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Shallow geothermal energy in Spain

Outlook and trends for a promising future

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geoplát



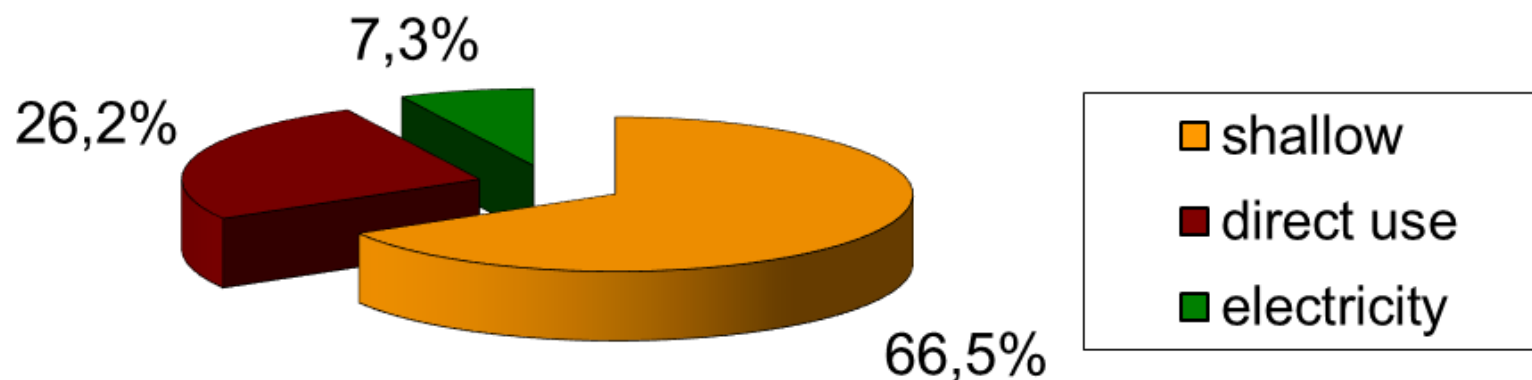
Resumen

- Market trends in Europe...
- Latest trends in Spain... situation of the sector
- Outlook

Capacity distribution in Europe by uses 2018

Shallow geothermal is the largest geothermal sector by far, covering 2/3 of the total installed capacity in Europe

