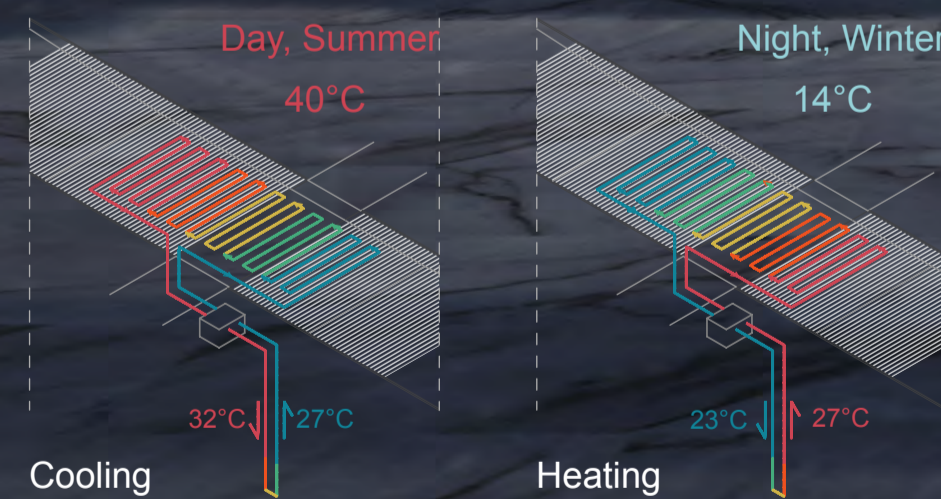
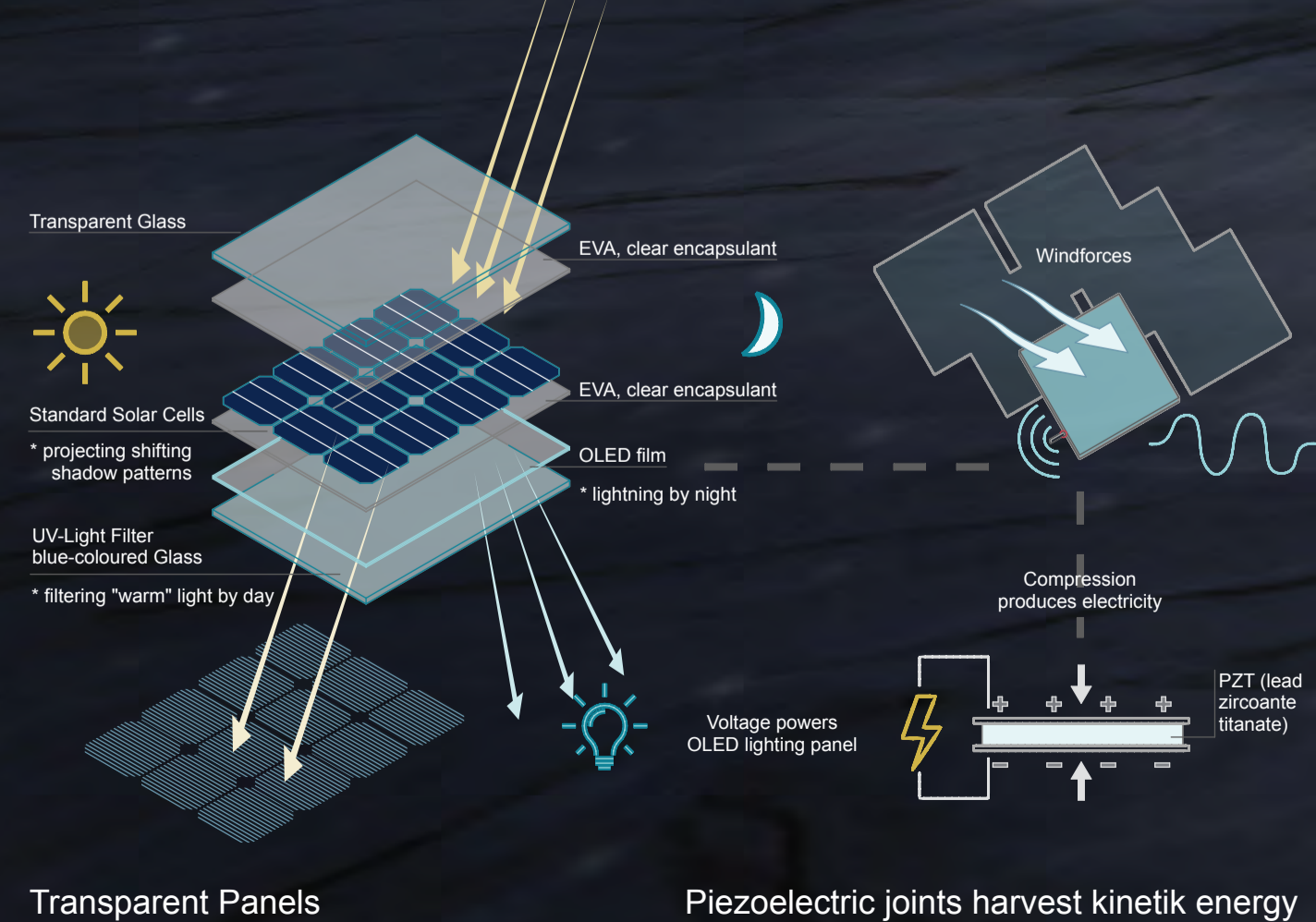




