

An aerial photograph of a lush green landscape. A river flows through the center, surrounded by dense vegetation and fields. The fields are divided into sections by narrow paths or ditches. The overall scene is vibrant and natural.

# Astron Solpower Pvt.Ltd.

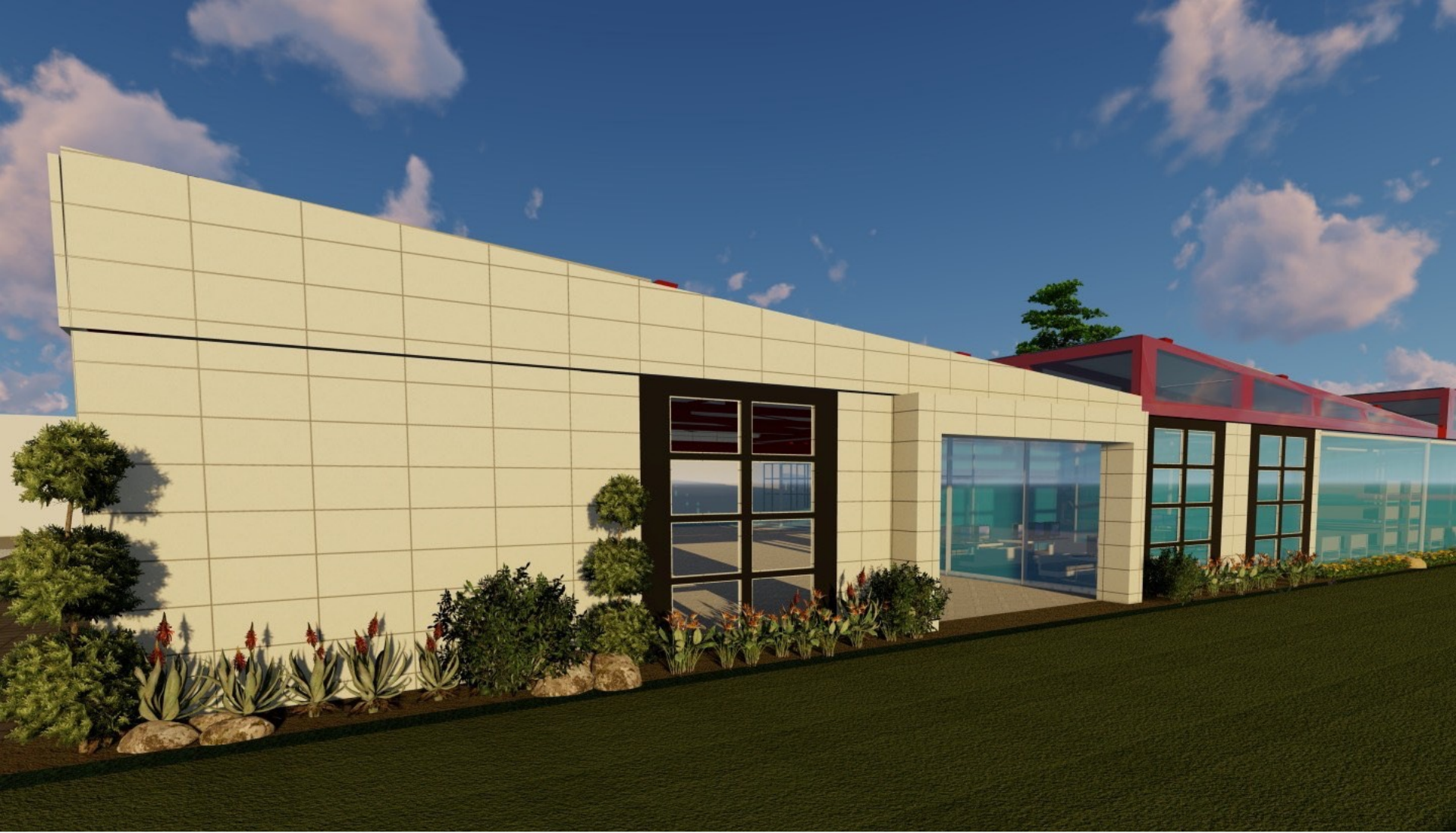
Sustainable Renewable Energy Solutions



# ASTRON GROUP

SOLAR THERMAL	SOLAR POWER	BIOGAS	GREENHOUSE
<ul style="list-style-type: none"> <li>Hot water for homes, hostels, hotels, hospitals, restaurants, dairies, industries etc.</li> <li></li> <li></li> <li>Around 60°C-80°C temperature based on solar collector system efficiency</li> <li>Easy installation on roof-tops, building terrace and open ground with no shading, south orientation of collectors and over-head tank above SWH system.</li> </ul>	<p>Turnkey project provider for residential and commercial complexes:</p> <ul style="list-style-type: none"> <li>Solar On Grid Roof Top</li> <li>Solar Off Grid</li> <li>Use of best material for longer durability and lifetime</li> <li>Supervision from experienced Engineers</li> </ul>	<ul style="list-style-type: none"> <li>Bio waste to cooking gas</li> <li>Bio waste to electricity</li> <li>Bio waste to CNG for vehicles</li> <li>Bio waste solutions, using wastes like cattle dung, green waste, crop and manure</li> <li>Carbon neutral solutions</li> <li>Cost effective compared to other sources like coal and oil.</li> <li>Production of organic manure/ tailored fertilizers</li> </ul>	<ul style="list-style-type: none"> <li>End to end solutions for high tech Integrated Solar Green Houses.</li> <li>Based on self power generation system with the help of high efficiency glass-glass solar panels which also controls the transmittance of daylight in greenhouse.</li> <li>Green House Accessories and Equipment for smooth running and easy operation of green house:</li> <li>Green house structure</li> <li>Irrigation system, micro and drip irrigation, manual and automatic</li> <li>Cooling system</li> <li>Heating system</li> <li>Lighting system</li> <li>Automation</li> <li>Hydroponic and Vertical farming</li> <li>Screening and blackout screens</li> <li>Dehumidification and fogging systems</li> </ul>





Solar Based Hi-Tech Greenhouse by Astron Solpower Pvt. Ltd

# Key issues that India is facing today

## Fragmented Land Holdings

The net area under cultivation is close to 141 million hectares. However, its immensity diminishes with the fact that a vast number of land holdings are fragmented to an extent of being rendered economically unviable. This is a prime reason that agriculture instruments in India cannot be used effectively.

