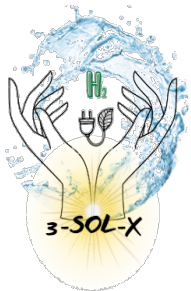




# Sustainable System for Electrical Energy, Green H2 and Atmospheric Water Generation



## 3-SOL-X SOLAR by Ambar Chile

December 2023

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# Big problems

## Pollution, lack of water & electricity



Social impact : **Barriers to development, Poverty**





**INPUTS:**

1. Waste heat or Solar heat
2. Air (Atmospheric)



**OUTPUTS:**

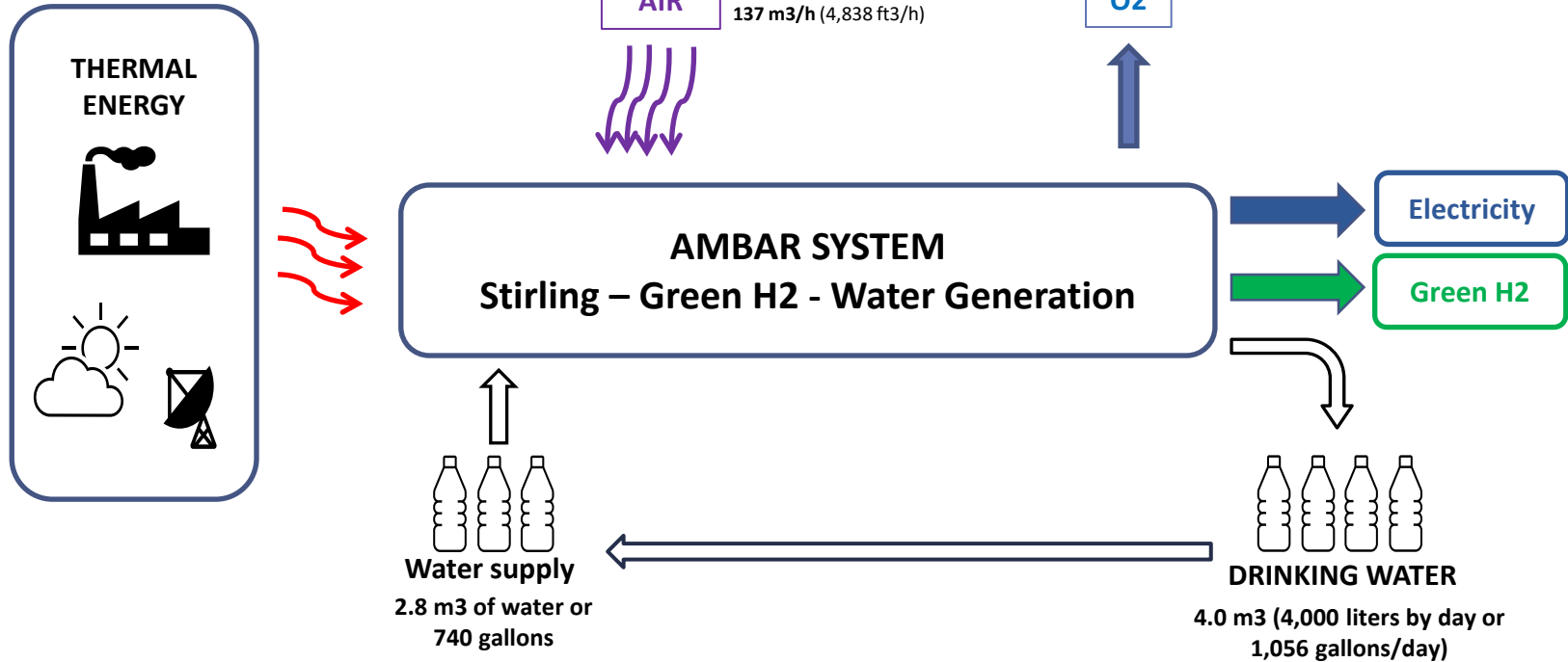
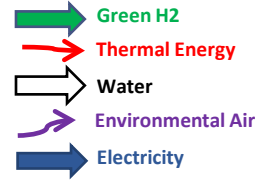
1. Electricity
2. Hydrogen (& O<sub>2</sub>)
3. Drinking water

