 2033. Consumers will ultimately foot the bill for these rising costs, which include double-digit electricity price increases in 41 states, with 28 states potentially facing peak year electricity price increases of at least 20 percent.”).



costs, which means economic welfare and quality of life for Americans were improved by passage of the 1990 Amendments and implementation of programs to meet their requirements,”<sup>24</sup> and that “[t]he broader economy is also improved overall by the 1990 Clean Air Act Amendments and related programs.”<sup>25</sup> Many scholars similarly question the validity of claims related to the adverse impact of national environmental regulation on international competitiveness.<sup>26</sup> For purposes of this Article, the significance of traditional industry objections to environmental regulation is that they focus almost exclusively on the financial hardship to the fossil fuel industry itself. Correspondingly, many regulatory exemptions, once adopted, operate to single out the fossil fuel industry, and allow participants in that industry sector alone to avoid the costs associated with environmental compliance that participants in other economic sectors must bear.<sup>27</sup>

Moreover, since Congress typically adopts underlying normative environmental standards based on an assessment that a particular pollutant, process, or activity is worthy of regulation to avoid its adverse impact on human health or other environmental values, any sector-specific exemption is likely to compromise (to some degree) the remedial objectives of the regulatory program,<sup>28</sup> and is certain to impose some

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<sup>24</sup> U.S. EPA, THE BENEFITS AND COSTS OF THE CLEAN AIR ACT FROM 1990 TO 2020: SUMMARY REPORT 27 (March 2011) <https://www.epa.gov/sites/production/files/2015-07/documents/summaryreport.pdf> [hereinafter “CAA BENEFITS AND COSTS SUMMARY REPORT”] (the full report is also available online, at [https://www.epa.gov/sites/production/files/2015-07/documents/fullreport\\_rev\\_a.pdf](https://www.epa.gov/sites/production/files/2015-07/documents/fullreport_rev_a.pdf)).

<sup>25</sup> *Id.* at 28. See also, James W. Coleman, *How Cheap Is Corp. Talk? Comparing Companies’ Comments on Regulations with Their Sec. Disclosures*, 40 HARV. ENVTL. L. REV. 47 (2016) (raising questions about the veracity of industry’s hardship claims in the face of environmental regulation based on contrary forecasts that they provide to shareholders, and a tendency for companies to “send inconsistent messages to their two audiences—warning regulators and reassuring investors”).

<sup>26</sup> See, e.g., Richard B. Stewart, *Environmental Regulation and International Competitiveness*, 102 YALE L.J. 2039, 2049 (1993) (“many economists doubt the dominant assumption that differences in national environmental measures have a significant impact on international competitiveness. They base this doubt on empirical studies that in most cases fail to find a strong correlation between the two variables.”) (citing Christopher J. Duerksen, *Environmental Regulation of Industrial Plant Siting: How to Make It Work Better*, 56 PACE ENVTL. L. REV. 297 (1983)). See also Patrick Low & Alexander Yeats, *Do “Dirty” Industries Migrate?*, in WORLD BANK DISCUSSION PAPERS: INTERNATIONAL TRADE AND THE ENVIRONMENT 89, 159 (Patrick Low ed., 1992); James A. Tobey, *The Effects of Domestic Environmental Policies on Patterns of World Trade: An Empirical Analysis*, 43:2 KYKLOS 191, 194 (1990).

<sup>27</sup> There are, of course, regulatory exemptions that target other sectors, especially including the agricultural sector. See, e.g., CWA § 404(f)(1), 33 U.S.C. § 1344(f)(1) (2015) (exempting various agricultural pollution sources from regulation under the Clean Water Act).

<sup>28</sup> See, e.g., CAA § 112(n)(4)(A), 42 U.S.C.A. § 7412(n)(4)(A) (excluding oil and gas facilities from the otherwise applicable rules for aggregating emissions when identifying “major sources” of hazardous air pollutants under § 112, with the result that fewer such sources are regulated under

(perhaps significant) costs on society.<sup>29</sup> Indeed, many scholars believe that “indirect and concealed subsidies” in the form of “the environmental costs of fossil fuels [on society] are at least equal to and possibly much greater than the more conventional and recognized [subsidy] costs.”<sup>30</sup> Where such environmental externalities are imposed as a result of a sector-specific regulatory exclusion, it is doubly important to expressly characterize the arrangement as a subsidy—and a special form of subsidy at that: one that is paid for by the communities who bear the burden of the impaired natural resource. These payments may be made in many forms, including (among others) illness and increased medical expenses, lost workdays, lost educational opportunity, and premature death.<sup>31</sup>

To be clear, it is not the intent of this Article to suggest that subsidies, as a general matter, are inappropriate.<sup>32</sup> Subsidies can take many forms, including but not limited to direct payments, tax credits, preferential rates, loans and loan guarantees, tax deductions, research and development programs, depletion allowances, accelerated depreciation, and risk insurance.<sup>33</sup> Throughout the history of the United States, subsidies of various kinds have played important roles in encouraging socially beneficial activities,<sup>34</sup> and the fossil fuel industry has a long

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this section of the Act). Section 112 has as its purpose the protection of the public from carcinogens, mutagens, neurotoxins, and reproductive toxins, as well as the avoidance of adverse environmental effects. See 42 U.S.C. § 7412(b)(2).

<sup>29</sup> See PERVERSE SUBSIDIES, *supra* note 18, at 55–56 (discussing the high cost of fossil fuel’s environmental externalities).

<sup>30</sup> *Id.*

<sup>31</sup> See, e.g., 2012 EGU MACT Rule, *supra* note 4, at 9305–06 (discussing the mortality and morbidity costs underlying the estimated benefits of the utility air toxics rule).

<sup>32</sup> Many have suggested, however, that subsidies are over-utilized in certain sectors of the economy where they are no longer either necessary or appropriate, and that the treatment of longstanding subsidies effectively as entitlements is harmful to society. See generally PERVERSE SUBSIDIES, *supra* note 18 (expressing a similar view and providing broad supporting analysis). See also Anthony Kammer, *Cornography: Perverse Incentives and the United States Corn Subsidy*, 8 J. FOOD L. & POL’Y 1, 2 (2012) (observing that “[t]he system of corn subsidies provides an instructive, if not nightmarish, example of the unintended consequences that legislated incentive structures can produce when not regularly reevaluated”); Dana Clark & David Downes, *What Price Biodiversity? Economic Incentives and Biodiversity Conversion in the United States*, 11 J. ENVTL. L. & LITIG. 9, 29 (1996) (noting that “[n]ot only do corporate subsidies drain the public treasury, but they often have negative impacts on biodiversity and other environmental assets”); Adrian McDonald, *Through the Looking Glass: Runaway Productions and “Hollywood Economics”*, 9 U. PA. J. LAB. & EMP. L. 879, 940 (2007) (observing that “corporate welfare-subsidies, tax incentives, and grants, [are] not . . . a left-right issue”).

<sup>33</sup> See PERVERSE SUBSIDIES, *supra* note 18, at 56; *Chapter 3: Subsidy Types*, in INTERNATIONAL INSTITUTE FOR SUSTAINABLE DEVELOPMENT, GLOBAL SUBSIDIES INITIATIVE, <https://www.iisd.org/gsi/subsidy-types> (identifying broad categories of subsidy type).

<sup>34</sup> See Tracey M. Roberts, *Picking Winners and Losers: A Structural Examination of Tax Subsidies to the Energy Industry*, 41 COLUM. J. ENVTL. L. 63, 69–74 (2016) [hereinafter “*Picking Winners and Losers*”] (discussing rationales for government intervention in energy markets).

history of receiving such monetary subsidies.<sup>35</sup> As a matter of principle, subsidies may be appropriate where the value of the activity to the public is great, where the social benefits would not accrue (or would be substantially diminished or delayed) in the absence of a subsidy, and where the detrimental effects of the activity or the subsidy itself are not unacceptable.<sup>36</sup> Other factors weighing on the appropriateness (or form) of subsidies may include the degree to which government already subsidizes an industry either directly or indirectly,<sup>37</sup> the availability of other more efficient or less harmful mechanisms to incentivize the desired public benefits, and distributional equity considerations related to the cost of the subsidy,<sup>38</sup> the types of burdens imposed by the subsidy, or the types of benefits to be derived.<sup>39</sup>

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<sup>35</sup> *Id.* at 74–94 (discussing the history of energy industry tax subsidies); *Long History of U.S. Energy Subsidies*, 89 CHEMICAL AND ENGINEERING NEWS (Dec. 19, 2011), <http://cen.acs.org/Articles/89/i51/Long-History-US-Energy-Subsidies.html> (such monetary subsidies may be appropriate or inappropriate—certainly, many have argued that they are often counterproductive). See also PERVERSE SUBSIDIES, *supra* note 18, at 55–61; THE IMPACT OF FOSSIL-FUEL SUBSIDIES ON RENEWABLE ELECTRICITY GENERATION 17–19, (International Institute for Sustainable Development, Global Subsidies Initiative 2014) (describing how fossil fuel subsidies discourage investment in renewables); Daniel A. Sumner, *Farm Subsidy Tradition and Modern Agricultural Realities*, at 3–9 (2006), [http://aic.ucdavis.edu/research/farbill07/aebriefs/20070515\\_summerRationalesfinal.pdf](http://aic.ucdavis.edu/research/farbill07/aebriefs/20070515_summerRationalesfinal.pdf).

<sup>36</sup> See PERVERSE SUBSIDIES, *supra* note 18, at 2–3 (discussing and distinguishing positive and counterproductive subsidies). This observation has also been made for example in the context of the tax treatment of capital gains. See Douglas Holtz-Eakin, *The Tax Reform Act of 1986: Simplicity, Equity, and Efficiency*, 4 AKRON TAX J. 69, 80 (1987) (“[A] subsidy is appropriate only if individuals undertake ‘too little’ (from a social point of view) risky investment. Even if this case is made, a subsidy is corrective only if risk-taking responds to tax incentives.”). Agricultural subsidies, for example, have been criticized for their relationship to obesity. See Marlene B. Schwartz & Kelly D. Brownell, *Actions Necessary to Prevent Childhood Obesity: Creating the Climate for Change*, 35 J.L. MED. & ETHICS 78, 80 (2007) (citing L. S. Elinder, *Obesity, Hunger, and Agriculture: The Damaging Role of Subsidies*, 331 BRITISH MED. J. 1333 (2005)).

<sup>37</sup> See, e.g., Sandra B. Zellmer, *The Virtues of “Command and Control” Regulation: Barring Exotic Species from Aquatic Ecosystems*, 2000 U. ILL. L. REV. 1233, 1257 n.162 (2000) (observing that “[s]ubsidizing the shipping industry for abating discharges of contaminated ballast water is all the more inappropriate in the Great Lakes because . . . the Great Lakes shipping industry is already subsidized as a result of the initial and ongoing government support for the construction and maintenance of the Saint Lawrence Seaway”).

<sup>38</sup> See Michelle White, *Commentary on Redistribution of Income Through Regulation in Housing*, 32 EMORY L.J. 745, 746–50 (1983) (discussing equity issues for housing subsidies). Such considerations relate to both immediate equity (intra-generational or community equity) and responsible decision-making over longer periods of time (inter-generational equity). See PERVERSE SUBSIDIES, *supra* note 18, at 7–8.

<sup>39</sup> See, e.g., Roger G. Noll & Andrew Zimbalist, *Sports, Jobs, & Taxes: Are New Stadiums Worth the Cost?*, BROOKINGS INSTITUTE (Sunday, June 1, 1997), <https://www.brookings.edu/articles/sports-jobs-taxes-are-new-stadiums-worth-the-cost/> (discussing the nature of the benefits derived from subsidizing sports stadiums—including the intangible “public good” of fan enjoyment—and the burdens imposed on local economies). To further illustrate, consider two hypothetical subsidies (that have equal costs)—one with benefits that marginally reduce the cost of some good or service, and another with benefits that work to save a significant number of lives.

Importantly, even where a subsidy makes sense, it should be crafted with precision, with an eye toward not just maximizing gross public benefit, but also avoiding the creation or exacerbation of distributional inequities.<sup>40</sup> A regulatory exclusion often reflects the most regressive and least equitable form of subsidy, especially in the context of environmental protection. Policy makers (and the public) should, therefore, subject any such provisions to special scrutiny, consistent with their potential for mischief, and should demand firm assurances that they will not have impacts that are undisclosed, unexamined, or fundamentally inequitable.

Presently however, there is a basic misalignment of values in the creation of such furtive subsidies. The decision-making processes from which they emerge typically fail to evaluate or acknowledge the subsidies' societal implications or potential to impose hardship on the "encumbered communities" (the communities that pay for furtive subsidies with their personal health and wellbeing), and virtually never assess their contributions to the *collective burdens* that, in the aggregate, prevent some communities from realizing their full potential. Thus, a new decision-making rubric is necessary in order to ensure that the consequences of furtive subsidies are not only recognized, but taken seriously by policy makers (whether that be Congress, states, or administrative agencies). Such scrutiny is particularly justified in the context of furtive subsidies for fossil fuels because of the industry's considerable capacity for producing environmental externalities,<sup>41</sup> and its central contributing role in "what will surely prove to be the biggest environmental externality of all, global warming."<sup>42</sup> Moreover, this issue is likely to take on greater importance in light of the 2016 Presidential

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Aside from any purely economic comparison, there is a *values* component to the difference that may inform our collective assessment of a subsidy's worth.

<sup>40</sup> For discussion of carefully crafting subsidies, see Joshua D. Sarnoff, *Government Choices in Innovation Funding (with Reference to Climate Change)*, 62 EMORY L.J. 1087 (2013). See also A. Dan Tarlock, *Environmental Protection: The Potential Misfit Between Equity and Efficiency*, 63 U. COLO. L. REV. 871, 882-3 (1992) (discussing the need for care when attempting to incorporate fairness considerations in to modern environmental policy).

<sup>41</sup> Environmental Externalities are defined and discussion in detail in Part II of this Article. See also PERVERSE SUBSIDIES, *supra* note 18, at 10–12, 55; Paul R. Epstein et al., *Full Cost of Accounting for the Life Cycle of Coal*, 1219 ANNALS OF THE N.Y. ACAD. OF SCI. 73, 91 (2011).

<sup>42</sup> PERVERSE SUBSIDIES, *supra* note 18 at 55. As Professor Purdy of Duke Law School has cleverly observed: "Climate change threatens to be the externality that ate the world." Jedediah Purdy, *The Politics of Nature: Climate Change, Environmental Law, and Democracy*, 119 YALE L.J. 1122, 1132 (2010). Indeed, the tragedy of the commons plays out with near perfect choreography on the global stage in the context of climate change. See generally Garrett Hardin, *The Tragedy of the Commons*, 162 SCI. 1243 (1968). As Professor Purdy puts it: "Whoever uses energy derived from fossil fuels gets the full benefit of that power while evenly dividing the atmospheric harm with somewhat more than 6.8 billion others. That is a ratio of benefit to harm all but certain to induce overindulgence." Jedediah Purdy, *The Politics of Nature: Climate Change, Environmental Law, and Democracy*, 119 YALE L.J. 1122, 1132 (2010).

election, given the likelihood that Donald J. Trump's administration will pursue more fossil fuel-friendly policy objectives.<sup>43</sup>

Part II of this Article will more clearly define the problems associated with subsidies that take the form of exclusions from or exceptions to environmental protection laws. Part III will examine this problem in the context of two specific statutory examples (one related to the Clean Air Act and another under the Resource Conservation and Recovery Act). Part IV will consider the question of furtive subsidies through the lens of environmental ethics, with particular emphasis on the "polluter-pays" principle. Finally, Part V proposes a critical framework for examining furtive subsidies (that includes consideration of various factors, including necessity, public involvement, aspects of both distributive and intergenerational equity, and environmental justice). The framework identifies fifteen distinct questions that should be asked and satisfactorily answered in connection with any decision to adopt or retain a furtive subsidy.

## II. THE PROBLEM WITH FURTIVE SUBSIDIES

### A. A Closer Look at Special Treatment

The economic concept of externalities has become an often-featured topic in discussions of environmental law and policy.<sup>44</sup> In this context, environmental externalities refer to those consequences of human activity that impose a human health or environmental cost that is not accounted for by the industrial actor or the broader marketplace. Negative environmental externalities are costs imposed on society by industrial products "that are not reflected in the transaction price for those products, and that therefore may be imposed on parties not involved in the

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<sup>43</sup> See, e.g., The Trump/Pence Energy Platform, <https://www.donaldjtrump.com/policies/energy> (emphasizing expanded reliance of domestic fossil fuels). See also, *Donald Trump's Energy Plan: More Fossil Fuels and Fewer Rules*, N.Y. TIMES, May 26, 2016, [https://www.nytimes.com/2016/05/27/us/politics/donald-trump-global-warming-energy-policy.html?\\_r=0](https://www.nytimes.com/2016/05/27/us/politics/donald-trump-global-warming-energy-policy.html?_r=0).

<sup>44</sup> See, e.g., Richard L. Revesz, *The Control of Interstate Environmental Externalities in a Federal System*, 38 ARIZ. L. REV. 883 (1996); Andrew Green, *You Can't Pay Them Enough: Subsidies, Environmental Law, and Social Norms*, 30 HARV. ENVTL. L. REV. 407 (2006); Rudy Perkins, *Electricity Deregulation, Environmental Externalities and the Limitations of Price*, 39 B.C. L. REV. 993 (1998); Michael I. Jeffery & Gao Qi, *The Development of Payments for Ecosystem Services in China: Cutting Through the Cloud of Confusion over China's Eco-Compensation*, 42 ENVTL. L. REP. NEWS & ANALYSIS 10041 (2012); Richard D. Gary & Michael L. Teague, *The Inclusion of Externalities in Electric Generation Resource Planning: Coal in the Crossfire*, 95 W. VA. L. REV. 839, 843-64 (1993).

transaction or on society as a whole.”<sup>45</sup> From the perspective of industry, externalities create the illusion of cost effectiveness—they appear to lower the cost of production by imposing uncompensated public costs<sup>46</sup> with no associated remedial obligation on the industrial actor.

