

# Energy Lizard: energy generation and environmental features



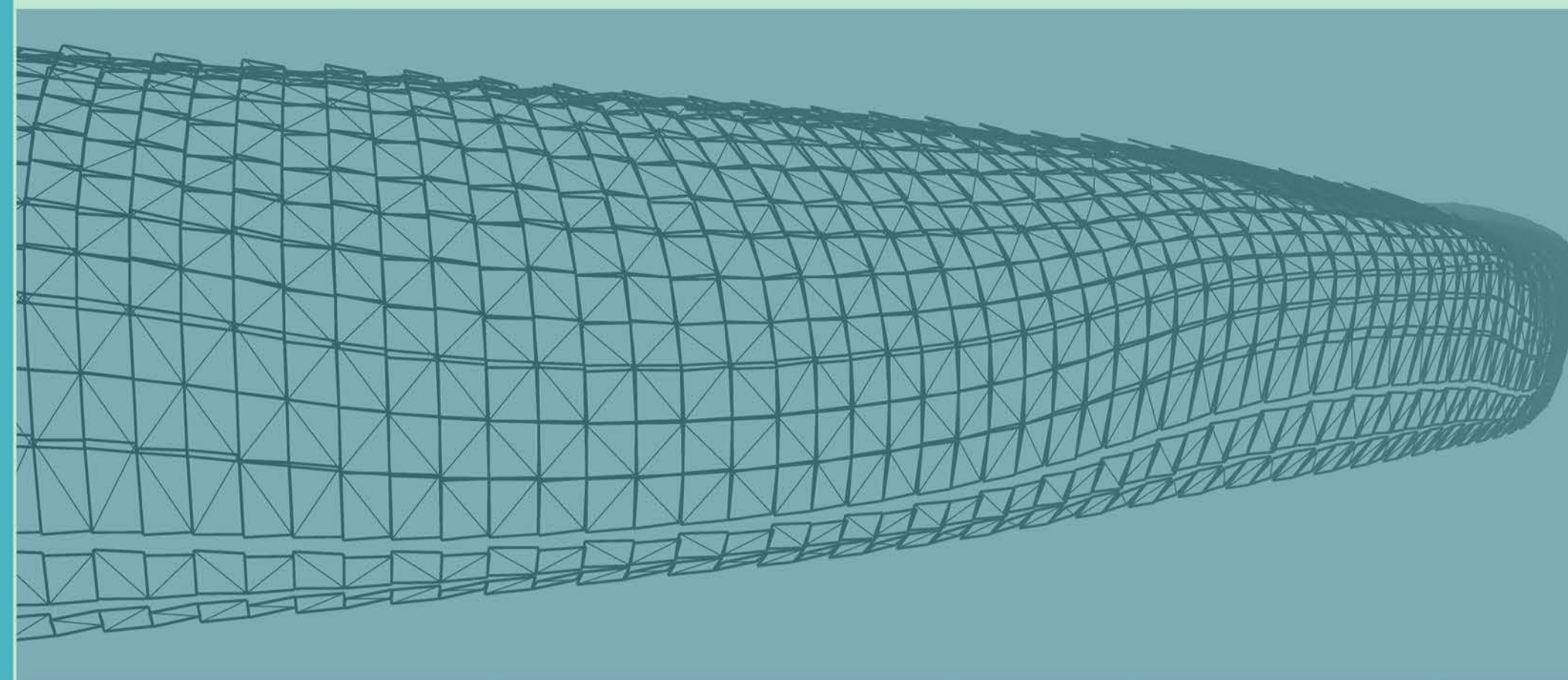
The plantings located on cascading slopes will be filled with indigenous plants of the region to create a new local flora and a new natural environment.



