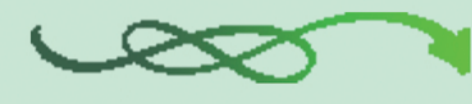


GREEN TOWER



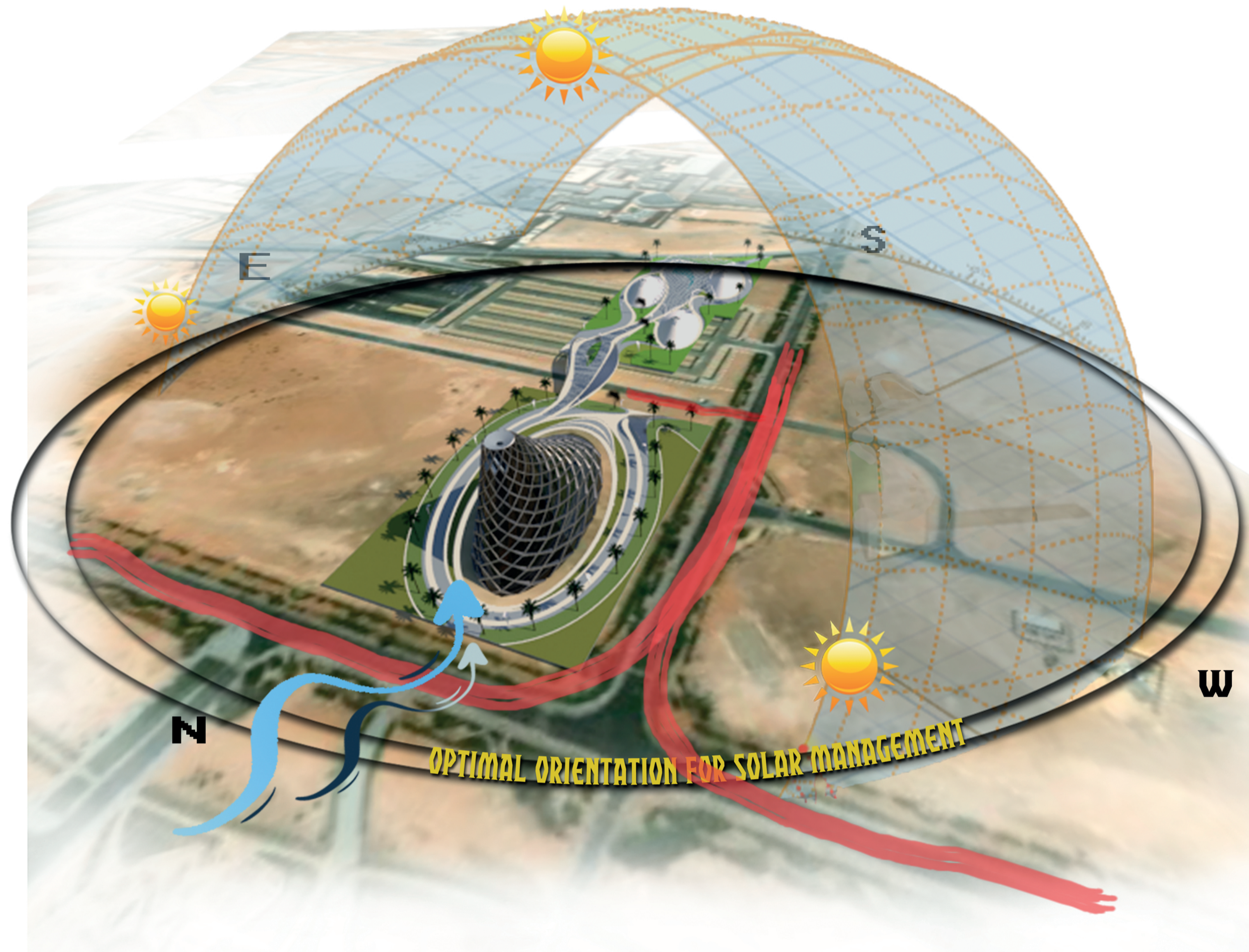
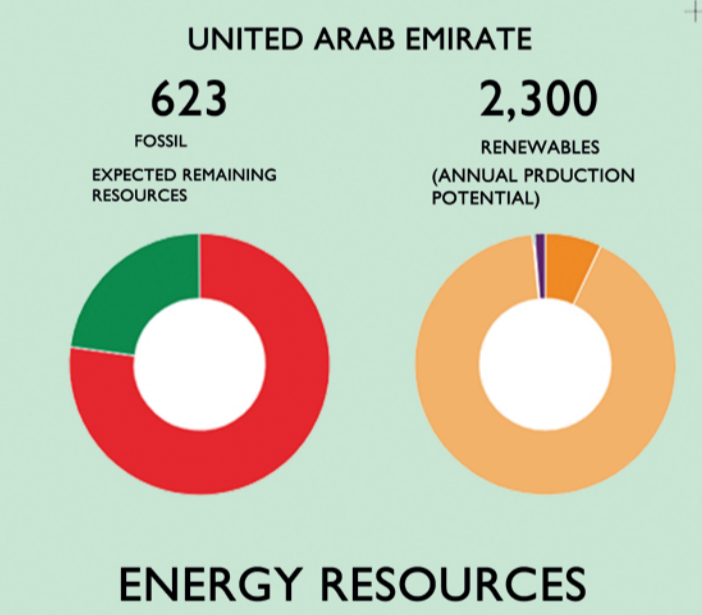
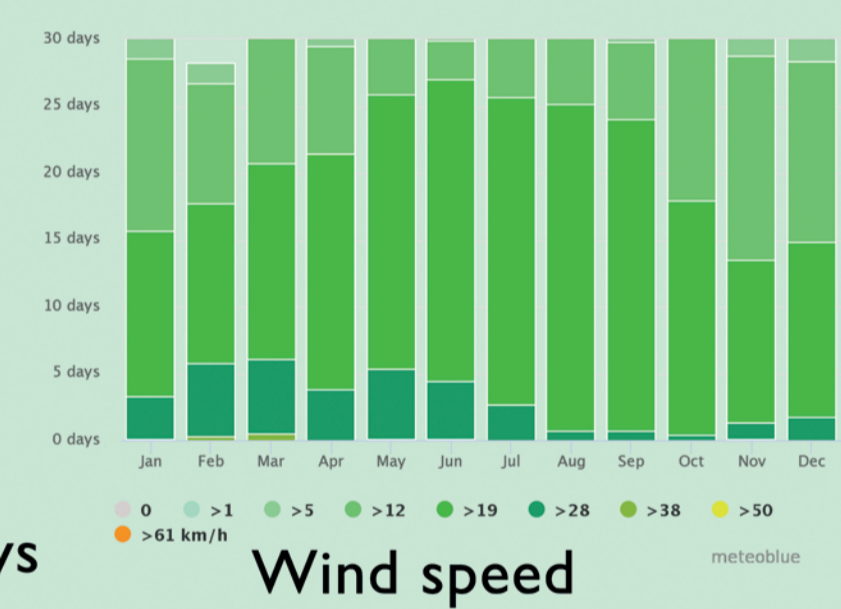
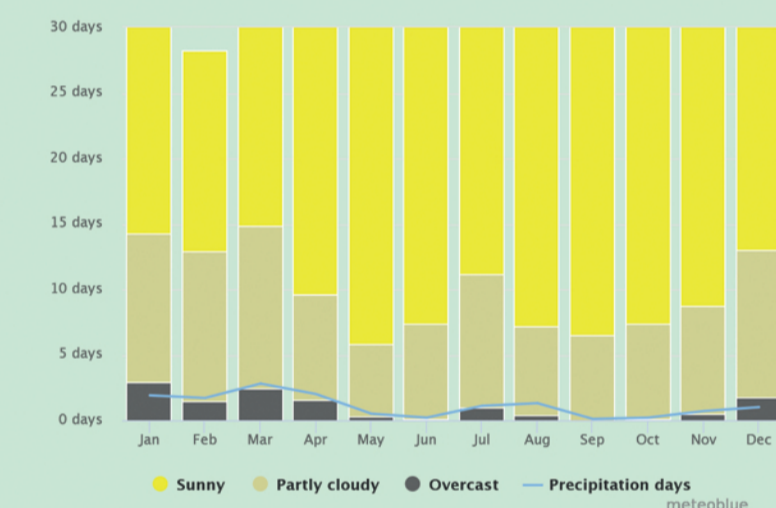
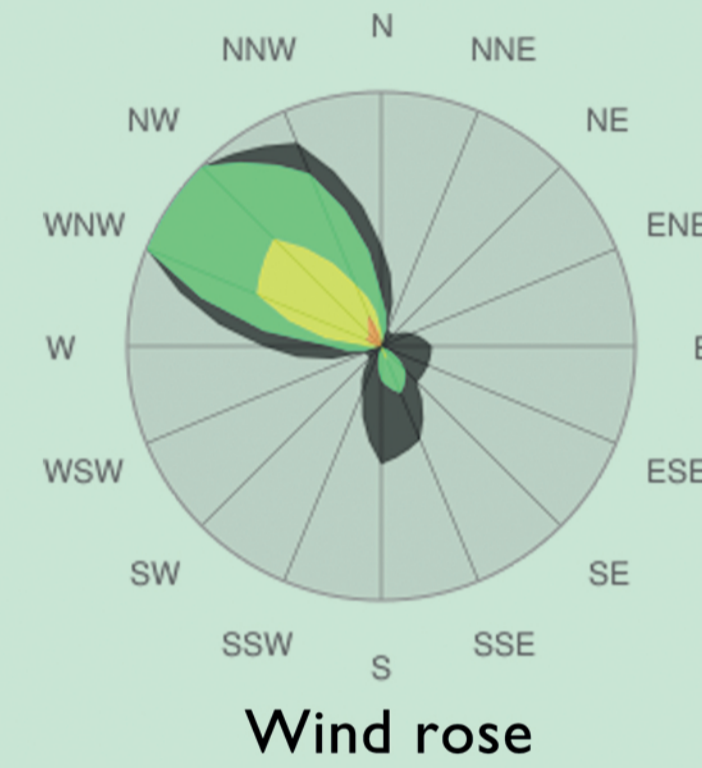
Windcatcher is a traditional element of Middle East architecture used from centuries to create natural ventilation and to refresh inside the buildings. These wind towers are vertical ducts allowing to capture and to direct the winds towards the interior of buildings. We can see them in an important quantity in Arabic architecture.

The interior of the tower is vertically separated into three ducts to allow the circulation air, two ducts bringing the fresh air and the last one expelling hot air. This circulation caused by differential atmospheric pressures created. At the center of the tower toward the incoming fresh air turbines setting up to generate electricity.

How it works: The concept is simple: reuse this traditional process by integrating turbines to generate electricity and to turn this tower into a wind turbine. To increase the amount of incoming air at the entrance the height of the wind tower is increased. Higher is the tower, easier it's to capture air flows (5 km/h as minimum) and by adding a solar panel in south side of the façade (on the external duct), the hot air will flow behind the panels and get hot till the top of the tower so the pressure will be stronger and helps the air circulation comes out faster.

By adding three floors around the structural core to cultivate lands in the shelter of the sun, Green tower proposes to make possible the development of a farm in autarky in full desert in an environment inhospitable to the human being.

Masdar Green tower will be a sustainable landmark based on respect for ecology, self-reliant and based on a sustainable energy goal of the project is to prove that it is possible to live without destroying our planet (even in the worst conditions) by combining technology and ancestral architecture.



- Bicycle path
- Street
- Main access
- Minor access

