



# The Development and Challenges of CarbinX<sup>TM</sup> Technology

Presents  
**CleanO2**

Presented by Jaeson Cardiff – Inventor, CEO, and Cofounder

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A black industrial machine with a blue top and a circular logo on the front. The machine is positioned on the left side of the image. The background is a plain, light-colored wall.

# CarbinX<sup>®</sup>

Reduced emissions from a direct capture process as well as via the built-in economizer

Energy savings by diverting waste heat back into the building

Supports the circular economy by converting carbon emissions into tangible products



An aerial photograph of a city, likely New York City, showing a wide river (the Hudson River) flowing through the urban landscape. In the foreground, there are large industrial buildings with corrugated metal roofs and a railway line. The middle ground is filled with dense residential and commercial buildings. In the background, the city skyline is visible across the river, with several tall skyscrapers. The sky is blue with scattered white clouds. The text "The built sector accounts for 15% of carbon emissions in North America" is overlaid on the right side of the image in a large, white, sans-serif font.

The built sector  
accounts for  
15% of carbon  
emissions in  
North America



**Electrification is only part  
of the solution**







**We require decades worth of natural  
gas to meet our energy needs**

The background of the image shows two industrial smokestacks at the bottom, emitting thick, dark smoke that rises into a sky filled with large, billowing clouds. The lighting suggests a sunset or sunrise, with warm tones on the edges of the clouds.

**The global carbon capture and storage market is expected to grow from \$4.77 billion in 2022 to \$5.43 billion in 2023 at a compound annual growth rate (CAGR) of 13.72%.**

63 units sold

32 units shipped

29 units installed

14 Gas Utilities

3 Countries

120 Collaborations



Where are they?



**APEX**   
**UTILITIES INC**





 TOKYO GAS



*Radisson*  BLU





**LUSH**



**ATCO**  
***Gas***

A graphic element consisting of a black horizontal line that tapers to a point on the right, with a blue swoosh underneath it.







This Cantrix® Device: ClearO2

Is equivalent to 500 trees in carbon sequestration	Produces no harmful chemicals
Is energy positive	Sequesters carbon forever





How Does It Work?

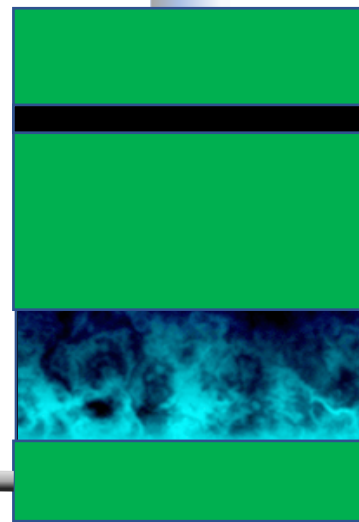
# CarbinX<sup>®</sup>



LESS

Carbon dioxide  
Waste heat

- Natural gas
- Propane
- > 240,000 Btu/Hr



Boiler

Reduced water  
temperature differential

40C/104F

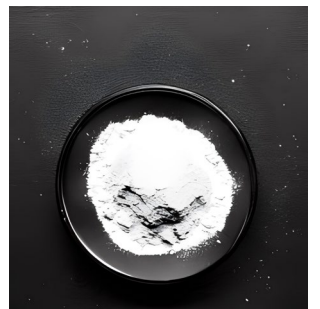
Hot water  
supply

Cold water  
return

Hot flue gas  
and carbon  
dioxide

Heat and  
carbon dioxide  
reduced

Soap  
Detergents  
Commercial  
cleaners  
Textiles  
Fertilizer



Potassium  
Carbonate



Approvals





What's Next?



