

Daylight Technology

Harvesting

March 5, 2022

In news– In order to reduce carbon footprint and improve the building's energy efficiency, the Ministry of Science & Technology has decided to promote a unique Start-up in the latest Daylight Harvesting Technology recently.

Key updates-

- **Skyshade Daylights Private Limited – the only Start-up company in India for Daylight Harvesting Technologies** has signed an MoU with Technology Development Board(TDB).
- TDB is a statutory body of the Department of Science & Technology.
- TDB will extend the financial support of Rs 5 crore of the 10 crore project to Skyshade company for developing new technologies for basement illumination on a 24×7 basis.

About Daylight Harvesting Technology-

- Daylighting is basically bringing natural sunlight inside the rooms.
- Daylight Harvesting is one of the most advanced techniques used in **sustainable lighting designs for contemporary buildings.**
- **It automatically adjusts the brightness of light in conjecture to the amount of light available in that space.**
- In simple words, it uses daylight to offset the amount of electric lighting needed to properly light a space, in order to reduce energy consumption.
- This is accomplished using lighting control systems that

are able to dim or switch electric lighting in response to changing daylight availability.

- **All daylight harvesting systems use a light level sensor, a photosensor, to detect the prevailing light level, luminance or brightness,** in open-loop or closed-loop systems.
- Photosensors are used to adjust electric lighting based on the available daylight in the space.
- The solar energy spectrum has 45% energy as visible light and this can be used to harvest building illumination for about 9-11 hours a day.
- Moreover, the proposed technologies, harvest huge quantities of sunlight for a building and make available for building illumination which reduces electrical lighting energy consumption by 70-80%, besides reducing air-conditioning (cooling load) consumption.

Skyshade Daylights Private Limited-

- The company, which had been **working in this area since 2014 is engaged in roots starting with design & build operations of large skylight domes** for building atriums and solar thermal technologies.
- **It did daylighting for a wide range of consumers from Government bodies, PSUs, Corporate** to a few religious structures comprising Airport Authority of India-Chennai, PMO office South block, New Delhi, etc. They further plan to daylight the religious Ayodhya Temple.
- It has **now come up with two more innovative solutions named Human centric-climate adaptive building facades and Central integrated daylighting system.**
- These two systems will give a new horizon to the daylighting and these products are easily affordable, adaptable and economically viable.
- **The Company has proposed a complete solution for Daylight Harvesting through their technologies to reduce carbon footprint** and improve the building energy

efficiency.

- **The company aims to create Green & Net zero buildings and to participate and contribute in national missions under the National Action Plan on Climate Change (NAPCC).**

Further

reading:

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