EGEC’s Position on the Taxonomy Regulation

On the 17th of December 2019, the European Parliament reached an agreement with the Council on the new criteria to determine whether an economic activity is environmentally sustainable – the so-called the “Taxonomy Regulation”. EGEC welcomes the positive outcome of this legislation, as it will play a crucial role in helping to redirect the necessary funding to investments in sustainable energy sectors.

According to it, the economic activities can only be categorised as “green” if they substantially contribute to mitigating or adapting to climate change, protecting and sustainably using the water and marine resources, transitioning to a circular economy, preventing pollution, or restoring or protecting ecosystems and biodiversity.

In the end, an economic activity should contribute towards one or more of the above objectives and not significantly harm any of them, as stipulated in the agreement. Its environmental sustainability will be measured using a unified classification system, as national labels based on different criteria make it difficult for investors to compare green investment, thus discouraging them from investing across borders.

In this sense, a Technical Expert Group on Sustainable finance has been established. Its objectives include:

- An EU taxonomy system to determine whether an economic activity is environmentally sustainable;
- An EU Green Bond Standard;
- Benchmarks for low-carbon investment strategies; and
- Guidance to improve corporate disclosures of climate-related information.

In practice the taxonomy provides a list of technologies eligible to be considered as a sustainable investment (e.g. RES technology, Nuclear is for instance not included).

- Proposes criteria for these technologies in terms of life cycle emission (LCE), “do no harm criteria”

It is important to highlight that the adopted text does not preclude or blacklist any specific technologies or sectors from green activities, apart from solid fossil fuels, such as coal or lignite. Gas, and nuclear energy production are not explicitly excluded from the regulation, however. These activities can potentially be labelled as an enabling or transitional activity in full respect of the “do not significant harm” principle.

**How may the sustainable finance regulation impact the geothermal sector?**

The criteria for eligibility as a sustainable investment under this European legislation are likely to have far reaching effects in shaping the financial sector approach to renewable energy investments. Therefore all upcoming geothermal projects may have to comply with the sustainable investment taxonomy’s requirement to attract financing, or benefit from support schemes.

**What are the main sustainable criteria for geothermal?**

For geothermal energy sector, there are the following proposed criterias in order to be considered as sustainable:

- **geothermal electricity**: “life cycle emission” threshold of 100gCO2e/kWh, decreasing to 0gCO2e/kWh in 2050; requirement of compliance with the Water Framework Directive, Air Quality regulations and other European Environmental legislations.
- **Geothermal cogeneration or geothermal heat**: The threshold is calculated from the relative production of heat and power, and based on the declining power generation threshold of 100 gCO2e/kWh(e), and a notional heat threshold of 30 gCO2e/kWh(th) declining to net zero for both metrics by 2050.
- **Geothermal heat pumps** to justify a Seasonal Coefficient of Performance of at least 3.33 to be eligible.

### What does it mean for investors?

The Taxonomy Regulation has to encourage investors to identify environmentally sustainable economic activities that substantially contribute to climate change mitigation, based on scientific evidence, including evidence from existing life cycle assessments (production, use, end of life and recycling), environmental impacts and long-term risks.

The new legislation also aims to protect investors from the risks of the so-called ‘greenwashing’ as it makes it compulsory to provide a detailed description of how the investment meets the environmental objectives.

### What should be considered for geothermal projects?

The criteria proposed by the TEG reflect the standards laid out for the different energy technologies listed in the taxonomy as eligible for consideration as sustainable investment so long as they respect these criteria. In that regard they are suitable for the geothermal sector, as they are non-discriminatory.
Geothermal energy projects however have some specific features that should be considered when assessing the eligibility of a project as sustainable investment.

First, geothermal systems may have natural emissions of non-condensable gases (CO2, H2S…) regardless of geothermal energy projects development. These natural emissions should be considered as such by the LCA and not attributed to the geothermal project. Indeed, they would be occurring regardless. Only additional emissions that may result from the development should be allocated to the project. The GEOENVI project, which aims at developing a LCA methodology for geothermal energy projects is a key resource for this provision to be robustly implemented, and the conclusions of the project should be reflected in this taxonomy.

Then, looking forward to the long-term reduction of the threshold for eligibility as a sustainable investment, the threshold of 0gCO2e/kWh seems rather impractical when not considering only the operational emissions of a project. Indeed, for geothermal energy, by 2050 it is reasonable to expect operational emissions that low, especially in light of an objective of a net-zero carbon economy by 2050. However, this threshold on a life cycle basis raises question, as some carbon emissions result from processes well beyond the mere performance of geothermal energy technologies. Typically, the process of making cement – a hugely important component of the geothermal value chain as it contributes to securing the geothermal wells – emits carbon. Moreover, existing LCA assessments of geothermal energy projects have noted that a large part of the carbon emissions may be imputable to the transport of materials. The decarbonisation of the transport sector by 2050 will therefore be necessary for geothermal projects to reach LCA emissions of 0gCO2e/kWh. In summary, many long-term structural changes will be required for geothermal project to meet this threshold, going well beyond the capacity of the geothermal industry itself. More precision should therefore be given as to what such a threshold refers to.

**Key recommendations:**

- The sustainable finance regulation needs to prevent any investment that locks-in fossil fuel emissions and puts the European economy on track with net-zero carbon emissions by 2050. That means incentivising renewable energy projects.
- For geothermal projects, the LCA assessment of emissions need to differentiate the natural emissions of geological systems from those resulting from geothermal project developments. The GEOENVI project is a major resource in that regard, as it precisely aims at developing a methodology to this end.
- The threshold for the performance requirement of heat pumps is realistic and confirms the role of a shallow geothermal systems as key resources for the energy transition.
- The threshold for 0 gCO2e/kWh in lifecycle emissions in 2050 needs to be clarified: for geothermal projects, in most cases emissions from secondary activities linked to project development (typically transport) represent a very large proportion of lifecycle emissions.

**Next steps**

The agreement reached by the European Parliament’s negotiators will have to be approved first by the two committees involved and by a plenary vote. The Commission will regularly update the technical screening criteria for the transition and enabling activities.

By 31 December 2021, the European Commission should review and define the criteria for when an activity has a significant negative impact on sustainability.