



# America's Clean Coal & Clean Water Company

**Investor Presentation**  
December 2025

OTCQB: BCHT | TSX: BCHT



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# Birchtech Overview

Birchtech develops activated carbon technologies & provides consulting services to remove mercury from the air we breathe & ‘forever chemicals’ from the water we drink

Our team includes **THE LEADING** activated carbon experts in the **U.S.**, allowing us to drive environmental technology innovation in air & water



## Clean Air Technologies

- Established, core business
- Reducing mercury emissions
- Patented SEA® Sorbent Technology used at 80% of U.S. coal-fired power plants that use sorbent technology removal system<sup>1</sup>

**\$270M**

Revenues generated (to-date & expected)<sup>2</sup>



## Clean Water Technologies

- New entrant into multi-billion-dollar market for PFAS removal ("forever chemicals")
- Applies activated carbon expertise to treat water
- Near-term EPA regulations for PFAS compliance

**\$1.5B**

In annual PFAS compliance costs<sup>6</sup>

### Strong IP Portfolio & Successful Enforcement Strategy:

- 33 total patents (and new provisional patent applications for the water business)
- Successfully secured \$35M in license agreements and income from legal claims from infringing parties to-date
- \$57M awarded by unanimous jury with a finding of willful infringement; final judgment pending

**Regulatory Tailwinds:** U.S. EPA regulations provide long-term tailwinds for both air (MATS regulation) & water purification (PFAS regulations for U.S. water utilities beginning 2027)<sup>1,3</sup>

**OTCQB: BCHT • TSX: BCHT**

Share Price<sup>4</sup> \$0.89

Market Cap<sup>4</sup> \$86.2M

Q3 2025 Revenue<sup>5</sup> \$7.4M

Q3 2025 Gross Margin<sup>5</sup> 54.8%

TTM Revenues & Income from Legal Claims<sup>5</sup> \$19.4M

Shares Outstanding<sup>5</sup> 97M

Float 66M

Insider Ownership 21%

1) Management Estimates

2) Revenues generated to-date & income pending from jury award

3) PFAS regulations utility costs from Table 6-1 Example Summary Cost Table for Potential Regulatory MCL of 4 ppt PFOA and PFOS

4) USD, As of 11/28/2025

5) As of 9/30/2025

6) EPA [Estimate](#)

# Customized Solutions for Cleaner Air & Water

## ! The Problem

Coal used at utilities & water contaminants in various geographic regions vary greatly across the U.S.

## 🧩 The Solution

Leveraging decades of expertise, Birchtech offers each customer a tailored solution using activated carbon in air & water treatment

## 📈 The Result

Customized solutions are **more economical & effective** at capturing mercury (air) and treating municipal & industrial wastewater, while reducing environmental footprint & meeting EPA regulations

## Mercury Emissions Removal

Over-Exposure to Mercury can Lead to:



Neurological  
Damage

Mercury exposure can harm the nervous system, particularly in developing fetuses and young children, affecting cognitive function, motor skills, and memory



Cardiovascular  
Effects

In adults, mercury exposure has been linked to increased risks of high blood pressure and heart disease



Pregnancy  
Risks

Mercury exposure during pregnancy can result in developmental delays, brain damage, and other birth defects



## Comprehensive Water Treatment Solutions

Exposure to PFAS Chemicals can Lead to:



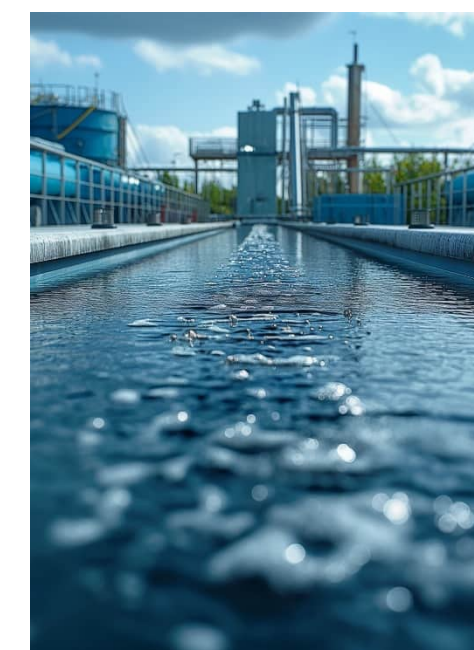
Pregnancy  
Risks

High blood pressure in pregnant women, decreased fertility, low birth weight & bone variations, among others



Reduced  
Immunization

Increased cancer risk & reduced ability of the body's immune system to fight infections, including reduced vaccine responses





# Our Go-To Market Strategy

Growing Our Air Business, Defending of our IP Portfolio & Moving Rapidly Into Water Treatment



