

Advance Leak Detection and Emission Measurement Enablement at Southern Company Gas.

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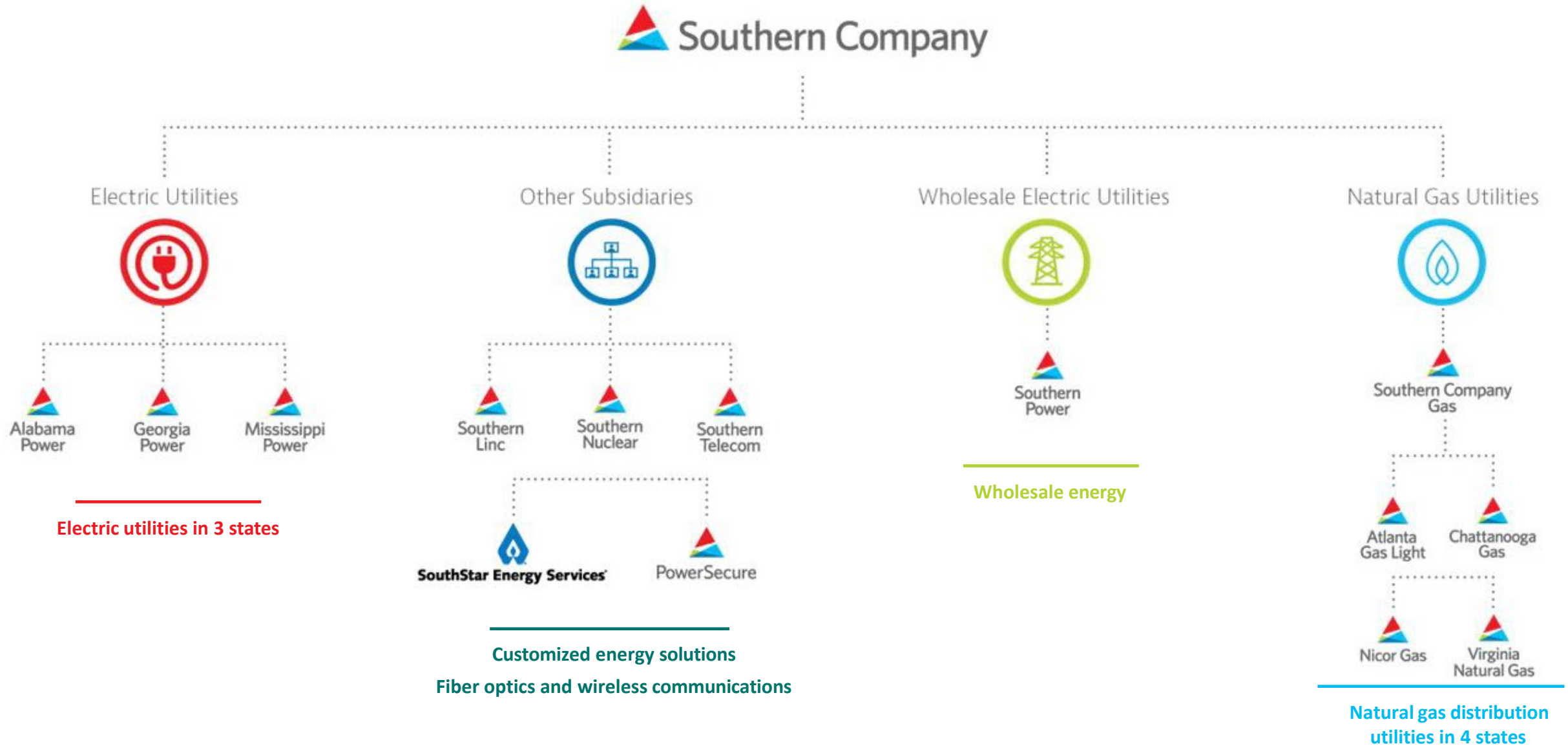
Agenda

- 1 Who are we?
- 2 What is our charge?
- 3 Implementing Advanced Leak Detection
- 4 Success Stories
- 5 What have we learned?

