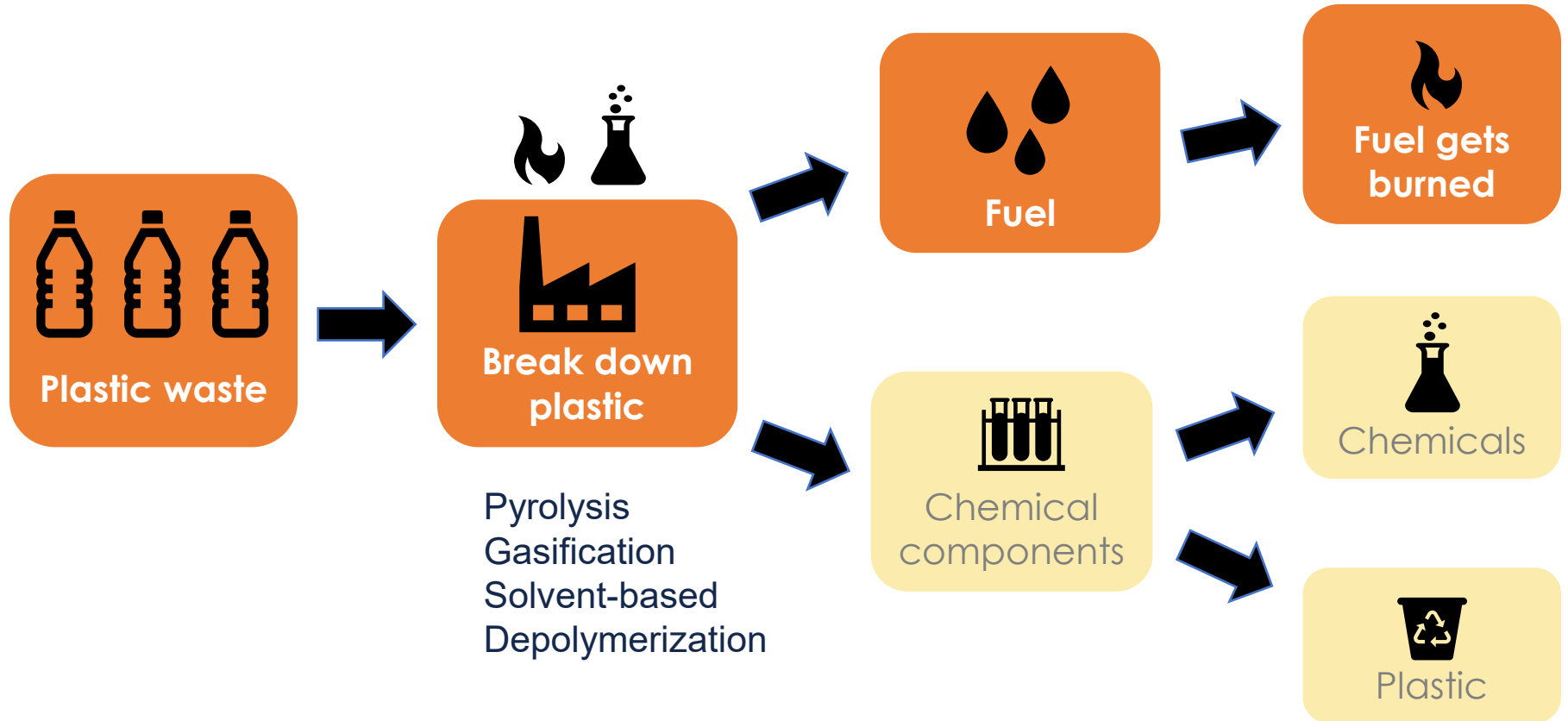


U.S. “advanced recycling” facilities



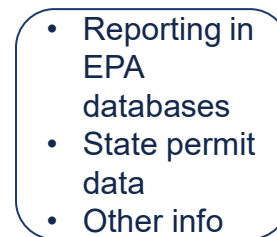
Veena Singla | Senior Scientist | Natural Resources Defense Council