## Clean Air Technologies: Mercury Emissions - SEA®

- Developed in early-2000s, 1st US Contract in 2011 - \$60 Million+ spent on R&D with 35 Active Patents
- Variations of proprietary SEA® technology believed to be in use at 40% of U.S. coal-fired power plants that are using sorbent technologies (others use expensive infrastructure)

### SEA® Patent Enforcement Now in Action

- Numerous Utilities have recognized the strength of Birchtech's patents through license/supply agreements
- **Secured \$35M in income from legal claims & license agreements, plus plus additional consideration in settlements; won \$57M jury award for 'willful infringement'**
- Infringing power plants engaged in ongoing discussions, with new suits and legal actions underway alongside world-class counsel



## Clean Water Technologies: Potable & Wastewater Treatment Solutions

- PFAS regulations will impose significant financial burdens on U.S. water utilities, with compliance costs estimated at \$1.5B annually over the next five years
- Two new world-class “Design Centers” focused on Analysis & Carbon Development, enabling the creation of advanced water treatment solutions for nationwide utility testing
- New tech launching with commercialization to begin this year to help utilities stay ahead of evolving regulations, with Activated Carbon recognized as the “best available technology” by the EPA





# Patented Technologies to Remove Mercury From Power Plant Emissions



# Our Established, Legacy Air Business

## Customized Solutions for Coal-Fired Power Plants to Reduce Mercury Emissions

- **Coal-fired powerplants account for 16% of U.S. power** & is projected to remain a significant fuel source through 2050
- Our **patented SEA® Technology** is a two-part system that helps coal-fired power plants **meet or exceed EPA regulations** at a **lower cost** than competitors
  - **Part 1:** SEA (halide mixture that oxidizes elemental mercury) injected directly into the boiler
  - **Part 2:** A back-end sorbent injection system (injects activated carbon)
- Our team **customizes solutions** to match fuel type & boiler configurations
- Custom-built material handling center in Texarkana supports existing supply business, expected to support new product development and distribution for water purification solutions
- **Air business revenue run-rate to ramp to at least \$40M by the end of 2026:**
  - ✓ \$18M in Estimated 2025 Air Business Revenues<sup>1</sup>
  - ✓ Current Customers under contract (TTM Revenues of \$19.4M, excluding income from legal claims)<sup>2</sup>
  - ✓ IP settlement agreements from infringing parties (\$35M+)
- **Ongoing post-trial outreach aims to convert technology users to customers, with new litigation underway and additional suits expected**



✓ Less Product

✓ More Effective

✓ Lower Cost

1) Preliminary revenue guidance for the fiscal year ending December 31, 2025 (excludes cash received from legal claims or water treatment revenue)

2) As of Q3 (9/30/2025)

# High Margin, Recurring Revenues

With Multiple Opportunities to Scale

We generate revenue in our core mercury emissions technologies from two primary sources:

## Product Sales with Consulting Services (Recurring)

Ongoing supply of proprietary SEA® material & sorbent material. Supply customers receive regular field analyses, optimized design of injection services, stack emission testing to ensure that our product applications are optimized with plant operations and infrastructure

## Licensing Agreement Revenues

Royalties and fees from technology adoption by utilities and industrial partners

### Long-Term Supply Clients and/or License Agreement Partners



**\$2M**

Average Annual Revenue per  
Power Utility Customer

**3-5 Years**

Typical Contract Length

**+30%**

Gross Margins

- 1) Preliminary revenue guidance for the fiscal year ending December 31, 2025 (excludes cash received from legal claims or water treatment revenue)
- 2) As of Q1 (3/31/2025)



# Illustrative Customer Economics for Air

## License/Supply Agreements Improve Cash Position, Increase Market Share of Core Business

In 2019, the Company filed an IP patent infringement suit based on unauthorized use of its patented technologies for mercury emissions capture, alleging that the refined coal Defendants caused significant business harm and obtained significant value from their use of the Company's technologies.

### Business-first Approach:

Resulted in licensing revenues & long-term supply agreements. Upon settlement or court ruling of infringement:

- Utilities **pay us a licensing fee after their current supply contracts expire** with competitors
- **Lock in long-term supply contracts**, which often offer attractive economics for both parties

### Success To-Date:

- **Many utilities** have settled or entered into license agreements, resulting in **over \$35M plus additional consideration in settlements** (structured as long-term supply and licensing agreements)
- In February 2024, **\$57M was awarded by jury** for willful infringement (final judgment expected in 2025)
- **\$159M requested (in total) from the court for past damages**

### Ongoing Litigation:

Infringing power plants remain engaged in discussions, with additional lawsuits & legal actions now underway.

