

## **Orbital Biocarbon, PYREG Partner to Transform Wastewater Sludge Disposal into Regulation Compliant, Carbon Negative and PFAS-Free Profit Center**

- PYREG strengthens its US wastewater sludge market capabilities by deepening ties with Orbital Biocarbon, a US waste manager and project developer.
- EPA confirms PYREG's technology at Silicon Valley Clean Water Utility destroys PFAS in wastewater sludge.
- Orbital Biocarbon owns and operates facilities that transform wastewater sludge into PFAS-free, commercial fertilizer, at a much lower cost than other disposal methods.
- Orbital provides upfront capital for projects via future CO<sub>2</sub> removal credit sales.

**Pittsburgh, Pennsylvania; Dorth, Germany – (April 17, 2024)** – Orbital Biocarbon, a leading Pittsburgh-based project development and finance company, specializing in wastewater sludge disposal solutions for wastewater utilities, made public today, its partnership with PYREG, a global leader and manufacturer of carbonization technology.

Using PYREG's technology, Orbital Biocarbon transforms wastewater sludge by non-combustion heating at high temperatures to produce salable biochar, a commercial-grade fertilizer or durable building material additive, renewable energy and CO<sub>2</sub> removal credits.

Last week, the EPA implemented new regulations mandating water utilities to monitor and eliminate "forever chemicals" (PFAS) from their water supply. PFAS chemicals, often found in wastewater sludge, pose risks to public health if they infiltrate the water system via landfill leachate or runoff from land-applied wastewater sludge. PYREG's technology plays a crucial role in addressing this issue by destroying these PFAS contaminants, thus helping water utilities meet EPA requirements and safeguard public health.

"Over the past 18 months, we have brought PYREG's compact, modular and easily integrable technology to scores of wastewater treatment plants, many of which are in varying stages of implementing our solution," said John Day, President of Orbital Biocarbon.

"Like PYREG, Orbital Biocarbon shares our core values of integrity, transparency and attention to the needs and expectations of our customers. Working together for these many months has served to reinforce our conviction that our selection of Orbital Biocarbon as a premier channel into the US wastewater sludge disposal market was and continues to be an excellent decision," said Jorg zu Dohna, CEO of PYREG.

Orbital Biocarbon offers a comprehensive solution, securing private capital to construct, own and operate on-site wastewater sludge disposal facilities. Wastewater utilities can now bypass public debt financing and operational risks while realizing value from their wastewater sludge.



Orbital Biocarbon also offers project development and PYREG technology solutions for wastewater utilities that prefer to own and operate these best-in-class plants.

A key component of Orbital Biocarbon’s ability to finance these sewage sludge treatment projects relates to Orbital’s skill in obtaining upfront capital via the sale of future CO<sub>2</sub> removal credits, even before the projects that create the CO<sub>2</sub> removal credits are completed.

As one established project capital provider put it: “By incorporating modest discounts to established exchange-based pricing of CO<sub>2</sub> removal credits, we are willing to pay for CO<sub>2</sub> credits today, even before Orbital’s plants are completed. Such is our level of confidence in this approach to wastewater sludge disposal. It’s good for our carbon capture requirements, and it’s good for climate change mitigation.”

The Orbital Biocarbon/PYREG partnership recognizes that the public need for their solution is urgent across the United States.

Rob Luksis, Chairman of the Canonsburg-Houston Joint Sewer Authority (CHJSA), located outside of Pittsburgh, PA, commented: “When we first met with Orbital Biocarbon, LLI Engineering and PYREG, I was surprised by how much value could be extracted from our wastewater sludge.

Mr. Luksis continued: “To think that the only choice that we thought we had at that time was to drive diesel truckload, after diesel truckload of wastewater sludge to the closest landfill, in hopes that the landfill could bury it, and, mind you, charge us a lot to bury it, and then hope that it did not leak out any time soon, was absurd.”

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## **Background Information**

### Other Individuals Choosing to Comment on Today’s Announcement:

LLI Engineering President, Jamie White, P.E., commented: “We are excited to be engineering PYREG-based wastewater sludge disposal systems with Orbital Biocarbon. PYREG’s proven technology, deployed in over 60 commercial-scale operations, provides us with valuable operating data. LLI Engineering is tailoring the designs to specific local details and circumstances. We believe this will save municipal sewer authorities millions of dollars that will be passed onto their customers.”

