Management Briefing

Growth opportunity of the Activated Carbon business

June 19, 2026

KURARAY CO. LTD

Today's theme:

Growth opportunity of the Activated Carbon business

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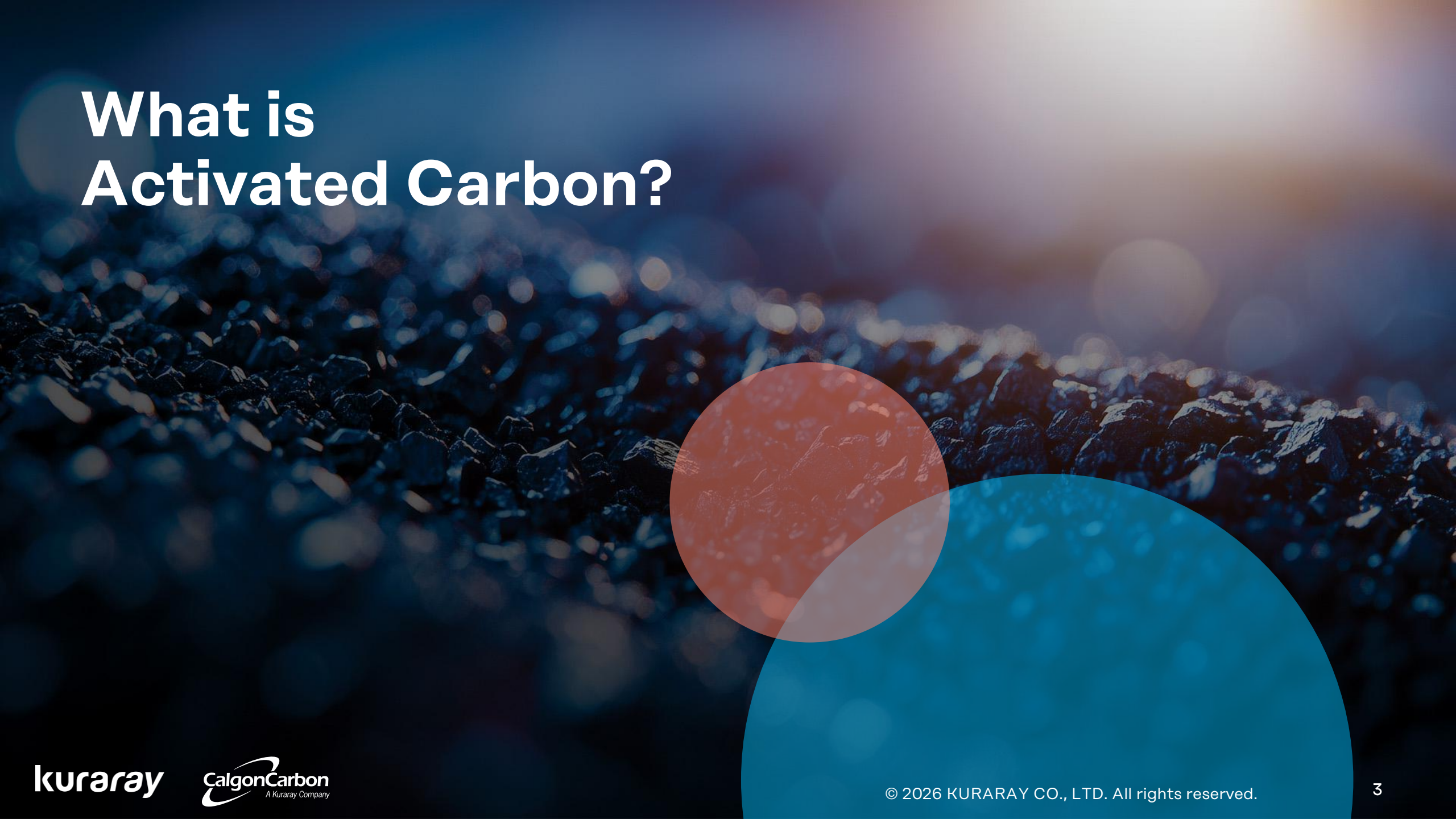
What is Activated Carbon?



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What is Activated Carbon?

Activated Carbon is a porous material that removes organic compounds from water and air as well as other liquids and gases by a process known as “adsorption.”

In adsorption, **organic molecules** contained in a liquid or gas are attracted and bound to the surface of the pores of the activated carbon as the liquid or gas is passed through.

Raw Materials for virgin carbon production:


Bituminous Coal


Coconut


Wood


Lignite

Broadest in the industry

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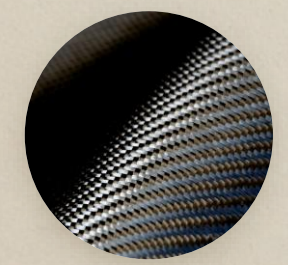
Broad portfolio:

Additional products & services as part of our full solution offering

Granular Activated Carbon Reactivation

Carbon Adsorption Equipment


Carbon cloth (viscous rayon)


Wet Molded Carbon Block


Carbon Sheets


Ongoing Innovation

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Helping customers & society across six key markets

2025 activated carbon and related sales volume percentage

35%
Approx. Sales Volume

Drinking Water

20%
Approx. Sales Volume

Wastewater

10%
Approx. Sales Volume

Food & Beverage

15%
Approx. Sales Volume

Air Treatment

< 15%
Approx. Sales Volume

Industrial Process

< 10%
Approx. Sales Volume

Specialty

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Overview of the U.S. PFAS drinking water regulations