**\$57M+**

Awarded by Jury with final judgment expected in 2025 – between \$57 and \$159M

**\$20M+**

Additional expected annual product supply revenue potential

**100%**

Success rate in enforcing our intellectual property rights to-date

1) Preliminary revenue guidance for the fiscal year ending December 31, 2025 (excludes cash received from legal claims or water treatment revenue)  
2) As of Q1 (3/31/2025)



# Illustrative Customer Economics for Air

## Current Customers & Flow Through Economics of Patent Protection Strategy

### Current Customer Example

*Annual*

<b>Annual Supply Agreement (per EGU)</b>	<b>\$2,000,000</b>
<b>Cost of Sales</b>	<b>\$1,400,000</b>
<b>Gross Profit</b>	<b>\$600,000</b>

Current revenue run-rate of \$17.3M TTM & stable customer base with long-term contracts and 30%+ gross margins on product sales

### IP License/Supply Agreement Customer Example



Clients that either settle or lose in an IP infringement suit typically have supply agreements in place with competitors.

Our business-first approach to IP litigation may allow customers to pay a nominal licensing fee until the existing supply agreement ends

Following the expiration of supply agreements with competitors, we seek long-term supply agreements, which generate a 30%+ gross margin profile

**A revenue run rate of \$25 million creates significant operating leverage, resulting in EBITDA margins of +30%**

*Note: Example shown above is applicable to negotiated settlements only that do not require protracted litigation from Birchtech.*



