

Initiatives for Sustainable Growth through the Activated Carbon Business



Stevan R. Schott

Executive Officer
General Manager of Environmental Solutions Division and
Calgon Carbon Corporation President

Helping to Provide Safe and Secure Drinking Water around the World Including Effective PFAS Treatment

— What are PFAS?

Trends Toward Regulatory Tightening to Ensure Drinking Water Safety

Drinking water, which is essential in human activity, contains a variety of compounds that are invisible to the naked eye. Concerns have been raised in recent years over the presence in drinking water of per- and polyfluoroalkyl substances (PFAS), a group of man-made compounds that have carbon-fluorine bonds.

Due to their unique properties, including high chemical stability and resistance to water and oil, PFAS are used across a broad range of applications, such as cooking utensils, food packaging, and paints.

However, as it is extremely difficult for these compounds to break down in nature, they can bioaccumulate in the human body over time, causing negative health effects including an elevated risk of cancer, which has led to tightening environmental regulations worldwide.

In April 2024, the U.S. Environmental Protection Agency (EPA) decided to tighten the nation's drinking water standards to limit exposure to PFAS, requiring drinking water utilities across the United States to be compliant by April 2029. For their part, countries in Europe and Asia are considering strengthening regulations on all PFAS.

As Is: Where We Stand

Market needs

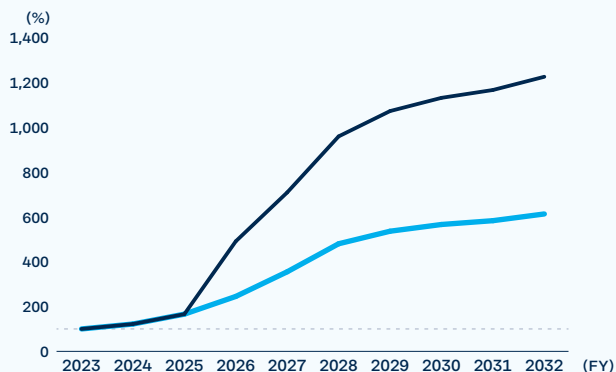
How Our Products Help Customers and Society

- Provide clean, safe drinking water
- Reduce environmental impact by allowing wastewater reuse or disposal
- Remove and recover contaminants from air emissions
- Enhance critical stages in chemical manufacturing
- Improve the environment through remediation projects
- Purify food and beverage products
- Enable electrification and reduce VOC emissions for automotive industry
- Protect personal environments

Revenue Growth Forecast for PFAS Removal Applications in U.S. Drinking Water

*Setting 2023 as 100% (Calgon Carbon Corporation)

— Amount of water treated to remove PFAS: 15% increase (low end of forecasting range)
— Amount of water treated to remove PFAS: 30% increase (high end of forecasting range)



Kuraray's competitive advantages

Total Solutions Provider

FILTRASORB™ virgin granular activated carbon

- Consistently demonstrates superior performance for PFAS removal
- The high durability of FILTRASORB™ minimizes wear during reactivation
- Stable product supply system
- New production line helps ensure a robust supply system

Large-scale purification equipment

- Engineering expertise to achieve superior performance in a variety of systems
- Equipment certified by the National Sanitation Foundation (NSF)

Drinking water reactivation

- Performance equivalent to virgin activated carbon
- Proven effective for removal, destruction of PFAS compounds
- Offered in combination: collection of spent carbon, reactivation, equipment refill

Expertise, services

- Knowledge gained over 25 years in PFAS treatment
- Large, experienced field service team delivering touch-free service
- Customer solutions optimization through pilot and laboratory testing

Special Feature Initiatives for Sustainable Growth through the Activated Carbon Business

— Strengths of Kuraray Group's Activated Carbon Technologies

Among the PFAS removal technologies recommended by the EPA, activated carbon-based technologies are considered a best available technology, which we believe demonstrates superiority over other methods in terms of low operating cost, simplicity of use, and the high efficiency of PFAS removal.

