



PROJECT
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Certified, Low Methane Natural Gas

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PROJECTCANARY.COM

Confidential

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Decarbonization Begins With Empirical Data.

You can't get to net-zero using estimates, emissions factors and self-attestations.

Leverage independent, verified environmental performance data to measure and certify the “E” in ESG.

Preventable Leaks Occur in the Gas Supply Chain, with Wide Variability Between Operators, Basins, and LDCs.

Methane is **82.5X** more potent than CO2

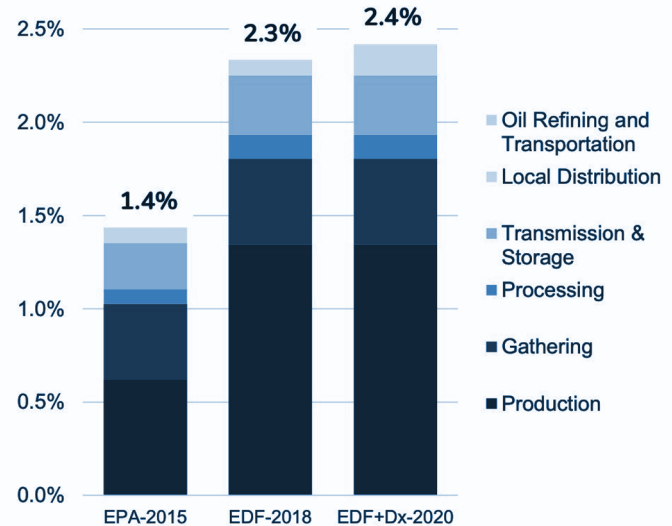
Methane leaks are **preventable**

Most methane leaks are **intermittent**

The biggest impact starts with **gas production**

The **technology** now exists to **measure and manage** methane emissions across the full supply chain

Methane leakage rate
(as % of gross annual production)



The Current EPA Reported Average of 0.454% Significantly Underestimates the Real Methane Leak Rate Across the U.S.

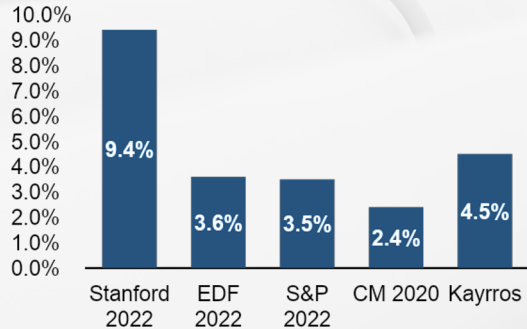
Measured leak rate for typical gas

4.8%

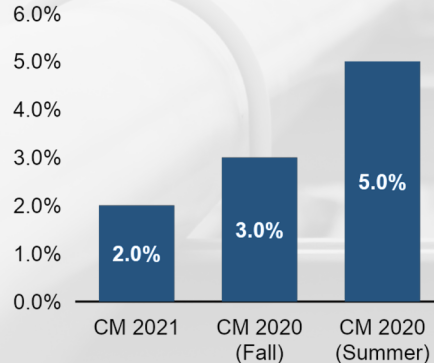
Certified low methane gas with continuous monitoring

0.2%

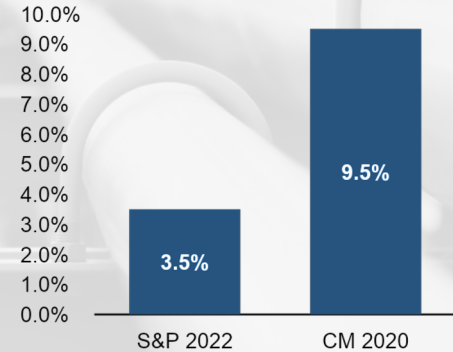
Permian - 4.7%



San Joaquin - 3.3%



Utica - 6.5%



ESG IS BEING OPERATIONALIZED

The Natural Gas Industry is Under Tremendous Pressure to Disclose and Prove Emissions Reductions.