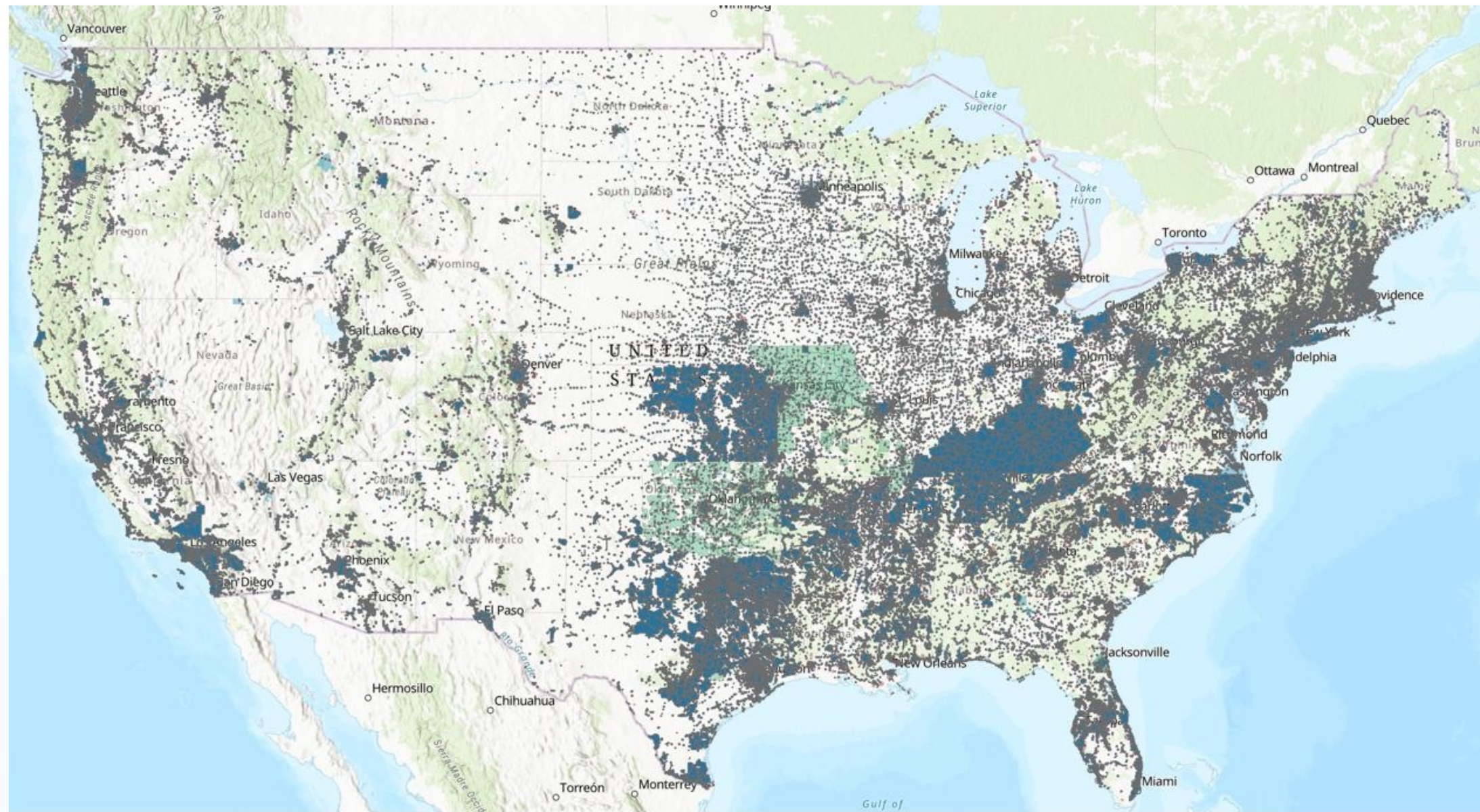


**Leveraging Expertise in Activated Carbon  
to Affordably Provide Cleaner Water  
for American Communities**



# Harmful PFAS Contaminants Across the U.S.

Significant Number of Impacted Communities Across the U.S., with ~50,000 Water Utilities At Risk



PFAS Contamination Crisis – PolicyInnovation.org

- The number of U.S. communities confirmed to be contaminated with PFAS continues to grow at an alarming rate – **90% of the US population relies on almost 50,000 community water systems** for their drinking water
- PFAS chemicals don't break down easily & exposure is linked to a range of health concerns, including increased cancer risk, decreased fertility & other harmful conditions
- **Each blue dot in the map represents a utility that requires a unique activated carbon blend for compliant water treatment.** A more robust solution is required for effective change ahead of the EPA regulations going into effect



# Birchtech Water Business Overview: Three Integrated Tiers

Birchtech's water platform delivers comprehensive PFAS treatment solutions, structured across three interconnected capabilities designed to provide end-to-end support for municipal and industrial clients.

1

## Design Centers Analytical & Carbon Development

- Crucial for developing, testing, and optimizing activated carbon solutions.
- Utilize Rapid Small-Scale Column Tests (RSSCTs) for efficient, cost-effective modeling.
- Lab-scale thermal reactivation capabilities for evaluating virgin and reactivated Granular Activated Carbon (GAC).
- Teams led by national experts in activated carbon research and PFAS analytics (Dr. David Mazyck, Dr. Nicholas Lentz).



2

## Water Treatment Solutions Supply of GAC & Other Media

- Integrative, effective treatment solutions utilizing various media with on-site technology assessment, system design, & oversight.
- Provide custom-formulated virgin and reactivated GAC blends for municipal and industrial water systems.
- Targeting approximately 50% gross margins on GAC products.
- Supported by an initial feedstock supply agreement valued up to \$7M, availability expected 1H 2026



3

## Reactivation Services rGAC

- Regional and on-site thermal reactivation services reduce lifecycle costs for utilities by 30–50%.
- Promote sustainable PFAS compliance with minimal waste.
- Reactivated GAC expected to outperform virgin GAC in specific applications.
- Full-scale regional reactivation facility under commencement, construction expected in 2026.





# Design Centers - Bridging Lab Results to Full-Scale Utility Deployment

Birchtech's Design Centers provide utilities with fast, accurate, and affordable testing to determine optimal PFAS removal solutions using activated carbon.

## Key Capabilities

- **RSSCT Testing (Grand Forks, ND):** Rapidly predicts full-scale Granular Activated Carbon (GAC) performance, saving time and cost.
- **Lab-Scale Thermal Reactivation (State College, PA):** Evaluates the efficacy of reactivated carbon specifically for each municipality.
- **Custom Analytics:** Advanced PFAS speciation, breakthrough curve modeling, and comprehensive comparative analysis.

## Expert Leadership

- **Dr. David Mazyck:** Renowned national leader in activated carbon engineering.
- **Dr. Nicholas Lentz:** Expert in PFAS testing and analytical chemistry.
- Additional research engineers & analysts from State College and Grand Forks environmental labs.

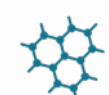




# Water Treatment Solutions — Supply of GAC, Various Media

Birchtech works closely with engineering firms, consultants, and small utility customers to provide more affordable and effective water treatment solutions to remove numerous contaminants with on-site treatment technology assessment, system design implementation, and infrastructure management.

## Birchtech Provides



Virgin Granular Activated Carbon (GAC)



Reactivated (rGAC)



Custom Blends designed from RSSCT data



Technical consulting & plant optimization



Logistics & material handling support



Equipment & Media Supply

## Competitive Advantages

- Best-in-class activated carbon expertise (air + water)
- Ability to design utility-specific GAC formulations
- Higher performance at lower lifecycle cost through reactivation pathway
- Positioned to supply both virgin & reactivated GAC at scale

### Why This Matters for Utilities

- PFAS regulations mandate sampling by **2027** and full compliance by **2029/2031\***
- Estimated U.S. market size: **\$1.5B annually**
- GAC usage is projected to increase **2.5×–4×**; change-out frequency: **2×–4×**

\*Any extension of the final ruling will not impact Birchtech's business in water treatment as utilities are currently addressing heavy contaminants and working toward PFAS compliance.



