

Challenge Statement

Seeking Solutions to Enhance Comfort and Provide Refuge Severe Outdoor Climatic Conditions in Abu Dhabi

- Can battery-powered heat management technologies acceptable to Masdar?
Reply:
Yes providing the batteries are charged from renewable energy and not from the grid.
- Is there a targeted temperature to reach for the temporary refuge?
Reply:
There is no targeted temperature. Apart from temperature, other factors may be considered such as air movement, humidity, radiant temperature etc.
- Any images of the environment that I can refer to where the solution will potentially deploy?
Reply:
Please refer to the presentation deck for images.
- Would evaporative cooling solution which involves the use of potable water be acceptable?
Reply:
All water related solutions would be considered as long as it does not require water demand from the water grid.
- Can Masdar accept any solution that require to connect to the power grid? b) How long is the pilot trial required if the company is shortlisted for collaboration?
Reply:
The preference is for the solution to be independent of the power grid. The pilot trial solution will need to be in place for at least 12 months.
- Considering after maintenance/repair, etc after the project implementation, is this a collaboration project with the local company or we will need to set up a team?
Reply:
Solution provider to propose set up of the team. Masdar has its own Facilities Management team who may be part of the set up depending on the proposal.
- Can you please clarify the requirement on portability? By the user or city worker?
Reply:
Portability means it can be moved by city worker (eg. towed by vehicle or on back of trailer) not by the user.
- What are some of the solutions tried in Masdar for this challenge statement but not suitable? What are some of the solutions that have done well and are currently already implemented?
Reply:

Masdar traditionally shade external areas with buildings and arcades. This has been more effective than lightweight shading structures (which also have been deployed). We seek solutions that go beyond shading only.

- Are you looking for new standalone structures (for active shading) or can this be in combination of the existing structures ?

Reply:

Masdar are looking for new standalone structures.

- If the proposal succeeds, what would be number of deployments potentially throughout Masdar City?

Reply:

This would depend on the cost per unit and its effectiveness. However, the vision is to deploy in multiple locations possibly replacing some of the park benches.

- Is the environment completely non-conducive to any vegetation ? This is in context of structures like composite Green Roofs or Facades?

Reply:

There is very limited rainfall so vegetation would be a challenge requiring careful consideration regarding the water source.

- Are there any cultural nuances that should be taken into account regarding outdoor use cases?

Reply:

Nothing specific.