Press Statement, *Why Fulcrum is a Bad deal for Gary*. Valerie Denney, September 21, 2022.

My friends in GARD wanted to better understand the Fulcrum proposal. They wanted to know what gasification is; what kind of track record it has; and what its environmental consequences are. I reviewed publicly available information about gasification and about other proposed waste to fuel technologies. The report we releasing today is what I found out.

In brief, the report compares Fulcrum's claims to reality; looks at gasification's track record, in the US and around the world; and explores the environmental consequences of the kind of plant Fulcrum proposes.

Its findings make it crystal clear that the proposed Fulcrum plant is a bad deal for Gary.

Most of the reporting about this plant and about gasification, in general, has been superficial. The claims the company makes are rarely well scrutinized. We hope this report will help everyone better understand what Fulcrum is proposing and evaluate how this proposed plant will impact the community.

All the information sources the report relies upon are listed and are publicly available. We encourage everyone to review them. They tell a very different story from the one that has been reported until now.

Some of you may think this report has just cherrypicked the worst cased and left out the positive stories. But anyone who does their research will find just how little support there is for waste to fuel operations – like the one Fulcrum proposes – from those who know the most about these things: waste management professional and the scientific community.

The report addresses three main issues

1. How do Fulcrum's claims measure up against reality
2. What is the track record of the process – gasification – that Fulcrum proposes
3. What art the environmental consequences of the kind of plant Fulcrum proposes

1. How Fulcrum's claims measure up against reality.

Fulcrum says it will ultimately produce "hundreds of millions" of sustainable aviation grade fuel.

The reality is that waste to fuel schemes have been piloted and tried since the 1970s. And no one in the world has succeeded in producing fuel from garbage on an ongoing, commercial and profitable scale.

- There have been numerous attempts, and they are well documented. Most have failed. And in many cases the waste is simply returned to landfills or burned in incinerators or cement kilns.
- Fulcrum's own plant, Sierre Biofuels, which it touts on its website, only began operating earlier this year, and there has been no independent confirmation that it is, or will be, able to produce useable fuel on a commercial scale.
- Not a single plant that mentioned on Fulcrum's website as an example of this kind of technology has ever produced useable fuel on a commercial scale.

- According to the U.S. Government's Civil Aviation Board, there are eight alternative aviation fuel production methods that are currently permitted. Gasification using municipal or solid waste is not one of them.

Fulcrum says it "developed and is operating a proprietary, patented, and proven process for turning waste into net zero carbon transportation fuels"

Though their process may be "patented," and it may produce some kind of fuel at laboratory scale, we have found no evidence of it having been "proven" to do the things they claim it can do – produce aviation fuels, on a commercial scale, that will be able to get government approval for airline use, and that airlines will actually purchase.

And one claim that is made in their statement is demonstrably false. There is no way that their plant can produce anything that can honestly be called a "net zero carbon fuel." Enormous amounts of energy are required in every step in the gasification process:

- The municipal waste will need to be cleaned, sorted, and separated
- This waste must then be processed and transformed into a feedstock that the gasification process can use
- The feedstock must be transported to the Gary Fulcrum site
- The operation of the gasification process itself requires an enormous amounts of energy
- Gasification, at best, can turn waste into something called syngas; but then more energy is needed to transform the syngas into a usable fuel
- Hazardous waste and other byproducts are produced throughout the process; and it will take additional energy to capture the wastes, transport them offsite, and then properly dispose of them – possibly by incineration

Th reality is that the Fulcrum operation will consume more energy than it will ever produce, and if it ever does produce fuel, it is unlikely that the fuel will be commercially sellable without subsidies.

At the end of the day, any fuel that Fulcrum might produce will be a carbon-based fuel, not a zero carbon fuel. It will release carbon dioxide into the air when it is burned, and it will contribute to climate change.

Its "net zero carbon" claim is little more than a catchy phrase dreamt up by their public relations team to make something sound better than it is.

2. What is the track record of the process – gasification – that Fulcrum proposes

Europe, widely tried to use gasification to create fuel in 1970s. Those efforts failed overwhelmingly, and gasification is now classified by the European Union as what it really is, incineration.

Europe found it impossible to get high quality fuel using a mixed waste source, and the fuel it could produce was too costly to sell. So they abandoned the process.

More recently, numerous news organizations, scientists, and public interest groups have investigated the potential of gasification in both the US and Europe. I quote from a number of these organizations and individuals in Chapter Two of the report. The consensus is the same regardless of who is reporting:

- Gasification cannot produce high quality fuel
- Most business that have tried it have failed, are inactive or re-thinking
- It is risky for investors because fuel produced is often more expensive than fossil fuels
- Toxic chemicals are produced in the process

3. What art the environmental consequences of gasification.

This is another area in which the experts agree. Gasification produces toxic by-products.

At least 30 percent of Fulcrum's feedstock will come from plastic. Most plastics contain highly toxic chemicals. And there is no way to know what kinds of chemicals or other toxic substances will be present in the rest of the garbage that Fulcrum plans to use.

Chemicals that are found in plastics are known harm human health in numerous ways, including the disruption of male and female reproductive systems and development in children. Some of the chemicals will be destroyed by the gasification process. And some will be released into the air and water run-off, or will need to be captured and transported off-site.

In addition, the gasification process produces toxic chemicals, like dioxin – one of the most toxic substances known to science; and polyaromatic hydrocarbons that are known to cause cancer.

In addition, trucks will make an estimated 200 to 240 round trips to Gary **every day** to bring in the gasification feedstock from locations in Illinois and Indiana. These trucks will emit particulate matter and other kinds of air pollution in communities that are already overburdened with pollution.

So, when you add it all up:

The false claims made by Fulcrum and its lack of transparency
Gasification's track record of failure
The inevitable exposure of people to toxic chemicals

We must conclude that Fulcrum can not be trusted to care for our community and that this plant is not a good deal for Gary