

SURYA ARANYA – FOREST OF THE SUN
(OUTDOOR SOLAR POWERED LIGHTING)

Category: Product – Public

Organisation: Name: Tata Capital Limited

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Description of the Company: Tata Capital Limited is a subsidiary of Tata Sons Limited. The company is registered with the Reserve Bank of India as a Systemically Important Non Deposit Accepting Core Investment Company and offers through itself and its subsidiaries fund and fee based financial services to its customers.

Titles of the Creators and Collaborators of the Project: Creators are jointly Tata Capital Financial Services Ltd. and Centre for Environmental Research and Education (CERE), a Mumbai based not-for-profit organisation, the Design company is Design Directions which is a Pune based Design company which has co-designed the Solar Tree together with inputs from CERE , the Solar Engineering has been done by Autonic Energy Solutions Pvt. Ltd. and the site belongs to Lodha Builders.

a. What is the entry and its intended use.

Surya Aranya, meaning “Forest of the Sun” in Sanskrit, is an outdoor solar-powered lighting installation. The installation is a cluster composition of six trees embedded with 14 solar panels to produce 750 watts of energy which self-illuminate and power 28 surrounding garden lights from dusk to dawn. The entire system is fully automated through light sensors and is also synchronized with the main grid through a master control panel to accommodate any fluctuations in solar power during the monsoon season. The trees are built of all-weather proof fibre-glass with leaves in different hues of green, orange and red representing the changing seasons reflected in the Indian Almond tree (*Terminalia catappa*). Each trunk bears two icons of plants and animals, covering all 12 phyla in nature, that depict species that are highly endangered or threatened in India due to habitat destruction caused by conventional fossil fuel based energy.

b. How the entry is manufactured and delivered to consumers.

Surya Aranya is an outdoor lighting that can take myriad forms and is flexible to design to fit any type of site and campus. If there are more lights that have to be illuminated then the number of

trees would need to be increased. Since this is a cluster of trees and additional trees would only make the cluster look more aesthetically pleasing.

The trees can be tailor made to suit the needs of the client with the below listed permutations and combinations:

- 1) Any number of trees can form the forest even a single tree can be installed.
- 2) Height of the tree/s can be selected as per the client's choice.
- 3) Colour combinations of the leaves can be as per the client's choice.
- 4) Globular lights on the trees can be changed to suit any shape that the client would like to have.

In case the client would like a complete different type of tree then even that is possible to design since mainly the shape, size and colours of the leaves would change together with the shape of the lights on it, the other aspects would remain more or less the same.

c. How the entry exhibits excellence in sustainability and environmental responsibility (although not a requirement, use “What We’re Looking For” as noted under each category as a guideline).

Surya Aranya or Forest of the Sun exhibits excellence in both sustainability and environmental responsibility since it is an aesthetic creation that is actually operates as a renewable power plant. It performs the functional task of lighting up all outdoor lights on the campus during the night. The varying height of the trees (10 – 18 feet) together with their strategic placement maximizes the solar radiation of the solar panels. The installation is also educative and plays the role of promoting the benefits of switching over to sustainability and renewable energy which not only mitigates global warming but saves habitats and wildlife. Each tree trunk bears two symbols of either a plant or an animal species that are on the verge of extinction in India due to fossil fuel extraction for conventional energy production. In India many forests habitats are primarily being destroyed for coal mining. This Forest of the Sun can be said to be “*A renewable power plant, a sculpture, an outdoor light, a symbol of nature and a communicator for conservation!*”