Industrial activity in the United States up through the middle of the twentieth-century is brimming with examples of environmental externalities. For many decades, for example, various industry sectors—from iron and steel plants in the Midwest, to pulp and paper mills in the Northeast, to chemical plants in the Gulf states—routinely discharged the unwanted byproducts of their commercial activity into adjacent waterways.<sup>47</sup> By doing so, they avoided the monetary cost of otherwise managing these wastes. These discharges, however, imposed real costs. Water pollution, among other things, adversely affects aquatic species upon which people rely for food, inhibits agricultural productivity by contaminating water used for irrigation and livestock, increases costs and impairs the health of downstream communities that rely on polluted waterways for drinking water.<sup>48</sup> This kind of externality is an inherent feature of a commercial marketplace, and imposes a spectrum of costs on individual bystanders, encumbered communities, and the public at large.

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<sup>45</sup> Rudy Perkins, *Electricity Deregulation, Environmental Externalities and the Limitations of Price*, 39 B.C. L. REV. 993, 994 (1998). See also Steven J. Ferrey, *Shaping American Power: Federal Preemption and Technological Change*, 11 VA. ENVTL. L.J. 47, 117 n.299 (1991).

<sup>46</sup> Discussion of “public costs” can be deceptively generic. In fact, most environmental externalities (involving for example air pollution or water contamination) do not involve uniformly distributed “public” harms. While ultimately some of these burdens may translate into truly public costs (such as higher taxes or reduced GDP), individual people, families, and communities bear the immediate brunt of such externalities. Therefore, this Article will largely avoid talking about “the public” and will instead identify those affected by externalities as “bystanders” (i.e., non-participants in the market transaction), “people,” and “communities.”

<sup>47</sup> See *A Brief History of Pollution*, NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION, <http://oceanservice.noaa.gov/education/kits/pollution/02history.html>. These facilities were often located adjacent to rivers to provide easy access to process water; the disposal capacity of the waterways provided an additional economic benefit.

<sup>48</sup> See Zygmunt J.B. Plater, *Facing A Time of Counter-Revolution—the Kepone Incident and A Review of First Principles*, 29 U. RICH. L. REV. 657, 659–77 (1995) (discussing externalization in the context of the historical development of environmental regulation) [hereinafter “Plater, *Kepone and First Principles*”]. See also, *Illinois v. City of Milwaukee*, 406 U.S. 91, 92 S. Ct. 1385, 31 L. Ed. 2d 712 (1972) (“*Milwaukee I*”); *City of Milwaukee v. Illinois*, 451 U.S. 304, 317, 101 S. Ct. 1784, 68 L. Ed. 2d 114 (1981) (“*Milwaukee II*”); *Missouri v. Illinois*, 180 U.S. 208, 21 S. Ct. 331, 45 L. Ed. 497 (1901) (“*Missouri I*”); *Missouri v. Illinois*, 200 U.S. 496, 26 S. Ct. 268, 50 L. Ed. 572 (1906) (“*Missouri II*”) (all addressing externalized costs related to sewage discharges). Air emissions similarly impose real costs. See *Connecticut v. Am. Elec. Power Co., Inc.*, 582 F.3d 309, 326 (2d Cir. 2009) *rev’d*, 131 S. Ct. 2527, 180 L. Ed. 2d 435 (U.S. 2011) (addressing externalized costs of greenhouse gas emissions); *Georgia v. Tenn. Copper Co.*, 206 U.S. 230, 237–39, 27 S. Ct. 618, 51 L. Ed. 1038 (1907) (addressing externalized costs associated with emission of sulfur compounds respectively).

Environmental regulation is intended, in part, to compel internalization of some of these costs.<sup>49</sup>

Without such regulation, private market participants can (and do) take advantage of externalities, in effect to compel communities to pay part of the cost of their profit-making activity.<sup>50</sup> These market players can realize substantial economic benefits by passing along real-world costs to the public (or to specific communities of people), whether or not the affected members of the public consent or themselves realize any substantial benefit.<sup>51</sup> This kind of privately imposed market “subsidy” is the norm in much of the world today, especially affecting people in countries with developing economies.<sup>52</sup> Public costs are still common in the United States, however. One life-cycle analysis of domestic coal use, for example, estimates that externalities impose, in the aggregate, a cost of \$345 billion annually.<sup>53</sup>

The system of environmental and public health regulations in place in the United States, however, was intended, at least in part, to address the problem of externalities that was brought into sharp focus by the

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<sup>49</sup> Environmental externalities exist in the form of water pollution, air pollution, solid waste disposal, occupational exposures, agricultural and silvicultural practices, unsafe consumer products, resource over exploitation, and in other contexts. See David R. Hodas, *The Role of Law in Defining Sustainable Development: NEPA Reconsidered*, 3 WIDENER L. SYMP. J. 1, 57–58 (Fall 1998); Henry N. Butler & Jonathan R. Macey, *Externalities and the Matching Principle: The Case for Reallocating Environmental Regulatory Authority*, 14 YALE L. & POL’Y REV. 23, 29 (1996). See also Gordon J. Johnson, *Paying the Piper: Comments on Liability for Natural Resource Injury: Beyond Tort*, 6 ALB. L.J. SCI. & TECH. 265, 270 (1996) (noting “that environmental regulation is a battlefield for various theories of and methods to compel economic entities to internalize the costs of pollution”).

<sup>50</sup> John C. Dernbach, *Sustainable Development as a Framework for National Governance*, 49 CASE W. RES. L. REV. 1, 59 (1998) (In the international context, for example, “externalized costs provide an indirect subsidy that may give the benefited entity an international trade advantage.”). See also Richard J. King, *Trade and the Environment: European Lessons for North America*, 14 UCLA J. ENVTL. L. & POL’Y 209, 222 (1996) (observing that even some “industrialists . . . in countries with high environmental standards, have contended that lax environmental standards amount to an indirect subsidy because the goods produced in that country do not bear the full costs of production.”).

<sup>51</sup> See *supra* note 15 (discussing the substantial externalized costs associated with the non-regulation of certain emissions from electric utilities).

<sup>52</sup> See, e.g., Yuhong Zhao, *Trade and Environment: Challenges After China’s WTO Accession*, 32 COLUM. J. ENVTL. L. 41, 74 (2007) (addressing the “urgent need” for Chinese law to better internalize negative environmental externalities).

<sup>53</sup> Paul R. Epstein et al., *Full Cost of Accounting for the Life Cycle of Coal*, 1219 ANNALS OF THE NEW YORK ACADEMY OF SCIENCES 73, 91 (2011) (Low, best, and high estimates were \$175, \$345, and \$523 billion, respectively. Costs included, among other things, land disturbance, methane emissions, carcinogenicity, health burdens in Appalachia, fatalities, air pollutant impacts, lost productivity, mental retardation, cardiovascular impacts, climate damage from CO<sub>2</sub>, N<sub>2</sub>O, and black carbon. The authors note that their review was “limited by the omission of many environmental, community, mental health, and economic impacts that are not easily quantifiable.”).

industrial boom of the late nineteenth and early twentieth century.<sup>54</sup> By the end of the 1960's, pollution in American waterways, smog in American cities, and the degradation of many of our natural treasures had ushered in the modern era of domestic environmental regulation.<sup>55</sup> In many instances these regulations have proven remarkably effective and relatively inexpensive compared to the avoided costs to society. In an assessment of the projected costs and benefits of the Clean Air Act between 1990 and 2020, EPA's Office of Air and Radiation estimated that implementation of that statute in 2010 provided annual net benefits of between \$110 billion and \$3.7 trillion.<sup>56</sup> EPA's analysis produced estimated benefit to cost ratios ranging from 3:1 up to 72:1.<sup>57</sup>

Indeed, regulation of the marketplace (in one form or another) is widely accepted as necessary to counteract the market incentives concerning externalities, and to prevent the imposition of associated costs on an unsuspecting public<sup>58</sup>—that is, to compel market actors “to account for the externality within the cost of the transaction, for example by installing pollution control equipment to correct the environmental impact.”<sup>59</sup> This reduces the externalized social costs and correspondingly

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<sup>54</sup> See ERIC PEARSON, ENVIRONMENTAL AND NATURAL RESOURCES LAW 1–2 (LexisNexis, 2d ed. 2002) (describing pollution problems caused by Industrial Revolution). *But see* Kevin C. Foy, *Home Is Where the Health Is: The Convergence of Environmental Justice, Affordable Housing, and Green Building*, 30 PACE ENVTL. L. REV. 1, 5 (2012) (“The first American national statutory efforts at environmental protection were driven by concern for commerce more than other values. For example, the Rivers & Harbors Act of 1899 represented an effort to keep the waters of the United States free from debris, so as not to impede shipping lanes. As the twentieth century progressed, however, other values, including human health, scenic beauty, wilderness protection, and conservation, began to evolve. With the emphasis on these values, in addition to commerce, the reach of environmental protection expanded.”) (internal citations omitted).

<sup>55</sup> David A. Westbrook, *Liberal Environmental Jurisprudence*, 27 U.C. DAVIS L. REV. 619, 622 (1994) (“Modern environmental law is associated with the rise of an environmental consciousness in the late nineteenth and early twentieth century. The contemporary era of environmental law began with the great statutes of the sixties and the seventies, and is being transformed by the interpenetration of economic and legal techniques.”).

<sup>56</sup> *Benefits and Costs of the Clean Air Act From 1990 to 2020*, U.S. EPA, OFFICE OF AIR AND RADIATION 7-9, Table 7-5 [pdf page 196] (April 2011), <https://www.epa.gov/clean-air-act-overview/benefits-and-costs-clean-air-act-1990-2020-report-documents-and-graphics> [hereinafter “EPA CAA COST BENEFIT REPORT”] (this reflects low, medium and high annual benefit estimates of \$160 billion, \$1.3 trillion, and \$3.8 trillion, respectively, and monetized costs of compliance of \$53 billion). This report uses a hypothetical baseline, which effectively “freezes the scope and stringency of emissions controls at their 1990 levels,” thus, it estimates only the benefits that accrue above and beyond what CAA programs had already achieved by 1990. *Id.* at 1–3.

<sup>57</sup> *Id.* at 7-9, Table 7-5.

<sup>58</sup> See Plater, *Kepone and First Principles*, *supra* note 48, at 705 (observing as well that there exists “an earnest institutional effort to resist and turn back environmental protections, coming from those who are forced to internalize costs previously passed widely to the commons”); Rudy Perkins, Note, *Electricity Deregulation, Environmental Externalities and the Limitations of Price*, 39 B.C. L. REV. 993, 1059 (1998).

<sup>59</sup> Perkins, *supra* note 58, at 1059.



increases the cost of production, incorporating those costs into the market transaction. As already noted, the trade-off between increased cost of production and reductions in costs imposed on communities and the public is not always an even one. In the Clean Air Act example discussed below, for example, EPA estimates that the health-related benefits of reducing toxic air pollutants will be far greater than the cost to industry associated with controlling pollutant emissions.<sup>60</sup>

Where a particular market participant or category of participant is granted an exception from otherwise applicable mechanisms intended to force the internalization of the environmental and human health costs of commercial activity, what was a negative externality becomes a discrete subsidy.<sup>61</sup> In such instances, the government has acted to effectively sanction the externality; it has negotiated on behalf of individual affected citizens, encumbered communities, and the public at large to accept the negative consequence of the industrial behavior as a tolerable trade-off in exchange for its societal and economic benefits, even though it is not doing so for other similarly situated market actors.

This kind of subsidy-by-exemption is distinctive in several respects. First, unlike fiscal subsidies,<sup>62</sup> sector-specific environmental exemptions seek to subsidize the profit-making capacity of a particular industrial activity by specifically withdrawing otherwise applicable protections negotiated by the government on behalf of society. Second, rather than assigning the burden of the discrete subsidy with specificity to some identifiable group (such as all taxpayers, or purchasers of particular goods or services), which is an inherent component of a monetary subsidy, the cost of a furtive subsidy is principally allocated (or misallocated) to the communities most affected by the officially sanctioned environmental noncompliance (e.g., those breathing dirty air, drinking contaminated

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<sup>60</sup> As EPA points out, its analysis counts only those benefits that are quantifiable, acknowledging that there will also be many unquantifiable benefits that remain unaccounted for (and that may serve as additional justifications for regulation). See REGULATORY IMPACT ANALYSIS FOR THE FINAL MERCURY AND AIR TOXICS STANDARDS, U.S. EPA ES-18 (Dec. 2011) [hereinafter EGU MACT RIA]. There may also be significant uncertainty associated with the quantification of both costs and benefits generally. *Id.* at ES-16 to ES-19.

<sup>61</sup> This is no less a subsidy, for example, than urban industrial zoning laws. See Roderick M. Hills, Jr. & David Schleicher, *The Steep Costs of Using Noncumulative Zoning to Preserve Land for Urban Manufacturing*, 77 U. CHI. L. REV. 249, 260 (2010) (“The major justification for exclusion of residential uses from manufacturing zones is less concerned with prevention of nuisance litigation than with stabilization of land prices. In purpose and effect, noncumulative zoning is a subsidy to draw manufacturing enterprises to the city—it reduces the cost of manufacturing land in the city, and, thereby, is a subsidy to new manufacturing entrants.”).

<sup>62</sup> Fiscal subsidies include economic incentives such as tax preferences, general grants, and various types of federal spending.

water, or consuming tainted fish).<sup>63</sup> Nor is there typically any rational justification for such an allocation—e.g., based on the distribution of the benefits of the industrial activity.<sup>64</sup> Third, industry and its representatives have a degree of access to the underlying law-making process (whether legislative or administrative) that is rarely enjoyed by members of the most affected communities. Thus, the substantive deliberations tend to be one-sided—missing meaningful scrutiny of the nature and magnitude of the burdens that communities and bystanders will be asked to shoulder.<sup>65</sup> Finally, because of underlying environmental and social inequities, the burden of furtive subsidies is likely to be felt more acutely by traditionally

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<sup>63</sup> While arguably, in a world of limited resources, even fiscal subsidies require some policy trade-offs, conceptually the decrease in general government revenue affects all programs more or less equally, and, at minimum, allows for considered and deliberate decision-making about where and how to allocate what remains in a manner that best serves the public interest. Moreover, fiscal subsidies are often accompanied by legal protections that reflect important collective social judgments. For example, to the extent that a fiscal subsidy constitutes “federal financial assistance,” it is subject (among other things) to the non-discrimination protections of Title VI of the Civil Rights of 1964, 42 U.S.C. § 2000d (1964). Federal financial assistance, in this context, means much more than the direct provision of money; it includes, for example:

- (1) A grant or loan of federal financial assistance, including funds made available for:
  - (a) The acquisition, construction, renovation, restoration, or repair of a building or facility or any portion thereof; and
  - (b) Scholarships, loans, grants, wages, or other funds extended to any entity for payment to or on behalf of students admitted to that entity, or extended directly to such students for payment to that entity.
- (2) A grant of federal real or personal property or any interest therein, including surplus property, and the proceeds of the sale or transfer of such property, if the federal share of the fair market value of the property is not, upon such sale or transfer, properly accounted for to the Federal Government.
- (3) Provision of the services of federal personnel.
- (4) Sale or lease of federal property or any interest therein at nominal consideration or at consideration reduced for the purpose of assisting the recipient or in recognition of public interest to be served thereby, or permission to use federal property or any interest therein without consideration.
- (5) Any other contract, agreement, or arrangement that has as one of its purposes the provision of assistance to any education program or activity, except a contract of insurance or guaranty.

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<sup>64</sup> *Infra* Part II.B.

<sup>65</sup> As discussed above and more fully in Part III, the direct costs avoided by the electric utility industry over twenty years of non-compliance with the Clean Air Act’s hazardous air pollution provisions amount to as much as \$9.6 billion per year, *see supra* note 15, and the quantifiable and non-quantifiable cost to communities and the public of *not* regulating those emissions was much higher. Had the policy debate been about whether to adopt *monetary subsidies* to compensate the public for the costs imposed by electric utilities’ environmental noncompliance for two decades, to the tune of perhaps \$50 billion per year, Congress (and the public) would likely have applied a higher degree of scrutiny in the decision-making process. Instead, however, Congress covertly allocated these costs to encumbered communities, bystanders, and the public at large by way of regulatory exclusion.

disempowered communities, especially communities of color and poor communities of all kinds. In this regard, the distributive effects of such environmental regulatory exclusions tend to be regressive in nature, underscoring the significance of furtive subsidies as a serious environmental justice issue.<sup>66</sup>

Government subsidy of industry (including the fossil fuel industry) is not remarkable. As a general matter, “federal incentives to stimulate industry have been defended on two grounds: (1) to promote a new technology during the early stages of its development, and (2) to pay the difference between the value of an activity to the private sector and its value to the public sector.”<sup>67</sup> These justifications have certainly played a role in the adoption of domestic subsidies for the fossil fuel industry. For example, the advent of the automobile early in the twentieth century was the catalyst for a suite of subsidies for the oil and gas industry.<sup>68</sup> Currently, credible estimates of total domestic fiscal subsidies for the fossil fuel/energy industry range from \$2.6 to \$121 billion annually.<sup>69</sup> These numbers do not reflect, among other things, the value of externalized costs (those “shifted onto surrounding populations without compensation”), or subsidies to “close compliments” (infrastructure like highways that facilitate use of fossil fuels).<sup>70</sup> When externalized costs are

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<sup>66</sup> Environmental justice is now widely recognized as an important legal and policy issue, as evidenced by its prominence in the policymaking dialogue over the past ten years. *See, e.g.*, EJ 2020 ACTION AGENDA: EPA’S ENVIRONMENTAL JUSTICE STRATEGY, U.S. EPA, <https://www.epa.gov/environmentaljustice/ej-2020-action-agenda-epas-environmental-justice-strategy>; PLAN EJ 2014, U.S. EPA, <https://www.epa.gov/environmentaljustice/plan-ej-2014>. The environmental justice implications of regulatory exclusions, however, have received little attention. The author hopes that this Article will serve as a catalyst for more robust examination of both the decision-making process that results in furtive subsidies, and the ethical and environmental justice implications of such policy decisions.

