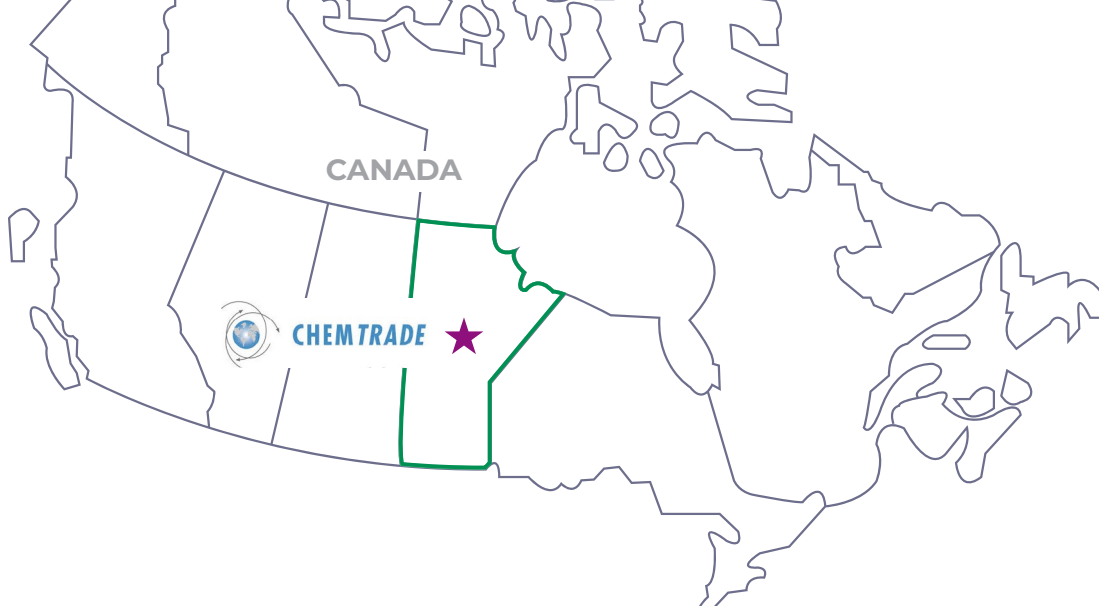


Teralta and partners launch Canada's largest e-NG project for export to Japan

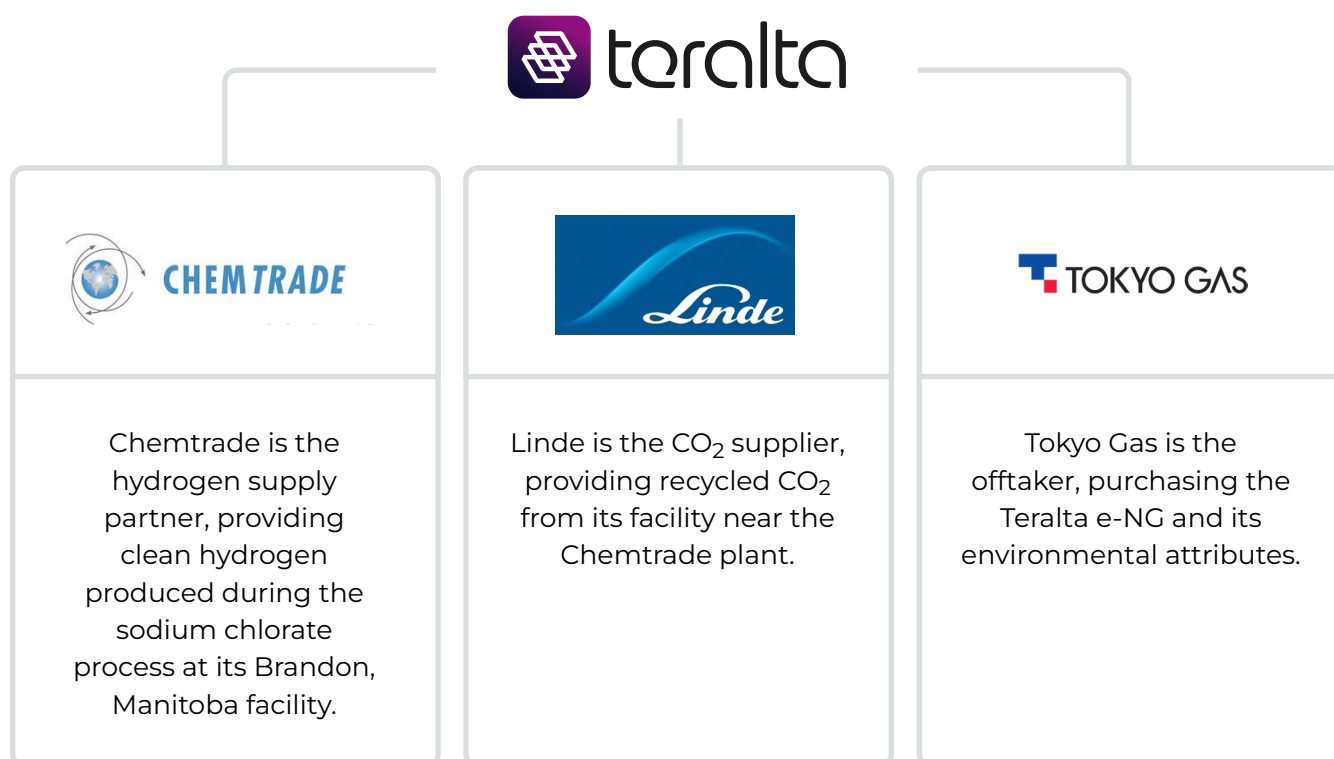
Learn how we worked with industry leaders to
produce e-NG using clean hydrogen and recycled CO₂