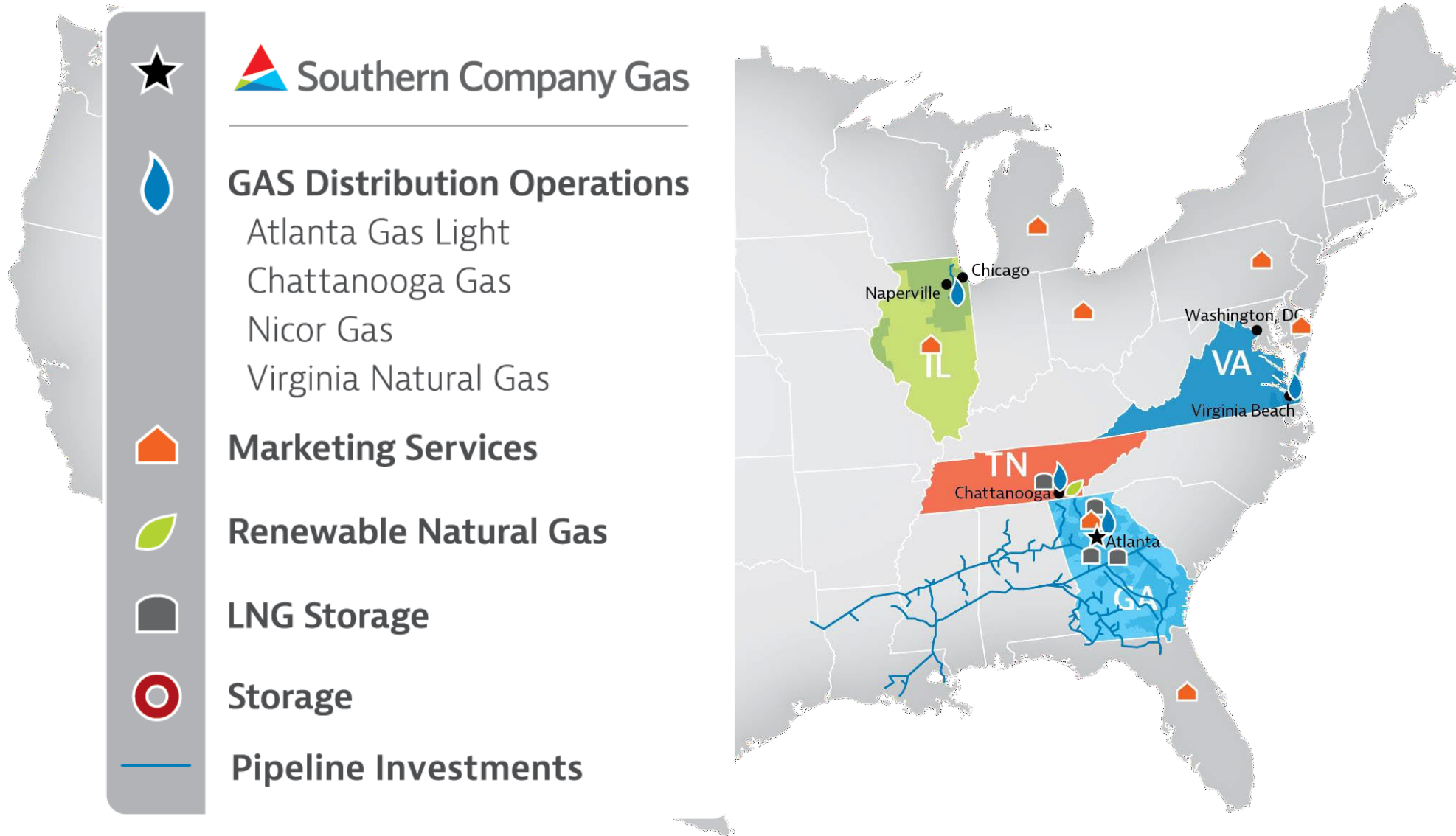
Who are we?



Overview



Footprint



 Southern Company Gas



GAS Distribution Operations

Atlanta Gas Light
Chattanooga Gas
Nicor Gas
Virginia Natural Gas



Marketing Services



Renewable Natural Gas



LNG Storage



Storage



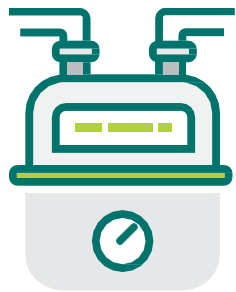
Pipeline Investments

What is our charge?