<sup>67</sup> Mona L. Hymel, *Environmental Tax Policy in the United States: A “Bit” of History*, 3 ARIZ. J. ENVTL. L. & POL’Y 157, 162 (2013) (internal citations omitted).

<sup>68</sup> *Id.* at 164–72. Hymel explains:

At the turn of the twentieth century, the U.S. government prioritized the development of motorized transport for all with a ready supply of inexpensive fuel . . . .As Americans’ dependence on automobile transport increased, our fuel demands required exploration for new supplies and advancements in fuel transport technologies. The federal government expanded incentives for the exploration and development of oil and gas while continuing to fund existing subsidies. By the early 1970s, however, the rationale for continued incentives for oil and gas had moved from one of support of a fledgling industry to price support for the American oil habit.

*Id.* at 162 (internal citations omitted).

<sup>69</sup> *See* Koplów and Dernbach, *supra* note 19, at 368 (reviewing existing studies of U.S. fossil fuel subsidies). Other studies have looked at slightly different questions regarding energy-related subsidies. *See e.g.*, ESTIMATING U.S. GOVERNMENT SUBSIDIES TO ENERGY SOURCES: 2002–2008 (Environmental Law Institute, Sept. 2009) [hereinafter “ELI ESTIMATING SUBSIDIES”].

<sup>70</sup> Koplów and Dernbach, *supra* note 19, at 363. *See also* PERVERSE SUBSIDIES, *supra* note 18, at 69–72 (discussing environmental externalities in the energy context).

included, the total annual subsidy estimates range from \$202 million to \$1.7 trillion.<sup>71</sup>

Whatever the purported justification for an industry subsidy, almost no one would agree to subsidize a specific industry sector with their own health and wellbeing, or that of their family. This is especially so, where measures exist to significantly reduce or eliminate the offending externalities (e.g., effective emission control technologies), and where others are required to pay their own way. Indeed, the selection of furtive subsidies in the environmental context inescapably reflects a policy choice to subordinate the wellbeing of individuals, families, and communities to the economic interests of a particular class of market participant—even as other similarly situated market actors are required to reduce or eliminate their pollution output in deference to the social values embodied in the relevant regulatory program.<sup>72</sup> From the perspective of an encumbered community that is exposed to mercury, contaminated water, toxic constituents in solid waste, or other harmful byproducts of industrial activity, the source of the offending pollution is of little importance. They are just as injured whether it originates from power plant operations, trash incineration, or the smelting of lead.<sup>73</sup>

### *B. Equity Implications of Furtive Subsidies*

The political process surrounding the adoption of furtive subsidies tends to ignore or marginalize the concerns of communities. Congress often adopts targeted exclusions from federal environmental statutes without open and informed dialogues, or any meaningful inclusion of potentially affected communities. Instead, furtive subsidies are usually the result of closed-door negotiations that occur during the mark-up process, at the end of a fully matured legislative process. This is hardly an approach designed to achieve transparency and thorough deliberation,

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<sup>71</sup> Koplow and Dernbach, *supra* note 19, at 363, 365 (The reduction in the low end is attributable to application of off-sets—taxes or fees paid by industry to governments and subtracted from the gross subsidy value to generate a net subsidy estimate. At the high end of these estimates, externalities are the single largest influence.).

<sup>72</sup> Not surprisingly, as a result, subsidies (including furtive subsidies) “tend to benefit few at the expense of many, and worse, the rich at the expense of the poor,” while also often “serv[ing] to pay the polluter.” PERVERSE SUBSIDIES, *supra* note 18, at xxiii.

<sup>73</sup> As a conceptual matter, there may be circumstances under which a sector-specific health-related trade might be accepted. For example, where it is technically impossible for an industry to reduce or eliminate its impacts on public health, and where the existence of the industry provides a significant net benefit to society, we might accept those impacts. In such instances, however, policy decision makers may still address the externalized burdens on communities by charging the industry actor for the value of the “socialized costs” and (ideally) providing services to the affected communities to minimize or manage the adverse effects.

or to ensure robust consideration of important social, policy, economic, legal, and ethical implications.

Moreover, access to this process is hardly equitable. As already noted, industry pays handsomely to have its voice heard in the policy-making process, and the fossil fuel industry is among the biggest spenders.<sup>74</sup> Industry has a heavy influence in electoral politics, where money often decides elections, and elections decide policy.<sup>75</sup> The revolving-door in Washington regularly brings corporate sycophants to high positions in government agencies, and then back to the corporate fold.<sup>76</sup> Industry associations, like the American Petroleum Institute (“API”), the Edison Electric Institute, and the American Public Power Association, regularly inform decision-making processes in Congress and within federal agencies through open fora (like Congressional hearings) and (perhaps most significantly) in more private settings with individual Congressmen, Congressional staff, or agency officials. These players, especially the most well-heeled industries, are perfectly positioned to steer policy in ways that benefit their interests,<sup>77</sup> including toward furtive environmental subsidies.

The communities most likely to be affected by the pollution from furtive subsidies are at the other end of the spectrum of political influence. Low-income communities of all stripes, and communities of color regardless of income, are disproportionately represented here. Furthermore, these communities are more likely to be close to pollution sources, more likely to suffer from pollution related ailments, and more

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<sup>74</sup> See *supra* note 14 and accompanying text.

<sup>75</sup> The political influence of corporate entities is likely to grow during the Donald Trump presidency, and in light of Supreme Court decisions like *Citizens United v. FEC*, 130 S. Ct. 876 (2010). See generally Molly J. Walker Wilson, *Too Much of a Good Thing: Campaign Speech After Citizens United*, 31 CARDOZO L. REV. 2365 (2010). To the extent this trend continues, it is likely to hurt communities (especially marginalized communities) who often find themselves at odds with corporate interests.

<sup>76</sup> See Brendan A. Cappiello, *The Price of Inequality and the 2005 Bankruptcy Abuse Prevention and Consumer Protection Act*, 17 N.C. BANKING INST. 401, 419–20 (2013) (noting that “[i]n practice, the revolving door phenomenon is real. Hundreds of revolving door employees have worked or currently work for the largest agencies in the United States government. While certainly not all of these revolving door regulators neglect their civic duties, if enough agency personnel are more in line with the industry than the public, policy and regulation can suffer”). See also *Top Agencies*, OPENSECRETS.ORG, <http://www.opensecrets.org/revolving/top.php?display=G> (last visited Jan. 17, 2013) (identifying the agencies with the most revolving door employees).

<sup>77</sup> In addition to the energy sector, pharmaceuticals, telecommunications, aerospace and defense, and the financial sector are among the most heavily subsidized industries. See Joe Romm, *Climate Progress, Over Half of All U.S. Tax Subsidies Go to Four Industries. Guess Which Ones?*, THINKPROGRESS, Nov. 13, 2011, <http://thinkprogress.org/climate/2011/11/13/366988/over-half-of-all-us-tax-subsidies-go-to-four-industries-guess-which-ones/>.

likely to be affected by multiple pollution sources.<sup>78</sup> Accordingly, members of these communities not only bear a disproportionate economic burden, in the form of financial hardships—lost wages, reduced earning potential, and increased medical costs (among other things)<sup>79</sup>—they also suffer disproportionately from associated psychological and emotional distress.<sup>80</sup> All in all, members of encumbered communities typically lack the access to the decision-making process that is enjoyed by the fossil fuel industry and its lobbyists, and are likely to have diminished access in general to the political process relative to their white and wealthier counterparts.<sup>81</sup> By default, these communities (as relative outsiders) rely even more on the quality and integrity of the policymaking process as a vehicle for robust consideration of relevant issues. That process, however, frequently lets them down.

As described by Professor Hovenkamp, “public choice theory” suggests that:

Money, influence, and argument flow more or less in proportion to the economic interests at stake, and the result is relatively efficient legislation. For example, if legislation benefits one group by 10X and injures another group by X, the beneficiaries will be willing to commit more resources than the victims and

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<sup>78</sup> See generally Robert D. Bullard et al., *Toxic Wastes and Race at Twenty: Why Race Still Matters After All of These Years*, 38 ENVTL. L. 371 (2008) (describing the environmental justice landscape) [hereinafter “*Toxic Wastes and Race at Twenty*”]; Crystal Gammon, *Pollution, Poverty, and People of Color: Asthma and the Inner City*, SCIENTIFIC AMERICAN, June 20, 2012, <https://www.scientificamerican.com/article/pollution-poverty-people-color-asthma-inner-city/>.

<sup>79</sup> *Toxic Wastes and Race at Twenty*, supra note 78, at 377–80.

<sup>80</sup> See, e.g., Catherine Millas Kaiman, *Environmental Justice & Community-Based Reparations*, 39 SEATTLE U.L. REV. 1327, 1363 (2016) (discussing the idea of “quantifying the psychological trauma of a community that has been forced to live with an incinerator”). These unquantifiable costs might include impacts associated with the emotional suffering that accompanies illness, the anxiety associated with poverty, the sorrow of losing loved ones, the psychological toll of raising a child with a mental or physical impairment, or the spiritual oppression of lost hope.

<sup>81</sup> See Kristen Clarke, *Voting Rights & City-County Consolidations*, 43 HOUS. L. REV. 621, 684 (2006) (“African Americans throughout the Commonwealth of Kentucky are disadvantaged with regard to certain socio-economic variables which directly impact access to the ballot box.”); Glenn D. Magpantay, *So Much Huff and Puff: Whether Independent Redistricting Commissions Are Inconsequential for Communities of Color*, 16 ASIAN PAC. AM. L.J. 4, 7 (2011) (discussing the history of redistricting and communities of color); Spencer Overton, *Voting Rights Disclosure*, 127 HARV. L. REV. F. 19, 20 (2013) (discussing recent efforts to “restrict . . . access [to the franchise] in order to diminish the political impact of vulnerable constituencies”); Terry Smith, *Reinventing Black Politics: Senate Districts, Minority Vote Dilution and the Preservation of the Second Reconstruction*, 25 HASTINGS CONST. L.Q. 277 (1998).

will tend to persuade the elected representatives to support the proposal.<sup>82</sup>

Hovenkamp acknowledges that this theory is “optimistic, in that something akin to the ‘public interest’ eventually [wins] out, despite the self-interest of most participants in the process.”<sup>83</sup> A less rosy view is almost certainly more accurate (although perhaps still a poor reflection of reality). As Hovenkamp describes it, according to the pessimistic brand of public choice theory:

Interest groups that are small, single-minded, and well-organized tend to convey their messages more clearly than large interest groups with diverse agendas. This produces a significant bias in the legislative process in favor of smaller, more efficient special interest groups. Legislation often favors the interests of a minority and may be quite contrary to the interests of the majority . . . Thus, public choice theory suggests that republican legislative systems produce socially useless or even harmful laws.<sup>84</sup>

Not surprisingly, under this theory “we would expect to see more efficient interest groups organized on the side representing the largest amount of gross wealth” (or perhaps the greatest concentration of wealth), because of the magnified value for such interests of positive legislative outcomes.<sup>85</sup> When it comes to the concentration of gross wealth, there are few sectors of our economy that can compete with the energy sector.<sup>86</sup>

On the public health side of the debate, from the perspective of individual community members, the potential advantages of political engagement on environmental policy issues are often incredibly dilute, uncertain, and likely to be perceived as relatively small. This is not necessarily true of aggregate societal gains, as one can clearly see from the EPA’s cost-benefit assessment of the CAA or its analysis associated with 2012 EGU MACT Rule.<sup>87</sup> However, there are often few, if any,

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<sup>82</sup> Herbert Hovenkamp, *Legislation, Well-Being, and Public Choice*, 57 U. CHI. L. REV. 63, 86 (1990).

<sup>83</sup> *Id.*

<sup>84</sup> *Id.* at 86 (1990) (citing Richard A. Posner, *Theories of Economic Regulation*, 5 BELL J ECON & MGMT SCI 335 (1974); Gary S. Becker, *Pressure Groups and Political Behavior*, in CAPITALISM AND DEMOCRACY: SCHUMPETER REVISITED 120 (Richard D. Coe and Charles K. Wilber eds., Notre Dame 1985)).

<sup>85</sup> Hovenkamp, *supra* note 82, at 87 (1990).

<sup>86</sup> *Profits for Oil, Gas & Coal Companies Operating in the U.S. and Canada*, OIL CHANGE INTERNATIONAL, <http://priceofoil.org/2013/09/26/profits-oil-gas-coal-companies-operating-u-s-canada/> (reports the “profit made in 2012 by companies involved in extracting, transporting, refining, distributing and trading in fossil fuels in the United States and Canada” to be \$271 billion).

<sup>87</sup> See *supra* note 15.

advocates with the resources, expertise, or inclination to mount an effective campaign on behalf of communities. That is not to say that industry lobbying goes unchallenged in a general sense, but when debate over adoption of a comprehensive regulatory program is reduced to the possibility of a discrete exemption in favor of a particular industry sector, most parties are willing to consider compromise. Such a discrete regulatory exception would, of course, be of paramount importance to the communities that it would directly affect, but they rarely have a seat at the table, either directly or via effective representation. As a result, debate and negotiation over such provisions rarely focuses on the question of whether shifting the burden onto these communities is the most equitable and appropriate form of subsidy.<sup>88</sup> Industry is willing to take what prize it can, and the interests of under-represented constituencies often can be traded away with the least resistance.

In fact, broader societal dynamics make it likely that the most vulnerable communities will have little practical incentive to themselves commit valuable (and scarce) resources to persuade elected representatives of the need for uncompromising positions on environmental policy issues. Even if the perceived value were high, such communities typically have limited capacity to meaningfully offset the lobbying investment that the regulated industry is willing to commit.<sup>89</sup> Indeed, even within more affluent affected communities, mobilization of political opposition may be unlikely to emerge even if the aggregate cost

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<sup>88</sup> Nor have the major environmental non-profit organizations historically been very effective at representing the viewpoints of marginalized communities (although many groups are making more serious efforts of late), perhaps as a function of calcified policy perspectives, a lack of diversity, and a poor understanding of how to engage with unfamiliar constituencies. *See generally*, Patrice L. Simms, *On Diversity and Public Policymaking: An Environmental Justice Perspective*, 13 SUSTAINABLE DEV. L. & POL'Y 14, 15 (2013).

<sup>89</sup> *See supra* notes 13 and 14 and accompanying text (regarding the amount of lobbying dollars spent influencing federal policy). *See also* Richard Craswell, *Passing on the Costs of Legal Rules: Efficiency and Distribution in Buyer-Seller Relationships*, 43 STAN. L. REV. 361, 385–86 (1991) (Discussing “wealth effects”—the idea that “the efficiency of permitting or prohibiting pollution may depend on whether pollution is already permitted or prohibited,” and on the wealth-related effects of other rules. Thus, the value of controlling pollution and the adverse effects that pollution has on affected communities are interdependent factors, making it difficult (if not impossible) to meaningfully select a regulatory approach on an efficiency basis alone. Distributional considerations, then, appropriately play an important role in such decisions.). *See also* David M. Driesen, *The Societal Cost of Environmental Regulation: Beyond Administrative Cost-Benefit Analysis*, 24 ECOLOGY L.Q. 545, 551 (1997) (“A cost-benefit criterion can only purport to address a fairly limited economic goal, that of improving ‘allocative efficiency’ among an artificially limited set of actors.”).



to the public far exceeds the cost of industry compliance,<sup>90</sup> because few if any individuals have any certainty of suffering catastrophic loss.<sup>91</sup>

In the end, the structural dynamic of the legislative process that underlies the adoption of environmental subsidies tends to favor the political considerations of the industry participants over the interests of potentially affected communities. This is especially true with respect to sectors with deep pockets and political savvy, and where the issues revolve around narrow and technically complex exceptions that benefit specific industries without categorically undermining the broader human health and environmental protection objectives of the underlying statutory program.<sup>92</sup> As a result, we have in place environmental programs littered with exemptions that function as distinct subsidies for specific industries. And while these furtive subsidies perhaps provide some indirect benefits for the public at large (such as incrementally cheaper electricity), their cost is often borne disproportionately on the shoulders of the most powerless communities.<sup>93</sup>

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<sup>90</sup> The exclusion of electric utilities from regulation under the Clean Air Act's air toxics provisions is a good example of such asymmetric costs. *See supra* notes 13 and 14.

<sup>91</sup> This is in part a problem of imperfect knowledge, a fundamental and compelling criticism of cost-benefit analysis generally. *See* Shi-Ling Hsu, *On the Role of Cost-Benefit Analysis in Env'tl. Law: A Book Review of Frank Ackerman & Lisa Heinzerling's Priceless: On Knowing the Price of Everything & the Value of Nothing*, 35 ENVTL. L. 135, 162 (2005) (Noting Ackerman and Heinzerling's point that "it is perfectly rational for people to engage in intuitive toxicology, given the amount of effort that would be required to make consistently accurate assessments of personal risk . . . . So it is not that common folks are not capable of making their own decisions about risk; it is that there is a market failure in information about risk. When markets fail, government intervention is warranted."); Michael T. Cappucci, *Prudential Regulation & the Knowledge Problem*, 9 VA. L. & BUS. REV. 1, 39 (2014) (discussing the critical role of knowledge in connection with financial market regulation, and observing that "[i]mperfect knowledge is not a challenge that can be overcome, but an unavoidable fact that must be accepted. All complex systems are susceptible to failure").