TECHNOLOGY

Standardized solar Panels with clear EVA, standard cells and built-in OLED thin-film technology, balancing on tensed steel wires.

As the wind breezes through the canopy the panels are brought to swing, while piezoelectric generators produce electricity from the pressure exerted on the joints, powering OLED luminescent films during the night.



Cooling Heating

ENVIRONMENTAL IMPACT STATEMENT

The artwork acts responsibly to environment and day-night cycle by solely use of main wind forces. This performative canopy generates optimal sheltering conditions without the necessity of further technological or energetic resources.

It promotes social exchange and physical well-being by offering quality outdoor recreational space within Masdar City.

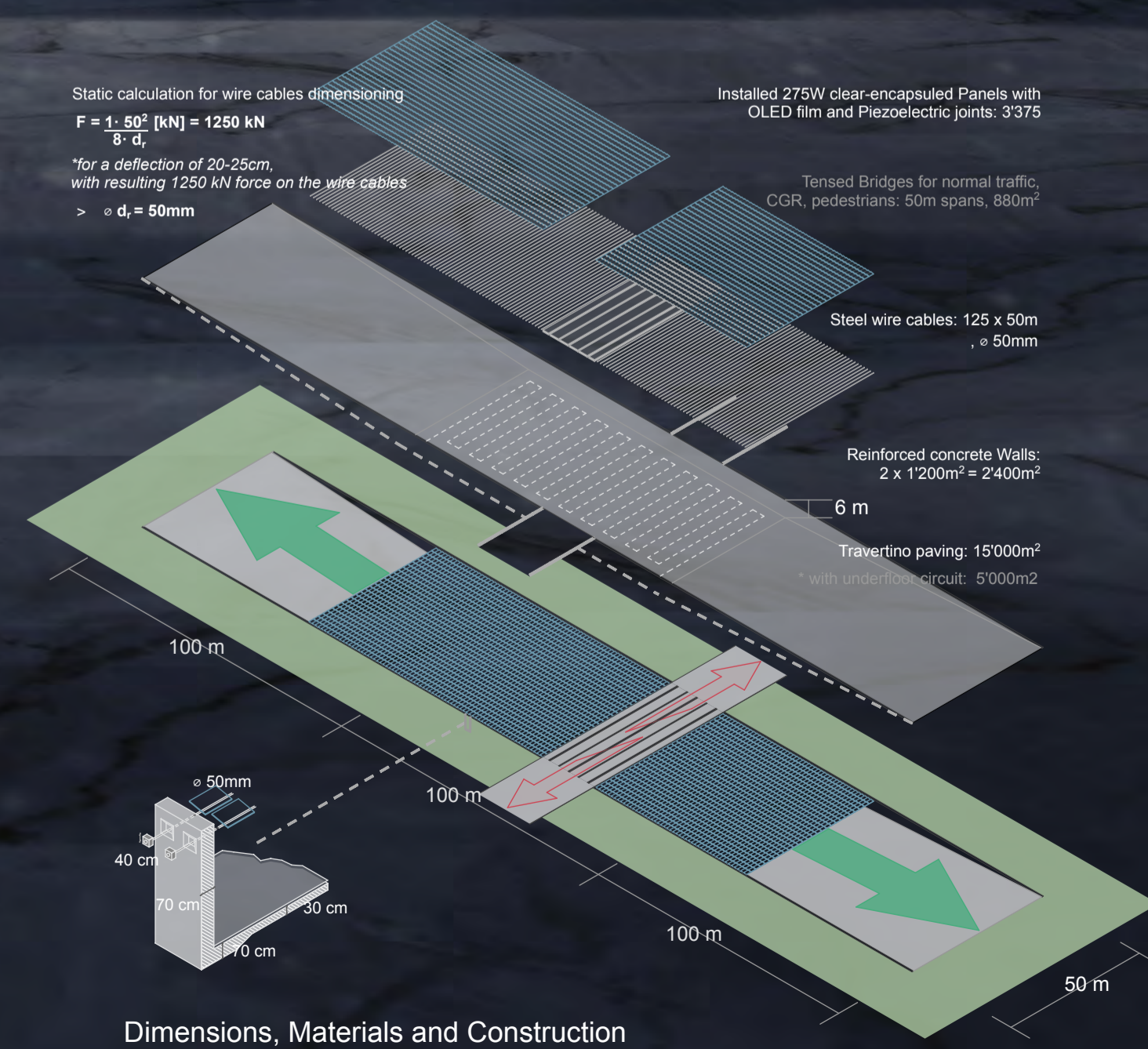
His standardized modular character allows easy handling while solar PV can be easily repaired, upgraded or substituted with more efficient ones as technological advances occur. The installation can also be used to test and display emergent PV technologies, giving a testing ground and a visible platform for new experiments in solar technologies.