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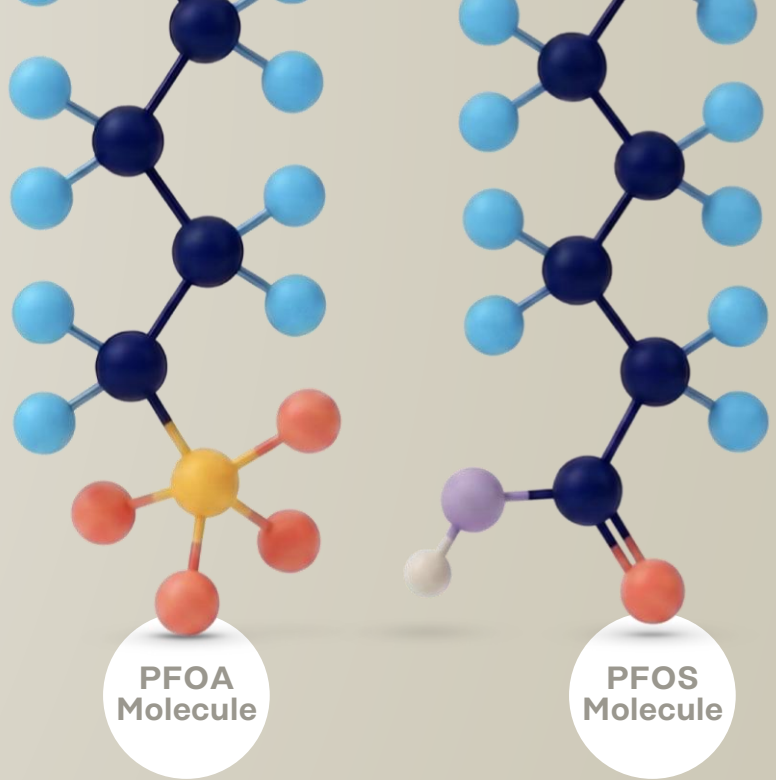
Forever Chemicals and the U.S. path to compliance



Understanding PFAS

- Poly- and Perfluoroalkyl Substances
- Characterized by carbon bonded with multiple fluorine atoms
- Class of synthetic fluorinated compounds originating in the 1940s
- Referred to as “forever chemicals” due to high resistance to degradation in the environment and ubiquitous in most water supplies
- Toxicological studies demonstrate adverse health effects through exposure at very low concentrations

The U.S. Compliance Outlook

PFOA
4 ppt
MCL*

PFOS
4 ppt
MCL*

PFNA
Under Reconsider-ation

PFHxS
Under Reconsider-ation

GenX
Under Reconsider-ation

*MCL: Maximum Contaminant Level

Timeline (per May 2026 Release) :

3 years monitoring +
2 years for treatment =
April 2029 compliance
with potential for 2-year extension

Early adoption due to state regulation, public pressure, etc. is expected.

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Expected demand growth

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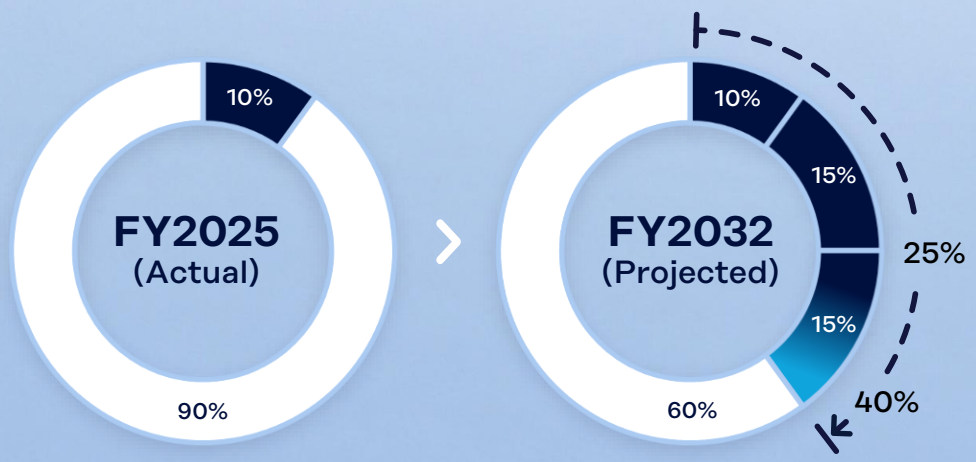
PFAS is everywhere. GAC is the answer.

