

Summary of proposed geothermal criteria under the Climate Bonds Standard

The objectives of the eligibility criteria are to:

- Distinguish *low*-emitting from high-emitting geothermal projects
- Avoid certifying projects which displace renewables, given that geothermal operational emissions can be far from negligible
- Exclude projects where emissions are poorly understood
- Exclude projects which do not meet acceptable standards in terms of environmental impact, health, safety and induced seismicity

To be eligible for Climate Bond certification, geothermal power projects need to meet *one* of the following options (A, B or C):

Option A criteria: Meet the threshold requirements for estimated carbon emissions

This can be achieved through a combination of:

1. **Estimating (operational) emissions** - net operational emissions of new and existing geothermal projects performances must be negligible. The estimation must use a GHG accounting methodology and result in an emissions profile no greater than zero gCO₂/kWh (carbon emissions/power generated)
2. **Implementing advanced technology** - if the project involves a binary cycle power plant to address fugitive emissions by implementing a closed loop system that returns GHGs to the existing reservoir, hence emissions are assumed negligible
3. **Counterfactual** - if the geothermal project would be more likely to displace renewables (e.g. hydro-electric) rather than fossil fuels and hence lead to an increase in emissions over the counterfactual, then the project is excluded

Option B criteria: only be deployed if no simple, low cost, reliable method could be found for estimating emissions from plants of all types under Option A

- Assume that emissions are negligible from a binary cycle power plant where Non-Condensable Gases are fully returned to the reservoir in a closed loop system. Exclude any project which is not a plant of this type

Option C criteria: for Non-Annex 1 countries, include only those projects that have been accredited under the Clean Development Mechanism and therefore is expected to have negligible emissions (meeting the zero gCO₂/kWh threshold). For other countries, revert to Option A or B.

Additional criteria are proposed to limit environmental, health, safety and social impacts

Projects are required to comply with best practice international guidelines/standards on environmental, health and safety for geothermal power generation (e.g. IFC/World Bank) and performance Standards on Environmental and Social Sustainability are strongly recommended IFC PS5 Land acquisition and Involuntary Resettlement, or IFC Ps6 Biodiversity conservation and sustainable management of living natural resources