



Profile of a Viable Biomass-to-Fuels Project

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Outline

- 1) Introduction to SunGas and C2X
- 2) SunGas technology history and our S1000 standardized biomass gasification offering
- 3) Project stress and underlying reasons
- 4) Profile of a viable biomass-to-fuels project
 - a) Team and partner profile
 - b) Site profile
 - c) Financial profile
- 5) C2X and SunGas flagship project, Beaver Lake Biofuels
- 6) How Beaver Lake Biofuels stacks up against this profile of a viable project
- 7) The value of captured carbon from the atmosphere
- 8) A second US based project for RNG based on the replicable Beaver Lake design
- 9) Key points

C2X & SunGas Accelerate Green Molecule Production



C2X



- ▶ C2X is a green molecule company
- ▶ C2X aims to develop and operate green methanol production facilities accelerating the availability of green methanol in large quantities for the chemicals, aviation and shipping sectors
- ▶ Experienced team with backgrounds from chemicals, renewables, construction of mega-projects, shipping and finance
- ▶ C2X investors include AP Moller Holdings, Maersk and ENEOS, providing unprecedented access to markets

- ▶ SunGas formed by GTI Energy in 2019 to make a meaningful impact in the energy transition by deploying the proven UGAS[®] gasification technology
- ▶ SunGas productized and commercialized the technology with the flagship S1000, establishing the company as a leader in biomass gasification
- ▶ C2X is the majority owner of SunGas and together they are working rapidly to scale the next wave of biofuels production
- ▶ SunGas and C2X's flagship project is Beaver Lake Biofuels

