

NATURAL GAS WEEK®

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INDUSTRY TRENDS

Major Players Move in as RNG Niche Goes Mainstream

Renewable natural gas (RNG) will never rival conventional gas in volume — but value is another matter, say officers of a new start-up backed by the renowned Rice brothers.

Even if things go according to plan, the RNG venture would only be producing 95 million cubic feet per day by 2025, so why would expats from a top gas producer bother?

“As a percentage of the 95 billion cubic feet per day natural gas market, this is relatively small in that context,” said Kyle Derham, president and chief financial officer at Rice Acquisition Corp. (RAC). “But obviously we’re selling this gas for a premium to fossil natural gas, which is going to create a lot more cash flow for the business.”

How much of a premium? Customers have been willing to sign long-term RNG contracts for \$14 per million Btu — four to five times the recent going price for gas, said Brian McCarthy co-founder and CFO for Archaea Energy, which was merged with Aria Energy in a \$1.03 billion deal earlier this month.

“While the energy per unit is the same, our customers are not trying to solve for the cheapest unit of energy. They are trying to solve for ‘How do I take what I’m already using in terms of my natural gas infrastructure and how do I ‘greenify’ it?’” McCarthy said. “The cost benefit analysis comes down to if I have to operate in a green way what do I do?”

Typically, a buyer purchases RNG contracts much like a company would buy output via a power purchase agreement from a wind farm. The pipeline-quality RNG is injected into existing gas infrastructure and the gas delivered at the meter has the environmental attributes the buyer is seeking.

While the RNG moniker is relatively new, methane has long been gathered from landfills, dairy operations, wastewater treatment plants and the like for niche use. But more recently, the gas sector has begun to recognize its value in confronting

a low-carbon future due to its ability to help the sector green up, Derham and McCarthy said in an interview last week with Energy Intelligence.

“The key pieces are the environmental benefits and environmental attributes that come with RNG,” McCarthy said.

For instance, among their clients is the University of California, which has a number of gas-fueled power generation assets that provide vital power for their hospitals and campuses.

The university had the option to toss the infrastructure — and the investment — and put it on the power grid. But then it would be subject to intermittent sources of power, which has proven problematic in recent years, McCarthy said (NGW Aug. 24, 2020). “Or it could take a green fuel and power what they have.”

The university system uses 9 billion Btu of gas a year — demand small enough to supply with RNG contracts alone, he added.

Shale-Steeped Leaders

The leadership of this new venture, which will keep the name Archaea Energy, has an enviable pedigree from years plying the shales of Appalachia. The CEO of Rice Acquisition Corp. is Daniel Rice, who with his brothers founded Rice Energy, a top-10 gas producer that merged with EQT creating the largest US gas producer in the US (NGW Jul. 15, 2019). Archaea was backed by the Rice family, so they are also majority owners of the merged venture by the same name.

“I think their motivation has been to just continue to look for great businesses, especially ones that rhyme with their experience,” said Derham, who had been an officer with Rice Energy and helped spearhead the Rice family takeover at EQT in 2019.

“When you look at renewable natural gas with all the experience they have on marketing, midstream, drilling, getting costs down

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and pushing your competitive advantage, all those things translate very well in this business,” Derham said.

“We’re always on a lookout for ways to put our skills to work to make the world a better place,” Daniel Rice later told Energy Intelligence. “We innovated a technology-driven approach at Rice Energy to help lead the US to energy independence while reducing our nation’s dependence on coal. We’re continuing this mission with Archaea, which is innovating better ways to capture and convert waste emissions into low-carbon fuel for customers across North America.

“Archaea is one of a handful of companies worldwide that creates value by helping the environment and we’re deeply committed to help them succeed,” he added.

Yet, listening to Daniel Rice in announcing the venture earlier this month, it’s clear hard-nose business is key.

“RNG is a certain source of renewable energy because landfill gas follows a predictable methanogenic production curve. Even when a landfill stops accepting waste, the gas rate will gradually increase for 10 to 15 years, and then follow a predictably shallow decline thereafter,” Rice said. “Looking back on our success building Rice Energy from scratch into a \$10 billion company, we know what it takes to build an industry leader. And we think this combined business has all the pieces today to generate even greater success, and in an accelerated time frame.”

RAC was looking to build a substantial portfolio in the renewable fuels space and determined that RNG derived from landfill gas “was best risk-adjusted return proposition for our share holders, while significantly improving the environment,” Derham said.

A handful of majors have entered the sector by buying into ventures, including Total, Chevron and BP, but RAC is making

a huge play with a combined platform of 22 working projects and a number of others in development, all of which involve landfill gas. Within the next 12 to 18 months as more projects come on line it will be the largest renewable gas producer in the country.

Landfills Best Choice

The exclusive focus on landfills is no accident and harkens to the venture’s roots in shale.

“Landfills have less feedstock risk than aerobic digesters, which rely on that dairy farm being in existence for 10, 20, 30 years when you’re building the digester,” Derham said, noting that if you added up all the RNG being processed by digesters, it would be less RNG than will be produced at a single landfill project Archaea is developing in Pennsylvania.

Also, gathering landfill methane is relatively easy, the hard part is processing it into pipeline-quality gas, McCarthy added.

Landfills are already required to cap filled sections, drill wells within 15 feet of the liner and vacuum the methane using perforated pipes to a well cap where it’s flared. That’s the point at which Archaea would take possession of the methane and route it to a plant for processing. The landfill owner is paid a 10% to 20% royalty based on the revenue from the sale of the RNG.

Taken together, RNG derived from all sources could potentially reach 5 Bcf–7 Bcf/d making a “meaningful contribution” to US gas supply in 20 to 30 years’ time, McCarthy said. However, its low-carbon credentials will be increasingly in demand for creating a cleaner, greener gas stream or even as an alternative feedstock for hydrogen production.

Tom Haywood, Houston