

# Bingham Research Lab

\$5 Million Incubates \$5 Billion industry over 6 to 7 years



Named after Kent Bingham Disney's Chief engineer for Construction of EPCOT who invented an Atmospheric Water Generator in his retirement. He was also our engineering partner but died of a heart attack several years ago. We are the beneficiaries of his [work](#).

Water, hydrogen, and carbon are focus of this Research Venture. The Initial research will be an Oasis machine that Kent Invented. Once we get a prototype ready for manufacturing, we will move onto a Carbon Capture machine

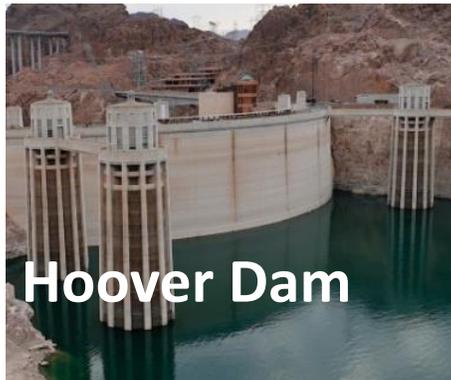
# The Problem

## Rivers and Lakes are drying up all over the world

Some water experts think it could be permanent and the beginning of aridification or at least a return to the 1930s Dust Bowl effect.

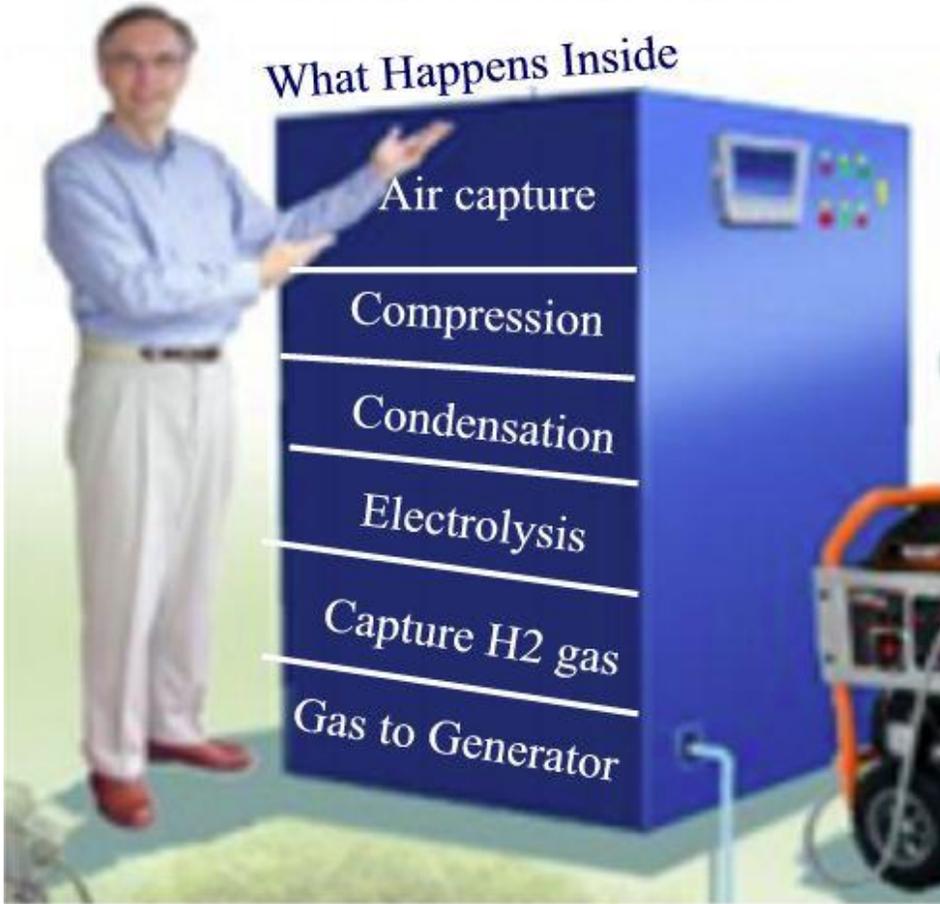
- \* [Hoover Dam](#) and Lake Meade Down 70%
- \* [Rio Grande River](#) Running dry
- \* [Ogalla Aquifer](#) Kansas to Texas down Running Dry
- \* [Yangtze River](#) China's Beating Heart

The sustainment of humankind requires water for agricultural production and for of cellular functions of which all organisms are comprised of.