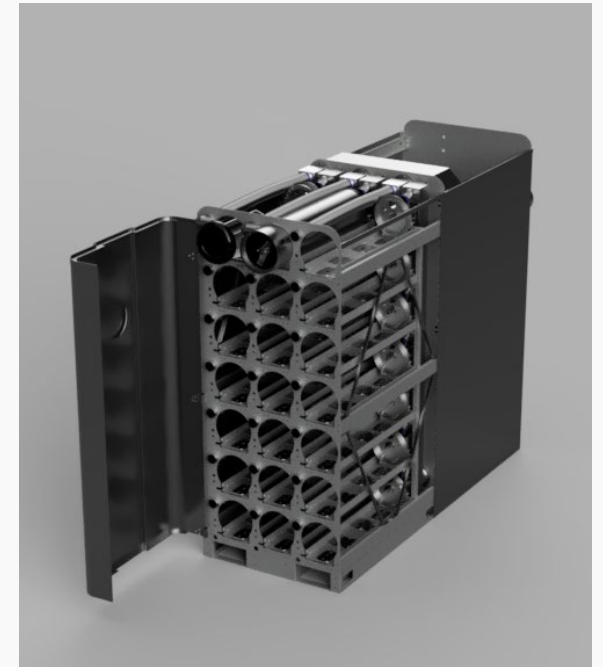
**CarbinX Version 4.0 Next Generation Technology**  
 Commercial Launch: Q3 2024  
 Streamlined modular design  
 “The impact of Version 4.0 technology could see a reduction of emissions by up to 73% per application, depending on the output of the connected appliances.”  
 Applicable to all natural gas boilers.

Four times the carbonate production

Enhanced operational and logistical performance

- IoT monitored
- Preloaded chemical cartridges
- Non-technical service personnel

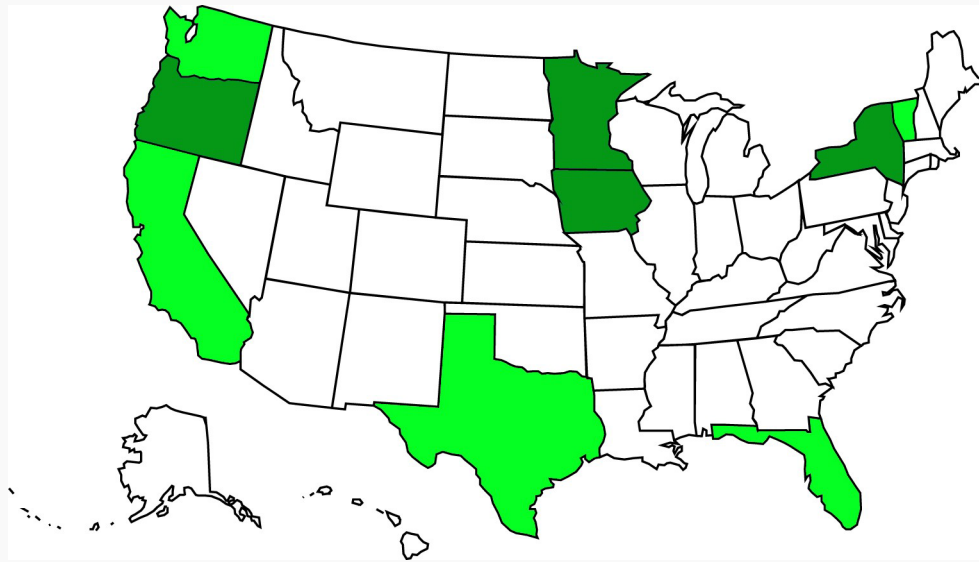
BRIGHTSPOT  
CLIMATE





# Partnerships

## US NATURAL GAS UTILITY PARTNERSHIPS



## CANADIAN NATURAL GAS UTILITY PARTNERSHIPS



## MANUFACTURING AND DISTRIBUTION



SPX group signed North American Testing and Validation Agreement and NDA; have purchased the first of four units to train employees



Partnered with Tokyo Gas to distribute CarbinX units and CleanO2 consumer products



Thank you!

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# CleanO2

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