## Tier 3

# Reactivation — Sustainable & Cost-Effective PFAS Compliance

## Why Reactivation Matters

Reactivated carbon **significantly reduces the operating costs** for utilities adopting PFAS treatment programs.

### Reactivation Capabilities

- Thermal reactivation of spent carbon
- Ability to evaluate spent GAC at lab scale before full plant reactivation
- Expected performance advantages relative to virgin carbon
- Provides utilities with a **sustainable, circular solution**

### Planned 2026 Facility

- **\$50M revenue capacity** upon commissioning
- Integrated with GAC feedstock partnerships and supply chain
- Designed for **high efficiency and minimal environmental impact**
- Expansion supports long-term margin profile of ~50%

### Why Utilities Use Reactivated Carbon

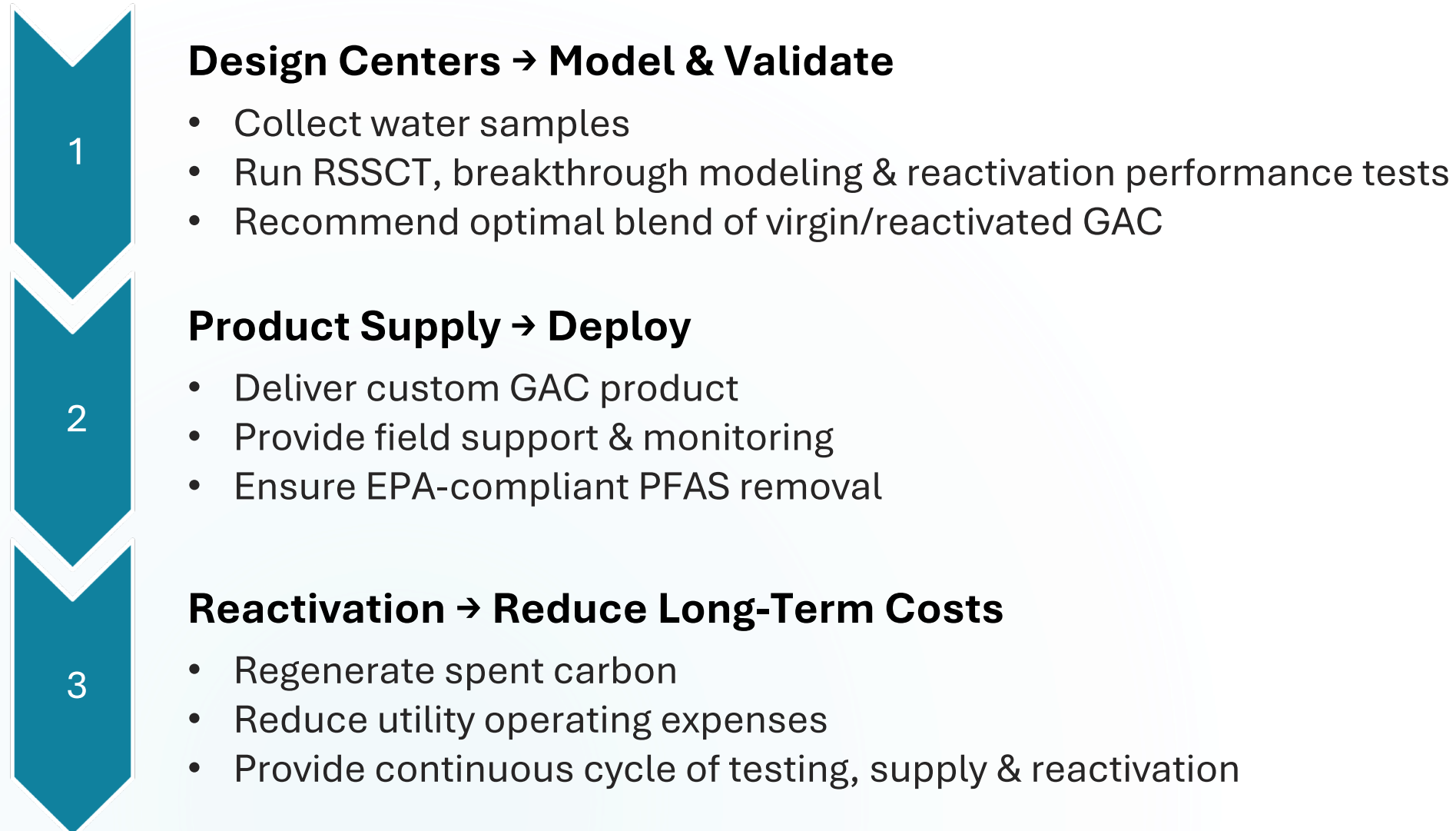
**Significantly reduces waste and cost of carbon supply.**