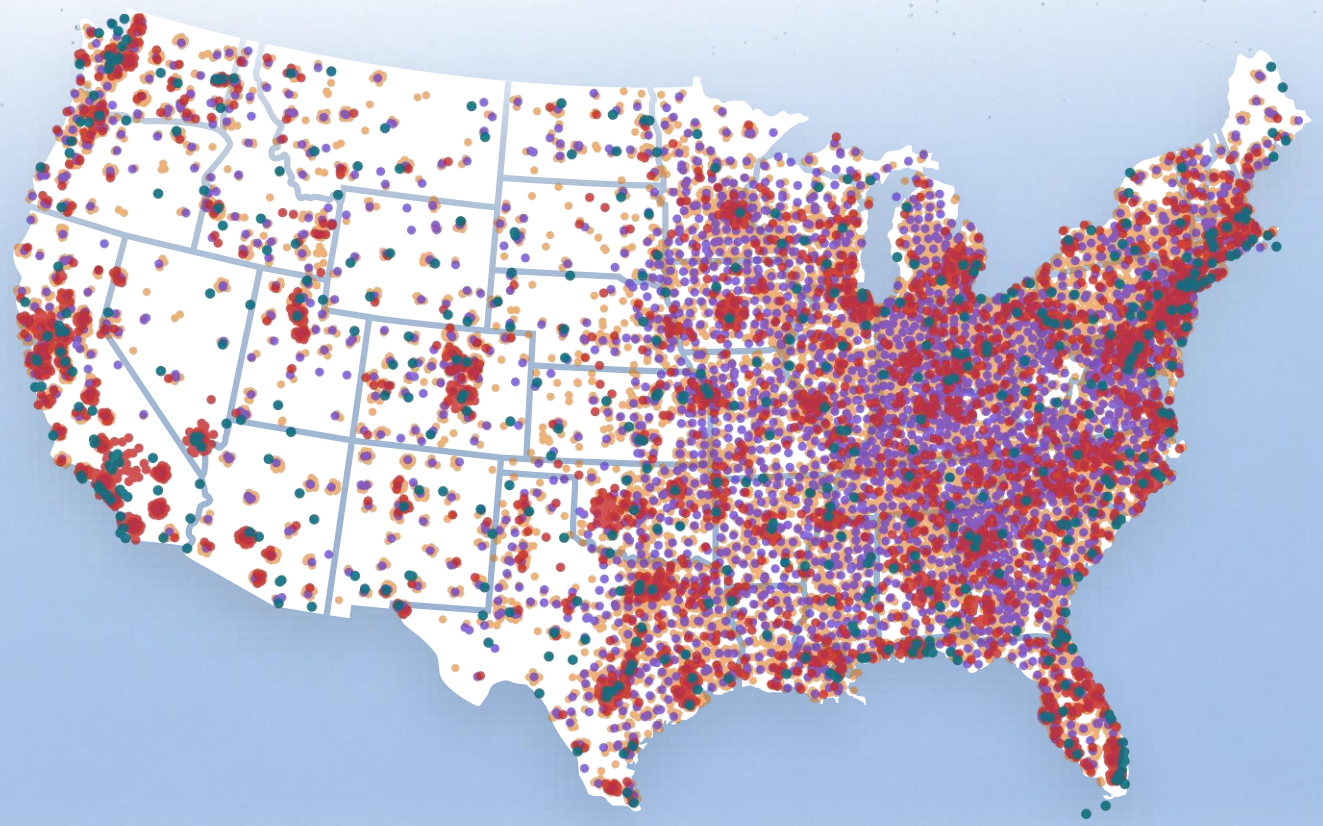
- The volume of drinking water treated with GAC should increase by at least 2.5x to comply with PFAS regulations.
- In addition to more utilities using GAC, change out frequency will increase by 2x–4x.

Market use of GAC:



- The U.S. Drinking Water Treated with GAC
- The U.S. Drinking Water NOT Treated with GAC

The U.S. PFAS Occurrence Map



- Known users of PFAS
- Suspected users of PFAS
- Sewage & waste treatment
- Landfills & Waste Disposal
- Airports using PFAS

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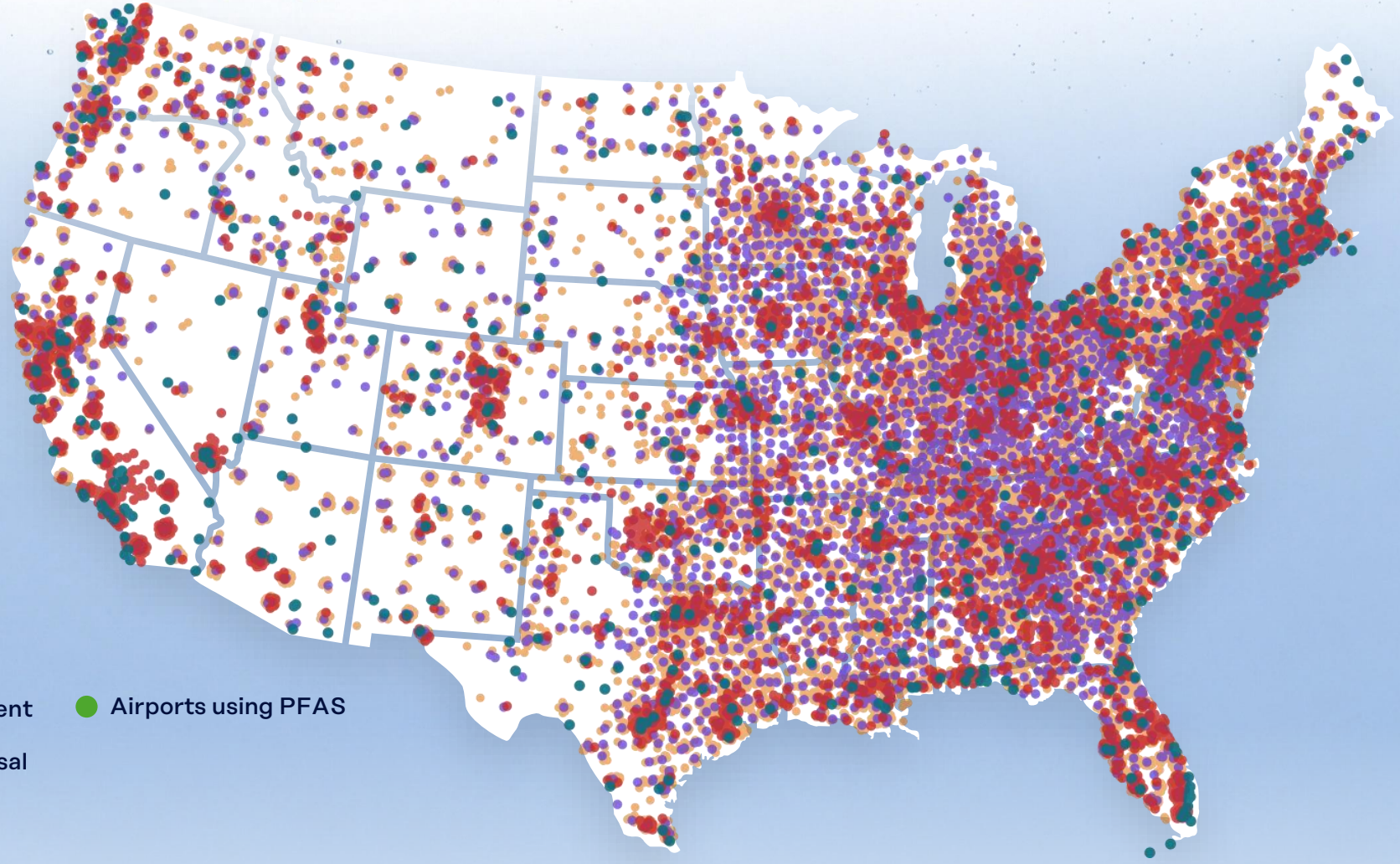
The U.S. PFAS Occurrence Map