## Lack of sufficient irrigation facility

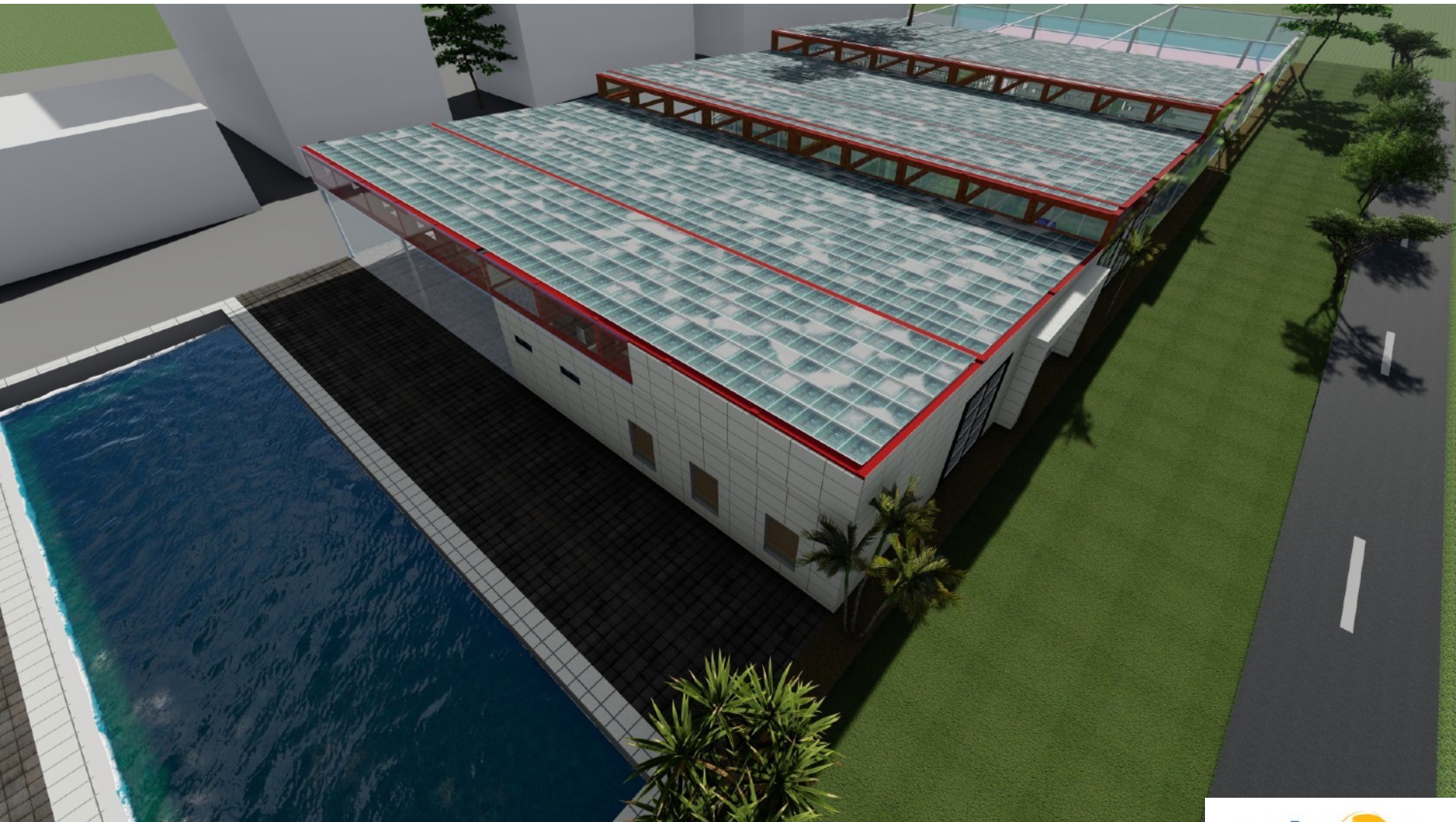
After China, India has the largest cultivated area that has irrigation facility. However, it covers only one-third of the total cultivated area. A major proportion of farming activities still depends on the monsoon. The irregularities of the monsoon can destroy the crops and cause hefty losses to the farmers.

## Over Dependence on traditional crops

As mentioned before, India produces rice and wheat in abundance. Some regions can easily adapt to facilitate the growth of new crops that can yield a higher quantity of produce. Farmers are resistant or hesitant to give it a try. Endorsing associations of commodity-based farmers and spreading awareness is a very effective way to overcome the over-dependence on traditional crops



## Solution: Solar Based Greenhouse



# Solar greenhouses

- Venlo greenhouse
- Integrated Solar panels
- New development based on highly experienced greenhouse know how
- According to International Standards
- Suitable for tropical weather





