

PROJECT DESCRIPTION

The plant is based on 2 x 22.5 MW units, fed by the geothermal resources from fifteen wells and using the binary organic cycle (ORC) technology. With a load factor of 8,300 hours/year, the plant is expected to produce 306.3 GWh/year equivalent to cover the demand for over 139 thousand households. The energy produced will allow saving around 163,900 tCO₂/year

CARBON FINANCE

The Project Sponsor has so far not developed carbon finance aspects. Considering the project size, the MidSEFF Team suggests to apply for Gold Standard (GS) certification.

ENVIRONMENTAL AND SOCIAL KEY ISSUES

- Potential pollution/contaminant emissions during construction and operation activities
- Potential visual impact
- Potential subsidence;
- Potential impact on fauna and flora;
- Cumulative impact
- Potential micro seismic activity due to fluid pressure increase during the reinjection;
- Stakeholder Engagement
- Community/workers health and safety both during construction and operation phases

MITIGATIONS/SUCCESSFUL IMPLEMENTATION

- Supervision of the construction activities by environmental, social and H&S experts to avoid, prevent, minimize and monitor impacts;
- Implementation of a photo-simulation study to present the dwellers;
- Installation of monitoring stations to take under control this event and the microseismic activity;
- Implementation of a biota monitoring plan
- Overall impact assessment with power transmission line;
- Stakeholder Engagement
- Naturalistic survey of flora and fauna during construction phase is suggested and mitigation measures in case;
- Identification & implementation of mitigation measures to minimize the effect on the community/workers H&S in case

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GENERAL INFORMATION

Project Location	Aydın Province
Technology	Geothermal Power Plant
Plant Capacity	45 MWm
Annual Energy Production	306.3 GWh/year
Annual CO ₂ Reduction	163,900 tCO ₂ /year

TIME SCHEDULE

Start of Construction	March 2012
Expected Commercial Operation	January 2013

FINANCIAL PARAMETERS

Total Project Cost	EUR 46,600,000
MidSEFF Loan	EUR 37,000,000
Payback Time	4.9 years
Internal Rate of Return	20.1 %