

ARTICLES

RECYCLING IS RUBBISH: REINVENT, REALIGN, AND RESTRUCTURE U.S. MATERIAL MANAGEMENT

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SUMMARY

The United States currently does not have capacity to recycle its waste domestically, nor can it export the amount of waste it once did. Many states are trying to solve this crisis through novel legislation, but states cannot solve this crisis on their own. This Article argues that the federal government should take the lead in developing new law and policy designed to increase national recycling rates. Specifically, it proposes enacting federal legislation to: (1) eliminate special tax subsidies for virgin materials; (2) charge a fee to producers of packaging materials; (3) reform regulations on environmental marketing claims; and (4) standardize recycling bins across the country. These four steps will work together to substantially increase U.S. recycling rates, while also decreasing the volume of packaging waste in the waste stream.

The amount of municipal solid waste produced in the United States has increased almost every year since 1960, and now averages almost five pounds per person, per day.¹ The U.S. Environmental Protection Agency (EPA) estimates that in 2018 the United States generated more than 292 million tons of this waste.² Between 30% and 65% of it comes from one source: containers and other packaging materials.³ The United States then incinerated or

landfilled more than 60% of these 292 million tons.⁴ The emissions produced by incinerating and landfilling at this rate harms people, resources, and the environment.⁵ This is unsustainable; recycling is crucial.

But the United States is currently in a recycling crisis, making its landfill and incineration rates higher now than in 2018.⁶ This crisis is self-inflicted. For decades, the United States relied on other countries, mainly China, to process and recycle (or burn or landfill⁷) its municipal

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1. U.S. Environmental Protection Agency (EPA), *National Overview: Facts and Figures on Materials, Wastes, and Recycling*, <https://www.epa.gov/facts-and-figures-about-materials-waste-and-recycling/national-overview-facts-and-figures-materials> (last updated July 14, 2021) [hereinafter *National Overview*]. Municipal solid waste is composed of the various items consumers throw away after being used; it excludes construction and demolition debris, wastewater sludge, and industrial wastes. *Id.*
2. *Id.* But see ROBERT CARMICHAEL, *ECONOMIST IMPACT, PLASTICS MANAGEMENT INDEX: EVALUATING EFFECTIVE MANAGEMENT AND SUSTAINABLE USE OF PLASTICS 13* (Naka Kondo ed., 2021) (estimating U.S. municipal solid waste as 353.5 million tons in 2016).
3. See U.S. EPA, *Containers and Packaging: Product-Specific Data*, [https://www.epa.gov/facts-and-figures-about-materials-waste-and-recycling/containers-](https://www.epa.gov/facts-and-figures-about-materials-waste-and-recycling/containers-and-packaging-product-specific-data)

[and-packaging-product-specific-data](https://www.epa.gov/facts-and-figures-about-materials-waste-and-recycling/containers-and-packaging-product-specific-data) (last updated Mar. 8, 2022) (reporting that packaging makes up 28% of municipal solid waste); University of Southern Indiana, *Solid Waste & Landfill Facts*, <https://www.usi.edu/recycle/solid-waste-landfill-facts/> (last visited May 19, 2022) (reporting that packaging makes up 65% of household trash).

4. *National Overview*, *supra* note 1.
5. See *infra* note 48 and accompanying text.
6. Cf. Alana Semuels, *Is This the End of Recycling?*, ATLANTIC (Mar. 5, 2019), <https://www.theatlantic.com/technology/archive/2019/03/china-has-stopped-accepting-our-trash/584131/> (reporting that most “recyclables” in the United States are now landfilled since China will no longer accept most U.S. waste); Melanie Rybar, *Expert Focus: How Is the US Approaching the Regulation of Packaging Materials?*, CHEM. WATCH (Oct. 21, 2021), <https://chemicalwatch.com/356915/expert-focus-how-is-the-us-approaching-the-regulation-of-packaging-materials> (explaining that COVID-19 has only exacerbated the U.S. waste problem by increasing packaging waste). But see THE LAST BEACH CLEANUP & BEYOND PLASTICS, THE REAL TRUTH ABOUT THE U.S. PLASTIC RECYCLING RATE: 2021 U.S. FACTS AND FIGURES 2 (2022) (reporting a striking 5%-6% (or lower) plastics recycling rate and claiming “[e]ven when millions of tons of waste plastic were still being exported to China each year, plastics recycling never managed to reach 10%”).
7. See Kenneth Rapoza, *China Doesn't Want the World's Trash Anymore. Including “Recyclable” Goods*, FORBES (Nov. 29, 2020), <https://www.forbes.com/sites/kenrapoza/2020/11/29/china-doesnt-want-the-worlds-trash-any->

solid waste.⁸ China no longer buys this waste.⁹ The United States tried sending it elsewhere.¹⁰ It soon inundated other countries that also stopped accepting shipments.¹¹ Because of its past reliance on China, the United States failed to build the necessary infrastructure to manage its own waste, and it is currently ill-equipped to do anything but landfill or incinerate.¹²

Now that the United States is stuck with most of its waste, it has no option but to develop plans to properly manage it. Individual states do not have the funds or the economies of scale to handle the whole issue.¹³ The solution to this crisis begins with the federal government. Because of its resources, expertise, and ability to set uniform policy, the federal government is uniquely suited to address U.S. waste management issues.

To protect people, resources, and the environment, the federal government needs to adopt and implement a national recycling framework that increases the domestic market for recycled materials. Sadly, decades of lackluster legislation and regulation has left a patchwork recycling system across the United States that is inefficient, costly, and wasteful. This Article proposes a national law to better manage packaging waste, the single largest source of municipal solid waste.¹⁴

The proposal—the Comprehensive Overhaul of Materials Management, Efficiency, and Resource Conservation Excise Tax (COMMERCE) Act—borrows features from current state and international laws. The proposed Act has four main parts: (1) it repeals tax subsidies for virgin material extraction to make reprocessed materials more

competitive¹⁵; (2) it charges producers of packaging waste a fee to encourage reducing, reusing, and recycling, and to fund domestic recycling infrastructure¹⁶; (3) it creates national labeling requirements to decrease consumer confusion about recycling¹⁷; and (4) it creates separate, uniform recycling bins for different materials to streamline waste management and increase efficiency.¹⁸ While this proposed law is not the ultimate solution to the U.S. waste problem, it will start the United States on the road away from the landfill.

The Article argues that the federal government must reform parts of U.S. waste management and tax policy in order to maximize recycling throughout the country. Part I discusses the importance of recycling, and explains the challenges the United States faces in attempting to increase recycling rates. Part II describes current federal law governing solid waste management in the United States, and discusses its inadequacies. Part III analyzes California's, Maine's, and Oregon's solutions to the recycling crisis, and discusses examples from the European Union (EU) and South Korea. This part also argues that the scale and complexity of recycling demand a national solution, and proposes the COMMERCE Act. The Act lays out several key elements from the above examples that offer real promise for achieving progress on the critical issue of managing packaging waste.

I. Background

A. Recycling: Why Does It Matter?

Per capita, Americans consume more of the world's resources than citizens of any other country: "With less than 5 percent of world population, the U.S. uses one-third of the world's paper, a quarter of the world's oil, 23 percent of the coal, 27 percent of the aluminum, and 19 percent of the copper."¹⁹ Much of these consumed resources end up as waste, with Americans producing half of the world's waste.²⁰ Many of these resources are non-renewable, but they are recyclable.²¹ On the global level, the United States has failed to commit to sustainable waste management and adhere to international standards.²²

more-including-recyclable-goods/?sh=2e1c891a7290 ("The fact is, many pieces of plastic, including those with recyclable icons on them, are not recycled in the U.S. And when China, or other developing nations get a hold of them, they simply end up in a landfill, or in a storage facility somewhere, never recycled.")

8. Megan Manning & Stephanie Deskins, *Making It Usable Again: Reviving the Nation's Domestic Recycling Industry*, 50 GOLDEN GATE U. L. REV. 107, 114 (2020).

9. For years, China made money by using its cheap labor force to sort, process, and repurpose waste to be sold back to the world as new products. However, as China became richer, and its environmental laws became stricter, China no longer wanted to be the world's waste processing center. *Id.* at 113-17.

10. Colin Parts, *Waste Not Want Nor: Chinese Recyclable Waste Restrictions, Their Global Impact, and Potential U.S. Responses*, 20 CHI. J. INT'L L. 291, 303-04 (2019).

11. *Id.* See also CARMICHAEL, *supra* note 2, at 24-25 (describing U.S. plastic exports to poor countries and the interplay with the Basel Convention, which the United States has yet to ratify).

12. Manning & Deskins, *supra* note 8, at 109-12.

13. *Id.* at 109-10. Cf. Ex-Post Evaluation of Five Waste Stream Directives, EUR. PARL. DOC. (COM 397) 36 (2014) [hereinafter Waste Stream Evaluation] (showing that economies of scale are necessary to benefit from certain economic and environmental advantages associated with waste prevention and reuse). Nor do corporate pledges go far enough to address the crisis without regulation. See, e.g., CHRIS SHERINGTON ET AL., PLASTIC POLLUTION PREVENTION FINAL REPORT iii (2022) (concluding that current corporate pledges to use more recycled content will have a minimal impact on marine debris).

14. Sara Hartwell, Presentation at Federal Trade Commission (FTC) Green Packaging Claims Workshop Session 2: Parceling Out the Green Guides—Do They Need Rewrapping? (Apr. 30, 2008), in FTC, ENVIRONMENTAL MARKETING GUIDES REVIEW 74 (2008) (P954501), https://www.ftc.gov/sites/default/files/documents/public_events/green-packaging-claims/transcript-3.pdf [hereinafter Packaging Workshop].

15. See discussion *infra* Section III.A.

16. See discussion *infra* Section III.B.

17. See discussion *infra* Section III.C.

18. See discussion *infra* Section III.D.

19. Roddy Scheer & Doug Moss, *Use It and Lose It: The Outsize Effect of U.S. Consumption on the Environment*, SCI. AM.: EARTH TALK (Sept. 14, 2012), <https://www.scientificamerican.com/article/american-consumption-habits/>. They also report that the average American uses as many resources as 35 average Indians or 53 average Chinese. *Id.*

20. *Id.*

21. Non-renewable resources, like oil (used to make many plastics) and minerals, are materials that earth cannot quickly regenerate. However, depending on the material and the recycling process, many non-renewable resources can be recycled and used again. WILLIAM R. BLACKBURN, THE SUSTAINABILITY HANDBOOK 564 (2d ed. 2015).

22. CARMICHAEL, *supra* note 2, at 61. *But see* United Nations Environment Assembly of the United Nations Environment Programme Res. UNEP/EA.5/Re.14, End Plastic Pollution: Towards an International Legally Binding In-

Reducing consumption is crucial. After a product is produced and consumed, several traditional options exist to manage the “waste,” such as discharging into waterways,²³ incinerating,²⁴ and landfilling.²⁵ None of these options is optimal. Landfilling and incinerating waste causes numerous environmental harms: leachates in water and soil; potent methane and other greenhouse gas emissions; and many environmental justice issues.²⁶

Another management option is to make products that are easily recyclable, and that reprocessing centers actually recycle into other products over and over: the circular economy.²⁷ A circular economy built on recy-

cling is the best option for several reasons: (1) recycling keeps waste out of incinerators and landfills; (2) recycling creates jobs and increases the gross domestic product (GDP)²⁸; (3) recycling slows natural resource depletion²⁹; and (4) recycling reduces greenhouse gas emissions.³⁰ As earth’s population continues to increase, develop, and consume more, reusing and recycling materials in a circle becomes ever more important.

B. Problems With the United States’ Current System

The United States faces multifaceted problems in sustainably managing resources through recycling.³¹ These problems fall into two categories. First, governments view virgin materials as inherently better than recycled materials. This shows itself in the way the federal government gives virgin material producers special tax breaks, which in turn gives virgin materials an unfair market advantage over reprocessed materials.³² At the other end of the spectrum, municipalities view household waste as inherently valueless.³³ Second, U.S. waste management is flawed because of inconsistent state laws, cheap landfill

strument (Mar. 2, 2022) (agreeing to develop an international legally binding instrument on plastic pollution); Rachel S. Doughty & Lisa Kaas Boyle, *Plastic Pollution Policy: California Leads, but the Crisis Requires National and International Action*, A.B.A. (Feb. 27, 2022), https://www.americanbar.org/groups/environment_energy_resources/publications/trends/2021-2022/march-april-2022/plastic-pollution-policy/ (explaining the Basel Convention and how it, and other recent international agreements, may affect the United States as a waste exporter).