The Teralta e-NG project in Brandon, Manitoba, is Canada's largest e-NG initiative to date and the first in the world to export e-NG to Japan. It is the result of [strong partnerships](#) Teralta established with Chemtrade, Linde, and Tokyo Gas.

Working together, the partners combine clean hydrogen and recycled CO₂ via a methanation process to produce e-NG. Post-production, the e-NG, and its environmental attributes, are sold to an offtaker.



In this case study, we explore how the Brandon e-NG project began, how Teralta—as the project sponsor—successfully negotiated partnerships with industry leaders, as well as the infrastructure, engineering, regulatory, and other requirements underway to bring the project to market.

Teralta & Chemtrade Partnership

Teralta and Chemtrade began working together in 2021 to identify opportunities to leverage Chemtrade's hydrogen across multiple sites.

In 2024, early-stage qualification work for an e-NG project on the Brandon site was complete. Teralta and Chemtrade signed a term sheet, and negotiations continued through to a definitive agreement for the project.



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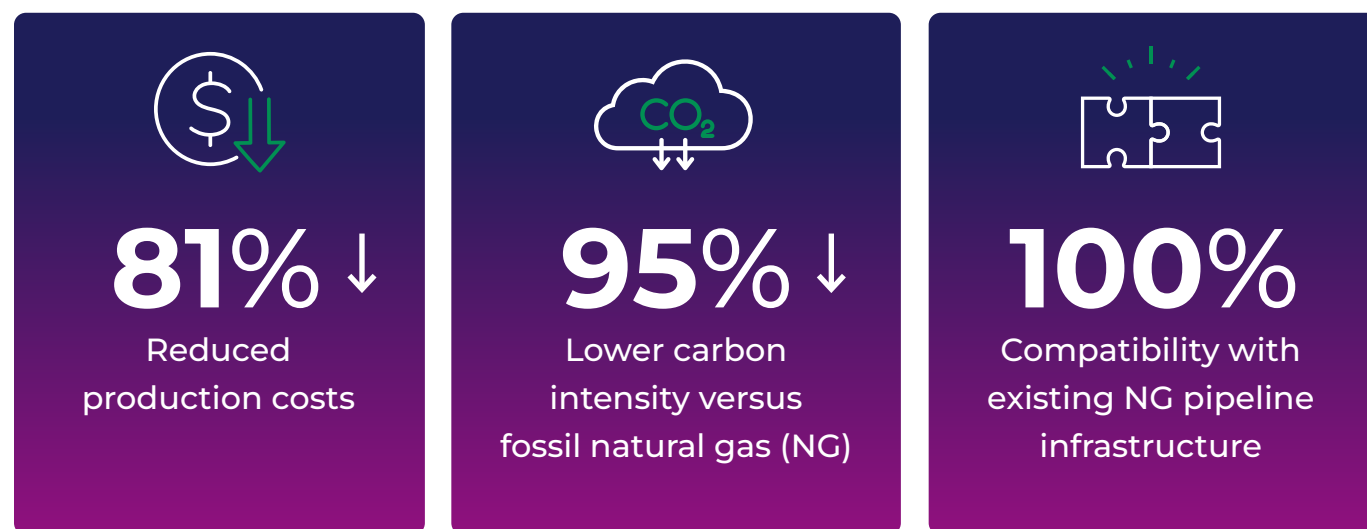
Teralta e-NG

