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**Kick off meeting of the EuGeoReg - S3 Partnership of European Regions for Geothermal Energy 2.0**

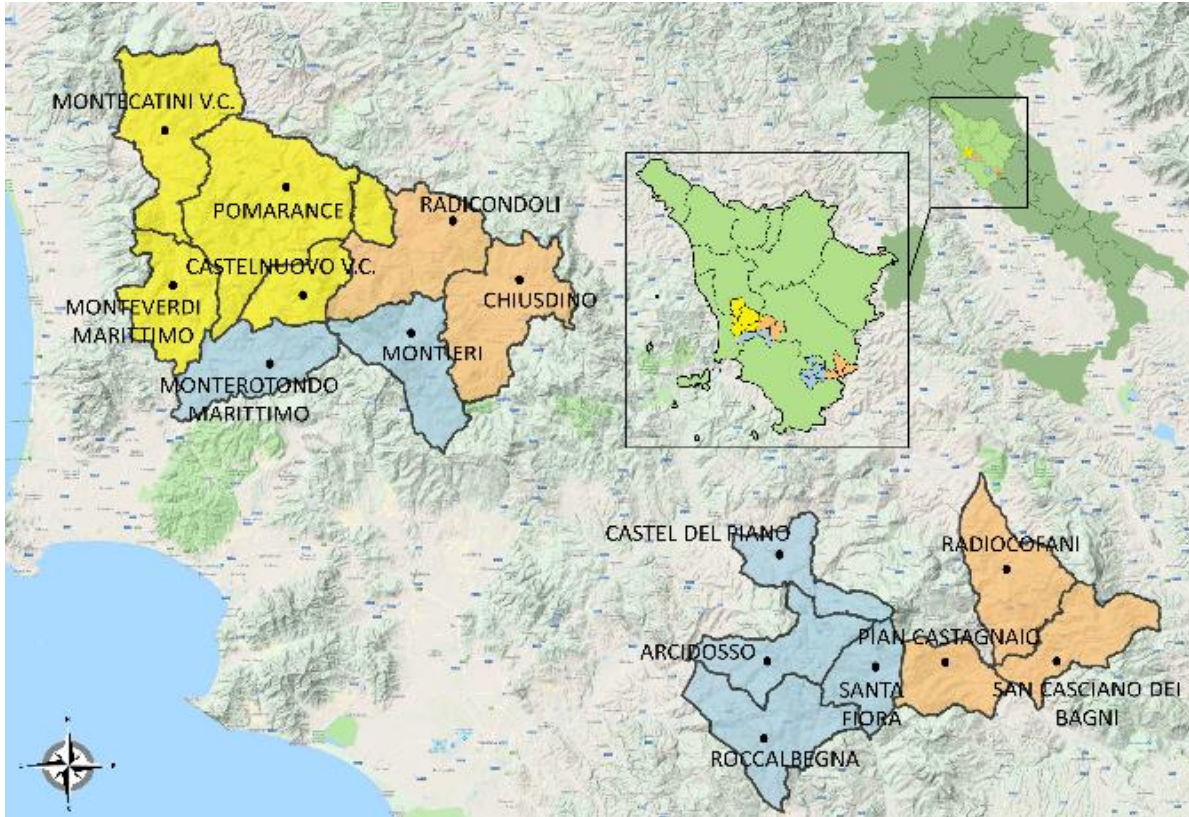
# **Policies, practices and state of the art of geothermal sector in Tuscany**



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*CoSviG – Consortium for the development of geothermal areas*

# Geothermal Energy in Tuscany



Tuscany can be considered the world cradle of geothermal energy

## Power generation

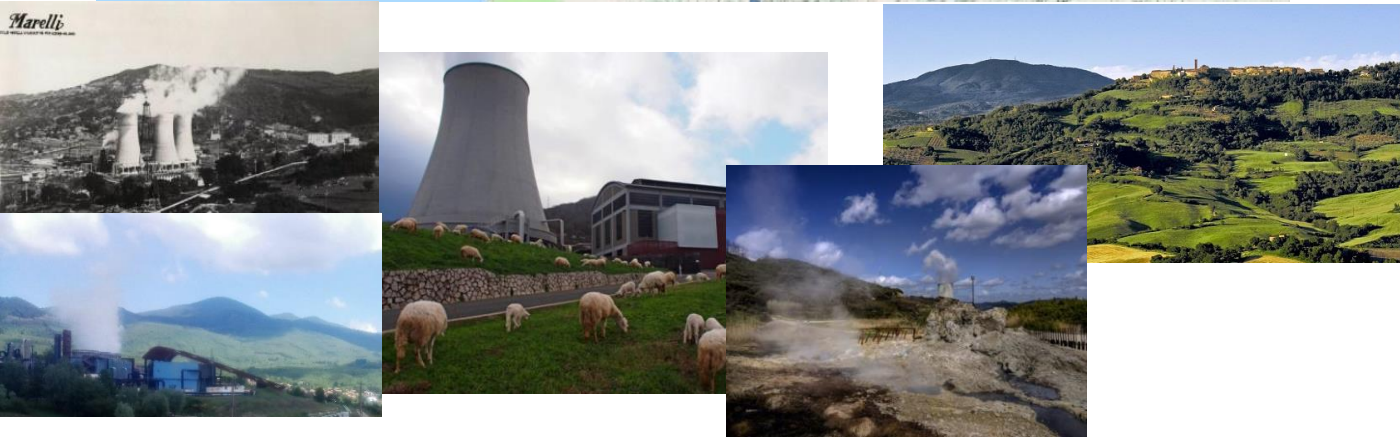
- 34 plants
- total capacity 915,8 MWe
- in 2017 production about 6.200 GWh
- more than 30% of the regional electricity demand