<sup>92</sup> As Hovenkamp points out, there are some rather striking reasons to reject the universal applicability of this theoretical model. "Enormous areas of legal policy making, such as the civil rights legislation of the 1960s and the deregulation movement of the 1980s, seem quite inconsistent with public choice theory. In both these cases representatives risked the wrath of powerful single interest groups in order to do what the public wanted or what they felt as a matter of ideology was the right thing to do." Hovenkamp, *supra* note 82, at 88. Rather, Hovenkamp observes "the literature suggests that legislators respond to three factors, in this order: (1) their desire for reelection by their constituents; (2) their personal political and economic beliefs; and (3) the short-run influence of special interest groups." *Id.*

<sup>93</sup> For an example of observations of a similar dynamic in the international context, see Patricia Nelson, *An African Dimension to the Clean Development Mechanism: Finding A Path to Sustainable Development in the Energy Sector*, 32 DENV. J. INT'L L. & POL'Y 615, 640 (2004) ("Massive indebtedness makes it impossible for African countries to invest in improving their environment, and the resulting lower environmental standards create an incentive for developed countries to export their most pollution-intensive industries and technologies to African and other developing countries. The situation has been characterized as the poor countries' subsidy of economic development and environmental improvement in the wealthy industrialized countries.") (internal citations omitted).

This characterization is generally consistent with Hovenkamp's observation that "[t]he influence of special interests is strongest when the statutory provision at issue is narrow or merely technical, the legislator feels that her constituency will not care [or perhaps will not notice] one way or the other, and the provision does not ultimately conflict with the legislator's own ideology."<sup>94</sup> For provisions that are as far down in the weeds, and as susceptible to hedging and obfuscation as are many furtive environmental subsidies, the likelihood that focused industry lobbying will overcome latent and indistinct concerns about community health are extraordinarily high. This is especially true when the burdens of such exemptions are likely to be felt most acutely by traditionally marginalized communities.<sup>95</sup> John Hasnas has further observed:

In recent decades, political science scholars and public choice economists have demonstrated ad nauseam the myriad opportunities for governmental "rent-seeking," the process by which special interests sway legislation to favor them at the expense of the general public . . . . Even politicians of the highest integrity will often find themselves bound to favor the parochial interests of their constituents over the good of society as a whole.<sup>96</sup>

As a consequence, when furtive subsidies emerge within legislative proposals—reliably at the behest of industry—not only will poor communities and communities of color likely be forced to bear a disproportionate share of the economic, physical, and emotional cost if the legislative initiative becomes law, their voices and concerns are unlikely to find secure purchase anywhere in the decision-making process. Without their participation, and without any other architectural feature in the policy-making process to ensure appropriate scrutiny, decisions regarding furtive subsidies are likely to rely disproportionately on justifications that focus solely on the interests of the industry beneficiaries.

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<sup>94</sup> Hovenkamp, *supra* note 82, at 88 (1990).

<sup>95</sup> The author believes that this is the case, even in light of Hovenkamp's "democratic bias" theory—the idea that "legislator[s] listens to voters, and the number of votes, not the number of dollars." Hovenkamp, *supra* note 82, at 89.

<sup>96</sup> John Hasnas, *Two Theories of Environmental Regulation*, 26 SOC. PHIL. & POL'Y 95, 97 (2009) (citing JAMES M. BUCHANAN AND GORDON TULLOCK, *THE CALCULUS OF CONSENT* (University of Michigan Press, 1962)); MANCUR OLSON, *THE LOGIC OF COLLECTIVE ACTION: PUBLIC GOODS AND THE THEORY OF GROUPS* (Harvard University Press, 1965); WILLIAM A. NISKANEN, *BUREAUCRACY AND REPRESENTATIVE GOVERNMENT* (Aldine, Atherton, 1971); THE ELGAR COMPANION TO PUBLIC CHOICE (William F. Shughart II and Laura Razzolini eds., Elgar, 2001); Bruce L. Benson, *Understanding Bureaucratic Behavior: Implications from the Public Choice Literature*, 8 J. PUB. FIN. & PUB. CHOICE 89, n.2–3 (1995); Gary J. Miller, *The Impact of Economics on Contemporary Political Science*, 35 J. ECON. LITERATURE 1173, n.3 (1997).

Finally, in addition to bearing a disproportionately high burden of environmental externalities and enjoying limited access to decision makers, affected communities (especially poor communities and communities of color) typically receive proportionally less of the overall societal benefit of the subsidized activities<sup>97</sup> and are less likely to have reliable access to a health safety net to help mitigate the burden they are asked to shoulder.<sup>98</sup> As New Zealand law professor Vernon Rive has noted: “It is sometimes argued that subsidizing fossil fuels is appropriate to help lift poorer members of society out of energy poverty. However, a number of studies strongly indicate the regressive nature of energy subsidies (that is, the benefits increase as household income increases, or conversely, decrease as income decreases).”<sup>99</sup> In contrast, some have observed that “[e]nergy expenditures account for a greater proportion of the income of poor households. Therefore energy taxes are regressive.”<sup>100</sup>

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<sup>97</sup> See *The Roots of the Widening Racial Wealth Gap: Explaining the Black-White Economic Divide*, INSTITUTE ON ASSETS AND SOCIAL POLICY, <https://iasp.brandeis.edu/pdfs/Author/shapiro-thomas-m/racialwealthgapbrief.pdf> [hereinafter “WIDENING WEALTH GAP”] (describing, e.g., one study showing “the total wealth gap between white and African-American families nearly tripl[ing]” over a 25 year period ending in 2009, as communities of color have reaped less and less of the benefit of economic growth).

<sup>98</sup> See Shannon M. Roesler, *Addressing Env'tl. Injustices: A Capability Approach to Rulemaking*, 114 W. VA. L. REV. 49, 81 (2011) (observing that “[m]inority, low-income, and indigenous children are at greater risk because factors such as poverty, poor nutrition, pre-existing health conditions, lack of access to health care, lack of information, lack of exercise, psychosocial stress, and lack of social capital contribute to greater susceptibility to environmental hazards”) (citing ENVTL. PROT. AGENCY, EPA’S ACTION DEVELOPMENT PROCESS: INTERIM GUIDANCE ON CONSIDERING ENVIRONMENTAL JUSTICE DURING THE DEVELOPMENT OF AN ACTION (July 2010), <https://www.epa.gov/environmentaljustice/interim-guidance-considering-environmental-justice-during-development-action>). While the Affordable Care Act may help to address some of these health disparities, the roots of the problem go deeper than just the health insurance infrastructure, and that law itself may be in jeopardy in light of the current political landscape. See Pub. L. No. 111-148, 124 Stat. 119-1025 (2010) (amending Title XVIII of the Social Security Act, 42 U.S.C. § 1395 *et seq.*, by adding new § 1899), *amended by* the Health Care and Education Reconciliation Act of 2010, Pub. L. 111-152, 124 Stat. 1029-84 (2010); Daryll C. Dykes, *Health Injustice & Justice in Health: The Role of Law & Pub. Policy in Generating, Perpetuating, & Responding to Racial & Ethnic Health Disparities Before & After the Affordable Care Act*, 41 WM. MITCHELL L. REV. 1129, 1133 (2015) (addressing, among other things, “how legal approaches will impact health disparities in the future, particularly in light of recent health reform measures, including the Affordable Care Act of 2010”). The American Psychological Association similarly recognizes the critical role of socioeconomic status and race and ethnicity as factors that influence overall community health. See *Ethnic and Racial Minorities & Socioeconomic Status*, AMER. PSYCH. ASSOC., <https://www.apa.org/pi/ses/resources/publications/minorities.aspx>.

<sup>99</sup> Vernon Rive, *Fossil Fuel Subsidy Reform: A New Zealand Perspective on the Int’l Law Framework*, 27 N.Z. U.L. REV. 73, 101 (2016) (citing IMF ENERGY SUBSIDY REFORM: LESSONS AND IMPLICATIONS 19 (January 28, 2013), <http://www.elibrary.imf.org/page/120?redirect=true>). As already noted, others have observed that subsidies “tend to benefit few at the expense of many, and worse, the rich at the expense of the poor.” PERVERSE SUBSIDIES, *supra* note 19, at xxiii.

<sup>100</sup> Dylan Golden, *The Politics of Carbon Dioxide Emissions Reduction: The Role of Pluralism in Shaping the Climate Change Tech. Initiative*, 17 UCLA J. ENVTL. L. & POL’Y 171, 192 (1999).

It is equally true, however, that when the energy industry is given a furtive subsidy, the disbenefits of the resulting energy-related pollutants are likely to fall disproportionately on poor communities and communities of color.<sup>101</sup> Accordingly, the economic costs of compliance (that the industry would have passed on more or less evenly to all of its customers) may be exchanged for more regressive health-based costs imposed disproportionately on already marginalized communities.

To bring the harms into sharper focus, consider that marginalized communities are likely to have far fewer social amenities in their neighborhoods (often lacking even the basics such as grocery stores),<sup>102</sup> earn less money for the same work,<sup>103</sup> have less education and a shorter life expectancy, accumulate less wealth, and generally benefit less from membership in society.<sup>104</sup> Members of such communities are, for this reason, likely to benefit less from the general societal “positives” of the

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<sup>101</sup> See generally *Toxic Wastes and Race at Twenty*, *supra* note 78. See also Jeanne Marie Zokovitch Paben, *Green Power & Envtl. Justice—Does Green Discriminate?*, 46 Tex. Tech L. Rev. 1067, 1078 (2014) (discussing the environmental justice impact of raw materials developed for power production); Alan Ramo, *California’s Energy Crisis—the Perils of Crisis Management & A Challenge to Envtl. Justice*, 7 ALB. L. ENVTL. OUTLOOK J. 1, 25 (2002) (noting the environmental justice implications of siting of fossil fuel plants); Peggy M. Shepard, *Issues of Cmty. Empowerment*, 21 FORDHAM URB. L.J. 739, 745 (1994) (noting the “connection between this nation’s reliance on fossil fuels, and the disproportionate negative environmental impact it has on communities of color”) (citing HENRY HOLMES, ENERGY POLICY & COMMUNITY ECONOMIC DEVELOPMENT 2 (1992)).

<sup>102</sup> Such areas are often referred to as “food deserts.” See Avi Brisman, *Food Justice As Crime Prevention*, 5 J. FOOD L. & POL’Y 1, 8–9 (2009) (discussing food deserts and noting that they “are residential areas that lack convenient access to the components of a fresh and healthful diet [and are] are overwhelmingly concentrated in low-income areas”); Paul A. Diller, *Combating Obesity with A Right to Nutrition*, 101 GEO. L.J. 969, 986 (2013) (observing that food deserts might be better characterized as “food swamps” because the void created by the absence of mainstream grocers is frequently filled by fast-food chains, takeout restaurants, and “corner stores” that sell a high proportion of obesogenic items like fried foods, candy, processed snack foods, and soft drinks”); Nareissa Smith, *Eatin’ Good? Not in This Neighborhood a Legal Analysis of Disparities in Food Availability and Quality at Chain Supermarkets in Poverty-Stricken Areas*, 14 MICH. J. RACE & L. 197 (2009).

<sup>103</sup> Daniel A. Farber & Philip P. Frickey, *Is Carolene Products Dead? Reflections on Affirmative Action and the Dynamics of Civil Rights Legislation*, 79 CAL. L. REV. 685, 726 (1991) (“Members of racial minorities, blacks in particular, have reason to feel like outsiders in America. Compared to majority group members in the same socioeconomic class, blacks earn less (even when education and experience are factored in), have higher unemployment rates, experience greater housing segregation, receive lower quality education, and have a shorter life expectancy.”) (citing R. BROOKS, RETHINKING THE AMERICAN RACE PROBLEM 25–128 (1990)). Lower earnings have associated implications for wealth and success. See Mylinh Uy, *Tax and Race: The Impact on Asian Americans*, 11 ASIAN L.J. 117, 122–23 (2004) (observing for example that because African Americans earn less they are “less likely to be able to buy a home and take advantage of the tax benefits available for homeowners”).

<sup>104</sup> See Alfreda Robinson, *Corp. Soc. Responsibility & African Am. Reparations: Jubilee*, 55 RUTGERS L. REV. 309, 316 (2003) (noting that “[r]ace creates, governs, influences, and dominates our social order,” and detailing how this is so); *Widening Wealth Gap*, *supra* note 97.

subsidized industrial activities.<sup>105</sup> To exacerbate matters, residents of poor communities and communities of color are more likely to be uninsured or underinsured,<sup>106</sup> less likely to have jobs with paid sick leave,<sup>107</sup> and less likely to have savings or other means to cope with chronic or prolonged illness or with the death of a primary wage earner.<sup>108</sup> Thus, the health-related impacts of furtive environmental subsidies may be felt more acutely, and may be more likely to lead to collapse of a family unit or other catastrophic consequences when they are imposed on these communities as opposed to on those with more resources.<sup>109</sup>

In light of the observations above, it seems evident that furtive environmental subsidies, regardless of their economic justifications, present serious questions of distributional equity. Such inequalities demand a structural fix to the environmental policymaking framework—one that regularizes probing and transparent analysis that expressly and deliberately addresses question of equity whenever furtive subsidies are proposed.

### III. FURTIVE SUBSIDIES IN STATUTORY CONTEXT

The following examples further illustrate the nature and scope of the problem of furtive subsidies for the fossil fuel industry.

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<sup>105</sup> See *supra* note 72. See also Sheila R. Foster, *Foreword*, 73 *FORDHAM L. REV.* 2027, 2036 (2005) (observing also that environmental racism is among the “many contemporary forms of racial discrimination” that the “current jurisprudential understandings render[s] invisible . . . and shield[s] . . . from judicial scrutiny”).

<sup>106</sup> Robert B. Leflar, *Reform of the United States Health Care System: An Overview*, 2013 *ARK. L. NOTES* 9 (2013) (observing that “[m]ore than one-third of Hispanic workers (33.8%) were uninsured in 2008, compared with 11.7% of African-Americans and 8.4% of Caucasians”).

<sup>107</sup> Katherine Elizabeth Ulrich, *Insuring Family Risks: Suggestions for A National Family Policy and Wage Replacement*, 14 *YALE J.L. & FEMINISM* 1, 21 (2002) (noting that “groups least likely to receive paid leave included women, Blacks and ‘All Others’ (those who are not Black, White, Hispanic, or Asian), single individuals, those who had a high school education or less, those earning less than \$20,000 per year, and hourly workers”) (citing *BALANCING THE NEEDS OF FAMILIES AND EMPLOYERS: FAMILY AND MEDICAL LEAVE SURVEYS*, U.S. DEP’T OF LABOR A-2-31, Table A2-4.1 (2001)).

<sup>108</sup> A. Mechele Dickerson, *Race Matters in Bankruptcy*, 61 *WASH. & LEE L. REV.* 1725, 1765 (2004) (discussing savings data and observing among other things that “[w]hite workers are more likely to work for employers with pension plans, and are more likely to participate in those plans, than blacks and Hispanics”).

<sup>109</sup> See, e.g., *Fact Sheet: Homelessness & Health: What’s the Connection?*, NATIONAL HEALTH CARE FOR THE HOMELESS COUNCIL (June 2011), [https://www.nhchc.org/wp-content/uploads/2011/09/Hln\\_health\\_factsheet\\_Jan10.pdf](https://www.nhchc.org/wp-content/uploads/2011/09/Hln_health_factsheet_Jan10.pdf) (discussing how the combination of poverty, poor health, and lack of insurance can result in a “downward spiral” that may lead to homelessness, and noting further that “[o]f the 1 million personal bankruptcies in 2007, 62% were caused by medical debt”).

### A. Electric Utility Hazardous Air Pollution

One of the most significant furtive subsidies in the CAA for the fossil fuel industry was the initial exclusion of electric utility steam generating units (“EGUs”) from the statute’s emission control requirements for hazardous air pollutants.<sup>110</sup> This exclusion effectively compelled communities to subsidize utility companies—absorbing the cost of their discharges, and paying with their health, wellbeing, quality of life, and economic potential.

Section 112 of the Clean Air Act<sup>111</sup> requires that EPA compile a list of “major source categories”—that is, a list of industry sectors that include facilities that emit statutorily significant quantities of HAPs.<sup>112</sup> The CAA itself identifies 187 HAPs, which the agency must consider in compiling its list of “major sources.”<sup>113</sup> Once EPA has generated its list of major source categories, the agency must promulgate “emission standards for each category or subcategory of major sources . . . of hazardous air pollutants,” and those emission standards must “require the maximum degree of reduction in emission . . . achievable.”<sup>114</sup> Thus, the architecture of the CAA “mandates that EPA list and establish emission standards for each category and subcategory of ‘major sources.’”<sup>115</sup>

Moreover, the statute initially directed EPA to complete the task of listing source categories by November 15, 1991, and to promulgate emission standards “as expeditiously as practicable,” ensuring that emission standards for “*all categories and subcategories*” are promulgated no later than November 15, 2000.<sup>116</sup> The statute also set

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<sup>110</sup> CAA § 112(n)(1), 42 U.S.C. § 7412(n)(1).

<sup>111</sup> 42 U.S.C. § 7412.

<sup>112</sup> CAA § 112(c)(1), 42 U.S.C. § 7412(c)(1). In particular, the CAA defines a major source as any “stationary source or groups of stationary sources located within a contiguous area under common control that emits or has the potential to emit considering controls, in the aggregate, *10 tons per year or more* of any hazardous air pollutant or *25 tons per year or more* of any combination of hazardous air pollutants. CAA § 112(a)(1), 42 U.S.C. § 7412(a)(1) (emphasis added).

<sup>113</sup> See CAA § 112(b)(1), 42 U.S.C. § 7412(b)(1); *Natural Res. Def. Council v. E.P.A.*, 489 F.3d 1250, 1254 (D.C. Cir. 2007) (explaining in § 112(b)(1) “Congress provided an ‘initial list’ of HAPs, and directed EPA to ‘periodically review the list’ and, ‘where appropriate, revise such list by rule, adding pollutants which present, or may present . . . a threat of adverse human health effects . . . or adverse environmental effects.’”) (internal citations omitted). EPA may add or delete HAPs pursuant to CAA §§ 112(b)(2), (b)(3), (c)(9), 42 U.S.C. §§ 7412(b)(2), (b)(3), (c)(9).