23. This disposal method was more common before the Marine Protection, Research, and Sanctuaries Act (codified at 33 U.S.C. ch. 27). See U.S. EPA, *Learn About Ocean Dumping*, <https://www.epa.gov/ocean-dumping/learn-about-ocean-dumping> (last updated June 10, 2021). But it is still a large problem with U.S. waste. See NATIONAL ACADEMIES OF SCIENCES, ENGINEERING, AND MEDICINE, *RECKONING WITH THE U.S. ROLE IN GLOBAL OCEAN PLASTIC WASTE* (2021) (estimating one to two million metric tons (about 25% of the global total) of plastic waste enters the ocean each year from the United States or its exported recyclables). See CARMICHAEL, *supra* note 2, at 23-26, and Ana Faguy, *West Continues to Use Asia and Africa for Illicit Waste, Report Finds*, E&E NEWS (Nov. 8, 2021), <https://subscriber.politicopro.com/article/eenews/2021/11/08/west-continues-to-use-asia-and-africa-for-illicit-waste-report-finds-282969>, for further reading showing that an increasing amount of U.S. waste is illicitly shipped to Asian and African countries and is then dumped in their rivers.
24. Much of the waste is then converted into a gaseous form that pollutes the air, and the rest is landfilled as ash. 3 FRANK P. GRAD, *TREATISE ON ENVIRONMENTAL LAW* §4.01[5] (Matthew Bender ed., 2021); CARMICHAEL, *supra* note 2, at 57; see also Cheryl Katz, *Piling Up: How China’s Ban on Importing Waste Has Stalled Global Recycling*, YALE ENV’T 360 (Mar. 7, 2019), <https://e360.yale.edu/features/piling-up-how-chinas-ban-on-importing-waste-has-stalled-global-recycling> (“[E]ven the most state-of-the-art incinerators can emit dioxins and other harmful pollutants.”). Many municipalities incinerate their waste. See U.S. EPA, *Energy Recovery From the Combustion of Municipal Solid Waste (MSW)*, <https://www.epa.gov/smm/energy-recovery-combustion-municipal-solid-waste-msw> (last updated Mar. 16, 2022).
25. The United States’ most common waste management technique. See *National Overview*, *supra* note 1.
26. See Manning & Deskins, *supra* note 8, at 112-13. For a discussion on the numerous environmental justice issues associated with U.S. waste and consumption as a result of low recycling, see, e.g., ROBERT D. BULLARD ET AL., *TOXIC WASTES AND RACE AT TWENTY: 1987-2007* (2007) (re-emphasizing race as the biggest variable in where hazardous waste facilities are sited in the United States); Paul Mohai & Bunyan Bryant, *Environmental Injustice: Weighing Race and Class as Factors in the Distribution of Environmental Hazards*, 63 U. COLO. L. REV. 921 (1992) (showing race as a more important factor than income in the distribution of environmental hazards); Noah Sachs, *Planning the Funeral at the Birth: Extended Producer Responsibility in the European Union and the United States*, 30 HARV. ENV’T L. REV. 51, 92-93 (2006) (describing some of the overseas harm felt by U.S. waste); Jael Holzman, *Low Pay, Abusive Conditions Rife at Congolese Cobalt Mines—Report*, E&E NEWS (Nov. 8, 2021), <https://subscriber.politicopro.com/article/eenews/2021/11/08/low-pay-abusive-conditions-rife-at-congolese-cobalt-mines-report-282967> (reporting abysmal working conditions for Congolese cobalt miners).
27. U.S. EPA, *NATIONAL RECYCLING STRATEGY: PART ONE OF A SERIES ON BUILDING A CIRCULAR ECONOMY FOR ALL 5* (2021) [hereinafter *NATIONAL RECYCLING STRATEGY*] (“A circular economy reduces materials use, re-designs materials to be less resource intensive, and recaptures ‘waste’ as a resource that can serve as feedstock to manufacture new materials and products.”); see also ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT, *GLOBAL PLASTICS OUTLOOK: ECONOMIC DRIVERS, ENVI-*

RONMENTAL IMPACTS, AND POLICY OPTIONS 32 (2022) [hereinafter *GLOBAL PLASTICS OUTLOOK*]:

The current use of plastics is far from circular. Of the 353 Mt [million tonnes] of global plastic waste generated globally in 2019, only an estimated 55 Mt [16%] were collected for recycling, 22 Mt of which were disposed [meaning only 9% of plastics produced were recycled and turned into secondary materials]. Secondary plastics accounted for barely 6% of total plastics use in 2019. In total, 67 Mt [19%] of plastic waste and residues globally were incinerated in industrial facilities and 174 Mt [49%] were disposed of in sanitary landfills. The amount of mismanaged and littered plastic waste is increasing and has reached 82 Mt [23%] per year. Of this, only 3 Mt [4% of mismanaged plastic] is collected for proper disposal by litter clean-up measures.

(emphasis added).

28. U.S. EPA, *RECYCLING ECONOMIC INFORMATION (REI) REPORT 1* (2020) [hereinafter *REI REPORT*] (noting that in 2012, recycling activities were responsible for 681,000 jobs, more than \$37 billion in wages, and \$5.5 billion in tax revenue). With landfilling, municipalities cannot recoup any of their costs of collecting, transporting, and disposing waste. See GRAD, *supra* note 24, §4.01[3][a]. But with the proper infrastructure in the United States, municipalities will be able to sell waste for reprocessing into new materials. Cf. Katz, *supra* note 24.
29. See GRAD, *supra* note 24, §4.01[2][a].
30. See *National Overview*, *supra* note 1 (showing that recycling and composting prevented 193 million metric tons of carbon dioxide emissions in 2018); see also NATIONAL RECYCLING STRATEGY, *supra* note 27, at iii, 5 (“[N]atural resource extraction and processing make up half of all global greenhouse gas (GHG) emissions that drive the climate crisis.”); GLOBAL PLASTICS OUTLOOK, *supra* note 27, at 23 (“Closing material loops could lower the carbon footprint of plastics substantially.”).
31. S. REP. NO. 94-988, General Statement (1976) (“The solid waste problem is not a single problem but a complex set of issues involving such questions as how society uses its resources, how it reuses discarded [sic] material, and how it ultimately disposes of materials no longer suitable for use.”).
32. Britt Anne Bernheim, *Can We Cure Our Throwaway Habits by Imposing the True Social Cost on Disposable Products?*, 63 U. COLO. L. REV. 953, 961-62 (1992).
33. Cf. Carrie Bradshaw, *England’s Fresh Approach to Food Waste: Problem Frames in the Resources and Waste Strategy*, 40 LEGAL STUD. 321 (2020) (discussing the issue of framing food waste in England, which is analogous to the amount of U.S. packaging waste thrown away instead of recycled).

costs, a severe lack of national infrastructure, *wishcycling*,³⁴ and companies and consumers generally not realizing the externalities of their decisions.

1. The United States Overvalues Virgin Materials and Undervalues Waste

The first problem is that the United States incentivizes producing virgin materials. For more than 60 years, the federal government has subsidized virgin materials with tax breaks to producers of virgin materials.³⁵ Because of these tax breaks, “virgin material prices are artificially low.”³⁶ This has two main effects: it both artificially decreases recycled material’s competitiveness in the market, and causes producers to use more virgin materials.³⁷

The way municipalities view waste further reduces recycled material’s competitiveness. American municipalities do not place the same value on secondary and virgin materials, and therefore do not adequately encourage material reuse.³⁸ Rather, municipalities view waste as a burden to be managed, not as a resource to be utilized:

Framing waste as a waste management problem (what we do with stuff once it becomes waste), rather than a resource management problem (how do we produce and manage resources to prevent them from becoming waste), has led to end-of-pipe approaches which tackle the symptoms, not the causes, of waste, and shift blame to those at the end of the chain (especially consumers).³⁹

Merely reclassifying “waste” to “resource” produces increased recycling, easier handling of waste streams, and decreased treatment costs.⁴⁰ With the proper system in place, recyclers will pay municipalities for their waste and get these materials back into the economy.⁴¹ The United

States must therefore redefine waste as a valuable commodity to be recycled, repurposed, and reused—not as a nuisance to be managed.

2. The United States Improperly Manages Waste

The second category of problems in sustainably reusing resources starts with the United States’ hodgepodge of different, inconsistent recycling laws.⁴² Not only do these inconsistent laws directly affect—and play a determinant role in—the recycling rate in each state,⁴³ they also confuse consumers.⁴⁴ The U.S. recycling system depends upon 20,000 different municipal waste management systems, which vary widely in standards and acceptable items.⁴⁵ Further, some state laws seem to be anti-sustainability. For example, while some states ban certain plastics, other states ban municipalities from banning certain plastics.⁴⁶

Another factor contributing to the recycling crisis is that the United States does not pay the “real” cost of landfilling waste, because many municipalities do not include externalities associated with throwing away waste. Externalities, for the purpose of this Article, are waste’s negative impacts on third parties not directly related to a transaction between a producer and consumer.⁴⁷ These negative impacts can be economic, social, or environmental.⁴⁸

Because these externalities are not factored into landfilling costs, landfilling waste is much cheaper than recycling.⁴⁹ A municipality may pay anywhere from two to five times more to recycle one ton of waste than to landfill it.⁵⁰ Land for landfilling, especially in the American West, is relatively inexpensive and abundant.⁵¹ Because landfilling is often so cheap in the United States, minerals are often

34. See *infra* Section I.B.2.

35. Bernheim, *supra* note 32, at 962; see, e.g., 26 U.S.C. §§167(h), 611-617.

36. Bernheim, *supra* note 32, at 962. Cf. Geof Koss, *Repeal of Fossil Fuel Breaks “Still Subject to Discussion,”* E&E NEWS (Sept. 23, 2021), <https://subscriber.politicopro.com/article/eenews/2021/09/23/repeal-of-fossil-fuel-breaks-still-subject-to-discussion-280932> (discussing a repeal of multiple fossil fuel tax breaks that would increase the cost of virgin plastic, therefore making recycled polymers more competitive).

37. Bernheim, *supra* note 32, at 962. See also GLOBAL PLASTICS OUTLOOK, *supra* note 27, at 84 (showing the vulnerability of secondary plastic markets, which do not fully reflect secondary production costs because of the impact of virgin materials and oil prices).

38. Cf., e.g., ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT, ECONOMIC IMPACT OF RECYCLING IN ALABAMA AND OPPORTUNITIES FOR GROWTH 14 (2012) (reporting \$193 million value of materials thrown away that could have been recycled); GLOBAL PLASTICS OUTLOOK, *supra* note 27, at 24 (“[S]econdary plastics are still mainly considered substitutes for primary plastics, rather than a valuable resource in their own right. . . . Thus, the secondary plastics market is small and vulnerable.”).

39. Bradshaw, *supra* note 33, at 332.

40. Won-Seok Yang et al., *Past, Present, and Future of Waste Management in Korea*, 17 J. MATERIAL CYCLES & WASTE MGMT. 207, 207-09 (2015) (using this reclassification as a true model of the circular economy); see also CARMICHAEL, *supra* note 2, at 8 (“If the circular economy is to succeed, the perception of plastic waste must shift from valueless to valuable.”).

41. See Alden Wicker, *Don’t Let Consumerism Co-Opt the Zero-Waste Concept, YES!* (May 10, 2021), <https://www.yesmagazine.org/issue/solving-plastic/2021/05/10/zero-waste-consumerism> (describing how packaging has become so complex and hard to recycle that municipalities no longer make

money from recycling and now have to pay to get rid of it); Leslie Nemo, *Getting Manufacturers to Help Pay for Recycling*, BLOOMBERG (Sept. 7, 2021), <https://www.bloomberg.com/news/articles/2021-09-07/who-pays-to-recycle-our-waste-u-s-states-have-a-new-answer> (reporting that Lane County, Oregon, went from being paid \$10 per ton of recyclable material to paying \$160 per ton after China stopped accepting waste).

42. See W. Kip Viscusi et al., *Lessons From Ten Years of Household Recycling in the United States*, 48 ELR 10377, 10379 (May 2018) (classifying state recycling laws based on stringency and effectiveness).

43. See *id.* at 10379-80 (showing a 26% swing in recycling rates between states with and without mandatory recycling laws).

44. Manning & Deskins, *supra* note 8, at 118.

45. E.A. (Ev) Crunden, *Recycling Hearing Probes Plastics Challenges, Market Trends*, E&E NEWS (Sept. 23, 2021), <https://subscriber.politicopro.com/article/eenews/2021/09/23/recycling-hearing-probes-plastics-challenges-market-trends-280936>; see Manning & Deskins, *supra* note 8, at 131 (explaining recent economic limits on municipal collection and the steps being taken to expand collection for recycling and reuse).

46. Ethan D. King, *State Preemption and Single Use Plastics: Is National Intervention Necessary?*, 20 SUSTAINABLE DEV. L. & POL’Y 31, 31 (2019). While these states may claim they are just antiregulation and pro-business, sustainability and business do not work against each other. See generally BLACKBURN, *supra* note 21.

47. See Tejvan Pettinger, *Externalities—Definition*, ECON. HELP, <https://www.economicshelp.org/blog/glossary/externalities/> (last visited May 19, 2022).

48. See Sachs, *supra* note 26, at 56 (discussing real and environmental costs of waste disposal); see generally *supra* note 26 (showing the negative social impacts disproportionately born by people of color in U.S. waste disposal).

49. Savanna Stanfield, *Is Recycling Cheaper Than Landfill? (With Cost Comparison)*, CITIZEN SUSTAINABLE (Apr. 22, 2021), <https://citizensustainable.com/recycling-landfill-cheaper/>.

50. *Id.*

51. Sachs, *supra* note 26, at 89.

cheaper to throw away, and to mine anew, than to responsibly reuse.⁵²

But even with the current cheap cost, landfilling has long been recognized as a looming crisis—especially in cities and populous regions.⁵³ If externalities associated with the beginning of a product's life (mining, extracting, manufacturing, etc.) and the end of a product's life (transportation, disposal, etc.) were factored into a producer's total costs, then recycled materials would be much more cost-competitive.⁵⁴ For example, in Europe, where many countries factor in some of these issues, recycling waste is often cheaper than landfilling waste, and recycled raw materials are 16% to 61% cheaper than virgin materials.⁵⁵

Unfortunately, the United States cannot just quit its landfill addiction: responsibly recycling its waste at scale is currently impossible. One of the biggest barriers to recycling more is the United States' lack of infrastructure to support robust recycling throughout the entire process, which includes reducing,⁵⁶ collecting,⁵⁷ sorting,⁵⁸ processing,⁵⁹ and remanufacturing waste.⁶⁰ Creating capacity for a circular economy will require a massive investment in national recycling infrastructure.⁶¹

Another issue that wreaks havoc in American recycling efforts is *wishcycling*. Wishcycling occurs when hopeful consumers place could- and should-be recyclable materials in their recycling bins, not knowing that these items either cannot currently be recycled in the United States, or that these items are being landfilled anyway due to recycling's

high cost.⁶² Many everyday items cannot be recycled with the United States' current infrastructure.⁶³ But companies do not make this clear to consumers. In fact, these products often have a recycling symbol on them.⁶⁴ Wishcycling does more harm than good by (1) gumming up sorting facilities, (2) contaminating bales of material, causing secondary processors to refuse them, and then (3) winding up in the landfill—along with other waste that otherwise could have been recycled.⁶⁵

Finally, and inextricably connected with these other problems, businesses do not realize all the externalities associated with the beginning and end-life of their products, ranging from extraction to disposal. Because businesses do not internalize these externalities, they often discuss sustainability and the circular economy without taking any action.⁶⁶ Therefore, optimum sustainability is unlikely to develop on its own without government regulation. Only when businesses internalize the externalities of the waste they produce will they be truly incentivized to reduce waste and make products that are more recyclable.

C. Pay-as-You-Throw and Extended Producer Responsibility

Currently, society feels the negative effects of burning, landfilling, and exporting excess waste.⁶⁷ Although all Americans produce waste, the externalities associated with waste are not equally distributed, and therefore the United States needs to work to shift these effects elsewhere. Often, poorer, non-white Americans feel these negative effects most intensely.⁶⁸ And communities throughout the world, not just Americans, bear the externalities of U.S. waste.⁶⁹ Therefore, justice, fairness, and common sense require that these externalities be shifted back to the producers causing

52. Stanfield, *supra* note 49.

53. See S. REP. NO. 94-988, General Statement (1976) ("Solid waste management is considered to be one of the most pressing problems of large and medium-sized cities. . . . [A]lmost half of the cities will be running out of available disposal capacity in less than five years. The mayors refer to this state of affairs as a crisis."). This crisis is especially pronounced in more populated areas of the country, like the Northeast. Entire states, like Massachusetts, are running out of landfill space and are driving up landfill costs in other states. Claire Potter, *NH House Panel to Tackle Bills on Landfills, Waste Reduction*, VALLEY NEWS (Jan. 19, 2022), <https://www.vnews.com/public-hearings-on-waste-management-in-NH-44489216>.

