

## VERBIO Nevada Biorefinery – Fact Sheet

**Project Overview** - The VERBIO Nevada Biorefinery (VNB), located at 59219 Lincoln Highway, Nevada, IA 50201, is being developed into a combined renewable natural gas (RNG) and ethanol production facility. The entity is 100% owned by VERBIO Nevada, LLC, a subsidiary of VERBIO North America Holdings Corporation (VNAH). The parent company, VERBIO AG, is a publicly traded German corporation and one of Europe's largest bioenergy and RNG producers. The location offers competitive infrastructure advantages due to the former owner's investment in site infrastructure. Additionally, it meets VNB's requirements for access to the natural gas grid, high voltage power, major highways, feedstock sources, and water supply.

The site, initially, is being developed in two major phases at an estimated total cost of \$115 million. Phase I (\$35 million) of the project, an RNG production facility is currently under construction with an anticipated operational start date in the 4<sup>th</sup> quarter of 2021. Phase II (\$80 million) includes the construction required to produce ethanol and additional RNG, along with investments in buildings, storage facilities and improved logistical capabilities. Construction of Phase II has commenced as of March 1, 2021 and is expected to be operational by the 4<sup>th</sup> quarter of 2022.

**Project Financing** - VERBIO AG is providing all project financing for the construction of Phases I and II. No public financing, federal grants, or bank loans have been sought. VNB was approved for incentives offered by the Iowa Economic Development Authority for both Phase I and II and for property tax abatement through the City of Nevada and Story County for Phase I, with Phase II approval pending. The incentives are tied to achieving targets for high quality jobs and wage rates, and as such they are a critical component of VNB's overall cost structure.

### Phase I – Description

**Process Outputs** - VNB will produce RNG and humus. RNG, using anaerobic digestion technology, will be upgraded to meet pipeline natural gas standards and injected into an onsite, natural gas distribution pipeline for eventual use as compressed natural gas (CNG) or liquefied natural gas (LNG) vehicle fuel. Humus, alternatively known as digestate, is a value-added lignin and nutrient rich soil amendment. Its appearance is similar to peat moss or compost, and it will be principally returned to feedstock suppliers and spread on farmland to replace the agronomic value of the crop residue that was harvested. VNB's process does not create any wastewater and will not pollute ground or surface waters.

**Feedstock** – VERBIO Agriculture (VA), LLC (formerly VERBIO Farm Services, LLC) was formed in late 2020, and its primary responsibilities are to secure feedstock of baled crop residue that is procured within a 50- to 75-mile radius. VA will secure 75,000 to 100,000 tons of corn stover per year during the first phase of operations and will be interested in evaluating the procurement of other types of cellulosic materials, including immature cover crops, over the long term. Project logistics consists of baling, storing, and hauling; some growers will likely be able to perform all of these functions themselves, while others will rely on VA or a third party to perform one or more of the required functions. VA understands the importance of transparent relationships with the regional growers and its impact on mutual success – VERBIO is happy to work flexibly with growers using a variety of options.

**Water Consumption** - VNB will use up to 25 million gallons of water per year during Phase I. Although the humus will be pressed (the primary by-product from RNG production) to recycle as much process water as possible, some water remains trapped in the humus and is ultimately spread on farmland in the region. The City of Nevada has ample capacity to meet VNB's near- and long-term water requirements.

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**Job Creation** – Employment currently stands at 41 full time staff members; it is expected that 100 plus indirect jobs will be created favorably impacting the local economy. Job titles of full-time staff during Phase 1, would include: plant manager, production manager, operators, material handlers, mechanics, electrician, truck driver, logistics manager, lab manager, and IT support. VNB and VA expect jobs to be filled at competitive wage rates, in addition to offering competitive health, retirement, and market-based benefits.

**Truck Logistics** - VA will employ round-trip trucking (for stover bales/humus) using specialized trailers, and ultimately plan to exclusively utilize clean-burning compressed natural gas (CNG) vehicles, fueled by RNG at a future date.

### Phase II – Description

**Process Outputs** - Since the Nevada site already has infrastructure in place to support ethanol production, VNB will invest in additional fermentation tanks, as well as required equipment to produce ethanol, additional RNG, corn oil, nitrogen fertilizer, and other value-added byproducts. Integration of the ethanol production process with the RNG process will result in higher efficiencies and improved sustainability. Expanded RNG production may be utilized to fuel VERBIO Nevada's boilers, which are utilized to deliver process heat critical to producing ethanol. Combining RNG with the ethanol process significantly reduces VNB's emissions and enhances VNAH's competitive position in the low carbon fuel standard (LCFS) transportation markets.

**Feedstock** - VNB's primary feedstock each year (approximately 20 million bushels of corn) will be procured locally. Construction will include a corn unloading facility and silo storage.

**Water Consumption** - VNB will use up to 230 million gallons of additional water per year during phase II. Additionally, VNB will continue to press the resulting additional humus to recycle as much water as possible. A significant portion of the additional water capacity will be used in the cooling tower, which is required by the ethanol production process.

**Job Creation** – During Phase II, VNB and VA plan on adding 41 full-time positions and will continue to add another 50 -75 (or more) indirect jobs that will further benefit the local economy. The positions necessary to support the Phase II expansion will include engineers, quality technicians, plant operators, mechanics, electrical and instrumentation technicians, and administrative resources. Following completion of Phase II, it is anticipated that VNB and VA will employ 82 high-quality, full-time positions. Well trained, competent employees represent a key element of VNAH's long-term success.

**Rail Logistics** – VNB will be building a rail loop track on newly acquired property located directly northwest of the main plant, which has been annexed by the City of Nevada. The loop track will provide the capacity to hold 100 rail cars and will be serviced by Union Pacific.