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Testimony before the
Committee on Environment and Natural Resources
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RE: Testimony in Support of LD 1660 – An Act to Provide That Advanced Recycling Facilities Are Subject to Solid Waste Regulation and That Advanced Recycling Does Not Constitute Recycling

Good morning Senator Brenner, Representative Gramlich, and members of the Environment and Natural Resources Committee:

My name is Nora Bosworth, and I am a Staff Attorney with the Conservation Law Foundation's (CLF) Zero Waste Project. Through our Zero Waste Project we work to identify and address polluting and unsustainable waste management practices while promoting proven and effective solutions such as source reduction, reuse, recycling, and composting. These goals are the same solutions outlined in Maine's solid waste hierarchy.[1]

CLF enthusiastically supports LD 1660, an Act to Provide That Advanced Recycling Facilities Are Subject to Solid Waste Regulation and That Advanced Recycling Does Not Constitute Recycling.

LD 1660 clarifies that a facility that processes solid waste using advanced recycling technology is a solid waste facility, and thus subject to the rules and regulations governing solid waste management. It also clarifies that processing waste at an "advanced recycling" facility is not recycling.

Advanced recycling (AR), also called chemical recycling, is an umbrella term that refers to a wide array of processes that use heat, pressure and solvents to break down plastics into fuel or chemical components. The typical processes used are gasification, pyrolysis, solvent-based processes and chemical depolymerization.[2] The petrochemical and plastics industry (which are

[1] 38 M.R.S.A. 2101
[2] Natural Resources Defense Council, Recycling Lies: "Chemical Recycling" of Plastic is Just Greenwashing Incineration, Feb. 2022, available at https://www.nrdc.org/sites/default/files/chemical-recycling-greenwashing-incineration-ib.pdf.

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one and the same[3]) has touted advanced recycling as the solution to the plastics crisis[4] but the technologies are mired with health, environmental, and social concerns.[5]

Given the emerging and unproven nature of AR processes, the wide array of toxics produced by AR technologies, and the potential for these toxics to result in air, water, and soil pollution that is harmful to public health and the environment, it is prudent to ensure that any AR facility would be subject to the same regulations and oversight as other solid waste facilities. AR facilities emit a broad range of toxic pollutants, including benzene, polycyclic aromatic hydrocarbons (PAHs), dioxins, and heavy metals, as well as particulate matter and greenhouse gases. Pyrolysis and gasification, for example, release PAHs, including dioxins and furans, which are "highly toxic" pollutants that "can cause cancer, reproductive and developmental problems, damage to the immune system, and can interfere with hormones."[6] In a review of advanced recycling facilities across the country, the Natural Resources Defense Council found that the majority of the facilities were generating large quantities of hazardous waste, releasing hazardous air pollutants, and they were often sited in communities that were disproportionately low income, people of color, or both.[7] In practice, operational AR facilities burn plastics, plastics-derived fuels, and plastic byproducts, or send those fuels and byproducts to be burned somewhere else.[8] None of the plastics handled by these facilities is used to create new consumer products.[9]

LD 1660 is necessary to preempt deregulation that the AR industry has now successfully lobbied for in 22 states. By classifying advanced recycling as "manufacturing" they are exempting such facilities from the comprehensive regulatory framework governing the permitting, design,

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[3] "Globally, plastics production is dominated by large chemical and oil gas companies including Dow Chemical Company; LyondellBasell; Exxon Mobil; SABIC; INEOS; BASF; ENI; LG Chem; Chevron Phillips Chemical; and Lanxess. These companies polymerize monomers to create plastics." *See* UN Principles for Responsible Investment, Engaging on Plastic Packaging: Petrochemicals, July 2021, available at https://www.unpri.org/plastics/engaging-on-plastic-packaging-petrochemicals/7953.article.

[4] American Chemistry Council, What is Advanced Recycling? And Why is it So Important for Meeting the Growing Demand for Recycled Plastics?, June 2021, available at https://www.americanchemistry.com/chemistry-in-america/news-trends/blog-post/2021/what-is-advanced-recycling-and-why-is-it-so-important-for-meeting-the-growing-demand-for-recycled-plastics.

[5] NRDC, Recycling Lies, 2, available at https://www.nrdc.org/sites/default/files/chemical-recycling-greenwashing-incineration-ib.pdf.