## Geothermal District Heating

- 14 geoDH (more 6 planned systems)
- total capacity about 100 MWt
- In 2017 about 160 GWht produced
- More than 5.000 users connected

## Direct uses

- Diaries, brewery, greenhouses, cured pork meat factory
- New projects: Spirulina microalgae, reuse of geothermal CO2





## Co.Svi.G. – Consortium for the Development of Geothermal Areas

- CoSviG is a consortium company, whose capital is entirely public
- It was founded in 1988, with the aim of promoting the local socio-economic development and to cooperate with Local Authorities, coordinating their technical and financial fulfilments linked to the use of royalties resulting from geothermal exploitation for power generation..
- 21 members
- It is an operational arm of their shareholders, in promoting a local development model promoting a local development model in line with vocations of territories.
- Main initiatives of CoSviG
  - Technology Cluster on Energy and Green Economy (DTE2V) of the Tuscany Region,
  - Training in the fields of renewables and energy efficiency
  - The Tuscan Renewable Energy Food Community
- International projects
  - Past: Geothermal Communities, GeoDH
  - GEOENVI - Tackling the environmental concerns for deploying geothermal energy in Europe
  - GeoSmart - Technologies for geothermal to enhance competitiveness in smart and flexible operation
- Among its infrastructures
  - CEGLab – Laboratory of the Centre of Excellence for Geothermal Energy of Larderello ([www.ceglab.it](http://www.ceglab.it))
  - SestaLab – Laboratories of the test area of Sesta ([www.sestalab.com](http://www.sestalab.com)).

**Regional Agency to support local development in geothermal areas, owned by**

- **14 Municipalities**
- **2 provinces**
- **4 consortium of municipalities**
- **Tuscany Region**





# POLICY INSTRUMENTS IN TUSCANY

## *POR CreO FESR 2014-2020*

(Regional operative program for increasing growth and jobs)

- **Scope of the policy instrument:** it contributes to the realization of the European Union for **smart, sustainable and inclusive growth**, as well as to **foster economic, social and territorial cohesion**.
  - The program allocates most of the resources to support the entrepreneurial system and also focuses resources on the development of social quality, services and environmental in the territories
  - It is divided into 6 priority axes, among which the fourth one supports the transition towards a low-carbon economy in all sectors.

# POR CreO 2014-2020 – **AXIS 4**

The 4° axis is divided into 3 **investment priorities**:

- **promoting energy efficiency** and the **rational use of renewable** energy in companies;
- support for **energy efficiency, smart energy management** and **energy use in public infrastructure**, including public buildings, as well as in the housing sector;
- promotion of **low carbon strategies** in all territories and in particular for urban areas, including the promotion of sustainable multimodal urban mobility, as well as relevant mitigation and adaptation measures.

# Linkage with S3

- In the second part of 2017 the Tuscan Energy Cluster (DTE2V), on behalf of the Tuscan Government, prepared a proposal for a midterm review of the regional Research and Innovation Smart Specialization Strategy concerning the energy sector, taking into account the current regional market state of the art and its needing. The document was drafted after a participative process involving all market stakeholders.
- This survey identified and updated the strategic roadmaps, through an update of roadmaps identified in 2013:
  - Roadmap 1 – Industry 4.0 – towards new solutions for energy efficiency of processes and systems
  - Roadmap 2 – Processes to promote geothermal energy and other renewables
  - Roadmap 3 – Processes for the decarbonization: innovative systems and new opportunities to reduce CO2 emissions

The reorganization is oriented to focusing in supply chains, identified by the RIS3 updating process, since their development is promising in short-medium period

# RIS3 and Geothermal energy in Tuscany

The S3 review process recognized:

- 3 development factors (research and development, innovation and interventions on the system input) within each technology priority,
- In line with 5 application areas, one of them is «Energy and Green Economy»,
- Focus on investments in research, development and innovation, finding possible synergies and integrations
- Energy and Green Economy includes the enhancement of renewables and considers as prioritary the geothermal value chain.

# What do we mainly expect by the EuGeoReg Partnership?

- Tackle social acceptance issues
- Tackle environmental concerns
- Enhance the promotion of direct uses
- Support R&D and Technological Innovation on geothermal energy





[www.cosvig.it](http://www.cosvig.it)



[www.ceglab.it](http://www.ceglab.it)

**Thank you!!**



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