50 year history of expertise in gasification and downstream integration



1975 First bubbling fluidized bed (BFB) gasifier patent & pilot plant

1992 Finland: 80 tpd biomass & coal demonstration plant

1995 DOE awarded design of 1250 tpd biomass IGCC plant, scale-up validated

2003 GTI opens 20 tpd Flex Fuel Gasification facility in Chicago

2008 Zao Zhuang: O₂-blown, 2x400 tpd gasifiers, coal-to-methanol

2014 Fully integrated bio-refinery at GTI Energy, wood-to-gasoline

2015-2016 Chalco: 3 sites, 7 gasifiers 350-550 tpd coal

2024 SunGas & C2X announce strategic partnership

1975 1985 1995 2005 2010 2015 2020 2025

1980 Completed DOE funded design scale-up of BFB gasifier to 1000 tpd

1994 Shanghai: 800 tpd low-rank coal

1998 Hawaii: 100 tpd biomass demonstration plant

2008 Skive, Denmark: 150 tpd CH&P plant using wood

2012 Yima: O₂-blown, 2x1200 tpd gasifiers, coal-to-methanol

2019 SunGas formed by GTI Energy

2025 C2X becomes majority owner of SunGas advancing development of Beaver Lake Biofuels

Denotes Biomass Experience

More than 200,000 hours of commercial operating experience



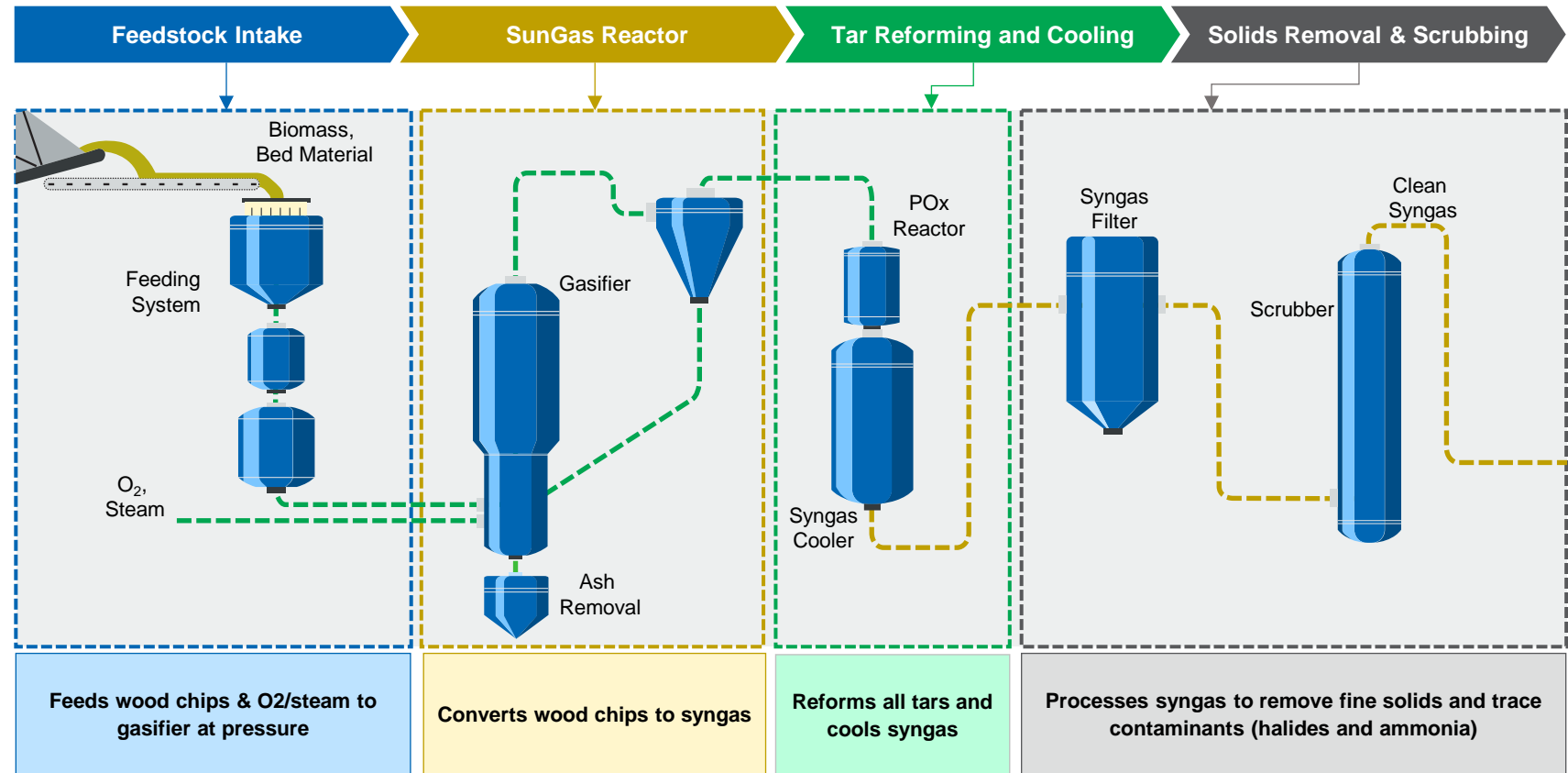
Overview of SunGas' Competitive S1000™ Product

High Technology Readiness Level Ensures Industry Leading Uptime and Yields

S1000 Technical Highlights

- Reliable and flexible feedstock feeding system with **minimal pre-treatment**
 - For woody biomass, no requirement for expensive torrefaction or pelletization
- Bubbling nature of fluidized bed provides **even temperature distribution**
- Bed volume provides large thermal mass that **accommodates feedstock variance**
- Long refractory life (>10 years)
- Effective reforming of all tars and residual carbon to high purity syngas
 - Less than 0.4% methane in syngas**
 - More than 97% carbon conversion**
- Commercially demonstrated and reliable** radiant syngas cooler designed for both dry solids and slagging conditions
- Additional raw syngas cleaning** by:
 - Syngas filtration to remove solids
 - Syngas scrubbing to remove chlorides and excess moisture

Illustrative S1000 Process



Headlines tell the story of many low carbon energy projects cancelled or stalled

Fulcrum BioEnergy abandons trash-to-fuel plant in Nevada

The waste gasification start-up abruptly laid off most staff in mid-May

October 22, 2025

E2: Companies Cancel \$1.6 Billion in Clean Energy Projects in Sept; Over \$24 Billion in 2025

ENVIRONMENT FEBRUARY 10, 2026

The United States Sacrificed \$35 Billion in Clean Energy Projects Last Year

GlobalData

Ørsted abandons e-methanol project amid slow market

Hoddesdon to shut as another waste-gasification plant fails

Enerkem to Retire its Edmonton Biofuels Facility

Thursday, 1st February 2024

Shell Cancels Another SAF Project

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Stalled e-methanol projects leave forecast murky

Market: Hydrogen | 23/01/24

Japan's IHI to withdraw from biomass power generation in US

Shift in decarbonization strategy under Trump administration led to decision

Hydrogen Reality Check 2026: Why Project Cancellations Expose a Deep Viability Gap



What is causing the distress?