“Advanced recycling”: plastic → fuel, chemicals



Finding facilities that are near-operational

Industry and NGO reports



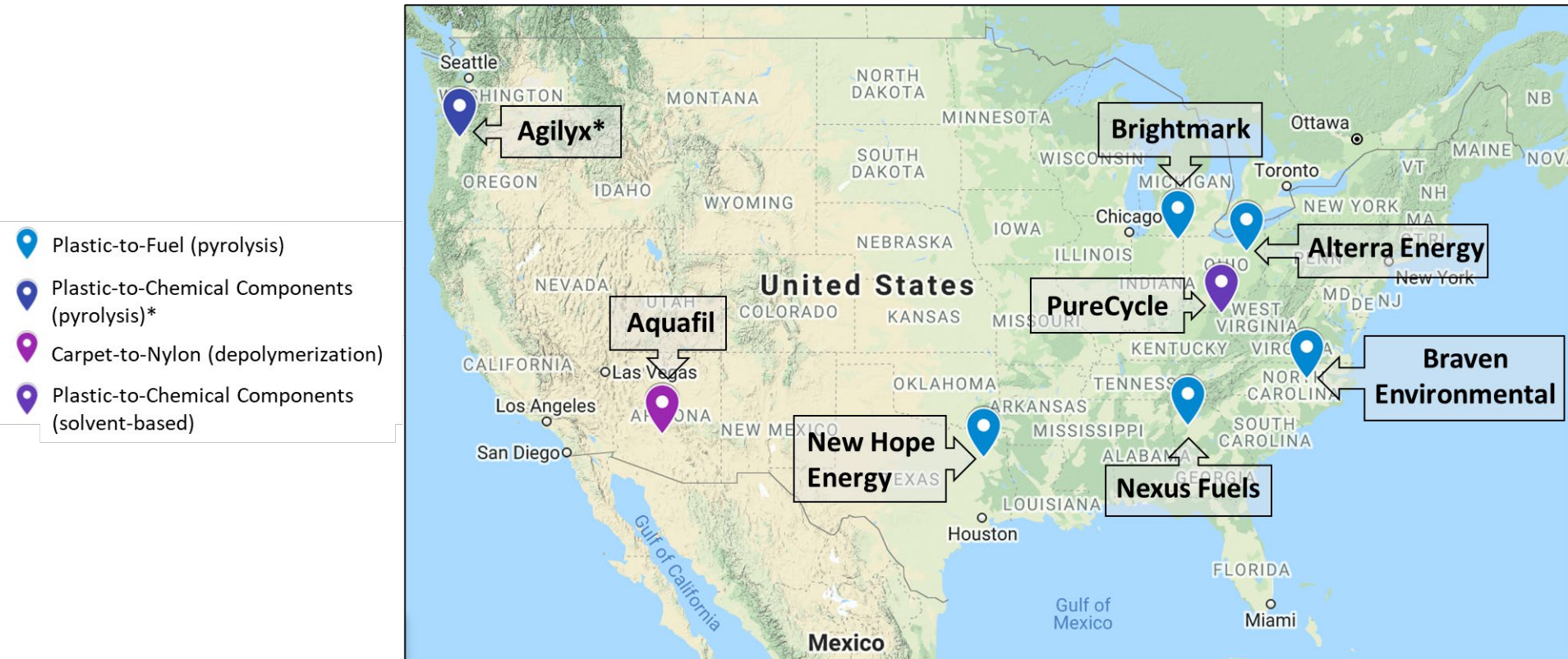
8 facilities

A dark blue rounded rectangle with a white border, containing the text "8 facilities".