Used Technologies, Total Capacity and Annual Output

- Geothermal pump**
- Piezoelectric energy harvesting**
*used to light up the panels during the night
- Transparent OLED thin-film technology**
*Solar panels built-in
- Solar Panels**
*275W, clear-Eva, Monocrystalline module (192 x 1640 x 42 mm)

TOTAL NAMEPLATE CAPACITY
3'375 x 275 W =
928.125 kWp

ESTIMATED ENERGY PRODUCTION
Area (m²) x Efficiency x Peak Sun Hours x Effective Output % After Deducting Losses x 365 day = Output (kWh/year)
3'375 x 1.63 m² x 0.166 (16.60%) x 5.84 x 0.75 (75%) x 365 =
1'459'944 kWh annual



Conceptual Costs Estimate

Total Budget: 928'125 W (installed capacity) x 20 \$/W = **18'562'500 \$**

Cost of Panels (incl. OLED films and piezoelectric generators): approx 4 \$/W for panel (incl. OLED film) x 928 125 W = 3'712'500 \$

Travertine paving: 2'250'000 \$

Earthwork and Reinforced concrete Structure : 6'000'000 \$

Steel wire cables: 1'700'000 \$

Geothermal Pump installation: 3'000'000 \$

Engineering, Work: 1'850'000 \$

Total Costs estimate: 18'512'500 \$