- ❖ Some developers are force fitting financial models to achieve FID which only “kicks the can” on distress.
- ❖ A lack of development capital is leading to development short cuts, particularly in technical design development, which is resulting in significant capital cost overruns and operation bottlenecks
- ❖ Inadequate and unrealistic commissioning and startup timelines is causing poor operational decision making due to working capital shortages.
- ❖ Aggressive offtake delivery terms are driving poor project execution behavior.
- ❖ A disregard for operation readiness (maintenance planning, reliability engineering, SOP’s, etc.) leading to low availability and throughput factors.
- ❖ Lack of utilization of highly skilled professionals in feedstock management.

Profile of a viable biomass-to-fuels project





Team and Partner Profile

- 5 | EPC & Technology Partners**
 - Trusted technology
 - Proven execution
 - Integration capability
- 4 | Feedstock Supplier**
 - Reliable
 - Affordable
 - Creditworthy
 - Sustainable



- 1 | Owner's Team**
 - Large-scale project experience
 - Development discipline
- 2 | Off-takers & Investors**
 - Trusted relationships
 - Commercial alignment
- 3 | Development Capital**
 - Access to adequate development capital through FID



Site and project profile

POWER

Access to low-cost green power

COMMUNITY

Local community support

CO₂ Solution

Access to viable CO₂ storage or uninterruptible low-cost H₂

BIOMASS

Access to abundant, affordable and sustainable biomass

LOGISTIC

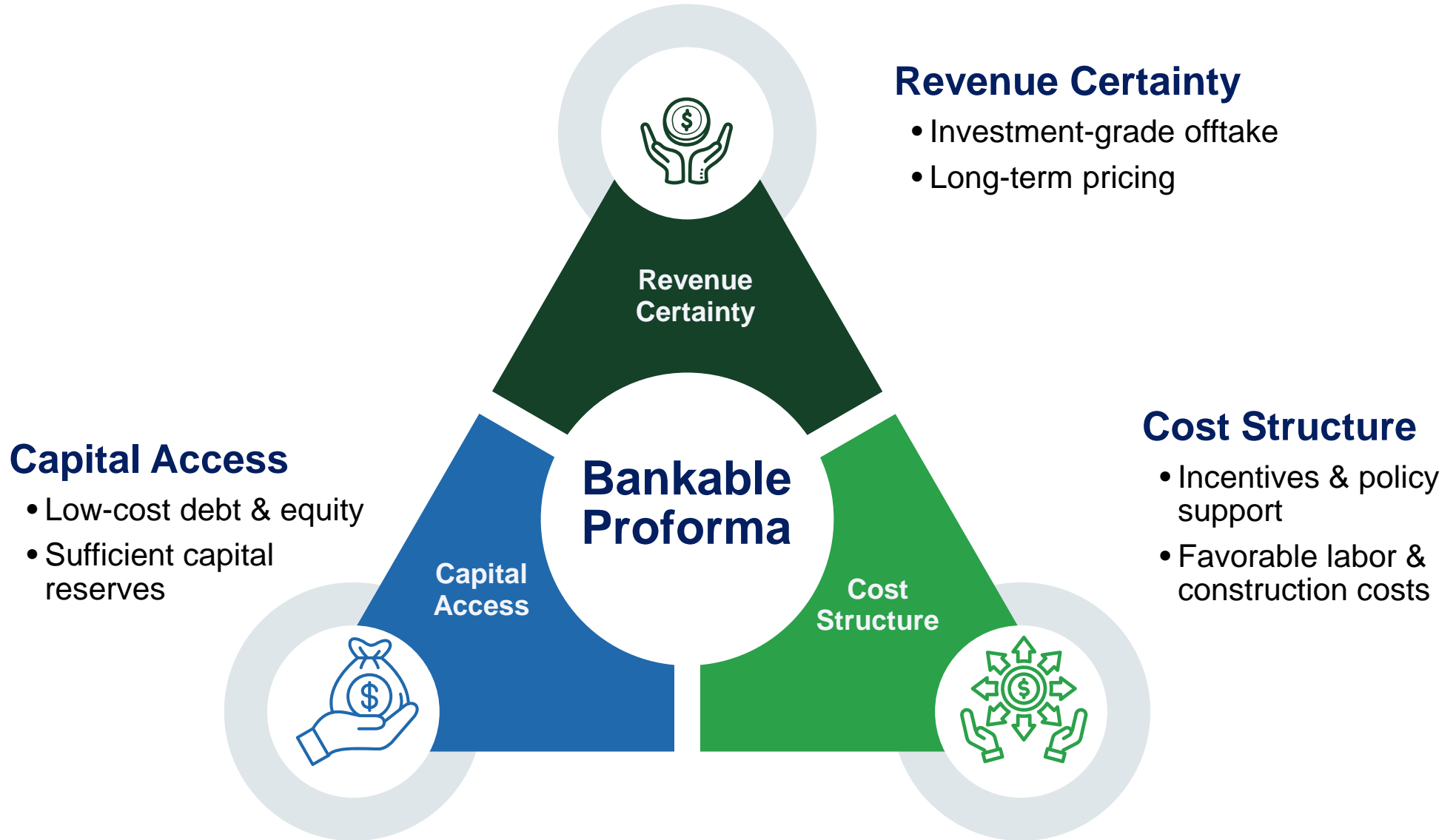
Access to navigable waterways, rail, and roads for feedstock, product transport and construction