# Technology we provide

## Vertical farming



## Climate controlled farming, as per nature of crop/plant



## Light control with help of grow lights for faster growth



# Special Features

**Digitally controlled  
water sprinkling system**



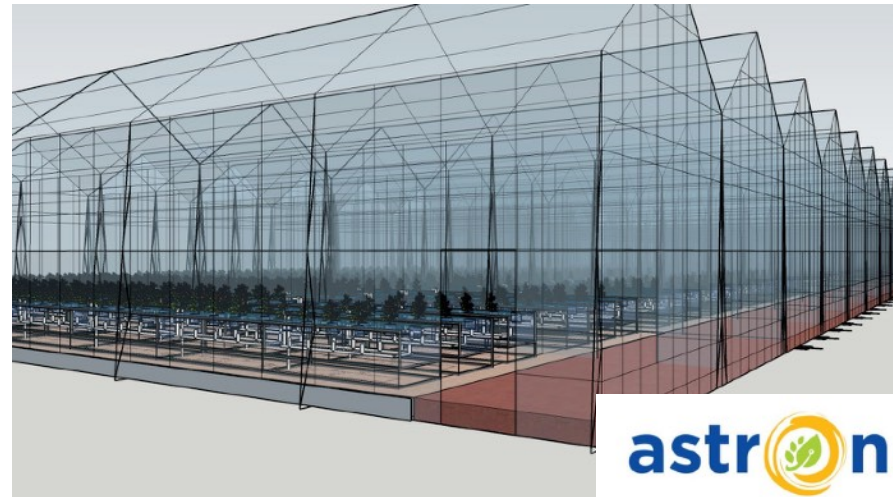
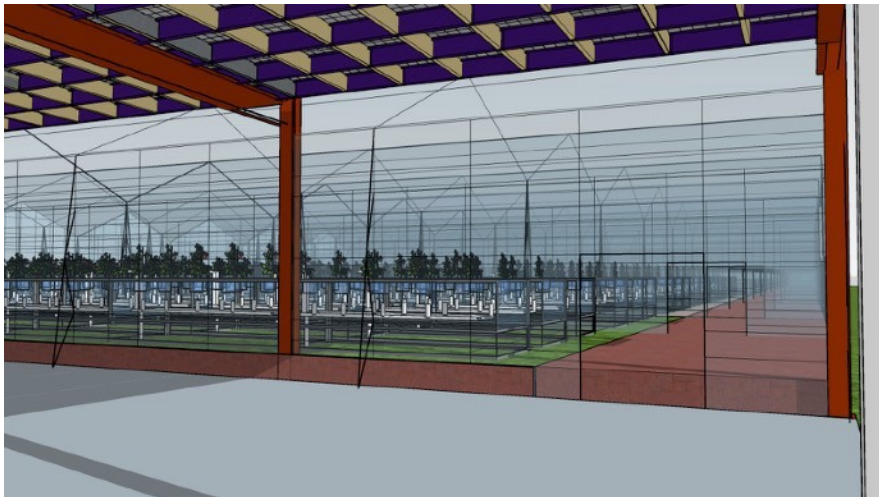
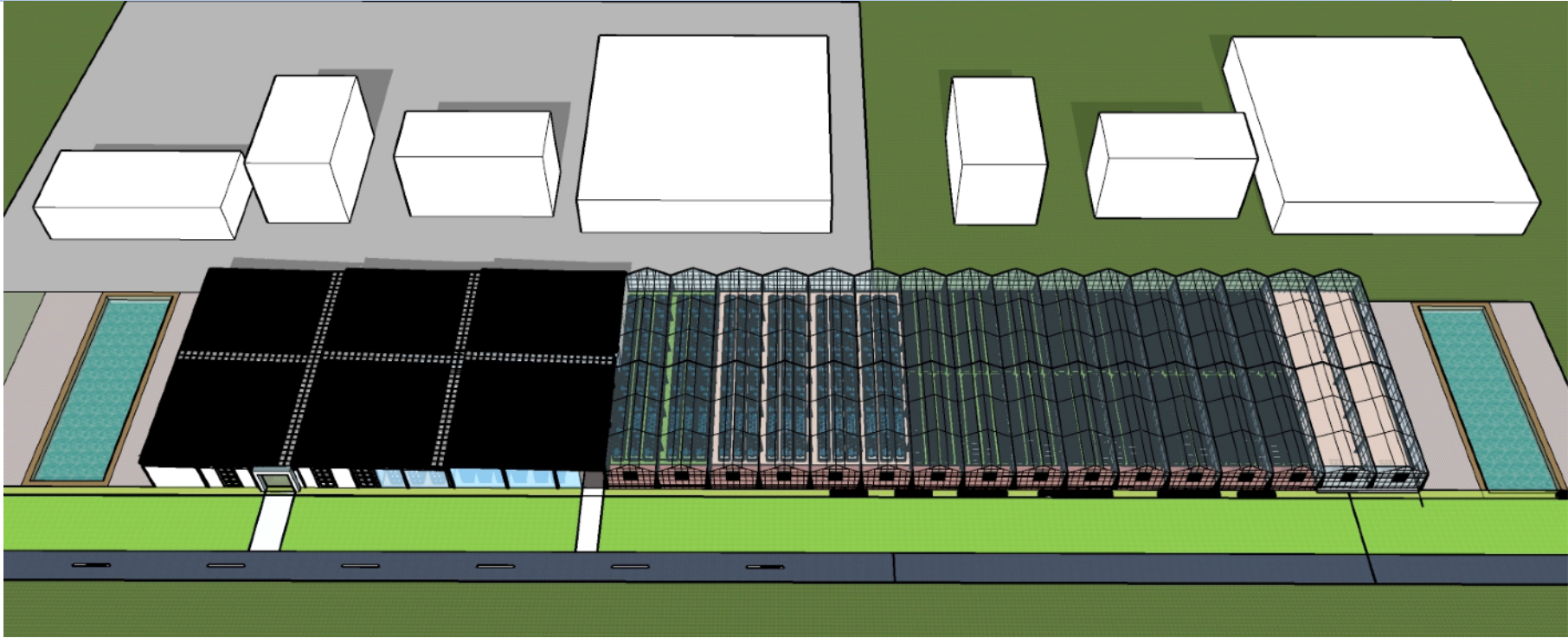
**Energy generation with help of  
Dual glass solar panels**



