

# Making Water from Air In Balance with Nature

### Innovating, Advancing and Scaling **Atmospheric Water Generation (AWG)** World-Class, Industrial-Grade AWG Systems and Projects

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Water Strategies for the Sustainable Development Goals (SDG) Agenda, Responsible Investments & Smart, Impactful Infrastructure

### SkyH20 A Triple Impact Investment Opportunity



#### LEGAL DISCLAIMER

This SkyH2O presentation uses forward looking statements and assumptions that involve risks and uncertainties; including, but not exclusively, the risks associated with the effect of changing economic conditions, changes in the markets, variations in the company's business plan, market acceptance risk, technical development risks, and other business risk factors. In light of these and other risks, and uncertainties, there can be no assurance that the events predicted will in fact transpire. As care and diligence has been used to ensure fair and accurate projections, based upon current methodology, current market conditions, research and analytic data.

An alternative investment involves a high degree of risk and should be undertaken only by institutions or persons whose financial resources are sufficient to enable them to assume such risk and to bear the potential total loss of their investment.

This presentation and the current SkyH2O investment opportunity is only for accredited investors, institutional lenders and qualified purchasers

# SkyH2O – Who We Are

SkyH2O is a California ClimateTech business that is driving a new Infrastructure Project Investment Class by innovating, advancing and scaling Atmospheric Water Generation ("AWG") technology, systems, projects and services, "in balance with nature".

SkyH2O effectively combines up-stream (IP/technology + products) with down-stream (projects + financing) to most efficiently provide communities and utilities, and large commercial and industrial water users with *Water Security* and *NetZeroWater*. AWG is a game-changing solution as it is a new water resource, and in many locations is more effective than alternative water systems including forward/reverse osmosis ("RO"), and is more environmentally friendly. SkyH2O's industrial-grade AWG can be deployed in a distributed manner ("DWG"), specifically where water is needed most, at or near existing water infrastructure including on roof-tops enabling *water* security, self-reliance and independence – "Water 4.0"



SUSTAINABLE GOALS

### The Problem Water is a finite and irreplaceable resource

- Worldwide +2.0 billion people currently live in areas where water use exceeds recharge, leading to the desiccation of rivers, depletion of groundwater and the degradation of ecosystems and the services they provide.
- Global water demand is projected to increase
  by 55% by 2050.
- The economic loss from the inadequate delivery of water is estimated to amount to 1.5 % of gross domestic product of the countries included in a WHO study on meeting the Millennium Development Goals (MDGs).
- **California** reported by The U.S. Drought Monitor (USDM) has status as of June 2021:
  - o D2 Severe Drought 92.9%
  - o D3 Extreme Drought 73.3

### WATER PRESSURE



SUSTAINABLE GOALS

### The Problem Critical Industries in water stress



By 2030 water supplies will satisfy only 60 percent of global demand and less than 50 percent in many developing regions where water supply is already under stress.

### Industries affected include:



- Public and Private Water Utilities
- Mining including oil drilling Operations
- Industrial Manufacturing
- Healthcare and Hospitals
- Military and Disaster Relief
- Food, Agriculture and Beverages

### Sustainability Generate Clean Water from Clean Energy

- California is leading sustainability goals, Worldwide. California's RPS stipulate 100% clean energy by 2045, 100% clean cars by 2035, and more.
- As the World is going clean, many locations Worldwide are experiencing over generation of power at certain times of the day, days in the Week and Seasons, often generated from nonbase load intermittent renewable energy including Solar, Wind, Geothermal, Hydro, Waste and more.
- SkyH2O enables the generation of valuable fresh water from undervalued, and often curtailed "stranded" power, "in balance with nature".



SUSTAINABLE GOALS

### The #1 Technology AWG to Grow 10X by 2026

Recently Frost & Sullivan, Top Technologies in Clean & Green Environment, finds that the most urgent environmental issue that needs to be addressed is water scarcity. The study identifies and explores the 10 most impactful CGE technologies. Atmospheric Water Generation ("AWG") was ranked the most resilient and efficient technology to contribute to water sustainability

**Top 10 CGE Technologies** Atmospheric Waterless Waste-to-Water **Technologies** Energy Generation ater-energy Solid Waste Indoor Air Reverse Efficient Upcycling Purification Osmosis chnologie Membrane Capacitive **Air Filtration** Distillation Deionization



SUSTAINABLE GOALS

Atmospheric Water Generator Market Revenue to Hit USD 16 Bn by 2026: Global Market Insights, Inc.

