
STATE LEGISLATION ALERT

1 What's happening?

In 2017-2019, the plastics and chemical industry, represented by the American Chemistry Council (ACC), led an effort to make legislative changes to statewide policies to promote pyrolysis as a solution to:

- Excess of plastic waste in the United States following global plastic import bans, such as the China National Sword Policy, and in response to single use plastic bans.
- Climate change by promoting the technology as a source of "renewable" fossil fuel energy, also known as plastic-to-fuel (PTF) technology.

ACC is modeling and promoting legislation to create a market for pyrolysis. Their report, "Economic Impacts of Advanced Plastics Recycling and Recovery Facilities in the U.S." outlines their goals for this nascent industry. The industry trade association is promoting pyrolysis as an economic opportunity that is projected to create \$10 billion in direct and indirect economic output. It has started a partnership with Renewology, a pyrolysis company. The CEO of Renewology, Priyanka Bakaya, also chairs the Plastics-to-Fuel and Petrochemistry Alliance, which commissioned the study.

2 What's the problem?

Pyrolysis is an expensive and immature technology – start-ups have come and gone over the years due to failure to meet pollution control limits, technical, and/or financial goals – and is a distraction from real solutions.¹

- Pyrolysis facilities produce toxic chemicals, like persistent organic pollutants (POPs), lead, arsenic, mercury, and polycyclic aromatic hydrocarbons.
- Plastic-to-fuel threatens our climate as plastics are made from oil and gas. Burning plastic directly and burning the gases from pyrolysis both create fossil fuel emissions.² PTF products may also contain dioxins and other toxic chemicals contained in plastics.³
- Billions of dollars have been invested and lost in pyrolysis approaches.⁴
- These processes do not work as promised and waste time & resources that should be spent developing real solutions – namely plastic reduction.

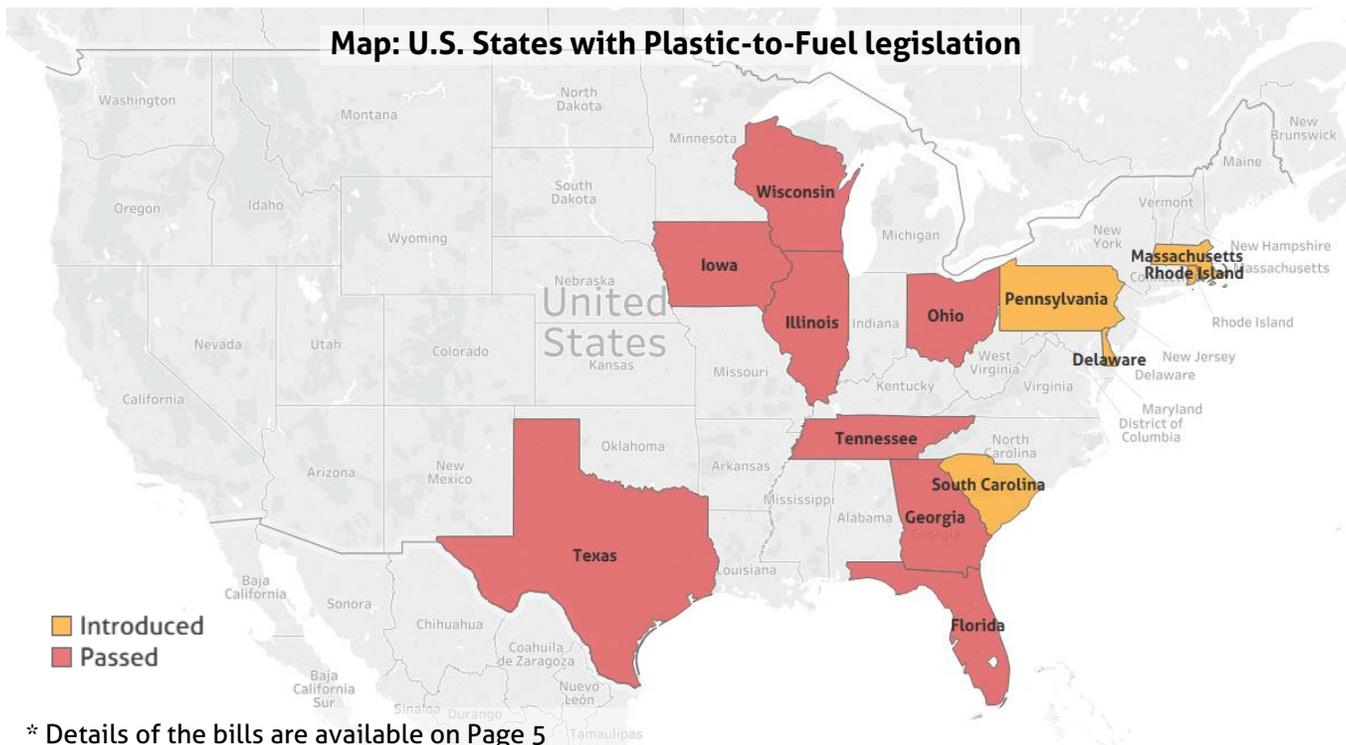
3 Where is it happening?