Mission

Southern Company Gas is fully committed to net zero direct GHG emissions from its **operations** by 2050. We also are committed to supporting emissions reductions **across the natural gas value chain – with suppliers, peers and customers.**



INFRASTRUCTURE
MODERNIZATION



CNG and NGVs



NEXTGENGAS SUPPLY
and RENEWABLE FUELS



EMPOWERING
CUSTOMER
SUSTAINABILITY



METHANE EMISSIONS
REDUCTIONS ACROSS
OPERATIONS



R&D INVESTMENT

Next Generation – Natural Gas is Foundational

Southern Company Gas is committed to lowering methane emissions through sustainable procurement, industry collaboration and market leadership:

- **Collaborating to advance** industry transparency and emissions reductions
- **Pursuing our ambitions** to procure and deliver low-emissions energy for our customers
- **Communicating** to signal our low-carbon ambitions and encourage environmental progress among our upstream suppliers

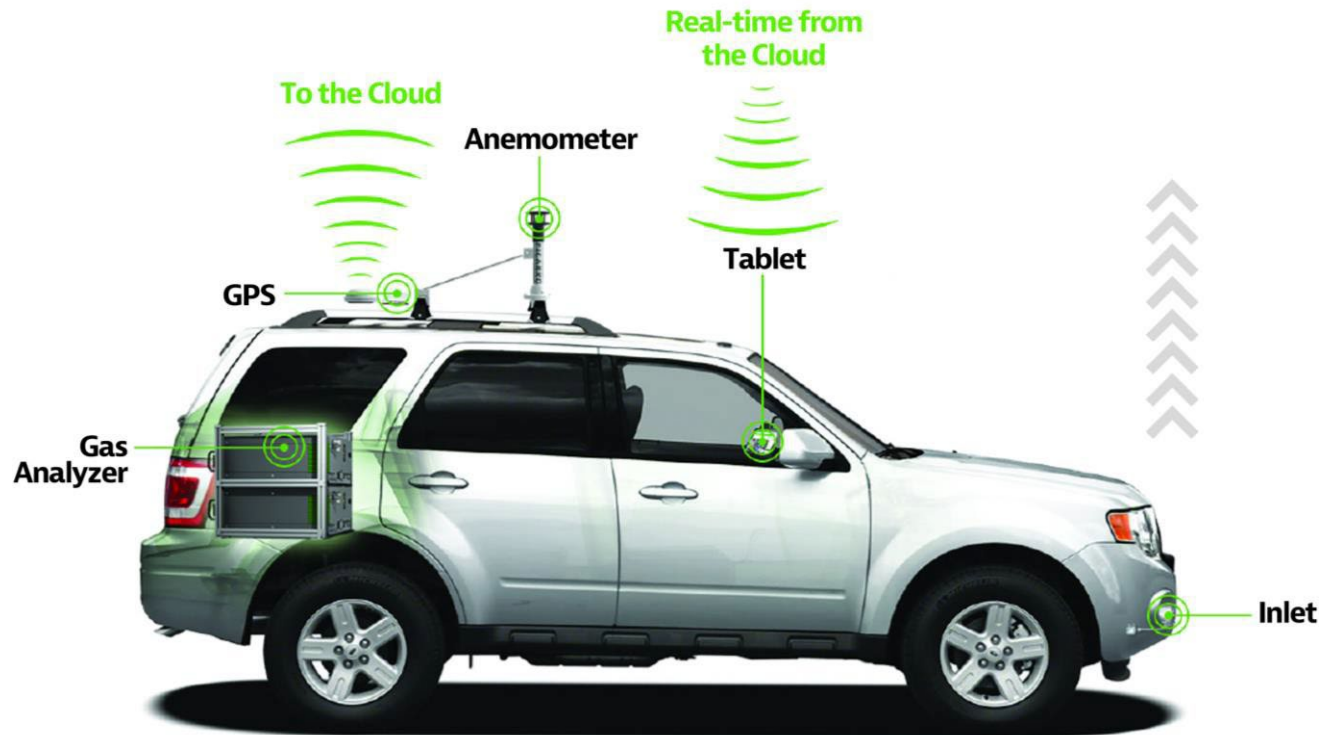
Southern Company Gas was 1 of 8 founding members of **One Future**