Teralta e-NG is a synthetic natural gas made from clean hydrogen and recycled CO₂. The methodology is proprietary and leverages the [Sabatier methanation process](#), using elevated temperatures to generate e-NG.

Readily available clean hydrogen

Typically, e-NG requires new renewable energy infrastructure to produce green hydrogen. For the Brandon project, Teralta uses clean hydrogen generated during the Chemtrade sodium chlorate manufacturing process.

With no dependence on new infrastructure for renewable energy, project costs and timelines are reduced considerably, allowing Teralta to produce and deliver electric natural gas to market in record time. Teralta e-NG is 95% lower in carbon intensity than fossil natural gas.



Backwards compatible

Since Teralta e-NG is chemically indistinguishable from fossil natural gas, it easily drops into existing natural gas pipelines, tankers, and port-side terminals with no investment required to construct dedicated infrastructure.

Zero capital risk

Teralta e-NG delivers a unique business model to our partners. All capital costs, including hydrogen and CO₂ capture, engineering, methanation, and distribution, are covered by Teralta.

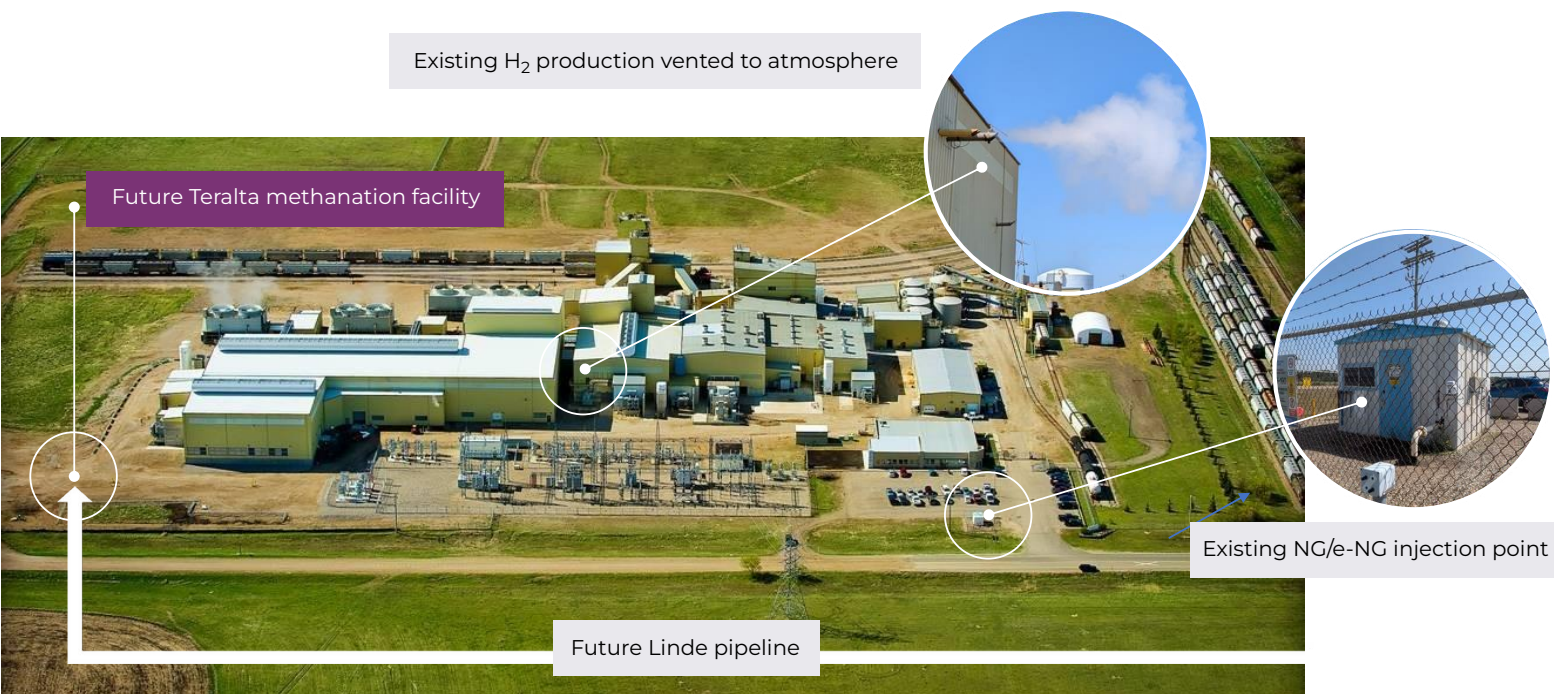
Brandon Project Infrastructure

Teralta projects are designed to be as efficient as possible, supporting our mission to produce clean energy at cost parity with (or better than) fossil fuels.

Project criteria require that all components of Teralta e-NG (H_2 and CO_2 , methanation site, and transport) be within close proximity to each other, reducing the need for new infrastructure, minimizing environmental impacts, and expediting the delivery of e-NG to market.

Chemtrade Site

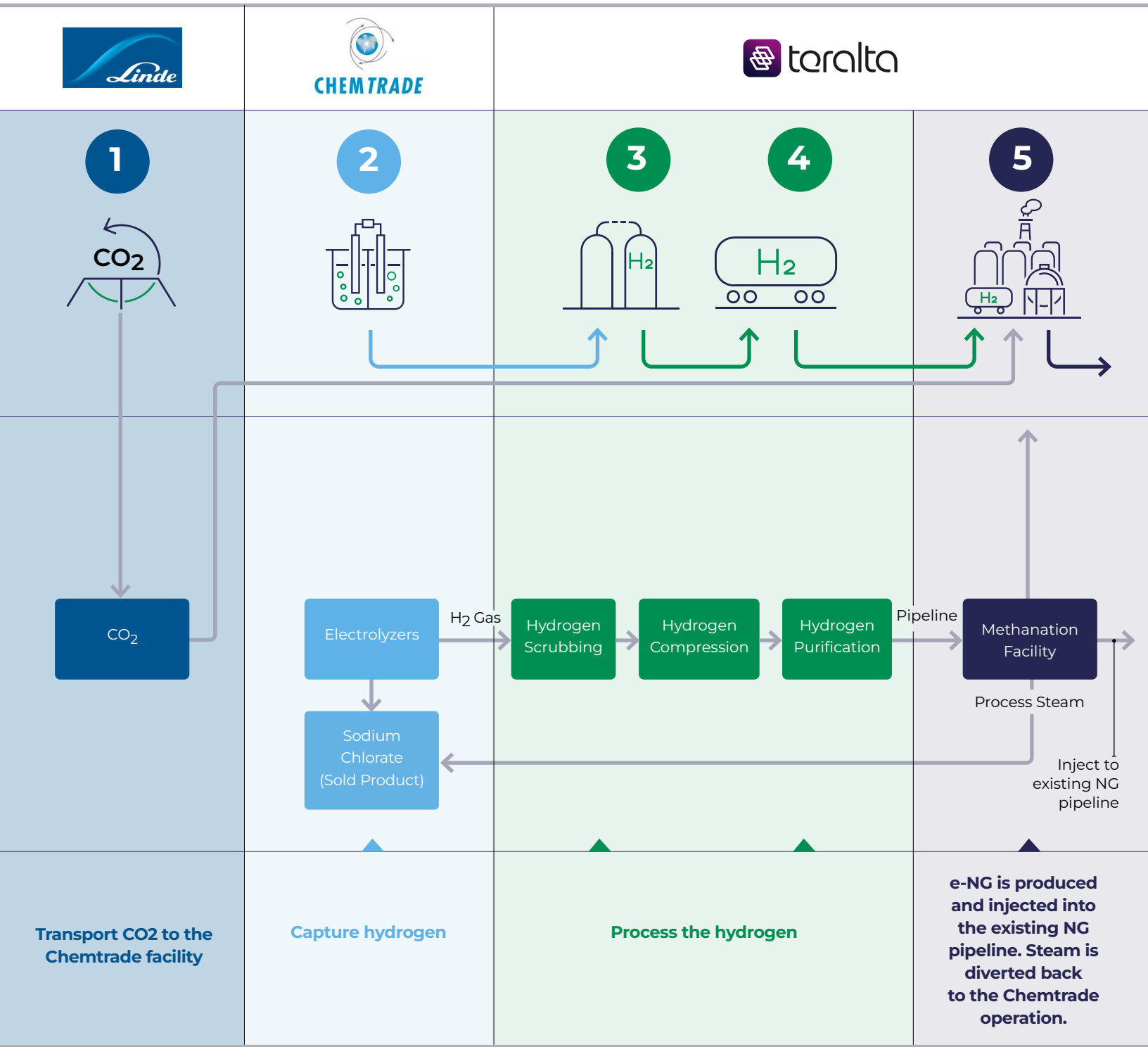
The site in Brandon checked all of these boxes. Along with clean hydrogen generated onsite by the sodium chlorate process, the plant is close to a dependable supply of CO_2 from Linde. Additionally, the site has an established injection point less than 400 metres from the production area that feeds into the existing fossil natural gas pipeline.