We have identified legislative and administrative policy changes in Ohio, Illinois, Texas, Tennessee, Iowa, Georgia, Wisconsin, Florida, Rhode Island, South Carolina, Delaware, Pennsylvania, and Massachusetts. There is also potential for the ACC to influence in states where the lobby group has a particularly strong presence, including Louisiana, California, Oklahoma, New Jersey, and New York. As documented in ACC's lobbying and influence spending tracker⁵, the company has worked to introduce new legislation, and insert amendments for state waste management and energy policies. The ACC spent almost \$7.5 million on lobbying last year, and the six years before that all exceeded \$9 million in annual advocacy spending.

PRIMARY TACTIC: Reclassification of Facilities

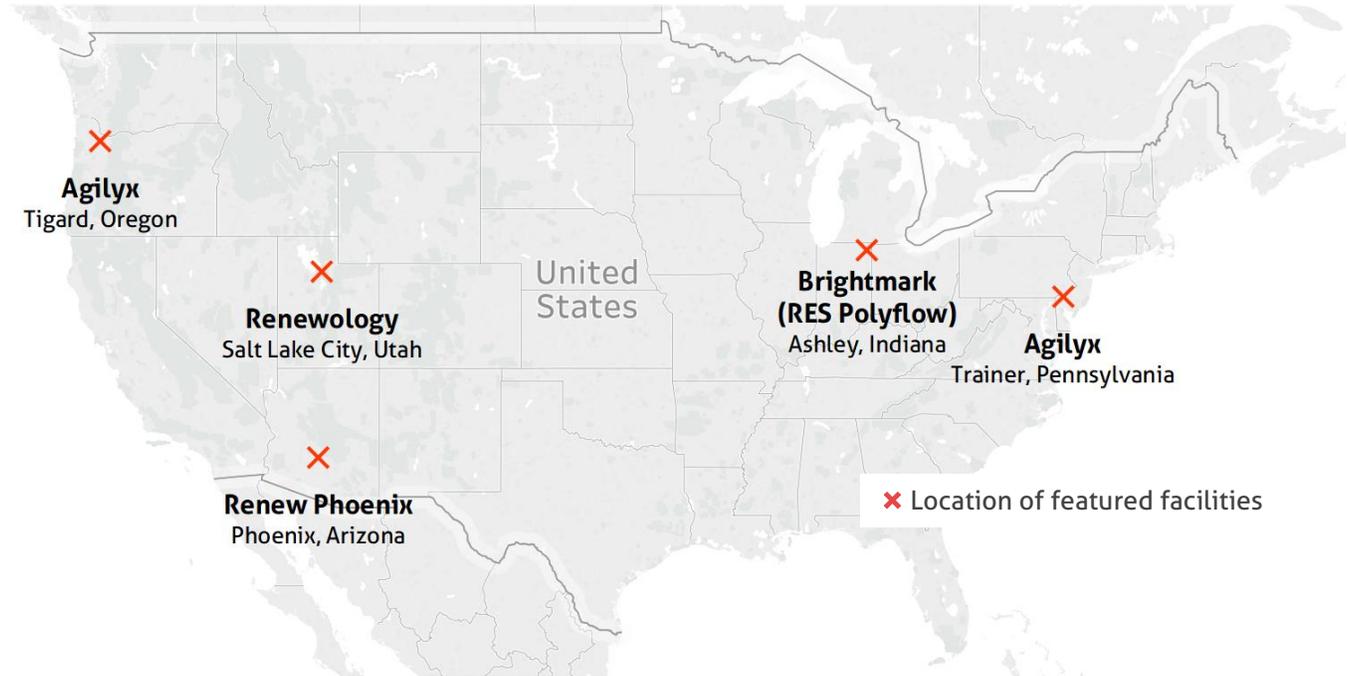
The industry is working to shift the framework that regulates the industry by reclassifying pyrolysis facilities as manufacturing facilities and creating markets for non-recyclable plastics that should be eliminated from the waste stream to make waste management systems truly zero waste. In some of the states listed below, the state's air, water, and waste regulations applicable to manufacturing facilities are weaker than solid waste facility regulations. In other states, certain types of manufacturing or alternative fuel production facilities may qualify for current or future renewable energy credits. The bills that are promoted by the plastic-to-fuel industry have two components in common:

- **EXEMPTION** of pyrolysis and gasification facilities from being regulated as solid waste facilities
- **RECLASSIFICATION** of post-use polymers as non-solid waste IF used in pyrolysis or gasification



Cases: High-profile projects raise questions

More and more proposals for pyrolysis facilities are popping up in the U.S., yet little is known about the feasibility, scalability, cost-efficiency, toxicity, and impacts to the local communities. While some operations claim to be able to create new plastic from old plastic, little evidence exists to prove this assertion. The case studies below highlight the PTF industry's ties with the petrochemical industry as well as the technological and economic challenges the industry has been facing.



Dow Chemical's Hefty EnergyBag Campaign to burn plastic waste in Salt Lake City, Utah

- Renewology constructed a plastic-to-fuel company in Salt Lake City in 2018. The company has been working in partnership with Dow Chemical in cities including Greater Boise, Idaho (2018) and Lincoln, Nebraska (2019) to implement a curbside collection program called Hefty EnergyBag, collecting "hard-to-recycle" plastic waste in orange bags to be burned or converted into fuels. GAIA organized a petition campaign to call out Dow Chemical's greenwash efforts in October, 2017.⁶ In April 2018, Boise, Idaho, joined the Hefty EnergyBag program. The Renewology plant in Salt Lake City has stopped accepting the collected waste since the first quarter of 2019 due to equipment upgrades, which will be finished in the beginning of 2020.⁷ The city continues to collect the orange bags so as not to confuse residents, stockpiling the plastic waste.

Turning plastic waste into fuel through a public-private partnership in Phoenix, Arizona

- The city of Phoenix Public Works Department announced a new partnership to build a facility on the city's Resource Innovation Campus with an aim to turn #3-7 plastic waste into fossil fuels. Renewology is involved in this partnership through Renew Phoenix, a joint venture with Generated Materials Recovery. The city of Phoenix is promoting the partnership under its zero waste city plan, "Reimagine Phoenix." However, relying on plastic-to-fuel technologies will only lock in costly infrastructure that replaces plastic waste with greenhouse gases, toxic emissions and other solid and liquid residues.

Pyrolysis plant in Ashley, Indiana to partner with a fossil fuel giant

- Brightmark is an owner of RES Polyflow, an Ohio-based manufacturer of plastic-to-fuel energy recovery systems. The company is partnering with the oil and gas company BP to provide diesel fuel, naphtha, and waxes. While the company's existing facility has yet to reach the advertised capacity, the company is seeking community partners across the country to build more plants with an aim to increase the said capacity by four or five times. In the meantime, BP is also working with a California-based gasification company, Fulcrum Energy to convert mixed waste into jet fuels.

Agilyx, the nation's plastic-to-fuel leader struggling with multiple challenges

- Oregon-based Agilyx has been one of the few plastic-to-fuel operations since 2008. In 2016, Agilyx shut the pyrolysis facility in Tigard, Oregon, after failing to compete with the low price of oil.⁸ Earlier in 2014, a facility in Portland, which used Agilyx's technology, was also shut down due to technological challenges, causing economic losses to the owner, Waste Management, Inc., and local communities. Now the company is partnering with Monroe Energy, a subsidiary of Delta Air Lines, Inc. to convert waste plastics into jet fuel in Trainer, Pennsylvania. Agilyx also claims that its facility in Tigard, Oregon will be retrofitted to recycle polystyrene (PS) into a styrene oil to be used to make new PS resin. However, not much is known about the technical and logistical details, economic models, efficiency and emission rates.

4 Resources

- GAIA (2019). [Questions and Answers: Chemical Recycling.](#)
- GAIA (2019). [It's NOT "recycling" when you treat plastic to BURN it.](#)
- GAIA (2019). [Factsheet: Plastic Pollution and Waste Incineration.](#)

5 References

¹ Wilson, M., Arkin, C. (2018, April 2). In Our Opinion: Fueling a fantasy. Resource Recycling. Retrieved from <https://resource-recycling.com/recycling/2018/04/02/in-our-opinion-fueling-a-fantasy>

² Center for International Environmental Law (2019). Plastic and Climate: The Hidden Costs of a Plastic Planet.

³ Center for International Environmental Law (2019). Plastic and Health: The Hidden Costs of a Plastic Planet.

⁴ GAIA (2017). Waste Gasification & Pyrolysis: High Risk, Low Yield Processes for Waste Management.

