Bill: HB 21

Date: January 27, 2021

Position: Support

Prohibition on the Chemical Conversion of Plastic

HB 21

Support

Dear Chair Barve and Members of the Environment and Transportation Committee,

Thank you for the opportunity to testify on behalf of HB 21, a Prohibition on the Chemical Conversion of Plastic. Oceana is the largest international advocacy organization dedicated solely to ocean conservation. With our 17,800 supporters across Maryland, we work to advance science-based policies at the federal, state, and local level that will restore the ocean's abundance and biodiversity. We submit this testimony to share our strong support for SB 21 and urge you to pass this important legislation.

Plastic pollution is a growing threat to the world's oceans, as well as our food, health and climate. Each year, an estimated 33 billion pounds (15 million metric tons) of plastic enters the marine environment.[i] This is roughly equivalent to two garbage trucks full of plastic being dumped into the oceans every minute.

Everything from salt to water to beer has been found to contain plastics.[ii] Plastics are making their way into our food, water and air, and harming our ocean ecosystems and marine species, including here in Maryland. According to a 2014 study, microplastics were found in 59 out of 60 water samples from the

Chesapeake Bay and its tributaries.[iii] In a report published in 2020, Oceana found evidence of nearly 1,800 marine mammal and sea turtles from 40 different species swallowing or becoming entangled in plastic in U.S. waters since 2009.[iv] Of those animals, a staggering 88% were from species listed as endangered or threatened with extinction under the Endangered Species Act

While we begin to realize the extent of plastic pollution's effects, plastic production continues to increase at a rapid rate. Global production of plastic is now projected to increase at least fourfold between 2014 and 2050.[v]

Traditional, mechanical recycling is not enough to solve the plastic pollution crisis, and neither is chemical conversion, or what some call "chemical recycling," when often the products are fuels to be burned. Waste-management solutions have not adequately dealt with plastic pollution in the past and cannot realistically keep up with the rising rates of plastic production. Only 9% of all the plastic waste ever produced has been recycled. [vi] The rest of it ends up either in an incinerator, a landfill or the environment.

Instead of ceasing to manufacture single-use plastic and materials that cannot be recycled with existing technology, the plastics industry is selling the idea of "chemical recycling" as a panacea to our plastic waste crisis. In reality, these technologies would require enormous costs and take decades to bring to scale — in fact, even the petrochemical industry acknowledges that a circular economy based on these technologies is not currently feasible.[vii] Even if ambitious targets for growth are met (600 plants handling 6 million tons per year), as the American Chemical Council predicts, that would handle only *one-fifth* of the plastic waste generated.[viii]

On top of the feasibility issue, chemical conversion poses environmental risks. Plastic products are made with myriad chemicals, many of which pose risks to the environment or human health, so breaking them down will always result in a troublesome stream of contaminants. Chemical recycling methods, such as pyrolysis and gasification expel these contaminants in the form of hazardous emissions and greenhouse gasses, making this "solution" just as irresponsible as incineration.[ix,x,xi,xii,xiii,xiv]

In short, chemical conversion facilities are unproven, costly technologies that face barriers in low recycling collection rates and often result in expensive fuels rather than recycled products while generating toxic waste streams at taxpayer expense.

The most effective way to stem the overwhelming flow of single use plastic into our oceans and communities is to enact policies governing its production and use. We must not lose valuable time, energy, or funds supporting the costly production of chemical conversion facilities, which do not address the problem of plastic pollution and in fact create even more environmental hazards.

We strongly support SB 21, which would safeguard Maryland from the hazards created by chemical conversion facilities and allow lawmakers and communities to continue implement smart policies that address the issue of plastic waste the source.

We thank you for the opportunity to testify and urge you to pass this important legislation to reduce plastic pollution. Thank you.

Sincerely,

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[i] Forrest A, Giacovazzi L, Dunlop S, *et al.* (2019) Eliminating Plastic Pollution: How a Voluntary Contribution From Industry Will Drive the Circular Plastics Economy. *Frontiers in Marine Science* 6: 627.

[ii] Kosuth M, Mason SA and Wattenberg EV (2018) Anthropogenic contamination of tap water, beer, and sea salt. *PLOS ONE* 13. doi: 10.1371/journal.pone.0194970

[iii] Yonkos LT, Friedel EA, Perez-Reyes AC, Ghosal S and Arthur CD (2014) Microplastic in four estuarine rivers in the Chesapeake Bay, U.S.A. *Environmental Science & Technology* 48: 14195-14202. doi: 10.1021/es5036317

[iv] Warner K, Linske E, Mustain P, Valliant M, Leavitt C (2020) Choked, Strangled, Drowned: The plastic crisis unfolding in our oceans. Oceana, Washington, DC. doi: 10.5281/zenodo.4281302

[v] -- (2016) The New Plastics Economy: Rethinking the future of plastics. World Economic Forum. 36p.

[vi] Ibid.

[vii] -- (2018) In My Opinion: Launchpad for circularity. In: Resource Recycling News.

[viii] Royte E (2019) Is burning plastic waste a good idea? In: Environment. Available: https://www.nationalgeographic.com/environment/2019/03/should-we-burn-plastic-waste/. Accessed Aug 28, 2019.

[ix] GAIA (2017) Waste Gasification & Pyrolysis: High Risk, Low Yield Processes for Waste Management. Global Alliance for Incinerator Alternatives.

[x] Conesa JA, Font R, Fullana A, et al. (2009) Comparison between emissions from the pyrolysis and combustion of different wastes. Journal of Analytical and Applied Pyrolysis 84: 95–102. doi: 10.1016/j.jaap.2008.11.022

[xi] Chen D, Yin L, Wang H and He P (2014) Pyrolysis technologies for municipal solid waste: A review. Waste Management 34: 2466–2486. doi: 10.1016/j.wasman.2014.08.004

[xii] Garrido MA, Font R and Conesa JA (2017) Pollutant emissions from the pyrolysis and combustion of viscoelastic memory foam. Science of The Total Environment 577: 183–194. doi: 10.1016/j.scitotenv.2016.10.159

[xiii] Thunman H, Berdugo Vilches T, Seemann M, et al. (2019) Circular use of plastics-transformation of existing petrochemical clusters into thermochemical recycling plants with 100% plastics recovery. Sustainable Materials and Technologies 22: e00124. doi: 10.1016/j.susmat.2019.e00124

[xiv] Zhou H, Wu C, Onwudili JA, et al. (2016) Influence of process conditions on the formation of 2–4 ring polycyclic aromatic hydrocarbons from the pyrolysis of polyvinyl chloride. Fuel Processing Technology 144: 299–304. doi: 10.1016/j.fuproc.2016.01.013