PROPOSED BIODIESEL REFINERY IN PULLMAN, WA: Who benefits? Who loses?
Questions, Issues & Comments
A "Concerned Pullman Citizen," Military Hill

A biodiesel refinery has been proposed within Pullman city limits, abutting a housing subdivision. The company, AgTech OS touts benefits to the community and local farmers, and wants to reassure citizens of minimal impacts. But at the same time, many Pullman citizens have raised concerns about potential issues such as sound, odor, and water use. Yet even more concerns must be raised. The purpose of this document is to raise less-than-obvious questions and to provide citizens with various ways to consider this proposal.

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HIGH RISK OF FAILURE

AgTech OS is a startup company. **About 90% of startups fail, across all industries**. Few make it past initial seed funding; even fewer achieve funding to begin operations.[1] Among the few that become operational, 10% of those startups fail within the first year.

The biofuel industry is particularly volatile and challenging, especially in an inflationary scenario with higher costs for fertilizer and other material inputs.[2] Company CEO Ernest Spicer even alludes to the risks as an uphill effort, acknowledging the necessary financial support of the state Community Economic Revitalization Board (CERB) loan ($5 million) and an additional Port of Whitman County investment. Spicer admitted the project would not be feasible without them.[3]

The "Energy Return On Energy Investment" (EROEI) of canola biodiesel is marginal (2:1 or less),[4] [5] which makes losses for AgTech OS much more likely. A low EROEI ratio means low output of energy compared with high material input. Research finds that modern industrial civilization needs an EROEI of approximately 10:1 to function.[6] The low EROEI of biodiesel contributes to the industry's dismal track record: very few companies survive in the long run.[7] Low EROEI also means negligible benefits in mitigating global warming.

We need to consider the high risk of failure[8] and what it means for Pullman City and for Whitman County. What are the local financial and taxpayer consequences if AgTech OS cannot raise the needed $111 million in its fundraising or if the company proves unprofitable?

We will return to these questions later.

PRODUCTION CONCERNS

The company plans to utilize a set of newer technologies that appear to have little precedent in biodiesel production, for example: (1) a proprietary reactor design and (2) proprietary concentrated solar thermal from another startup company. Are these technologies proven, that is, have they been demonstrated profitably in the real world, at scale? Or are they only theoretically viable, through computer modeling?

Biodiesel operations can produce a hydrogen sulfide odor (rotten egg smell). Can we trust AgTech OS in their claims that the plant will not produce noise or smell – have their remediating technologies proven viable and affordable in other operations? Would the company remain committed to the expenditure of scrubbers and other smell prevention efforts if the company has financial struggles?

Is it completely true that there would be no externalized wastes; that all waste products will be used in production processes? What about air pollution from the biomass boiler?

TRUCK IMPACTS

AgTech OS asserts that the operation will have little effect on air quality. Does that estimate include truck emissions?

What hours will the trucks run? Assuming they only run during normal business hours, this would mean additional truck traffic when Pullman has the highest traffic load. No matter when, the truck traffic will be burdensome to the neighborhood near the operation.

Who are various players bringing material goods to the plant (such as farmers and supply vendors)? Where will trucks come from and return to? Thus, what routes through Pullman will they primarily take?

While increased truck traffic in Whitman County is normal during harvest season as AgTech OS mentions, it does not currently converge in Pullman. Even this seemingly moderate level of predicted truck traffic (10-20 trucks/day during harvest season, plus another 4-6 trucks/day year-round) will impact Pullman citizens substantially in their day-to-day activities.

Assuming that even a modest amount of truck traffic uses Highway 270 (bringing canola harvest from land east of Pullman) – this will further slow a very-congested area in the downtown core where Grand Avenue converges with 270. As it is, the continual sound and momentum of traffic on Main Street and Grand has an erosive effect on the ambiance, culture, and health of struggling downtown small businesses. **This additional truck traffic will negatively impact the downtown Pullman business core on Main Street and Grand Avenue.**

What is the shipping distribution plan for the end products: (1) 11 million gallons of biodiesel, (2) 60,000 tons of seed meal, and (3) 900,000 gallons of 1,3 propanediol? What routes through Pullman and Whitman County will trucks primarily take, to transport finished goods and then return to the plant? **The already-heavy traffic on US195, north to Colfax and south to Lewiston, would certainly increase.**

Tolling (renting out) of the crush facility[9] would bring additional truck traffic to the facility. Is this included in the predicted truck estimates?