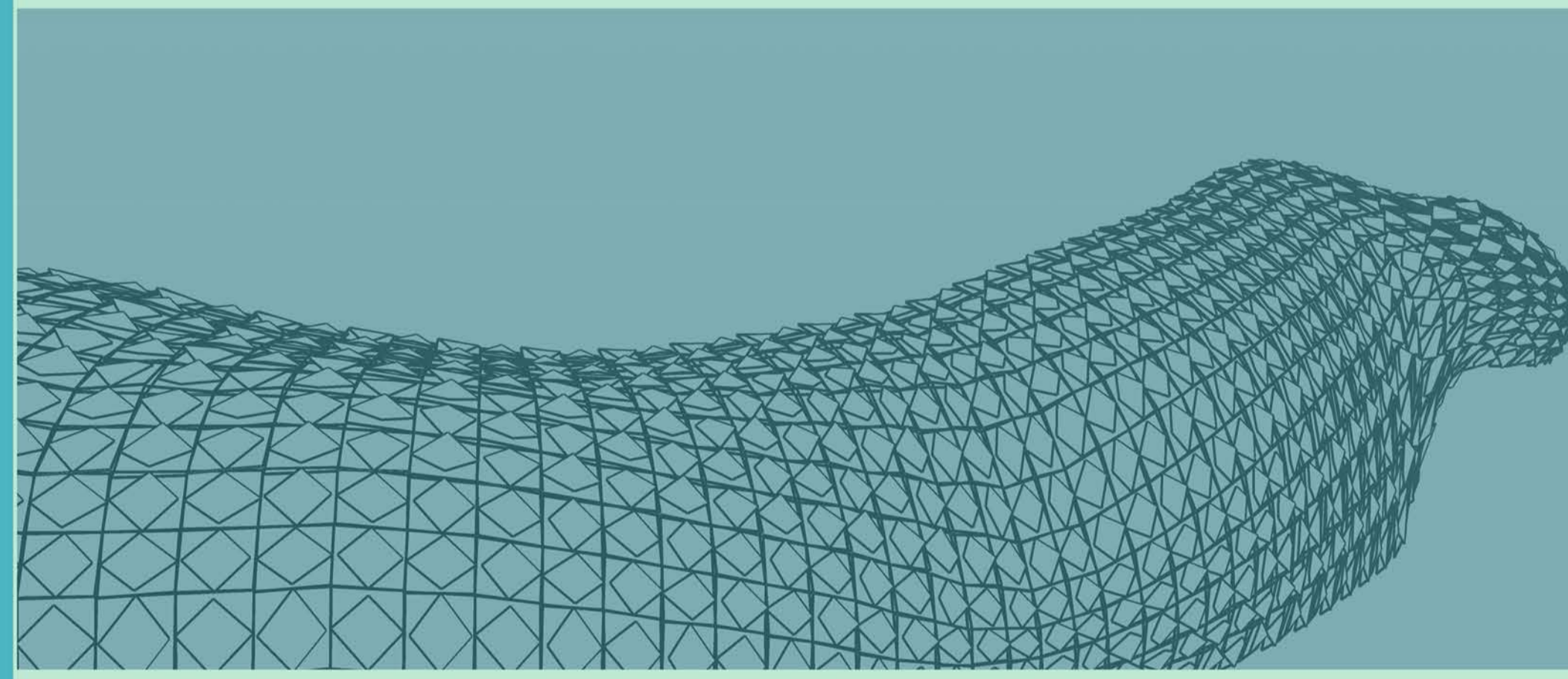
The water features on cascading steps cool the area with the North wind. The water balances the temperature, creates a microclimate around the area and fresh air movement for Energy Lizard.