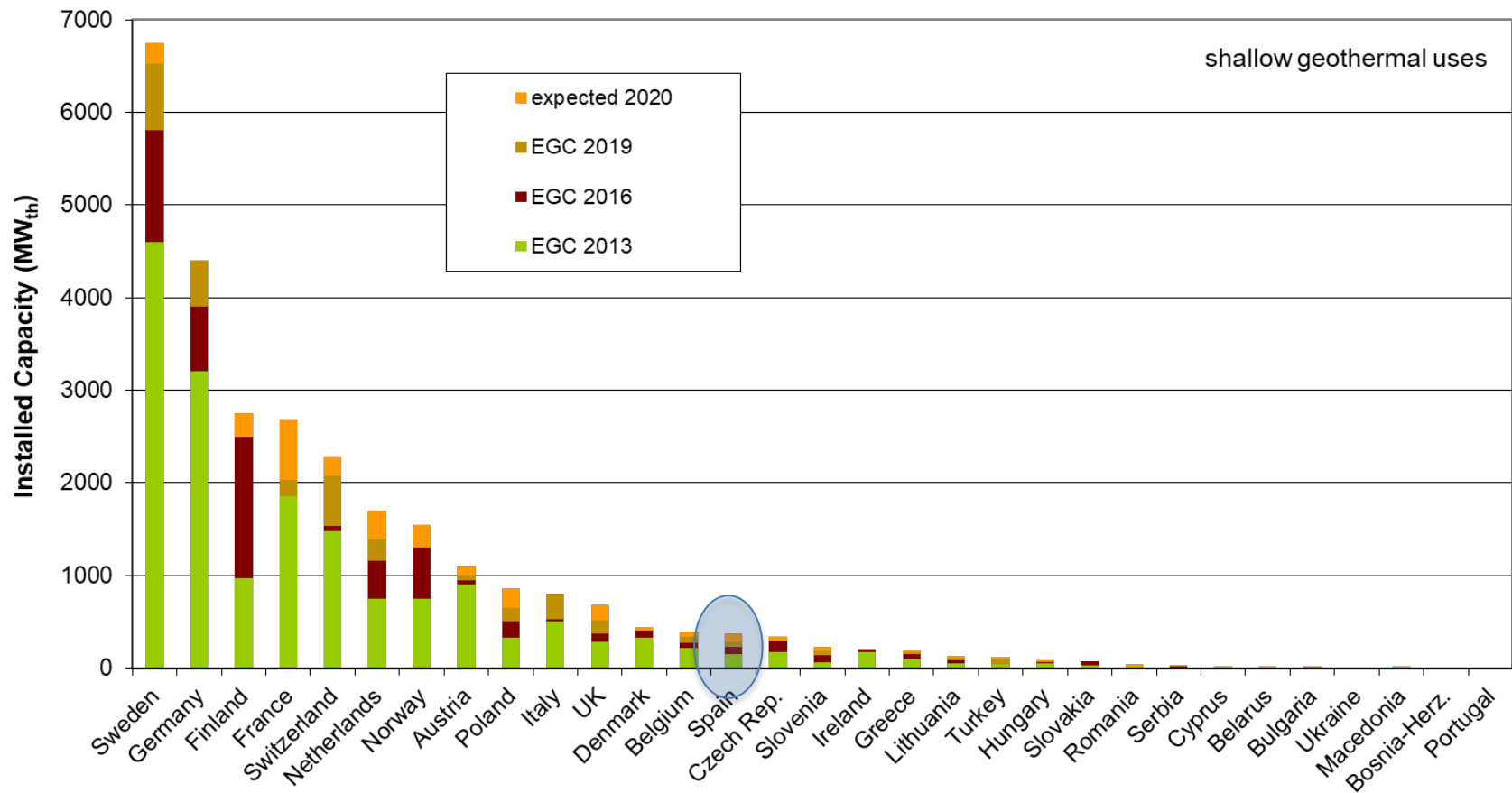
EGC 2019



Share of installed capacity in the three geothermal sub-sectors in Europe as of 2018 (from EGC 2019 country update reports)

Shallow geothermal Europe 2019

Installed capacity and trends (after several sources)



Summarizing ... in EUROPE

- 3000 MWeI
- 30.000 MWth
- 2 Mio GSHP units / new about 100 k each year

What about ... Spain?

- 0 MWeI
- 500¿? MWth
- ¿nr GSHP?

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- In Spain we cannot be satisfied ... much has been accomplished, but not enough... **CONS**
 - Lack of awareness ... specially in the building sector
 - Lack of statistics, numbers, data...
 - Lack of a clear and homogeneous support framework
 - The energy policy does not perceive the thermal sector as a differentiated and strategic component with its own rules and needs.
 - Regulatory “nowhere’s land”
 - wide availability of gas at prices that do not reflect its environmental costs.

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- In Spain we cannot be satisfied ... much has been accomplished, but not enough.. **PROS**
 - Existence of a complete value chain
 - Experienced/influential stakeholders, associations..
 - A broad basis of existing installations, some of them with high-end engineering profile, larger systems
 - Involvement of R&D, Universities, Institutes
 - Advanced framework conditions for training
 - Recognized standards (UNE...)



New scenarios... towards 2030

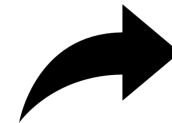
New!

The Spanish Institute for Energy Diversification (IDAE, core member of GEOPLAT) has performed a wide market research which is going to be published in the next days...

