



Geothermal power, Indonesia

Indonesia is situated on the *Pacific Ring of Fire* which not only brings some volcanic activity but also a large potential of emission free geothermal energy production. That rich potential is, however, far from being fully utilized and this project is seen as an exemplar.

Location



This project is situated about 100 km southwest of the capital Jakarta in a sparsely populated region of vast tropical forests and some volcanic activity.

The geothermal potential in the region is mainly based on plate tectonic from the so-called *Pacific Ring of Fire* that circles the Pacific Ocean with volcanoes.

Project



This geothermal power plant uses the powerful natural resources of Indonesia's underground geothermal activity to reduce demand for fossil fuels and to make a positive change on people's lives in the surrounding local communities. The project activity involves the upgrade of existing turbines to significantly lift their efficiency and thus generate more emission free energy from the same source of geothermal steam.

The project owner, in close cooperation with the affected community, identified that a number of positive socio-economic benefits could be achieved as a direct consequence of the upgrade and the subsequent sales of carbon credits associated with the emission reductions generated through this project.



Due to the remoteness of the region, unemployment was understandably high and this was deemed a priority. As such, 24 new jobs were created during the construction phase. Furthermore, through technology transfer and industry-specific training, 12 new positions have been filled by locals, bringing in welcomed additional funds into the local economy. In addition, vocational training is offered to qualify community members for the local garment and fashion industry. Furthermore, the local kindergarden received donations in the form of books from the project owner.

Project achievements



Socio-economic impact:

- Employment for locals has been created, with over twenty jobs filled during construction, and another 12 permanent jobs in operation and maintenance of the upgraded plant.
- To address the regional situation of unemployment and low incomes, the project owner offers vocational trainings for women and unemployed to qualify them for the local garment and fashion industry.
- To support sustainable development, the educational situation in the community has been addressed by the project owner. Land was donated and support given to build a kindergarden, a school and an Islamic boarding school. Once the schools were operational, books and fundings to cover operational cost were donated.
- The project supports technology and know-how transfer through trainings and practical work to further qualify workers and spread the idea of emission free power generation.
- Roads and local infrastructure have been improved by the project owner which allows for better connections to the capital and enables economic development.

Environmental impact:

- As the cleanest renewable energy available, geothermal power generates no waste at all. In recognition of the company's efforts to provide the country with clean energy, it was awarded with the Clean Energy Initiative Excellence 2010.

Checklist Projekt 300321



✓ Additionality and permanence:	according to the rules of the VCS
✓ 3 rd party verified::	by TÜV Nord
✓ Transparency:	provided by Markit Environmental Registry
✓ Annual CO ₂ -reduction:	100,000 tCO ₂ e
✓ Social and environmental benefits:	as documented in our database
✓ Marketing material:	high resolution pictures available

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