Aga Khan Health Services

Afghanistan: Aga Khan Health Service, Afghanistan
Solarising Bamyan Provincial Hospital

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The Bamyan Provincial Hospital was originally a government-run facility with a capacity of 35 beds, 15 of which were housed in a tent and relied entirely on a diesel generator. In 2004, the Aga Khan Health Service, Afghanistan (AKHS, A), assumed responsibility for the hospital's operations through a Public-Private Partnership with the Afghan authorities. Under AKHS, A's management, the hospital's capacity was expanded to more than 100 beds, new equipment was installed, staff were trained, and a steady supply of medicines was ensured.

When building the new hospital, solarisation was a key priority. In 2013, AKHS, A, constructed a new eco-friendly and seismic-resistant 141-bed hospital (with support from the Aga Khan Foundation Canada, and the governments of Canada and France). In 2016, in line with its environmental stewardship and eco-friendly construction policy, the facility was equipped with a 400-kW solar plant and 576 batteries, with a later addition of 144 batteries - totaling 720 batteries and a power storage capacity of 2,160 kWh, thereby enhancing energy efficiency. Since then, the solar plant has been generating an average of about 50% of the facility's electricity consumption, resulting in cost savings of approximately USD 270,000 annually. This has contributed to an avoidance of diesel consumption of approximately 130,000 liters, and associated 350 tCO2e emissions, annually. The payback time was achieved within 7 years.

AKHS, A is committed to reducing carbon emissions and achieving net zero by 2030. AKDN's carbon management tool was used to calculate carbon emissions.



Figure 1: Solar plant with batteries at Bamyan Provincial Hospital