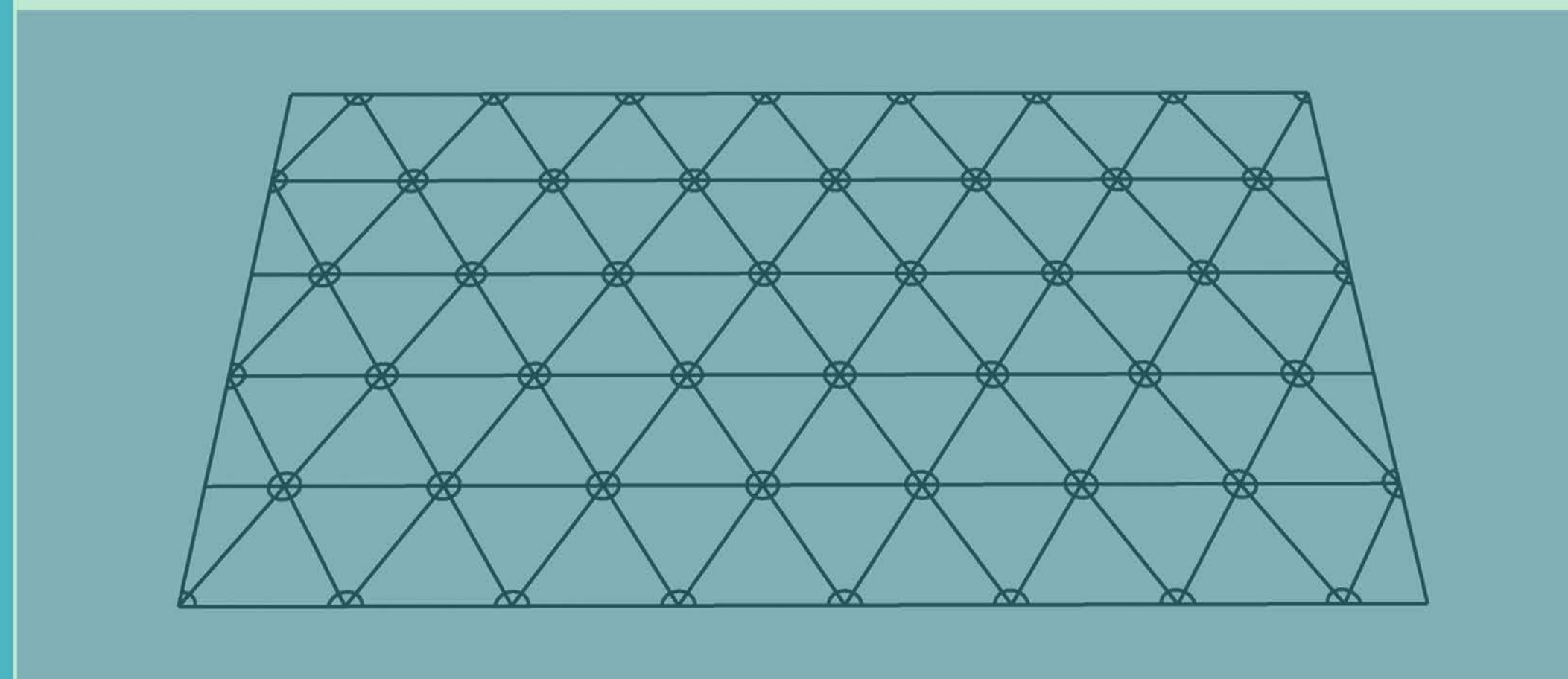
The pavement pattern that will be used on site is inspired by the cracked pattern of desert floor. This paving will also have a porous material to allow efficient storm water system all around the site.



**Energy Generated by Solar Photovoltaic Panels:** The total annual power generated by solar energy is 480 MWh. The type of solar cell that will be used in solar photovoltaic panels is "monocrystalline maxeon 3rd generation solar cells". The electrical power of a single panel is 335W and works with 21% efficiency.



**Energy Generated by Wind Panels:** The total annual power generated by wind energy is 90 MWh. We'll use "Vibro-Wind" system, which is made up of aluminum lightweight panels attached to piezoelectric materials, producing electricity from each vibration of panels in the wind. The electrical power of a single wind panel is 3-10W, depending on the wind speed. System requires min. wind speed of 2m/s.



**Energy Generated by Kinetic Flooring:** The total annual power generated by kinetic energy is 30 MWh. Kinetic paving system is made up of floor tiles, which capture kinetic energy when people walk on them and convert it to electricity. The electrical power of a single module is 5W, regardless of weather conditions.



Solar paving modules will be installed on some parts of the bike path, throughout the Esplanade. This will not only provide power to light the road at night, but also raise awareness of renewable energy systems.



The green wall will cover all the west facade of the Palais Theatre. The arrangement of various colors of vegetation made up of indigenous plants will also be an example for art that is created with nature.



The main pathway of the site will be illuminated with solar LED lights at night, forming an artistic pattern.