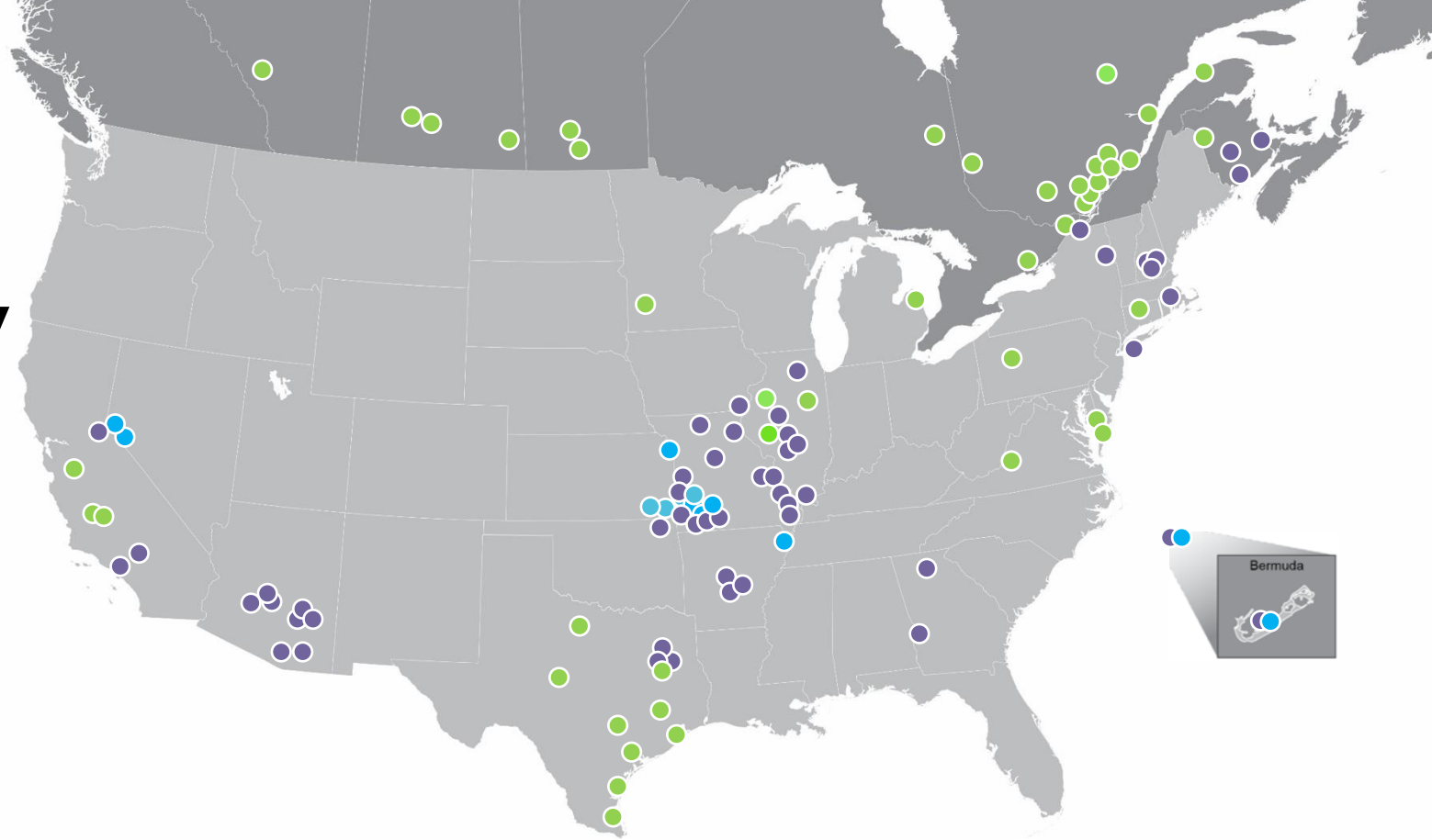
Liberty Utilities

Liberty™

Liberty, part of a diversified international energy company

Liberty's parent company, Algonquin Power & Utilities Corp., is a diversified international generation, transmission and distribution company with more than US $17 billion in total assets.