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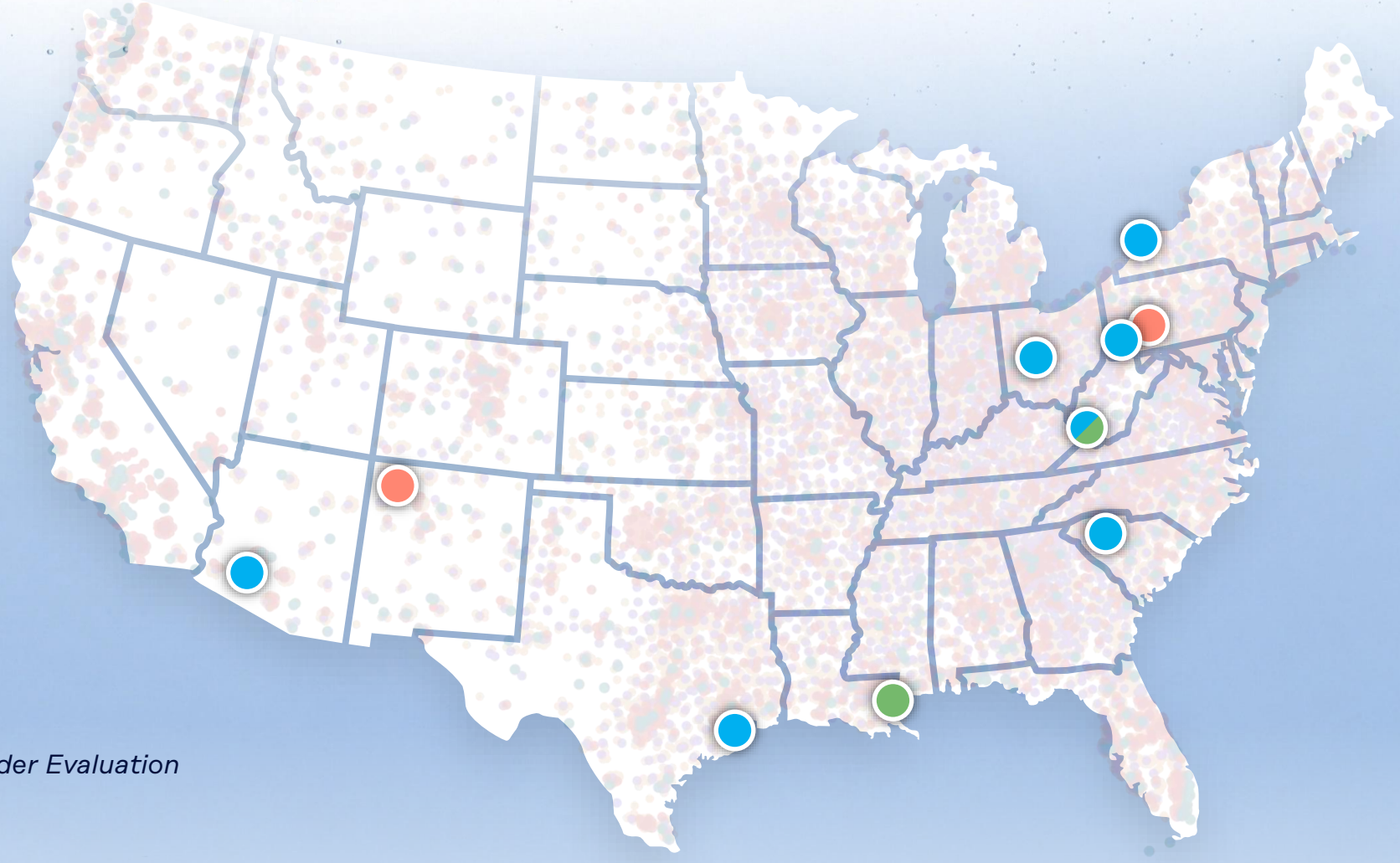
PFAS is everywhere. GAC is the answer.

Calgon Carbon the U.S. manufacturing locations:

- **Virgin Carbon Production**
  - Big Sandy, Kentucky[2]
  - Pearl River, Mississippi
- **Reactivation**
  - Pittsburgh, Pennsylvania[1]
  - Columbus, Ohio[1]
  - Gila Bend, Arizona[2]
  - Big Sandy, Kentucky[2]
  - North Tonawanda, New York
  - Crosby, Texas[1,2]
  - Tyger River, South Carolina[2]
- **Equipment Production**
  - Pittsburgh, Pennsylvania[1]
  - Bloomfield, New Mexico[1]



Footnote Explanation:

[1]Expansion Approved & in Progress, [2]Expansion under Evaluation

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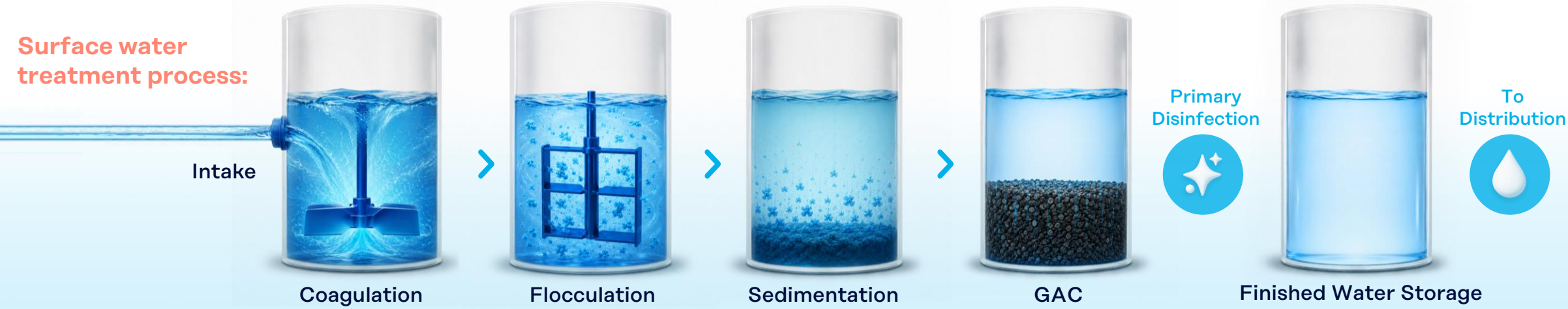
The U.S. EPA Acknowledged. Field-Proven. GAC Wins.

