

## Thassalia, France's first marine geothermal power plant

by FRANCOISE PETROS / 2017-06-01 19:03:43 / Francia / 13698 / FR



**Year of commitment** : 2016

**CO2 Impact** : réduction des émissions de gaz à effet de serre de près de 70%

**Green energies** : Marine energy, Geothermal, Cool, Heat

**Digital services** : Smart metering, Cloud data solutions, Water

**Water cycle** : Capture, Waterways, Other

**Circular economy and waste management** : Eco-Design, Industrial Ecology, Preservation of natural heritage



35 000 000 €

**Builder**

ENGIE - THASSALIA

**Manager / Dealer**

ENGIE - THASSALIA

### GENERAL INFORMATION

In Marseille, a new solution has been developed to exploit the renewable energy present locally: the exploitation of calorific energy contained in the Mediterranean Sea.

Located on the Grand Maritime Port of Marseille (GPMM), the Thassalia marine geothermal power station is the first in France and Europe that uses marine thermal energy to supply hot and cold all the buildings connected to it - 500 000 m<sup>2</sup> by 2020 - while reducing the greenhouse gas emissions generated by 70%. It is through a three-kilometer network that the facilities will be able to supply the connected buildings with energy.

## Progress Status

Delivered

## Data Reliability

Assessor

## Funding Type

Private

## Website Enterprise / Infrastructure

<http://www.engie-cofely.fr/actualites/thassalia-1ere-centrale-francaise-de-geothermie-marine/>

## Sustainable Development

### Attractiveness :

500,000 m<sup>2</sup> of buildings supplied by the plant between 2015 and 2020

### Well Being :

- Removing cold groups on the roofs of buildings
- Reduction of noise in buildings

### Social Cohesion :

Beyond the economic and environmental aspects, this project also allows the creation of some 60 local jobs including a team of 30 people who will be dedicated to the daily activity of the plant.

### Preservation / Environmental Improvement :

- Use of renewable marine energy
- 70% CO2 savings
- 70% of renewable energies

### Resilience :

As a constant local resource, marine geothermal energy represents a sustainable energy solution that is particularly relevant to France with its 3,805 km of coastline. This project aims to serve as an example to be duplicated in other cities on the Mediterranean coast but also from France or elsewhere. Indeed, the potential of marine geothermal energy is unlimited. With more than 40% of the world's population living within 100 kilometers of the sea (2.4 billion inhabitants), marine geothermal energy is a response to the strong demographic demand.

### Responsible use of resources :

Marine geothermal energy exploits the difference in temperature between hot surface water and cold water from the seabed, pumped by pipelines. On the coast, heat exchangers and heat pumps make it possible to produce, as needed, hot or cold. The water is then conveyed to the buildings for heating or cooling.

## Testimony / Feedback

## Governance

PATRICK BERARDI

**Holder Type :** Private Company

ENGIE - THASSALIA

**Builder Type :** Power producer

ENGIE - THASSALIA

**Manager / Dealer Type :** Private

This project meets the environmental requirements of Euroméditerranée and the expectations of all its partners including Euroméditerranée, the Regional Council of Provence-Alpes-Côte d'Azur, the General Council of the Bouches du Rhone, Marseille Provence metropolis, the city of Marseille and the organizations that support energy efficiency solutions: ADEME, and the European Regional Development Fund.

### Business Model :

The project represents a total investment of 35 million euros, and has received funding from local authorities (region, department, city and metropolis), ADEME and the ERDF.

## Sustainable Solutions

Marine geothermal

**Description :**

The Thassalia plant collects sea water at a depth of 7 meters in the Mediterranean (water at 14°C in winter and 22°C in summer) and pumps it to the surface by cold units and thermofrigopompes (TFP) associated with heat pumps: refrigeration and calories are recovered according to needs and transmitted to a network supplying part of the new port area Euroméditerranée.

CO2 Impact : 70,00

- Resources :
- Water management

Company (es) Website :

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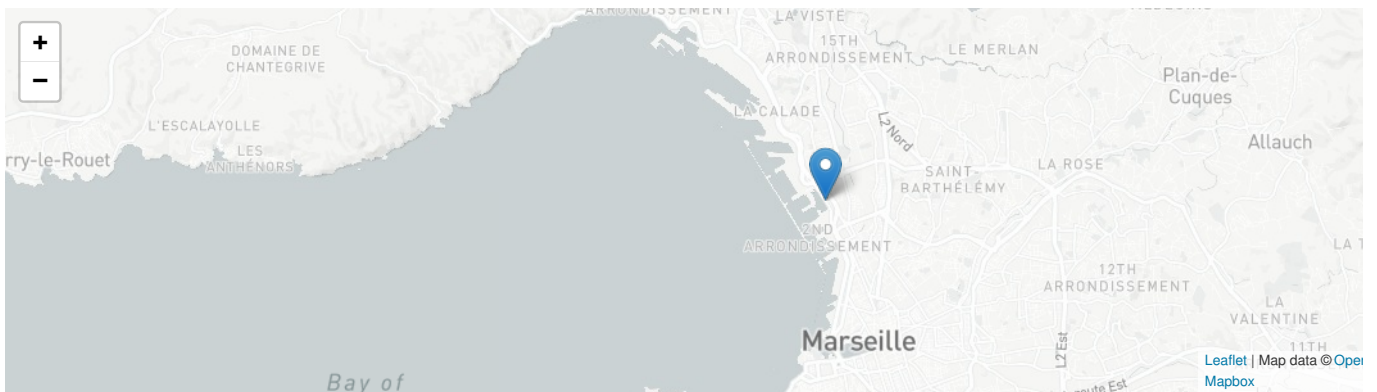


## Contest

### Reasons for participating in the competition(s)

par rapport à un parc équivalent d'installations autonomes, le réseau permet :

- 40% de consommations électriques
- +70% d'énergies renouvelables
- 70% démissions de CO2
- 65% de consommation d'eau
- 80% d'utilisation de produits chimiques



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