



This Gold Standard project involves the generation of zero-emissions renewable energy through the installation of wind turbines in Gansu province, northwest China, which are connected to the local grid. Due to the size of the project it is making a significant contribution to the sustainable development of one of the poorest provinces in China.

### The technology:

Wind is an abundant energy resource which can be used to generate clean electricity through wind turbines. Wind power is produced by transferring the kinetic energy from wind to rotors. The mechanical energy from the wind turbine's rotating blades then powers an electric generator. The output of a wind turbine depends on the turbine's size and the wind's speed through the rotor blades. These blades range from around 30 to 90 metres in diameter and the supporting towers are roughly the same size in height. The power generated by utility-scale turbines varies from 100 kilowatts to as much as seven megawatts. Larger turbines are grouped together into wind farms, providing bulk power to the electrical grid which is sent through transmission and distribution lines to homes and businesses.



### Emission reductions:

The project, located in the Gobi Desert, constructed 134 new 750 kW turbines with a total capacity of 100.5MW of clean electricity, which is delivered to the Gansu Grid and Northwest China Grid (NWCG). The project reduces GHG emissions by displacing electricity which would otherwise have been drawn primarily from fossil fuel power stations.





## The region:

Gansu province is located in the northwest part of China and has a population of 26 million. Most of Gansu's economy is based on mining as well as electricity generation, petrochemicals, and oil exploration machinery. China as a whole derives over half its energy from coal, making it the world's largest consumer of this fossil fuel. At the time of project inception, there was only one other wind farm of its scale in Gansu and thus this project makes a significant contribution to renewable energy generation in the region.

Project area coordinates: The project is located just north of the town of Anxi in the north west part of Gansu province of People's Republic of China. It is located at longitude 95°40' - 95°56' East and latitude 40°34' - 40°50' North.

## Additional benefits:

Beyond the climate change benefits, the project has created 32 permanent jobs for the project operation, most of which have been recruited from the surrounding villages. The Gold Standard requires project developers to hold two rounds of stakeholder consultations: one before construction and one at the time of operation. As a result, the local residents, businesses, schools, governments and not-for-profits were consulted, resulting in strong support for the project and its environmental, social and sustainable impacts. The project owner has also donated half a million RMB (approximately 73,000 USD) to the "Hope School" in Anxi County. The donation helped establish the school by constructing the building and supplying the school with equipment. To comply with the Gold Standard's requirements, the project's sustainable development benefits must be monitored and verified. Therefore, the success of the "Hope School" donation was verified by assessing the school's enrolment. To ensure all other social and environmental impacts remain favourable, employment numbers, soil, air, and water conditions are also monitored regularly.

