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## Murphy ignoring organic waste as clean energy source: Tomich

**Matt Tomich**

March 8, 2019

Gov. Phil Murphy pledged to restore New Jersey to national leadership in fighting climate change, building a green economy and transitioning to 100 percent clean energy by 2050.

He has already taken some laudable steps. He brought New Jersey back into the Regional Greenhouse Gas Initiative (RGGI) to lower greenhouse emissions from electric power generation, and the Transportation and Climate Initiative (TCI) to lower emissions from the transport sector, which is the largest emitter of greenhouse gases, accounting for 40 percent of New Jersey's emissions.

So far, so good. But there's a big step yet to be taken to vault New Jersey ahead on climate change, clean transportation and clean energy: harnessing its massive organic waste stream as a renewable, ultra-low carbon energy resource.



**More than 30 percent of the U.S. food supply ends up going to waste, according to the Department of Agriculture. (Photo: Getty Images/iStockphoto)**

New Jersey generates millions of tons of organic waste annually, including some 1.4 million tons of food scraps from residents and businesses, plus agricultural waste and municipal wastewater.

If these wastes decompose in oxygen-free environments they produce methane-rich biogas. Left to escape into the atmosphere, methane is a greenhouse gas 80 times more powerful than carbon dioxide over 20 years. But when captured and used to generate renewable heat/electricity, it fights climate change.



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Gases from organic waste rotting in landfills can be processed and refined to remove moisture, contaminants and impurities, becoming “renewable natural gas” (RNG) or “biomethane” fuel. Beyond landfills, organic wastes and municipal wastewater can also be processed in oxygen-deprived tanks called “anaerobic digesters” to produce RNG.

RNG is chemically indistinguishable from natural gas extracted from the ground, but it’s not a fossil fuel. It entails no drilling or fracking, and has a much lower carbon footprint than fossil natural gas. In fact, it’s the lowest-carbon fuel available, and is often net-carbon-negative. That means making and using RNG can actually result in less greenhouse gas in the atmosphere than if the biogases were never captured and used as fuel in the first place.

RNG is one of the only renewable, ultra-low carbon, reliable forms of energy that can be made locally. Unlike wind or solar, it's not intermittent, and it's easily transported and stored via existing gas pipelines and infrastructure. It could be a huge factor in meeting New Jersey's emissions and clean energy goals.

There is modest progress on RNG in New Jersey. Bills are moving in the Legislature to separate and collect food waste and other organic materials, instead of sending them to rot in landfills. Several digester facilities are planned to process them, and one, now under construction in Trenton, will soon start converting 100,000 tons of food waste a year into biogas and fertilizer.

But New Jersey is still a long way from realizing its organic wastes' potential as a clean energy source. It isn't even using most of the biogases from organic wastes already rotting in its landfills.

New Jersey can't ignore such resources and hope to meet its climate goals. In the transport sector alone, its organic waste could generate enough RNG to cut greenhouse gas emissions by 1.2 million tons a year. Much more should be done to leverage it.

Some gas utilities have been slow to allow waste-derived RNG into their facilities. But as demand and recognition of RNG's climate and air quality benefits have grown, that's changing. National Grid, Vermont Gas, SoCalGas and others, as well as vehicle fleets and large corporate gas users like UPS, L'Oreal and Dallas-Fort Worth airport, are successfully adopting RNG and/or injecting it into their pipeline networks.

New Jersey could, too. That would spur in-state production of RNG from New Jersey's organic wastes, and help reduce climate impacts from its natural gas industry. Home-grown RNG could fuel natural gas vehicles already operating in the NJ Transit fleet, public and private refuse trucks and more, allowing New Jersey to access existing federal incentives for RNG as a transportation fuel.

With climate change accelerating, and New Jersey warming faster than other states, we can't afford to leave clean energy resources on the table. If New Jersey wants to show leadership on climate change now, it could start by allowing RNG into its natural gas pipelines and using it to power municipal fleets and power plants. That would stimulate more in-state RNG production, and allow New Jersey to reap the climate and economic benefits.

*Matt Tomich is president of the non-profit organization Energy Vision, whose mission is to research and promote viable technologies and strategies for a sustainable, low-carbon energy and transportation future.*