INFRASTRUCTURE

Developed infrastructure with access to transmission lines, water, natural gas, etc.



Financial profile



Flagship Project: Beaver Lake Biofuels

Subsequent projects will leverage Beaver Lake with a replication strategy enabled by the standardized SunGas S1000

Feedstock
Supply

High Quality
Offtakers
Microsoft
MAERSK

Proven
Technologies
JM SunGas RENEWABLES Linde

550,000 tpa
Nameplate
Capacity

~1MM+ tpa of
CO₂ Sequestered
Annually

FEL-3
Commenced
April 2025
Kiewit Jacobs

FID Expected
2026

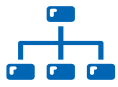
Key Highlights

- 1 Located in Alexandria, LA. Repurposing local forestry biproducts and residues after legacy paper mill closure.
- 2 Access to ~2 million tpa of feedstock within 100-mile radius to revitalize the forest industry and local economy
- 3 Multi-modal import and export infrastructure in place
- 4 High quality portfolio of offtake commitments. Methanol use in shipping (e.g. Maersk), chemicals (names withheld). Large CRU contract signed with Microsoft.
- 5 Beaver Lake's low (5-10 g/MJ)* CI green methanol will be below the 65% reduction required by current regulations
- 6 Sufficient land and infrastructure to pursue future expansion
- 7 In dialogue with solar developer to source renewable power
- 8 Best in class bankable partners in all critical technologies and project areas

Beaver Lake Site Overview



Beaver Lake BioFuels key stakeholders and focus



Owners

- A.P. Møller Group
- Maersk (premier shipping company)
- ENEOS (premier Japanese energy company)

C2X

Developer

- Project developer
- Long-term owner and operator



Technology

- Strategic owner of licensed technology
- Key to biomass conversion process at scale



Company

- Strengthening US manufacturing
- Meeting growing global biofuel demand
- Revitalizing the US forestry industry



Products

- Bio-methanol
- Carbon Removal Units (CRUs)



Customers



- Maritime shipping
- Aviation industry
- Chemical companies
- Companies that value CRUs



SunGas standardized S1000 gasification island 13



How Beaver Lake Biofuels stacks up to this profile



Team and Partners Profile

- ✓ Experienced C2X team
- ✓ Maersk & ENEOS are investors
- ✓ \$100MM capital raise through FID with >50 staff working 9 workstreams
- ✓ Credit worthy forest owner & feedstock supplier
- ✓ Kiewit, largest US infrastructure contractor selected
- ✓ Bankable technology partners in SunGas, JM and Linde



Site and Project Profile

- ✓ Former International Paper site with barge access, two rail lines and excellent roads
- ✓ Two NG pipelines cross site, 4x1MM gal/day wells, two substations, and a permitted landfill
- ✓ Access to 2.5MM tpa feedstock infrastructure
- ✓ Excellent geology with low-cost permanent storage
- ✓ Strong local support
- ❖ Moderate cost power

