

# PRESS RELEASE

## FIGURE 8 ENVIRONMENTAL AWARDED NATIONAL SCIENCE FOUNDATION GRANT FOR NET ZERO-CARBON AMMONIA RECOVERY FROM LIVESTOCK MANURE

*The Small Business Innovation Research (SBIR) Phase I Funding will support the development of a technology platform that will transform animal agriculture waste into sustainable fuel and fertilizer.*



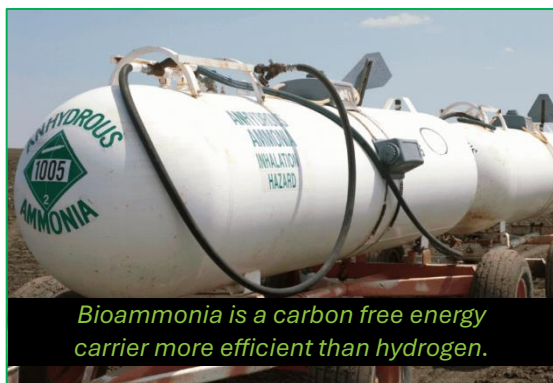
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### FOR IMMEDIATE RELEASE

**San Luis Obispo, CA (May 31, 2024)** – [Figure 8 Environmental](#), a California based company specializing in the recycling and upcycling of waste byproducts, has been awarded a [Small Business Innovation Research](#) (SBIR) Phase I grant from the [National Science Foundation](#) (NSF). The grant, totalling \$274,922, will support the development of a groundbreaking process to recover ammonia (NH<sub>3</sub>) from livestock manure, with the goal to ultimately produce clean, net zero-carbon fuel and fertilizer.



The innovative process developed by Figure 8 Environmental will leverage a novel technique to strip ammonia gas from animal manure and dissolve it into water, achieving an impressive NH<sub>3</sub> recovery rate of approximately 90%. This high-efficiency process not only mitigates greenhouse gas emissions but also generates renewable ammonia, which can serve as a CO<sub>2</sub>-free energy carrier and a bio-based fertilizer, marking a significant milestone in sustainable agriculture and renewable energy production.

This project is set to revolutionize the way ammonia is recovered and utilized, reducing both capital expenditure (CAPEX) and operating expenditure (OPEX) when compared to traditional methods. This makes the technology economically viable for large-scale adoption. Additionally, it significantly reduces CO<sub>2</sub> and N<sub>2</sub>O emissions, enhancing its environmental appeal.

The renewable ammonia produced by this process offers substantial market potential in the nitrogen fertilizer sector, valued at approximately \$10 billion in the U.S., and in the burgeoning green fuel market, facilitating a smoother transition to net zero-carbon energy solutions. The process aligns with the

growing demand for sustainable, stably priced bio-N fertilizers and low-carbon fuels, particularly in the maritime industry where ammonia is gaining traction as a bunker fuel.

“Receiving this National Science Foundation SBIR Phase I grant is a testament to the transformative potential of our ammonia recovery technology,” said Scott Harrison, CEO of Figure 8 Environmental. “This innovation is about more than advancing sustainable practices; it’s about providing an economically viable solution that meets the growing market demand for green energy and bio-based fertilizers.”

“Our process not only addresses the environmental challenges posed by livestock manure but also leverages untapped ammonia resources to create valuable products,” added Ken Tasaki, Ph.D., Chief Scientist at Figure 8 Environmental. “We are grateful for this support and excited to further develop this technology and demonstrate its full market potential.”

The National Science Foundation SBIR Phase I program is designed to support innovative projects with significant commercial potential and societal impact. The funding will enable Figure 8 Environmental to optimize its ammonia recovery process and validate its economic and environmental benefits through rigorous testing and analysis. This will include detailed life-cycle assessments to measure the reduction in greenhouse gas emissions and a comprehensive economic evaluation to ensure the process is cost-effective for large-scale implementation. Additionally, the project will involve pilot-scale demonstrations to fine-tune the technology and confirm its scalability and practicality in real-world agricultural settings.

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### **About Figure 8 Environmental**

Figure 8 Environmental has been at the forefront of sustainable waste management for over a decade. The company specializes in innovative solutions that convert waste into valuable resources, helping industries reduce their environmental footprint and achieve sustainability goals. As an official distribution partner of Livestock Water Recycling’s First Wave and PLANT systems, Figure 8 Environmental is committed to advancing environmental technology through expertise in waste management, creating sustainable and economically viable solutions. For more information, visit [www.figure8environmental.com](http://www.figure8environmental.com).

### **About the National Science Foundation**

The National Science Foundation (NSF) is an independent federal agency created by Congress in 1950 to promote the progress of science, advance national health, prosperity, and welfare, and secure national defense. With an annual budget of \$8.5 billion, NSF funds approximately 25% of all federally supported basic research conducted by America's colleges and universities. By supporting transformative research, NSF is committed to ensuring the United States remains a global leader in innovation and technology. For more information, visit [www.nsf.gov](http://www.nsf.gov).

**For more information please contact:**

Scott Harrison, CEO Figure 8 Environmental  
T: 661.332.0983 | e: [Scott@fig8env.com](mailto:Scott@fig8env.com)