Implementing Advanced Leak Detection (ALD)

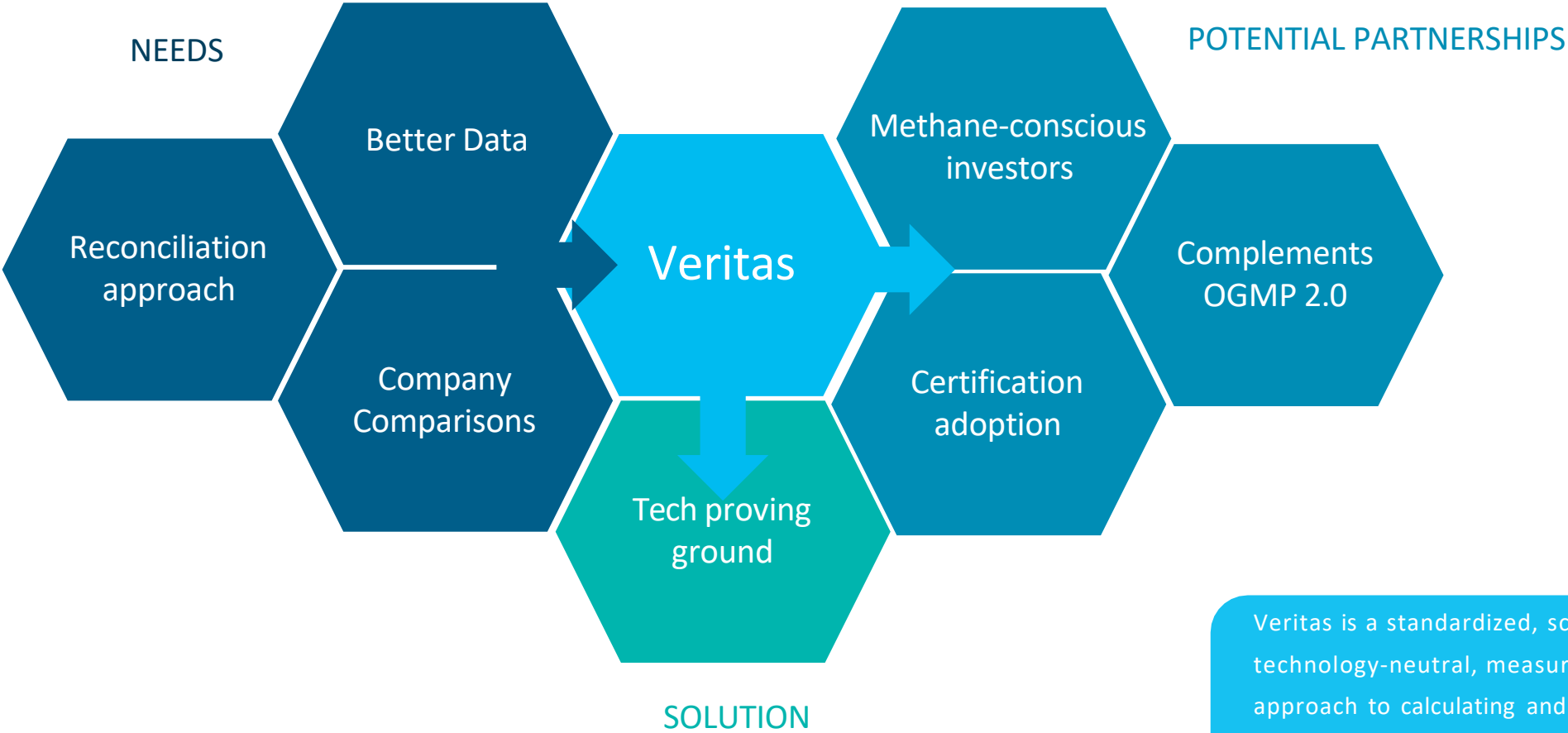


Mobile Methane Detection



Planned: UAVs (Drones), Satellite, Stationary Monitors and AI enabled Cloud Computing Platform

