Aga Khan Health Services

Syria - From Diesel to Solar: The experience of the Aga Khan Medical Centre-Salamieh.

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Striving to achieve Net Zero carbon emissions by 2030, the Aga Khan Health Service, Syria has transitioned operations from being reliant on diesel generators to solar-power. The Aga Khan Medical Centre-Salamieh (AKMC-Salamieh) offers daycare outpatient services for 8 hours per day, 6 days a week, and initially was operating on 60 KVA and 200 KVA generators to meet daily operational needs. Since 2022, this centre pursued installing solar PV to reduce high carbon emissions and costs resulting from generator usage.

The initial plan for solarization was to cover all clinical needs except for occasional higher energy requirements for X-rays, Variable Refrigerant Flow (VRF) cooling and heating systems, and mammograms.

The aim was to install 60 solar panels with a capacity of around 29 KWh, and have additional needs provided by generators. However, AKMC-Salamieh managed to mobilize additional funds to increase solar cover from 60 to 102 panels, generating 50 KWh, which was projected to be sufficient to accommodate daily activities, including the VRF and mammograms. The X-ray remained the only equipment projected to be in occasional need of the 60 KVA generator for days with insufficient solar power. Once the system was installed, it was discovered that the VRF had inverter problems. When these were replaced, the solar system was able to accommodate energy needs for X-rays requiring a little planning to stagger the use of equipment with high energy needs. This system should also cover further plans for a CT scan. The generators will nevertheless be retained for back up on cloudy days in winter or particularly busy clinic days.



The Aga Khan Medical Centre-Salamieh

There are plans to continue upgrading the solar system in line with aims to increase services. With the investments this far, significant financial savings and reduced carbon emissions are anticipated. The expected payback Period is within 5 years with estimates to avoid generating around 72tCO2e in carbon emissions annually. Carbon emissions were calculated using the AKDN carbon management tool.