Carbontech

Carbontech refers to the wide variety of commercial products made with the CO₂ emissions captured from power plants, biomass, or direct air capture. There is an estimated $1 trillion available market in the U.S. alone for carbontech goods, including everything from fuels and plastics to building materials and other industrial products.

The economic potential of carbontech

The economic opportunity for carbontech goods is enormous – $1 trillion in the U.S. alone. Globally, that number rises to $6 trillion. Carbontech encompasses a diverse set of goods and services, including global commodities like fuel, plastics, and building materials as well as valuable niche applications like cosmetics, food, beverages, and emerging technologies like carbon nanotubes.

MAJOR ENACTED POLICIES

FUTURE ACT: Expands and enhances the “45Q” tax credit to provide a $35 dollar credit for every ton of carbon dioxide stored in carbontech products

USE IT Act: Provides funding for a direct air capture technology prize and establishes a R&D program for carbontech at the Environmental Protection Agency

OFFICE OF FOSSIL ENERGY RESEARCH & DEVELOPMENT ACT/EFFECT ACT: Updates the Department of Energy’s work on carbon management technologies like carbon capture and expands their focus on carbontech

SEA FUEL Act: Establishes a direct air capture and ocean carbon removal program at the Department of Defense that focuses on turning captured carbon from the ocean into fuels

OTHER RELEVANT BILLS

• The Carbon Utilization Act of 2018
• The Fossil Energy Utilization, Enhancement, and Leadership Act of 2018
• The Advancing CCUS Technology Act

Total Available Market (TAM)

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>TAM</th>
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<tbody>
<tr>
<td>TRANSPORTATION FUELS</td>
<td>$882B</td>
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<tr>
<td>Gasoline, Diesel, Jet</td>
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<tr>
<td>BUILT ENVIRONMENT</td>
<td>$101B</td>
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<tr>
<td>Cement, Concrete, Asphalt, Aggregate</td>
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<tr>
<td>PLASTICS</td>
<td>$72B</td>
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<tr>
<td>Polyethylene, Polypropylene</td>
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<tr>
<td>WOOD-BASED PANELS</td>
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<tr>
<td>Plywood, Particleboard, OSB</td>
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<tr>
<td>CHEMICALS</td>
<td>$2B</td>
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<tr>
<td>Fertilizer, Feed</td>
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</table>

2017 TAM $1,070,000
Carbontech is a win-win for business and climate.

+ Provides a market-based incentive to repurpose carbon emissions
+ Displaces fossil fuels and high-emissions products like cement and steel
+ Drives down the cost of carbon removal and encourages further research & development of carbon removal technology

The industry today

There are at least 182 ongoing carbontech projects in at least 14 different countries, including the U.S., Canada, Germany, China, and India. The U.S. is home to more projects than any other single country.

→ Virgin Atlantic and LanzaTech flew a 747 jet from Orlando, Florida to London, England using jet fuel derived from factory CO₂ emissions.
→ Climeworks has partnered with Coca-Cola to provide CO₂ from their Swiss direct air capture plant for carbonated beverages.
→ CarbonCure has supplied nearly 7 million cubic yards of concrete made from carbon waste to construction projects all over the U.S. and Canada.

FURTHER READING

“Carbontech: A trillion dollar opportunity,” Matt Lucas, Carbon180

“CO₂ Utilization: A Look Ahead,” Center for Climate and Energy Solutions

“Climate Change Solutions Slowly Gain Ground,” Washington Post

REFERENCES

On carbontech-related policies:

“Policy Tracker,” Carbon180

On the current market opportunity for carbontech:

A Review of Global and U.S. Total Available Markets for Carbontech, a Carbon180 report

On the current industry of carbontech startups:

“Carbon Capture Projects Map,” Third Way

“Richard Branson’s Virgin Atlantic set to fly a 747 jet with fuel made from factory pollution,” CNBC

www.carboncure.com
www.climeworks.com

Learn more at carbon180.org.