Vapor Produces Electricity!

Relief for Areas Which are in Desperate Need of Electricity

Hi! We are NA Team ☀️

Haneen Mostafa

Egypt🇪🇬

Helped with the concept and designed the prototype

Yousef Rashad

Egypt🇪🇬

Developed the concept of producing electricity using vapor

Mariam Chihabi

Morocco 🇲🇦

Conducted research and worked on developing the concept

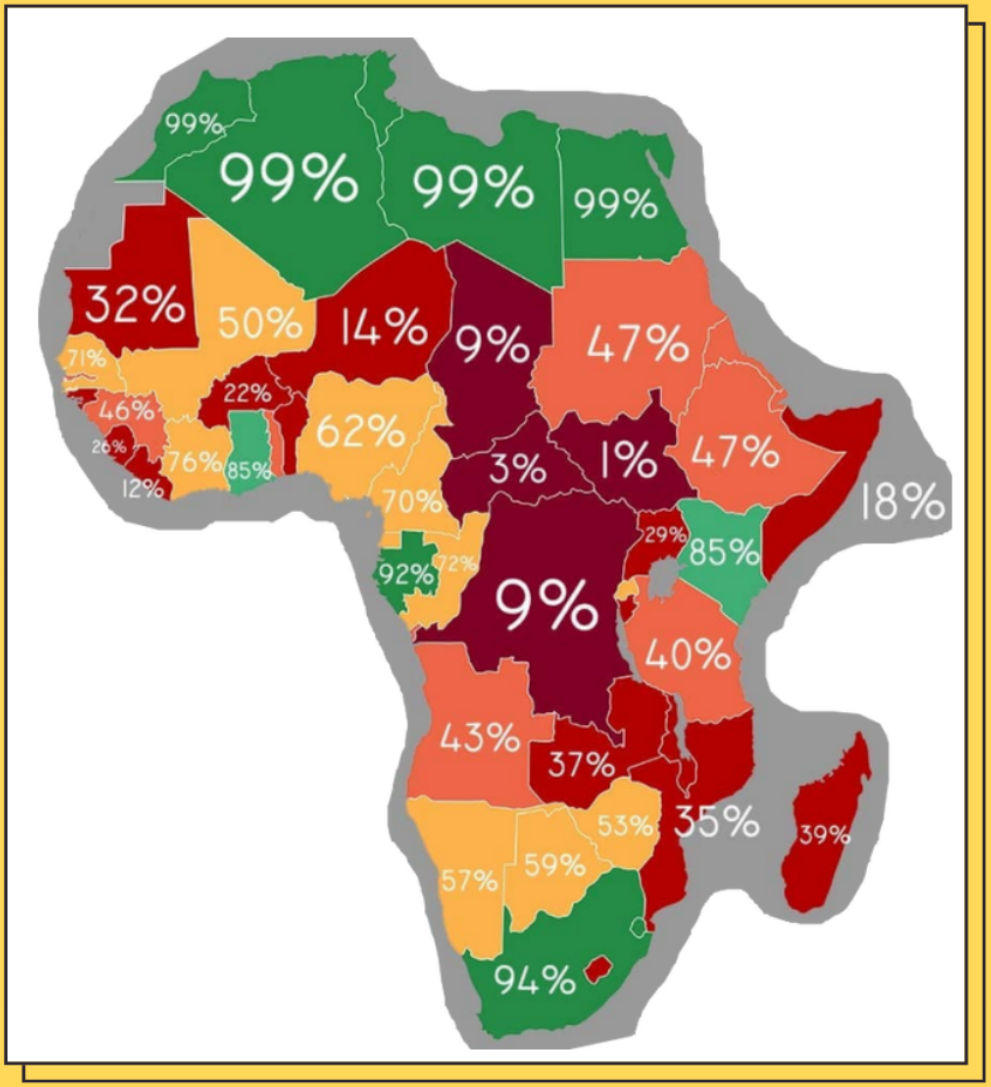
Inkar Tulegenova

Uzbekistan 🇺🇿

Worked on video editing and representing the idea

Africa is The Most Affected

Africa, especially developing countries, suffers from severe poverty in electricity, which is one of the basics of life. About 39% of Continent's people aren't provided with electricity!



The Problem is Developing

About 770 Million of people in Africa can't access electricity. Which is about 38% of the people in the continent.

It's expected that, By 2030, 50 per cent of the global population without access is concentrated in seven countries – Democratic Republic of the Congo, Nigeria, Uganda, Pakistan, Tanzania, Niger and Sudan.

The Solution

- The prototype doesn't emit pollutants or increase carbon dioxide in the atmosphere.
- The prototype takes advantage of waste heat energy in the desert, which heats and vaporises the water with the pushing energy of the vapor against the turbines, which produces electricity!
- It limits the use of fossil fuels and hence reduces greenhouse gases.

Why?

Fossil Fuels are the main source of energy and we use nonrenewable sources more than renewable resources, that's really a massive problem. On the other hand, many countries doesn't have the ability to to produce electricity from renewable or even non-renewable.

Our project is here to solve this challenge💪

One cycle.
Our project is a closed cycle, after the water is vapoured to push the turbines ,and produce electricity, the vapor will be condensed in order to reuse it again in the same cycle and produce electricity for many times!

What will we need?

- Aluminium water tank, will be placed in the desert up to 80°C (to conduct the heat and vaporise the water), also we will need a photovoltaic cell to help the water temperature to reach 100°C and more to vaporise, then the vapor will flow through tubes.
- A container under the ground (to be isolated) which will contain the turbines. The turbines will rotate and produce electricity, when the vapor flow to the turbines with its pushing force. (The electricity will be stored in batteries).
- After the turbines are rotated the vapor will flow to third container (cooled container), where the water will condense and we can take it to the ground with water pump and reuse it again in the same cycle.

The Economical Outline and Efficency

We decided to use recycled and used materials with the same quality, or even has better quality, which will increase the efficiency of our project and protect the environment.

We have allocated 6150$ for each unit, and a unit can provide electricity (more than 50 kWt) for about four homes for the whole day with stable quality.


By 2030
It will be
Happy Africa