[6] *See* U.S. Environmental Protection Agency, Learn about Dioxin, June 1, 2022, available at https://www.epa.gov/dioxin/learn-about-dioxin; *see also* Lee Bell & Hideshige Takada, International Pollutants Elimination Network, Plastic Waste Management Hazards: Waste-to-Energy, Chemical Recycling, and Plastic Fuels, at 53–54, 2021, available at https://ipen.org/sites/default/files/documents/ipen-plastic-waste-management-hazards-en.pdf.

[7] *Id.* at 3.

[8] Denise Patel, Global Alliance for Incinerator Alternatives, All Talk and No Recycling: An Investigation of the U.S. "Chemical Recycling" Industry, at 3 (2020), https://www.no-burn.org/wp-content/uploads/All-Talk-and-No-Recycling_July-28.pdf

[9] *Id.*

operation and closure of solid waste facilities.[10] Moreover, using AR technology to convert plastic into fuel or chemicals should not be considered "recycling", given that AR facilities merely burn their products, and thus do not lower the consumption of virgin materials. Recycling standards and programs must continue to exclude such processes. LD 1660 would achieve all of this.

Advanced recycling is the plastic industry's false solution to the world's growing awareness of our plastic crisis. As we are learning, plastic waste contaminates our waterways soil, air, and bodies. In recent years, microplastics have been documented in all parts of the human lung, in maternal and fetal placental tissues, in human breast milk and in human blood.[11] Plastics also play a significant role in the climate crisis, generating heat-trapping gases at every stage of their lifecycle.[12] Meanwhile, plastic production, and particularly single-use plastics, is anticipated to keep skyrocketing. The petrochemical companies foresee lowered dependence on fossil fuels as renewable energy and electrification spreads, and their business strategy is to invest in the exponential proliferation of plastics.[13] The inability of our current recycling system to actually recycle the enormous volume of plastics is widely documented—by the EPA's last estimate we are recycling less than 9% of our plastics nationwide, while more recent studies have shown a rate between 5% and 6%.[14] There is no question that we are in the midst of a growing plastics crisis; but advanced recycling is not a real solution.

The real solutions are those outlined in Maine's solid waste hierarchy[15]: source reduction, reuse, and (actual) recycling. We should continue to push for policies and laws that lower the production and consumption of single-use and toxic plastics, make manufacturers responsible for plastics' lifecycle through initiatives like our Extended Producer Responsibility for Packaging Program, strengthen our container redemption system with strong modernization bills, and set post-consumer recycled content mandates as we did with LD 1637. Maine is leading on sustainable waste initiatives in many ways—protecting our state from the deregulation of advanced recycling would be a continuation of this leadership.

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[10] Marissa Heffernan, Resource Recycling, Illinois Bill Continues Chemical Recycling Debate, March 20, 2023, available at https://resource-recycling.com/recycling/2023/03/20/illinois-bill-continues-chemical-recycling-debate/.
[11] Anne Pinto-Rodrigues, Science News, Microplastics are in Our Bodies, Here's Why we Don't Know the Health Risks, March 24, 2023, available at https://www.sciencenews.org/article/microplastics-human-bodies-health-risks#:~:text=What%27s%20more%2C%20a%20study%20of,lobes%2C%20researchers%20in%20England%20reported.
[12] Somini Sengupta, The New York Times, Guess What? More Plastic Trash, Feb. 7, 2023, available at Guess What? More Plastic Trash. - The New York Times (nytimes.com); Brooke Bauman, Yale Climate Connections, How Plastics Contribute to Climate Change, Aug. 20, 2019, available at https://yaleclimateconnections.org/2019/08/how-plastics-contribute-to-climate-change/.
[13] Katie Brigham, CNBC, How the Fossil Fuel Industry is Pushing Plastic on the World, Jan. 29, 2022, available at https://www.cnbc.com/2022/01/29/how-the-fossil-fuel-industry-is-pushing-plastics-on-the-world-.html.
[14] Greenpeace, Circular Claims Fall Flat Again, Oct. 2022, available at https://www.greenpeace.org/usa/reports/circular-claims-fall-flat-again/.
[15] 38 M.R.S.A. 2101

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Respectfully submitted,

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