

## 1.5. District Cooling Facilities and Cooling Towers

### 1.5.1. Cooling Tower

A cooling tower is a heat rejection device, which extracts waste heat to the atmosphere through the cooling of a water stream to a lower temperature. The type of heat rejection in a cooling tower is termed "evaporative" in that it allows a small portion of the water being cooled to evaporate into a moving air stream to provide significant cooling to the rest of that water stream

### 1.5.2. District Cooling

District cooling is the centralized production and distribution of cooling energy. Chilled water is delivered via an underground insulated pipeline to office, industrial and residential buildings to cool the indoor air of the buildings within a district

### 1.5.3. Counter Flow Cooling Tower

A cooling tower classification in which the water flows countercurrent to the airflow

### 1.5.4. Cross Flow Cooling Tower

A cooling tower classification in which the airflow is essentially perpendicular to the flow of water

### 1.5.5. Mechanical Draft Cooling Tower

A cooling tower classification in which air movement depends on fans or blowers.

### 1.5.6. Natural Draft Cooling Tower

A cooling tower containing no fans or blowers, in which air movement depends on the difference in densities of the heated air inside the tower and the cooler air outside

### 1.5.7. Cell

The smallest tower subdivision that can function as an independent unit with regard to air and water flow.

### 1.5.8. Fire Resistant Partition

A tight, continuous partition suitable for use in a cooling tower environment that has a fire resistance rating of 20 minutes or more.