Data sources utilized (August 2021)

Facilities	State Permit/ Reporting Data	EPA ECHO Data	EPA TRI Data	EPA RCRA Data	EJ SCREEN Demographic Analysis
Agilyx	X	X	X	X	X
Alterra Energy	X	X			X
Aquafil					X
Braven Environmental	X				X
Brightmark	X				X
New Hope Energy	X				X
Nexus Fuels	X	X			X
PureCycle	X			X	X

1. Majority of facilities are plastic-to-fuel (not recycling)



2. Air permits allow release of hazardous air pollutants

Chemical	Carcinogen	Reproductive toxicant	Developmental toxicant	Neurotoxicant	Persistent	Bioaccumulative	Liver toxicant	Cardiovascular toxicant	Respiratory toxicant	Kidney toxicant	Skin toxicant	Eye toxicant
Styrene	X	X	X	X			X					X
Benzene	X	X	X	X			X	X	X			
Toluene			X	X			X	X	X	X		X
Mercury	X			X	X	X	X	X	X		X	
Arsenic	X		X	X			X	X	X		X	
Dioxins	X	X			X	X	X			X		
Ethyl benzene	X		X	X			X		X	X		X
Xylenes			X	X			X		X	X		X
Naphthalene	X			X	X	X	X		X			X
Acetaldehyde	X							X		X		X
Formaldehyde	X						X		X			X
Hydrochloric acid								X		X		X
Methanol			X	X								
Hexane		X		X								

State permit data: OR, OH, NC, IN, GA, OH

3. Large quantities of hazardous waste

Agilyx: Claims pyrolysis of polystyrene > styrene
~500,000 lbs hazardous waste reported in 2019

Chemical	Pounds sent offsite (2019)	Disposal involves burning
Ignitable waste, benzene	474,242	Fuel blending, energy recovery
Ignitable waste, corrosive waste, cadmium, chromium, benzene, 1,2-dichloroethane	6,472	Energy recovery
Ignitable waste	2,160	Fuel blending
Ignitable waste, corrosive waste, cadmium, chromium, benzene, vinyl chloride	990	Incineration
Ignitable waste, benzene, corrosive waste	420	Energy recovery
Barium, cadmium, chromium, lead, selenium	340	Energy recovery
Benzene, 1,2-dichloroethane	66	Fuel blending
Total	484,744	

PureCycle: claims solvent purification of polypropylene

Registered as large quantity hazardous waste generator (>2,200 lbs/ month)

4. Facilities sited in communities that are disproportionately people of color, low income or both

Facility	Agilyx	Alterra	Aquafil	Braven	Brightmark	New Hope	Nexus Fuels	PureCycle	U.S. Average
Location of facility	Tigard, OR	Akron, OH	Phoenix, AZ	Eagle Rock, NC	Ashley, IN	Tyler, TX	Atlanta, GA	Hanging Rock, OH	
Population within 3-mile radius of facility*	119,130	63,396	97,114	13,072	2,499	38,275	50,100	3,602	
Percentage with household income below \$25,000	15%	31%	38%	17%	17%	37%	29%	29%	20%
Hispanic or Latino	10%	2%	79%	14%	2%	41%	13%	2%	18%
Non-Hispanic or Latino									
White alone	77%	70%	12%	60%	96%	26%	8%	91%	61%
Asian/ Pacific Islander	7%	2%	1%	0%	0%	0%	1%	0%	5.6%
Black or African American alone	2%	21%	5%	23%	0%	31%	77%	4%	12%
American Indian	>1%	>1%	2%	0%	0%	0%	>1%	0%	>1%
Other/multiracial	4%	4%	1%	2%	1%	1%	1%	4%	2.4%

Summary

- Most U.S. “advanced recycling” facilities are not recycling any plastic
- Facilities produce hazardous air pollutants and hazardous waste
- Communities of color, low-income communities disproportionately impacted
- Changing classification is not needed for facilities to operate
- Changing classification will leave Kansas footing bill for clean up

Thank you!

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