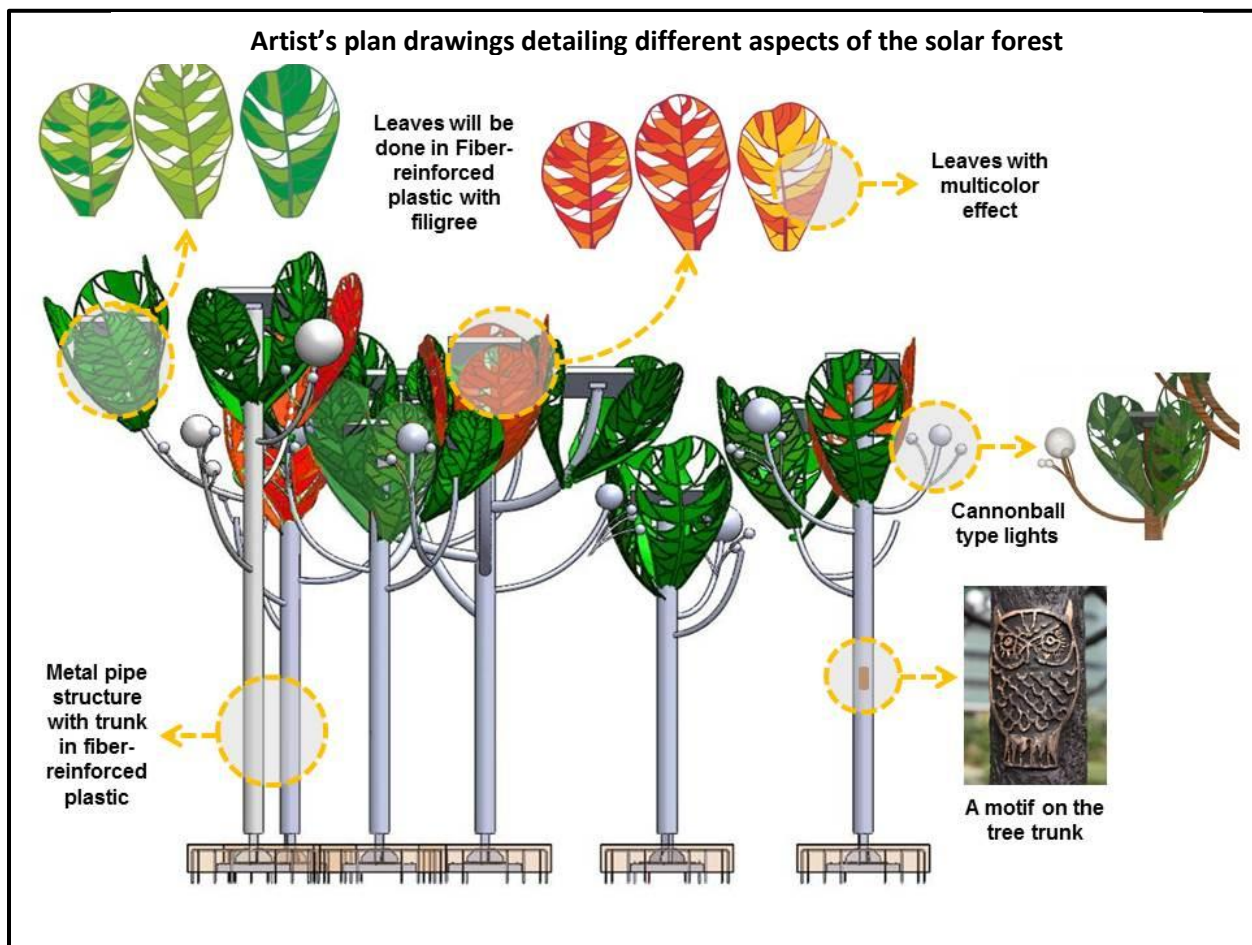
Surya Aranya truly embodies the triple bottom-line approach of Tata Capital where environmental and social development has been one of the guiding factors of the company. The company plans to achieve carbon neutrality by the end of this decade and has started a pro-planet venture entitled Tata CleanTech Capital Limited to assist companies promote clean technology, especially renewable energy generation projects. With *Surya Aranya* the company has practiced what it preaches and the installation is a symbol of the company's pro-planet stance. The Forest of the Sun has been installed on common property at the i-Think Techno Campus which will benefit the larger community of occupants and environmental awareness will be spread to thousands of office-goers since the campus has a foot-fall of over 3500 persons per day. *Surya Aranya* effectively conveys that issues like fossil fuel based energy leads to global warming and habitat loss lead and affects our natural environments and the communities that live within them. *Surya Aranya* is also an excellent success story of the strength of a collaborative partnership in society wherein a functional art installation has emerged from the collective efforts of a leading corporate house, an environmental NGO, an experienced design firm, an innovative solar

provider and a green builder, all coming together and pooling their resources to create a revolutionary product for a larger community and cause.

Link for viewing the YouTube film is:

[Tata Capital presents Surya Aranya - A Nano Power Plant](https://www.youtube.com/watch?v=AUo0jx3pYNM)
(<https://www.youtube.com/watch?v=AUo0jx3pYNM>)





Different endangered species motifs on the tree trunks.



Forest Owlete
Athene blewitti



Red Sandalwood
Adenanthera pavonina



Gooty Tarantula
Poecilotheria metallica



Bengal Tiger
Panthera tigris tigris



Fern
Athyrum nigripes



Ganges Shark
Glyphis gangeticus



Porcelain & Plate Coral
Leptoseris incrustans
Acropora aculeus



Spotted Seahorse
Hippocampus kuda



Anamalai Flying Frog
Rhacophorus
pseudomalabaricus



Orchid
Arundina graminifolia



Grass Octopus
Octopus macropus



Hawksbill Turtle
Eretmochelys imbricata