<sup>114</sup> CAA §§ 112(d)(1), (d)(2). These are commonly referred to as Maximum Achievable Control Technology or “MACT” standards. See *Ne. Md. Waste Disposal Auth. v. E.P.A.*, 358 F.3d 936, 939–40 (D.C. Cir. 2004).

<sup>115</sup> *Natural Res. Def. Council v. E.P.A.*, 489 F.3d at 1368.

<sup>116</sup> See CAA §§ 112(c)(1), (e)(1), 42 U.S.C. §§ 7412(c)(1), (e)(1) (emphasis added). The administrator was also required to publish a schedule for promulgation of standards for all categories and subcategories no later than November 15, 1992. See CAA § 112(e)(3), 42 U.S.C. § 7412(e)(3).

interim goals for the agency, requiring the promulgation of standards “for not less than 40 categories and subcategories” by November 15, 1992; promulgation of standards for 25 percent of listed sources by November 15, 1994; and standards for another 25 percent of sources by November 15, 1997.<sup>117</sup>

Nonetheless, EGUs received special solicitude under the hazardous air pollution provisions of the CAA. In particular, the Act instructed EPA *not* to include EGUs in its initial major source listing exercise; rather, EPA was to “perform a study of the hazards to public health reasonably anticipated to occur as a result of emissions by electric utility steam generating units,” and transmit that report to Congress no later than November 15, 1993.<sup>118</sup> Only “after considering the results of the study” could EPA regulate EGUs, and only then if it made a finding that “such regulation is appropriate and necessary.”<sup>119</sup>

Congress adopted the EGU exclusion as part of the 1990 amendments to the Clean Air Act.<sup>120</sup> In general, those amendments sought to significantly strengthen the regulations aimed at controlling HAPs.<sup>121</sup> For almost twenty years prior to 1990, EPA had attempted to regulate HAPs under a risk-based approach that Congress had adopted in 1970; the results of that effort were anemic.<sup>122</sup> In light of this failure, in 1990 Congress adopted a technology-based approach that restricted the agency’s discretion and facilitated a more efficient and effective regulatory process.<sup>123</sup> The § 112(n) EGU exclusion therefore stands in sharp contrast to the otherwise aggressive HAP provisions of the 1990 amendments.

The EGU provisions works in several ways to establish a long-term regulatory exclusion. First, by delaying any determination of the need to regulate HAPs from EGUs until after generation of a study (with a 1993 time window), the exclusion precluded placement of EGUs on the initial source category regulatory schedule, which EPA was to issue before the

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<sup>117</sup> CAA § 112(e)(1), 42 U.S.C. § 7412(e)(1).

<sup>118</sup> CAA § 112(n)(1), 42 U.S.C. § 7412(n)(1).

<sup>119</sup> *Id.* See also *New Jersey v. EPA*, 517 F.3d 574, 578 (D.C. Cir. 2008).

<sup>120</sup> Pub. L. No. 101-549, 104 Stat. 2531 (1990) (“1990 CAA Amendments”).

<sup>121</sup> See *Sierra Club v. E.P.A.*, 353 F.3d 976, 979 (D.C. Cir. 2004) (“Congress passed the Clean Air Act Amendments of 1990 . . . to ‘strengthen and expand the Clean Air Act.’”) (citing H.R. Rep. No. 101-490, pt. 1, at 150 (1990)).

<sup>122</sup> See S. Rep. No. 101-228, at 3 (1989) (“Very little has been done since the passage of the 1970 [CAA] to identify and control hazardous air pollutants.”). The risk-based approach required EPA to identify and list air pollutants that caused cancer and/or other adverse health effects, and then regulate significant sources of those pollutants so as to protect public health and the environment. See *Sierra Club v. E.P.A.*, 353 F.3d at 979 (also observing that “[f]rom 1970 to 1990, EPA listed only eight HAPs, establishing emission standards for seven of them”).

<sup>123</sup> See *Natural Res. Def. Council v. E.P.A.*, 529 F.3d at 1079.

end of 1992.<sup>124</sup> Thus delayed, there was little chance that EPA would engage in any regulatory planning for an EGU standard until after it had not only made the required determination, but also revisited the regulatory schedule. This had the immediate effect of generating institutional momentum against any such standard.

More importantly, by requiring an “appropriate and necessary” determination before EPA could add EGUs to the CAA’s § 112(c) source category list, the EGU exemption severely hampered the statutory leverage for strong regulation. With the § 112(n) exclusion in place, the regulation of EGUs functionally became a discretionary regulatory action.<sup>125</sup> This was, in effect, a sector-specific preservation of a risk-based approach to regulatory decision-making—an approach that had proven so ineffective prior to the 1990 Amendments. The difficulty of this kind of decision-making was borne out by EPA’s inability to meet its deadline for issuing the required study,<sup>126</sup> and its inability to issue an appropriate and necessary determination until the end of 2010.<sup>127</sup> Indeed, in support of its “appropriate and necessary finding” for EGUs, EPA generated hundreds of pages of risk assessment, explanation, and analysis, to justify adding EGUs to the CAA’s § 112(c) source category list on the basis of health risks.<sup>128</sup> For other source categories, on the other hand, this exercise was merely a question of adding up pollution tonnage.<sup>129</sup>

Ultimately, without a straightforward statutory mandate, EPA was ill equipped to move forward briskly over the objections and active

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<sup>124</sup> See *supra* note 113.

<sup>125</sup> Compare the certainty of the language in §§ 112(c)(1) and 112(d), which contemplates *mandatory* listing (based on the objective criteria of tons per year emissions) followed by *mandatory* promulgation of technology based emission standards, with the admonition of § 112(n) that EPA “shall regulate [EGUs] under this section, *if* the Administrator finds such regulation is *appropriate and necessary*.” CAA § 112(n)(1), 42 U.S.C. 7412(n)(1) (emphasis added).

<sup>126</sup> EPA ultimately issued the study in 1998. STUDY OF HAZARDOUS AIR POLLUTANT EMISSIONS FROM ELECTRIC UTILITY STEAM GENERATING UNITS—FINAL REPORT TO CONGRESS, U.S. EPA (Feb. 1998), <https://www3.epa.gov/ttn/atw/combust/utiltox/eurtc1.pdf>.

<sup>127</sup> See 65 Fed. Reg. 79825 (Dec. 20, 2000).

<sup>128</sup> See, e.g., 65 Fed. Reg. 79825 (Dec. 20, 2000); 2012 EGU MACT Rule, *supra* note 4; TECHNICAL SUPPORT DOCUMENT: NATIONAL-SCALE MERCURY RISK ASSESSMENT SUPPORTING THE APPROPRIATE AND NECESSARY FINDING FOR COAL- AND OIL-FIRED ELECTRIC GENERATING UNITS, U.S. EPA, [http://www.epa.gov/ttn/atw/utility/pro/hg\\_risk\\_tsd\\_3-17-11.pdf](http://www.epa.gov/ttn/atw/utility/pro/hg_risk_tsd_3-17-11.pdf); REVISED TECHNICAL SUPPORT DOCUMENT: NATIONAL-SCALE ASSESSMENT OF MERCURY RISK TO POPULATIONS WITH HIGH CONSUMPTION OF SELF-CAUGHT FRESHWATER FISH, U.S. EPA, <https://www.epa.gov/sites/production/files/2015-11/documents/20111216mercuryriskassessment.pdf>. EPA provides a comprehensive list of the many notices and background documents on its website at <https://cfpub.epa.gov/enforcement/cases/index.cfm>.

<sup>129</sup> See CAA §§ 112(a)(1) and 112(c)(1).



resistance of a powerful industry with a strong political lobby.<sup>130</sup> In fact, the utility industry convinced the George W. Bush administration to attempt to “undo” the appropriate and necessary determination,<sup>131</sup> and submitted reams of comments in support of this regulatory about-face.<sup>132</sup> If successful, EPA’s action would have effectively “delisted” EGUs and permanently sidestepped regulation under § 112. While the delisting was challenged in the courts, and ultimately did not withstand scrutiny,<sup>133</sup> the episode delayed action to regulate EGUs by perhaps a decade, and helps illustrate how successful the special treatment provision under § 112(n) was at creating a de facto long-term exemption under the CAA.

Finally, in March of 2011, more than a decade after making the required statutory determination, EPA proposed regulations for EGUs under § 112.<sup>134</sup> Those rules were finalized on February 16, 2012.<sup>135</sup> Not surprisingly, the utility industry continued to oppose regulation under § 112. EPA received more than twenty petitions for reconsideration of the rule,<sup>136</sup> and UARG and others challenged the rule in the U.S. Court of Appeals for the District of Columbia Circuit in an attempt to prevent the

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<sup>130</sup> The Utility Air Regulatory Group (“UARG”) is the primary advocacy organization for the utility industry when it comes to air-related law and policy. UARG describes itself as “a voluntary, non-profit association of electric generating companies and organizations and four national trade associations (the Edison Electric Institute, the National Rural Electric Cooperative Association, the American Public Power Association, and the National Mining Association). UARG’s purpose is to participate collectively on behalf of its members in EPA’s rulemakings and other Clean Air Act proceedings that affect the interests of electric generators and in litigation arising from those proceedings.” Comments of the Utility Air Regulator Group on the Proposed National Emission Standards for Hazardous Air Pollutants; and In the Alternative, Proposed Standards of Performance for New and Existing Stationary Sources: Electric Utility Steam Generation Units: Notice of Data Availability (Dec. 1, 2004), <http://www.publicpower.org/files/FINALMercuryCommentAtt.pdf> [hereinafter “UARG EGU MACT Comments”].

<sup>131</sup> See Revision of December 2000 Regulatory Finding, 70 Fed. Reg. 15994 (Mar. 29, 2005) (“Delisting Rule”); *New Jersey v. E.P.A.*, 517 F.3d 574, 577 (D.C. Cir. 2008).

<sup>132</sup> EPA received thousands of comments on the revised regulatory finding, see 70 Fed. Reg. at 15997, and 108 pages of comments from UARG in response to the agency’s public notice. See UARG EGU MACT Comments, *supra* note 130.

<sup>133</sup> See *New Jersey v. E.P.A.*, 517 F.3d at 583.

<sup>134</sup> National Emission Standards for Hazardous Air Pollutants From Coal and Oil-Fired Electric Utility Steam Generating Units and Standards of Performance for Fossil-Fuel-Fired Electric Utility, Industrial-Commercial- Institutional, and Small Industrial- Commercial-Institutional Steam Generating Units, 76 Fed. Reg. 24976 (proposed March 16, 2011).

<sup>135</sup> See 2012 EGU MACT Rule, *supra* note 4, at 9305–06.

<sup>136</sup> On April 23, 2013, EPA took final action on most of the issues for which it granted reconsideration. See Reconsideration of Certain New Source Issues: National Emission Standards for Hazardous Air Pollutants From Coal- and Oil-Fired Electric Utility Steam Generating Units and Standards of Performance for Fossil-Fuel-Fired Electric Utility, Industrial-Commercial-Institutional, and Small Industrial-Commercial-Institutional Steam Generating Units, 78 Fed. Reg. 24073, 24074 (Apr. 23, 2013).

2012 EGU Final Rule from taking effect.<sup>137</sup> Finally, on April 15, 2014, the D.C. Circuit ruled on the petitions for review, and denied each challenge to EPA's rule.<sup>138</sup> Thereafter, the U.S. Supreme Court granted a petition for certiorari, and ultimately reversed and remanded EPA's rule, concluding that that EPA unreasonably deemed cost irrelevant when it decided to regulate power plant emissions.<sup>139</sup> Thus, as a result of the § 112 EGU exemption, regulatory and political obstruction, and litigation, EGUs continue to operate today (more than 26 years after passage of the 1990 Clear Air Act Amendments) exempt from hazardous air pollutant control requirements that apply to all other major industrial sources.<sup>140</sup>

The emission reductions that would have resulted from regulation under the CAA's HAP provisions would have had dramatic consequences for communities across the country—rolling back a major furtive subsidy that helps to distort the market in favor of fossil fuels. In fact, because of EPA's recent regulatory efforts, we now have the rare advantage of a detailed assessment revealing the dividend that a particular furtive subsidy has been paying to its industry beneficiaries. The EPA rulemaking illustrates the troubling scale of the burden that this subsidy has imposed on communities and the public at large, including the following conclusions regarding public health benefits from the regulation of EGUs, specifically related to mercury. The EPA estimated that implementation of the Mercury Air Toxin Standard would annually avoid up to 11,000 premature deaths; 2,800 incidents of chronic bronchitis; 4,700 heart attacks; 130,000 asthma attacks; 5,700 hospital and emergency room visits; 3,200,000 restricted activity days; and 54,000 missed work days.<sup>141</sup>

In addition, mercury pollution from power plants can “damage” children's developing nervous systems, “impair[ing] [their] ability to think and learn,”<sup>142</sup> and contaminate waterways resulting in fish

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<sup>137</sup> The D.C. Circuit held oral argument in these cases on December 10, 2013. See John Walke, *Clean Air Has Its Day in Court*, NRDC SWITCHBOARD (Dec. 13, 2013), [http://switchboard.nrdc.org/blogs/jwalke/clean\\_air\\_has\\_its\\_day\\_in\\_court.html](http://switchboard.nrdc.org/blogs/jwalke/clean_air_has_its_day_in_court.html).

<sup>138</sup> *White Stallion Energy Ctr., LLC v. E.P.A.*, 748 F.3d 1222, 1229 (D.C. Cir. 2014), *rev'd sub nom. Michigan v. E.P.A.*, 135 S. Ct. 2699, 2712, 192 L. Ed. 2d 674, 688 (2015).

<sup>139</sup> *Michigan v. E.P.A.*, 135 S. Ct. at 2712.

<sup>140</sup> Even if EPA were to readopt the 2012 standards considering cost in a manner acceptable to the court, such rule would almost certainly defer implement for at least three years, as did the original 2012 rule. See 2012 EGU MACT Rule, *supra* note 4, at 9465 (the Final Rule would not have required any actual emission reductions from electric utility until 2015).

<sup>141</sup> See Fact Sheet: Mercury and Air Toxics Standards for Power Plants, U.S. EPA, <https://www.epa.gov/sites/production/files/2015-11/documents/20111221matssummaryfs.pdf> [hereinafter “EGU MACT Fact Sheet”].

<sup>142</sup> *Id.* at 1.

consumption advisories and adverse impacts on aquatic ecosystems.<sup>143</sup> In connection with the final Mercury Rule, EPA prepared a comprehensive regulatory impact analysis (“RIA”), which explores in detail, among other things, the costs and benefits of the rule. According to EPA’s analysis, the externalized *human health* costs alone associated with mercury and hazardous air pollutant emissions from covered sources amounted to between \$37 and \$90 billion dollars annually.<sup>144</sup> That is to say, communities across the United States have been subsidizing the operation of coal and oil-power plants, with sacrifices to their personal health and wellbeing, to the tune of perhaps \$90 billion per year. When Congress adopted the 1990 Clean Air Act Amendments, it agreed to place this hefty load on shoulders of those communities who would experience the consequences of the pollution from this industry.

Because these subsidies are paid in the form of impaired health (from chronic bronchitis, heart attacks, and asthma attacks), lost productivity (from lost workdays and schooldays, hospital and emergency room visits, and restricted activity days), and premature deaths, they have more than simply sterile economic impacts on affected communities. They impair the ability of affected communities to thrive, reduce capacity to build wealth, undermine both the relative economic and political power of communities, and impose an incalculable psychological and emotional toll (especially when they affect the wellbeing of children).<sup>145</sup>

The energy sector, on the other hand, has reaped (and continues to reap) the benefits of the longstanding furtive subsidy. EPA estimates that the cost to utility, industry, and society associated with complying with the 2012 EGU Rule would be \$9.6 billion annually.<sup>146</sup> In effect, this means that Congress, when it adopted the § 112(n) exclusion, traded the health and wellbeing of American communities to the tune of between \$37 to \$90 billion dollars per year, for an annual subsidy to the fossil fuel

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<sup>143</sup> *Id.* See also EGU MACT RIA, *supra* note 60, at § 4.3 (“Impacts of Mercury on Ecosystems and the Environment.”) EPA could not quantify all the benefits of the rule. As EPA explains in the RIA, “EPA was unable to quantify or monetize all of the health and environmental benefits associated with the final MATS Rule. EPA believes these unquantified benefits could be substantial, including the overall value associated with HAP reductions, value of increased agricultural crop and commercial forest yields, visibility improvements, and reductions in nitrogen and acid deposition and the resulting changes in ecosystem functions.” *Id.* at ES-9.

<sup>144</sup> 2012 EGU MACT Rule, *supra* note 4, at 9305–06.

<sup>145</sup> See Helen H. Kang, *Pursuing Envtl. Justice: Obstacles & Opportunities—Lessons from the Field*, 31 WASH. U.J. L. & POL’Y 121, 127–28 (2009) (discussing why “environmental vulnerability is but one of the many challenges that minority and low-income communities face”); *Smog in Our Brains*, AMER. PSYCH. ASSOC., <http://www.apa.org/monitor/2012/07-08/smog.aspx> (discussing the potential impact of pollution on cognitive function).

<sup>146</sup> 2012 EGU MACT RULE, *supra* note 4, at 9306. These costs reflect “the sum of the compliance costs and monitoring and reporting costs.” *Id.*

utility industry of less than \$10 billion (that money they would otherwise have needed to spend to reduce harmful air emissions).<sup>147</sup> It is only natural to ask why any decision-making body would have done such a thing.