- Reactivated carbon has a **longer lifecycle** than virgin due to re-use
- Virgin GAC pricing has increased **50% over the last 18 months**
- Reactivated GAC costs **~50% less** than virgin GAC

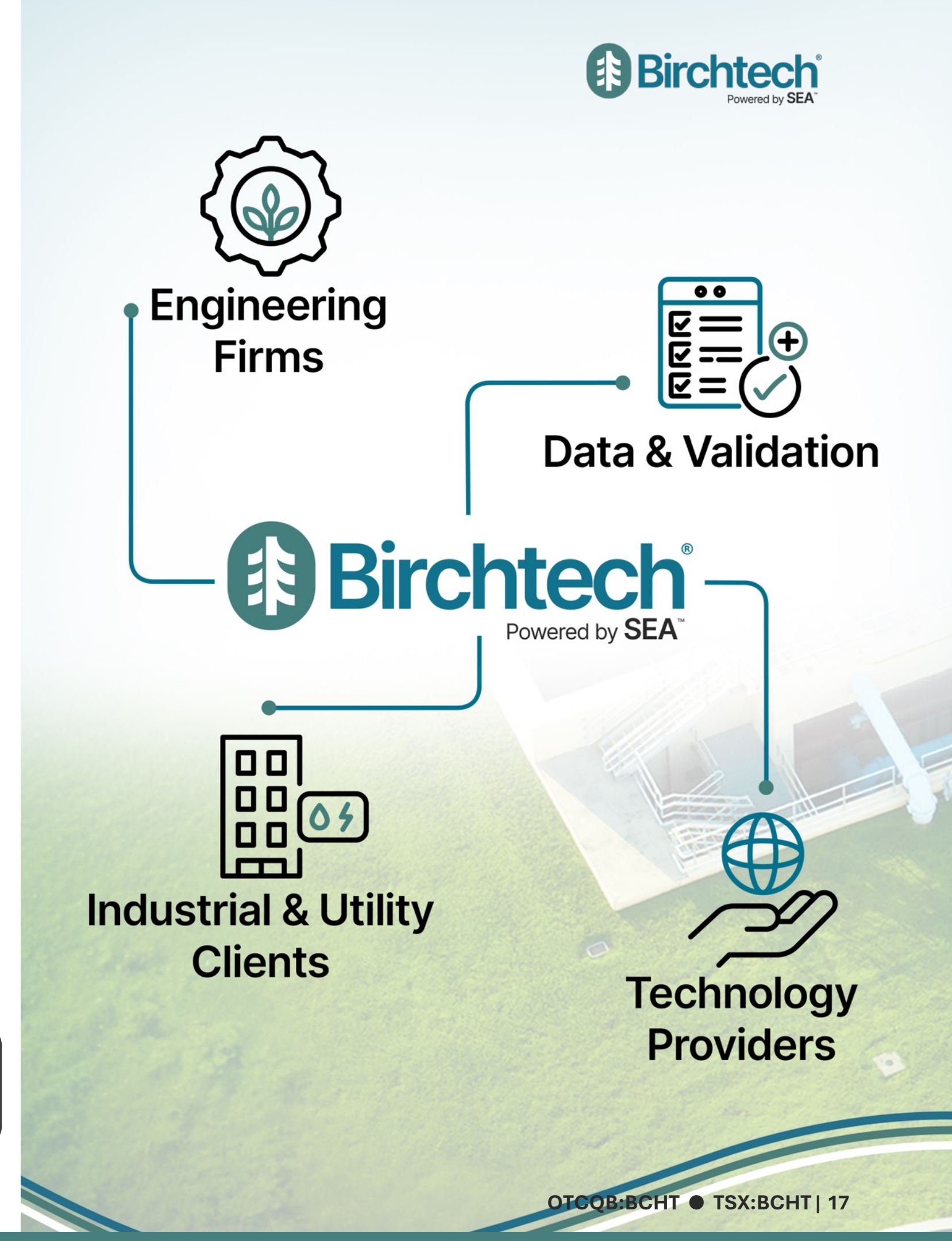


# Integrated Model: How Birchtech's Tiers 1–3 Work Together for Utilities

The seamless integration of Birchtech's three tiers creates a unique and powerful value chain, delivering sustainable and cost-effective PFAS compliance solutions for our clients.



**Result →** Recurring, high-margin, vertically integrated water business that reduces cost, speeds compliance, and outperforms traditional suppliers.





