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Senate Bill 954 (as introduced 3-8-22)
Sponsor: Senator Aric Nesbitt
Committee: Environmental Quality

Date Completed: 4-12-22

CONTENT

The bill would amend Part 115 (Solid Waste Management) of the Natural Resources and Environmental Protection Act to do the following:

- **Define "advanced recycling", "advanced recycling facility", and other terms associated with the material inputs, processes, and products of "advanced recycling".**
- **Specify that "solid waste" as defined and governed under Part 115 would not include post-use polymers and recovered feedstocks, two materials inputted during the advanced recycling process.**

Under the bill, "advanced recycling" would mean a manufacturing process for the conversion of post-use polymers and recovered feedstocks into recycle byproducts by pyrolysis, gasification, depolymerization, catalytic cracking, reforming, hydrogenation, solvolysis, or other similar technologies. The recycled products produced could include monomers, oligomers, plastics, plastics and chemical feedstocks, basic and unfinished chemicals, waxes, lubricants, coatings, and other basic hydrocarbons. The term would not be solid waste processing, waste diversion, resource recovery, incineration, or combustion.

"Post-use polymer" would mean a plastic to which all the following apply:

- It is derived from an industrial, commercial, agricultural, or household activity.
- It has been sorted from solid waste and other regulated waste but may contain residual amounts of solid waste such as organic material and incidental contaminants or impurities, for example, paper labels and metal rings.
- It is not mixed with solid waste or hazardous waste on-site or during conversion at an advanced recycling facility.
- It is used or intended for use as a feedstock for advanced recycling.
- It is converted at an advanced recycling facility or stored there before conversion.

"Recovered feedstock" would mean material that meets all the following requirements:

- It is a post-use polymer, a material for which use the United States Environmental Protection Agency (EPA) has granted a nonwaste determination pursuant to 40 CFR 241.3(c), or a material that the EPA has otherwise determined are feedstocks and not solid waste, or any combination of the three, that has been converted by advanced recycling so that they may be used as feedstock in an advanced recycling facility.
- It does not include unprocessed municipal solid waste.

-- It is not mixed with solid waste or hazardous waste on-site or during conversion at an advanced recycling facility.

(Under 40 CFR 241.3(c), the regional administrator for the EPA may grant a nonwaste determination if an advanced recycling facility or facilities submit an application for a determination that a nonhazardous secondary material has not been discarded and is indistinguishable in all relevant aspects and the regional administrator determines that the nonhazardous secondary material meets certain criteria, including whether market participants treat the nonhazardous secondary material as a product rather than as a solid waste and whether the nonhazardous secondary material will be used in a reasonable time frame given the state of the market, among other criteria. As used above, "secondary material" means any material that is not the primary product of a manufacturing or commercial process, and can include post-consumer material, post-industrial material, and scrap, among other things.)

"Advanced recycling facility" would mean a facility that receives and stores post-use polymers and recovered feedstocks and converts the polymers and feedstocks using advanced recycling. An advanced recycling facility would not be a solid waste processing plant, a solid waste transfer facility, waste diversion center, resource recovery facility, or municipal solid waste incinerator.

"Pyrolysis" would mean a manufacturing process in which post-use polymers are heated in the absence of oxygen until melted and thermally decomposed and are then cooled, condensed, and converted into valuable raw materials and intermediate and final products, including plastic monomers, chemicals, waxes, lubricants, plastic and chemical feedstocks, and other basic hydrocarbons.

"Gasification" would mean a manufacturing process in which recovered feedstocks are heated and converted into a fuel-gas mixture in an oxygen-deficient atmosphere and the mixture is converted into valuable raw materials and intermediate and final products, including plastic monomers, chemicals, waxes, lubricants, plastics and chemical feedstocks, and other basic hydrocarbons.

"Depolymerization" would mean a manufacturing process in which post-use polymers are broken into smaller molecules such as monomers and oligomers or raw, intermediate, or final products, plastics and chemical feedstocks, basic and unfinished chemicals, waxes, lubricants, coatings, and other basic hydrocarbons.

"Solvolysis" would mean a manufacturing process in which post-use polymers are purified with the aid of solvents, while heated at low temperatures or pressurized, or both, to make useful products while allowing additives and contaminants to be removed. The products of solvolysis would include monomers, intermediates, and valuable chemicals and raw materials. The term also would include hydrolysis, aminolysis, ammonolysis, methanolysis, and glycolysis.

Among other things, "disposal area" means a processing plant at a location as defined by the boundary identified in its construction permit or engineer plans approved by the Department of Environment, Great Lakes, and Energy (EGLE). The bill specifies that "disposal area" would mean a *solid waste* processing plant that met the requirements described above.

The Act defines "solid waste" as garbage, rubbish, ashes, incinerator ash, incinerator residue, street cleanings, municipal and industrial sludges, solid commercial waste, solid industrial waste, and animal waste. The term does not include certain waste, such as human body waste

and medical waste, among other things. The bill specifies that the term would not include post-use polymers and recovered feedstocks.

The Act defines "solid waste processing plant" as a tract of land, a building or unit, an appurtenance of a building or unit, or any combination of these that is used or intended for use in the processing of solid waste or the separation of material for salvage or disposal, or both. The term does not include certain plants, such as a plant engaged primarily in the acquisition, processing, and shipment of ferrous or nonferrous metal scrap. The bill specifies that term would not include a facility that was located at the site of generation or the site of disposal of the solid waste or an advanced recycling facility.

MCL 324.11502 et al.

BACKGROUND

Plastics generally are divided into seven standard classifications, ranging from one to seven, based on the type of plastic. According to the American Chemistry Council (ACC), a chemistry trade association, mechanical recycling, the process of collecting and melting plastics into raw material, can recycle plastics from classification numbers one and two, such as plastic bottles and jugs. Advanced recycling is the process of breaking down certain used plastics into their chemical building blocks, and advanced recycling allows for types of plastics in classifications three through seven, such as food foils and fiberglass, to be remanufactured into new plastics and byproducts. The ACC states that advanced recycling requires different infrastructure from mechanical recycling.

Legislative Analyst: Tyler P. VanHuyse

FISCAL IMPACT

The bill would have no fiscal impact on EGLE or local units of government. Currently, there are no advanced recycling facilities in Michigan. In the future, if there were advanced recycling facilities built in Michigan, their regulation and permitting would be subject to the Department's existing clean air and clean water requirements, as applicable to the individual facilities themselves.

Fiscal Analyst: Ben Dawson

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This analysis was prepared by nonpartisan Senate staff for use by the Senate in its deliberations and does not constitute an official statement of legislative intent.