Transforming the Future of Sustainable Energy & Agriculture
Dominion Energy Overview

- $69B market cap
- $102B assets
- ~20,000 employees
- 6.7M utility customers
- 18 states of operation

Electric
- 3.4M customers
- 10,200 electric transmission miles
- 84,800 electric distribution miles
- 29 GW total generation capacity
- 11 GW zero carbon generation

Gas
- 3.3M customers
- 15,900 gas transmission miles
- 92,900 gas distribution miles
- 1.1 Tcf gas storage
## Business updates

### 2018 Sustainability and Corporate Responsibility Report
- Most comprehensive report to date
- Substantial CO₂ and methane emissions reductions
- Strong results from diversity and veteran hiring initiatives
- $35M/126,000 employee hours to charitable and community causes

### Electric school buses initiative
- Replace 100% of ~13,000 diesel school buses in Virginia electric service territory by 2030
  - Equivalent emissions reduction as removing 65,000 cars
  - ‘Vehicle-to-grid’ technology allows buses to inject energy onto grid

### Renewable Natural Gas (RNG)
- Increasing investment to $500M over ten years (split 50/50 with Smithfield)
- Projected to reduce greenhouse gas emissions by the equivalent of removing 500,000 cars or planting 40 million new trees
**One of country’s most sustainable + innovative energy brands**

55% reduction in carbon emissions by 2030 (vs. 2005); 80% by 2050 (vs. 2005)

50% reduction in methane emissions by 2030 (vs. 2010)

### Zero-carbon generation

- Offshore wind: ~60%
- Solar: ~30%
- Nuclear relicensing: ~10%

### Sustainable natural gas

- Renewable enabling resource
- Reducing or eliminating gas venting during planned maintenance
- Replacing infrastructure throughout our GT&S system
- $500M JV in RNG

### Innovation, technology, resiliency

- $2B strategic undergrounding program
- Up to $3B grid transformation
- Enhanced Environmental Management System
- Electric school bus initiative

---

**Align Renewable Natural Gas**

55% reduction in carbon emissions by 2030 (vs. 2005); 80% by 2050 (vs. 2005)

50% reduction in methane emissions by 2030 (vs. 2010)
What is Renewable Natural Gas?

Renewable natural gas (RNG) is methane captured from hog and dairy farms, landfills, food waste and wastewater treatment facilities that is converted into clean, renewable energy to heat homes and power local businesses.

Benefits

- Greenhouse gas (GHG) reduction
- Improved waste management
- Around-the-clock renewable energy
- New revenue stream for family farmers
Turning Hog Manure into Clean, Renewable Energy

Capturing Methane from the Farm
Methane is captured from covered lagoons or digesters and then transported to a central conditioning facility.

Converting it to Renewable Natural Gas
The methane captured from multiple farms is processed and converted into renewable natural gas at a central conditioning facility.

Delivering RNG to Homes and Businesses
Once the RNG is processed to meet pipeline quality standards, it is put into existing pipelines to serve local homes and businesses.
Capturing Methane from Hog Farms

- Manure from hog barns is transferred by underground pipe to an adjacent covered lagoon, known as an anaerobic digester.
- Naturally occurring bacteria breaks down the manure over 6-12 months, generating organic fertilizer and methane.
- The methane generated from anaerobic digestion is pumped to a central conditioning facility.

Most projects consist of clusters of 15 – 20 farms
Converting Methane into Renewable Natural Gas

- The methane captured from multiple farms is transported to a central conditioning facility, where it is processed to meet pipeline quality standards.
- The RNG is then pumped into existing distribution pipelines to serve local homes and businesses.

RNG gas quality exceeds 99% CH\textsubscript{4} after processing.
Customers Want Renewable Energy, Now

State level goals:

- **Virginia** - 30% renewable electricity by 2030, 100% carbon-free electricity by 2050
- **North Carolina** - Reduce electric sector greenhouse gas emissions by 70% below 2005 levels by 2030, carbon neutrality by 2050
- **Utah** - Carbon neutrality between 2005 and 2020

Corporate highlights:

- **L’Oreal** - Purchased and developed Big Run Landfill in KY for purpose of sourcing RNG
- **Loves Travel Stops / Trillium CNG** - 100% CNG derived from RNG by 2040
- **Waste Management** - Achieved goal of capturing methane from 130 disposal sites in 2018
- **SoCal Gas** - Announced throughput goal of 5% RNG by 2022 and 20% by 2030

Renewable Energy Buyers Alliance

78 Companies 69M MWH Demand for Renewable Electricity $7.8T in Market Cap
Global Industry Leaders Form Largest RNG Partnership in History

$500 million
joint venture between
Dominion Energy and Smithfield Foods

- 18 RNG Projects covering 90% of the finishing capacity in North Carolina
- 5 additional projects coast to coast
- >$500 M in Capital
- 5.7 BCF of Renewable Natural Gas to market annually by 2028

*The Utah project is under consideration for Align RNG. It is currently underway as a Smithfield Foods project.
First Four Align Projects in North Carolina, Virginia and Utah

Milford, UT
Construction began in 2018
Operational 2019

Sampson and Duplin Counties, NC
Construction begins in mid-2019
Operational by mid-2020

Waverly, VA

---

Enough energy to power

14,000
homes and businesses

Emissions reduction equal to planting

7.8 million
new trees
Dramatic Greenhouse Gas Reduction

- Renewable natural gas is a carbon-negative fuel because it leads to a net reduction in GHG’s in the atmosphere.

- The methane captured from hog farms is 25 times more powerful as a GHG than the CO$_2$ generated when burning natural gas.
Around-the-Clock Renewable Energy

Renewable natural gas generates energy 24/7, 365 days a year and can be used on demand to meet the real-time needs of homes, businesses and utilities.

- RNG generates reliable power 24/7, 365 days a year
- Solar generates reliable power 25% of the time
- Wind generates reliable power 35% of the time
New Revenue Stream for Family Farmers

- Waste management is a significant cost for family farmers.
- RNG allows farmers to turn a major cost driver into a new revenue stream.
- Farmers can invest in building the infrastructure on their farms and then share long-term revenues.
Learn more about Align RNG:
www.alignrng.com

Kraig Westerbeek
Vice President & Co-COO
Align RNG, LLC
kwesterbeek@smithfield.com

Ryan Childress
Vice President, Business Development
Align RNG, LLC
ryan.w.childress@dominionenergy.com