



AIR AND CYROTECH

Investigated how the biological processes of the Vai Vai could be translated into technology*1. Night time technology uses a nitrogen powered heat engine that allows the absence of solar. The potential to harness air (78% nitrogen). Next integrating "thermal battery" we borrow the traditional features of traditional persian architecture called a Yakhchal (Hareth Pochee and Gunstone, 2018). Ice is not being used as fuel but the difference in temperature to do the mechanical work. generate electricity from the heat energy contained in ice blocks creates an energy deficient(Skylights.org, 2024) so using a photovoltaic solar mini grid as primary power source of consumable power and fuel for the heat engine and cryocooler (liquifying nitrogen) The technical narrative describes a closed-loop system that extracts nitrogen from the surrounding air and cools it to liquid nitrogen. Using liquid nitrogen twice in the system to generate electricity and provide material supply. Interacting with ice and water, respectively. when in contact with ice a thermal mass that can absorb heat and expand the nitrogen as gas which spins a microturbine generating electricity. Electricity is generated for consumption and self-sufficiency in the system. Daily when liquid nitrogen is used to treat pond water, it freezes into ice, which is then stored in the yakhchal, and the cycle is repeated.

