**AMERICAN PARTNER TRUSTEES: SOLAR PROJECT AT THE UNITED CHURCH OF ZAMBIA MWANDI MISSION HOSPITAL**

**In the Fall of 2018, the American Partner Trustees of the Board of Directors of the United Church of Zambia Mwandi Mission Hospital (UCZMMH) completed the first phase of solar power installation at UCZMMH.**

**The solar project is a part of the Strategic Plan for the UCZMMH adopted by the international board of trustees in April 2017. Currently, the UCZMMH is a first level referral hospital in Zambia’s Western Province. The hospital catchment area has a population of about 28,000 in a 5000 square kilometer area. Recently, the Zambian government is making plans to upgrade hospital facilities in line with Universal Health Care Coverage, the Mwandi Mission Hospital is now on the verge of attaining level two status meaning a doubling of the catchment area (including neighboring districts).**

**One major goal of the 2017 Strategic Plan is to fully convert the hospital to solar power by 2027.** For many years, at least 43% of UCZMMH’s operating budget was consumed by its electricity bill. During that time, the government’s grants for hospital operations were not received on a regular basis; hence, the hospital was unable to cover all of the costs of electrical power. The hospital’s board recognized that trying to meet the constantly rising costs of electricity was unsustainable for the institution and formulated a plan that would phase the installation of solar power and gradually reduce the dependence on ZESCO. A consultant was engaged to assess the power needs of the hospital and to recommend a phased implementation plan.

The first phase of the solar project was completed on September 14, 2018, with solar panels installed on the roof of the main hospital building and deep-cycle batteries activated. **After the completion of Phase 1, the hospital was able to utilize solar energy between 8 – 16 hours each day and to reduce consumption of ZESCO power by about 40% Daily.** The evaluation phase of the project should be completed by April 2019. During this phase, the electricity consumption from solar power and from ZESCO is being monitored continuously. The results of this assessment will indicate some intermediate steps that could be made to increase efficiency (reducing power consumed by equipment). Installation of additional solar panels might be warranted to generate more solar power and further reduce the dependence on ZESCO. After monitoring the effectiveness of Phase 1 is complete, specific plans will be proposed for extending solar power for the entire hospital compound (Phase 2). The requirements for Phase 2 of the solar project will depend on finalizing a new master plan for a level two facility that can accommodate an increased patient population and provide more extensive patient services.