No matter which highways would bear increased truck traffic, both the city of Pullman and the county of Whitman would be on the hook for **increased road maintenance costs** (additional wear-and-tear). Is this being considered?

OTHER CONSIDERATIONS

Explosions and other accidents do occur at biodiesel plants for many reasons. How safe are the new proprietary technologies in regards to accident risk? Will the plant need imports of dangerous chemicals?

What about light pollution impact on the surrounding neighborhoods, especially given this is a 24/7 operation? Typically refineries are lit up like a Christmas tree at night.

A loss of property value of the adjoining neighborhood (and perhaps of Pullman as a whole) must be also considered. **How might the loss of property value affect city revenue, in terms of property tax income?**
IS THIS EVEN FEASIBLE?

Have any feasibility studies been done to assess the availability of sufficient local canola harvest?
The only commercial-scale seed-crushing operation west of the Mississippi River, Viterra Oilseed Processing, is located just 110 miles to the west in Warden, WA. Its capacity exceeds what is currently grown in the northwest. How can there be sufficient canola availability for AgTech OS? While acreage is predicted to expand, canola is a rotation crop. Also, canola plants are sensitive to heat exposure, a big vulnerability in a hotter world.

Additionally, a biodiesel plant in western Washington, REG Grays Harbor, is the second-largest biodiesel refinery in the US. It uses canola feedstock from Washington and Canada.

AgTech OS would compete with Viterra seed crushing and Grays Harbor biodiesel refining, so it is not clear that the new facility meets any unmet need. This form of biofuel can only be mixed with diesel in a ratio of 5% biodiesel / 95% diesel, so the benefit in supplying fuel to local farmers is limited. Most would likely be used elsewhere.

The US consumes far more canola than it grows, importing the vast majority to meet its needs. About one-quarter of US harvest currently goes to biofuel production. Meanwhile Canada, our biggest supplier by far, is ramping up its own canola biofuel production. **Using canola for liquid fuel production competes directly with food production and inflates food prices.**[10] This is especially relevant now as Ukrainian seed oil exports have plummeted due to the war with Russia, creating a cooking oil shortage in the world market. Plenty of market demand exists for canola without needing a local biodiesel plant.

FINANCIAL RISK

Let's return to the initial questions related to AgTech OS's viability. Washington state's CERB loan awards $5 million, and the port is adding $1.25 million from its general fund. **What are the consequences for local citizens if the company cannot raise the needed $111 million or if the operation proves unprofitable? Will CERB and port funding in land and infrastructure amount to lost investments?**

What are the payback terms of the state CERB loan? Who would be left holding the bag for the funds that the Port of Whitman County has already committed? Who ends up dealing with: (1) up-front investment in infrastructure, and (2) increased wear-and-tear upon roads and infrastructure, due to company impacts?

Here's a real-life example: the foreclosure of a biofuel startup, Red Rock Biofuels in Lakeview, Oregon has burdened the town with $2 Million in debt.[11] The project was delayed numerous times due to cost overruns, re-engineering of its production technology, the bankruptcy of a supplier, COVID-related delays, and a lack of financing. Another major factor was the lack of wood scrap feedstock, as no feasibility studies were done.

In summary: questions are legion; risks and uncertainties loom large; and the notion of who benefits remains unclear. The AgTech OS proposal may look highly appealing to many Whitman county residents, especially farmers and those who want to mitigate climate change. But all told, the company may actually prove to be a major budget/tax liability while eroding the quality of life for the citizens of Pullman City and Whitman County – providing negligible benefit to local farmers or to the climate.

If you share these concerns, please say NO to rezoning of Pullman property (Sunnyside) to heavy industrial and commercial.

Sign the petition: https://www.change.org/p/oppose-the-rezoning-of-pullman-wa-property-to-heavy-industrial-for-biodiesel-plant

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