54. Cf. Anthony A. Austin, *Where Will All the Waste Go?: Utilizing Extended Producer Responsibility Framework Laws to Achieve Zero Waste*, 6 GOLDEN GATE U. ENV'T L.J. 221, 231 (2013) (analyzing the vast energy savings of using secondary materials over virgin materials because of the savings from mining, extracting, and manufacturing virgin materials).

55. Waste Stream Evaluation, *supra* note 13, at 37-38; Stanfield, *supra* note 49.

56. See PRODUCT STEWARDSHIP INSTITUTE, EXTENDED PRODUCER RESPONSIBILITY FOR PACKAGING AND PAPER PRODUCTS: POLICIES, PRACTICES, AND PERFORMANCE 1 (2020) [hereinafter EPR FOR PPP] (explaining that product producers have no incentives to reduce packaging or materials; rather, the trend is moving toward ever more complex and harder to recycle materials); CARMICHAEL, *supra* note 2, at 28 (reporting that petrochemical companies continue to invest heavily in infrastructure to manufacture virgin plastics).

57. Manning & Deskins, *supra* note 8, at 120 (noting more than 40% of recycling centers in the United States closed from 2015-2019).

58. Issues exist with consumers *wishcycling* and with infrastructure. The infrastructure issue begins with single-stream recycling and ends with the inability of current machines to separate combined materials effectively. See *id.* at 120-21.

59. *Id.* at 122. It does not matter if consumers throw recyclable materials into a provided bin if no processing centers exist to accept the material.

60. *Id.* ("[A]cquiring and producing new materials often costs less than producing recycled secondary materials.").

61. KAREN BANDHAUER ET AL., PAYING IT FORWARD: HOW INVESTMENT IN RECYCLING WILL PAY DIVIDENDS 4, 6 (2021) (estimating \$17 billion is needed over five years to get to a 50% recycling rate by 2030).

62. Livia Albeck-Ripka, *Your Recycling Gets Recycled, Right? Maybe, or Maybe Not*, N.Y. TIMES (May 29, 2018), <https://www.nytimes.com/2018/05/29/climate/recycling-landfills-plastic-papers.html>.

63. See generally JENNIE ROMER, CAN I RECYCLE THIS? A GUIDE TO BETTER RECYCLING (2021). See also EUGÉNIE JOLTREAU, (DE)GLOBALIZATION OF INTERNATIONAL PLASTIC WASTE TRADE 1 (2019) (emphasizing about 40% of plastics are single-use and quickly end up as waste).

64. The recycling symbol is the collection of arrows arranged in a triangle around a number found on almost any plastic packaging. This common symbol is known and identified in several ways in the various sources cited. See, e.g., S.B. 343, 2021-2022 Reg. Sess., 2021 Cal. Stat. 507 (using terms chasing arrows symbol, resin identification code (RIC), and recycling symbol). This Article uses the term "recycling symbol" for consistency.

65. ROMER, *supra* note 63, at 57-58. See also GLOBAL PLASTICS OUTLOOK, *supra* note 27, at 24 (explaining the difficulty in sorting and recycling mixed plastics, causing them to lose most of their value).

66. Although many businesses see the need for better regulation of their waste management problems, and support such regulation, they have not been acting on their own with the needed gumption. Indeed, plastic's share of the global packaging volume has increased from 17% in 2000 to 25% in 2015—and this is only projected to keep increasing. CARMICHAEL, *supra* note 2, at 9, 16.

67. See *supra* note 26.

68. *Id.*

69. *Id.*; U.S. EPA, *Managing Air Quality—Control Strategies to Achieve Air Pollution Reduction*, <https://www.epa.gov/air-quality-management-process/managing-air-quality-control-strategies-achieve-air-pollution> (last updated Sept. 29, 2021) (noting that pollution does not follow geographic boundaries and travels great distances to affect people internationally).

them. Most of this excess waste is packaging waste, and producers have little incentive to reduce it.⁷⁰

When negative externalities reach a point where individual interests sacrifice social welfare, government needs to step in “to control the play of economic forces . . . to promote . . . the total welfare, of their citizens as a whole.”⁷¹ This is where the idea of a Pigouvian tax comes from.⁷² The economist Arthur Pigou said that a state may shift externalities back to those responsible by encouragements or restraints—bounties or taxes.⁷³

One example of a Pigouvian tax, which has become popular in recent decades, is a pay-as-you-throw (PAYT) surcharge on municipal waste.⁷⁴ PAYT charges consumers for their waste by weight or volume.⁷⁵ This cost structure is meant to internalize to consumers the externalities associated with their waste.⁷⁶ EPA recommends setting PAYT rates by computing the full front- and back-end costs of each municipal waste collection service.⁷⁷

PAYT is a good supplement to a waste management system that incentivizes recycling, but PAYT is deficient on its own for several reasons. First, most municipalities that use PAYT systems do not set fees that accurately reflect all the externalities associated with landfilling. Many states and municipalities only consider upfront costs like transporting or disposing waste in their pricing.⁷⁸ These pricing systems inaccurately reflect the effects landfilling has on the environment and earth’s resources. Second, PAYT shifts producers’ externalities to consumers. PAYT is therefore too far removed from producers to cause them to change packaging habits.⁷⁹ But producers should internalize the exter-

nalities of packaging waste because they are the ones best situated to solve this problem by changing their practices.

One concept meant to make producers internalize the externalities associated with their waste is extended producer responsibility (EPR). EPR forces the producer of a good to assume the “operational or financial responsibility for the take-back, disposal, recycling, or other disposition of the product and its packaging after use.”⁸⁰ For some products, like electronic waste, a physical take-back approach is best because the waste is so complex.⁸¹ For other products, like packaging waste, a fee-based approach to EPR is better because of the impossibility of returning every piece of packaging to its producer.⁸²

EPR is not a new concept. EPA concluded nearly 50 years ago that EPR was quite feasible, and that it would have “significant impacts on the post-consumer solid waste stream.”⁸³ The Agency still recommends EPR.⁸⁴ Thirty-three U.S. states have already enacted more than 115 EPR laws, covering waste from batteries to mattresses.⁸⁵ Internationally, EPR laws have also proven effective.⁸⁶ Canada and the EU both have EPR packaging laws that have significantly increased recycling rates compared to the United States.⁸⁷ EPR can help solve resource depletion problems this world is facing.⁸⁸ The time is ripe to implement a national EPR system for packaging waste, now that the United States can no longer export millions of tons of recyclable waste to China every year.

70. See *supra* note 56.

71. ARTHUR PIGOU, *THE ECONOMICS OF WELFARE* 129-30 (4th ed. 1932).

72. A form of excise tax, a Pigouvian tax corrects inefficient market outcomes by pricing the tax to equal negative externalities. See Tax Foundation, *Pigouvian Tax*, <https://taxfoundation.org/tax-basics/pigouvian-tax/> (last visited May 19, 2022). However, excise taxes in general can be levied in more ways than just to account for externalities, such as a user fee. See Tax Foundation, *Excise Tax*, <https://taxfoundation.org/tax-basics/excise-tax/> (last visited May 19, 2022).

73. PIGOU, *supra* note 71, at 192.

74. U.S. EPA, *Pay-As-You-Throw*, <https://archive.epa.gov/wastes/conserve/tools/payt/web/html/index.html> (last updated Feb. 21, 2016).

75. *Id.*

76. *Cf. id.* (“When the cost of managing trash is hidden in taxes or charged at a flat rate, residents who recycle and prevent waste subsidize their neighbors’ wastefulness. Under PAYT, residents pay only for what they throw away.”).

77. U.S. EPA, *SETTING RATES FOR A PAY-AS-YOU-THROW PROGRAM* 27 (1999) (EPA530-R-99-006).

78. See, e.g., VERMONT AGENCY OF NATURAL RESOURCES, *VARIABLE RATE PRICING (AKA UNIT-BASED PRICING) GUIDE AND SAMPLE ORDINANCE FOR MUNICIPALITIES* 5, 11 (2015) (recommending a pricing structure that only covers the cost of hauling and disposal for each unit of waste); COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION, *PAY-AS-YOU-THROW: AN IMPLEMENTATION GUIDE FOR SOLID WASTE UNIT-BASED PRICING PROGRAMS* 30 (2004) (providing for a full cost accounting method of setting rates, which includes the front- and back-end costs associated with landfilling, but not all the externalities that a producer or consumer must realize to pay the full price of the waste); FORT COLLINS, COLO., *CODE* §12-19(a)(2) (2021) (requiring solid waste collectors to charge a fee based only on volume, with no set standards of what should be included in the fee).

79. A nationwide requirement that municipalities adopt PAYT for garbage collection would help consumers internalize the externalities of their waste and would probably decrease consumption and increase recycling. But this would not have a strong effect on producers. An EPR system that reflected the externalities of packaging waste on producers, with a PAYT system re-

flecting the externalities associated with excess consumption, would be an ideal solution. However, the focus of this Article deals only with the externalities producers should realize.

80. BLACKBURN, *supra* note 21, at 579. For example, a government could (1) regulate product design to minimize adverse environmental and social effects; (2) mandate product take-backs so companies are directly responsible for their products’ end-life; or (3) assess a fee instead of a physical take-back to make sure companies are responsible for disposal and other waste management costs. *Id.* at 579-80.

81. Electronic waste includes phones, computers, and printers. Forcing the producers of electronic waste to be directly responsible for recycling their products will increase incentives to design for durability and recyclability. Further, the manufacturer is best suited to recycle complicated products as they know the component parts best. Some companies (like Xerox, IBM, and Dell) have already implemented programs like this. See Sachs, *supra* note 26, at 75-76 n.109.

82. For example, forcing producers to collect boxes, wrappers, and containers would be almost impossible without 100% consumer participation. Further, both the financial and environmental costs would be astronomical in comparison to merely making producers financially responsible for their part of the current waste cycle. *Id.* at 76, 84 (“If EPR were implemented through a physical take-back system rather than up-front fees, products would have to be tracked and sorted out of the waste stream by brand name—a daunting bureaucratic challenge with very high transaction costs.”).

83. U.S. EPA, *FOURTH REPORT TO CONGRESS: RESOURCE RECOVERY AND WASTE REDUCTION 93-94* (1977).

84. See NATIONAL RECYCLING STRATEGY, *supra* note 27, at 29.

85. Product Stewardship Institute, *U.S. State EPR Laws*, https://www.productstewardship.us/page/State_EPR_Laws_Map (last visited May 19, 2022).

86. EPR FOR PPP, *supra* note 56, at 2.

87. *Id.*

88. The effects of an EPR system should ultimately lengthen the depletion rate of any materials covered under the system since “[d]epletion rates can be lengthened with greater recycling and reuse or through a lower rate of consumption,” and the purpose of EPR is to internalize the costs and responsibilities of products to force producers to (1) use less material, and (2) design products to be more recyclable, compostable, and reusable. BLACKBURN, *supra* note 21, at 564; Austin, *supra* note 54, at 236.

II. The Current Landscape of Federal Waste Management and Product Labeling Laws

The federal government has historically played a minor regulatory role with solid waste, mostly under the Resource Conservation and Recovery Act (RCRA).⁸⁹ If the United States does not implement stronger laws to encourage recycling, valuable minerals will continue to “[e]scape from the [e]conomy.”⁹⁰ Another regulatory role the federal government plays is in product labeling, which is vital in educating consumers about a product’s recyclability. The Federal Trade Commission (FTC) oversees some product marketing and labeling in the United States through the Fair Packaging and Labeling Act and the FTC’s guides on marketing claims.⁹¹ However, the FTC guides on environmental marketing claims have not gone far enough in making sure producers educate consumers on what is and is not recyclable.

A. RCRA Is Inadequate to Encourage Reuse and Recycling

In 1976, the U.S. Congress enacted RCRA, amending the Solid Waste Disposal Act and marking its largest effort yet to tackle waste.⁹² But RCRA’s main focus was hazardous waste; thus, it is wholly ineffective for dealing with the United States’ current solid waste problem—the sheer volume of waste being landfilled and incinerated.⁹³ For non-hazardous solid waste, RCRA only prohibited open dumps and established sanitary landfills.⁹⁴

In 1980, Congress again amended the Solid Waste Disposal Act.⁹⁵ Congress’ findings regarding material conservation and recovery were enlightening: (1) conserving materials and decreasing waste could provide significant savings; (2) solid waste contains valuable materials that, if recovered, could save increasingly scarce fossil fuels and virgin materials; (3) recovery of these materials could reduce municipal burdens on the ever-increasing volume

of waste streams; and (4) the technology to conserve and recover these resources already exists and is feasible.⁹⁶

While these four findings appeared to portend a shift in federal waste management policy, Congress’ fifth finding clarified that they did not; Congress said communities all had different needs and that “[f]ederal assistance in *planning and implementing* such . . . recovery programs *should* be available” to these communities.⁹⁷ One of the main effects was federal grants to implement waste recovery plans.⁹⁸ Notably, a state could receive these grants by conserving resources *or* by building incinerators.⁹⁹ So, despite Congress’ recognition of waste recovery’s importance, Congress ended up spurring more investment into waste incineration rather than recovery with these grants.¹⁰⁰

Federal regulations are also lacking. EPA requires states to submit solid waste management plans.¹⁰¹ The plans must provide for and consider resource conservation and resource recovery.¹⁰² However, EPA did not set any minimums for resource conservation and recovery. State plans are required to provide for adequate practices necessary to dispose of waste in an environmentally sound manner,¹⁰³ but “environmentally sound” includes landfills and incinerators.¹⁰⁴ The rest of the provisions on resource recovery are merely suggestions for states, and are not enforceable.¹⁰⁵

Another EPA regulation, 40 C.F.R. §246, deals with source separation for material recovery. Source separation is important for efficient and cost-effective resource recovery, because it decreases labor costs and recycling contamination.¹⁰⁶ EPA sets basic minimum separation requirements for office paper and residential materials.¹⁰⁷ Yet even these minimal requirements only apply to federal agencies; the “requirements” are only recommendations to state and local governments.¹⁰⁸ But even assuming the requirements applied equally to states, they still would not substantially increase the United States’ recycling rates because of their limited applicability and scope.¹⁰⁹ Therefore, EPA’s current regulations are not enough to fix the United States’ solid

89. See 42 U.S.C. §§6901-6992k, ELR STAT. RCRA §§1001-11011.

90. See NATIONAL RECYCLING STRATEGY, *supra* note 27, at 11-12 (demonstrating that resource loss from not properly recovering recyclables hurts the economy).

