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Aloha Councilmembers,

We are writing to urge that you focus on source reduction, reuse, and recycling to solve our solid waste woes, and reject discredited “waste-to-energy” proposals such as Resolution 73.

Please especially focus on the old Hu Honua site, where ill-advised projects may be proposed by investors seeking a way forward. Instead, the site may work well for battery storage for renewable energy, or for hemp processing.

Re. Resolution 73, it is extremely troubling that this sweeping proposal, to up-end the entire County solid waste plan in three short years, was passed after only one brief Council discussion without an appropriate second reading.

Supporters of the resolution and the Yummet company were obviously informed and organized well ahead of time, while the public had less than a week’s notice.

Proper review, by the Environmental Management Commission and a Council committee, could have advised regarding the concerns below.

There may be an ethics violation--we have been informed that Resolution 73 was written at the request of Yummet and for its benefit.

Hawai'i County Code, Article XIV, Code of Ethics, Section 14-2, Standards.

It shall constitute a conflict of interest for employees or officers of the county to...

b) Use their official position to secure special privileges, consideration, treatment or exemption to themselves or any person beyond that which is available to every other person.

Impacts were not evaluated.

Greenwaste, now an example of circularity, given freely to people farming at a subsistence level, would be taken to make biochar. Farmers would need start paying for mulch, and it would be shipped over thousands of miles and wrapped in plastic. And biochar certainly wouldn't be free.

“Waste-to-energy” cannot meet targets in decarbonization laws.

Contracts with Business Services Hawai'i, Hawaiian Earth Recycling, and Waste Management would need to be rewritten—if possible.

Ramzi Mansour, director of the Department of Environmental Management, commented at the March 8 County Council meeting that a steady stream of waste would be needed. But two “waste-to-energy” proposals (2008 and 2015) for Hawai'i Island were rejected, after months of divisive debate, because the island doesn't generate enough garbage to make it cost effective. On O'ahu, taxpayers are paying penalties to H-Power because O'ahu can't generate enough garbage to fulfill the contract.

Resolution 73 proposes burning agricultural and green waste to produce biochar. But Energy Justice Network says:

“Incineration by any name (including various staged incineration or “waste conversion” technologies, such as plasma arc, gasification or pyrolysis) is not clean or safe, despite industry claims. Even with the increased requirements for pollution controls that came into effect since 2000, incinerators are STILL dirtier than coal in terms of air emissions. Incinerators still turn trash into toxic ash and toxic air emissions. This reality is inescapable, as even with the most modern pollution controls, pollution levels still exceed coal by nearly all measures.”

<http://www.energyjustice.net/incineration/>

Biochar can be toxic.

"Application of biochar into soil does not usually have a toxic effect and very often stimulate plants, bacteria activity and invertebrates. The effect however is strictly determined by type of biochar (especially the feedstock used and pyrolysis temperature) as well as contaminants content. The pH, electrical conductivity, polycyclic aromatic hydrocarbons as well as heavy metals are the main factor usually responsible for biochar toxicity." *[underline added]*

Journal of Hazardous Materials, Volume 403, 5 February 2021, 123833,

<https://www.sciencedirect.com/science/article/abs/pii/S0304389420318227>

Hydrogen, another proposed product in Resolution 73, is an “indirect greenhouse gas”.

“...hydrogen is also an indirect greenhouse gas whose warming impact is both widely overlooked and underestimated. This is largely because hydrogen’s atmospheric warming effects are short-lived – lasting only a couple decades – but standard methods for characterizing climate impacts of gases consider only the long-term effect from a one-time pulse of emissions. For gases whose impacts are short-lived, like hydrogen, this long-term framing masks a much stronger warming potency in the near to medium term. This is of concern because hydrogen is a small molecule known to easily leak into the atmosphere, and the total amount of emissions (e.g., leakage, venting, and purging) from existing hydrogen systems is unknown.... ”

Climate consequences of hydrogen emissions, Ilissa B. Ocko and Steven P. Hamburg,

Environmental Defense Fund, New York, NY, USA, published: 20 July 2022, Atmospheric Chemistry and Physics, Atmos. Chem. Phys., 22, 9349–9368, 2022

Claims by Brittany Zimmerman, CEO of Yummet, were not evaluated.

Observers noted that CEOs of large companies with actual financial backers don't spend 30 days on each of four islands chasing County resolutions with no force of law, never mentioning a physical corporate headquarters.

Was Zimmerman six years old when she started working on her skills?

In 2021 she said she'd been in the "20 under 35 cohort of 2020".

So by 2021 she couldn't be older than 36.

Then she "spent 30 years" working on skills.

36 minus 30 equals 6.

"Brittany has spent 30 years working on expanding her breadth of skills...Brittany is a member of the 20 Under 35 cohort of 2020"

bio from Thesis Defense by Brittany Zimmerman on April 30, 2021

<https://blogs.und.edu/jdosas/2021/04/thesis-defense-by-brittany-zimmerman-on-april-30th/>

Zimmerman holds three patents, but all are held jointly, and apply to space, not Earth.

<https://patents.justia.com/inventor/brittany-lynn-zimmerman>

Zimmerman cited nuclear energy as "renewable".

Zoom meeting with Sustainable Energy Hawai'i, July 29, 2022,

<https://www.youtube.com/watch?v=JQOVKWCs2vg>

at 26:50 minutes

Zimmerman claimed "each of our facilities can scale very large...we [looked at implementation] for example, in Savannah, Georgia, and that can scale to remove a billion tons of carbon dioxide directly from the environment annually."

**somewhat unintelligible*

Zoom meeting with Sustainable Energy Hawai'i, July 29, 2022,

<https://www.youtube.com/watch?v=JQOVKWCs2vg>

at 17:17 minutes

But the 15 facilities worldwide now doing direct air capture remove fewer than 10,000 tons of carbon dioxide a year. And it takes all the world's forests to remove 16 billion tons a year.

"Direct air capture removes carbon dioxide from the air by passing it through liquid chemical solutions or by chemically binding it with solid filters. However, the 15 facilities currently in operation globally capture only 9,900 tons of carbon dioxide each year."

UCLA Institute of the Environmental and Sustainability, April 1, 2021

<https://www.ioes.ucla.edu/article/carbon-sequestration-a-critical-but-less-understood-piece-of-the-climate-puzzle/>

"The world's forests currently absorb around 16 gigatons [16 billion tons] of CO₂ each year."

<https://www.edf.org/article/carbon-capture-fight-climate-change-stop-climate-pollution>
Spring 2022 issue of EDF's Solutions magazine

The Yummet website says

"Our concrete is certified and showcased in the Department of Transportation MnRoad Facility."

<https://www.yummet.com/green-concrete>

But the MnRoad website does not mention Yummet in its "Partners" list.

<https://www.dot.state.mn.us/mnroad/collaboration/index.html>

In closing, thank you for considering our concerns. For the future, we urge you to evaluate waste proposals thoroughly, especially for "waste-to-energy" and the old Hu Honua site.

Mahalo,

Chuck Flaherty, chair, Sierra Club, Hawai'i Island Group

Note: Thanks to Mike Ewall, director, Energy Justice Network; Hannah Hartmann, Master of Science Candidate; Steve Holmes, former Honolulu City Council member; and Kristine Kubat, director of Recycle Hawai'i for their valuable input.