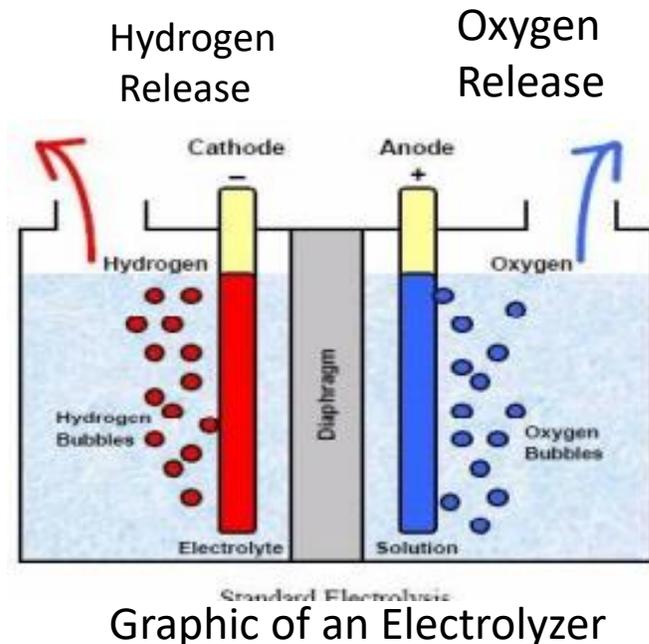
# Potential Solution and Approach

## Oasis Machine



Atmospheric Water Generators have been around for a long time. They extract water vapor out of the air and condense it to a liquid form. They can cost up to a \$1 million for an agricultural machine capable of 35,000 gallons per day. But they are expensive to run and hard to place where needed for restoring rivers. Our plan is to scale these down enough to generate 1,000 gallons per day, ( at 30% humidity) This is equal to 1 acre foot per year off grid and our cost goal is under \$10,000.

# The Hydrogen Factor



To do this we plan to electrolyze water and break the bond that holds Hydrogen to Oxygen together to release hydrogen that can run a small motor for generating enough electricity on the spot to run the fans and condensers. Hydrogen can also be used to run motors that generate propulsion on the spot. We will engage a physicist for the Electrolyzer, and we know a good one



Small Electrolyzers can produce .5 kg of hydrogen from one gallon of water to run small utility motors for weeks or maybe months

A hydrogen motor is scalable from generating huge amounts of water for agricultural and industrial machines down to small amounts for residential size uses or even backpack size uses that generate as little as 10 gallons per day. The motor can also be scaled to provide hydrogen motors for propulsion. Our Chief investigator has co-designed and built a 4-cylinder hydrogen motor capable of 400 horsepower.

# Cleaning The Air

- \* The Oasis Machine will extract large amounts of air that contain more than just water vapor. As our planet warms from climate change, the hot air stores more water vapor which causes more and bigger storms.
- \* The air will contain CO<sub>2</sub> although, we don't know how much. Initially this will be ignored until an Oasis machine is working well. Later we can experiment with filtering out the CO<sub>2</sub>, how to process it and to distribute it.
- \* It will also extract "harmful airborne contaminants", which can be filtered out. Lately there has been a lot of talk about aluminum and plastic particles in rain everywhere even in Antarctica. Someday, this too can be filtered out.
- \* Finally, some of the Oxygen released from electrolysis will find its way into the air

# Some Water Economics

- \* Target cost is a \$10,000 per machine + pipelines for delivery, + easements +setup = \$20,000 total
- \* One acre foot sells to farmers in California for \$100 to \$300 per acre foot (a/f) per year and to cities for \$30,000 to \$58,000 per a/f. one time cost per unit. The farmer price will be rising soon.
- \* If it were bottled it could bring over \$2 million per a/f
- \* As the world continues to dry out, water will become more expensive than gasoline and hydrogen could become its replacement
- \* Only 5 to 8% of the water vapor falls annually as rain or snow to restore all the rivers, lakes, aquifers on earth. And the water vapor is also renewed annually.

# Mission

To implement the demonstrator concept capable of serving three markets for water, hydrogen and electricity and then organize a National Test with a State like New Mexico to buy 1000 Oasis Machines for \$20 million (with some federal agency assistance) along 150 miles of the Rio Grande River from Albuquerque to the Colorado State line.



# Team



**Don Deptowicz** will manage the Research Lab and who has a 40 - year background in technology projects including hydrogen motors, aircraft coatings and other tech.



**Lloyd Goff** Managing member-Goff is a packager of development projects for the past 53 years and will be the business manager for this one.



**Daren Dozier**- An IT manager and web site builder with a couple of decades of experience who developed [www.lloydgoff.com](http://www.lloydgoff.com). He will handle external media



**Herman Colato** 2017 Bachelor of Science, Computer Science: He has designed a multi-platform application to solve user issues with calendars, events, scheduling, contacts and databases . He will manage internal communications of the team

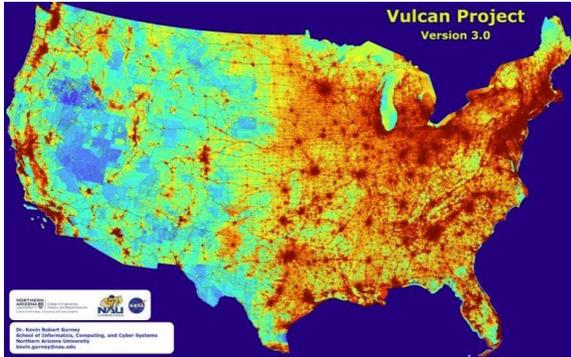
We also have a variety of networked resources that have consulted with Goff for years including CPA, office manager, lawyers, animator, research, compliance and a physicist who is new. What we need next are researchers.

