

# CL / MA R / SK

CO-FINANCED PROJECT



THE PROJECT PARTNERS



Access to **ENERGY, WATER** and **COOLING** systems is **VITAL** for survival

Having drinking water, keeping medicines, vaccines and food cold, outdoor lighting to guarantee safety, health care, communications... These are crucial **PRIORITIES** for humanity and a **SOLUTION** should be provided to those who are forced to flee their homes due to natural disasters, wars or as a result of **CLIMATE CHANGE**.

It is therefore necessary to create sustainable energy solutions that allow electricity to be generated from **RENEWABLE** sources.





There is an **objective demand** for this solution



### Refugee Camps

(UN, World Food Programme,  
Red Cross Cooperation Centre  
with Africa)

Isolated areas by  
natural disasters

Transport of  
medicines

Also, for the provision of electric power ...

- ... to small fishing villages on the West African coast
- ... rural areas in remote areas that are not connected to the electricity grid
- ... isolated villages with a planned connection to the electricity grid
- ... to mining camps



Potential market waiting for solutions

## Investors & Companies

Enough capacity to meet demand taking into account locations and uses (isolated areas, complex climates, emergency situations, insufficient communications, difficult access...)

This solution has the following characteristics:

It is robust

Maximum efficiency

Easy to transport

Allows electricity generation from renewable sources

Scalable according to demand

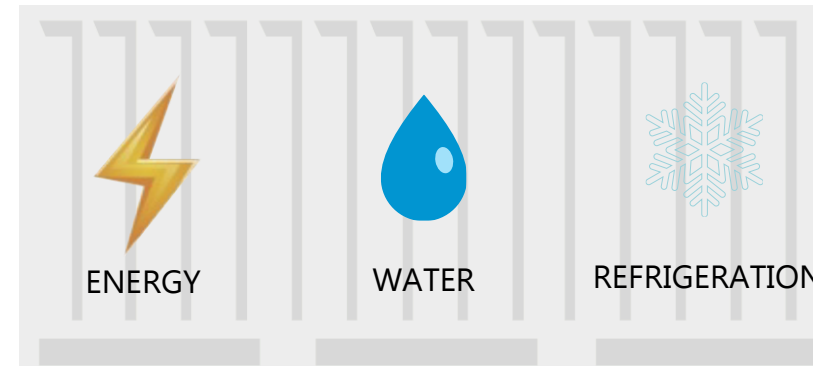
Easy to implement

The CLIMARISK project was awarded the  
**IBERDROLA International Energy  
Cooperation Award** in 2019

WHAT IS IT?



This is an **integrated, mobile and easy-to-implement** solution for the supply of:



**4** standard 20-foot containers

Space and transport **optimisation**

An **intelligent** energy management system that is able to optimise the operation of the different elements to reduce operating costs

Through **Machine Learning** tools, the system can learn and improve its performance

A technological **innovation** compared to other systems available on the market

Ready to be used in any situation that requires **immediate** power, water and cold





## Electricity generation system

**15 kilowatts** of power

**Solar photovoltaic** renewable energy and storage batteries

No need for civil works and rapid **scalability** on demand

**Intelligent** energy management system: Machine Learning, weather forecasting, load optimisation, inter-container communication

**Quick** to install and implement: the power supply can be ready in 15 minutes and the deployment of the whole system takes approximately 5 hours

It generates enough energy to:

Produce more than 12 m<sup>3</sup>  
of water per day  
**(1.000 people)**

Power a  
**120- bed hospital**

Provide energy for about  
**1.000 to 2.000 people**  
depending on the level of renewables

Keep the refrigerator at  
**5 °C (15 m<sup>3</sup>)**

Simultaneously



## Drinking and distilled water production system

**Two solutions** in one container

A water treatment or a desalination plant,  
depending on the source of the water:

**24.000 litres/day**  
**(2.000 people)**

Production of water from humidity in the  
air:

**500 litres/day**

**Plug&Play system:** the generation system **recognises** the water system as soon as it is connected and **adjusts** the controls to supply energy so that the required demand is met at the **lowest possible cost**



## Two cold production systems

### Frozen and fresh products

Food and medicines from

-25°C to +12°

It includes a thermal inertia improvement system  
with PCM and strip curtains

### Fresh products

Food and medicines  
from +5°C

It includes a thermal storage system with PCM and  
an autonomy of up to 16 hours





1. It meets the technical conditions and safety guarantees required by ISO and UNE standards and Spanish regulations.
2. All equipment bears the CE marking and a declaration of conformity.
3. The system comes with user guides that provide instructions for use and maintenance.
4. Verified by Lloyd's Register.



The ITC is a leading centre with over 25 years of experience looking for solutions to supply energy, water and refrigeration

Partner of  
**more than 12**  
African governments

Technology transfer  
through a  
**public-private**  
partnership

Endorsed by the UN and  
International Red Cross

Project financed by the  
**ERDF**

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Talent to make the world a better place

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