91. See *infra* Section II.B.

92. See RCRA, Pub. L. No. 94-580, 90 Stat. 2795 (1976) (codified as amended in scattered sections of 42 U.S.C.). RCRA amended the Solid Waste Disposal Act of 1965.

93. See 42 U.S.C. §6942 (requiring only that EPA establish “guidelines to assist” states in establishing solid waste management plans); see also Roger W. Anderson, *The Resource Conservation and Recovery Act of 1976: Closing the Gap*, 1978 WIS. L. REV. 633, 642 (1978).

94. 42 U.S.C. §6944. The federal government intended only to assist states in developing plans that encouraged environmentally sound disposal methods, maximized the utilization of resources, and encouraged resource conservation. *Id.* §6941. Further, Congress tasked EPA to develop guidelines that advised states “how to do it” rather than telling states to “do it,” and the legislative history supports the federal government’s intent for a backseat approach. See Anderson, *supra* note 93, at 664 n.186.

95. Solid Waste Disposal Act Amendments of 1980, Pub. L. No. 96-482, 94 Stat. 2334 (codified as amended in scattered sections of 42 U.S.C.).

96. 42 U.S.C. §6941a.

97. *Id.* (emphasis added).

98. *Id.* §6948.

99. Assistance is available to states if the Administrator determines that the plan will conserve resources *or* recover energy from materials. *Id.* §6943(c). Incineration is the main way to recover energy from “waste.” See *supra* notes 23-25 and accompanying text.

100. *Cf. National Overview*, *supra* note 1 (showing an increase in combustion with energy recovery of more than 12 times since 1980, while recycling grew by about four times, even while the amount landfilled continued to increase).

101. 40 C.F.R. §§256.01(b), 256.03 (2021).

102. *Id.* §§256.01(b)(6), 256.02(a)(2).

103. *Id.* §256.40.

104. See *id.*

105. See *id.* §256.31 (recommending a procurement plan and encouraging development of recovery facilities).

106. See Manning & Deskins, *supra* note 8, at 132.

107. 40 C.F.R. §§246.200-1, 246.201-1 (2021).

108. See *id.* §246.100(b).

109. See *id.* §§246.200-201 (requiring offices of more than 100 people to separate out high-quality paper for recovery, and residential areas of more than 500 people to separate used newspapers for recovery). The rest of the section, however, deals with recommendations that do not even bind federal agencies. *Id.*

waste problems, nor does EPA have authority to promulgate regulations that will.¹¹⁰

The COMMERCE Act would give EPA the authority to complete these important objectives. Because this long-recognized problem remains 50 years later, and continues to worsen, Congress needs to act again. Members of Congress tried several times in 2021 to implement some of these policies, but these efforts have not yet become law, nor did they go far enough.¹¹¹ The COMMERCE Act is more desirable than these proposed laws because it combines many elements of these bills—and pays for itself, unlike many of these bills.

B. Federal Labeling Requirements Are Insufficient to Educate Consumers

The FTC ostensibly has authority to promulgate regulations dealing with claims about a packaging material's recyclability.¹¹² Under this apparent authority, the FTC has promulgated 16 C.F.R. §260, which deals with environmental marketing claims. This regulation reflects the FTC's "current views about environmental claims," and "help[s] marketers avoid making environmental marketing claims that are unfair or deceptive."¹¹³

According to the FTC, an environmental claim is deceptive if it is likely to mislead consumers and is key to their decisions.¹¹⁴ Further, an environmental claim usually requires competent and reliable scientific evidence to support it.¹¹⁵ With that evidence, a marketer can make a general environmental claim about a product or packaging so long as it applies to all but minor, incidental components of that product; however, if that component "significantly limits the ability to recycle the product, the claim would be deceptive."¹¹⁶ Although the FTC has authority under

the FTC Act to take action against a company engaged in deceptive environmental marketing claims, the FTC does not regularly enforce these regulations.¹¹⁷

Several problems exist with the current regulations. First, the FTC does not have specific, delegated authority to promulgate regulations regarding environmental claims. Second, a "reasonable consumer" is easily misled by the recycling symbol found on most plastic packaging, yet this symbol is exempt from misleading environmental marketing claims if placed away from a product's main label.¹¹⁸ Third, some FTC examples on what is or is not an acceptable claim seem to be in conflict.¹¹⁹ Fourth, decades after the FTC promulgated its regulations, consumers and producers remain confused about claims' meanings and producers' responsibilities.¹²⁰ Finally, due to the absence of strong FTC labeling requirements, private standards and certifying bodies have appeared; these have grown so numerous that consumers have a hard time understanding and making informed decisions.¹²¹ Congress, therefore, needs to specifically require the FTC to regulate the recycling symbol and other environmental claims.

III. Building the COMMERCE Act

Recently, U.S. states have led the way in trying to decrease and bring awareness to excess packaging waste. Maine, Oregon, and California have enacted EPR and labeling laws that should be a model for the federal government to follow. Further, countries like Germany and South Korea have several decades of successful waste management experience to learn from. Individual states' solutions are not enough. The United States should learn from the issues and

110. See, e.g., NATIONAL RECYCLING STRATEGY, *supra* note 27, at 30 (recommending analysis of policies to "help inform decision makers nationally" and "develop[] recommendations for administrative or legislative action").

111. See, e.g., Break Free From Plastic Pollution Act of 2021, S. 984, H.R. 2238, 117th Cong. (2021) (proposing a comprehensive series of measures to reform solid waste management in the United States, including EPR for packaging waste); RECYCLE Act of 2021, S. 923, H.R. 2159, 117th Cong. (2021) (focusing solely on educating consumers about recycling, without a corresponding increase in infrastructure); RECOVER Act, H.R. 2357, 117th Cong. (2021) (authorizing \$500 million over the next five years to increase domestic recycling infrastructure, with no way to pay for it); REDUCE Act of 2021, S. 2645, 117th Cong. (2021) (placing an excise tax on plastics without considering specific externalities associated with each); Recycling Infrastructure and Accessibility Act of 2022, S. 3742, 117th Cong. (2022) (establishing grant program to increase recycling in underserved communities, with no specific appropriations or income to pay for it); Recycling and Composting Accountability Act, S. 3743, 117th Cong. (2022) (requiring EPA to improve recycling and composting reporting practices). None of these bills does enough individually. The problems in the United States' waste stream are multifaceted—they need a multifaceted solution.

112. See 15 U.S.C. §§41-58 (giving authority to manage "unfair and deceptive" marketing practices, but not specifically delegating requirements to promulgate regulations on recyclable claims).

113. 16 C.F.R. §260.1(a) (2021).

114. *Id.* §260.2.

115. *Id.*

116. *Id.* §260.3(b). A "minor, incidental component" may make an entire product nonrecyclable in many recycling programs if it significantly limits its recyclability. These components could include certain dyes, the shape, the size,

or other attributes of a product. If labeled as recyclable, this claim would be deceptive. *Id.* §260.12(d).

117. See FTC, *Legal Library: Cases and Proceedings*, <https://www.ftc.gov/legal-library/browse/cases-proceedings> (choose "Environmental Marketing" from Consumer Protection Topics dropdown; choose "Food and Beverages," "Consumer Goods (Non Food and Beverage)," and "Retail" under Industry dropdown) (last visited May 19, 2022) (showing only two cases with complaints and resolutions, neither of which deals with recyclable claims).

118. See 16 C.F.R. §260.12(d) ex. 2 (2021) (exempting the "recycling symbol" from recyclable claims so long as it does not appear in a prominent place on the packaging). Yet, consumers are often unaware of the technical meanings of these symbols and instead rely on them to indicate their recyclability. See Letter from Lynne R. Harris, Senior Vice President, Science and Technology, Society of the Plastics Industry, Inc., to Office of the Secretary, FTC (May 19, 2008), https://www.ftc.gov/sites/default/files/documents/public_comments/guides-use-environmental-marketing-claims-534743-00034/534743-00034.pdf. See also NATIONAL RECYCLING STRATEGY, *supra* note 27, at 27 (stating that "[l]abels should be accurate and not misleading," and noting the recycling symbol is confusing).

119. For example, example 2 under 16 C.F.R. §260.3 can be read as conflicting with example 2 under 16 C.F.R. §260.12(d). The first example speaks of a trash bag labeled "recyclable," which is misleading because trash bags are normally thrown away, leading to no environmental benefit. The second example speaks of a yogurt container with the recycling symbol (which, as discussed above, leads consumers to think the product is recyclable) not being misleading so long as the symbol is not placed in a prominent place. So, the trash bag in the first example would presumably not be misleading if it had the recycling symbol on it, even though this would cause the same deception to consumers as in the first example.

120. See BLACKBURN, *supra* note 21, at 594.

121. See *id.* at 594-98.

adopt the solutions these states and countries have found along the way.

Although individual states lead the way, the federal government is best suited to implement meaningful recycling reforms. Individual states are not equipped to handle the big-picture issues of national material markets and infrastructure for several reasons. First, if each state had its own EPR and labeling system, it would be harder for businesses to comply and they would face higher costs. Every state that implements its own packaging requirements will add compliance costs to producers, and potentially jeopardize the monetary and environmental benefits realized through effective waste management strategies.¹²²

Second, a national system of bins and labels will be easier for consumers to understand when they travel, because the bins will be uniform. Third, economies of scale dictate building infrastructure where it would make economic sense.¹²³ The federal government is better equipped than smaller or less populous states to research and finance sensible infrastructure. Finally, if the United States hopes to solve its waste problem, the federal government will need to preempt states actively fighting sustainability.

Setting uniform laws for municipal waste management across states certainly raises some federalism concerns. For instance, it would make no sense to set a uniform rate for landfilling across the country when landfilling is cheaper in some areas and more expensive in others. Nonetheless, the federal government could require municipalities to consider certain factors, including externalities, when setting their own rates. The federal government could also require municipalities to implement PAYT, or give incentives for meeting reduction targets. These types of regulations would balance the historical local power to manage waste with the current need for comprehensive reform. But certain issues are big enough that the federal government will need to set a strict rule across the board, such as EPR fees for producers of packaging materials.

State legislation is necessary, and people should encourage their states to do more—but trying to solve the recycling crisis state-by-state is not enough. The United States needs strong, comprehensive federal legislation to tackle

this crisis. Moreover, federal legislation on this issue should be feasible—“[r]ecycling is ‘one of those few things that can really attract people from both sides of the aisle.’”¹²⁴—and viewed properly, the COMMERCE Act has aspects that both parties could get behind.

More recycling in the United States will create more jobs and spur economic growth.¹²⁵ Domestic recycling also will ensure access to materials and decrease dependence on imports. Recycling more will decrease emissions and, when done right, decrease negative health effects to those long impacted by U.S. waste practices. Finally, the COMMERCE Act aims to be budget-neutral, which should appeal to those concerned with impacts on the deficit and national debt. Each of these effects is something that members of Congress could and should support—creating an opportunity for bipartisanship during a moment of much-needed change.

The COMMERCE Act proposes that federal legislation, at a minimum, needs to (1) repeal subsidies for virgin material producers¹²⁶; (2) create a national EPR system for packaging and single-use products that accurately reflects the externalities associated with these materials¹²⁷; (3) dictate product labeling and packaging standards to increase consumer awareness of what to do with, and what actually happens to, their waste¹²⁸; and (4) create standard recycling bins for different materials that allow municipalities to easily add new materials to their recycling stream when feasible.¹²⁹ Each of these proposals is within the federal government’s power to tax, spend, and regulate commerce. And the federal government can implement them using existing agencies, without the need for new agencies or organizations.

A. Congress Must Repeal Virgin Material Subsidies

The federal government must take the first step of the COMMERCE Act because states are unable to. The government needs to reform the tax code to eliminate virgin material “subsidies that promote unsustainable consumption and technologies.”¹³⁰ As described above, the federal government has long encouraged mining new minerals and materials by giving producers special tax benefits.¹³¹ Congress should immediately repeal certain provisions from the tax code to eliminate these special tax breaks that producers of reprocessed materials do not enjoy.

122. Cf. Dan Leif, *Q&A: Seizing the Moment on Recycling Policy*, RES. RECYCLING (Apr. 19, 2022), <https://resource-recycling.com/recycling/2022/04/18/qa-seizing-the-moment-on-recycling-policy/>:

Let’s imagine that three or five more states pass packaging EPR bills that differ in their approach. We then have a reprise of the disjointed approach that occurred around state electronics EPR laws from the early 2000s, each differing in their details. For many companies and groups, that is a recipe for disaster.

Waste Stream Evaluation, *supra* note 13, at 41 (noting that a lack of harmony between EU Member State policy instruments in waste management jeopardizes cost efficiency); Rybar, *supra* note 6 (noting that without a federal program, companies will face a confusing, complicated, and costly patchwork of legislation). Several other states have already introduced their own EPR legislation, or efforts to study EPR, to try to deal with the waste problem. *See, e.g.*, H.B. 22-1355, 73d Gen. Assemb., 2d Reg. Sess. (Colo. 2022) (requiring governor’s signature as of May 28, 2022, but passed by House and Senate); H.B. 2399, 31st Leg., 2022 Sess. (Haw. 2022); S.B. 292, 2022 Reg. Sess. (Md. 2022); H. 948, 192d Gen. Ct., 2021-2022 Sess. (Mass. 2021); A. 10185, 2021-22 Sess. (N.Y. 2022); H. 142, 2021-2022 Sess. (Vt. 2021).

123. EPR FOR PPP, *supra* note 56, at 1.

124. Marissa Heffernan, *Conference Panelists Outline State of Plastics Recycling Policy*, RES. RECYCLING: PLASTICS RECYCLING UPDATE (Mar. 7, 2022), <https://resource-recycling.com/plastics/2022/03/07/conference-panelists-outline-state-of-plastics-recycling-policy/>.

125. REI REPORT, *supra* note 28, at 1; BANDHAUER ET AL., *supra* note 61, at 5, 10-11.

126. *See* discussion *infra* Section III.A.

127. *See* discussion *infra* Section III.B.

128. *See* discussion *infra* Section III.C.

129. *See* discussion *infra* Section III.D.

130. BLACKBURN, *supra* note 21, at 566.

131. *See supra* Section I.B.1; *see also, e.g.*, 26 U.S.C. §§167(h), 611-617.