# Best-in-Class Executive Team

✓ 120+ collective patents in Activated Carbon Technologies    ✓ 20+ years of Government Agency Research    ✓ 100+ years of Combined Experience in Activated Carbon Technologies



**Richard Macpherson**  
Chief Executive Officer

**Company founder who successfully led the early development and commercialization of the firm's SEA<sup>®</sup> technologies.**

Over 25+ years in Executive Management roles across Canada and the U.S. for various industries, including communications, industrial production, and internet marketing firms.



**John Pavlish**  
Senior Vice President, Chief Technology Officer

**25+ years in mercury emission capture technology with over 70 patents.**

Inventor of multiple mercury control technologies with commercial applications. Industry experience - Energy & Environmental Research Center, Director of Center for Air and Toxic Metals, Black & Veatch Unit Leader.



**Fiona Fitzmaurice**  
Chief Financial Officer

**Strong financial management with publicly listed companies** in the exploration sector, private placements, prospectus, flow-through financing, and corporate audits. Chartered accountant with 15+ years of experience in accounting and financial controls for companies listed on the TSXV and other major entities.



**Jim Trettel**  
Executive Vice President of Operations

**Mechanical Engineer and material handling expert.** Senior project management background with expertise in coal utilities and supply chain.



**Dr. David Mazyck**  
Executive Director of Innovation & Commercialization

**PhD in Activated Carbons, extensive experience in developing highly successful commercialized activated carbon technologies.** Instrumental in driving Birchtech's success in the potable water treatment market.



**Dr. Nicholas Lentz**  
Senior Analytics Manager

**PhD in PFAS, extensive background in mercury research and testing.** Expert in the identification and development of new analytical methods for small-molecule analysis (including PFAS analyses) in a wide range of environmental matrices (air, soil, and water).



**Christopher Rinaldi**  
Director of Strategic Operations

**30+ years leading water treatment firms;** now advancing Birchtech's commercialization and partnerships in activated carbon solutions.

## BOARD OF DIRECTORS

**Richard Macpherson**  
Interim Chairman

**David M. Kaye**  
Director

**Troy Grant**  
Director

**Mitzi H. Coogler**  
Director



# Financial Summary

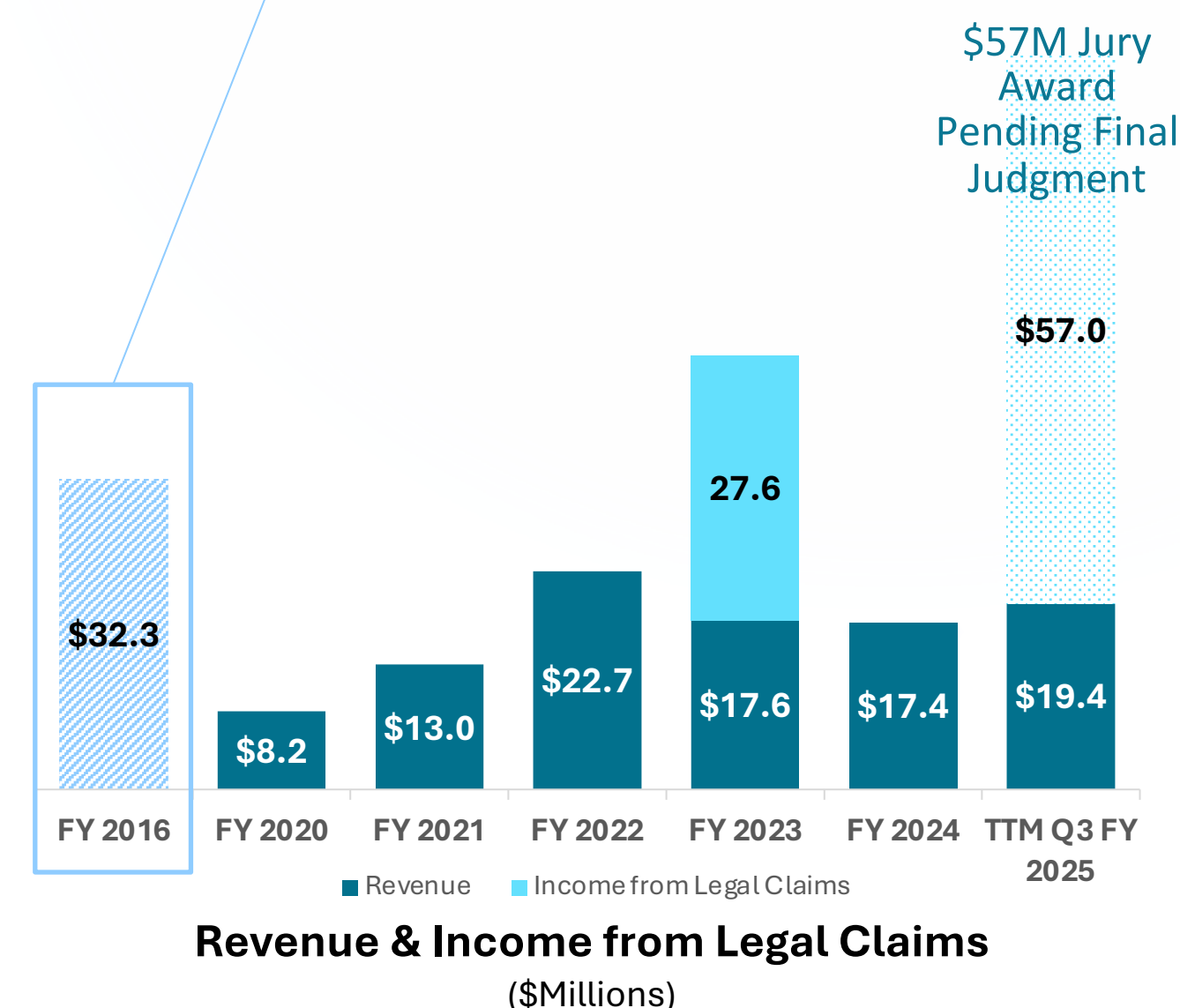
- **Recurring Revenue Base:** Air business provides strong recurring revenue base with +30% gross margins; water business to provide ~50% gross margins
- **Litigation Upside:** \$57M jury award & one-time licensing fees from new air business customers expected to provide meaningful cash to the business, which can be used to grow the water business, for share buybacks, and other value-additive strategies
- **Strong Cash Management:** Operating with low burn with significant optionality for near-term cash upside from air business as well as water business launch
- **Debt Repaid:** Repaid \$13.1M in debt in 2024, with no debt currently outstanding.

