Britain's New Biomethane-Fueled Bus: Pooh-Poohing the "poo" bus

Skot Rogers | Fall 2014

While several other European nations have already embraced the technology for some while, Great Britain has just launched its addition of a newsworthy new bus running between the city of Bath and the Bristol airport. What makes it newsworthy is not that it is running on natural gas, as some bus fleets in a number of nations already do. The surprise here, perhaps the *very little* controversy that it does stir, is that the bus is running on fuel produced by the collection and anaerobic digestion of *human* waste. The new bus, dubbed "The Bio-Bus", appearing in several November 2014 articles including a CleanTechnica.com article located here, has a range of about 186 miles on a full tank. One full tank is able to be produced by "...the waste [that] five people flush down the toilet annually." The unique thing here is that the fuel is coming from a sewage treatment plant, not widely considered by the public as any kind of energy source.

The Debate at Hand

The discussion on the new bus actually includes very little *scientific* debate. This organic matter, if it were not being collected and used for transportation fuel, is often already being converted to gas by sewage treatment facilities which then use that power to process more municipal waste. Some of the solids are sent to a landfill. Most of what is left is treated by long processes that end in the sending of that water back into rivers, lakes, the ocean, etc. The debate that *is* worth considering is the

average person's *perception* of the matter. The average person is mentioned in the article, and it is noted that, "…consumers will have to get over the scatological base of their fuel. Not many people want to be reminded that the gas they might be using to cook their breakfast could be based on what they flushed down a few days earlier."

Pros

- Among the many positive aspects about this, the predominant one is that instead of being burned off, buried, or treated with intensive amounts of energy and other chemicals to create wastewater that barely meets the very minimal standards for going back to the environment, this process can create usable fuel that is relatively much less carbon-intensive than fossil fuel.
- There is obviously an ample supply
- This can be sourced locally so that it is not required to use more energy in the transportation of the fuel and there is less chance for leakage in long trips
- When uncovered organic material of any kind decomposes, it releases methane (a very potent GHG) into the atmosphere anyway. This system puts a priority on the careful collection of that GHG for fuel production which thereby reduces what is lost as 'natural' pollution, and transforms methane into less harmful CO2

Cons

- There have been conversations in the past about biofuel and the methane lost in its production, storage, and transportation. However, there are very few contemporary scientific studies that support the idea that a localized system such as this carries threats that would outweigh the benefits.
- It still produces CO2 when it is burned, so it is not 100% free of pollution
- The biggest substantive con, perhaps the only one, is that people are simply expected to have a negative *idea* of the matter. As mentioned above, cooking

with fuel that comes from human waste seems unhygienic so the expectation is that a lot of people will find riding in a bus fueled by energy that is produced this way unacceptable

The Compromise

The simple solution is to simply extend the strategy already in play here–keep the entire situation *funny on purpose*. Cities should keep the technical details forthcoming, informational, and presented honestly to the public in a way that *includes* that public. The bus itself is already decorated in a hilarious artistic rendering of people 'creating' the fuel that this bus will run on as shown here:

In looking through some of the comments on an NPR.org article found here that presented information on the same topic, people are already participating in the discussion in a lively way that supports the idea that it is not as much of a turn-off as the *first* article would suggest. Funny comments fly. Chris Vandenberg joked, "...would this always be the number two bus?" Ted S. wrote, "Five people pooping

for a year will power a bus for 186 miles...Well, they should be able to secure enough from Washington to fuel them into the next century." Username "Phil from Delhi NY" wrote, "DEPENDable transportation". While the jokes are flying, username "Acethecat1" wrote something that I believe holds the real sentiment of those who are very informed, "The Europeans make a diesel engine run on poop while we burn our food (ethanol) for fuel and call it a good idea."

This technology is progressive, powerful, and certainly proportionally sustainable. Doubters just need a little time to just get used to the "ew-factor". The compromise here is to effectively allow those who want to joke plenty of room to do so, and to continue pursuing this technological solution so aggressively that its worldwide adoption, the frequency of this kind of technology, makes arguments against it as fundamentally nonsensical as any argument trying to assert that busses aren't *useful* because of how uncomfortably *crowded* they can become at times.