First, Congress should repeal 26 U.S.C. §167(h), which allows businesses to deduct expenses paid when exploring or developing oil or gas within the United States. Second, Congress should repeal those parts of 26 U.S.C. §263(c) and (i) that deal with deductions for oil and gas drilling. Third, Congress needs to clean up 26 U.S.C. §§613 and 613A to repeal mineral subsidies dealing with oil, gas, and oil shale.¹³² Fourth, Congress must strike 26 U.S.C. §§43 and 45I, which give a credit for projects that enhance oil recovery beyond what a producer would reasonably expect from a site, and a credit for oil and gas produced from marginal wells. Finally, Congress should strike 26 U.S.C. §7704(d)(1)(E), to eliminate income generated from gas and oil from qualifying as deductible income.¹³³

Each of these is a special subsidy that has the effect of driving down the cost of virgin plastics, which makes recycled material less competitive. Eliminating them will put businesses trying to recycle materials and businesses mining for virgin materials on more equal footing, allowing for fairness and competition in the marketplace.

These proposals are not new. However, they have yet to pass. The Clean Energy for America Act included these proposals, yet they were subsequently stripped from the Build Back Better Act, despite being part of President Joe Biden's campaign pledges.¹³⁴ Despite this, “[r]ecycling is an incredible area for bipartisanship—one where we can do good for our planet and our economy at the same time,”¹³⁵ and, if built in to a larger proposal based on recycling, may be more palatable to members of Congress.

Indeed, “[t]here is no reason that the fossil fuel industry deserves special privileges over other businesses.”¹³⁶ Repealing these tax breaks will fund other parts of the COMMERCE Act—each part is necessary and works together to pay for itself. For example, the increased tax revenue from Part A and the EPR fee from Part B will pay for the increased investments in education and infrastructure from Part B and the uniform bins from Part D.

Finally, Congress should commission the Internal Revenue Service (IRS) to prepare a report indicating other tax

breaks that encourage producing or consuming raw timber or minerals over recycled materials. The IRS could recommend a repeal or a phaseout to Congress. Based on other policy goals, Congress may decide these other recommendations are not as vital to repeal as the oil and gas incentives. Driving down virgin plastic production is the most vital, because plastic is the least recycled and most harmful of packaging materials.¹³⁷

Repealing these tax breaks will have several positive effects on the issues recycling faces in the United States. First, producers buying virgin materials for their packaging will finally have to pay the true costs of these materials, rather than a subsidized cost. This will drive up demand for recycled material and simultaneously increase private investment in recycling infrastructure to meet increased demand.¹³⁸ Second, it will increase tax revenue because of the decreased tax subsidies. The federal government should use this revenue to pay for other parts of this Act, including grants for infrastructure and consumer education. Repealing these tax breaks is necessary; combining the rest of the COMMERCE Act's proposals will further augment these positive effects.

B. Creating an EPR System for Packaging and Single-Use Products

The second step needed to reimagine waste management in the United States is enacting a suitable EPR system for packaging material and single-use products: “Going a step further, [Congress] can realign tax policy to encourage the behavior and focus [businesses] need.”¹³⁹ Indeed, “[t]here are [some] externalities that simply have to be hemmed in through regulations.”¹⁴⁰ Maine's and Oregon's recently passed laws are a helpful guide for Congress in creating a national EPR system, with one important caveat—Maine and Oregon both create a producer responsibility organization that would be unnecessary at the national level.

1. Overview of Maine's and Oregon's Recent Laws

On July 12, 2021, Maine was the first state to pass legislation implementing a statewide EPR system for packaging waste.¹⁴¹ Oregon followed shortly thereafter, enacting EPR legislation on August 6, 2021.¹⁴² Oregon's act is much more

132. See 26 U.S.C. §613(a) (allowing a taxpayer to take an allowance of up to 100% of taxable income for depletion of oil and gas properties); *id.* §613(b) (2)(B) (allowing a taxpayer to depreciate 15% of the gross income from oil shale properties); *id.* §613A (allowing a taxpayer to depreciate certain oil and natural gas income).

133. Congress must repeal other provisions of the tax code to help the U.S. transition to cleaner energy. See Clean Energy for America Act, S. 1298, 117th Cong. tit. V (2021). However, this Article focuses on tax credits for oil and gas—major components of most plastic production, and necessary to keep the plastics industry from becoming the main climate driver in the United States. See E.A. (Ev) Crunden & Ana Faguy, *Plastics Poised to Overtake Coal as Climate Driver*, E&E NEWS (Oct. 21, 2021), <https://subscriber.politicopro.com/article/eenews/2021/10/21/plastics-poised-to-overtake-coal-as-climate-driver-282248>; see also Roland Geyer et al., *Production, Use, and Fate of All Plastics Ever Made*, 3 SCI. ADVANCES 1, 1 (2017) (noting that the vast majority of plastics are made from fossil fuels and are not compostable).

134. Koss, *supra* note 36.

135. Press Release, U.S. Senate Committee on Environment and Public Works, Carper, Capito, Boozman Applaud EPW Passage of Recycling and Composting Legislation (Apr. 7, 2022), <https://www.epw.senate.gov/public/index.cfm/press-releases-democratic?ID=DA9117D7-7138-49F4-B2A8-661C9E68C1A1>.

136. Koss, *supra* note 36.

137. See GLOBAL PLASTICS OUTLOOK, *supra* note 27, at 19, 21-22 (showing only 9% of plastic waste is recycled and that the plastic leakage from the rest is posing substantial risks to human health and the environment).

138. *Cf. id.* at 24 (showing that the secondary plastics market is intimately tied to that of virgin materials).

139. BLACKBURN, *supra* note 21, at 566.

140. Bruce Kahn, Keynote Speaker, Vermont Law Journal Symposium, *Balancing Corporate & Activist Interests: Clean Energy, Wildlife Protection, and Land Use Reform*, VIMEO: VT. L. SCH., at 1:24:43 (Nov. 5, 2021), <https://livestream.com/vermontlawschool/events/9922547>.

141. State of Maine Legislature, *Summary of LD 1541*, <https://legislature.maine.gov/LawMakerWeb/summary.asp?ID=280080518> (last visited May 19, 2022).

142. See Modernizing Oregon's Recycling System, 2021 Or. Laws 681.

detailed than Maine's law and has more requirements. For example, Maine's law deals specifically with packaging material.¹⁴³ It does not touch on single-use products or other products that often end up in landfills, like paper.¹⁴⁴

On the other hand, besides EPR, Oregon also attempts to deal with product labeling, composting, and marine cleanup.¹⁴⁵ Further, Oregon places a lot of emphasis on comingled recyclables and their potential harm to an efficient recycling system.¹⁴⁶ Although more complex, Oregon's law will go a lot further in achieving important recycling objectives.

Maine's and Oregon's EPR systems require producers to join an organization and pay a fee to that organization for all packaging waste they produce.¹⁴⁷ The organizations will oversee collecting and disbursing these fees.¹⁴⁸ Maine will have a bidding process to choose an organization; in Oregon, organizations submit plans to the state agency, subject to approval.¹⁴⁹ Therefore, in Oregon, there will likely be multiple organizations trying to administer an already complex system. As argued below, the federal government does not need a separate organization to manage an EPR system for packaging waste, saving money and red tape.¹⁵⁰

Both states exempt certain producers, which would also be unnecessary at the federal level. In Oregon, small producers are exempt from being a member of the organization.¹⁵¹ Also, for producers with less than \$10 million in gross revenue or who sold less than five tons of covered products in a year, there will be a uniform fee, rather than a per-ton rate.¹⁵² However, in Maine, producers are exempt if, in the past year, they (1) realized less than \$2 million in gross revenue; (2) used less than one ton of packaging material; (3) realized more than 50% of their total gross revenue from salvages or the like; or (4) sold perishable

food packaged in less than 15 tons of packaging material.¹⁵³ These exemptions mostly target smaller producers that might not be able to easily calculate the amount of packaging they send into individual states.

As opposed to the state systems, a federal EPR system with a self-reporting mechanism would not need to exclude smaller producers. First, because the fee would remain the same throughout the nation, producers would not need to differentiate between geographic boundaries. Small producers would only have to know how much they sell in the United States every year, rather than try to calculate how much product they sold into Maine, Oregon, and so on, which would be more difficult on smaller producers. And second, their fee would be easy to calculate based on their business records, which, if accurately kept, should reflect all materials purchased and sold each year.

Maine and Oregon also set their fees differently. In Maine, for producers covered under the law, there will be a fee based on the net weight or volume of each type of packaging material used.¹⁵⁴ The fee is not set out in the law. Instead, the Maine Department of Environmental Protection will adopt rules "setting forth the manner in which such payments must be calculated for packaging material that is readily recyclable and packaging material that is not readily recyclable."¹⁵⁵ These rules "must be designed to incentivize the use . . . of packaging material that is readily recyclable and disincentivize the use . . . of packaging material that is not readily recyclable."¹⁵⁶ Ultimately, a producer may reduce or eliminate fees owed in Maine in two ways: (1) by setting up an alternative collection and management program, subject to approval by the department¹⁵⁷; or (2) by reducing the amount of packaging material used.

However, in Oregon, the organization assesses the fee, rather than the state agency.¹⁵⁸ The organization must look at several factors. First, the fees must meet the organization's obligations.¹⁵⁹ Second, the fees must differentiate between types of covered product, material, and format.¹⁶⁰ Third, each material must have its own base fee.¹⁶¹ Fourth, there should be a separate, higher fee for products not accepted by recycling collection programs in the state.¹⁶² Fifth, the fees must incentivize producers to reduce environmental and health impacts by charging lower fees for lower impacts and vice versa.¹⁶³ When assessing environmental impacts of materials, an organization should look to (1) the post-consumer content of the material, (2) the product-to-package ratio, (3) the choice of material, (4) life-cycle environmental impacts, and (5) the recycling rate of the material.¹⁶⁴ Oregon lists more factors to consider when

143. ME. REV. STAT. ANN. tit. 38, §2146(1)(I) (2021).

144. See generally *id.*

145. See Modernizing Oregon's Recycling System §§26a, 36, 41.

146. See *id.* §19 (prohibiting certain comingled recyclables in the waste stream); *id.* §§22(3)-(5) (determining which materials are appropriate to comingle); *id.* §§24-25 (charging a contamination management fee and processor commodity risk fee to producers for the cost of separating comingled recyclables and disposing nonrecyclable waste mixed in); *id.* §§37-39 (requiring certification and a permit to establish and operate a comingled recycling processing facility after a certain date). See also Manning & Deskins, *supra* note 8, at 114-17, 121, 131-32 (explaining the problem of comingled recycling streams ("single-stream recycling") and potential solutions in the United States); Waste Stream Evaluation, *supra* note 13, at 50 (showing the need to reduce contamination in the recycling stream for increased recycling to take place).

147. See ME. REV. STAT. ANN. tit. 38, §2146(6) (2021); Modernizing Oregon's Recycling System §4(1)-(2).

148. ME. REV. STAT. ANN. tit. 38, §2146(3), (6) (2021); Modernizing Oregon's Recycling System §§11, 13-15.

149. ME. REV. STAT. ANN. tit. 38, §2146(3)(A) (2021); Modernizing Oregon's Recycling System §§6-7 (meaning Oregon could have many organizations).

150. See discussion *infra* Section III.B.4.

151. Modernizing Oregon's Recycling System §5. The Oregon law defines a "small producer" as a nonprofit; a public body; a company with less than \$5 million in gross revenue or who sold less than one ton of covered products into Oregon in a year; a beverage manufacturer who sells less than five tons of covered products a year; a restaurant that sells food intended to be consumed immediately and does not produce food service ware; or who operates a single retail establishment that is not a franchise and has no online sales. *Id.* §2(32)(a)-(g).

152. *Id.* §11(6).

153. ME. REV. STAT. ANN. tit. 38, §2146(2)(A)-(D) (2021).

154. *Id.* §2146(6).

155. *Id.*

156. *Id.*

157. *Id.* §2146(8).

158. Modernizing Oregon's Recycling System §11(1).

159. *Id.*

160. *Id.*

161. *Id.* §11(2).

162. *Id.* §11(3).

163. *Id.* §11(4).

164. *Id.* §11(4)(a)-(e).

setting a fee than Maine does. Similarly, Congress should give a nonexclusive list of externalities for EPA to consider when setting its fee.

Maine and Oregon require their organizations to disburse fees in different ways, but with similar goals. Maine's organization will manage a packaging stewardship fund to deposit and disburse collected fees.¹⁶⁵ The organization may then disburse funds in four ways: (1) to reimburse participating municipalities for their costs in collecting, transporting, and processing packaging materials, among other things¹⁶⁶; (2) to cover the costs of the stewardship organization¹⁶⁷; (3) to pay the department applicable fees, including those incurred in adopting rules¹⁶⁸; and (4) to support investments in education and infrastructure that support the recycling of packaging material.¹⁶⁹ On the other hand, Oregon's organization will be directly responsible for all the law's obligations, but it must also compensate local governments and service providers for some of their waste management costs.¹⁷⁰

Ultimately, the Maine and Oregon EPR systems are well-thought-out laws that ought to reduce waste within those states. However, the small size of these states and their economies will limit their laws' effects. The federal government needs to implement this kind of system on a national basis to have sufficient effects on the recycling crisis. And, as stated above, it will be inefficient, costly, and confusing if every state adopted its own EPR system with its own nuances.¹⁷¹ Further, as discussed below, the added costs of a managing organization are unnecessary: the government already has all the tools it needs to implement a successful EPR system without new agencies or organizations.¹⁷²

2. The EU and Germany Provide Long-Term Examples

Maine's and Oregon's laws are too new to see their effects yet. But international examples have been around for many years, and have shown much success. Europe leads the world in efforts to manage plastics, partly due to "the proactivity of the EU and its ability to fund innovation and research."¹⁷³ In 1994, the EU released its Directive on Packaging and Packaging Waste that recognized producer responsibility for packaging waste.¹⁷⁴ The EU encouraged Member States to take measures to "introduce producer responsibility to minimize the environmental impact of packaging."¹⁷⁵ The EU directive sets forth essential require-

ments for packaging composition, reusability, and recoverability to standardize marketable waste for recycling.¹⁷⁶

Since then, every Member State in the EU has adopted EPR legislation.¹⁷⁷ And packaging waste recycling has consistently increased within the EU.¹⁷⁸ Implementing EPR systems and other policies has been very effective in meeting the EU's recycling goals.¹⁷⁹

Like the United States now, Europe had its own difficulties in managing waste and implementing effective policies. The EU's 1994 Directive on Packaging and Packaging Waste resulted from EU Member States complaining about the lack of harmony between national waste policies.¹⁸⁰ Because each Member State had its own legislation, Member States and producers requested comprehensive legislation that would harmonize the management of packaging waste.¹⁸¹ Similarly, the lack of harmony between states' waste management hinders U.S. recycling efforts.¹⁸² The United States must therefore harmonize management of EPR systems across the nation.

