

Umurlu II Geothermal Power Plant

PROJECT DESCRIPTION

Umurlu II GEPP will have a production capacity of 12 MWe (3 production, 3 (planned) reinjection wells) and, it will be a binary cycle power plant using an Organic Rankine Cycle (ORC) system. The plant is expected to produce 72 GWh/year equivalent to cover the demand for over 32 thousand households. The energy produced will allow saving around 37,298 tCO₂/year.

CARBON FINANCE

The Project Sponsor has a Carbon Development agreement and has preferred VCS for certification standard.

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 impacts,
- 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;
- Subsidence and seismicity monitoring;
- Fauna and flora monitoring;
- Visual impact assessment of power plant, wells and piping;
- Implementation of Stakeholder Engagement plan;
- Identification & implementation of mitigation measures to ensure community/workers' safety.

Developed by



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GENERAL INFORMATION	
Project Location	Aydin Province
Technology	Geothermal Power Plant
Plant Capacity	12 MWe
Annual Energy Production	72 GWh/year
Annual CO ₂ Reduction	37,298 tCO ₂ /year
TIME SCHEDULE	
Start of Construction	January 2015
Expected Commercial Operation	November 2016
FINANCIAL PARAMETERS	
Total Project Cost	EUR 38,700,000
MidSEFF Loan	EUR 25,200,000
Payback Time	7.1 years
Internal Rate of Return	11.9 %