However, the production of virgin activated carbon generates large amounts of CO₂. Use of reactivated carbon is an effective means of surmounting this problem. Reactivated carbon, made by treating spent activated carbon in a high-temperature furnace, recycles spent activated carbon and reduces CO₂ emissions by 80% while also breaking down the PFAS adsorbed onto the spent activated carbon, enabling safe disposal.

Kuraray's great strengths lie in our technologies and groundbreaking expertise amassed over many

years of manufacturing activated carbon, which enable us to provide comprehensive solutions from system and facility design through to the sale of virgin activated carbon and reactivation of spent activated carbon. No other company can offer such solutions globally and on the same scale.

In terms of reactivated carbon in particular, Kuraray has the largest production capacity in the world. We are also the only*¹ company to have published research on the effectiveness of reactivating spent activated carbon containing PFAS in a peer-reviewed journal—in fact, the U.S. EPA cites our work.

— Outlook for the Growth of the Activated Carbon Business

We estimate the U.S. drinking water PFAS treatment market to grow to \$1–\$2 billion annually by 2030*². We accordingly forecast a sales CAGR of 10%–13% through 2030 for the Environmental Solutions

Division (activated carbon business).

Expanding production capacity is a vital issue to meet future demand growth. At the same time, we are implementing comprehensive environment, health, and safety programs surrounding PFAS globally and are working to reinforce appropriate management of spent activated carbon containing PFAS collected from customers.

In January 2025, we announced a long-term contract with the largest private water and wastewater utility company in the United States to provide comprehensive services ranging from the supply of virgin and reactivated carbon to the supply of associated specialized equipment. As a global leader in PFAS treatment using activated carbon, we aim to continue contributing to the betterment of society and the environment.

*¹ As of December 2024

*² Total demand forecast, including all technologies and associated equipment

To Be: Where We Are Headed

Enhance social and environmental value

Increase Supply Capacity while Lowering Environmental Footprint

Social Issues to Be Addressed

- U.S. PFAS treatment opportunities beyond drinking water (industrial wastewater, food and beverage)
- Tightening of PFAS regulation in other regions (Europe, Asia)
- Trends toward stricter regulations for chemicals other than PFAS in air and water
- CO₂ emission as byproduct in production processes

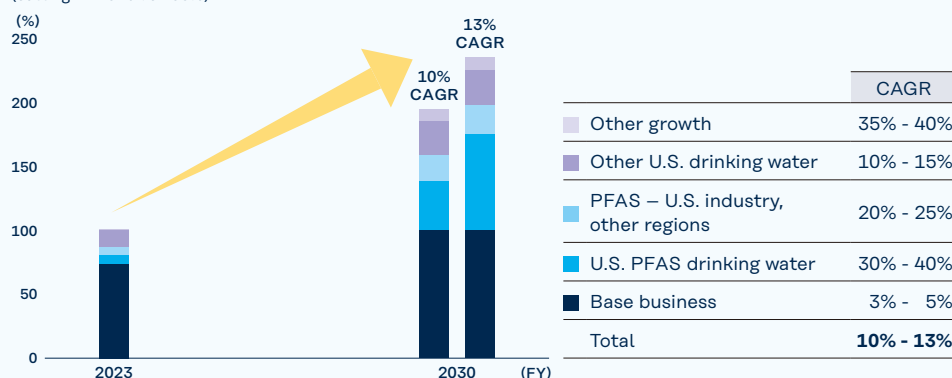
Kuraray Initiatives

- Ensure supply capacity covering every country and region
- Reduce CO₂ emitted as a byproduct in activated carbon production processes, build a system for Carbon dioxide Capture, Utilization, and Storage (CCUS)
- Reduce environmental footprint through use of reactivated carbon, contributing to a circular economy

Enhance economic value

Revenue Growth Forecast in Environmental Solution Division

(setting FY2023 as 100%)



CAGR of 10% or more through FY2030