EXECUTIVE SUMMARY

Virginia’s waterways are under assault by single-use plastic pollution, but chemical conversion, also known as Advanced Chemical Recycling, is a false and flawed solution to the plastic pollution crisis threatening our local waterways, oceans, and aquatic animals. Chemical conversion will not reduce the use of single-use plastics, rather it will incentivize plastics continued use as a feedstock for plastics-to-fuel facilities. The resulting air pollution and hazardous waste generated from chemical conversion would put Virginia’s communities and environmental health at risk. Legislators and regulators must ensure that the industry does not pollute waterways, entrench our dependence on single-use plastics, and inequitably burden communities of color where chemical conversion plants are often sited.

CHALLENGE

Chemical conversion is an experimental process where plastic is melted down in an oxygen-free environment to render a raw material for more plastic production, or to create fuel (see graphic below). Often, the plastic used in the chemical conversion process is sourced from brokers or single companies, and would not "recycle" local plastic products used by Virginians. The increased air pollution and hazardous waste production that result from chemical conversion put Virginians' health at risk. In 2018, when the fuel and feedstock produced from one of these facilities alone was burned, over 49,000 tons of toxins went into our air.

Pollution disproportionately burdens communities of color and, as a result of this environmental injustice, Black people are three times more likely to die from exposure to air pollutants than white people. In particular, seven of the eight chemical conversion facilities in the United States are in communities that are low income, Black, or both; this combined with the fact that these facilities are often out of compliance with EPA compliance with hazardous waste regulations further demonstrates chemical conversion as a false, unequitable solution.

Plastic pollution and lack of effective recycling industry infrastructure has given the industries an opportunity to market “advanced recycling” technology, like chemical conversion, as a solution, despite the complete lack of operating success.

The American Chemistry Council has succeeded in convincing eighteen state legislatures to pass bills, such as 2021 bill SB1164 in Virginia, that effectively exempt these facilities from important waste regulations.

Moreover, the short history of chemical conversion facilities in Virginia confirms chemical conversion as a false solution to the plastic pollution crisis and a waste of taxpayer money. Braven Environmental LLC abruptly canceled its plans to build a facility that would serve as a “solution” to the state’s plastic waste problem in Cumberland County, after receiving over $200,000 in state grants in 2020.

SOLUTION

State solid waste management policy should focus on reducing single-use plastics in the waste stream and as litter, reusing products where possible, and if recycling is required, elevate solutions that reduce the amount of virgin plastics manufactured.

Emerging technologies, such as chemical conversion, should be robustly evaluated for safety and proof of scalability before being allowed in Virginia. Technologies should be profitable (i.e. not reliant on taxpayer dollars) and proven to achieve goals that advance Virginia’s quality of life, such as litter reduction, plastic waste management, and environmental equity.

We have seen the chemical conversion industry stumble due to issues surrounding technology scalability, high volumes of hazardous waste production, energy consumption, and overall inability to turn over a profit. To truly tackle the plastic pollution crisis, Virginia needs actual plastic reduction solutions that reduce our reliance on single use plastic (see REDUCING PLASTIC WASTE, page 15) to protect human health, our waterways, the ocean, and aquatic animals, such as turtles.

POLICY RECOMMENDATIONS

State code should clarify that technologies that turn plastic to fuel are not recycling, and should be regulated using all applicable solid waste and energy laws.

Support proven solutions that reduce overall plastic consumption like an extended producer responsibility program or others outlined in REDUCING PLASTIC POLLUTION, page 15.

Ensure the protection of environmental justice communities that are disproportionately impacted by chemical conversion facilities by requiring comprehensive environmental justice impact analysis, including robust air quality monitoring systems in site suitability studies.

Taxpayer money (loans or grants) should not be used to recruit or retain any private chemical conversion businesses.