Comparing the EPA's three Best Available Technologies (BAT)

	Operating Costs	Capital Costs	Effectiveness	End of Life
 **Granular Activated Carbon** (GAC)	✓ Low product cost, multi-contaminant removal, no energy consumption	! Equipment and infrastructure investment, larger footprint vs. IX	✓ Effective for long and short chain, design and treatment goals must be considered	✓ Reactivation is a sustainable and cost-effective option for PFAS treatment
 **Ion Exchange Resin** (IX)	! Higher product cost, fouling concerns, limited simultaneous removal	! Equipment and infrastructure investment, smaller footprint vs. GAC	✓ Effective for long & short chain, design and treatment goals must be considered	✗ Must landfill or incinerate spent media, which is costly
 **Reverse Osmosis** (RO)	✗ High energy cost, high maintenance and membrane replacement cost	✗ Higher overall project costs vs. GAC & IX	✓ Effective for long & short chain, design and treatment goals must be considered	✗ Must landfill or Reject water disposal requires incineration or deep well injection, which is costly

Drinking water treatment basics

Surface water treatment process:



Ground water treatment process:

Treatment needs will differ by process. Based on > 90% of utilities reporting results, 60% of water requiring PFAS treatment will be surface water and 40% ground water.

Simultaneous contaminant removal

EPA lists GAC as a Best Available Technology for multiple contaminants found in drinking water

Additional regulation is anticipated or under evaluation which would further drive demand.

Per- and Polyfluorinated Compounds (PFAS)

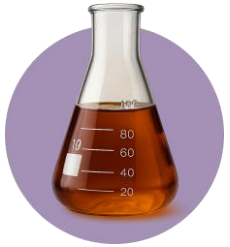
- PFOA
- PFOS
- PFHxS
- PFNA
- HFPO-DA (GenX)
- PFBS

Disinfection Byproducts (DBPs)

