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US RNG industry is ‘rapidly expanding’, new study shows

Renewable natural gas (RNG) capacity and production across the US is rapidly expanding, according to a new study.

Sustainable energy firm Energy Vision released its most recent joint assessment of the US RNG industry, performed on behalf of the US Department of Energy’s Argonne National Laboratory.

The study found the total number of RNG production facilities in the US that are operational, under construction, or planned, increased by 42% - from 219 in early 2019, to 312 by the end of 2020. The figure includes 157 RNG production facilities now operating, 76 projects under construction, and 79 in the planning stages.



The 157 operational projects now producing RNG represent total production capacity of 59 million MMBtu, equivalent to over 459 million gallons of diesel – enough to refuel 50,000 refuse trucks (nearly 40% of refuse trucks in the US). With 155 new RNG projects under construction or in the planning stages, rapid capacity growth is expected in the years ahead.

Nearly identical chemically to natural gas, RNG is a practical substitute, according to Energy Vision. It can be used in virtually all the same applications, and stored and transported in the same infrastructure.

“The crucial difference is that this is a renewable fuel, not a fossil fuel, that requires no drilling,” said Energy Vision founder Joanna Underwood. “So, instead of digging up methane from underground, RNG captures and makes beneficially use of methane gases that would otherwise escape and become potent climate warmers.”

According to Argonne National Laboratory’s GREET model, RNG produced from the anaerobic digestion of food waste or dairy and hog manure is net carbon-negative over its lifecycle, including production, transport, and use.

Matt Tomich, Energy Vision’s president, said: “More greenhouse gases (GHGs) are captured in producing the fuel than are ever emitted by the vehicles burning it, meaning that making and using RNG

can result in lower atmospheric GHGs than if it were never made or used in the first place.”

As a transport fuel, switching vehicle fleets from diesel to RNG derived from a food waste digester exceeds international 2050 GJG emissions goals, cutting emissions by more than 80% below 2005 levels.

Potential domestic RNG production is estimated to be between 10 and 20 times greater than actual current production.

“RNG is a powerful tool for decarbonizing high-emissions, difficult-to-decarbonize sectors like transportation, manufacturing, and various thermal applications,” said Tomich,” and it can reduce the climate impacts of the natural gas industry itself.

“It is also a strategy that directly addresses the significant fugitive methane emissions currently produced by the management of urban and agricultural waste streams. How much it can reduce climate impacts depends on how much we can produce, and how fast. This new assessment shows RNG ramping up quickly, and growth is likely to keep accelerating.”