



## **ECOENERGIES: Recovering cold energy from the regasification process of the liquefied natural gas in ENAGAS's plant.**

The aim of this project is to profit wasted energy sources to provide heat and cold to a district heating and cooling network.

One of the biggest regasification plants in southern Europe is located in Barcelona's harbor, and has a 625.000 m<sup>3</sup>(N)/hour capacity. Gasification process consists in heating the LNG with seawater which generates a huge amount of cold.

In addition, Barcelona produces up to **15.000 tones of biomass** coming from public parks that could be energetically profited.

This project will recover a part of the wasted cold, thus recovering energetically the whole amount of biomass to serve the population.

## ECOENERGIES: A project to give energy to domestic clients

The main end users of this project will be the 85% of the neighbors of the new *Marina del Prat Vermell* neighborhood (up to 1.100 new apartment buildings), the first domestic customers for this kind of facilities in Barcelona.

The project aims to cover as well Barcelona's central market Mercabarna, the Fair facilities, hotels, and even a hospital. These final users will have a 24/7 intervention service, and SMS news update service.

### **Cold recovery Central**

Installed power: 30 MW

### **Biomass Central**

Supply: 15000 tons/year

Electric installed power: 1.3 MWe

Thermal installed power: 4.8 MWt

### **Energy production (year 2023)**

Cold production: 62.48 GWh/year

Heat production: 57.53 GWh/year

### **Environmental facts**

Avoided CO<sub>2eq</sub>: 13400 tons/year



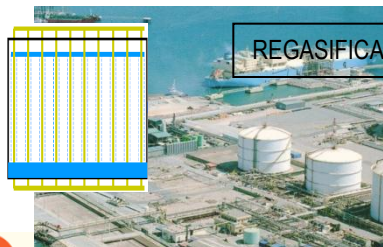
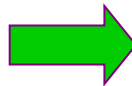
# District Heating and Cooling in Barcelona



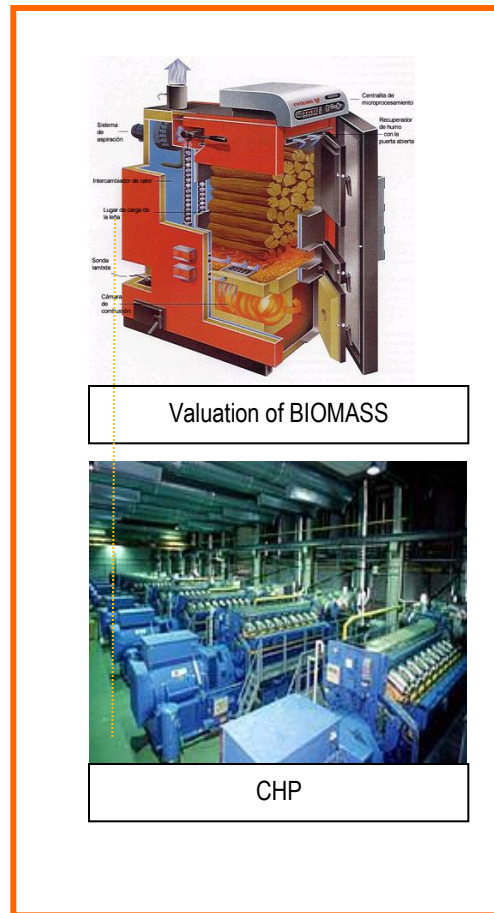
NATURAL GAS



PARC AND GARDENS BIOMASS

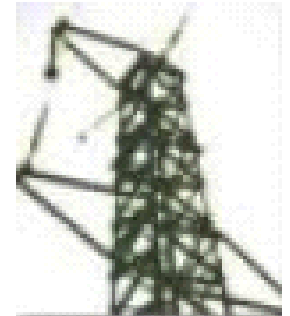


REGASIFICADORA's RESIDUAL COLD

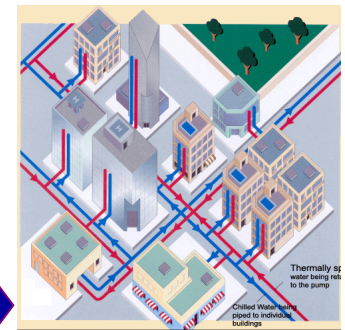


Valuation of BIOMASS

CHP



PRODUCTION OF ELECTRICITY



NETWORK OF DH&C



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