# SkyH2O and AWG

### **Competitive Advantages**

- Ideal locations: AWG are modular in design and can be located in a distributed manner ("DWG", distributed water generation) where water is needed/used including roof-tops.
- Environmentally friendlier: AWG systems draw in large volumes of air that is filtered, condensed, cooled past the dew point, and then collects pure fresh H2O.
- Right sized: effective AWG projects can be modularly expanded in about 10,000 liters/day (2,700 gallons/day) increments to any size, to 1,000,000 liter/day and more.
- **Fast deployment:** our *fast-track program* allows for project completions ~6-months.
- Cost competitive: AWG project CapEx enjoys a significant lower investment barrier with fresh, healthy "potable" water cost ("LCOW" = CapEx + OpEx + EnergyEx) often as low as about \$15.00/M3 (Cents 1.5/liter)
- Water Security: AWG effectively generates the most valuable water needed for Drinking, Cooking and Personal Washing
- SMART Grid: SkyH2O IoT enable generating valuable water from undervalued energy including grid balancing and resiliency



Hierarchy of water requirements (after Maslow's hierarchy of needs)





# AWG works in Balance with Nature



- Air holds up to 30g of water/kg of air.
- SkyH2O Industrial-grade AWG Machines extract up to 80% of this available water and exhausts dry air back into environment.
- SkyH2O AWG accomplish this by drawing in large volumes of air that are then filtered, then preconditioned, then compressed, and then cooled below the dew-point to collect H2O in the form of condensation.
- Worldwide relative humidity is rapidly increasing. For every 1° Celsius increase in global warming results about 7% increase in relative humidity.

#### Average Annual Relative Humidity





# SkyH2O -The Solution



### SkyH2O - Atmospheric Water Generation (AWG)

SkyH2O products and services address the challenge by tapping a new water source, the "air" atmosphere. Our Distributed Water Generation (DWG) systems produce fresh water from the air at any place and at anytime – localizing water production similarly as solar has localized clean power generation. SkyH2O provides *ZeroNetWater* and the ultimate in *water security, self-reliance and independence...*Water 4.0.



**AWS MAXIMUS 4.10**<sup>™</sup> 2020-21

AWS WaterSecurityTower™ 2021-22 **AWS Roof-Top Building-Integrated™** 2022-23

# SkyH2O - Technology

After extensive research and analysis in collaboration with professors from UC Berkeley and leading industry experts educated at Stanford, Cal Poly SLO, and Germany on our Advisory Board, SkyH2O proprietary technology, which includes, cold and hot air recycling, aerodynamic ducted air-flow turbo-fans, advanced heat exchangers, IoT SMART controls and Biomimicry water collecting surfaces allows us to extract an expected **30% more water** from air-borne water vapor than any existing Air-To-Water system/technology - with the same energy consumption as current less effective systems. While AWG systems currently on the market can only condense ~50% of water vapor in the air, SkyH2O's system with its intellectual property ("IP") **condenses up to 80%** of the potentially extractable air-borne water vapor without increasing energy consumption.

SUSTAINABLE GOALS

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### Additional Benefits AWG Can Provide Dual Use Services

- AWG can also provide Heating and/or Cooling, which can supplement or even replace existing air conditioning
  - Warehouses
  - Commercial Facilities
  - Industrial Complexes
- AWG can also provide **Cleaning** of the air by filtration









### SkyH2O Produces fresh healthy drinking water

By 2030 water supplies will satisfy only 60 percent of global demand and less than 50 percent in many developing regions where water supply is already under stress. There is a shortage of fresh, healthy drinking water everywhere, Worldwide.