Targeting to achieve diffused light and limited shadow effect (patent filed)



# Our Solar based Greenhouse project

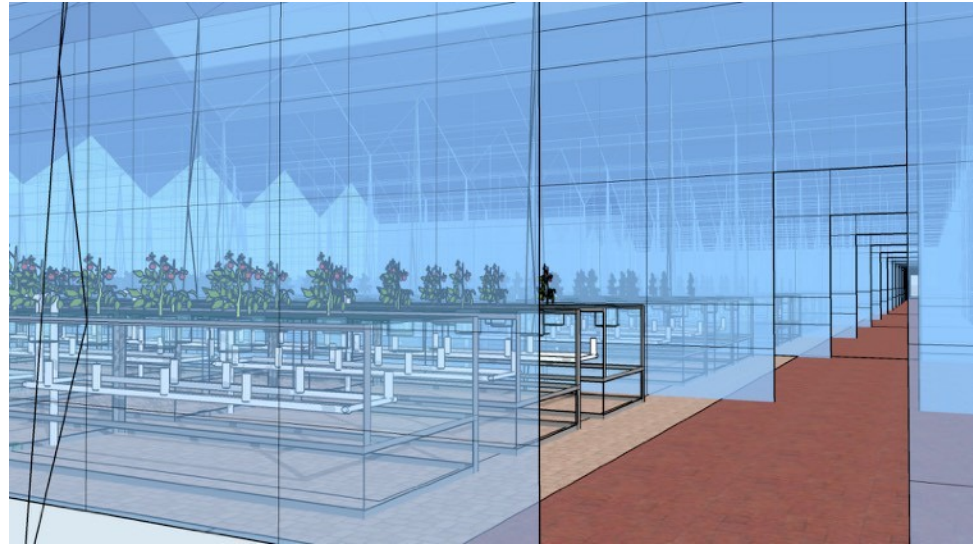
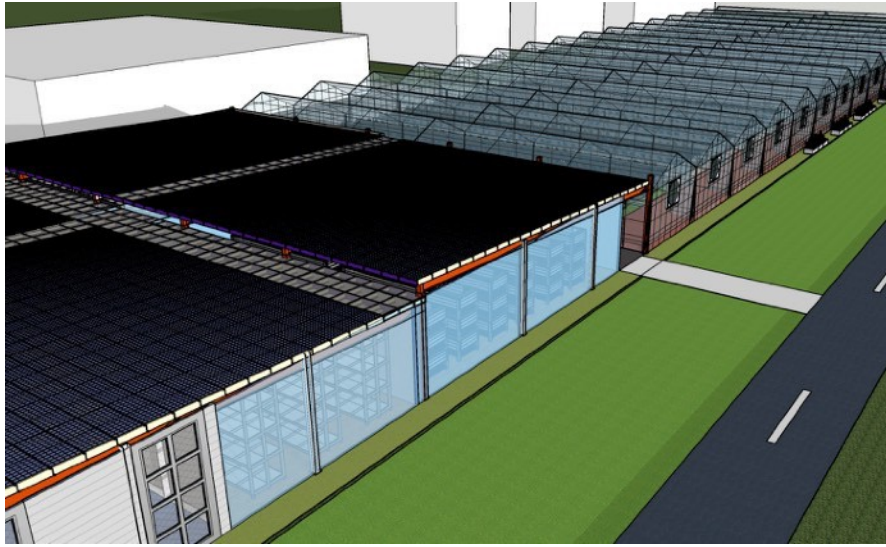