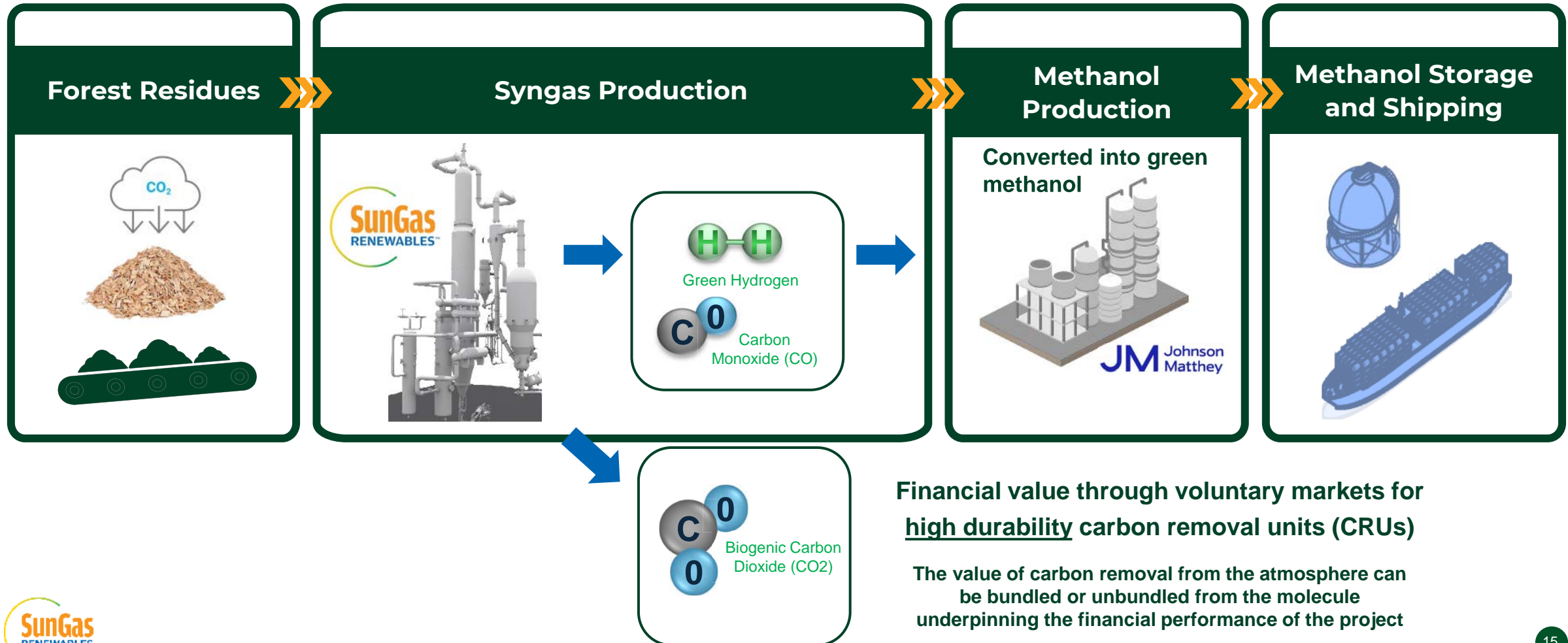


Financial Profile

- ✓ Investors are supporting bankability with offtake
- ✓ CO₂ removal and storage agreements with Microsoft and others enhance financials
- ✓ IRA production tax credits from 45Q and 45V
- ✓ Progressing low-cost debt agreement
- ✓ One of the lowest cost construction areas in US

Pioneering approach transforms forestry by-products and residue into both clean fuel and high-quality CRUs

SunGas proprietary technology is the key for the conversion of biomass, producing methanol with a low carbon footprint that is a cleaner burning as compared to traditional maritime fuel with the added advantage of removing CO₂ from the atmosphere



Microsoft

C2X to deliver 3.6 million metric tons of carbon removal to Microsoft over 12 years

How Beaver Lake Biofuels hit the mark with Microsoft:

Rigorous Biomass Sourcing Protections:

C2X's biomass sourcing will follow the core principles outlined in 2025 Guide to Sustainable Biomass Sourcing. These assure the biomass sourced will have robust governance under a credible certification scheme, protect communities and ecosystems, preserve existing carbon stocks, and ensure biomass use and safeguards against distortions to forest markets.

Verified LCA & Emissions Accounting:

Beaver Lake uses a comprehensive, third-party verified lifecycle assessment (LCA), guaranteeing transparent tracking of all process emissions. Emissions are fairly allocated, with strong measures in place to ensure carbon benefits are not double counted between the green methanol and carbon removal units.

Community Engagement:

C2X has maintained strong relationships with Louisiana Economic Development (LED), and organizations and individuals within the surrounding Pineville and Alexandria communities. These partnerships ensure local stakeholders have been consulted and that economic benefits flow to the surrounding community.

Source: https://www.linkedin.com/posts/courtney-fay_microsoftis-pleased-toannounce-anofftake-activity-7404909523599134722-boKB?utm_source=share&utm_medium=member_ios&rcm=ACoAABtMcYwBVs-kFW6pGJVp24qupgfz2qziZFA

Carbon Direct & C2X announce collaboration on pioneering forestry residue-to-biofuel project

Importance of the collaboration between Carbon Direct & C2X:



Harness the forest's formidable ability to remove carbon:

The Beaver Lake Biofuels project in Louisiana presents a pioneering approach to biomass carbon removal and storage (BiCRS), transforming abundant forestry residues and by-products into both biofuel and high-quality carbon removal units (CRUs).