Regulated Services Group

Provides regulated wastewater, water, natural gas and electric utility services to over 1 million customer connections through operations in primarily North America, Bermuda, and Chile.

Renewable Energy Group

Owns, operates, and has interests in a portfolio of North American renewable and clean energy power generating facilities representing over 4 GW of installed renewable energy capacity[1].

Legend

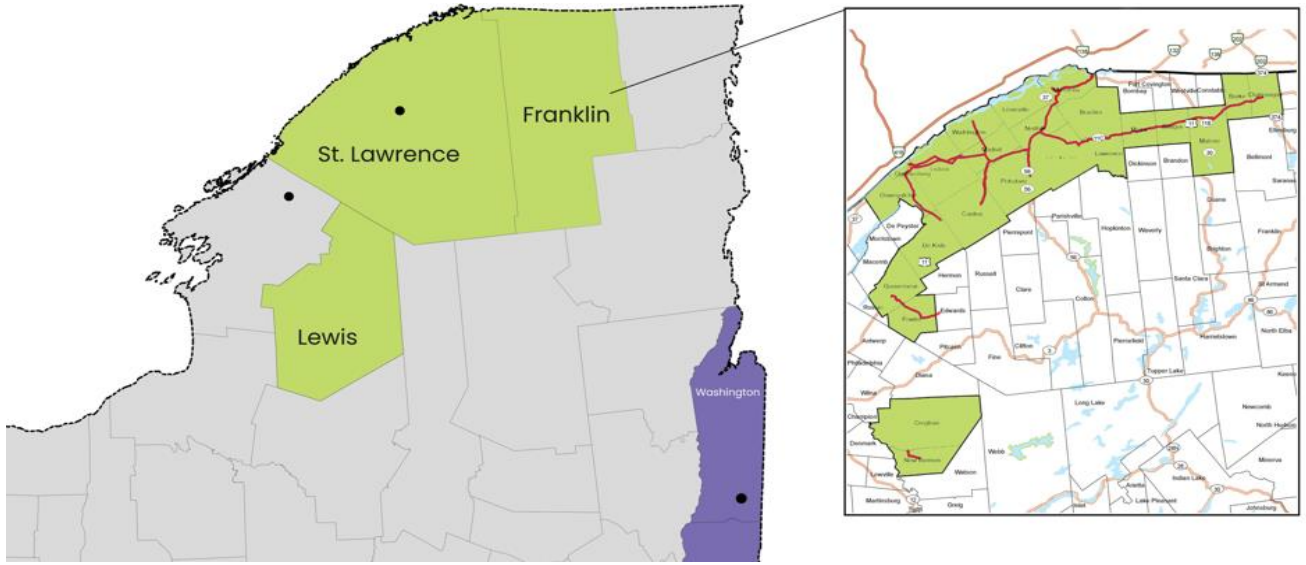
- Renewable Energy – Operational power generation site
- Regulated Services – Utility distribution system
- Regulated Services – Rate-based power generation

1. Includes renewable generating capacity in both the Regulated Services Group and Renewable Energy Group as well as a proportionate amount of the renewable energy generating capacity of Atlantica Sustainable Infrastructure plc (based on AQN's ~43% ownership interest in Atlantica Sustainable Infrastructure plc).