(USD \$ in Millions)	Fiscal Q3 2025	Fiscal Q3 2024	Fiscal Q3 2023	Fiscal Q3 2022
Revenue	\$7.4	\$5.2	\$6.8	\$7.5
Gross Profit Margin	54.8%	30.5%	33.7%	31.8%
Net Income (loss)	\$0.8	(\$0.5)	(\$0.8)	\$0.6
(USD \$ in Millions)	Sept. 30, 2025	Sept. 30, 2024	Sept. 30, 2023	Sept. 30, 2022
Cash & Cash Equivalents	\$1.8	\$4.4	\$2.5	\$1.3
Debt (Net of discount & Issuance costs)	\$0.0	\$0.0	\$10.9	\$13.0

\*For the Q3 period ending Sept 30, 2025

**Strong topline performance growing at 50% YoY via recurring revenue streams**

Core business represented \$30M+ in topline sales prior to IP infringement





# Upcoming Catalysts: Late 2025-2026

Strategic Growth, Settlements with Infringing Parties & Entrance Into \$1.5B Water Market



Following jury award of \$57 Million in March 2024, **final judgment from the U.S. Federal Court of Delaware expected in 2025**



**Additional water business sales expected during next few months following initial commercial sales (\$0.9M) in water treatment solutions announced in early Q3-2025**



**Targeting an uplisting to major U.S. exchange, expected by early 2026**



**Increased revenues through additional settlements** with infringing utilities in the form of licensing payments & new supply contracts



**Begin construction of GAC reactivation facility, permitting underway**



# Key Takeaways

## The Right Team, Disruptive Technologies, Recognized IP and Regulatory Tailwinds

### Our Team

- We have world class experts in activated carbon, allowing us to create **customized and effective environmental technologies** for air & water

### Regulatory Tailwinds

- \$1 billion in federal funding has been allocated for water monitoring systems
- EPA regulations for U.S. water utilities to capture PFAS beginning in 2027, over 50% of U.S. states have imposed own PFAS regulations

### Large, Addressable Markets

- **Stable, Profitable Air Business** – Revenue ramp underway, \$40M+ revenue opportunity
- **Massive, Underserved Water Business** – Custom solutions for municipalities to treat water economically & introducing disruptive new GAC technologies in \$1.5B U.S. water treatment market

### Strong IP Portfolio & Successful Enforcement Strategy

- \$57M awarded by jury (final judgment expected in 2025)
- \$35M in funds received to date from IP efforts (license agreements & settlements)

### Move into Water Business Underway

- GAC supply agreement valued at up to \$7M in revenue, additional water treatment sales over next few months
- Buildout of GAC facility commencing in 2025



# Leading Technologies for Cleaner Air & Water

## Corporate Office

📍 Manufacturing & Production Distribution Center  
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🌐 [www.birchtech.com](http://www.birchtech.com)

## Investor Relations

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