The Future – Transforming Our Gas Utilities & The Veritas Initiative



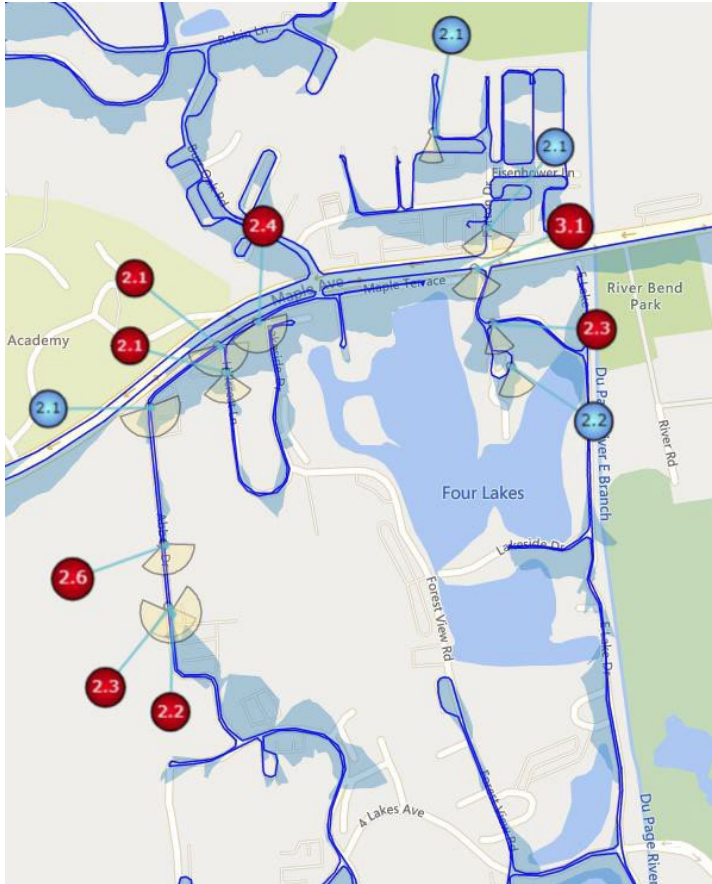
Veritas is a standardized, science-based, technology-neutral, measurement-informed approach to calculating and reporting methane emissions