- Total Trihalomethanes (TTHMs)
- Haloacetic Acids (HAA5s)
- Nitrosamines

Pesticides

- Dieldrin
- Glyphosate
- Atrazine
- Carbaryl

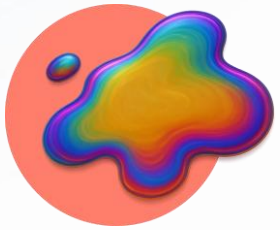


Carcinogenic VOCs

- TCE
- PCE
- 1,2,3-TCP

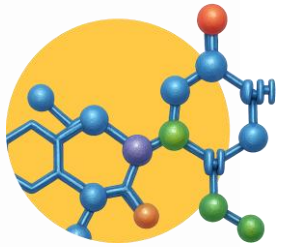
EDCs and PPCPs

- Pharmaceuticals
- Growth hormones
- Caffeine



Defense Barrier

- Chemical Spills



Algal Toxins

- Microcystin
- Cylindrospermopsin
- Anatoxin A

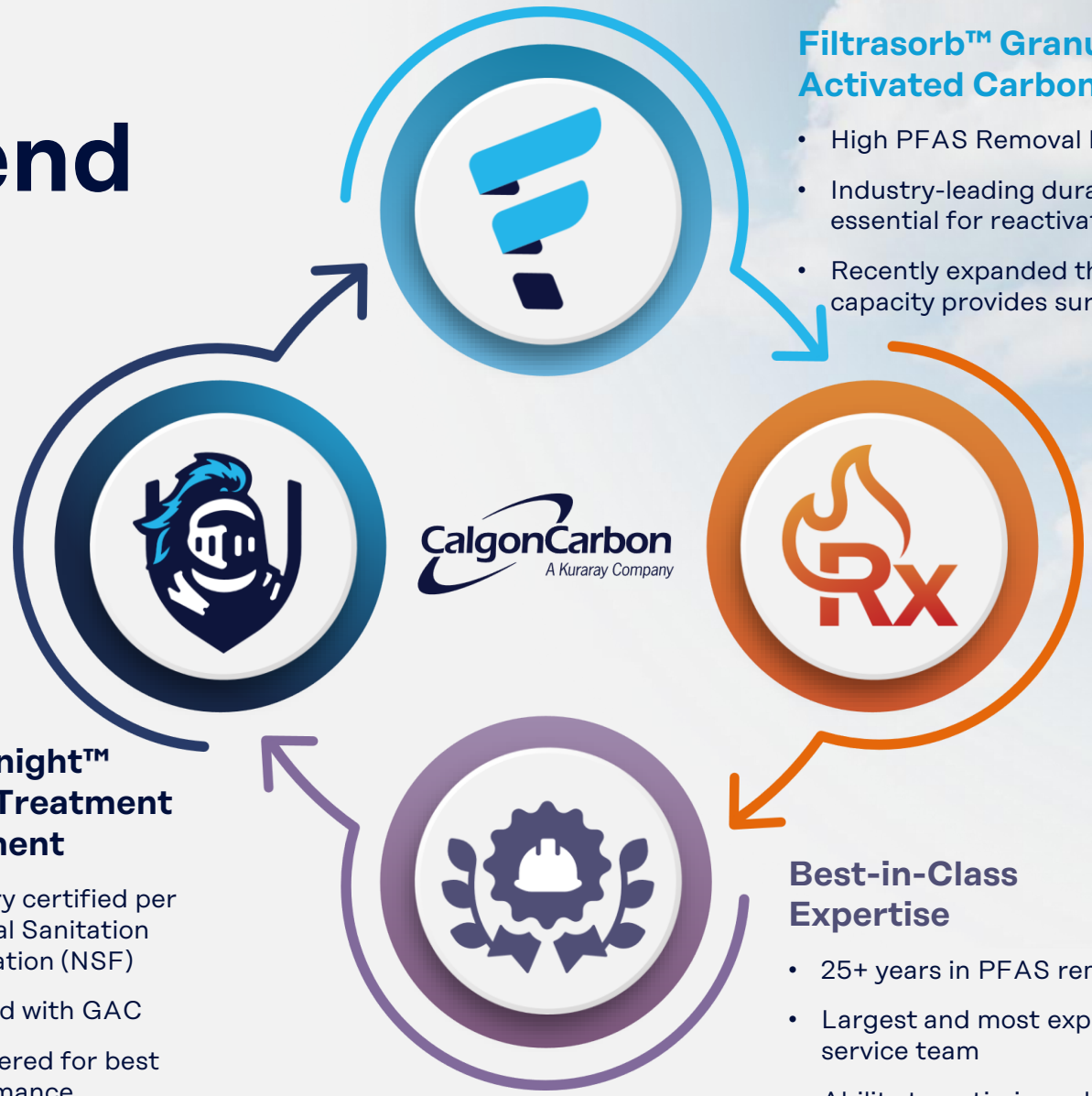
Plastics Manufacturing

- Phthalates
- Bisphenol A (BPA)
- Nanoplastics

Calgon Carbon: the only end-to-end PFAS solution provider

Four strengths. One advantage.

- Closed-loop customer journey
- Most extensive PFAS portfolio in the market
- Proven at municipal scale
- Broad platform model with recurring value streams



Filtrasorb™ Granular Activated Carbon

- High PFAS Removal Performance
- Industry-leading durability essential for reactivation
- Recently expanded the U.S. capacity provides surety of supply

Filtrasorb Rx™ Reactivated Carbon

- Equivalent or better than virgin for PFAS
- Proven removal and destruction of PFAS
- Sustainable approach at end of life

Best-in-Class Expertise

- 25+ years in PFAS remediation
- Largest and most experienced field service team
- Ability to optimize solutions through laboratory and pilot testing

AquaKnight™ Water Treatment Equipment

- Industry certified per National Sanitation Foundation (NSF)
- Bundled with GAC
- Engineered for best performance

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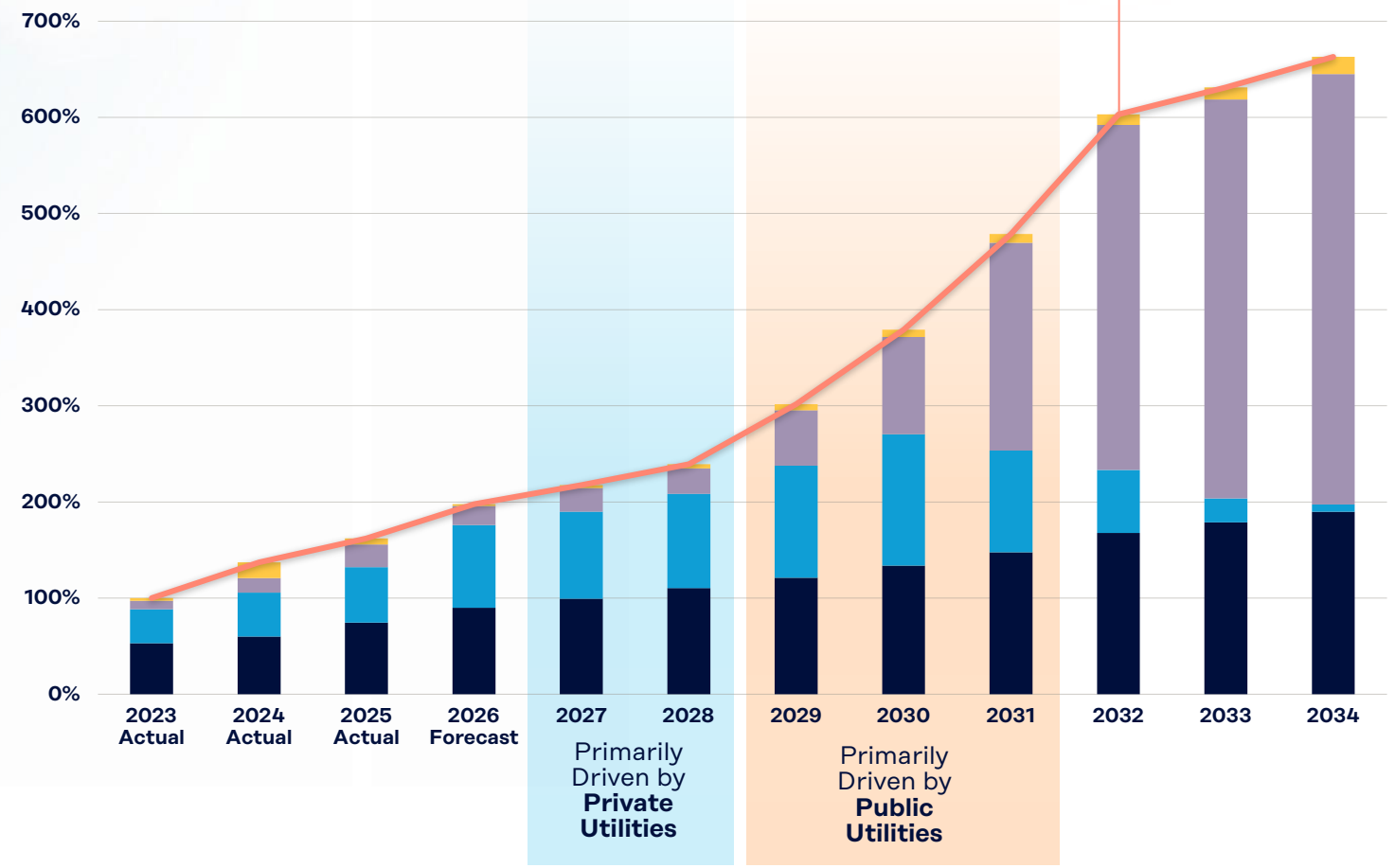
Expected demand growth for drinking water in the U.S.

