**Monarch Bio Energy, LLC**

**Roeslein Alternative Energy of Missouri**

**RNG Facilities Fact Sheet**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Farm** | **Owner** | **Location** | **# of Hogs**  **Per Year** | **Annual RNG Production (MMBtus)** | **RNG Facility Start Up** | **Environmental Benefit:**  **Equivalent # of Cars**  **Removed from Road¹** |
| Ruckman | Smithfield Hog Production | Albany | 168,000 | 70,000 | July 2016 | 5,712 |
| Locust Ridge | Smithfield Hog Production | Harris | 168,960 | 58,000 | October 2016 | 4,733 |
| Valley View | Smithfield Hog Production | Greencastle | 295,680 | 125,000 | July 2017 | 10,200 |
| South Meadows | Smithfield Hog Production | Browning | 147,840 | 62,000 | October 2019 | 5,059 |
| Somerset | Smithfield Hog Production | Powersville | 359,040 | 144,000 | May 2020 | 11,750 |
| Homan | Smithfield Hog Production | King City | 192,000 | 73,000 | May 2020 | 5,957 |
| Whitetail | Smithfield Hog Production | Unionville | 190,080 | 76,000 | May 2021 | 6,201 |
| Green Hills | Smithfield Hog Production | Unionville | 190,080 | 76,000 | May 2021 | 6,201 |
| Hedgewood | Smithfield Hog Production | Princeton | 105,600 | 42,000 | May 2021 | 3,427 |
| **TOTAL** |  |  | **1,817,280** | **726,000** |  | **59,240** |

1. Greenhouse gas emissions from passenger vehicles driven for one year per EPA’s Greenhouse Gas Equivalency Calculator

Key Project Partners

* Smithfield Foods, Inc. – Formed joint venture with Roeslein Alternative Energy called Monarch Bio Energy to produce renewable natural gas (RNG) across Smithfield’s hog farms in Missouri
* Roeslein Alternative Energy – Developer
* TPG Rise – Joined Monarch Bio Energy joint venture in 2022
* Element Markets – partnered with Monarch Bio Energy as the RNG Marketer
* ANR Pipeline – constructed and operates the interconnect facility where RNG is injected into the natural gas pipeline
* Roeslein & Associates – EPC Contractor for all projects

Capital Investment

* $150 million spent to date

Job Creation

* 9 full time operating jobs / 20 full time Operations and Maintenance jobs
* 70 trade and craft construction jobs to date
* 80 trade and craft construction jobs to completion / over 300,000 man hours in Northern Rural Mo.

Major Milestones/Always Firsts

* First to invest over $50 MM for proof of concept without Federal or State aid
* First EPA Swine Registration
* First EPA “Cluster” Registration
* First Virtual Pipeline Registration
* First CARB Swine Pathway Registration
* Highest price ever received for a cellulosic D3 RIN
* Lowest CI (Carbon Intensity) Score for CARB ever achieved