SkyH2O provides Bottling Solutions to Meet all Market Segments, and in the Most Environmentally Responsible Way

 Commercial, large 19 liter (5 gallon) containers for delivery and subscription business

- Retail, in all sizes and shapes, and packaged in the environmentally responsible materials
- Branding and packaging for all types of markets and consumer needs
- Premium and designer water for optimal taste and health









# A Water Stressed World



Industrial AWG annual Total Addressable Market expected to grow to \$10.0+ Billion by 2026







SKYH2C

## Strategic Business Development Irvine CA, USA: Global HQ

Irvine CA is a know-how center for the water business, where from SkyH2O is effectively developing, including:

- Corporate Development and Financing
- Business and Project Development
- Innovation (R&D), including design/engineering, proving advanced technologies, and commercializing and demonstrating next generation AWS systems, including:
- AWS WaterSecurityTower™
- AWS RoofTopBuildingIntegrated™
- AWGUA<sup>TM</sup> "Micro Watery"





SUSTAINABLE G ALS

## Strategic Business Development, Franchise Model AWGUA "Micro Watery", Irvine CA



#### **PROJECT FINANCING**

TOTAL COST	USD 9,950,000					
	Not including about 1.0 hectare land, and about 2,000 M3 Class B industrial building.					
	Electrical requirements, industrial power, 3 phase , peek 2,376 kW					
USE OF PROCEEDS	١.	Pre Construction				
		i. USD 300,000 for soft costs, design and permitting				
	II. EPC Construction					
Reep Local Community		i. USD 6,500,000 for 17 AWS MAXIMUS systems				
		ii. USD 450,000 for water collection and storage				
		iii. USD 250,000 for water Preparation and Mineralization equipment				
		iv. USD 750,000 for bottling system including filling, capping and cleaning				
		v. USD 200,000 for blow-mold bottling maker				
	trition Facts a no 121 to 50000 to 10000 to 10000 to 1000 to 10000 to 1000 to 1000 to 10000 to 10000 to 10000 to 1000	vi. USD 1,250,000 Construction and Installation Services				
	The second secon	vii. USD 250,000 for Inventory, miscellaneous , and contingency				

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#### **OPERATIONS BUDGET**

SIZE ANNUAL WATER GENERATION (LITERS)		35,000,	,000		
REVENUE PER YEAR				GROSS PROFIT PER YEAR	
@ \$0.25/liter	USD 8,7	750,000	USD 1,600,000		
@ \$0.50/liter	ii.	USD 17,500,000		USD 10,350,000	
@ \$1.00/liter	iii.	USD 35	,000,000	USD 27,850,000	
	i.	USD 3,8	350,000		
COST OF GOODS SOLD PER YEAR		i.	LCOW Generation US Cents 3.0/liter		
		ii.	<ul><li>ii. Water preparation/mineralization</li><li>US Cents 1.5/liter</li></ul>		
		iii.	Bottling, filling, capping (4 and 19 liter bottles) US Cents 6.5 liter		
OPERATING COSTS	ii.	USD 3,3	300,000		
PER YEAR		i. Salaries and wages for 8 – 12 employees			
		ii.	USD 300,000 per year for leasing of land and		
NOTE: LCOW =		building iii. Sales and Marketing			
Capex + Opex + EnergyEx, Energy					
cost is est at		iv.	Miscellaneous		
Cents 5/kwH					

## Strategic Business Development Abu Dhabi UAE: Regional HQ



### The GCC region has the most immediate needs with US\$ 1.0+ billion annual industrial-scale AWG market

• 9 of the 10 most water stressed countries by 2040 in the World are in the GCC/MENA region



 SkyH2O has established SkyH2O MENA Limited, a 100% subsidiary, at the prestigious Abu Dhabi Global Markets ("ADGM") Free-zone in

Abu Dhabi UAE as a "bridgehead" to strategically develop business across the GCC markets

- SkyH2O has secured a prestigious KSA Family Office to support GCC business development.
- SkyH2O has executed MOU for "SkyH2O Saudi" with significant KSA Industrial Group.
- SkyH2O plans to deliver in Q4 2021 a first AWS MAXIMUS to prestigious ICBA facilities (Dubai, UAE) for VIP customer demonstration and testing.