⁵ Center for Responsive Politics. Retrieved from <https://www.opensecrets.org/orgs/lobby.php?id=D000000365>

⁶ GAIA (2017). Say NO to Dow's Dirty Energy Bag! Retrieved from <https://www.no-burn.org/dirtyenergybag>

⁷ Pyzyk, K. (2019, July 24). Boise, Idaho mixed plastic program could expand following changes. Waste Dive. Retrieved from <https://www.wastedive.com/news/boise-idaho-mixed-plastic-program-could-expand-following-changes/559418>

⁸ Brettman, A. (2016, February 21). Economy took steam out of gas production, so Agilyx retools. The Oregonian/OregonLive. Retrieved from https://www.oregonlive.com/business/2016/02/economy_took_steam_out_of_gas.ht ml

Learn more at www.no-burn.org



State Summaries:

OHIO - PASSED on July 17, 2019

Ohio [HB166](#) excludes gasification and pyrolysis from its solid waste facility regulations. According to the bill, "Disposal" does not include the process of converting post-use polymers and recoverable feedstocks using gasification or pyrolysis.

ILLINOIS - PASSED on July 26, 2019

Illinois [HB2491](#) amends the Environmental Protection Act to reclassify pyrolysis as manufacturing facilities, changes the definition of "waste" to exclude post-use polymers or non-recycled feedstocks processed through pyrolysis or gasification.

TEXAS - PASSED on May 17, 2019

Texas [SB1656/](#)[HB1953](#) would classify non-recycled plastic waste as a recoverable feedstock or post-use polymer, rather than solid waste, if it is converted into new products using pyrolysis or gasification, and excludes pyrolysis and gasification facilities from being regulated as solid waste facilities.

TENNESSEE – PASSED on April 23, 2019

Tennessee [S923/](#)[H219](#) excludes gasification and pyrolysis of post-use polymers and other post-industrial waste containing post-use polymers under the definition of "solid waste processing" under the Tennessee Solid Waste Disposal Act. (TCA Title 68, Chapter 211).

IOWA - PASSED on April 8, 2019

Iowa [S534/](#)[H220](#) reclassifies facilities that "convert post-use plastics into plastic and chemical feedstocks, crude oil, transportation fuels, or other products" as manufacturing facilities instead of as solid waste disposal facilities.

GEORGIA - PASSED on May 8, 2018

Georgia [HB785](#) reclassifies post-use plastics as raw materials for "manufacturing" and regulate gasification/pyrolysis facilities as manufacturing facilities instead of waste management facilities.

WISCONSIN – PASSED on April 17, 2018

Wisconsin [A789/](#)[S646](#) exempts certain facilities from solid waste facility regulations by reclassifying them as manufacturing facilities and excluding "post-use plastics" from solid waste if processed in pyrolysis or gasification facilities.

FLORIDA - PASSED on June 27, 2017

Florida [HB 335/](#)[S1104](#), exempts certain pyrolysis facilities from certain resource recovery regulations and authorizes recovered materials dealers to use pyrolysis facilities. It also facilitates recognition that the conversion of post-use plastics into these products will count as recycling and contribute to meeting Florida's 75% recycling goal and requires the \$50 registration fee to be deposited into the Solid Waste Management Trust Fund.

RHODE ISLAND - INTRODUCED on February 14, 2019

Rhode Island Bill [H5448/](#)[S408](#) exempts post-use polymers or recoverable feedstocks to be processed at pyrolysis sites from the definition of municipal solid waste. Both bills have been held for further study since February 28, 2019 (H5448) and April 3, 2019 (S408).

SOUTH CAROLINA - INTRODUCED on February 27, 2019

South Carolina [SB574/](#)[HB4152](#) seeks to reclassify post-use polymers and recoverable feedstocks as "recovered materials" instead of "solid waste," if used in pyrolysis or gasification processes.

DELAWARE - INTRODUCED on June 6, 2019

Delaware [HB184](#) creates a classification of post-use polymers and other recoverable feedstocks and acknowledges their distinction from solid waste. It further defines gasification facilities as facilities that process post-use polymers and recoverable feedstocks using gasification, and pyrolysis facilities as facilities that process post-use polymers using pyrolysis.

PENNSYLVANIA – INTRODUCED on September 16, 2019

Pennsylvania [HB1808](#) reclassifies pyrolysis and gasification facilities as manufacturing facilities and exclude post-use polymers from "municipal waste" if converted through pyrolysis and gasification.

MASSACHUSETTS – INTRODUCED on October 7, 2019

Massachusetts [H829](#) reclassifies post-use plastics and solid or dissolved material in domestic sewage as non-solid waste if processed in pyrolysis or gasification facilities.