Investors

- Sustainability-linked lending
- Differentiate vs. divest
- Insurance risk
- Environmental disclosures

Regulators

- International - COP 26
- Federal - EPA, FERC, SEC, FASB
- State agencies & PSCs/PUCs

Operators

- ESG branding
- Access to capital
- Operational excellence
- Talent acquisition & retention



ENERGY
UPSTREAM, MIDSTREAM,
DOWNSTREAM

End Consumers

- LNG (Europe & Asia)
- Utilities (IOUs, munis, co-ops)
- Environmental non-profits

Certified Low Methane Gas aka Responsibly Sourced Gas (RSG) Helps Stop Methane Leaks.

- RSG undergoes independent, **3rd-Party assessments** or scoring of environmental best practices by producers
- Buyers use **Purchasing Power** to reduce methane emissions and other environmental impacts of natural gas production
- **Certified Low Methane Intensity:** Top Tier RSG uses continuous monitoring to measure and verify true methane intensities **below 0.20%** at each well vs. industry average
- Other Environmental Attributes: **Low Water Usage**, safety, seismic, land, community impacts included
- **Larger Volumes Available Now:** 20% of US gas market will be certified by end of 2022



The Carbon Abatement is Significant When Procuring RSG Rather than Typical Natural Gas.

Realistic U.S National Average		Typical Upstream Producer		PROJECT CANARY	
MMBtu procured methane	268,000,000	MMBtu procured methane	268,000,000	MMBtu procured methane	268,000,000
MMBtu per mcf	1.04	MMBtu per mcf	1.04	MMBtu per mcf	1.04
mcf procured	258,437,801	mcf procured	258,437,801	mcf procured	258,437,801
kg per mcf of methane	18.86	kg per mcf of methane	18.86	kg per mcf of methane	18.86
kg of methane	4,873,878,496	kg of methane	4,873,878,496	kg of methane	4,873,878,496
Methane Intensity ⁽¹⁾	4.68%	Methane Intensity ⁽¹⁾	0.45%	Methane Intensity ⁽²⁾	0.20%
kg methane emitted	228,097,514	kg methane emitted	22,127,408	kg methane emitted	9,747,757
MT methane emitted	228,098	MT methane emitted	22,127	MT methane emitted	9,748
Methane GWP (20 year) ⁽³⁾	82.5	Methane GWP (20 year) ⁽³⁾	82.5	Methane GWP (20 year) ⁽³⁾	82.5
MT of CO2e emitted	18,818,045	MT of CO2e emitted	1,825,511	MT of CO2e emitted	804,190
EU ETS Price	79.56	EU ETS Price	79.56	EU ETS Price	79.56
Buyer Benefit of RSG	\$1,497,163,650	Buyer Benefit of RSG	\$145,237,670	Buyer Benefit of RSG	\$63,981,352

CO₂e Abatement Equivalents



270,000
Gasoline-powered cars for one year



3
Natural gas-fired power plants in one year



3mm
Barrels of oil consumed

1.02mm tCO₂e is the carbon abatement for one major east coast utility if sourcing RSG opposed to typical (dirty) natural gas.

Sources: EPA, Wood and Mackenzie. 1. Stated EPA methane intensity of natural gas. Expresses methane emission per unit of gross gas production; the 0.454% figure includes only production operations and implicitly attributes all methane emissions from natural gas wells to natural gas production. 2. TrustWell[®] cutoff for certified gas methane intensity that a best-in-class operator can achieve. 3. The Intergovernmental Panel on Climate Change (IPCC) has indicated a GWP for methane of 82.5 when considering impact over a 20-year timeframe.

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NASCENT MARKET

The First RSG Purchase Was Four Years Ago.

Now: LNG Exports With Project Canary® Certification

2018

*“..Southwestern Energy Co. publicly announced that it struck a deal to sell TrustWell® rated gas to utility **New Jersey Natural Gas (NJNG)** from a group of wells in West Virginia for a premium to local Appalachian index prices.”*

2022

*Southwestern said the **Uniper** affiliate would utilize the **Responsibly Sourced Gas (certified by Project Canary)** for **domestic distribution** to downstream customers. The supply would also go to U.S. liquefied natural gas (LNG) terminals for **export to global LNG markets**.*

*“We believe **natural gas is foundational to a low carbon future**, and that U.S. natural gas, in particular, plays a vital role in supporting **global energy supply and security**.” -
Southwestern Energy CEO Bill Way*

More Buyers Stepping Forward to Pay Premium for ‘Responsibly’ Produced Natural Gas



BY JAMISON COCKLIN

April 8, 2019

Share on:

Texas-based Independent Energy Standards Corp. (IES) recently reached a milestone by certifying its first independently certified natural gas production system that meets the IES standards for low-carbon natural gas prices.

