

### Industrialisation of village in Southern France by solar energy

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#### ▶ To cite this version:

Louis Boisgibault. Industrialisation of village in Southern France by solar energy. Annual Research Conference - 2014 (ARC'14), Nov 2014, Doha, United Arab Emirates. , Qatar Foundation, Energy & Environment (EEPP0277), pp.Ref. 10.5339/qfarc.2014, 2014, Proceedings volume 1. halshs-01121871

#### HAL Id: halshs-01121871 https://shs.hal.science/halshs-01121871v1

Submitted on 4 Mar 2015  $\,$ 

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## INDUSTRIALISATION OF VILLAGE IN SOUTHERN FRANCE BY SOLAR ENERGY How energy transition can dynamize a territory?

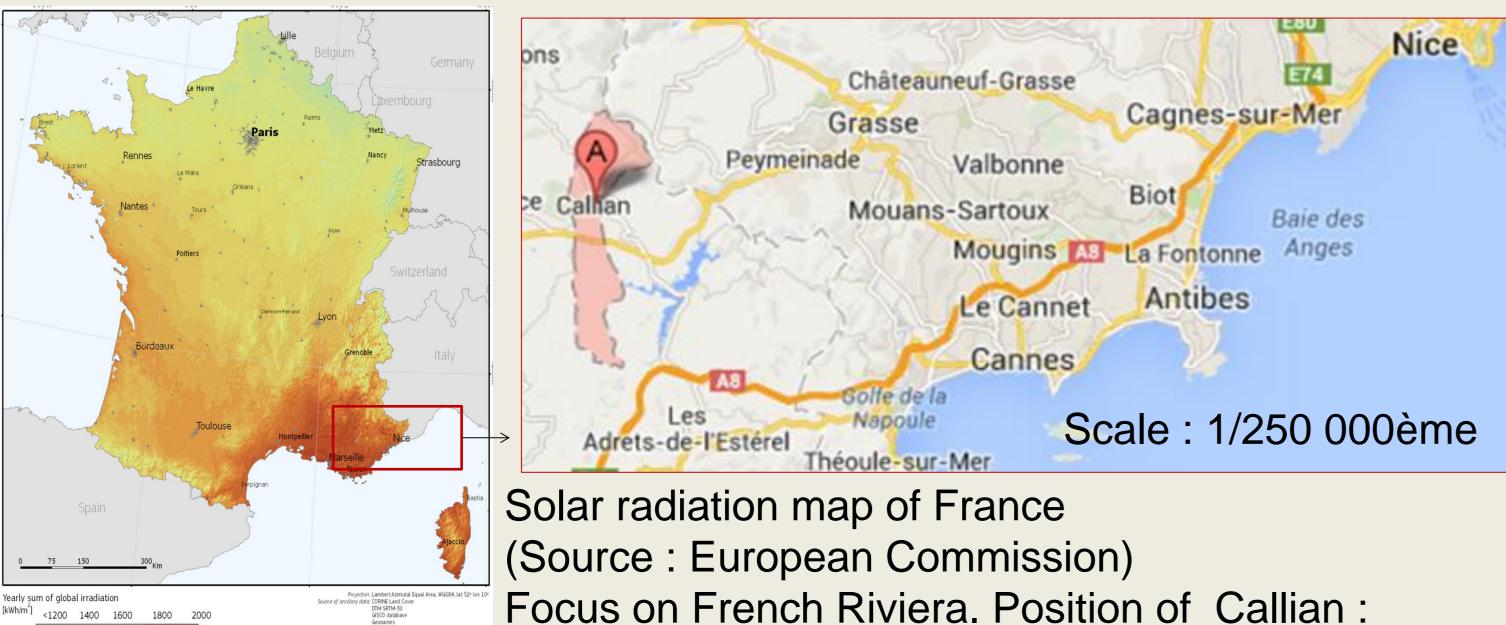


### **PRESENTATION OF CALLIAN**

Callian is a village of 3 000 inhabitants, 320 meters above the sea level. Located in Southern France, 30 km away from Cannes, its solar radiation is one of the best in France, with 1 600 kWh/m²/ year.

## **ECONOMIC HISTORY OF CALLIAN**

• Before JC: the Romans built an aqueduct to



- 43° 37' 20" de latitude N, 06° 45' 11" de longitude E.

- channel water of Camiole river.
- 12th century: village becomes significant as evidenced by feudal castle.
- 19th century: Callian has a paper plant, 5 ovens, and 6 oil and flour mills powered by Camiole river.
- 1876: new aqueduct built to irrigate the plain.
- 1892: beginning of railways « Central Var », but trains stopped in 1950. Mills stopped as well operations.

# **AN AMBITIOUS PHOTOVOLTAIC PROJECT**

• 2008: Callian signs a pre-agreement to rent the old landfill with start up company Energy for



The PV solar farm (below) is located 2 km away from centre of Callian (above), uphill in the forest.



### feasibility studies

- 2010: solar farm construction starts with private owned EPC contractors. 40 188 solar modules, manufactured by Sharp, are imported from the UK. Installed capacity: 4,7 MWp/17 hectares.
- August 2011: with CAPEX of 24 Millions €, solar plant is finished. O&M for Schneider Electric.
  Project satisfactory Internal Rate of Return is due to the 20 year Feed In Tariffs.
- During 30 years, Callian will earn old landfill rent and taxes, with no cost for inhabitants.

# **FIRST YEAR OPERATION 2012**

- Solar radiation : 1 515 KWh/m<sup>2</sup>/year.
- Power production : 11,2 GWh.

Every rectangle of solar farm represents 0,9 hectares

- Power needs cover : 5000 inhab/3000 inhabitants
- CO2 emissions : 1 650 tonnes avoided.
- Job creation during construction : 80.
- Job creation during operation : 5.

## Old landfill is rehabilitated. Population accepts this new green investment.

Dynamics must continue around this solar farm in order to create more jobs.



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