

Phoenix Biometrics, Inc.

Low-energy desalination

Water Crisis Opportunities

- *Growing water shortages in Arizona, California, and Nevada as well as agricultural regions throughout the world.*
- *Seawater intrusion is a growing problem throughout the world as ocean levels rise.*
- *Seventy percent of all the fresh water in the world is presently locked in the Antarctic and Greenland glaciers.*

Phoenix Biometrics Solution

- *Low-energy desalination platform designed for brackish and seawater applications.*
- *I met with Governor Hobbs of Arizona in May and she expressed support of the PBI portable desalination technology to assist Arizona farmers.*

Technology Overview

- We discovered that the alveolar capillary membrane in our lungs regulates salt transport by a phospholipid component of surfactant called DOPC.
- Thus, we use DOPC-coated silicon or magnesium coated discs to capture the salt crystals with DOPC with less than 1% of the energy required for reverse osmosis or flash desalination.
- This revolutionary technology is currently protected by USPTO 8,628,625B2.
- The magnesium patent application that demonstrates over 99% salt extraction will be reviewed by the USPTO within 3 months and a PCT application has been submitted with a filing date of July 15, 2025.

Key Advantages

- *Much lower energy requirements, brineless, modular deployment, and renewable energy requirements.*
- *It is expected desalination will grow exponentially over this decade and Phoenix Biometrics is positioned to be a major contributor to this growth.*

Target Markets

- *Agriculture, municipalities, industrial users, AI data centers, aquifer restoration, mitigate seawater intrusion.*
- *We will attempt to be 100% sustainable by using the collected salt to grow seaweed which can be used as a desert fertilizer, fuel source for both gasoline and jet fuel, and food source for animals and humans. This revenue source will benefit both Phoenix Biometrics and the State of Arizona.*

Deployment Strategy

Portable units, regional desalination hubs (Buckeye, Arizona), and large-scale coastal projects.

Partnerships

- *University of Arizona Foundation owns 3% equity in Phoenix Biometrics.*
- *Collaboration with Eric Morgan a 25-year soil remediation specialist.*
- *Collaboration with MIT Department of Chemistry through Eric Morgan.*
- *Collaboration with Dr. Dante Lauretta who is the Director of the #1 ranked Arizona Astrobiology Center and a world renowned geochemist.*
- *My business advisor is Tim Dunne who has 30+ years in the financial industry and has been my personal financial advisor for 25 years.*

Vision & Next Steps

Pilot deployments (Duncan Family Farms, 2025 #1 USA Organic Grower) and several large farming companies in the Yuma area.

Scale-up and strategic investment partnerships including a loan guarantee program with the State of Arizona.