Create low carbon intensity fuels for hard-to-abate industries:

This important collaboration represents an opportunity to bolster a declining market for wood by-products and transform this resource into two complementary climate solutions at scale. The Beaver Lake project combines the benefits of bio-methanol production for customers in hard-to-abate sectors, such as marine and aviation, with permanent carbon removal from the atmosphere.



World scale biofuel production and carbon removal:

The Beaver Lake project is expected to produce nominally 550,000 tonnes of bio-methanol annually and durably store approximately 1 million tonnes of CO₂ per year. Science-backed carbon removal credits from this project are available for forward offtake and interested buyers should contact Carbon Direct.

<https://www.carbon-direct.com/services/carbon-credits>

Biomass to RNG pathway accelerated by replicable Beaver Lake design

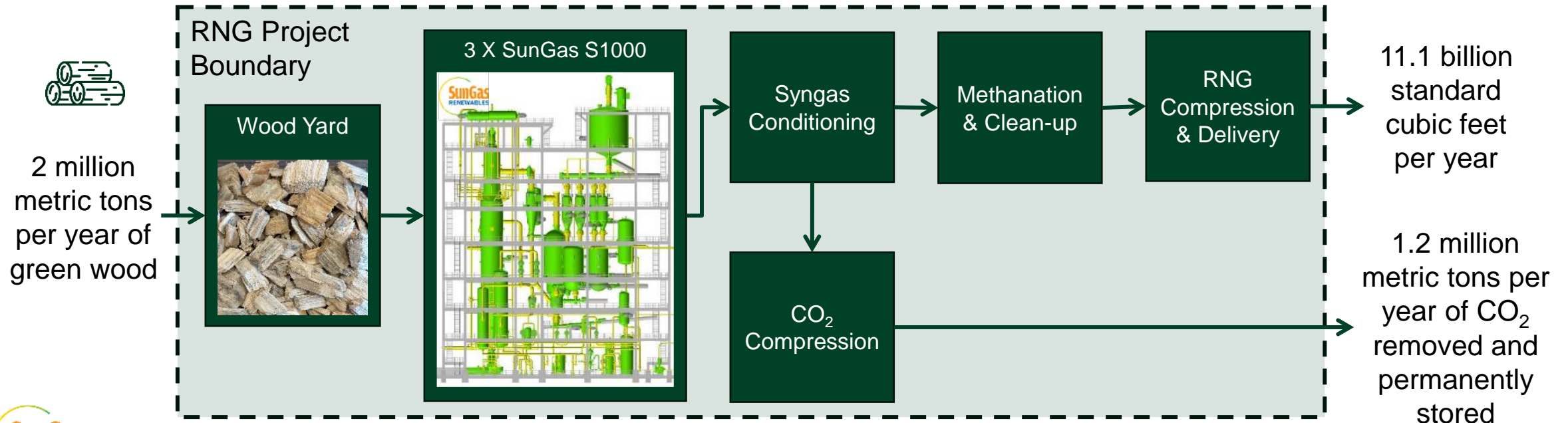
Unmatched project scale compared to all other RNG production pathways

RNG Attributes

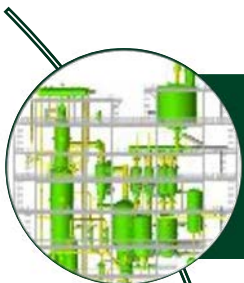
- RNG to meet ISCC sustainability standards
- Uses sustainably sourced biomass from existing managed forests
- Biogenic CO₂ sequestration results in deeply negative CI score of *minus 111 gCO₂e/MJ*

Key Markets

- Fuel EU Maritime regulated companies
- European ETS regulated companies
- Cleaner LNG supply for importing countries
- Low carbon chemical manufacturing



Key Take Aways



SunGas standardized S1000 gasification island is a proven and bankable platform for viable biomass to fuel projects



Current market challenges can be successfully navigated with strong project teams & partners, good site selections, and favorable financial fundamentals



Beaver Lake Biofuels is one example of a project navigating today's turbulent conditions



Beaver Lake is a replicable model for not only large-scale methanol facilities, but also RNG and other biofuel projects



**For more information, contact us at
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www.sungasrenewables.com**