Southwestern Energy, Uniper Clinch Agreement for Certified Natural Gas Supply, LNG Exports

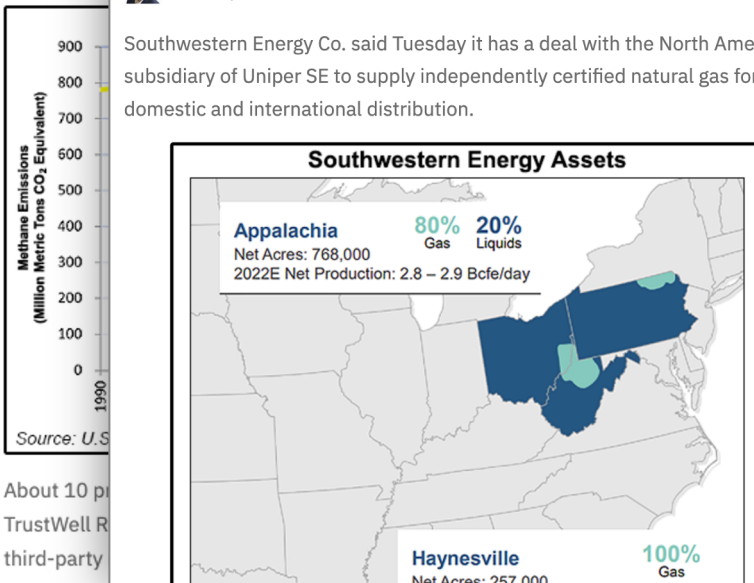


BY JAMISON COCKLIN

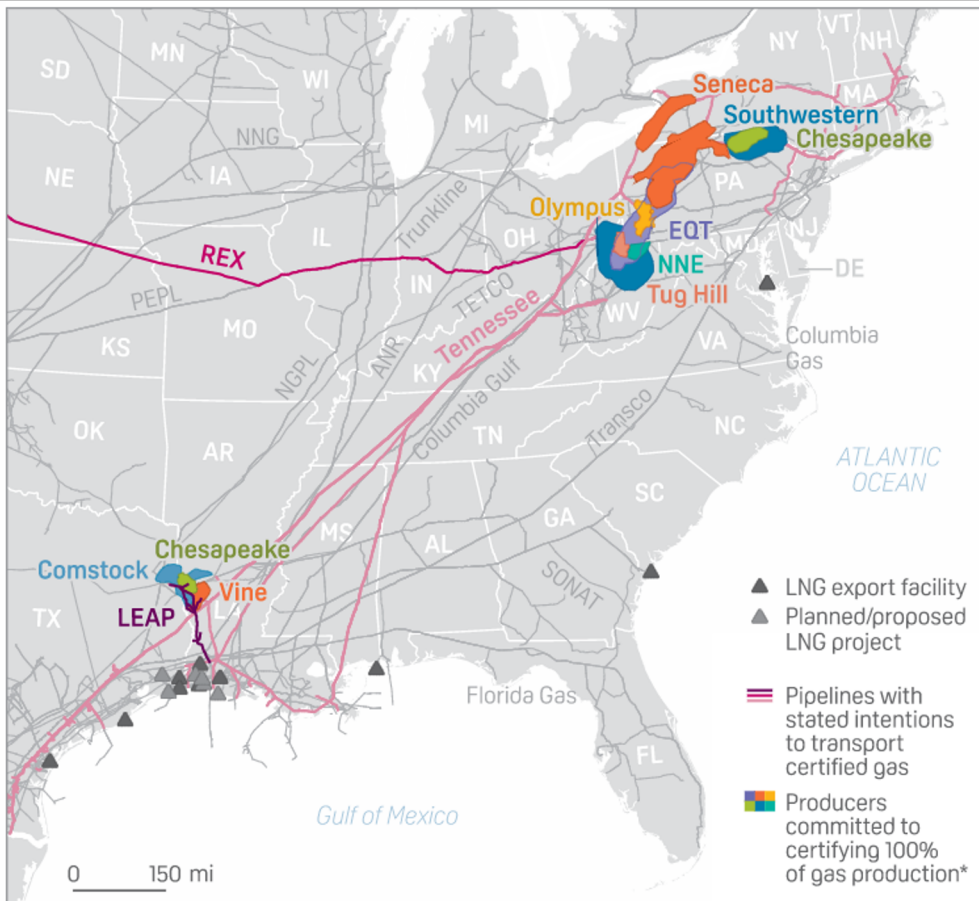
June 14, 2022

Share on:

Southwestern Energy Co. said Tuesday it has a deal with the North American subsidiary of Uniper SE to supply independently certified natural gas for domestic and international distribution.



About 10 percent of the TrustWell RSG is sold to third-party buyers as an attempt to show buyers that the commodity is produced in the most environmentally responsible way possible.



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Certified Gas Gains Momentum

“Methane emissions have emerged as a key performance metric for certified gas, with an emphasis on monitoring and measurement.” S&P Global, October 14, 2021

“Record volumes of gas certified for its environmental credentials have come to the market after nearly two dozen U.S. gas producers committed to external assessment of their emissions and ESG criteria last year.” S&P Global, January 14, 2022

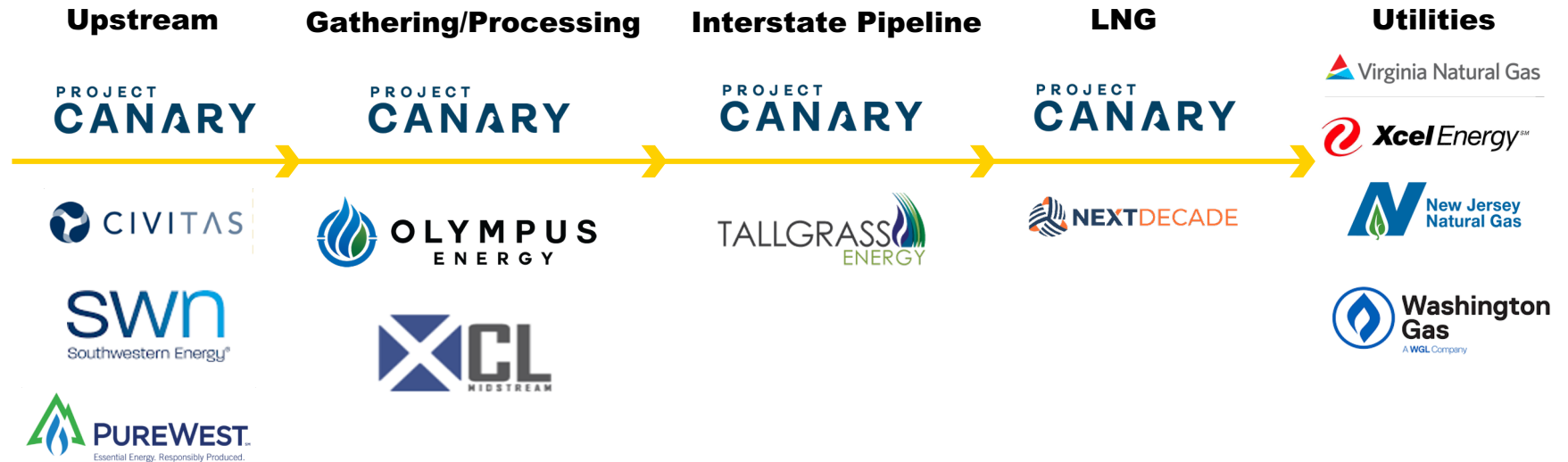
*Not shown: Crestone Peak Resources in Colorado committed to certifying 100% of gas production; total volume undisclosed.
Data as of December 14, 2021
Source: S&P Global Platts Analytics, company websites

Monitoring Operators' Emissions Across Major North American Oil & Gas Basins



Developing the Market for Independently Certified Energy Commodities

Value Chain



Utilities Are Prioritizing RSG To Achieve ESG Targets

Case Study: PureWest & Xcel Energy



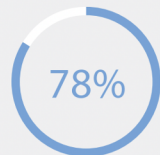
- Largest gas producer in WY, 675 MMcfe/day across 3400 wells
- **85% lower methane** footprint than US average
- Commitment to monitor 937 wells on 69 pads by YE22. Working toward **RSG certification of 100% of production**
- 1st Rockies producer to pursue Freshwater Friendly Verified Attribute by TrustWell®