- The U.S. PFAS water treatment market estimated at $1.0B to $2.0B in 2032.
- We believe activated carbon will represent ~75% of the market.
- Total solution offering positions us to capture more than half of the demand.

Calgon Carbon the U.S. drinking water PFAS-only revenue growth. (2023 as 100%, Low End of Range):



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Private versus public water utilities in the U.S.

Market structure and investment implications

Private utilities are more motivated to invest & driving early adoption of PFAS.

	Private utilities (~10% population coverage)	Public utilities (~90% population coverage)
Characteristics	• Investor-owned utilities (IOUs) • Consolidated (top players dominate) • Strong balance sheet & access to capital	• Municipally owned and operated • **Large number,** diverse and locally governed • Dependent on public budgets and subsidies
Investment behavior	• **Faster regulatory compliance** • **Ability to sign long-term contracts**	• CAPEX sometimes constrained • Typically restricted on contracting

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Significant progress to realizing growth in U.S. drinking water

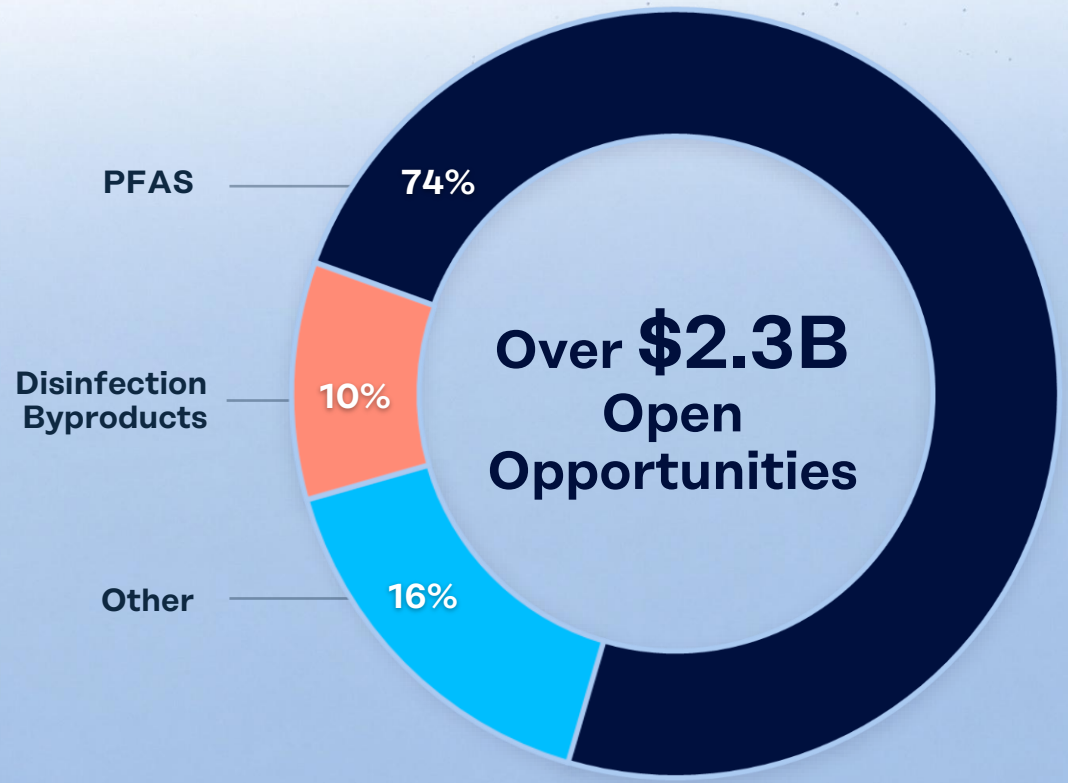
Regulatory support from EPA reinforces demand growth

Mainly private utilities

- **Multi-year contracts**
  with 7 of 8 largest private water utilities (>$250MM)

- **Equipment backlog:**
  ~ $90MM (2026–2028), including private water utilities

Private and public utilities



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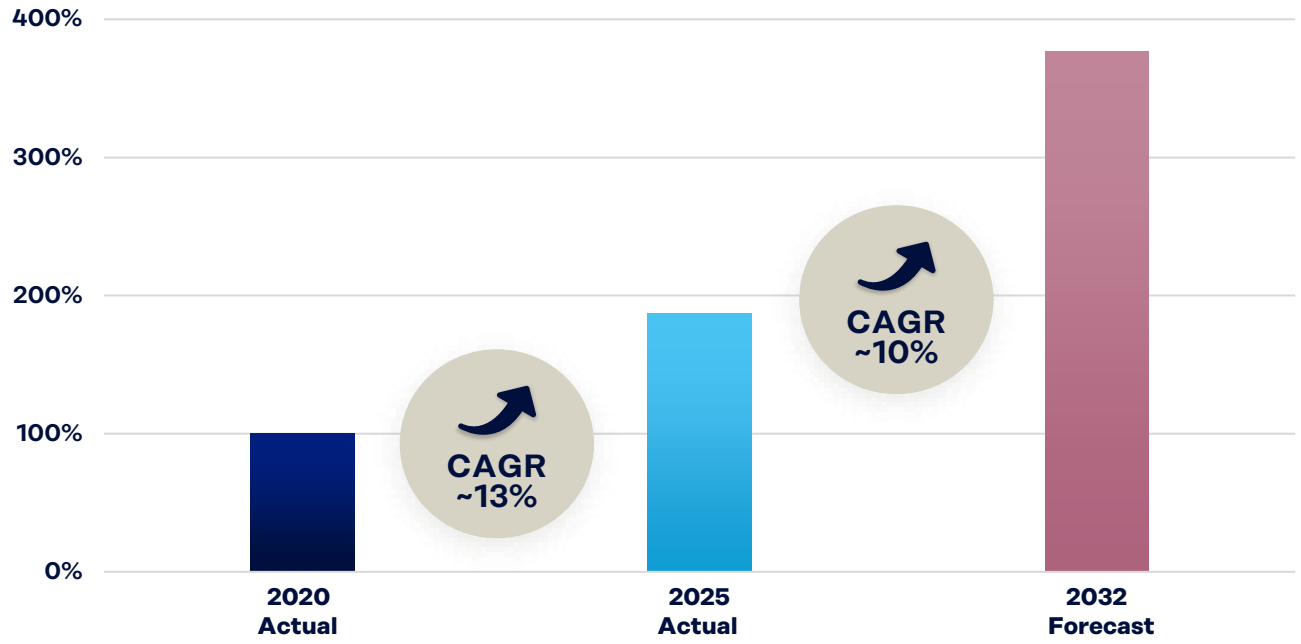
Growth drivers in EU market

