

One CNG/hybrid truck: multiple benefits

A partnership between Baker Rock Resources and NW Natural shows how sustainability, community needs and business requirements work together.

For more than 60 years, Baker Rock Resources of Washington County has provided construction and landscaping materials to growing communities. The firm also offers a wide range of construction services.

All this calls for a lot of trucks — big trucks that can carry heavy loads in tough conditions. But until recently, fuel options for such trucks were limited to diesel.

So, to a company that's always looking for ways to lead its industry's environmental practices, a hybrid natural gas/electric truck that transports the heaviest loads sounded ideal.

But only if it could perform as promised.

That's why Keith Peal, Vice President of Marketing and Sales at Baker Rock Resources, was enthusiastic about a free trial.

After the first time driving the truck with a full load, an astonished driver came back with a positive report: "We made it up Sylvan Hill at regular speed, fully loaded." Right then, Peal knew he had found a way to match the company's environmental goals to its operating needs.

The partnership

Nina Carlson, who works in Public Affairs at NW Natural, met Peal through their volunteer work with the Westside Economic Alliance and the Hillsboro Chamber of Commerce. Knowing his company's transportation demands, Carlson thought Peal would be interested in an innovative vehicle system: a truck that operates on compressed natural gas (CNG), with a performance-boosting electric powertrain.

Peal's was the first company to take advantage of a no-cost short-term trial, courtesy of NW Natural and Hyliion, provider of the hybrid CNG powertrain system.

A previous program allowed fleet operators to try a Class 8 400 horsepower CNG truck. But Peal knew trucks hauling aggregate and asphalt products needed more oomph than CNG alone provides. The hybrid sounded like a great alternative.

And Carlson was excited to see how the truck performed for a NW Natural customer.

"Our goal is to help people learn of vehicles like these and all their benefits. But no business can afford to take a risk on a new technology that isn't going to get the job done," she said. "So, we want to give companies a low-risk way to get comfortable with the trucks. If they are happy with the performance, and if their customers see a hybrid truck delivering to their work site, we'll have a good chance of pushing the technology out to other fleets." »



Driver Steve Holmes finds the CNG/hybrid with Hyliion's powertrain system has the power he needs.



Another partner is Onboard Dynamics, a Bend company. It has recently developed a mobile fueling station, which Baker Rock Resources is the first to use on site.

The truck and its benefits

CNG hybrids pack a one-two punch of benefits for a large fleet: They help companies meet their environmental goals while reducing operating costs by providing the following benefits.

- **Natural gas vehicles fight climate change.** Renewable natural gas (RNG) can be used in all CNG vehicles and reduces greenhouse gas emissions to zero. The electric battery also is emission free.
- **Air quality.** CNG trucks win awards for their clean-running engines. They emit no soot or heavy metals, and are lower in other pollutants compared to diesel by 90 to 99 percent.
- **An E-axle** – operated by an electric battery – adds 120 horsepower to a Class 8 truck, so it can pull loads of 100,000 pounds or more uphill with minimal or no decrease in performance.
- **Energy and money savers.** For years, CNG has been substantially less expensive than diesel, and tax credits and renewable and low carbon fuel incentives for using RNG bring fuel costs close to nothing. In addition, the E-axle captures unneeded energy when the vehicle travels downhill or brakes. This contributes to fuel efficiency, and the battery never needs a plug-in recharge.
- **Weight.** The hybrid system adds 800 pounds to a conventional truck. To encourage use of renewable vehicles, the State of Oregon's Department of Transportation adds 2,000 pounds to the allowable weight for an extended weight permit for CNG trucks.



Renewable natural gas, RNG, is methane captured from sources like dairy farms and waste treatment facilities. By keeping methane out of the atmosphere and using it as a substitute for natural gas, RNG has tremendous potential to fight climate change. Local facilities are now producing RNG, offering a way to return money spent on fuel to our communities.

That's why many states and the federal government encourage its use. Fleet operators can earn substantial tax credits by participating in no-hassle programs to support RNG production.

Commitment to community and environment

Baker Rock Resources is a third-generation family-owned business. The family is dedicated to Washington County, and Peal considers community involvement an essential part of his job. Over the 35 years he has been at Baker Rock Resources, he has taken an active role with many local organizations — from three chambers of commerce to the Westside Economic Alliance and the Oregon International Airshow.

The company's location, products and expertise mean Washington County and developers will be looking to Baker Rock Resources to support new development. The company anticipates that the mixed-use project of South Hillsboro, expected to house up to 20,000 people, will require their building materials and construction help.

But an equally important responsibility is to ensure the region's continued environmental health. For example, "We were the first West Coast company to issue an Environmental Declaration for our asphalt mixtures," Peal said.

So, this opportunity to try out an environmentally sound truck was a natural. "Everybody wins," Peal said. "Alternative fuel vehicles are our best option for keeping our air clean as the population grows."

At a time when the Northwest is experiencing the harsh effects of climate change, "We've got to do what we can to reduce greenhouse gas emissions. I look forward to the time we can add vehicles like this to our permanent fleet," Peal said.

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