PYREG’s Chief Sales Officer, Robert Kovach, commented: “We have been thoroughly impressed with Orbital Biocarbon, and its capable and dedicated professionals. From Orbital’s most junior financial modelers to its project managers to John Day, the company’s young, energetic and entrepreneurial president, a Washington County, Pennsylvania native, the company has assembled an exceptional team. With a clear focus and urgency, Orbital Biocarbon is committed to enhancing cost-effectiveness for wastewater utility clients while prioritizing environmental stewardship.”

Mr. Kovach added: “As a sales executive, I am always impressed when a company removes barriers from clients to make important operational improvements. In the aging and capital-intensive wastewater treatment industry, Orbital gets high marks for its ability to help clients finance projects, often without clients needing to utilize their capital.”

West Virginia-based Hope Utilities CEO, Morgan O’Brien said: “The need for safe wastewater sludge disposal is paramount for wastewater utilities. I am committed to facilitating the adoption of Orbital Biocarbon’s innovative PYREG-based solutions in the Appalachia market, where they have already made significant progress. This aligns with the importance of introducing cutting-edge technologies and business practices that spur job creation and enhance business competitiveness, in West Virginia and greater Appalachia.”

#### Relevant Past Projects Developed by Orbital Biocarbon:

- The multi-billion-dollar regionalization and asset bundling initiative for Allegheny County’s wastewater system, including its central wastewater plant upgrade.
- The \$500 million water and wastewater treatment project for the Erie, Pennsylvania Water Works, ensuring regulatory compliance and improving wastewater treatment cost-effectiveness.
- The Allegheny County’s district energy system privatization, including the upgrade and decentralization of energy, heat and water/waste services.
- The first and only United States full-island commercial airport microgrid at Pittsburgh International Airport, providing all energy and waste services at the airport.
- Designing, building, owning and operating AK Steel’s wastewater treatment plant at its Middletown, Ohio steel-making facility.
- The building, owning and operating of microgrid energy and waste assets for hospitals in the Allegheny Health Network.
- The development and building of a group of energy and waste assets for Peoples Gas, recently sold to Cordia Energy for over \$150 million.
- The integration of Chester Engineers’ wastewater treatment assets into Canada-based Hatch Corporation, a world leader in natural resource-related infrastructure projects.

#### **About Orbital Biocarbon**

Orbital Biocarbon, a leading waste manager and project developer for wastewater utilities, integrates design, engineering, finance and construction to deliver comprehensive wastewater sludge disposal solutions for municipal and privately owned wastewater utilities. Utilizing PYREG’s technology, Orbital addresses the need for sustainable and regulatory-compliant solutions in a market consisting of more than 17,000 treatment plants, generating 30 million tons of wastewater sludge annually.

Through long-term sludge purchase agreements, Orbital guarantees reliable, cost-effective and carbon-negative solutions, emphasizing public health and environmental preservation and financial stability for wastewater utilities.

For more information about Orbital Biocarbon, visit [orbitalbiocarbon.com](http://orbitalbiocarbon.com)



## About PYREG

PYREG is a world-leading manufacturer of machines for carbonizing organic waste (various biomasses, including wood waste, wastewater sludge, etc.) into high-quality biochar, and in the process creating renewable energy, CO2 credits and destroying PFAS contaminants.

With more than 60 commercial-scale facilities worldwide, PYREG's modular high-tech carbonization equipment offers a proven, scalable, and cost-effective solution for safely and permanently binding CO2 in the form of beneficial biochar.

To learn more about PYREG, visit [pyreg.com](http://pyreg.com)

### **Orbital Biocarbon Contact**

Chris Bravacos  
Bravo Group

Tel: (717) 214 – 2200  
E-mail: [bravacos@thebravogroup.com](mailto:bravacos@thebravogroup.com)

### **PYREG Contact**

Henriette zu Dohna

Tel: +49 6747 95388 0  
E-mail: [h.dohna@pyreg.com](mailto:h.dohna@pyreg.com)