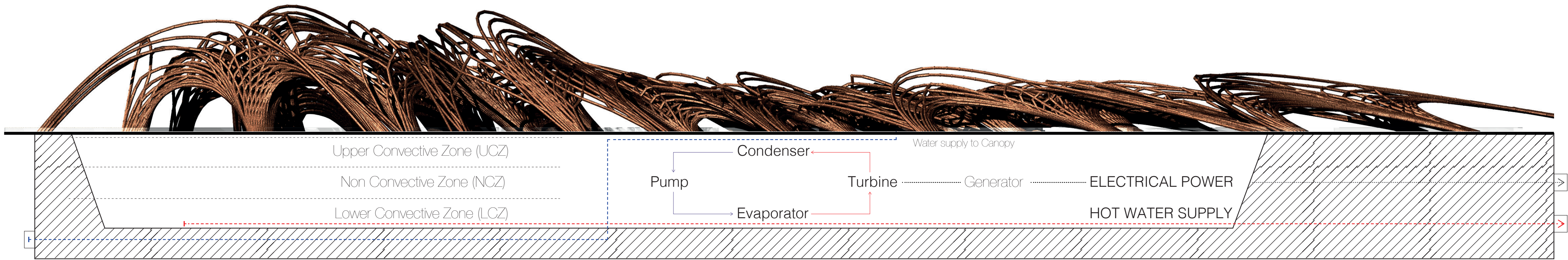
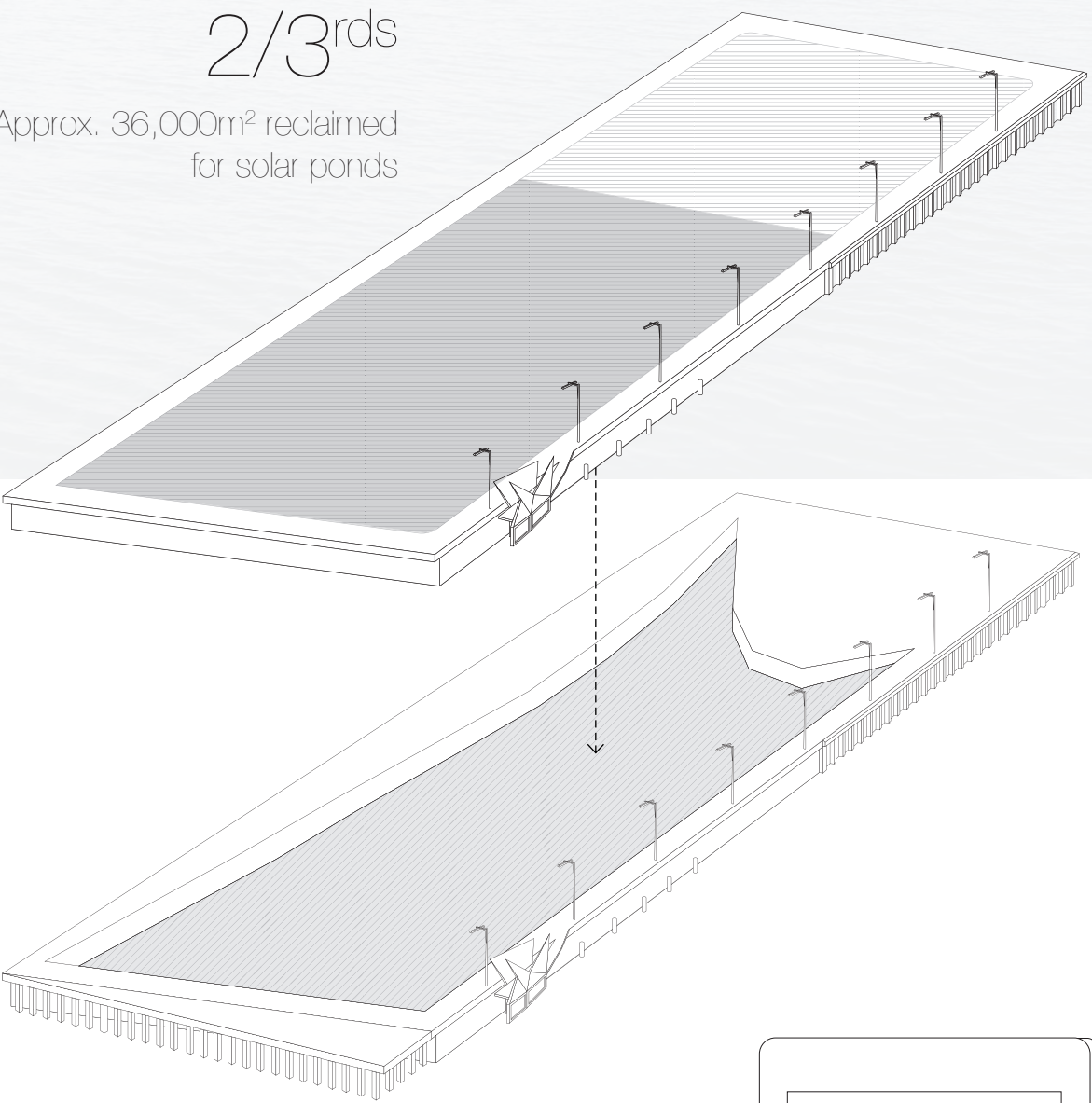


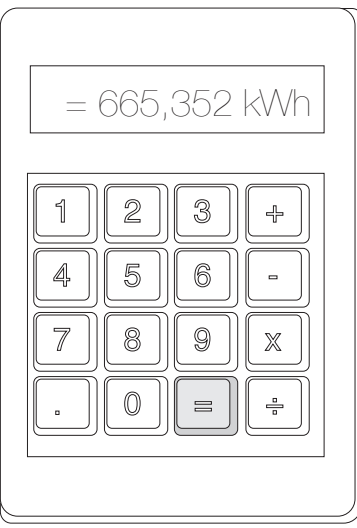


Solar ponds work on the basis of the scientific phenomena of *stratification*: where water naturally arranges itself into layers of different properties, particularly different salinity and temperature. With increasing depth, the water in a solar pond increases in salinity and therefore temperature, with bottom layer temperatures frequently exceeding 80°C. Rankine cycles take advantage of this naturally-occurring phenomena and use these heated waters to heat a working fluid; these fluids when heated expand into a gas and turn a typical turbine (thus inducing an electrical current) before being cooled back down to a liquid by cooler waters drawn from the bay.

ENERGY CALUCATION



HOW DOES IT WORK?



Average Annual Insolation in København = 1026.78 kWh/m<sup>2</sup>  
Net Pond Efficiency = 18%  
1026.78 x 0.18x0.10 = 18.482 kWh/m<sup>2</sup> per year  
665,352 kWh per year  
1,822.88 kWh per day  
75.95 kWh per hour



600+

PEOPLE 'S ELECTRICITY NEEDS\*

\*Assuming an average annual usage of ~ 1,000 kWh/person (Danish Energy Savings Trust) from a maximum estimated yearly energy output of 665,352 kWh. This does not account for any transmission loss or the (albeit small) amount of energy expended to pump around water.