Without question, individuals often make implicit choices to accept certain burdens, including limitations on our personal freedoms and sacrifices to our personal wellbeing, as the price for admission in modern society.<sup>148</sup> There is a manifest difference, however, when we have elected as a social unit to ensure protection from certain categories of burden—say by requiring large polluters to control certain types of emissions—and then we carve out *special rules* to allow certain industries to skirt those established protections. Such actions imply that there is something so extraordinarily important about the activity of that particular industry that we are willing to subsidize its economic health by sacrificing the health of at least some segment of our society.<sup>149</sup>

Even when viewed from this perspective, it is not necessarily true that such a subsidy is inappropriate *per se*. However, in light of the potentially profound burdens imposed on encumbered communities, it seems prudent to subject any sector-specific regulatory exclusion to heightened scrutiny—both at its inception, and throughout the life of the subsidy.<sup>150</sup>

### B. Coal Ash

Another of the most remarkable longstanding exclusions for the fossil fuel industry is the exemption of coal ash or coal combustion wastes<sup>151</sup>

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<sup>147</sup> *Id.* at 9305–06. These costs of course would be associated with the purchase, operation and maintenance of emission control technologies, the upgrading of antiquated and inefficient combustion equipment, and other regulatory compliance costs (such as recordkeeping and reporting responsibilities).

<sup>148</sup> For example, we agree to be bound by traffic laws (requiring seatbelts, or prohibiting cell phone use) to promote safety and general social welfare. Also we accept the risk of driving motor vehicles, we use household cleaners and other chemicals, and we want the benefits of electric power, despite the fact that each of these choices has inherent attendant risk and necessarily imposes some costs associated with those risks.

<sup>149</sup> In the United States at least, we do this without even providing a comprehensive health care safety net, which would at least help to ensure that the victims of the inevitable harm that such subsidies cause are not left to absorb the burden entirely as individuals—a scenario that often leads to personal tragedy.

<sup>150</sup> As others have noted, the justifications for subsidies, including furtive subsidies crafted as regulatory exclusions, often disappear over time, but the subsidies are rarely withdrawn. See PERVERSE SUBSIDIES, *supra* note 18, at 9.

<sup>151</sup> Coal combustion wastes are also referred to as “coal combustion products,” “coal combustion byproducts,” and “coal combustion residuals.” These alternative monikers are intended, at least in part, to deemphasize the nature of these materials as waste products. The World Coal Association, for example, highlights the many beneficial uses of “coal combustion products.” See *Coal Combustion Products*, WORLD COAL ASSOCIATION, <http://www.worldcoal.org/coal/uses-of-coal/coal-combustion-products/>. American Electric Power (“AEP”) also publicly proclaims itself to be “a steward of the environment” because of its commitment “to the recycling

from regulation under the federal Resource Conservation and Recovery Act (“RCRA”).<sup>152</sup> Coal-fired utilities (and other large scale coal users) generate these wastes as a byproduct of coal combustion.<sup>153</sup> The United States generates an enormous quantity of coal combustion wastes every year—more than 130 million tons according to EPA.<sup>154</sup> Health and environmental advocates often describe coal ash as America’s second largest industrial waste stream—second only to mining waste.<sup>155</sup>

In fact, this waste category consists of several different discrete waste streams, including fly ash, bottom ash, boiler slag, and flue gas desulfurization wastes (“FGD wastes” or “scrubber sludge”).<sup>156</sup> EPA described these individual waste streams in detail in its 2010 proposed rule.<sup>157</sup> For simplicity’s sake, this Article will refer to these wastes collectively as “coal ash” or “coal wastes.”

Significantly, the coal ash waste stream is not only massive, it is also laced with an array of hazardous constituents, which can give rise to a variety of human health and environmental concerns.<sup>158</sup> According to EPA, “[t]he contaminants of most environmental concern in [coal ash] are antimony, arsenic, barium, beryllium, cadmium, chromium, lead, mercury, nickel, selenium, silver and thallium.”<sup>159</sup> The range of health effects that EPA identifies as associated with exposure to these substances includes skin, liver, bladder and lung cancer, altered glucose and cholesterol levels, myocardial (heart-related) effects, spontaneous abortions, gastrointestinal disturbance, muscular weakness, conditions resembling pneumonia, kidney disease, lung disease, fragile bone,

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of its coal combustion products (“CCP”).” See *Coal Combustion Products*, AMERICAN ELECTRIC POWER <https://www.aep.com/about/b2b/CoalCombustionProducts/>.

<sup>152</sup> Solid Waste Disposal Act, 42 U.S.C. § 6901 *et seq.*

<sup>153</sup> See Hazardous and Solid Waste Management System; Identification and Listing of Special Wastes; Disposal of Coal Combustion Residuals From Electric Utilities, 75 Fed. Reg. 35128, 35136–37 (June 21, 2010) [hereinafter “CCR Proposed Rule”].

<sup>154</sup> See *id.* at 35151 (noting that there were some “136 million tons of CCRs generated by coal-fired electric power plants in 2008”) (citing 2008 COAL COMBUSTION PRODUCT (CCP) PRODUCTION & USE SURVEY REPORT (AMERICAN COAL ASH ASSOCIATION (“ACAA”) (2009)). The ACAA’s latest survey reports about 117 million tons of coal ash production for calendar year 2015. 2015 COAL COMBUSTION PRODUCT (CCP) PRODUCTION & USE SURVEY REPORT (ACAA 2016), [https://www.acaa-usa.org/Portals/9/Files/PDFs/2015-Survey\\_Results\\_Table.pdf](https://www.acaa-usa.org/Portals/9/Files/PDFs/2015-Survey_Results_Table.pdf).

<sup>155</sup> See COAL ASH: HAZARDOUS TO HUMAN HEALTH I (Physicians for Social Responsibility), <http://www.psr.org/resources/coal-ash-hazardous-to-human-health.html>; See also Senate Coal Ash Bill Leaves Americans in Harm’s Way and Fails to Promote Recycling, EARTHJUSTICE ET AL., <http://earthjustice.org/sites/default/files/S1751-fact-sheet.pdf>.

<sup>156</sup> See CCR Proposed Rule, *supra* note 153, at 35130. See also 2015 COAL COMBUSTION PRODUCT (CCP) PRODUCTION & USE SURVEY REPORT (ACAA 2016), [https://www.acaa-usa.org/Portals/9/Files/PDFs/2015-Survey\\_Results\\_Table.pdf](https://www.acaa-usa.org/Portals/9/Files/PDFs/2015-Survey_Results_Table.pdf).

<sup>157</sup> CCR Proposed Rule, *supra* note 153, at 35137.

<sup>158</sup> *Id.* at 35137–38.

<sup>159</sup> *Id.* at 35138.

decreased nervous system function, high blood pressure, anemia, brain damage, kidney damage, fetal abnormalities, allergic reaction, selenosis,<sup>160</sup> argyria,<sup>161</sup> hair loss, and reproductive system damage.<sup>162</sup>

Typically, utilities dispose of their coal combustion wastes on-site, in large open pits.<sup>163</sup> These may be dry waste piles or large sludge impoundments (containing coal ash mixed with water).<sup>164</sup> Because power plants are almost always located adjacent to waterways (to accommodate the large quantities of needed process and cooling water), these coal waste units can threaten both ground water and surface water resources.<sup>165</sup> Despite the existence of a federal statute that contemplates comprehensive management of all hazardous wastes, as discussed below, until very recently coal ash was subject only to a patchwork of inconsistent state laws that differ tremendously in terms of both stringency and vigor of enforcement.

RCRA, the vehicle through which the federal government regulates the disposal of both hazardous and non-hazardous solid waste,<sup>166</sup> imposes a stringent combination of requirements on hazardous waste generators<sup>167</sup> and transporters,<sup>168</sup> as well as on owners and operators of hazardous waste treatment, storage and disposal facilities (frequently referred to as “TSDs”).<sup>169</sup> Justice Scalia has described RCRA as “a comprehensive environmental statute that empowers EPA to regulate hazardous wastes from cradle to grave, in accordance with . . . rigorous safeguards and waste management procedures . . . .”<sup>170</sup> The objective of the statute is “to

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<sup>160</sup> Chronic is defined as, “(long-term) expos[ure] to high levels of selenium in food and water have reported discoloration of the skin, pathological deformation and loss of nails, loss of hair, excessive tooth decay and discoloration, lack of mental alertness, and listlessness.” *Selenium Compound: Hazard Summary*, U.S. EPA, <https://www.epa.gov/sites/production/files/2016-09/documents/selenium-compounds.pdf>.

<sup>161</sup> “Argyria . . . is a condition caused by improper exposure to chemical forms of the element silver, silver dust, or silver compounds. The most dramatic symptom of argyria is that the skin becomes blue or bluish-grey colored. Argyria may be found as generalized argyria or local argyria.” *Argyria*, <http://www.princeton.edu/~achaney/tmve/wiki100k/docs/Argyria.html>.

<sup>162</sup> CCR Proposed Rule, *supra* note 153, at 35169 n.99.

<sup>163</sup> See Barbara Gottlieb, *Coal Ash, The Toxic Threat to Our Health and Environment*, PHYSICIANS FOR SOCIAL RESPONSIBILITY, at vi (2010), <http://www.psr.org/assets/pdfs/coal-ash.pdf> [hereinafter “PSR COAL ASH REPORT”].

<sup>164</sup> See *id.* Water is often used to inexpensively transport the coal ash from the power plant to the sludge pond.

<sup>165</sup> *Id.* at 8–10.

<sup>166</sup> See generally 40 U.S.C. § 6902(a).

<sup>167</sup> See 42 U.S.C. § 6922.

<sup>168</sup> See 42 U.S.C. § 6923.

<sup>169</sup> See 42 U.S.C. § 6924.

<sup>170</sup> *City of Chicago v. Envtl. Def. Fund*, 511 U.S. 328, 331, 114 S. Ct. 1588, 1590, 128 L. Ed. 2d 302 (1994) (discussing Subtitle C of RCRA, 42 U.S.C. §§ 6921–6934). See also *Steel Mfrs. Ass’n v. E.P.A.*, 27 F.3d 642, 644 (D.C. Cir. 1994) (“Subtitle C of RCRA . . . ‘directs EPA to

minimize the present and future threat to human health and the environment” from hazardous wastes.<sup>171</sup>

As an initial step, RCRA required that EPA “develop and promulgate criteria for identifying the characteristics of hazardous waste” and promulgate regulations actually “listing particular hazardous wastes.”<sup>172</sup> In particular, the statute instructs EPA to take into account a substance’s “toxicity, persistence and degradability in nature, potential for accumulation in tissue, and other related factors such as flammability, corrosiveness, and other hazardous characteristics.”<sup>173</sup> Once a substance is listed as hazardous, any party who generates waste containing such substance is subject to the “waste generator” requirements of the statute and the corresponding EPA regulations.<sup>174</sup> These standards include recordkeeping, reporting and labeling requirements, as well as obligations to furnish information regarding chemical composition and to utilize a manifest system to enable tracking and ensure proper handling.<sup>175</sup> “EPA regulations assume that waste is properly characterized as hazardous or nonhazardous when it first becomes waste. Based on that characterization, the waste is regulated under either Subtitle C or D.”<sup>176</sup>

EPA’s rules promulgated pursuant to Subchapter D of RCRA prescribe criteria for landfills that accept non-hazardous solid wastes.<sup>177</sup> This includes solid wastes such as municipal garbage (household trash), non-recycled household appliances, scrap metal, sludge from industrial and municipal waste water treatment, and construction and demolition debris.<sup>178</sup> Significantly, such landfills are not subject to direct federal regulation.<sup>179</sup> In contrast to the strong federal role in the regulation of hazardous wastes under Subtitle C regulation, Congress intended for state and local governments to serve as the primary regulating agents under Subtitle D—EPA, under Subtitle D, is restricted to establishing technical design and operating criteria (which, at a minimum, the States must

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establish a comprehensive “cradle to grave” system regulating the generation, transport, storage, treatment and disposal of hazardous wastes.”) (quoting *Chemical Waste Management, Inc. v. Hunt*, 504 U.S. 334, 337 n.1, 112 S.Ct. 2009, 2011 n.1, 119 L.Ed.2d 121 (1992)).

<sup>171</sup> 42 U.S.C. § 6902(b).

<sup>172</sup> 42 U.S.C. § 6921(a), (b) (emphasis added). The hazardous waste list may be revised as appropriate to include additional substances, 42 U.S.C. § 6921(b), and substances may be deleted from the list pursuant to § 6921(f).

<sup>173</sup> 42 U.S.C. § 6921(a).

<sup>174</sup> See 42 U.S.C. § 6922. See, e.g., 40 C.F.R. § 262.10(a).

<sup>175</sup> 42 U.S.C. § 6922(a). See, e.g., 40 C.F.R. § 262.10(a).

<sup>176</sup> *City of Chicago v. Env'tl. Def. Fund*, 511 U.S. at 340–41 (Stevens, J., dissenting).

<sup>177</sup> See, e.g., 40 C.F.R. § 258.1(a).

<sup>178</sup> See 40 C.F.R. § 243.101.

<sup>179</sup> See 40 C.F.R. § 239.1.

include in their own regulations).<sup>180</sup> Moreover, while Subtitle D directs EPA to evaluate the adequacy of the state permit programs, in practice EPA is precluded from conducting compliance inspections or otherwise pursuing enforcement of the federal minimum criteria unless and until the Agency makes a formal determination that a state's solid waste program is inadequate.<sup>181</sup> As a result, in practice, states enjoy a tremendous degree of autonomy both with respect to the design and administration of their subtitle D solid waste programs, and with respect to the vigor with which those programs are enforced.<sup>182</sup>

As is the case for toxic air emissions under the CAA, however, the fossil fuel industry received special immunities (with respect to coal ash among other things) when RCRA was passed.<sup>183</sup> As a result, the disposal of coal ash for decades was subject to neither Subtitle C nor Subtitle D regulation.<sup>184</sup> Like the CAA, RCRA instructed EPA to conduct a study of coal combustion wastes.<sup>185</sup> It then conditioned EPA's authority to

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<sup>180</sup> See, e.g., 40 C.F.R. §§ 257, 258.

<sup>181</sup> See *Ringbolt Farms Homeowners Ass'n v. Town of Hull*, 714 F. Supp. 1246, 1257–59 (D. Mass. 1989).

<sup>182</sup> See REPORT: EPA MUST IMPROVE OVERSIGHT OF STATE ENFORCEMENT, EPA OFFICE OF INSPECTOR GENERAL 8–17 (Dec. 2011), <https://www.epa.gov/sites/production/files/2015-10/documents/20111209-12-p-0113.pdf>. See also Shanila Chatlani, *Two Years After EPA's Coal Ash Rule, Progress Depends On States*, UTILITY DIVE, <http://www.utilitydive.com/news/two-years-after-epas-coal-ash-rule-progress-depends-on-states/419672/>.

<sup>183</sup> See *supra* note 5 (discussing § 112(n) of the CAA).

<sup>184</sup> In particular, RCRA § 3001(b)(3)(A) (42 U.S.C. § 6921(b)(3)(A)) includes the following special provisions:

Notwithstanding the provisions of paragraph (1) of this subsection, each waste listed below shall, except as provided in subparagraph (B) of this paragraph, be subject *only to regulation under other applicable provisions of Federal or State law in lieu of this subchapter* until at least six months after the date of submission of the applicable study required to be conducted under subsection (f), (n), (o), or (p) of section 6982 of this title and after promulgation of regulations in accordance with subparagraph (C) of this paragraph . . . (i) Fly ash waste, bottom ash waste, slag waste, and flue gas emission control waste generated primarily from the combustion of coal or other fossil fuels.

*Id.* This provision also includes statutory exemptions for “[s]olid waste from the extraction, beneficiation, and processing of ores and minerals, including phosphate rock and overburden from the mining of uranium ore,” and “Cement kiln dust waste.” *Id.*

<sup>185</sup> The relevant provision states:

The Administrator shall conduct a detailed and comprehensive study and submit a report on the adverse effects on human health and the environment, if any, of the disposal and utilization of fly ash waste, bottom ash waste, slag waste, flue gas emission control waste, and other byproduct materials generated primarily from the combustion of coal or other fossil fuels.

42 U.S.C.A. § 6982(n) (also directing EPA to include in its study certain analyses). The statute provides further that:

The Administrator shall publish a report on such study, which shall include appropriate findings, not later than twenty-four months after October 21, 1980. Such study and findings shall be submitted to the Committee on Environment and Public Works of the



regulate coal ash disposal on the Agency's ability to make a determination that such regulations were warranted.<sup>186</sup>

Not later than six months after the date of submission of the applicable study . . . the Administrator shall . . . either determine to promulgate regulations under this subchapter . . . or determine that such regulations are unwarranted. The Administrator shall publish his determination, which shall be based on information developed or accumulated pursuant to such study . . . in the Federal Register accompanied by an explanation and justification of the reasons for it.<sup>187</sup>

Again, with RCRA, as was the case under § 112(n) of the Clean Air Act, the strategy of delay, and the imposition of special substantive and procedural hurdles, have functioned to effectively exempt this waste stream from meaningful, uniform regulation for decades.

The history of this furtive subsidy is instructive. EPA first implemented RCRA by adopting a comprehensive regulatory structure in the years following initial passage of the statute.<sup>188</sup> The proposed rule included a "special waste" category that was subject to "tailored management standards" to address the unique concerns of high volume and low toxicity wastes like mining waste. The final rule, however, abandoned the "special waste" provisions of the proposal.<sup>189</sup> After promulgation of the final rule, the mining industry and the electric utility industry went to Congress seeking enshrinement of some special treatment in the statute itself.<sup>190</sup> In October of 1980, Congress passed what has come to be known as the "Bevill Amendment,"<sup>191</sup> which carved out several types of waste streams, including coal ash,<sup>192</sup> and erected significant hurdles to their regulation under RCRA Subchapter C.

On its face, the Bevill Amendment merely requires the completion of a study (and other administrative steps) before EPA may regulate coal

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United States Senate and the Committee on Energy and Commerce of the United States House of Representatives.

*Id.*

<sup>186</sup> In this regard the provision mirrors § 112(n) of the Clean Air Act, discussed in the preceding section of this Article.

<sup>187</sup> 42 U.S.C.A. § 6921(b)(3)(C).

<sup>188</sup> 43 Fed. Reg. 58946 (1978) (proposed rule). 45 Fed. Reg. 33066 (1980) (final rule).