# Market and Customers

- Initial customers are Federal Agencies and States for large sales in the thousand at a time. With 6 or 7 years this market can use millions of Oasis Machines.
- \* Gradually agriculture, Military bases, Cities, hospital, transportation authorities, resorts and industrial are added. These sales will be smaller per buyer with more buyers but harder to reach
- \* Finally, the smallest users like residential, recreational vehicles, campers and backpackers can be added in
- \* Depending on the acceleration of global warming continuing, within the first 10 years 1 million units are possible and within 20 years over 5-million-unit sales are possible in the USA alone, We may not get all of these sales because competition will grow. Then there is the International market.

# Traction”

Built an email marketing program and multiple teams

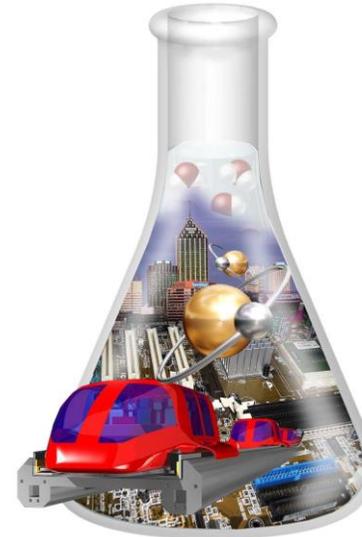


Developed a \$3 Trillion Economic Model for Climate Tech

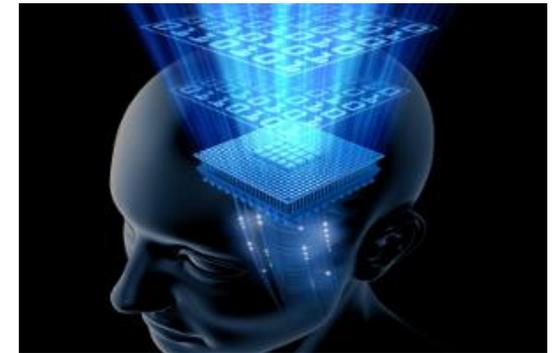


A team member Co-developed Hydrogen engine

packaged several Tech Ventures



Participation with Kent Bingham in Electrolyzing water research



Business Plan for a Climate Tech Brain Trust



Spent over \$ 1 million researching and developing multiple web sites and docs

# Sustaining Life for the Future

- \* Generates water for rivers, lakes and aquifers. In the process supports turning surrounding areas into landscaping with trees shrubs and grassland
- \* Waters Crops especially along highways and can be used with center pivot water sprinkling systems for farming and provides drinking water
- \* Generates alternative fuels for motors useful in propulsion and utility power on the spot which can be used for farming tractors, trucking, trains and to keep America moving.
- \* Reduces the carbon Footprint and could cause the greening of America
- \* Bridges Supply Chain Gaps in assembly, sales, delivery, farming, gardening, and water agencies

# Manufacturing/ Reuse

Most of the components already exist and mainly need to be configured in a manner that meets our requirements. This Joint Venture will take the project thru engineering, so specification and assembly is the next major effort.

We want to study keeping Bingham Labs strictly for research and selling licensing or subcontracting assembly to other companies . Some of this can be done of course by major corporations, but we also want to explore assembly by Indian Tribes. They need the jobs and can be trained for the work. They also have a special relationship with the land and can be useful in machine maintenance, farming and monitoring the machines performance.

# Use of Funds

\$500,000 First few months - Set up the company, legal work for a long-term financial structure such as SPV or IPO, organize the team, survey the industry and reserves.

\$2,000,000 For two years - research and development of Oasis Machine with two or three configurations using differing components.

\$1,500,000 for one year- value engineering, testing for a prototype, cost/sales projections and marketing feasibility. Find manufacturing solutions.

\$1,000,000 for 9 months evaluating the marketplace, marketing materials, marketing team and negotiates with federal agencies for additional demonstration funds

# The Joint Venture

This is planned as an LLC Operating Company to begin with and will look at other legal structures as time and performance allows such as Special Project Vehicles or Initial Public Offerings.

A \$50,000 pre-seed nonrefundable earnest money to begin

\$1 million every six months as needed up to \$5 million for 50% of the initial company which we plan to be an LLC

The partner will assist in the financial design for next round of funding for manufacturing. The main source of profits are expected to come from licensing and/royalties. An IPO is a possibility, if everything is done in-house.

# Contact info

Lloyd Goff email to: [lloydgoff@hotmail.com](mailto:lloydgoff@hotmail.com) or phone/ text to  
(303) 598-2379

For a Copy of the Bingham Labs Business Plan email [lloydgoff@hotmail.com](mailto:lloydgoff@hotmail.com)

Don Deptowicz Head of Research [donald.deptowicz@gmail.com](mailto:donald.deptowicz@gmail.com)  
(970) 532-4736