AQN | Liberty

Liberty St. Lawrence Gas System Characteristics

- **646 Miles of main and distribution pipe**
  - Expanded into Franklin County in 2015, an additional 90 miles of main and distribution pipe
- **Delivers 2800 MSCFH at peak load**
  - Gas supply:
    - TCPL and Iroquois pipelines
    - 2 active renewable natural gas(RNG) digesters
    - 3 Additional RNG projects anticipated to be active in 2024
- **Customer Composition: 90% residential**
  - 15% classified as low-income
  - Almost entire service territory designated a DAC under New York's Climate Act

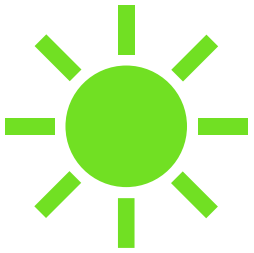


North Country Electrification Challenges

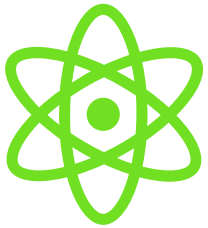
- Economic Challenges (15% of customers classified as low income).
- Cost of conversion can average as much as $20-30K per household
- 37% Colder than the State average
- Frigid temperatures -15° F or lower often occur Nov-March
- Adds peaking load to the electric grid(s) that is often supplied by more expensive fossil fuel based power and may actually increase the gird carbon footprint

Alternatives to Decarbonize Thermal Load

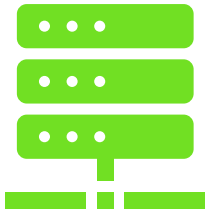
Serving the North Country



Renewable Natural Gas



Hydrogen



Utility Thermal Networks (UTEN's)

RNG Sources

There are four sources of RNG that may be accepted into the Company's system:

1. Landfill
2. Dairy, Swine
3. Waste Water Treatment Plant ("WWTP")
4. Food Waste
5. Any Combination of Above

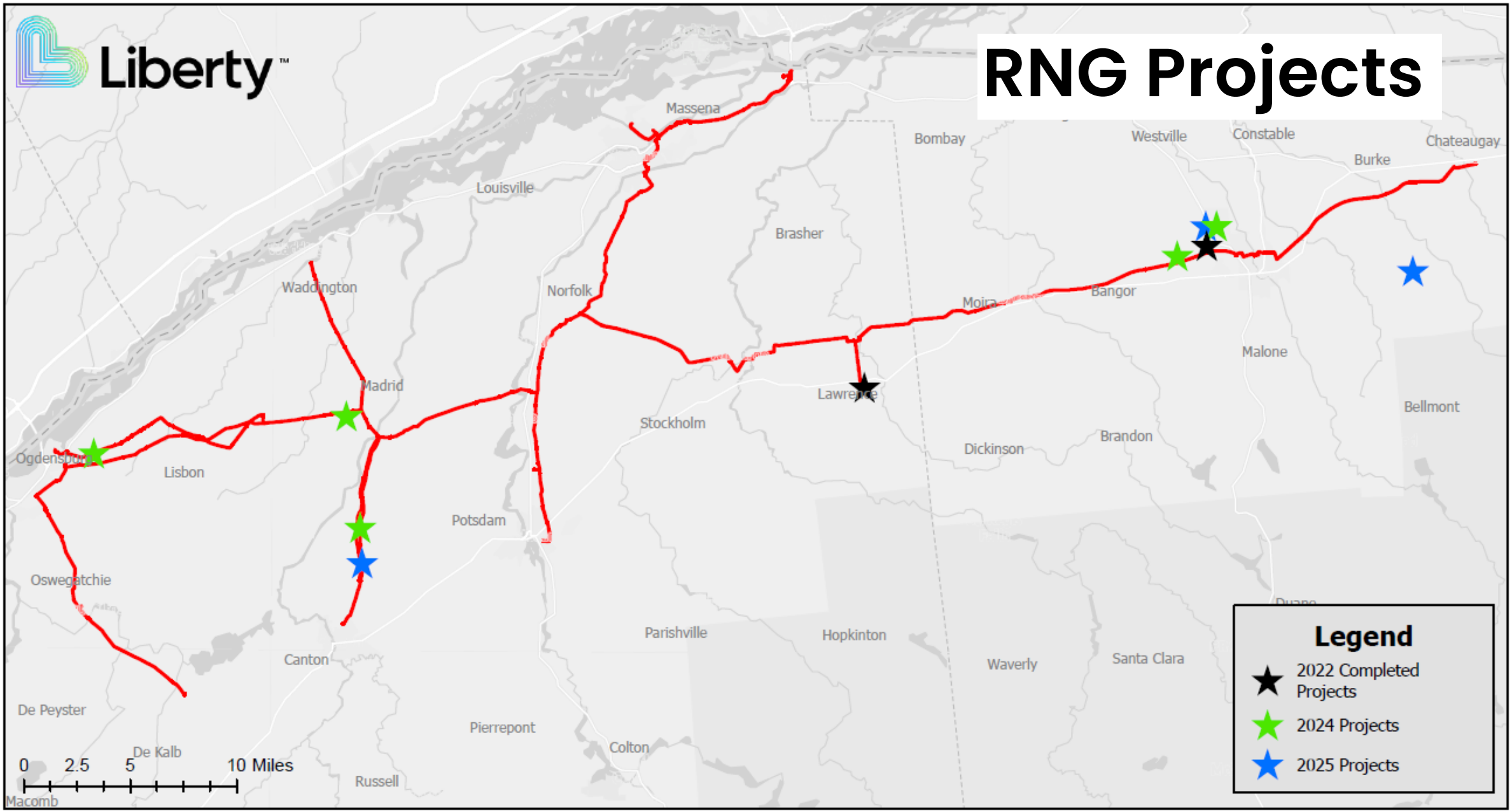
Current focus is on Dairy Feed Stocks

- **Interconnect Agreements are specific regarding feedstock sources**

Renewable Natural Gas RNG

A Focus On RNG From The Dairy Industry

- 2,500 Local Farms (168,000 Head)
- 2 Active Digester Projects injecting RNG into Liberty's system (750 DTH/Day)
- 3-4 Projects in 2024 (1,750 DTH/Day)
- Total System Injection (2,500 DTH/Day)
- RNG will represent 30% of our non-heating load in2024


Liberty™
RNG Projects
Massena
Bombay
Westville
Constable
Chateaugay
Burke
Louisville
Brasher
Waddington
Norfolk
Moira
Bangor
Malone
Madrid
Lawrence
Stockholm
Bellmont
Ogdensburg
Lisbon
Dickinson
Brandon
Potsdam
Oswegatchie
Parishville
Hopkinton
Waverly
Santa Clara
Canton
De Peyster
Pierrepont
Colton
De Kalb
Russell
Macomb
0 2.5 5 10 Miles
Legend
2022 Completed Projects
2024 Projects
2025 Projects

RNG Interconnect Strategy

- Liberty uses the **Northeast Gas Association and Gas Technology Institute's Interconnect Guide for Renewable Natural Gas (RNG)** in New York State as a guidance document for its procedures applicable to RNG.
- **Interconnect Agreements (IA's)** are governed by Liberty's Gas Transportation Operating Procedures Manual.
- Each IA is project-specific but will have many of the same conditions creating a streamlined process when getting the RNG from similar sources (I.e. dairy farms)
- All of the Company's IA's include supply purchase agreements for the bio-gas at a discounted rate based on pricing at the Dawn hub.

RNG Interconnect Strategy (Cont.)

Renewable Natural Gas - Pre-Interconnection Testing

(1)Prior to the delivery of RNG to the Company, the RNG Operator shall conduct two tests over a two to four week period for the constituents identified in Exhibit B of the RNG-IA for the applicable RNG source.

(2)Pre-interconnection testing shall be performed by the RNG Operator using Company-approved independent certified third-party laboratories qualified to perform testing in accordance with the following methods: EPA Method 29, EPA 200.8, EPA Method 8270,TO-15, TO-11A, as well as those identified in Exhibit B of the RNG-IA, as applicable. The Company shall be notified of the RNG sampling and tests and have the option to observe the samples being taken. Test results will be shared with the Company within five calendar days of the test results being received by the RNG Operator.

Questions?

Thank You!!!