<sup>189</sup> Steven G. Barringer, *The RCRA Bevill Amendment: A Lasting Relief for Mining Wastes?*, 17 NAT. RESOURCES & ENV'T 155, 156 (Winter 2003).

<sup>190</sup> *Id.* at 157.

<sup>191</sup> Pub. L. 69-482 (Oct. 21, 1980). The amendment is named for the former Congressman Thomas Bevill of Alabama who sponsored the bill in the House of Representatives. Barringer, *supra* note 189, at 157.

<sup>192</sup> The Bevill amendment also created special statutory privileges for solid wastes associated with oil and gas exploration and drilling. 42 U.S.C. § 6921. Finally, the amendment identified cement kiln dust as another class of waste deserving of special treatment. *Id.*

ash as hazardous waste, but as a practical matter, the statutory exclusion functioned as an ongoing de facto exemption. Among other things, one effect of the Bevill Amendment is to shift the burden of proof regarding toxicity and the need to regulate to EPA; regulation was no longer simply a matter of identifying the material as a “solid waste”<sup>193</sup> and applying the criteria for hazardous waste characterization.<sup>194</sup> This placed EPA again in the position of having to take affirmative discretionary action in the face of powerful political opposition before it could adopt regulatory protections merely reflecting the status quo for every other industrial sector. This is something that EPA has repeatedly proven incapable of doing quickly, if at all.<sup>195</sup> As a result, the Bevill Amendments effectively enshrined a regulatory exemption for coal ash to the detriment of communities located near unregulated or under-regulated coal ash piles and sludge ponds.

The evidence is strong that the Bevill Amendment has led to significant risks for communities. As a result of the Bevill Amendment, coal ash disposal is subject only to state regulation.<sup>196</sup> This poses

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<sup>193</sup> 42 U.S.C.A. § 6903(27) (“The term ‘solid waste’ means any garbage, refuse, sludge from a waste treatment plant, water supply treatment plant, or air pollution control facility and other discarded material, including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations, and from community activities.”). *See also*, EXCLUSIONS AND EXEMPTIONS FROM RCRA HAZARDOUS WASTE REGULATION (Department of Energy, 1993) <https://www.osti.gov/scitech/servlets/purl/10133339>.

<sup>194</sup> A waste product is not subject to regulation under RCRA Subtitle C unless is it both a “solid waste” and a “hazardous waste.” EPA lists hazardous wastes at 40 CFR Part 261. *See* HAZARDOUS WASTE LISTING: A USER FRIENDLY REFERENCE DOCUMENT, U.S. EPA, [https://www.epa.gov/sites/production/files/2016-01/documents/hw\\_listref\\_sep2012.pdf](https://www.epa.gov/sites/production/files/2016-01/documents/hw_listref_sep2012.pdf).

<sup>195</sup> In this context, EPA finally did propose some alternatives for regulating coal ash in 2010, however it was unable to move the regulation forward until 2015, when it issued final regulations that imposed only limited restrictions on coal ash disposal. Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals From Electric Utilities, 80 Fed. Reg. 21302 (April 17, 2015) (to be codified at 40 C.F.R. §§ 257 and 261) [hereinafter “CCR Final Rule”]. *See also* EPA’s First-Ever Coal Ash Rule Leaves Communities to Protect Themselves, Earthjustice (Press Release, Dec. 19, 2014) <http://earthjustice.org/news/press/2014/epa-s-first-ever-coal-ash-rule-leaves-communities-to-protect-themselves> (reflecting the environmental community’s dissatisfaction with EPA’s regulatory approach). The sluggishness of the regulatory process, and the relative laxity of the final rules were due in large part to political resistance from the fossil fuel industry, and the intervention of the White House Office of Management and Budget (“OMB”), industry’s de facto fiscal watchdog within the executive branch. *See* Robert L. Brubaker & Judith L. French-Berry, *Is A Rule by Any Other Name Still A Rule?: Case Answers Under the Clean Air Act*, 18 N. KY. L. REV. 271, 293 (1991) (observing that “[t]here’s no question that OMB’s Office of Information and Regulatory Affairs routinely reviews and attempts to influence the substance of proposed agency rules. Sometimes this is done by pressuring an agency to shift direction and sometimes it is done by holding rules hostage for long periods of time”); Richard J. Lazarus, *The Tragedy of Distrust in the Implementation of Federal Environmental Law*, 54 L. & CONTEMP. PROBS. 311, n.137 (1991) (noting that once “OMB ‘held’ a rule proposed by EPA pursuant to the Resource Conservation and Recovery Act . . . from October 1988 to July 1990”).

<sup>196</sup> 42 U.S.C.A. § 6921(b)(3)(A).

significant problems for two reasons. The first is that states have a tendency to compete in a “race to the bottom” in order to acquire a competitive advantage when attracting new industry.<sup>197</sup> The second is that fossil fuel and utility interests play a dominant role in many states’ politics. In light of these two factors, the substantive stringency of environmental protections related to coal ash disposal varies dramatically from state to state.

Advocates for the regulation of coal ash note that coal ash threatens both surface water and groundwater resources.<sup>198</sup> They note that leaks or catastrophic failure of sludge ponds (which can occur when the berms that contain the ash-water slurry rupture) pose the biggest threat to surface water.<sup>199</sup> Just such an event occurred in December 22, 2008, when a berm collapsed at the Kingston Fossil power plant in Tennessee releasing approximately 5.4 million cubic yard of coal as slurry.<sup>200</sup> Moreover, in the absence of federal regulation, information about the number of such ponds, the quantity of wastes that they contain, and the condition of their containment berms is spotty.<sup>201</sup> EPA ultimately concluded that 467 coal plants dispose of coal in one way or another.<sup>202</sup> And it is clear from information gathered by EPA in 2009 that a significant number of such ponds (almost 7 percent of those for which EPA then had information) deserved a “high” hazard rating, meaning that dam failure is likely to cause loss of life.<sup>203</sup>

Yet, as Physicians for Social Responsibility points out, “[f]ar more common than a dam break is leaching of contaminants from ponds and landfills . . . [which] can endanger public health and the environment by

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<sup>197</sup> See William W. Buzbee, *Brownfields, Environmental Federalism, and Institutional Determination*, 21 WM. & MARY ENVTL. L. & POL’Y REV. 1, 24 (1997).

<sup>198</sup> PSR COAL ASH REPORT, *supra* note 163, at 8–9.

<sup>199</sup> *Id.*

<sup>200</sup> See David Biello, *Toxic Ash Pond Collapse in Tennessee*, SCIENTIFIC AMERICAN, Dec. 23, 2013, <http://www.scientificamerican.com/article/toxic-ash-pond-collapses/>. See also Shaila Dewan, *Tennessee Ash Flood Larger Than Initial Estimate*, N.Y. TIMES, December 27, 2012, [http://www.nytimes.com/2008/12/27/us/27sludge.html?\\_r=0](http://www.nytimes.com/2008/12/27/us/27sludge.html?_r=0).

<sup>201</sup> PSR COAL ASH REPORT, *supra* note 163, at 7.

<sup>202</sup> See REGULATORY IMPACT ANALYSIS FOR EPA’S PROPOSED RCRA REGULATION OF COAL COMBUSTION RESIDUES (CCR) GENERATED BY THE ELECTRIC UTILITY INDUSTRY, U.S. EPA 33, 39, Exhibit 3G (April 2010) (indicating also the following figures regarding coal ash: 56.8 million tons disposed in on-site landfills, 22.4 million tons disposed in on-site impoundments (ponds), and 15 million tons disposed in off-site landfills, annually).

<sup>203</sup> Fact Sheet: Coal Combustion Residues (CCR)—Surface Impoundments with High Hazard Potential Ratings, U.S. EPA (June 2009), <https://nepis.epa.gov/Exe/tiff2png.cgi/P10048EX.PNG?-r+75+->

g+7+D%3A%5CZYFILES%5CINDEX%20DATA%5C06THRU10%5CTIFF%5C0000453%5CP10048EX.TIF. EPA identified another significant percentage as having a “significant” rating, meaning that failure would cause substantial “ecological loss, environmental damage, or damage to infrastructure.” PSR COAL ASH REPORT, *supra* note 163, at 7.

contaminating surface water or groundwater used for drinking supplies.”<sup>204</sup> The EPA and others have documented damage to water resources from coal ash leachate at dozens of sites across the country,<sup>205</sup> and detected dangerously elevated concentrations of numerous hazardous chemicals.<sup>206</sup> The quantities of coal ash that are generated each year are staggering. In its proposed rule, EPA put the number at 136 million tons generated in 2008.<sup>207</sup>

Significantly, there are important distributional concerns about the dangers from coal ash contamination.<sup>208</sup> According to EPA, risks from the disposal of coal ash are disproportionately high for poor communities and children. In particular, EPA found:

[T]hat for the non-cancer health effects in the groundwater-to-drinking-water pathway and in the fish consumption pathways evaluated in the probabilistic modeling, children rather than adults had the higher exposures. This result stems from the fact that while at a given exposure point (e.g., a drinking water well located a certain distance and direction down-gradient from the landfill or surface impoundment), the modeled groundwater concentration is the same regardless of whether the receptor is an adult or a child. Thus the other variables in the exposure equations (that relate drinking water intakes or fish consumption rates and body weight to a daily “dose” of the constituent) mean that, on a per-kilogram-body-weight basis, children are exposed to higher levels of constituents than adults.<sup>209</sup>

In its proposed rule, EPA also concluded:

A disproportionate number of electric utility plants have surrounding child population percentages which exceed their

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<sup>204</sup> PSR COAL ASH REPORT, *supra* note 163, at 9.

<sup>205</sup> *Id.* at 16.

<sup>206</sup> *Id.* at 10.

<sup>207</sup> Hazardous and Solid Waste Management System; Identification and Listing of Special Wastes; Disposal of Coal Combustion Residuals from Electric Utilities, 75 Fed. Reg. 35128 (June 21, 2010) (discussing the “136 million tons of CCRs generated by coal-fired electric power plants in 2008”).

<sup>208</sup> As a result, proper management and disposal is not just an issue of immediate distributional concern, it is a question as well of intergenerational equity—what quality of environment will we leave to future generations if we fail to appropriately address this waste stream in the present? As Justice Scalia has explained: “[G]iven the statute’s express declaration of national policy that waste that is . . . generated should be treated, stored, or disposed of so as to minimize the present and future threat to human health and the environment, . . . we cannot interpret the statute to permit [Municipal Waste Combustor] ash sufficiently toxic to qualify as hazardous to be disposed of in ordinary landfills.” *City of Chicago v. Environmental Defense Fund*, 522 U.S. at 335 (internal quotations omitted).

<sup>209</sup> Hazardous and Solid Waste Management System; Identification and Listing of Special Wastes; Disposal of Coal Combustion Residuals from Electric Utilities, 75 Fed. Reg. 35128 (June 21, 2010) (proposed rule).

statewide benchmark . . . Using the nationwide aggregation basis across all 495 electric utility plants in all 47 states where the plants are located, 6.08 million people reside near these electric utility plants, including 1.54 million children.”<sup>210</sup>

The demographic data also “indicate that the current (baseline) environmental and human health hazards and risks from electric utility [coal ash] disposal units . . . may have a . . . disproportionately higher effect on low-income populations.”<sup>211</sup>

Not surprisingly, after EPA’s 2010 coal ash proposal, industry took its message to Congress, seeking permanent shelter from regulatory burdens—a permanent furtive subsidy that (unlike the Beville Amendment) EPA would be powerless to undo.<sup>212</sup> Such clandestine approaches to securing economic benefits at the expense of communities and the public are unfortunately not uncommon in connection with the fossil fuel industry (or other powerful interests), and the persistence of such approaches in the policymaking context do a serious disservice to public.

The absence of regulation of coal ash under RCRA was not only as a furtive subsidy to the utility industry, it was also a lost opportunity. Historically, RCRA “had a forcing effect on waste treatment technology and policy, and . . . wrought major and irreversible changes on the industries that generate and dispose of hazardous wastes.”<sup>213</sup> As a result, “many generators learned—mostly by modifying processes and choosing less toxic chemicals and feedstocks—to reduce or even eliminate the generation of RCRA hazardous wastes.”<sup>214</sup> Moreover, the harsh penalties imposed for violation of RCRA’s hazardous waste transporter, storage and disposal provisions led facilities engaged in such activities to be much more cautious.<sup>215</sup> In the absence of RCRA rules addressing coal ash, however, none of these influences are brought to bear on the utility industry’s management of coal combustion wastes.<sup>216</sup>

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<sup>210</sup> *Id.*

<sup>211</sup> *Id.*

<sup>212</sup> See Thomas O. McGarity & Rena I. Steinzor, *The End Game of Deregulation: Myopic Risk Management and the Next Catastrophe*, 23 DUKE ENVTL. L. & POL’Y F. 93, 130 (2012) (noting that fossil industry “lobbyists fanned out across Capitol Hill, asking members from states where affected companies were located to find ways to delay or terminate the rulemaking”).

<sup>213</sup> Steven G. Barringer, *The RCRA Beville Amendment: A Lasting Relief for Mining Wastes?*, 17 NAT. RESOURCES & ENV’T 155 (2003).

<sup>214</sup> *Id.*

<sup>215</sup> *Id.*

<sup>216</sup> A separate argument has persisted about the potential for stringent regulation to create a counterproductive stigma. See McGarity & Steinzor, *supra* note 212, at 126–27 (“[E]lectric utilities and their allies in the coal and construction industries focused their opposition to the EPA proposal on the notion that it would create a ‘stigma effect’ that would destroy the recycling market because

In 2015, EPA finally published its final rule establishing modest requirements for coal ash disposal facilities, which resulted in an internalization of costs totaling nearly \$300 million per year that had previously been borne by encumbered communities and the public at large.<sup>217</sup> Although, in the aggregate, EPA's rule imposed more costs on the industry than it saved,<sup>218</sup> when viewed as a question of whether to force communities saddled by the impacts coal ash pollution to carry the burden of subsidizing energy production for the rest of society, EPA's decision to regulate rests on a strong policy foundation, regardless of the gross cost-benefit trade-off.<sup>219</sup> In fact, an argument can be made that even more stringent regulation is warranted.<sup>220</sup> It is a separate question entirely, whether and to what extent we, as a society, might want to subsidize energy production (including perhaps by paying industry to properly dispose of its waste) through direct monetary subsidy, tax mechanisms, public management of wastes, or other non-furtive subsidies. What seems suspect, however, is a furtive subsidy that covertly compels unsuspecting bystander communities (who reap no special benefits) to carry the load for us all.

#### IV. THE ETHICAL CASE FOR CLOSE SCRUTINY

From a social, economic, and ethical perspective there is a compelling argument that furtive subsidies can actually impede economic growth and erode public wellbeing and prosperity generally.<sup>221</sup> This is hardly

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consumers of the products containing the ash would be deterred from buying the material by its designation as a hazardous waste when it was simply disposed of in regulated landfills. As a result of the stigma effect, electric utilities would be compelled to pay significantly higher costs for disposal and their customers that now recycled coal ash would stop doing so and would instead be compelled to pay more for virgin materials.”) (internal citations omitted). This debate, while significant to the ultimate choice of whether or not (or how) to regulate coal ash, is beyond the scope of this Article. And, it is unclear whether EPA's ultimate regulatory approach will provide much insight.

<sup>217</sup> See CCR Final Rule, *supra* note 195; REGULATORY IMPACT ANALYSIS FOR EPA'S 2015 RCRA FINAL RULE REGULATING COAL COMBUSTION RESIDUAL (CCR) LANDFILLS AND SURFACE IMPOUNDMENTS AT COAL-FIRED ELECTRIC UTILITY POWER PLANTS ES-10 (U.S. EPA, Dec. 2014) [hereinafter “CCR FINAL RIA”].

<sup>218</sup> CCR FINAL RIA, *supra* note 217, at ES-9, ES-10.

<sup>219</sup> See generally PSR COAL ASH REPORT, *supra* note 163; Comments of Earthjustice et al. on EPA's Proposed Coal Ash Rule (June 21, 2010), [http://earthjustice.org/sites/default/files/files/us\\_epa\\_proposal\\_disposal\\_coal\\_comb\\_residue\\_pdf\\_58002.pdf](http://earthjustice.org/sites/default/files/files/us_epa_proposal_disposal_coal_comb_residue_pdf_58002.pdf).

<sup>220</sup> This argument was, in fact, made forcefully by the organizations that originally petitioned EPA to regulate coal ash. Comments of Earthjustice et al. on EPA's Proposed Coal Ash Rule, Section II (June 21, 2010), [http://earthjustice.org/sites/default/files/files/us\\_epa\\_proposal\\_disposal\\_coal\\_comb\\_residue\\_pdf\\_58002.pdf](http://earthjustice.org/sites/default/files/files/us_epa_proposal_disposal_coal_comb_residue_pdf_58002.pdf).

<sup>221</sup> See, e.g., PERVERSE SUBSIDIES, *supra* note 18, at 17–20.

surprisingly in light of EPA's cost-benefit conclusions discussed above.<sup>222</sup> A 1994 report from the Institute for Southern Studies<sup>223</sup> aggregated data showing that "states with stronger environmental standards tend . . . to have higher growth in their gross state products, total employment, construction employment, and labor productivity than states that rank . . . lower environmentally."<sup>224</sup> Because in such states communities subsidize industry with their own health, the quality of their environmental resources, and "indicators of public welfare . . . decline as the subsidies increase."<sup>225</sup> As a result, these states "become . . . poorer, more polluted, less diversified, subject to boom and bust economi[es], and more reliant on the very industries which are reaping the [benefit of the] subsidies."<sup>226</sup>

A central feature of both U.S. and international environmental law is the "polluter-pays principle." Professor Dernbach has described the principle this way:

According to the polluter-pays principle, governments should require polluting entities to bear the costs of their pollution rather than impose those costs on others or on the environment. Economic development, in short, should not come at the expense of social development, natural resources protection or even other types of economic development. Use of the polluter-pays principle should thus result in greater efficiency. The polluter-pays principle also would prevent the involuntary wealth redistribution that occurs when some benefit at the expense of others.<sup>227</sup>

At its core, this principle is an expression of minimum ethical standards for the commercial behavior of private market participants. The polluter-pays principle has been formalized to a degree by international law. As early as 1972, the Environment Committee of the Organization for Economic Co-operation and Development ("OECD")<sup>228</sup> issued "Guiding Principles Concerning the International Economic Aspects of Environmental Policies," specifically addressing the normative responsibilities of OECD nations with regard to "the internal aspects of

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<sup>222</sup> See *supra* note 143 and accompanying text.

