



## Media Release

---

### **Cumberland County Authority Uses Waste Heat to Evaporate RO Concentrate**

**MILLVILLE, NEW JERSEY. (May 24, 2021)** – The mission of the Cumberland County Improvement Authority (The Authority) is the development, financing and integration of projects, strategies, and initiatives integral to the sustainability of the economic and environmental future of the county. With this mission at the forefront of their objectives, The Authority, with the help of Energy Power Partners (EPP), has developed an in-house Energy Hub at the Solid Waste Complex located at 169 Jesse Bridge Road, Millville, NJ.

As a result of a Public-Private Partnership, EPP owns and operates a 4,800-kilowatt landfill gas-to-energy plant at the Authority's Solid Waste Complex. There are three landfill gas fueled engines that produce approximately 20 million kilowatt-hours, enough electricity to power 1,600 homes. This project reduces annual emissions by 15,000 tons of carbon dioxide.

According to the EPA, the emission reduction of this plant is equivalent to removing 3,000 cars from the road, or planting 18,500 acres of U.S. forest, or reducing the import of 32,700 barrels of oil. "EPP appreciates the vision of The Authority with its forward-looking Energy Hub project. This project combines many innovative, sustainable ideas at one location for the benefit of the county and the residents of New Jersey," remarked Steve Gabrielle, partner at Energy Power Partners.

Landfill gas is a methane gas that forms from the decomposition of garbage in the landfill. Landfill operators extract the methane through a network of pipes and gas wells located throughout the landfill. The Solid Waste Complex currently operates 160 methane gas wells and this number will increase as the landfill expands. The greenhouse gas (GHG) impact of methane is up to 84 times worse than CO<sub>2</sub>, so collecting this gas and destroying it is important. Many landfills in the U.S. simply flare their landfill gas. The Authority, however, saw the opportunity to use this gas beneficially to further reduce GHG emissions and simultaneously create economic value for the County. To do this, The Authority provides this renewable methane as fuel to produce electricity.

The Authority saw an opportunity to continue to reduce GHG emissions and create economic value by using cogeneration to treat its landfill leachate. Cogeneration is a concept where the hot exhaust from power plant is used beneficially as thermal energy. Landfill leachate is the fluid that collects in the landfill. The Solid Waste Complex treats on average 100,000 gallons per day



(GPD) of leachate using a membrane technology called reverse osmosis (RO). However, the RO process creates 30,000 GPD of highly concentrated leachate that still must be trucked offsite for disposal.

Working with EPP, The Authority installed a leachate evaporation system from Heartland Water Technology. Heartland's solution, called the Heartland Concentrator™, is a patented process that can use the hot exhaust from a power plant beneficially for evaporation, creating an energy efficient cogeneration solution. Says Heartland's CEO, Earl Jones, "Forward-thinking organizations such as The Authority recognize that improving the environment and reducing costs are simultaneously possible with the right vision, partnership, and solutions."

By evaporating the leachate concentrate, The Authority eliminates GHG emissions and environmental risks associated with nearly 1,500 truckloads per year that were previously hauling leachate offsite, saving the county thousands of dollars per year.

"The Authority understands and values its founding mission and objective to provide an environmentally safe and effective solid waste program to county residents," added President/CEO of The Authority Gerard Velazquez, III. "The ability to implement these programs while creating environmentally friendly and sustainable systems is integral to the ongoing operations of The Authority and its energy partners."

Joseph Derella, Director of the Cumberland County Board of Commissioners, lauded The Authority's "visionary mission" stating, "The Authority is proving that innovative green technology not only improves our environment through the reduction of greenhouse gases, but it also is the engine that will drive the economy of the future, a future that has arrived in Cumberland County."

### **About The Authority**

The mission of the Cumberland County Improvement Authority ("The Authority") is to facilitate the Development, Financing and Integration of Projects, Strategies and Initiatives Integral to the Sustainability of the Economic and Environmental Future of Cumberland County, NJ. The Authority is the economic development entity for the county. As a multi-faceted agency, the CCIA provides the financing, technical assistance, pre-development, development and management expertise for all aspects of business planning, construction, and operations.

Inquiries and questions about the Authority should be sent to: Samantha DeFrancisco, Communications and Marketing at [samdefrancisco@theauthoritynj.com](mailto:samdefrancisco@theauthoritynj.com) .



### **About Energy Power Partners**

Founded in 2009, Energy Power Partners (“EPP”) is a private market fund manager making long-term equity investments in U.S. and Canadian renewable energy projects, with a focus on decentralized generation and carbon neutral fuels. The firm targets assets that have predictable cash flows, utilize proven technologies, and have asset optimization potential.

Inquiries and questions about the Energy Power Partners should be sent to: Steve Gabrielle, Partner, at [sgabrielle@eppservice.com](mailto:sgabrielle@eppservice.com)

### **About Heartland Water Technology**

Heartland Water Technology, Inc. ([www.heartlandtech.com](http://www.heartlandtech.com)) develops innovative solutions for treating the world's most challenging wastewaters. Its proprietary direct contact wastewater evaporation solution, the Heartland Concentrator™, has a proven track record of successfully treating a wide range of industrial wastewaters. Heartland has delivered its simple, robust, reliable and cost-effective technology to industrial and municipal customers from Virginia to Alaska. Heartland’s proprietary and patented CoVAP™ configuration for using exhaust heat from power generation equipment drives down operating costs and consistently delivers the lowest life-cycle cost to treat.

Inquiries and questions about Heartland Water Technology should be sent to: Casey Cammann, Chief Marketing Officer at [ccammann@heartlandtech.com](mailto:ccammann@heartlandtech.com).