Solar Snow Melter

The Army posts located in remote high altitude areas do not have electricity. Kerosene stoves are used to melt the snow as the liquid water is mostly flowing in the valleys far below. Fuel has to be air lifted most of the time adding to the cost and logistic problems.

To overcome these problems, a solar snow melter has been developed which will be able to meet requirement of water to a great extent at snow bound pickets (>18,000ft) in high altitude locations thus saving cost.

The melter consists of an outer box made of GI. The inner container is made of SS to prevent any rusting in the drinking water. The heating sheet is made up of copper which is covered by polycarbonate sheet.

The snow melter lets the smaller wavelength IR (Infrared) rays in and then converts them to longer wavelength IR rays that cannot escape.

- It generates about 7.2 liters/hr (at sea level)
- Tested at high altitude (Khardungla, 18380 ft)
- It provides about 3 liters /hr water even under subzero conditions.

Patent application has been filed.