<sup>223</sup> Bob Hall, *Gold and Green*, in INSTITUTE FOR SOUTHERN STUDIES 4 (1994).

<sup>224</sup> *Id.* at 6 (internal quotations and citations omitted).

<sup>225</sup> *Id.* (internal quotations and citations omitted).

<sup>226</sup> *Id.* (internal quotations and citations omitted).

<sup>227</sup> John C. Dernbach, *Sustainable Development As A Framework for National Governance*, 49 CASE W. RES. L. REV. 1, 58-59 (1998) (internal citations omitted).

<sup>228</sup> See *History*, OEDC, <http://www.oecd.org/about/history/>.

environmental policies.”<sup>229</sup> While the primary focus of this policy statement is to address “the international aspects of environmental policies with particular reference to their economic and trade implications,”<sup>230</sup> some of these principles shed light on the domestic dilemma regarding the allocation of subsidy costs under U.S. law.<sup>231</sup>

Since its inception, the polluter-pays principle has served as “a fundamental principle for allocating costs of pollution prevention and control measures,”<sup>232</sup> and stands for the proposition that “the polluter should bear the expenses of carrying out [pollution prevention and control] measures decided by public officials to ensure that the environment is in an acceptable state. In other words, the cost of these measures should be reflected in the cost of goods and services which cause pollution.”<sup>233</sup> The OECD has further clarified:

Generally speaking, a polluter has to bear *all the costs* of preventing and controlling *any pollution* that he originates. Aside from [certain] exceptions . . . a polluter *should not receive assistance of any kind* to control pollution (grants, subsidies or tax allowances for pollution control equipment, below-cost charges for public services, etc.).<sup>234</sup>

Thus, the OECD generally rejects government subsidies for pollution control except in certain exceptional circumstances.<sup>235</sup>

According to the OECD’s 1992 analysis of its polluter-pays principle, “[i]t is clear that a polluter who failed to take the measures decided by the authorities to ensure that the environment is in an acceptable state would be liable and would have to pay compensation to any victims.”<sup>236</sup> The analysis goes on to address “whether a polluter should have to pay for

<sup>229</sup> RECOMMENDATION OF THE COUNCIL ON GUIDING PRINCIPLES CONCERNING INTERNATIONAL ECONOMIC ASPECTS OF ENVIRONMENTAL POLICIES (OCEC, May 26, 1972) [hereinafter “OECD PRINCIPLES ON ENVIRONMENTAL POLICIES”].

<sup>230</sup> *Id.* at 1.

<sup>231</sup> It is worth acknowledging that “opinions vary as to the precise status of the principle as customary international law or as an emerging rule of law common to civilised [sic] nations.” THE POLLUTER-PAYS PRINCIPLE AS IT RELATES TO INTERNATIONAL TRADE 10 (OECD, 2002) [hereinafter “POLLUTER PAYS AND TRADE”]. Fortunately, for purposes of this Article it is not essential to either grapple with or resolve this question.

<sup>232</sup> RECOMMENDATION OF THE COUNCIL ON THE IMPLEMENTATION OF THE POLLUTER-PAYS PRINCIPLE, (OECD, Nov. 14, 1974) [hereinafter “OECD POLLUTER-PAYS PRINCIPLE”].

<sup>233</sup> OECD PRINCIPLES ON ENVIRONMENTAL POLICIES, *supra* note 229, at 1.

<sup>234</sup> THE POLLUTER-PAYS PRINCIPLE: OECD ANALYSES AND RECOMMENDATIONS 5 (OECD, 1992) (emphasis added) [hereinafter “OECD POLLUTER PAYS ANALYSES”]. Enumerated exceptions relate to research and development and assistance to polluters “facing particularly severe new pollution control requirements.” *Id.*

<sup>235</sup> See Kenneth S. Komoroski, *The Failure of Governments to Regulate Industry: A Subsidy Under the Gatt?*, 10 HOUS. J. INT’L L. 189, 205 (1988).

<sup>236</sup> OECD POLLUTER PAYS ANALYSES, *supra* note 234, at 6.



pollution damage when he has taken all the measures ordered by the authorities (residual pollution).”<sup>237</sup> The analysis concludes:

If the level of pollution is . . . quite substantial or the damage significant, the current view appears to be that the polluter should bear the cost. Where the level of pollution is slight (allowable residual pollution), on the other hand, it seems that damage will not as a rule be compensated for.<sup>238</sup>

As the OCED has observed, this understanding of the polluter-pays principle “does not imply that the polluter actually has to ‘pay’ anything to anyone. Rather, implementation of the polluter-pays principle results in reducing or eliminating certain subsidies to encourage pollution abatement” and avoid the distortion of international markets.<sup>239</sup> That is to say, “sustainable and economically efficient management of environmental resources requires the internalization of pollution prevention, control and damage costs,” and government subsidies to defray such costs are generally discouraged.<sup>240</sup>

Conceived of within the polluter-pays framework contemplated by international law, the approach to furtive subsidies through regulatory exclusions for specific industrial sectors under U.S. environmental law is at best suspect. First, the existence of an underlying statutory/regulatory framework (such as the CAA’s hazardous air pollutant provisions) reflects a normative decision by lawmakers that a particular type of pollution, when emitted in specified quantities by any industry sector, should be subject to control to ensure that human health and the environment are protected to “an acceptable state.”<sup>241</sup> As described above, however, such standards are undermined when the legislature or the regulatory body exempts a specific industry sector. Only the beneficiary industry is able to externalize the cost of any adverse impacts on human health, leaving government-sponsored public welfare programs or the affected community members themselves to pick up the tab. This is distinct from a situation in which the regulatory body has generally concluded that control of a particular pollutant, or of a certain quantity of emission, is categorically unnecessary to provide acceptable environmental protection. Rather, as is the case for much of the fossil fuel

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<sup>237</sup> *Id.*

<sup>238</sup> *Id.* at 6–7 (also characterizing the polluter-pays principle as “increasingly . . . a principle of full internalization”).

<sup>239</sup> OECD POLLUTER PAYS AND TRADE, *supra* note 231, at 9.

<sup>240</sup> OECD POLLUTER PAYS ANALYSES, *supra* note 234, at 7 (citing RECOMMENDATION ON THE USE OF ECONOMIC INSTRUMENTS IN ENVIRONMENTAL POLICY, OECD (Final)).

<sup>241</sup> Using the language of the OECD principles. See OECD PRINCIPLES ON ENVIRONMENTAL POLICIES, *supra* note 229, at 1.

industry under many U.S. environmental regulations, the exclusion is a sector-specific handout, adopted primarily for its economic benefits.

While the precautionary principle under international law identifies two narrow exceptions, neither exception would broadly encompass the furtive subsidies for the fossil fuel industry embedded in U.S. law. The first would apply “[w]hen steps to protect the environment would jeopardise [sic] the social and economic policy objectives of a country or region.”<sup>242</sup> The other makes limited allowance for environmental subsidies where an industry faces “particularly severe new pollution control requirements.”<sup>243</sup> Notably, this exception is qualified. It applies only so long as the subsidy is (1) *limited in time*, (2) *required on social grounds* and (3) *does not cause any significant distortion in international trade and investment*.<sup>244</sup> Finally, the principle also allows for fiscal support for research and development of pollution prevention and pollution control measures.<sup>245</sup>

With regard to the fossil fuel industry in the United States, the exclusions from the statutory provisions discussed above are often not time limited but permanent features of the relevant statutory structure.<sup>246</sup> Even where the law has contemplated some degree of limitation or qualification, the exemptions have, in practice, been long-lived. More significantly, perhaps, the case has not been compellingly made for any of the exceptions that they are “required on social grounds.”<sup>247</sup> Even had the case been made upon passage of the original statutes, that determination would now likely be stale—illustrative of the structural importance of the “limited in time” element of the exception.

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<sup>242</sup> OECD POLLUTER PAY ANALYSIS, *supra* note 234, at 26 (“This would be the case, for example, when the additional expenditure incurred by polluting industries would result in holding back regional development or adversely affecting the labour market. However, in the spirit of the general principle approved, it is recommended that such exceptions are kept at the level and for the time strictly necessary to reach the specific socio-economic objectives.”).

<sup>243</sup> *Id.* at 5.

<sup>244</sup> *Id.* These ideas, notably, are expressed in the *conjunctive*.

<sup>245</sup> *Id.*

<sup>246</sup> See, e.g., *supra* note 7 (discussing the Halliburton Loophole).

<sup>247</sup> One author points out, at least in the criminal context, that some U.S. courts have “acknowledged that a polluter should assume the costs of pollution as a cost of doing business, rather than charge the loss to a wholly innocent party.” Craig W. Anderson, *Environmental Enforcement*, 9 UTAH B.J. 23, 23–24 (1996) (citing *Branch v. Western Petroleum*, 657 P.2d 267 (Utah 1982)). The author observes that the *Western Petroleum* Court (citing *Atlas Chemical Industries, Inc. v. Anderson*, Tex. Civ. App., 514 S.W.2D 309, 319 (1974), *aff’d*, 524 S.W.2D 681 (1975)) opined that it knew of “no acceptable rule of jurisprudence which permits those engaged in important and desirable enterprises to injure with impunity those who are engaged in enterprises of lesser economic significance. The cost of injuries resulting from pollution must be internalized by industry as a cost of production and borne by consumers or shareholders, or both, and not by the injured individual.” *Id.*

The point of this analysis is not to suggest that sector-specific exclusions from domestic environmental laws constitute violations of normative international standards but rather to illustrate that the basic principles of moral conduct and ethics that inform international law are sharply at odds with the special treatment that the fossil fuel industry (and others) enjoys in U.S. environmental regulatory programs. Nor do such furtive subsidies conform to best practices when it comes to the consideration of intergenerational justice,<sup>248</sup> the objective of which is to ensure that each living generation:

- “does not unduly restrict the options available to future generations in solving their problems and satisfying their own values”;
- “maintain[s] the quality of the earth so that it is passed on in no worse condition than received”—and thereby recognizes that future generations are “entitled to a quality of the planet comparable to the one enjoyed by previous generations”; and
- “provide[s] its members with equitable rights of access to the legacy from past generations” and “conserve[s] this access for future generations.”<sup>249</sup>

This is especially true considering the fact that our reliance on fossil fuels, which furtive subsidies further encourage, is at the heart of perhaps the most profound intergenerational injustice in human history—global climate change.<sup>250</sup>

Because Congress and the relevant federal agencies, in establishing the current suite of furtive subsidies, have failed by and large to adequately

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<sup>248</sup> Burns H. Weston, *Climate Change & Intergenerational Justice: Foundational Reflections*, 9 VT. J. ENVTL. L. 375, 383–89 (2008) (defining intergenerational justice and observing, among other things, that “there is no theoretically plausible reason why remote unborn persons should not be accorded deference in roughly the same manner as persons living today or soon to follow”).

<sup>249</sup> *Id.* at 396 (quoting EDITH BROWN WEISS, IN FAIRNESS TO FUTURE GENERATIONS: INTERNATIONAL LAW, COMMON PATRIMONY, AND INTERGENERATIONAL EQUITY 38–39 (1989)) (internal citations omitted). With regard to energy, this is not merely an issue of fossil fuel’s capacity to damage the environment; in light of the millions of years it takes fossil fuels to form, it is also a question of the inherent interest of future generations in the Earth’s finite resources. *See also* David R. Hodas, *Ecosystem Subsidies of Fossil Fuels*, 22 J. LAND USE & ENVTL. L. 599, 599–600, 604 (2007) (observing that energy is an ecosystem service involving the “transform[ation] of biomass into fossil fuels,” and we rarely consider the implications of burning “a few gallons of petroleum, which nature spent a hundred million years manufacturing”) (internal citations omitted). The fossil fuels available now are all that the planet has to offer, essentially for all of the foreseeable future (on human timescales at least). Policies that encourage imprudent extraction and use consume this finite resource, diminishing its availability for human uses far into the future.

<sup>250</sup> *See supra* note 43; CLIMATE CHANGE 2014 SYNTHESIS REPORT SUMMARY FOR POLICYMAKERS 6–8 (Intergovernmental Panel on Climate Change, 2014) (discussing current impact and future risks associated with greenhouse gas emissions, concluding that climate change “will cause further warming and long-lasting changes in all components of the climate system, increasing the likelihood of severe, pervasive and irreversible impacts for people and ecosystems”).

consider both these ethical principles, and the full range and scope of impacts that industry's furtive subsidies might impose on communities and on the public, corrective steps are needed. To that end, a more deliberate framework is essential for assessing whether and when furtive subsidies might be appropriate.

#### V. TOWARD A MORE DELIBERATE ASSESSMENT OF FURTIVE SUBSIDIES

In light of the serious problems outlined above, and the likelihood of more furtive subsidies under a Donald J. Trump presidential administration and a Republican-controlled Congress, a more coherent and consistent means of scrutiny is imperative. A comprehensive critical framework should apply categorically to any newly proposed or contemplated furtive subsidy, and should also be employed to evaluate the appropriateness of existing regulatory exclusions in order to guide the reconsideration and removal (or replacement) of existing furtive subsidies. The outline below offers the central features of an analytical framework that could be employed as a "public policy check" on any new furtive subsidy (whether legislative or administrative). Moreover, these factors should be employed to reexamine existing furtive subsidies as well, and to assess their ongoing appropriateness, beginning with subsidies of long-standing that may have become stale and subsidies that create particularly harsh consequences for encumbered communities.

In particular, for each furtive subsidy the following questions should be asked and satisfactorily answered before the subsidy may be adopted (or, as to existing subsidies, in order to determine whether such subsidy should persist):

- Whether a comprehensive and robust analysis has been conducted justifying a public subsidy of any kind for the particular industrial activity based the nature and extent of its public benefits.
- Whether the assessment justifying a public subsidy included substantial public involvement (including meaningful involvement of potentially affected communities).<sup>251</sup>
- Whether, where there is a validly developed compelling justification for a public subsidy of some kind, *all manner* of potentially available subsidy options have been fully and expressly considered (including, e.g., tax incentives, loan

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<sup>251</sup> It is this author's view, as consistent with the basic principles of participatory governance and environmental justice, that the assessments of the appropriateness of furtive subsidies, to be considered valid, must include meaningful involvement of the public, and especially of those communities most likely to be affected.

mechanism, research and development grants, direct monetary subsidy, etc.).

- Whether, where there is a validly developed compelling justification for a public subsidy of some kind, there are applicable provisions (or specific recommendations) that will expressly limit the subsidy in time and/or ensure meaningful periodic reevaluation.
- Whether, in connection with a newly proposed or existing furtive subsidy, the proposed subsidy relates to a program that involves protection of public health or important environmental values the loss of which would impose a cost on society.
- Whether, in connection with a newly proposed or existing furtive subsidy there has been a comprehensive examination of the nature and severity of impacts that will or might result from each regulatory exclusion of the relevant industrial activity.
- Whether there has been a detailed assessment of where and in what form the impacts of any new or existing furtive subsidy will be felt.
- Whether the furtive subsidy has the potential to impose non-trivial burdens on discrete communities that are either in close geographic proximity to pollution sources or that are located in areas where the pollution effects may predictably occur.
- Whether any communities likely to be affected are already subject to disproportionate environmental burdens, or have characteristics that might amplify the impacts of the expected pollution-related effects.
- Whether potentially affected communities have specifically consented to the furtive subsidy, with full knowledge of its potential impacts.
- Whether potentially affected communities receive some special benefits from the relevant industrial activity that are significantly greater than those experienced by society more broadly.
- Whether, in connection with a newly proposed or existing furtive subsidy, an assessment has been performed to examine any potential inter-generational justice implications (e.g., the consumption or destruction of finite natural resources as to which future generations may reasonably claim an interest).
- Whether the relevant industry actor, or industry sector, already receives significant benefits from other furtive subsidies, or from other subsidies of any kind.
- Whether it has been demonstrated, by clear and convincing evidence, that a furtive subsidy (i.e., a regulatory exclusion) is

substantively the only reasonable mechanism for encouraging the beneficial industrial activity (for reasons *other than* procedural ease of adoption).

- Whether the costs of avoiding the impacts on potentially affected communities are clearly of such a magnitude that they could not reasonably be borne (in whole or in part) by the relevant industry actor, by the relevant industrial sector more broadly, by the relevant marketplace (i.e., customers of the product or service), by state or local taxpayers, by the federal taxpayers, or by any combination of these resources.

Only in instances where, after application of this analytical framework, a furtive subsidy in the form of a sector-specific regulatory exclusion is shown to be the only reasonably available means of achieving the public value of the industrial activity, and where the public good clearly outweighs the cost to communities, should policymakers consider adopting or retaining a furtive subsidy. Moreover, in any instance where a proposal is made to adopt or retain such a subsidy, lawmakers should assess (with meaningful public input) whether and to what extent encumbered communities can be made whole by way of a corresponding community subsidy directed at ameliorating the adverse effects of the furtive industry subsidy.

## VI. CONCLUSION

The problem of furtive subsidies is a serious one that undermines the integrity of our environmental laws and shakes the public's confidence in the decency of our body politic. The fossil fuel industry, as much as any other, has taken advantage of this odious tool for its own advantage, and it is time that we confront the fallacy of that industry's regulatory exceptionalism and hold it to the standards that embody our collective environmental and public health values.