



## FOR IMMEDIATE RELEASE

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## **Mainstream is developing advanced spacecraft carbon dioxide and water removal systems**

ROCKLEDGE, FL — June 5<sup>th</sup>, 2023 — Mainstream Engineering Corporation has been awarded a contract from NASA to improve size, weight, and power (SWaP) of spacecraft carbon dioxide (CO<sub>2</sub>) and water removal systems. Mainstream has developed and demonstrated a patent-pending process to embed sorbent-bed regeneration circuitry directly into the sorbent bed. This has been demonstrated to dramatically improve thermal performance during regeneration. This NASA-funded follow-on effort is focused on a) scaleup and optimization of separate formulations for CO<sub>2</sub> and H<sub>2</sub>O removal, b) accelerated life testing to simulate long-term use, and c) full-scale testing at representative flow rates and adsorbent concentrations to qualify the technology for spacecraft air purification and water removal applications. Mainstream also plans to extend this technology to terrestrial applications under internal R&D funding.

### **About Mainstream Engineering Corporation**

[www.mainstream-engr.com](http://www.mainstream-engr.com)

Mainstream Engineering Corporation is a 37-year-old Brevard County, Florida manufacturer with a history of leading-edge research and development that has resulted in advanced cost-competitive Marine, HVAC and Military products, which are made in the USA. Mainstream's mission is to transition advanced R&D into high-quality, environmentally-safe, green products using lean manufacturing techniques. Areas of research include thermal control, energy conversion, power electronics, biomass conversion, chemical technology and materials science.

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