3-SOL-X by Ambar Chile



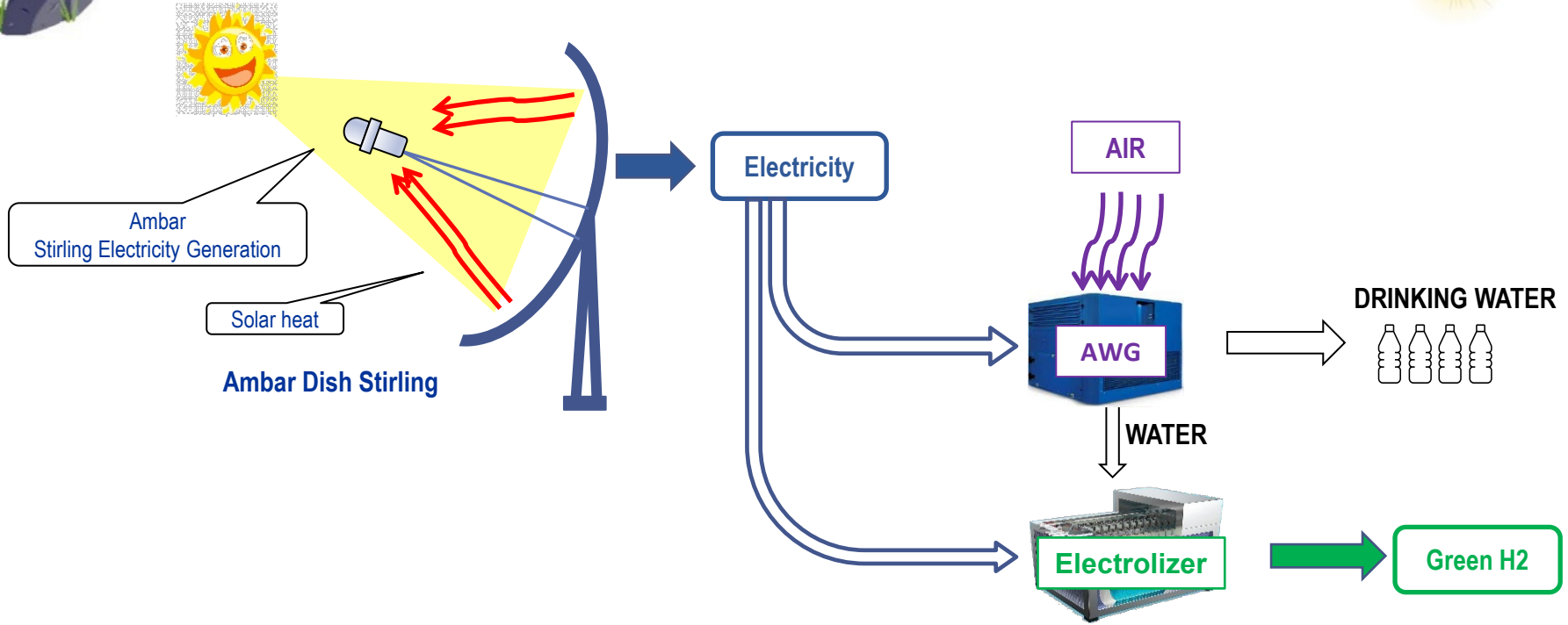


# 3-SOL-X Block diagram





# 3-SOL-X Solar




# 3-SOL-X- SOLAR : Easter Island (Rapa Nui)



Technical Support - remote monitoring & alarming




Electricity for Homes, Hotels, street lighting, etc.



**AMBAR DISH STIRLING**  
Solar electricity with Stirling Engine

**Fog catcher**



30 a 50 lt/day  
(8 to 13 gallons/day)

**Atmospheric Water Generation (with Stirling cryocooler)**

250 to 4,000 lt/day  
66 to 1056 gallons/day

**Desalination Plant**

lt/day under evaluation

**Green Hydrogen**

7 a 124 kg of H<sub>2</sub>/day  
(15.4 to 273.3 lb of H<sub>2</sub>/day)  
(1 Kg or 2.2 lb of H<sub>2</sub> is equivalent to 7 Kwh)  
(7 Kw is equivalent to 9.4 HP)

**Rapa Nui**  
Recovery Medicinal plants

**Precision agriculture (Agriculture 4.0)**

**Rapa Nui**  
Production Functional Foods and Essential Oils

Water Recovery      Heat Recovery (Conversion to electricity) (AMBAR -μGen)

**DEHYDRATED FRUITS**





# 3-SOL-X Business

## Differentiators and advantages

- Technique: Lifetime, carbon footprint and minimum maintenance
- Partnership with CEA Liten (French R&D center, top 1, according to Reuters 2016 ranking \*)
- Patent granted in 2020 for pyrometallurgical processes (US 10.539.045 B2).
- PCT filed in 2021, for green H<sub>2</sub>, with Stirling in pyrometallurgical processes and/or with solar dishes (PCT/CL2021/050084).
- Awards in iCAN 2022 and Prix Eiffel 2022 innovation competitions.
- We highlight the advantages over Photovoltaic (PV) solution, both in terms of
  - ✓ LCOE is 52% to 75% of PV,
  - ✓ LCOH is 35% lower than H<sub>2</sub> production with PV,
  - ✓ Carbon footprint : 13 times lower than PV solution.

- ❖ **Modular.**
- ❖ **Scalable.**
- ❖ **On site.**
- ❖ **Autonomous**

\* <https://www.reuters.com/article/ctech-us-innovation-rankings-idCAKCN0WA2A5>





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Thanks for your attention!