Other problems in the EU included increased costs associated with setting up new waste management systems, and costs of setting up new EPR systems; in spite of that, these costs were mitigated—indeed overcome—by savings realized from decreased virgin material extraction and use, decreased greenhouse gas emissions, diversion from the landfill, and landfill infrastructure savings.¹⁸³ Further, Member States that struggled to reach the EU's recycling targets had the same issues the United States does now: a lack of infrastructure, a high dependence on landfilling, administrative and instructional drawbacks, and inefficient source separation of waste.¹⁸⁴ Many of these countries overcame these problems. By also overcoming these problems, the United States will realize the high recycling rates and economic advantages the EU now sees.¹⁸⁵

Within the EU, Germany models best waste management practices.¹⁸⁶ Part of the reason Germany leads "is its lifecycle approach, including efforts to build a circular economy for plastics."¹⁸⁷ In fact, Germany's law inspired the EU's 1994 directive.¹⁸⁸ Germany's packaging ordinance

165. ME. REV. STAT. ANN. tit. 38, §2146(12) (2021).

166. *See id.* §2146(9)-(10), (12)-(13) (reimbursing municipalities at the median per-ton rate of managing waste in the state, hoping to incentivize municipalities to reduce costs).

167. *Id.* §2146(12)(B). The organization must be audited annually. *Id.*

168. *See id.* §2146(12)(C), (13).

169. *See id.* §2146(11), (12)(D).

170. *See* Modernizing Oregon's Recycling System §§6, 13-15.

171. *See* discussion *supra* Part III.

172. *See* discussion *infra* Section III.B.4.

173. CARMICHAEL, *supra* note 2, at 2.

174. *See* European Parliament and Council Directive 94/62/EC, 1994 O.J. (L 365) 1.

175. *Id.* art. 4.

176. Waste Stream Evaluation, *supra* note 13, at 6.

177. Sachs, *supra* note 26, at 68.

178. European Environment Agency, *Treatment of Packaging Waste in the EU-15*, <https://www.eea.europa.eu/data-and-maps/figures/treatment-of-packaging-waste-in-the-eu-4> (last modified Nov. 29, 2012); Waste Stream Evaluation, *supra* note 13, at 49.

179. Waste Stream Evaluation, *supra* note 13, at 3-4, 18, 22. *See also* GLOBAL PLASTICS OUTLOOK, *supra* note 27, at 24 (explaining that EU policies to simultaneously "push" supply through EPR and "pull" demand through recycled content targets have strengthened secondary material markets).

180. Waste Stream Evaluation, *supra* note 13, at 5-6.

181. *Id.*

182. *See supra* Section I.B.2.

183. *See* Waste Stream Evaluation, *supra* note 13, at 36, 42.

184. *Id.* at 18.

185. *But see* ADAM GENDELL & RACHEL STONER, EXTENDED PRODUCER RESPONSIBILITY FOR PACKAGING: ELEMENTS AND OUTCOMES 3-11 (2021) (showing an increase in recycling rates with EU EPR programs, but recommending specific consideration of recycled content, design-for-recycling, and end-market values in EPR programs to achieve these outcomes).

186. CARMICHAEL, *supra* note 2, at 2.

187. Waste Stream Evaluation, *supra* note 13, at 7.

188. *Id.* at 14.

is so effective because it internalizes waste costs to producers; Germany's system requires producers to pay a licensing fee to use a packaging logo that indicates its recyclability.¹⁸⁹ The fee to use the logo increases with the nonrecyclability of the packaging, which internalizes to producers the increased costs of managing harder to recycle waste.¹⁹⁰ Germany's EPR system caused packaging volume to decrease by 4% over nine years, while packaging recovery rates went from 37% to 77%.¹⁹¹ In contrast, packaging volume increased by 15% to 20% in the Netherlands, which ran a voluntary recycling program.¹⁹²

A government that mandates a well-organized EPR system will see its recycling rates rise. On the other hand, a government that runs a voluntary recycling program is likely to see waste volume increase and the recyclability of goods and packaging decrease. The United States has many good examples of EPR systems to follow, both nationally and internationally. To significantly increase recycling, the United States must mandate EPR like Germany, rather than recommend it like the Netherlands.

3. Main Features of a Federal EPR Fee for Packaging Material

The United States should implement its own EPR law, which will streamline state systems like EU Member States saw.¹⁹³ Congress should draw from the best parts of each EPR law without following examples that will add unnecessary cost or complexity to the system.

Like Maine, Oregon, and Germany, a U.S. federal EPR system should charge producers a fee to make them internalize the externalities of their waste. For packaging, a fee-based EPR system is better than a producer take-back approach, because waste collection systems are already running in many municipalities.¹⁹⁴ Further, it would be almost impossible for producers and consumers to sort and send back the thousands of different types of packaging currently in use. It will therefore be cheaper and less complex for producers to pay for a system already up and running than to try and implement their own. Nevertheless, like Maine's law, the government should allow producers to mitigate the fee if they show they have a packaging take-back or reuse system in place with a minimum efficacy. But the burden must be on the producer to show facts that allow them to mitigate their fee.

This fee is a type of excise tax, yet an EPR fee is a better solution than a simple excise tax.¹⁹⁵ A well-designed EPR system is different from a simple excise tax because fees are calculated to internalize producers' externalities for specific materials and their recyclability, whereas a simple excise tax is just a flat fee that does not accurately reflect externalities.¹⁹⁶ An EPR system with a true Pigouvian tax can curb waste and improve recycling at a higher rate than a simple excise tax.¹⁹⁷

Additionally, authorizing EPA to determine the fee allows it to be more flexible and respond to changing market conditions as recycling infrastructure increases and waste management costs decrease in the United States. Further, a simple excise tax would require Congress to reassess and amend the tax code every so often. This is not a good idea for the same reason Congress should not have put virgin material subsidies in the tax code—now, even with wide support, Congress still has a hard time repealing them.¹⁹⁸

Therefore, a national EPR system with a Pigouvian tax for packaging waste is best suited to decrease waste and increase resource recovery. Specifically, this fee should make producers responsible for negative externalities of waste disposal and environmental costs: collecting, transporting, and disposing of waste; re-mining a virgin material lost to the landfill; cleaning up litter from single-use products; cleaning up communities long stuck with the adverse effects of American waste¹⁹⁹; and paying for increased emissions and other negative effects on climate that certain materials produce.²⁰⁰ Only once producers internalize their products' real costs will they have incentives to decrease waste and make products more recyclable.²⁰¹

Like Maine gave its state agency authority to set the fee, Congress should also give EPA authority to set fees for packaging waste. Congress should make clear that the fees should consider externalities throughout the front- and back-end of a material's life. For example, EPA should consider increased environmental justice issues, greenhouse gas emissions, and pollution concerns associated with virgin material production and disposal. Because these concerns are generally lower with recycled content, fees for recycled

189. Sachs, *supra* note 26, at 69.

190. *Id.*

191. Margaret Walls, *Extended Producer Responsibility and Product Design: Economic Theory and Selected Case Studies*, RES. FOR FUTURE, Mar. 2006, at 38.

192. *Id.*

193. See *supra* notes 173-79 and accompanying text.

194. See Elena Bertocci, *Maine and Oregon: The New Frontiers of Packaging EPR*, PROD. STEWARDSHIP INST., at 14:50-16:32 (Oct. 27, 2021), http://www.productstewardshipinstitute.net/audiofiles/PSI_2021-10_ME-OR_Packaging_Laws_Webinar_Recording_1080p.mp4 [hereinafter *Maine and Oregon*] (describing that Maine decided to go with a fee rather than a take-back approach like it has for other products because of the unique attributes of packaging materials).

195. See REDUCE Act of 2021, S. 2645, 117th Cong. (2021), for an example of a simple excise tax, which sets a flat rate for all types of plastic that would need additional congressional action to adjust to changing market conditions over the years.

196. See *supra* notes 80-82 and accompanying text.

197. See Ulrik Boesen, *Federal Plastics Tax Is Not a Good Revenue Raiser*, TAX FOUND. (Sept. 30, 2021), <https://taxfoundation.org/federal-plastics-tax-proposal/>.

198. See Koss, *supra* note 36 (reporting hard lobbying against proposals to repeal oil and gas subsidies).

199. These communities tend to be poorer, and have a higher rate of Black, indigenous, and people of color. See *supra* note 26; Julia Mizutani, *In the Backyard of Segregated Neighborhoods: An Environmental Justice Case Study of Louisiana*, 31 GEO. ENV'T L. REV. 363, 364-70 (2019). Producers should also pay the costs of treating the increased rates of asthma and other negative health effects caused by living next to the dumps and incinerators placed close to these communities. See NATIONAL RECYCLING STRATEGY, *supra* note 27, at 7.

200. See Crunden & Faguy, *supra* note 133.

201. Sachs, *supra* note 26, at 75-76.

packaging material should be less than fees for packaging material made from virgin materials.

Similarly, some materials do not have value as a commodity: municipalities should not collect these materials for recycling,²⁰² and the fees associated with these materials should increase. Fees should also increase for materials that cannot be recycled or that can only be recycled a limited number of times, like plastics.²⁰³ These fees are necessary because producers choose to make packaging hard to recycle.

On the other hand, proper recycling results in fewer externalities, and producers should be rewarded with a lower fee for using materials that can be, and are, recycled.²⁰⁴ This incentive will drive up demand for recycled materials, simultaneously increasing private investment in infrastructure and increasing recycled material's competitiveness in the market. At the same time, this fee will have a positive effect on sustainability's first two goals: reducing and reusing. To avoid the fee, producers will reduce the amount of packaging in products and find ways to reuse packaging so it does not wind up in the waste stream.

The EPR fee should pay the COMMERCE Act's costs for recycling education and infrastructure in the United States, and for grants to municipalities to buy new, uniform bins across the country. True, the United States is already making investments in its recycling infrastructure. For instance, the recently passed infrastructure bill included \$275 million in grants to improve recycling management and infrastructure for post-consumer materials,²⁰⁵ and \$75 million for consumer education about recycling.²⁰⁶

Yet, the United States needs \$17 billion in infrastructure investment over the next five years to make recycling accessible and ubiquitous.²⁰⁷ These investments would almost double their return in economic benefits over 10 years, and add 200,000 new jobs.²⁰⁸ But taxpayers should not foot this

bill; the producers of the United States' excess waste must pay for it. If producers invest in infrastructure directly, they will also receive the economic benefit of these recyclables.

Some argue that taxpayers will foot the bill anyway, when producers increase prices to reflect EPR fees; they argue that this kind of EPR system is regressive and hurts the poor.²⁰⁹ However, this assumes that businesses will just increase prices and not change their behavior in the face of this new system. But EPR encourages lesser volumes of more recyclable waste. So, businesses that choose more sustainable packaging will purchase less packaging material and pay a smaller fee.²¹⁰ Ultimately, this will allow these businesses to keep products at lower prices.

As consumers do now, they will choose the lower-priced products—which will now be the more sustainable products. Consumers will reject the higher-priced, less sustainable alternatives. This will cause demand to shift toward the “greener” alternative, which will cause more businesses to choose better packaging materials.²¹¹ Just as now, the market will keep prices low. But because of the EPR fee, recycled material will be the lower-priced and higher-demanded material.

4. Congress Should Authorize Existing Agencies to Implement EPR

An effective EPR system for packaging does not need a separate managerial organization, because the federal government already has the expertise and capacity to handle a national EPR system for packaging waste. EPA, the IRS, and the FTC are already well equipped to quickly implement a national EPR system. EPA is the United States' most qualified agency for assessing environmental harms, and already has a wealth of experience and knowledge about U.S. waste management.²¹² The IRS already has the experience and infrastructure to collect and enforce periodic payments from businesses across the country. Finally, the FTC understands labeling and has decades of experience about how consumers think, which will allow them to create clear national standards.

Not creating a separate managerial organization or agency would have benefits that Maine and Oregon will not see. First, a federal system will lower administrative costs and confusion between agency-organization management. Administrative costs will be lower because the United States already has these agencies. Both systems will need increased agency capacity, whether to oversee the program or to oversee the organization. But the extra costs of a new organization will be cut by making the Agency directly responsible for effecting the EPR program. Sec-

202. Kate Krebs, Presentation, *in* Packaging Workshop, *supra* note 14, at 100-01. Some resins are worth more to recyclers, and are therefore more likely to get recycled. The resins that are easier and worth more to recycle will be recycled at a higher rate; therefore, the EPR system should account for the lower waste produced by these plastics. See ROMER, *supra* note 63, at 54-55; U.S. EPA, *supra* note 3.

203. See JOLTREAU, *supra* note 63, at 2 (explaining that plastics degrade during the recycling process and therefore can only be recycled a limited number of times); Geyer et al., *supra* note 133, at 2 (“Recycling [of plastics] delays, rather than avoids, final disposal.”). Even the most recyclable plastic, polyethylene terephthalate (PET), still needs at least 50% virgin plastic to retain its structure. Whereas glass and metal can be recycled endlessly with the proper facilities. JOLTREAU, *supra* note 63, at 2.

The Italian model is a good example for EPA of a fee structure that recognizes this. For example, in Italy, the fee for one ton of steel packaging is 50 times lower than the most recyclable type of plastic, and 123 times lower than the least recyclable type of plastic. See DOMINIC HOGG ET AL., STUDY TO SUPPORT PREPARATION OF THE COMMISSION'S GUIDANCE FOR EXTENDED PRODUCER RESPONSIBILITY SCHEMES 162-66 (2020).

204. See, e.g., JOLTREAU, *supra* note 63, at 4 (describing how almost 5% of France's total emissions were avoided due to recycling).

205. See Infrastructure Investment and Jobs Act of 2021, Pub. L. No. 117-58, div. J, tit. VI, 135 Stat. 429, 1404 (appropriating \$275 million for grants under §302(a) of the Save Our Seas 2.0 Act); 33 U.S.C. §§4281-4282 (giving EPA authority to give grants to states to support recycling programs and infrastructure).

206. Infrastructure Investment and Jobs Act §70402.

207. BANDHAUER ET AL., *supra* note 61, at 6.

208. *Id.* at 5, 10-11.