### Strategic Project Development Kingdom of Morocco

### Morocco is a top-10 most water stressed country Worldwide.

- Both Mediterranean and Atlantic Coastal Morocco provide "excellent" locations for SkyH2O AWG Projects. Currently SkyH2O is developing about US\$ 90 million in AWG projects starting in the city of Dakhla and its nearby disputed Western Sahara has been recognized as part of the Kingdom of Morocco
- The United Nations ("UN") newly has recognized the disputed Western Sahara territory as part of the Kingdom of Morocco. Over US\$ 4.0B in new projects are planned to advance the regional economy including; Industrial Port \$1.1B, Wind energy 900MW \$2.5B, Rare earth mineral mining, Data Centers, Tourism including new Resorts and Hotels, and more.



- SkyH2O AWG projects are most effective as the Dakhla region enjoys:
  - Good atmospheric conditions including annual relative humidity ("RH") 68%
  - Low energy costs from highly efficient renewable wind energy
  - High value of water, as there are no regional fresh water resources







## Project Feasibility Study Houston, Texas: NetZeroWater





Efficiency

Recycle



- NetZeroWater solution for Industrial Facility for a Fortune 100 corporation
- Generate and Capture 50,000 gallons/day to "make up" for water loss/use
- AWS MAXIMUS 4.10<sup>™</sup> generates about 2,390 gallons/day
- Project scope: AWG generation @ 25,000 gallons/day, Storm water capture @ 25,000 gallons/day, Water collection, water processing, storage.
   Reduction
- CapEx US\$ 6.5 M







## Project Feasibility Study Catalina Island, CA: Energy Micro-grid + Water





- Generate 10,000 gallons/day for water Security and fresh drinking
- AWS MAXIMUS 4.10<sup>™</sup> generates about 1,750 gallons/day
- Project scope: AWG generation from 6 AWS MAXIMUS, IoT SMART Grid Energy interface, Water collection, water processing, storage.
- CapEx US\$ 2.8 M (not including micro-grid)
- LCOW about US Cents 5.5/gallon





Catalina Island Essential Fish Habitat... Los Angeles

Huntington Beach Anaheir

Santa Ar

Irvine

Long Beach



## Project Feasibility Study Monterrey, Mexico: Waste to Energy to Water







- Environmentally Responsible Waste to Energy to Water Facility, turning under-valued energy into valuable water
- Generate up to 25,000 gallons/day of fresh potable water
- AWS MAXIMUS 4.10<sup>™</sup> generates about 1,920 gallons/day
- Project scope: AWG generation from 13 AWS MAXIMUS, IoT SMART Grid Energy interface, Water collection, water processing, storage.
- CapEx US\$ 5.9M

250.000-300.000

LCOW about US Cents 4.5/gallon



## Project Feasibility Study Bahrain: US Military Base





- Water Security and Sustainability to fortify a 500 Capital US Military Base, requirement 2.25 Million gallons of fresh potable water per month
- AWS MAXIMUS 4.10<sup>™</sup> produces 1,571 gallons/Avg-Day
- 47 units and 7,000 m<sup>3</sup> storage distributed across facilities no single point of failure or exposed target
- Project Scope: AWG generation, water collection and storage, potable water processing.
- CapEx US\$ 18.5 M
- LCOW about US\$ 8.5/gallon



## Project Feasibility Study Malaga, Spain: Medical Facility





- Water Security, healthy potable water, for demand 20,000 Liters per day, 2,250 m<sup>3</sup> per month
- AWS MAXIMUS 4.10 produces 6,550 Liters/Avg-Day
- Project scope: AWG generation, potable water processing, storage.
- CapEx Euro 1.6 M
  - LCOW about Euro Cents 2.5/liter





## Project Feasibility Study Istanbul, Turkey: Commercial Water Bottling







- Fresh, healthy bottled water source for local citizens with Commercial Vending business model
- Generation up to 100,000 liters per day
- AWS MAXIMUS 4.10<sup>™</sup> produces 8,470 Liters/Avg-Day
- Project Scope: AWG generation by 13 AWS MAXIMUS, potable water processing, storage, bottling.
- CapEx Euro 5.9 M

