Renewable World
Transforming Lives Through Clean Energy

Technology Fact Sheet

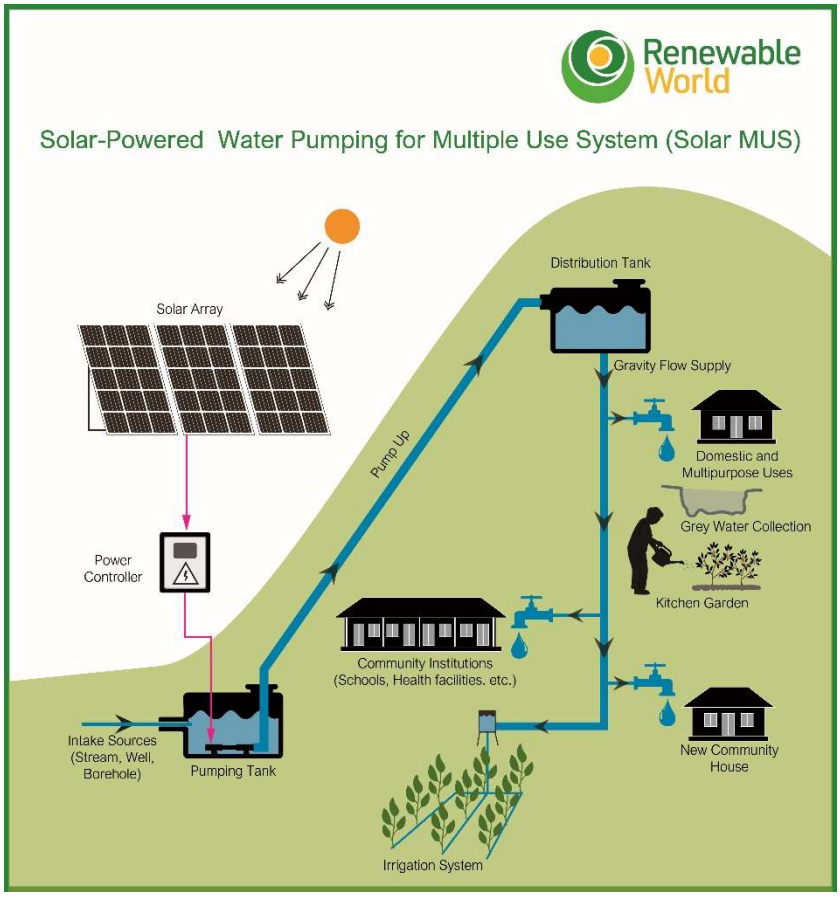
Solar MUS

The challenge: In rural areas, water sources may be located far from the home. The daily activity of fetching water is therefore both physically demanding and time-consuming. In addition, the scarcity of water impacts negatively on sanitation and hygiene and the ability of householders to grow vegetables and crops during the dry season.

The solution: A community-owned solar-powered water pumping for multiple use system (Solar MUS) can meet these diverse needs. Water is pumped from a spring, stream, or well to a hilltop storage tank. From the storage tank water flows by gravity to houses and community institutions. Households have individual tap stands for domestic use, watering livestock, and irrigating their gardens. Community institutions such as schools, health centres and municipal/ ward offices are also connected to the water system.

The technology: Each system comprises the following main components: intake; horizontal roughing filter and pump tank at the source; storage tank at the highest point; transmission and distribution pipeline; tap stands; solar panels; pump (typically submersible); inverter inbuilt with MPPT charge control to convert DC generated by the solar array to AC required by the pump.

Illustrative output: Systems may vary from 1-25 kilowatt-peak (kWp). The pumping capacity of the system is dependent on the quantity of water to be pumped and the height the water needs to be pumped.



Lifespan? @20 years.

Why choose Solar MUS?

- ✓ Efficient, effective and environmentally friendly option.
- ✓ Can operate in off-grid locations.
- ✓ Cheap to run and maintain.
- ✓ Major reduction in time and effort required – usually by women – to fetch water.
- ✓ Water is available for diverse uses, including community institutions, irrigation, home gardens, and household needs.