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**Committee: Environment and Transportation**

**Testimony on: HB21 “Environment – Recycling – Prohibition on the Chemical Conversion of Plastic”**

**Position: Support**

**Hearing Date: January 29, 2021**

The Maryland Chapter of the Sierra Club supports HB21, which would prohibit establishment of facilities in Maryland that convert plastic into fuel and would exclude these processes from the definition of recycling in Maryland.

**The plastics industry is gearing up to increase production four-fold by 2050 amidst a global plastic pollution crisis that threatens our land, oceans, wildlife, and human health.** This crisis was caused largely by excessive production of cheap, single-use plastic with the knowledge decades ago that mechanical recycling of plastic would never be adequate to address plastic waste created.<sup>1</sup>

**To put the public at ease, the industry is promoting a new solution to the plastic pollution crisis: “chemical recycling,” also referred to as “advanced recycling.”** These processes<sup>2</sup> break down plastics into their monomer components with heat, pressure, and solvents, in a low-oxygen chamber, after which the components could then be used, in principle, to make new plastic via repolymerization, creating a circular economy in plastic.

**In practice, the chemical conversion of plastic is not being used to create new plastic, but to transform plastic back into fossil fuel for combustion, which is not recycling.** Despite 50 years of experimentation, the technology for chemical conversion of plastic is not mature and is not delivering on conversion of plastic to plastic.

- According to the Global Alliance for Incinerator Alternatives (GAIA), of 37 chemical recycling projects advertised since 2000, only three are in operation and none of these are transforming plastic-to-plastic.<sup>3</sup> There is no plastic-to-plastic operation that has been taken to scale. Almost all of the plastic in these operations is being transformed back into contaminated fossil fuel and burned.
- A 2020 report by Greenpeace examined projects promoted by the American Chemistry Council to divert plastic waste from landfills, finding that “none of the plastic-to-plastic projects...show promise of becoming viable. This means that very little of this

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<sup>1</sup> See two recent documentaries *Plastic Wars* (<https://www.pbs.org/wgbh/frontline/film/plastic-wars/>), produced by PBS, and *The Story of Plastic* (<https://www.storyofplastic.org/>), produced by The Story of Stuff Project.

<sup>2</sup> Primarily pyrolysis and gasification.

<sup>3</sup> Global Alliance for Incinerator Alternatives (GAIA). 2020. “All Talk and No Recycling: An Investigation of the U.S. ‘Chemical Recycling’ Industry. Berkeley, California. [www.no-burn.org/chemical-recycling-us](http://www.no-burn.org/chemical-recycling-us).

Founded in 1892, the Sierra Club is America’s oldest and largest grassroots environmental organization. The Maryland Chapter has over 75,000 members and supporters, and the Sierra Club nationwide has over 800,000 members and nearly four million supporters.

investment [in chemical recycling] has a chance of reducing plastic production or pollution, and ensures years of fossil-based plastic pollution.”<sup>4</sup>

**The processes for converting plastic back into fossil fuel are energy intensive, present a large carbon footprint, and create a new waste stream of toxic contaminants, in addition to the environmental impacts of burning the contaminated fossil fuels.**<sup>5</sup>

- Just as for mechanical recycling, the plastic still needs to be sorted by type. Additives and contaminants have to be stripped out.
- The process produces a new waste stream of gas products, oil products, and solvent products (“char”) for disposal.
- Pyrolysis creates new contaminants, including high concentrations of dioxin, furans, heavy metals (mercury, cadmium, and lead), and particulates.
- Each stage of the process demands a lot of energy, has an enormous carbon footprint, and generates large carbon impacts.

**This bill does not preclude the eventual development of plastic-to-plastic technologies.** Repolymerization is not banned. However, even if chemical conversion of plastic to plastic worked, it would be much more expensive than mechanical recycling. *The fact is, no form of plastic recycling – mechanical or chemical – will be able to compete economically in a market is flooded with cheap virgin plastic.*<sup>6</sup> **The solution to the plastic pollution crisis going forward is clear: produce less plastic, especially single-use plastic.**

To summarize, plastic is made from fossil fuels, most commonly from fracked gas. Maryland has banned fracking because of its environmental impact. Now the industry wants us to allow a process that breaks plastic into its monomer components to make a heavily contaminated fossil fuel for combustion in Maryland. This is not recycling. Further, the process requires a lot of energy and has a high carbon footprint. The products are low quality and require extensive cleanup. The byproducts are highly contaminated, creating their own toxic waste stream. These processes will add to existing environmental injustices associated with increased extraction of fossil fuels. Let’s prevent them from coming to Maryland.

We respectfully request a favorable report on HB21 to ban these processes in Maryland and ensure that they are not classified as recycling.

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<sup>4</sup> *Deception by the Numbers: American Chemistry Council claims about chemical recycling investments fail to hold up to scrutiny.* Greenpeace Reports, September 9, 2020, p. 3. [www.greenpeace.org/use/research/deception-by-the-numbers](http://www.greenpeace.org/use/research/deception-by-the-numbers).

<sup>5</sup> GAIA. 2020. *Op cit*

<sup>6</sup> GAIA. 2018. “Questions and Answers: Chemical Recycling.”