209. See, e.g., Boesen, *supra* note 197.

210. See *supra* note 88 and accompanying text.

211. See Robyn White, *Higher Food Costs Due to EPR “Unlikely,” LETSRECYCLE* (Nov. 2, 2021), <https://www.letsrecycle.com/news/higher-food-costs-due-to-epr-unlikely/> (noting that it will be “up to businesses to decide” whether to increase prices under EPR).

212. See generally, e.g., *National Overview*, *supra* note 1; U.S. EPA, *supra* note 3; U.S. EPA, *Sustainable Materials Management*, <https://www.epa.gov/smm> (last updated Apr. 28, 2022).

ond, each organization added to the system can increase confusion, and producers in Oregon may choose to create an organization for each type of material. This would unduly complicate the system and increase costs.

Finally, unlike Germany, where a producer responsibility organization for product take-backs grew organically,²¹³ municipalities already have a system of private waste management contracts: these systems should not be unnecessarily interfered with. The EPR system needs to charge producers the real costs of their waste and feed those charges back into the system, while making it more efficient and sustainable. Although it is difficult to calculate the costs of externalities, EPA has the ability and resources to approximate the appropriate fees to charge producers of waste.²¹⁴

Congress should therefore delegate much of the authority to implement this EPR system to EPA, starting with several immediate responsibilities. First, EPA needs to fully assess externalities associated with each type of waste. This assessment must include unrealized environmental and social costs of (1) mining and producing virgin raw materials; (2) the difficulty of recycling certain materials; (3) landfilling valuable resources; (4) impacts to communities that are disproportionately affected by waste incineration and landfilling; (5) impacts to foreign countries that are harmed by exported American waste; and (6) collecting, sorting, and processing waste. Using this information, EPA should assess a base per-ton fee for different packaging materials.

After EPA assesses the base fee, it should assess additional fees that will incentivize increased recycling in the United States. The fee should distinguish between types of material, including between different types of plastic that are more, or less, recyclable.²¹⁵ EPA should also consider increasing fees for packaging with various features that make it harder to recycle, such as adding certain dyes, mixing layers of different plastics, or adding labels or other materials that a consumer must remove to make an item recyclable.²¹⁶

If it so chose, EPA could also decide to add a yearly premium on producers who have not either decreased their packaging or increased its recyclability.²¹⁷ These higher fees

will incentivize producers to use more recyclable materials. EPA should reassess these fees every five years as system capacity and recycled content increases, and as other externalities shift due to the new system. Giving EPA this flexibility over the fee will allow for an EPR system that is more responsive to changing market conditions, unlike a simple excise tax.

After calculating the appropriate fees, EPA may then recommend the fee structure to Congress, which Congress should adopt into the Internal Revenue Code. The IRS has the authority to hold producers responsible for their fees: this includes its current powers to audit, and to file tax liens and levies to make sure businesses comply.²¹⁸ Ultimately, the fees should be easy enough to understand and calculate that each producer can assess their fee based on their yearly business records. Like IRS Form 6627, the IRS can create a new form that attaches to Form 720.²¹⁹

Similar to Form 6627, this new form will have line items for businesses to report the weight and type of materials used for packaging or single-use products. Businesses can self-assess their material use and calculate the fee owed by multiplying the amount of material used with the rate set forth in the Internal Revenue Code. Businesses will then pay the fee with their taxes. Businesses that do not pay their fees will face the same consequences as if they chose not to pay their other taxes.

These fees are constitutional under U.S. Supreme Court precedent, and are not an impermissible penalty, for several reasons. First, just because Congress has a regulatory purpose of enacting this fee to decrease material use and promote recycling does not make it invalid.²²⁰ Second, this fee is distinguishable from the tax the Court struck down in *Child Labor Tax Case*.²²¹ The fee is generally applicable to all businesses, it is commensurate with the amount of materials used, there is no scienter requirement, and the IRS, not EPA, will enforce the law.²²² Finally, these fees will raise revenue for the federal government.

213. Sachs, *supra* note 26, at 69.

214. See, e.g., U.S. EPA, FULL COST ACCOUNTING FOR MUNICIPAL SOLID WASTE MANAGEMENT: A HANDBOOK 5-10 nn.5-7 (1997) (EPA 530-R-95-041) (acknowledging the difficulties in calculating external social and environmental costs of waste management, but nevertheless laying a foundation for how to do so).

215. See GLOBAL PLASTICS OUTLOOK, *supra* note 27, at 17 (“[V]arious plastics have different lifetimes, recyclability, and risks to the environment and to human health.”).

216. See, e.g., Break Free From Plastic Pollution Act of 2021, S. 984, 117th Cong. §12102(b)(3)(B)(iv) (2021) (requiring consideration of the higher cost of managing products with certain designs, labels, or bonded materials). See also Katz, *supra* note 24 (“[P]lastic packaging has become increasingly complex, with colors, additives, and multilayer, mixed compositions making it ever more difficult to recycle.”). Of course, Congress could also authorize EPA to ban items from the waste stream that they determine are extra harmful—like Styrofoam.

217. See National Fed’n of Indep. Bus. v. Sebelius, 567 U.S. 519, 567 (2012) (“[T]axes that seek to influence conduct are nothing new.”); see also Janet

E. Milne, *The U.S. Supreme Court Opens a Door: Expanded Opportunities for Environmental Taxes*, 43 ELR 10406, 10409-10 (May 2013):

In the environmental context, inactivity (the failure to change behavior in an environmentally positive manner) is an important, underappreciated federal tax base because it targets the environmental vulnerability—the failure to act. That failure often contributes to the environmental problem. Hence, it is environmentally useful to have another means to reach the passive individual.

218. See 26 U.S.C. §§6201, 7801(a)(1) (granting authority to the Secretary of the Treasury to enforce the Internal Revenue Code).

219. See IRS, *Form 720: Quarterly Federal Excise Tax Return*, <https://www.irs.gov/pub/irs-pdf/f720.pdf> (rev. June 2022); IRS, *Form 6627: Environmental Taxes*, <https://www.irs.gov/pub/irs-pdf/f6627.pdf> (rev. Jan. 2022) [hereinafter *Form 6627*].

220. See *United States v. Doremus*, 249 U.S. 86, 93 (1919):

[T]he fact that other motives may impel the exercise of federal taxing power does not authorize the courts to inquire into that subject. If the legislation enacted has some reasonable relation to the exercise of the taxing authority conferred by the Constitution, it cannot be invalidated because of the supposed motives which induced it.

221. 259 U.S. 20 (1922).

222. Compare *id.* and MILAN N. BALL, CONGRESSIONAL RESEARCH SERVICE, R46551, THE FEDERAL TAXING POWER: A PRIMER 14 (2020) (listing the factors the Court used to strike down the tax in *Child Labor Tax Case*), with *National Fed’n of Indep. Bus.*, 567 U.S. at 563 (“The exaction . . . looks like a tax in many respects.”).

Congress should also commission EPA to conduct a nationwide study on recycling capacity, which must include capacity on every step of recycling, including collection, sorting, transport, processing, and secondary markets.²²³ The funds for this study will come from the general fund, which the EPR fee will eventually replace. EPA then needs to assess what infrastructure the United States needs, where it needs it, and in what order, to increase material reuse efficiently and quickly.²²⁴ The COMMERCE Act differs from EPA's National Recycling Strategy in that it collects the fees necessary to finance these infrastructure improvements, rather than just identifying them.²²⁵ After this, EPA should set tangible goals for increasing the amount of municipal solid waste recycled each year.

During this implementation period, Congress should set a minimum-recycled-content standard, which “drives technology and markets to achieve the economic, environmental, and community benefits of using recycled content, and [] fosters continual improvement through increasing requirements over time.”²²⁶ These standards reduce virgin material demand and increase the value of recycled materials.²²⁷ Paired with EPR, a minimum-recycled-content standard is an effective strategy to fix the economics of recycling, “enabling an expedited transition to a circular economy.”²²⁸

The eventual goal would be to implement a mandatory recycling law where consumers can place all packaging (and other) waste into recycling bins. However, mandatory recycling laws will not be helpful in the initial years of this program, as the market adjusts to higher costs for virgin materials and starts implementing better design and recycling practices. Only once infrastructure capacity is available can mandatory consumer recycling laws be helpful.²²⁹ During this implementation period, fees should increase for packaging material that processors cannot recycle to drive production lines toward more recyclable materials.²³⁰ At the same time, costs will decrease for recycled and recyclable materials because of their increased recoverability. The increased fee and the lower cost for recycled material will further incentivize producers to switch their methods.

The fees will go into the general fund each year. As part of the COMMERCE Act, Congress should apportion 100% of these fees for the first 10 years into a fund

set up for EPA to manage.²³¹ EPA should use fees collected under this system in several ways. First, EPA should give grants to support building new recycling infrastructure in the United States. EPA should give these grants based on needs assessed in their nationwide study. Second, like Maine, EPA should reimburse municipalities for the costs of collecting and transporting waste based on nationwide averages for that type of locality.²³² Third, EPA should use the fees to support municipal grants in buying new, uniform recycling bins to streamline waste management and increase efficiency.²³³ And fourth, fees should support consumer education on recycling. After 10 years, Congress should evaluate the needs identified by EPA and continue to fund this special fund as necessary.

The EPR portion of the COMMERCE Act need not preempt states from any of their taxing, spending, or police power rights. Of course, under this system, states would still be free to ban certain materials or products from their waste streams that they find particularly egregious. States could also require other fees based on externalities not found at a national level. Also, states could still charge consumers a PAYT fee for any costs not covered under the national system, which would further incentivize consumers to buy products made with easy-to-recycle packaging material.²³⁴ But the national fee will generally reflect unwanted qualities of hard-to-recycle materials, which will make those materials more costly and thus less likely that businesses will choose them for packaging. Therefore, this Act would not unnecessarily interfere with state sovereignty, but it would eliminate confusing, inconsistent laws all trying to implement separate EPR laws.

C. Clarifying Labeling Requirements to Decrease Consumer Confusion

An effective EPR system that forces producers to internalize the externalities of their waste will only go so far. If consumers are still confused as to what is recyclable, and continue to contaminate the recycling stream, municipalities will not be able to sell waste to reprocessing facilities.²³⁵ Clearer labels will educate consumers on what can and cannot be recycled, which will decrease contamination.

223. See NATIONAL RECYCLING STRATEGY, *supra* note 27, at 21-22 (laying a road map for an infrastructure study).

224. See *id.* (explaining how EPA would assess the needs with a focus on environmental justice).

225. See *infra* notes 231-33 and accompanying text.

226. RESA DIMINO ET AL., RECOMMENDATIONS FOR RECYCLED CONTENT: REQUIREMENTS FOR PLASTIC GOODS AND PACKAGING 7 (2022).

227. *Id.* at 6.

228. See, e.g., *id.* at 7-8.

229. See Sachs, *supra* note 26, at 80-81 (describing the issues Germany faced when it mandated recycling and recycled materials far surpassed capacity).

230. This could be accomplished by placing a line item on the new IRS form that multiplies the rate by a certain amount with language such as “You are liable for the multiplied rate if, on December 31st, you used materials that EPA has determined are nonrecyclable.” See, e.g., Form 6627, *supra* note 219, pt. IV.

231. See, e.g., 54 U.S.C. §200402(b)(1), (e) (establishing deposits into a fund from specific tax revenue for the purpose of maintaining protected federal lands).

232. See ME. REV. STAT. ANN. tit. 38, §2146(10) (2021) (requiring reimbursements to municipalities based on the “median per-ton cost of managing packaging material that is readily recyclable and . . . not readily recyclable”); see also Brian Beneski, in *Maine and Oregon*, *supra* note 194, at 19:56-20:47 (describing Maine's reasoning to reimburse the median cost to incentivize streamlining and lowering municipalities' waste management costs).

233. See discussion *infra* Section III.D.

234. See *supra* notes 74-76 and accompanying text.

235. Many municipalities contract for waste collection and management services and therefore do not “sell” waste to re-processors directly. However, if waste has a higher value when collected, contractors will be able to sell it and make their operations more profitable. This will lead to them being willing to contract with a municipality for less, therefore decreasing costs to municipalities. Municipalities do, however, have a role in setting rules for sorting and collecting waste, which may lead directly to cost savings.

Decreasing contamination in recycling streams will lead to increased recyclability of goods and higher profits for waste collectors.²³⁶ Therefore, along with the EPR system, the United States needs to better regulate packaging labeling.

1. The California Example: Banning Unrestricted Use of the Recycling Symbol

California is leading the charge on clarifying recyclability claims on packaging. On October 5, 2021, the governor of California, Gavin Newsom, signed Senate Bill 343.²³⁷ The California Legislature desired explicit and implicit environmental marketing claims to be “substantiated by competent and reliable evidence to prevent deceiving or misleading consumers about the environmental impact of plastic products.”²³⁸ Further, the legislature wanted to make sure that any “claims related to the recyclability of a product or packaging be truthful in practice and accurate.”²³⁹ Consumers and recyclers have been confused for many years about what the producer-developed recycling symbol means.²⁴⁰ Consumers often understand this symbol to mean “recyclable.”²⁴¹ However, these materials are often landfilled or incinerated in the United States.

California’s law requires a product sold in California that displays the recycling symbol to meet certain requirements.²⁴² California law already required people who represented their goods as not harmful to, or as beneficial to, the environment to maintain specific records supporting that representation.²⁴³ The new law makes clear that using the recycling symbol represents that a product is not harmful to the natural environment.²⁴⁴ Therefore, people who use this or similar symbols must maintain written records “supporting the validity of the representation.”²⁴⁵

Section two of the new law makes it unlawful for a person to make an explicit or implicit untruthful, deceptive, or misleading environmental marketing claim.²⁴⁶ Yet companies have a defense if their claim is one of the FTC’s examples of nondeceptive environmental marketing claims.²⁴⁷ But California’s new law carves out one important exception to this defense—even though the FTC cites it as nondeceptive, the use of the recycling symbol cannot be used as a defense.²⁴⁸

Therefore, the law presumes the recycling symbol is a deceptive or misleading claim.²⁴⁹ A person who hopes to use this symbol has the burden to show that the product is recyclable according to California’s standards. This depends on what is recyclable *and* recycled within the state. The law requires California’s Department of Resources Recycling and Recovery to conduct studies every five years on recycling programs within the state to see what types of materials are collected, sorted, and sold.²⁵⁰ If the department determines that the material type and form is collected, sorted, and reclaimed within the state for at least 60% of the state’s population, it is considered recyclable.²⁵¹

Further, packaging will not be considered recyclable if (1) it includes any components, inks, adhesives, or labels that prevent its recyclability; (2) it contains certain added chemicals; or (3) it is made with per- and polyfluoroalkyl substances (PFAS).²⁵² Subject to some exclusions,²⁵³ a person can put a recycling symbol on their product or packaging only if they comply with the above standards. If they cannot, they must put the number identifying the plastic within a basic triangle instead of within the recycling symbol.²⁵⁴

The California law is straightforward, and the United States must implement something similar. The COMMERCE Act, therefore, aims to help consumers understand recycling better, to help municipalities manage commingled recyclables, and to remove the veil of recyclability that manufacturers have hidden behind since the development of the recycling symbol. Although California’s law will impact packaging throughout the United

236. See Manning & Deskins, *supra* note 8, at 143.

237. S.B. 343, 2021-2022 Reg. Sess., 2021 Cal. Stat. 507.

238. 2021 Cal. Stat. 507, sec. 4, §42355.5(a).