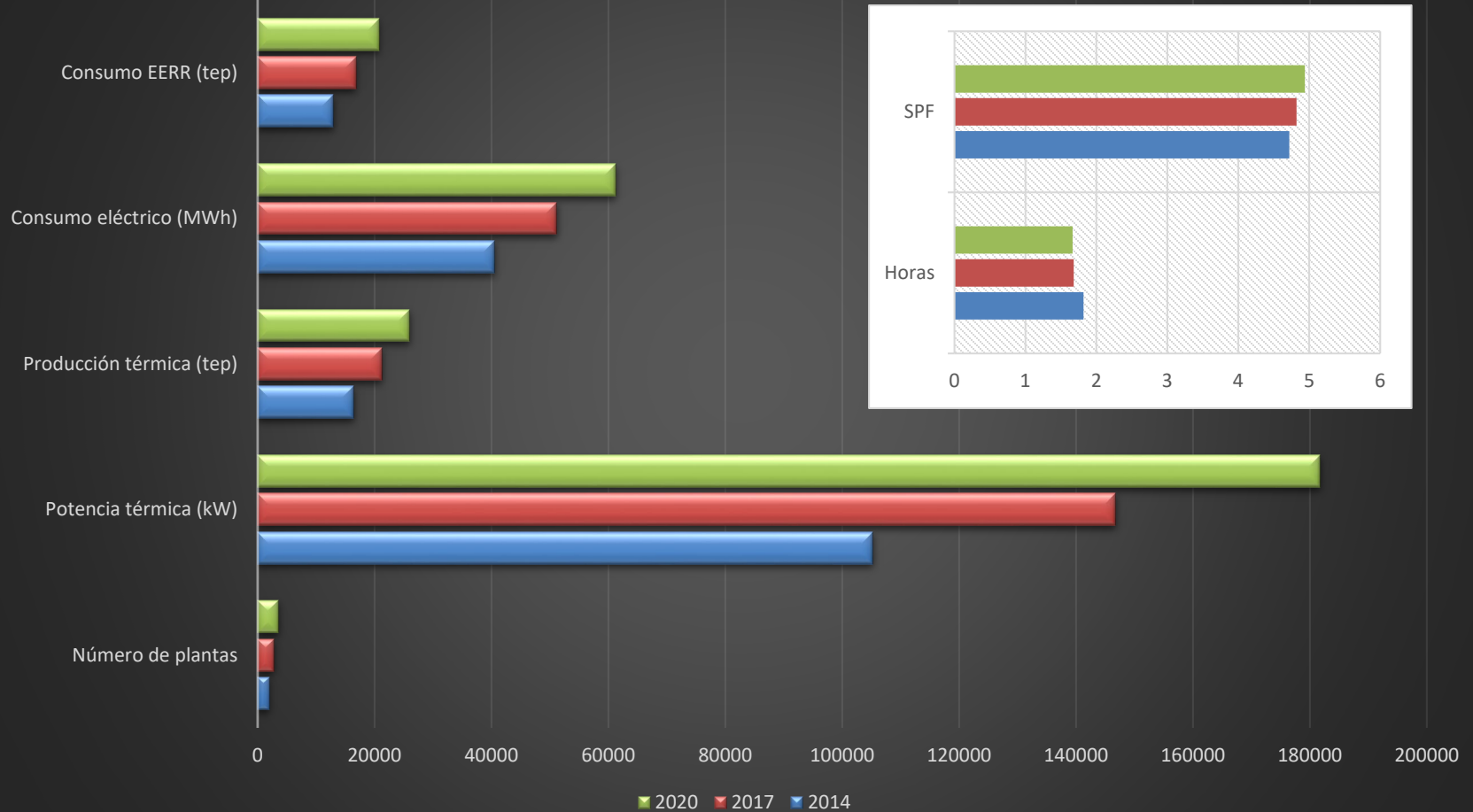
It gives a much clearer picture about the situation and trends of SGE in Spain

There are however methodological shortcomings.. The picture may only be partial

<https://estadisticas-bombasdec calor.idae.es/>



Evolution of SGE market in Spain (2014 - 2020)

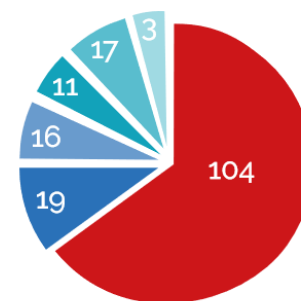


Plataforma Tecnológica y de Innovación en Geotermia

- Grupo de coordinación científico-técnica sectorial liderado por la industria, y formado por todos los actores relevantes de la geotermia en España.
 - ▶ Instrumento del Ministerio de Ciencia e Innovación.

- ▶ Actuaciones enfocadas a cumplir con las directrices proporcionadas por el Ministerio de Ciencia, Innovación y Universidades y la Agencia Estatal de Investigación, además de con los objetivos establecidos por el Grupo Rector para

GEOPLAT es un instrumento necesario para generar valor añadido al sector español de la geotermia. promocionar, implantar y desarrollar comercialmente la geotermia en España, de forma sostenible y competitiva.



170 ENTIDADES EN TOTAL

35 % EMPRESAS EN SU MAYORÍA PYMES

- Empresas
- Universidades
- Entidades públicas
- Asociaciones y cooperativas
- Centros Tecnológicos y Fundaciones
- Organismos públicos de investigación



European Technology Platform

www.rhc-platform.org

Final considerations

- Platforms such as GEOPLAT are key if we want to accelerate the implementation of technologies in the markets.
- In Europe, geothermal energy is called to play an important role in the decarbonization of thermal sector due to its great flexibility.
- Key concepts are:
 - SGE provides **sector coupling**
 - SGE goes in hand with efficiency in the building sector
 - SGE increases the share of RES and is the only available option for decarbonizing the COOLING DEMAND
 - It helps to reduce the **energy dependency** from imports



Gracias por su atención!