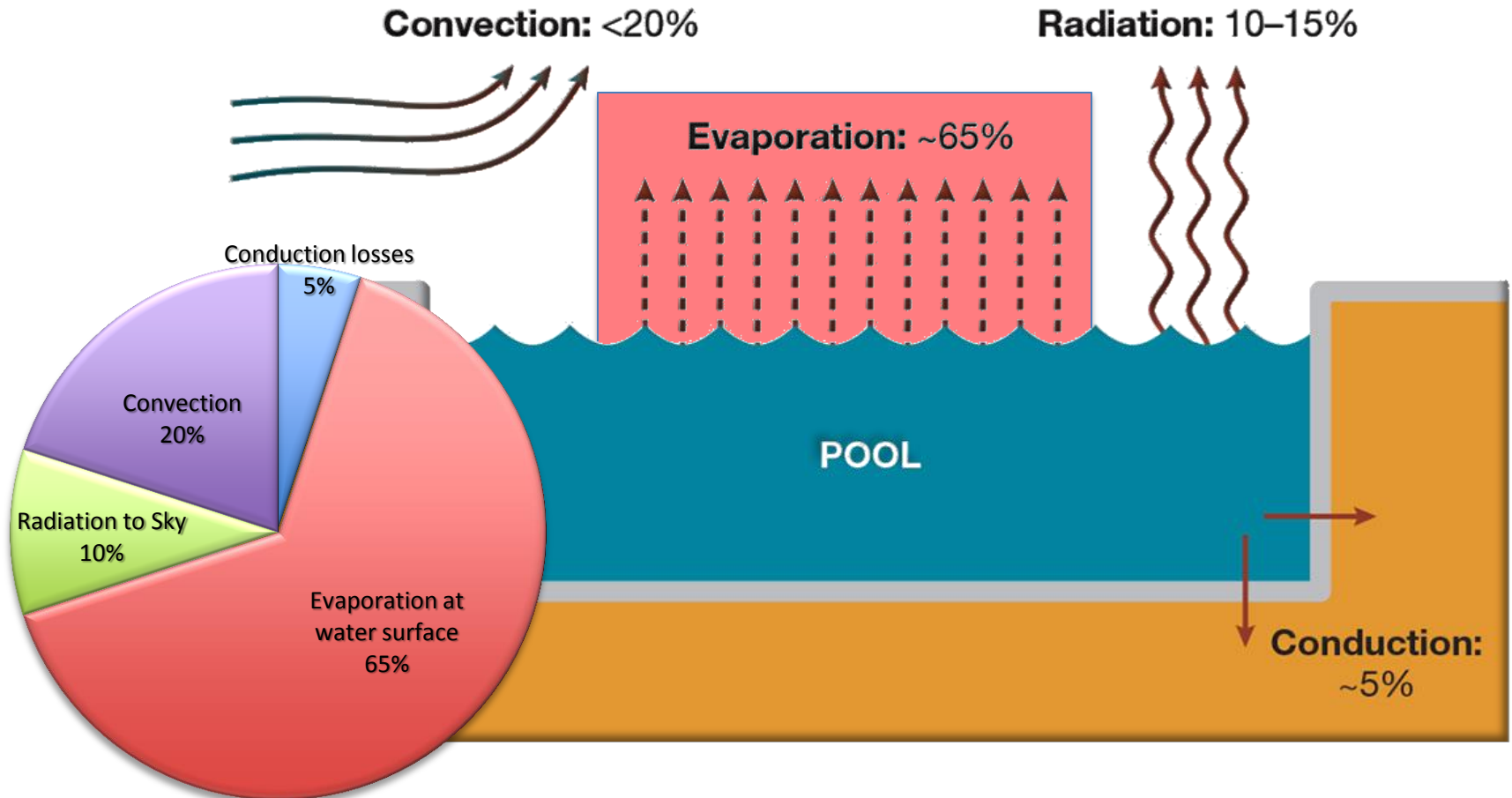


POOL HEATING- HEAT LOSS



Heater sized to make up for evaporation heat loss

POOL HEATING

- Convection losses are accelerated by **larger pool surfaces, higher pool temperatures, higher wind speeds** and **lower air temperature**.
- Heating and chemical costs are directly proportional to total surface area
- The difference between zero wind across the pool surface and a breeze of 10km/h can increase heating costs up to 10% and increase filtration and chemical costs as well.
- **BTU** = Heat required to raise the temperature of 1 pound of water 1 deg. Farenheit.
- **CHANGING HEATER CAPACITY CHANGES SPEED TO HEAT. TOTAL HEAT REQUIRED IS THE SAME FOR A GIVEN QUANTITY OF WATER**

$$\text{BTU} = [\text{Temp Diff } \Delta T \text{ (deg F)} \times \text{Area (Sq.ft)} \times 12]$$

OR

$$\text{Heater kW} = 0.7 \times \text{Pool Area (sq.m)} \text{ per } 10 \text{ deg C}$$

$$1 \text{ sqm} = 10.76 \text{ sq.ft}$$

$$\Delta F = 1.8 \Delta C$$

$$\text{BTU} = \text{kW} \times 3413$$