# Highlights of the project

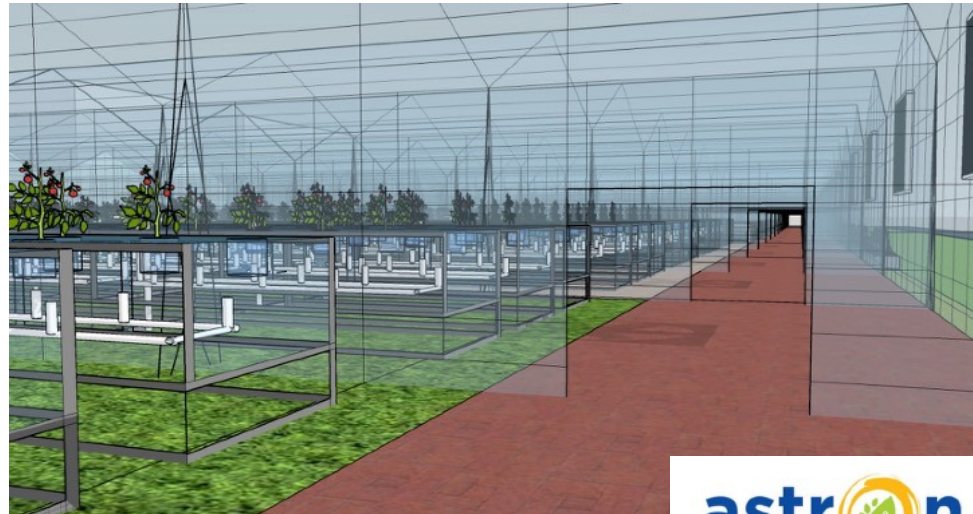
- A Hi-tech Solar based greenhouse laboratory of a total area of 6000 mtr<sup>2</sup>
- Temperature controlling from -4°C to 24°C
- Automatic water sprinkling system which minimises requirement of water Climate control system
- Light intensity controlling system with the help of grow lights
- The plant is self energy sufficient with the help of high efficiency glass to glass solar panels which will generate 11.5 Lakhs units annually
- Plant has got hi-tech seeding plant for maximising the production of crops
- Plant is completely thermal insulated with help of thermal pads Water storage facility for annual requirement of plant



# Next step towards growth of Indian Agriculture Industry...



Starting second solar greenhouse project of 1000 sq. mtr in Roorkee, Uttarakhand



# For Enquiries and Support

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### Collaborated partners

