

## Salgenx Introduces Organic Rankine Cycle to Power Pressurization Pumps in Heat Pump-Integrated RO Systems

Salgenx Expands Technological Horizons: Introduces Organic Rankine Cycle to Power Pressurization Pumps in Heat Pump-Integrated RO Systems

## MADISON, WISCONSIN, USA,

September 5, 2023 /EINPresswire.com/ -- <u>Salgenx</u>, an industry leader in renewable energy solutions, is thrilled to introduce another layer of innovation to its existing heat pump technology for Reverse Osmosis (RO) desalination systems. The company is now incorporating the Organic Rankine Cycle (ORC) to power the pressurization pumps, making the desalination process even more energy-efficient and cost-effective.



Salgenx S3000 innovative saltwater flow battery technology. Unlock the power of storage, thermal storage, and graphene production with this membrane-free Redox flow battery. Explore the limitless potential of our aqueous saltwater flow battery solution.

Innovative Strides in Desalination Technology

Building upon its game-changing grid-scale saltwater flow battery, which provides simultaneous

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With ORC now powering our pressurization pumps, we're setting new standards in energy-efficient, costeffective water desalination." *Greg Giese (CEO of Salgenx)*  desalination while charging without a membrane, Salgenx continues to pioneer advancements that synergize energy and water solutions.

Incorporating the Organic Rankine Cycle

The Organic Rankine Cycle is a proven technology primarily used for waste heat recovery. By employing ORC to power the pressurization pumps in the RO system, Salgenx leverages thermal energy that would otherwise be wasted. This not only improves the overall efficiency but also further reduces the system's energy consumption.

Benefits of ORC Integration

Greater Energy Utilization: By capturing and converting waste thermal energy to power the pressurization pumps, the ORC makes optimal use of available resources.

Reduced Operational Costs: With the ORC supplying the energy required for pressurization, the need for external electrical power is diminished, resulting in lower utility bills.

Enhanced System Longevity: The use of ORC lessens the mechanical strain on primary pumps, potentially extending their operational life and reducing maintenance costs.

Synergy Across Technologies

The Organic Rankine Cycle perfectly complements both the heat pump-integrated RO systems and Salgenx's saltwater flow battery technology. When these systems operate in tandem, they deliver an unparalleled combination of cost-efficiency, sustainability, and operational excellence.

"The integration of the Organic Rankine Cycle marks a significant milestone for Salgenx and the industry as a whole," states Greg Giese, CEO of Salgenx. "We're bringing a holistic approach to solving some of the most pressing challenges of our time—water scarcity and energy sustainability. With ORC now powering our pressurization pumps, we're setting new standards in energy-efficient, cost-effective water desalination."

Salgenx (a division of <u>Infinity Turbine</u> LLC) is a trailblazing leader in energy storage and sustainable technology solutions. With a commitment to innovation and environmental responsibility, the company strives to redefine the boundaries of energy storage capabilities to pave the way for a brighter and greener future.

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