With such an efficient project site, new infrastructure requirements are minimal. For example, Teralta will build less than 1 km of public-facing pipeline for the entire project. All other infrastructure will be built or already exists on the Chemtrade site.

e-NG Workflow

Teralta e-NG is produced using technology and systems that are commercially off the shelf and easily scalable. The workflow combines the recycled CO₂, clean hydrogen, and methanation to produce e-NG.



Methanation Facility

While the CO₂ is transported directly to the methanation facility, the clean hydrogen undergoes scrubbing, compression, and purification processes beforehand.

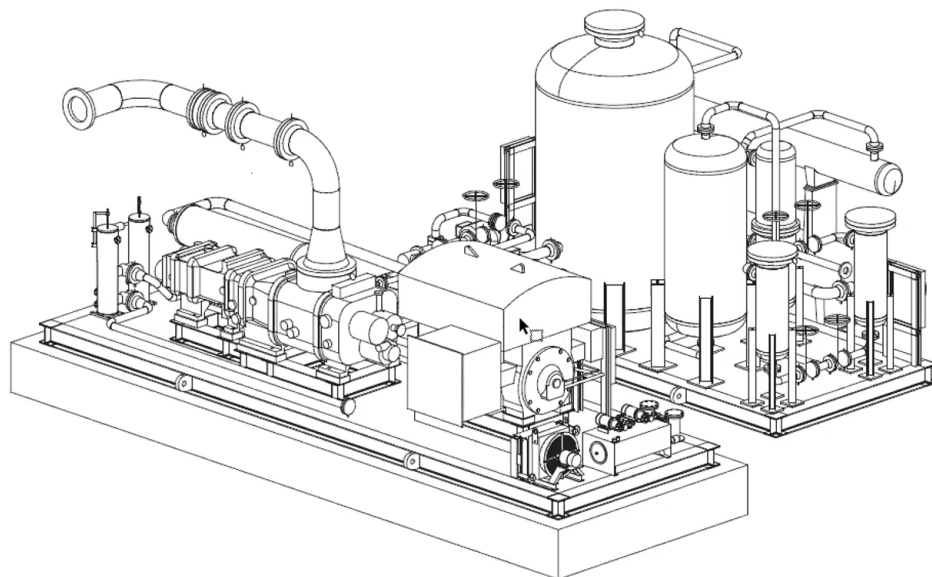
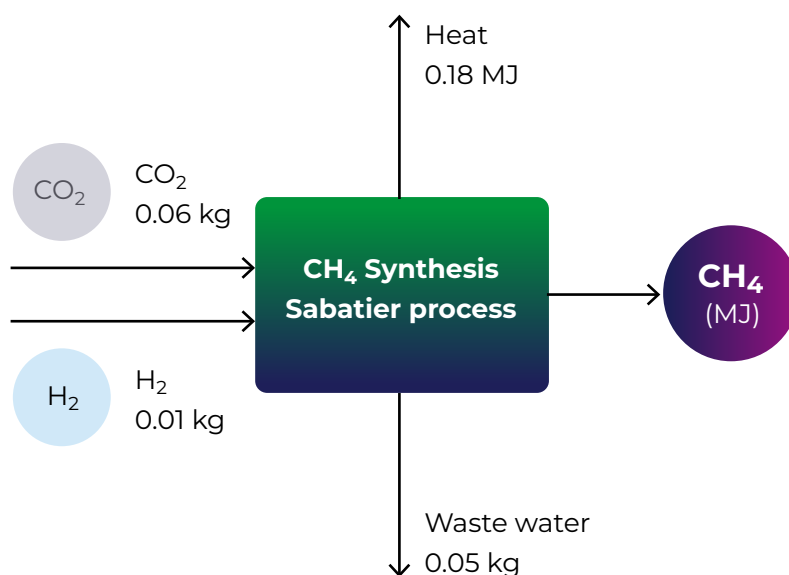