### LCOW about Euro Cents 2.5/liter



## Project Feasibility Study Lima, Peru: Community Water Bottling



- Program "Oasis H2O", Fresh, healthy bottled water source for local citizens with ESG Impact business model
- Generation up to 100,000 liters per day
- AWS MAXIMUS 4.10<sup>™</sup> produces 9,050 Liters/Avg-Day
- Project Scope: AWG generation by 12 AWS MAXIMUS, potable water processing, storage, bottling.
- CapEx US\$ 5.7 M
- LCOW about US\$ 3.0/liter



### Oasis H2O Program ESG Solution Business Development Initiative

- Oasis H2O's is a ESG "impact" solution with the mission is to provide a clean, healthy, water to water-impoverished who live in infrastructure challenged urban areas
- Oasis H2O accomplishes this by developing and operating circular water generation and distribution facilities with a typical capacity of 100,000 liters/day, for about 25,000 people/day, in the most environmentally responsible.
- Oasis H2O facilities possess advanced reusable/recyclable
  +10 liter bottling that integrates filling, cleaning and dispensing, with bottle production and concession services.
- An Oasis H2O facility is strategically located within urban areas in order to most efficiently supply water impoverished with minimal carbon footprint. First Oasis H2O project is planned to be in Lima, Peru.
- The first Oasis H2O project is planned to be in Lima, Peru, with additional +50 projects under evaluation in Peru, Mexico, Morocco, and further countries with large cities experiencing water stress.

### **OASIS H2O SOLUTION**

A circular solution integrating water generation, treatment and bottling with distribution and recycling

Located in a 1.5 acre land lot to be leased back from a local bank
 Initial output of 100,000 liters per month (or 150,000 bottles per month)
 20-liter reusable plastic bottles to be used and identified by an exclusive AWG-origin consumer brand

SUSTAINABLE GOALS

production assets: 12 AWG machines with 8,500 L average capacity each

Additional assets: compressors, bottling-cleaning line, exclusive electric 1,800 KW line connected to the national grid (NG supply under study

### SkyH2O From IRVINE USA to WORLDWIDE





### SkyH2O Management Team Performance, Experience, Integrity

SkyH2O is formed by leading Water, Energy, Project Development & Finance, EPC construction, Asset Management, Engineering and Legal Executives, to proactively develop the growing need for industrial Atmospheric Water Generation ("AWG"). Together the group provides the expertise with the credibility and professional network to deliver within budget industrial-scale AWG Projects.



Alexander von WELCZECK (Irvine, CA) President & CEO

Charlie KUFFNER, P.E.

(San Francisco, CA)

Chief Operating

Advisor



AMERIC

Edward SHEI, MBA (Irvine, CA)

Director, Corporate Development S **KYH20** 



James POOLE, P.E. (San Francisco, CA) Chief Engineering Advisor

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SUSTAINABLE GOALS

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## SkyH2O – Sales Pipeline Well Qualified Potential Orders, June 2021

SUSTAINABLE GOALS





### SkyH2O Business Expansion Capital



**SkyH2O** invites Professionals, Strategic Partners and Impact Investors to accelerate business and project development in water stressed markets, Worldwide.

Employees and Executives: SkyH2O currently has businesses in Irvine CA, Abu Dhabi UAE and Hong Kong CHINA

**Agents:** SkyH2O offers an Agent Program "Ambassadorship" to well qualified Professionals who seek to promote SkyH2O products and services.

Value Added Resellers ("VAR"): SkyH2O offers an VAR "distributor" Program to well qualified businesses who seek to develop business and projects that integrates SkyH2O products and services.

**Strategic Partnerships:** SkyH2O offers Partnerships including JVs to accelerate business and project development in certain geographical territories, specific vertical markets, and SPV Projects

**Impact Investment:** SkyH2O offers impact investment opportunities in SkyH2O Inc (USA), to accelerate corporate development, and SPV projects:

- Professional "Angel" Investors, minimum \$100K
- Impact including ESG and Family Office investors, minimum \$500K
- Fund and Strategic investors, minimum \$2.0M
- Donations via WaterIsLife non-profit 501c3, <u>www.waterislife.com</u>





## Thank you for your sincere interest !

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