- Net zero by 2050 - 1st major energy provider to announce comprehensive, aggressive GHG reduction goals (gas and electricity)
- Public commitment to **procuring 100% RSG by 2030** for gas distribution and power production
- Cost to customers is pennies per month for hundreds of thousands of tons of CO2e avoidance annually



51% of total production certified to date by Project Canary TrustWell



78% of certified gas achieved Platinum (highest) rating



CLIMATE
LEADERSHIP
AWARDS 2020

Organizational Leadership Award Winner

Platinum-Standard: Environmental Assessments, Continuous Monitoring & Quantification.

Environmental Assessment Air, Land, Water and Community (TrustWell® by Project Canary)

- Robust review of environmental risks and risk-mitigation efforts
- Site visits and interviews for every asset assessed
- Certification: Platinum, Gold, and Silver



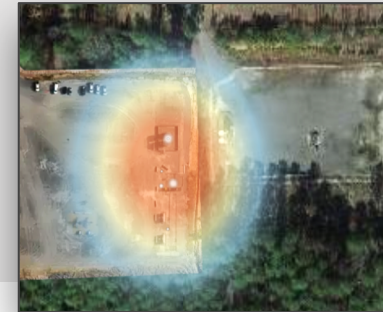
Continuous Monitoring Technology & Web-Based Dashboard

- Canary X – 24/7 real-time monitoring technology using high-fidelity methane detection
- Web-based dashboard with ML-based smart alerts



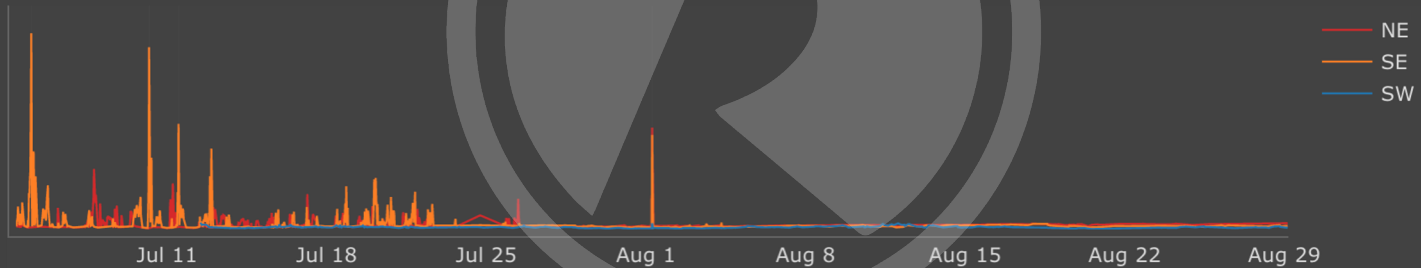
Quantification of Emissions Intensity

- ML-based regression and plume models used to localize and quantify total site emissions
- Hourly mass-value emissions profile by equipment



ACTIONABLE EMISSION REDUCTION WITH FACILITY-LEVEL CONTINUOUS MONITORING.

Quantifiable methane data unlocks targeted intervention



Emissions Detected

Project Canary identifies thief hatch emissions

Operational Improvements

Company performs retrofits

Proven Emission Reductions

Data proves emission reduction after retrofit

Benefits of Buying Certified Low Methane or Responsibly Sourced Gas.

Certified or Responsibly Sourced Gas (RSG) is geologic natural gas with low methane (GHG) emissions and ESG profiles with immediate, low cost, positive impacts.

Buying certified gas reduces methane emissions by 50%+

Certified gas drives O&G industry to improve and reduce leaks now

Reduced GHG achieved at very low cost - pennies per customer / month

Water and other environmental impacts also measured and reduced

Allows buyer to choose differentiated product with lower climate impact

Simple, low cost implementation - standard gas procurement contracts

Know and reduce the emission footprint of your gas supply chain.





Thank You.

Project Canary - as a **certified public benefit corporation** - is working to drive a transparent approach to RSG assessments that enables public proof of performance and progress over time.