Fig. 1: Example of a hydrogen compression system.

The methanation facility is on the Chemtrade site. While hydrogen extraction and other methodologies are proprietary to Teralta, the methanation process itself involves the Sabatier reaction, a proven e-NG production process.

The Sabatier reaction combines clean hydrogen and recycled CO₂ at high temperatures (between 300°-400°C), creating methane and water to produce Teralta e-NG.

Learn more about the [Sabatier reaction](#).



The methanation process also produces steam which is diverted back to the Chemtrade facility, serving as a clean source of energy for the sodium chlorate operation.

For more information on site infrastructure, read the [Teralta FAQ](#).

e-NG Offtaker: Tokyo Gas



June 2025: Tokyo Gas, Chemtrade, and Teralta team members at the project site in Brandon.



Tokyo Gas signed onto the project in [Q3 2025](#) as the offtaker, purchasing the e-NG and its [environmental attributes](#).

As a Japanese utility, Tokyo Gas supports Japan's e-NG mandate and the adoption of a national framework for decarbonization and a hydrogen-based society.

In the short term, this means replacing 1% of the country's domestic liquid natural gas (LNG) consumption with e-NG by 2030, increasing to 90% by 2050.

Currently, Japan imports LNG by tanker to meet its energy needs. With Teralta e-NG chemically indistinguishable from LNG, there is no need for new infrastructure, allowing Tokyo Gas to use its existing pipelines, tankers, and port-side terminals in the utility's transition to e-NG..

Collaboration with Governments and Manitoba Hydro

e-NG is an emerging market. While many projects are already underway in Europe and Asia, work is just beginning in North America.

Teralta engaged with Federal government entities, the Manitoba provincial and local governments, First Nations, and Manitoba Hydro, working within existing regulatory frameworks to advance the project.

The work is collaborative and ongoing with the project delivering tangible benefits to Manitoba's economy and the environment. For example, a cumulative reduction of 2.1 million tons of CO₂e emissions will be achieved over the project life (20 years).



Next Steps

Construction for the Brandon project is on track to begin in 2026, with e-NG production up and running by mid-2029.



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Working closely with industry leaders, governments, and the community, Teralta is producing e-NG that is 95% lower in carbon intensity than fossil natural gas. By leveraging existing infrastructure, Teralta e-NG provides the fastest time to market versus any other natural gas on the market today.

Teralta e-NG project partners benefit from:

1. Zero capital risk	2. Guaranteed offtake	3. Fastest time to market	4. Highest volume, lowest touch	5. Unbeatable environmental benefits
All capital costs, including hydrogen and CO2 capture, engineering, methanation, and distribution equipment are covered by Teralta.	A stable business model based on long-term and consistent demand from an established network of global, investment-grade offtakers.	Exclusive access to offtakers, hydrogen, and CO2 expedites time to market and optimizes project returns.	Maximal hydrogen volumes with minimal resource commitments.	Independent validation of carbon intensity for confirmed value of environmental attributes and proof of compliance.

If you're interested in becoming a Teralta e-NG partner, [contact us](#) or visit our [website](#).

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