239. *Id.* §42355.5(b).

240. See Hartwell, in Packaging Workshop, *supra* note 14, at 104 (agreeing that many people find the recycling symbol confusing); Krebs, in Packaging Workshop, *supra* note 14, at 72-73, 96-98, 103-05 (noting that more than half of consumers rely on recycling symbols on products to determine whether a product is recyclable, that even some recycling professionals do not understand the symbol well, and that it is probably the single most confusing symbol for consumers); Anne Johnson, Presentation, in Packaging Workshop, *supra* note 14, at 141-42 (explaining that although the recycling symbol tells people that a product should be recyclable, often there is no program in the country that would collect this product for recycling); Winston Choi-Schagrin & Hiroko Tabuchi, *Trash or Recycling? Why Plastics Keep Us Guessing*, N.Y. TIMES (Apr. 21, 2022), <https://www.nytimes.com/interactive/2022/04/21/climate/plastics-recycling-trash-environment.html>.

241. See Letter from Lynne R. Harris, *supra* note 118, at 1 (acknowledging better consumer education is needed to tackle confusion regarding the recycling symbol and its use in misleading environmental marketing claims).

242. 2021 Cal. Stat. 507, Legislative Counsel’s Digest (2). The law also applies to other symbols or statements that would lead a consumer to believe the product is recyclable. *Id.*

243. *Id.* Legislative Counsel’s Digest (3).

244. 2021 Cal. Stat. 507, sec. 1, §17580(a).

245. *Id.* This information includes reasons the person believes the representation to be true; significant adverse environmental impacts associated with the production, distribution, use, and disposal of the good; measures taken to reduce the environmental impacts of the good; permit violations associated with the good; whether the terms used conform to FTC standards; and, if the person uses the term “recyclable” or the recycling symbol, whether the good meets all of the requirements of the new law. *Id.*

246. *Id.* sec. 2, §17580.5(a).

247. *Id.* §17580.5(b)(1). See 16 C.F.R. §260, for examples of what the FTC considers nondeceptive.

248. Compare 16 C.F.R. §260.12(d) ex. 2 (2021) (exempting containers with the recycling symbol located in inconspicuous places from constituting a recyclable claim), with 2021 Cal. Stat. 507, sec. 2, §17580.5(b)(2)(B) (clarifying that the defense does not apply for alleged violations of §42355.51(b)(1)), and 2021 Cal. Stat. 507, sec. 5, §42355.51(b)(1) (deeming a product displaying a recycling symbol to be deceptive or misleading unless it is actually considered recyclable in the state).

249. See 2021 Cal. Stat. 507, sec. 5, §42355.51(b)(1).

250. *Id.* §42355.51(d)(1)(B).

251. *Id.* §42355.51(d)(2). Further, the reclaiming facility must be consistent with the requirements of the Basel Convention, which the United States has signed but not ratified. The Basel Convention seeks to protect human health from the adverse effects of waste. Specifically, it seeks to bring informed consent to the transboundary shipment of wastes to countries without adequate infrastructure to safely dispose of it—which is exactly how America dealt with much of its recyclable waste for decades. See Basel Convention, *Overview*, <http://www.basel.int/TheConvention/Overview/tabid/1271/Default.aspx> (last visited May 19, 2022).

252. 2021 Cal. Stat. 507, sec. 5, §42355.51(d)(3).

253. See *id.* §42355.51(d)(4)-(7).

254. *Id.* sec. 3, §18015(a), (d), sec. 5, §42355.51(c)(4).

States, the federal government still needs to implement these requirements on a national level to reduce confusion and increase compliance.

2. Revamping Regulations on Environmental Marketing and Developing National Symbols

Consumers are undoubtedly confused by myriad packaging materials that make up the current waste stream.²⁵⁵ Labels today range from the ever-confusing recycling symbol to even more confusing claims such as “check locally” or “not recycled in all communities.”²⁵⁶ Federal intervention and preemption is needed, because at least 39 states require the recycling symbol in some form or another.²⁵⁷ Further, producers will be more confused and have higher burdens as more states require them to meet different labeling requirements.

Therefore, the federal government must regulate recycling claims uniformly across the United States to alleviate producer and consumer confusion. Increased consumer education will decrease wishcycling and contamination in the waste stream. This will increase the value of recycled materials and decrease recycling costs, further reducing the price of recycled material, and increasing its demand. The FTC is well equipped to study and regulate recycling claims on packaging. In fact, the FTC already regulates them, but Congress has not given it enough authority yet.

Currently, the Fair Packaging and Labeling Act only regulates labeling of quantity on certain types of packaging. Therefore, as part of the COMMERCE Act, Congress should amend the Fair Packaging and Labeling Act to (1) apply to all products; (2) add a new subsection to 15 U.S.C. §1453(a) to authorize recycling claims on packaging only if the packaging meets specific criteria developed by the FTC; and (3) instruct the FTC to develop nationally uniform symbols and wording to make a product’s recyclability clear.

Congress should delegate authority to the FTC to determine which criteria a producer must meet before putting recyclable claims or symbols on packaging. Similar to 15 U.S.C. §1453(a), Congress can specify that no person shall distribute any packaged commodity unless it is in conformity with regulations established by the FTC. In promulgating these regulations on whether a producer may use the FTC-developed recycling symbols, the FTC should consider things such as (1) a minimum number of consumers who have access to recycling programs for the type of material; (2) whether the United States has the capacity to recycle a certain percentage of the material used; (3) whether secondary markets are available for the

reprocessed material; and (4) whether the material includes additives or features that make it nonrecyclable.²⁵⁸

Producers can then use information from EPA’s periodic assessments on the state of U.S. recycling capabilities to determine whether their packaging meets FTC standards to use the symbols. Through post-market monitoring and enforcement, the FTC could enforce an action against a producer if it uses the symbol without the supporting data.²⁵⁹ However, Congress should also authorize a private cause of action for consumers to bring against companies with deceptive environmental marketing claims.

Further, Congress should task the FTC with creating new symbols and wording that clearly indicate what material a product is and its recyclability or nonrecyclability. The current method of labeling plastics with a number between one and seven is confusing for consumers, and not detailed enough for recycling processors to determine a material’s recyclability. As part of this effort, the FTC should regulate when a producer may use a symbol or wording indicating a material’s recyclability. If a producer cannot meet these standards, their packaging should include symbols indicating its nonrecyclability. Then, the producer must also pay the higher fee calculated by EPA to include the externalities of losing the resource to the landfill. For consumers’ and producers’ ease, these labeling standards should preempt state law to maintain uniformity across the United States.

D. Creating Uniform Recycling Bins for Consumer Ease Across the Nation

Finally, to decrease contamination in the recycling stream and increase the quality and quantity of recyclable material, many municipalities will have to switch from single-stream recycling to multi-stream recycling. Multi-stream recycling decreases contamination, makes separation easier, and increases the value of recycled materials.²⁶⁰ The COMMERCE Act recognizes this, and helps municipalities implement these new systems by (1) creating uniform recycling bins that match the FTC-developed labels for different materials, and (2) giving grants to municipalities to buy these new bins and other needed infrastructure to implement multi-stream recycling.

South Korea is a prime example of the importance of clear labeling, EPR, PAYT, and multi-stream recycling. Since the 1980s, South Korea has seen waste increase by a factor of five, while its landfill rates have dropped from more than 90% of waste to less than 10%.²⁶¹ According to South Korea’s Ministry of Environment, South Korea

255. See *supra* notes 62-65, 240-41 and accompanying text.

256. See, e.g., Complaint at 47, *Greenpeace, Inc. v. Walmart Inc.*, 2021 U.S. Dist. LEXIS 178959 (Sept. 20, 2021) (No. 21-cv-00754) (alleging deceptive practices with small print recyclable qualifications).

257. See *What Are the Requirements for Resin Identification Codes for Polymer Blends?*, KELLER & HECKMAN: PACKAGINGLAW.COM (Nov. 27, 2012), <https://www.packaginglaw.com/ask-an-attorney/what-are-requirements-resin-identification-codes-polymer-blends>. See also, e.g., CAL. PUB. RES. CODE §18015 (Deering 2021).

258. EPA will be able to supply the FTC with much of this needed data from their reports.

259. See 15 U.S.C. §45.

260. See Waste Stream Evaluation, *supra* note 13, at 36 (explaining that such collection systems result in a higher yield of collected waste and a positive influence on waste collected); Manning & Deskins, *supra* note 8, at 145.

261. *South Korea Legislates Towards a Zero Waste Society*, WASTE MGMT. REV. (July 17, 2015), <https://wastemanagementreview.com.au/south-korea-legislates-towards-a-zero-waste-society/>; see also Yang et al., *supra* note 40, at 210.

recycles and reuses 86% of its waste.²⁶² The United States can also realize these results with the right programs. Additionally, household waste in South Korea is less than half that of each American.²⁶³ Still, the government does not consider this enough. South Korea has set a goal of zero waste, and has worked for decades toward achieving that goal.²⁶⁴

South Korea's success comes from national legislation, comprehensive management plans, and campaigns to educate the public.²⁶⁵ First, South Korea has EPR systems for many types of waste.²⁶⁶ Second, South Korea has a national bin system where consumers separate their recyclables according to kind.²⁶⁷ Third, consumers pay according to the volume of waste they generate to encourage recycling.²⁶⁸ Fourth, South Korea prioritizes reducing, reusing, recycling, and recovery at every step of a material's life cycle.²⁶⁹ And finally, South Korea heavily invests in recycling and recovery infrastructure.²⁷⁰

This kind of success would be more difficult to achieve in the United States due to different cultural, logistical, and transportation challenges.²⁷¹ But South Korea is four decades ahead of the United States on national waste management strategies. There is certainly room for the United States to improve upon its current system.

While the United States lacks the necessary infrastructure, some municipalities will not be able to recycle some recyclable materials economically or environmentally.²⁷² However, as the federal government funds new recycling infrastructure, municipalities will be able to recycle more materials. By creating EPR fees that reflect a desire for recycled goods, while simultaneously investing in increased recycling infrastructure across the United States, recycled material will become more competitive in the marketplace.

Municipalities will then be able to shift their collection systems by adding bins for materials they could not previously collect, to take advantage of new economic and environmentally sound opportunities to recycle more materials.²⁷³ In the meantime, consumers are confused by municipalities' single-stream bins with specific rules for what can and cannot go into them.²⁷⁴ Therefore, having separate bins for each class of materials will allow munic-

ipalities to easily add new materials to their recycling stream that consumers will understand.²⁷⁵ These separate bins will decrease wishcycling, allowing recycled material to become more competitive.

For example, in the American West, bulky and heavy glass bottles may have to travel hundreds of miles from collection to processing centers. It may not make economic or environmental sense to recycle these materials until the United States builds closer processing centers, or until municipalities have the capability to crush glass themselves before shipping. Until that happens, it may make more sense to landfill these materials.

With uniform bins across the country that differentiate between materials, a municipality that is only able to recycle aluminum and paper economically and environmentally will only have these two bins for consumers. As infrastructure improves, and that municipality can recycle glass, it can easily furnish consumers with the nationally standard glass bin.

Different bins allow consumers to tangibly understand what is and is not recyclable in their communities. This will decrease contamination and potentially influence consumers' purchasing decisions when they see what their communities do not recycle. It therefore would make economic, environmental, and logistical sense to implement multi-stream recycling and uniform bins across the United States.

IV. Conclusion

The United States uses resources far faster than earth can replenish them. Many of these resources are used one time and then landfilled or incinerated, wasting the usefulness of valuable materials, taking them out of the economy, and harming the environment. The United States must sustainably manage its resources for the good of its people, economy, and the environment. One of the key steps in sustainably managing resources is recycling, which the United States is currently ill-equipped to do. In the midst of a recycling crisis, the United States must take proactive steps to reimagine what *reduce, reuse, recycle* means to it.

Reducing, reusing, and recycling are essential to sustainably managing resources. EPR for packaging materials will cause producers to reduce waste, reuse containers, and recycle the rest. While states play an important role, only the federal government can implement some of the necessary laws to recycle effectively. The federal government must therefore eliminate virgin material subsidies, implement a national EPR scheme for packaging materials, revamp product labeling standards, and design nationally uniform recycling bins. These steps will jump-start U.S. domestic recycling into a new era of circularity, one where resources are reused, rather than disposed of as valueless.

262. South Korea Ministry of Environment, *Land & Waste*, <http://eng.me.go.kr/eng/web/index.do?menuId=466> (last visited May 19, 2022).

263. *Id.*

264. See Yang et al., *supra* note 40, at 207-09.

265. See *id.*

266. *Id.* at 213-14.

267. Manning & Deskins, *supra* note 8, at 143; Seoul Metropolitan Government, *Recycling Station Project: Bringing Innovation to Recyclable Waste Separation and Disposal to Residential Area*, SEoul SOL. (June 20, 2015), <https://seoulsolution.kr/en/content/recycling-station-project-bringing-innovation-recyclable-waste-separation-and-disposal>.

268. Yang et al., *supra* note 40, at 212; see also Ki-Yeong Yu, *Volume Based Waste Fee (VBMF) System for Municipal Solid Waste*, SEoul SOL. (Jan. 13, 2017), <https://seoulsolution.kr/en/content/6326>.

269. Yang et al., *supra* note 40, at 214.

270. *Id.* at 216.

271. See Manning & Deskins, *supra* note 8, at 128.

272. See Katz, *supra* note 24.

273. See Manning & Deskins, *supra* note 8, at 141-42.

274. See *The Pros and Cons of Single Stream Recycling*, RTS (Feb. 17, 2021), <https://www.rts.com/blog/the-pros-and-cons-of-single-stream-recycling/> (listing

limited plastic types available for collection along with consumers continuing to place noncollectible materials alongside them).

275. See Manning & Deskins, *supra* note 8, at 143-44.