- **Strong demand** (>11% CAGR) for remediation and wastewater treatment.
- Demand expected to **keep growing through 2032.**

Volume growth in industrial reactivation:



Future growth drivers:

- **4th Treatment Step**

  EU-wide requirement to remove micropollutants from wastewater.

- **Industrial Emissions Directive (IED)**

  Stricter limits for ~5,000 plants. Activated carbon is a key Best Available Technology.

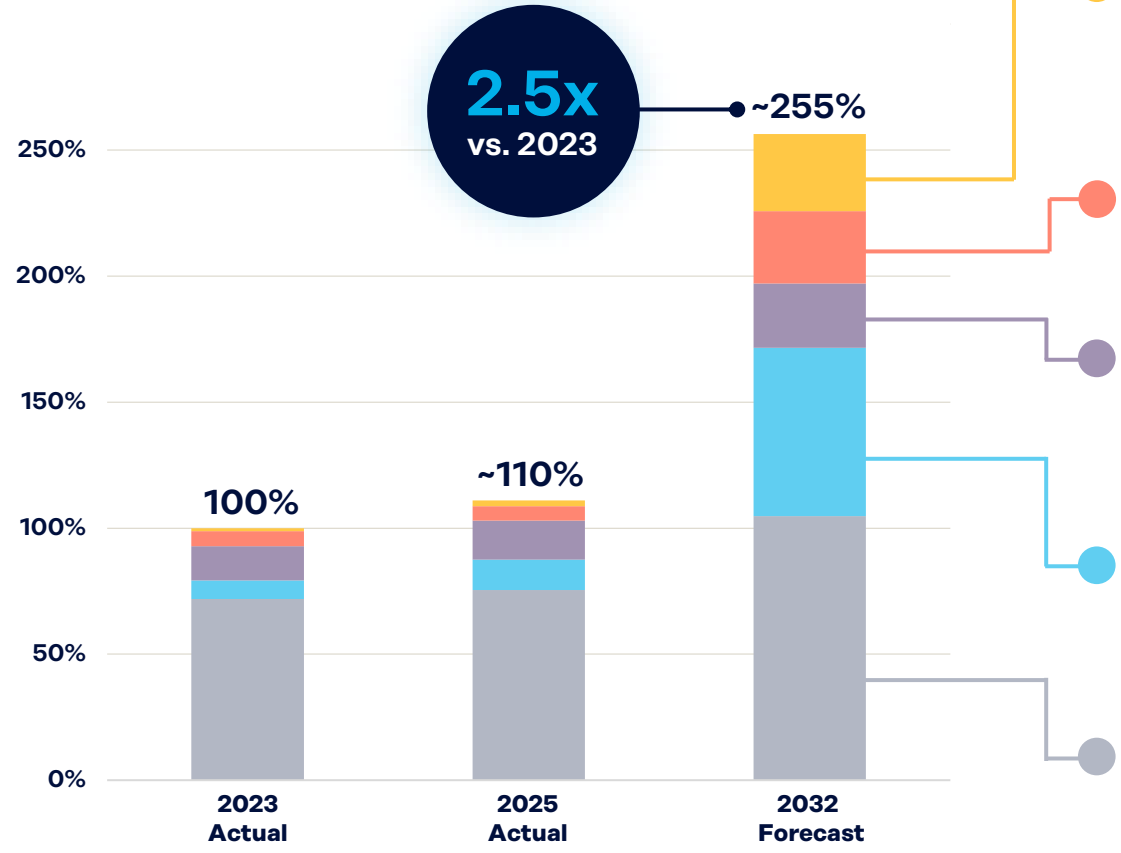
- **PFAS & Remediation**

  New EU water rules driving tighter limits and permit updates.

Environment Solution Division's strong growth forecast from PFAS & other markets

Though delayed, growth from **PFAS treatment for the U.S. drinking water will be strong** and additional growth is expected from other markets and applications

ESD's total global revenue growth:



Others

Growth in other markets including biogas, battery materials and stricter air & water regulations beyond PFAS.

Other — the U.S. drinking water, including DBP III

Additional regulatory requirements for the U.S. Drinking Water.

PFAS — the U.S. industrial & other regions

Demand for PFAS for non-drinking water markets in the U.S. and treatment in Europe & Asia.

PFAS — the U.S. drinking water

Growth from established the U.S. Drinking Water Regulations for PFOA & PFOS

Base business

Organic growth of legacy business driven significantly by demand imbalance and upward pricing

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- The performance forecasts, outlooks, and business plans described in this document are based on current assumptions and estimates regarding future business environments and economic conditions. Please be aware that actual performance may differ from these projections.