Aga Khan Health Services

Afghanistan: Aga Khan Health Service, Afghanistan-Faizabad Hospital Transitioning from generator-powered to hydro-powered services.

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The Aga Khan Health Service, Afghanistan (AKHS, A), is committed to reducing carbon emissions and achieving net zero by 2030. In 2022, Faizabad Hospital, a 180-bed capacity provincial hospital, was entirely fueled by 4 diesel generators (2 x 700 KVA and 2 x 300 KVA). As well as being carbon-intensive, in Afghanistan, diesel was also expensive. A decision was consequently taken to explore connection to the nearest city's electricity grid which was served by hydropower, sourced from the Shurabak dam.

Following projections of the benefits in terms of cost and carbon, AKHS, A purchased and installed a 1000 KVA transformer and related accessories, including transmission poles, for connecting the hospital to the city's grid.

The results include a reduction in operating costs by up to 44%, and annual savings of USD147,560. These calculations take into consideration actual costs and the occasional use of back-up generators. Diesel consumption has reduced from around 360,000 litres in 2021 to 14,000 litres in 2023, representing a 96% reduction. This transition represents a particularly high reduction of 928 tons of CO2e emissions annually as the electricity is generated by hydropower. The costs to make this transition, including the transformer, labor, and accessories, was approximately one-third (1/3) of the annual operational savings.

Carbon emissions were calculated using the AKDN carbon management tool.



Installation of a 1000KVA Transformer and connection to grid of the AKHS, A- Faizabad Hospital, 2022.