Success Stories

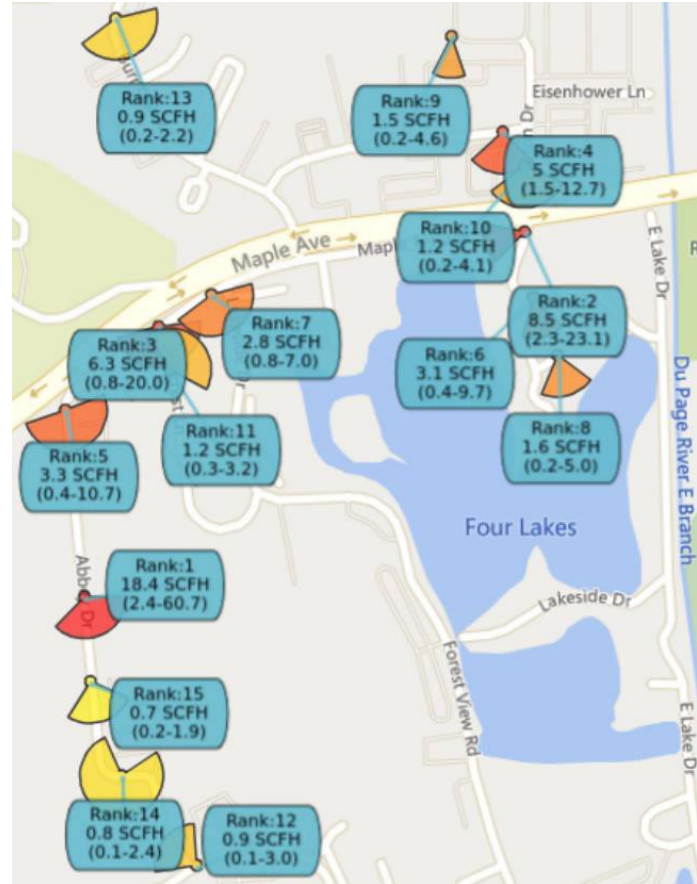


Data Analytics for Over Pressurization Special Survey

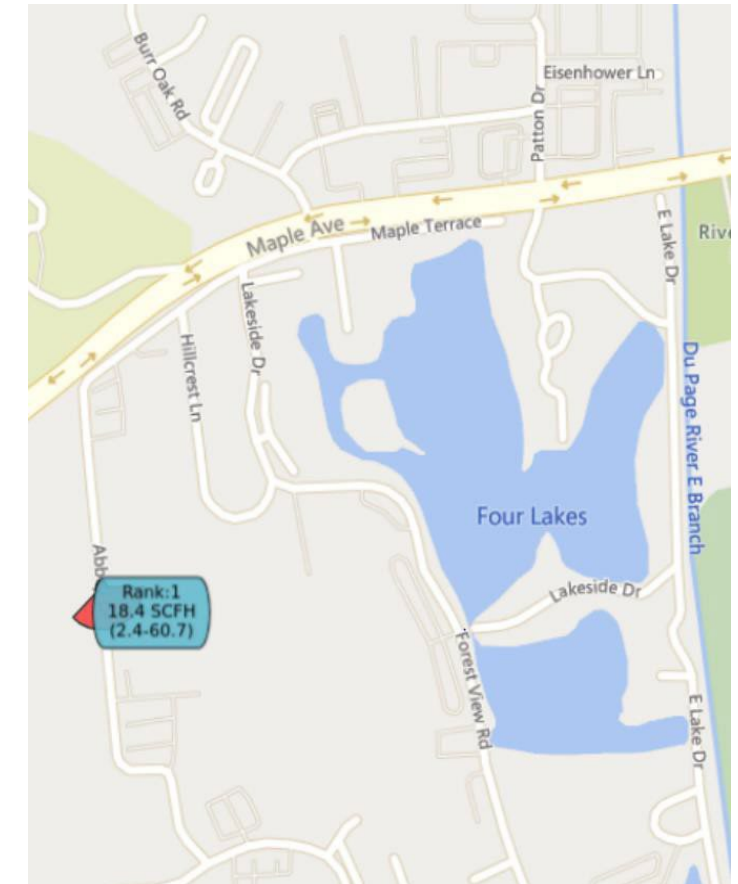
Compliance Survey



Emissions Quantification



High Flow Survey



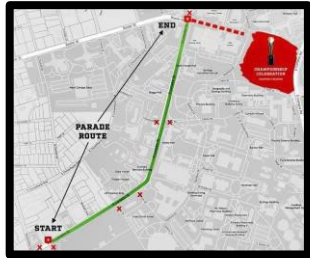
Flow Rate (SCFH)	Total Annual (CF)	Total Annual (MCF)	Total Annual CO2e (Metric Tons)
18.40	161,184	161.18	8.8
56.20	492,312	492.31	27

Repairing this highest emitting leaks reduced this grid's emissions by 33%.

Additional Success Stories



- **Georgia Tech Leak Investigation** – Contract leak survey driver called in a leak during his evening drive due to the strong smell of gas in the air. Field Operations responded and confirmed a Grade 1.
-



- **University of GA (UGA) Parade Route** - Strategic use of mobile ALD technology in advance of large public gatherings, to proactively identify and repair leaks.
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- **Virginia Natural Gas Post Incident Assessment** - “This leak detection method is more efficient and sensitive than traditional processes and allows emissions data to be collected at a speed and scale not previously possible, which is highly useful for areas affected by severe weather,” said Rus Hayslett, vice president of Operations at Virginia Natural Gas.

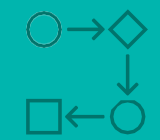
What have we learned?



Lessons Learned from Mobile ALD Program Rollout



Work out the application interfaces before you start driving



Integrate the drive with your LISA and Meterset AC inspections processes



Participate actively in the data quality verification process throughout the pilot



Involve yourself in the development of the dashboards



Communicate realistic timelines for assessing your network via mobile ALD



Prepare your teams for potential changes in the AG/BG active leak counts

Questions?





Southern Company
Gas