

# Plant Design Overview

2 Megawatt / 40,000 Slice Solar Plant Design



## Design Goals

We're on a mission to accelerate the transition to clean energy by building a robust and impactful solar plant. Our approach prioritizes proven technology, ensuring minimal risk and maximum return on your support. By focusing on durable, efficient components and systems, we'll deliver a solar plant that consistently generates clean energy, contributing to a healthier planet and a brighter future.

# Key Technologies

To ensure the highest levels of efficiency, reliability, and longevity, we will carefully select components from industry-leading manufacturers. The following are examples of the types of technologies we are considering, based on their proven performance and track record in the solar industry:

- **Photovoltaic (PV) Modules:** 3,600 high-efficiency modules, such as those offered by Canadian Solar (e.g., HiKu6 CS6W-550MS), are known for their exceptional performance and durability, maximizing energy capture from sunlight.
- **Inverters:** We'll choose 4 inverters like Sungrow's SG500MX series, renowned for their efficient conversion of DC electricity from the solar panels into usable AC electricity and their seamless integration into the overall system.
- **Mounting Systems:** 40 single-axis tracking systems from reputable manufacturers like Array Technologies (e.g., DuraTrack HZ v3) will dynamically adjust the angle of the panels to follow the sun's path, increasing energy production and mitigating the risk of hail damage.
- **Transformers:** 2 transformers from trusted brands like Siemens, designed for optimal performance, safety, and longevity, will be employed to step up the voltage of the generated electricity for efficient transmission.
- **Combiner Boxes:** 25 combiner boxes will be installed to consolidate the electrical output from multiple solar panels, ensuring a streamlined and organized system.
- **Cables and Wiring:** We'll utilize high-quality DC/AC cables and grounding wires specifically designed for outdoor use and heavy electrical loads. These cables will be sourced from reputable manufacturers to ensure safety and longevity, even in harsh weather conditions.
- **Monitoring and Control:** Advanced monitoring systems like the Solar-Log 2000 provide real-time data and analytics, allowing us to proactively manage the plant's performance, identify potential issues, and ensure maximum energy generation.
- **Safety Equipment:** To protect the plant from electrical hazards, we'll install an array of safety components, including ABB surge protection devices, fuses, and circuit breakers. These measures will safeguard the plant's valuable assets and ensure the safety of personnel.

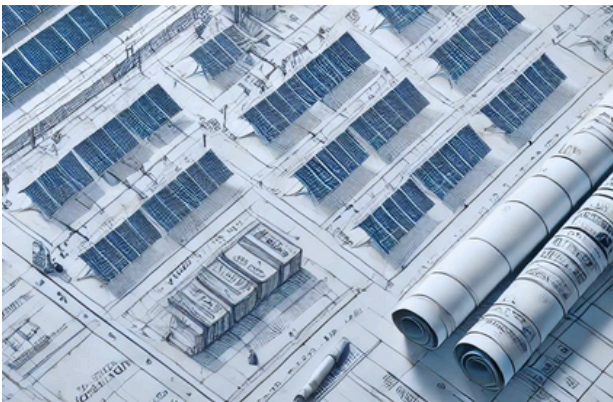
By selecting proven technologies and partnering with industry leaders, we are confident in our ability to deliver a solar plant that exceeds expectations in terms of performance, reliability, and sustainability.

# Site Selection

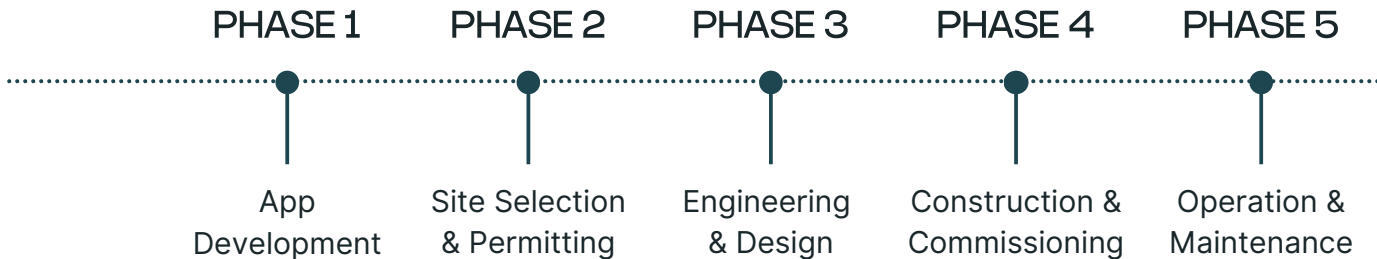
Our final site selection will be determined by the success of our crowdfunding campaign. We're seeking a location that offers:

- **Ample Land Area:** Approximately 8-10 acres to accommodate solar panels and equipment.
- **High Solar Irradiance:** A location with abundant sunlight to maximize energy production.
- **Minimal Environmental Impact:** We're committed to minimizing disturbance to the natural environment and prioritizing eco-friendly practices.
- **Grid Proximity:** A site close to existing power lines will streamline the integration of the generated electricity into the grid.
- **Carbon Offset Potential:** We'll prioritize locations where our solar plant can replace high-emission energy sources, making a significant contribution to reducing greenhouse gas emissions.

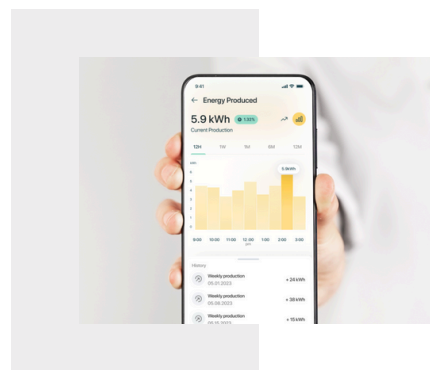
Potential locations include California, Texas, and Nevada, all of which offer favorable conditions for solar energy production.



# Proposed Timeline



- **App Development (Concurrent):** In parallel with the plant's construction, we'll develop a user-friendly app to empower supporters. This app will track energy production, showcase individual and collective impact, and facilitate the gifting of "Slices" of solar energy.
- **Site Selection & Permitting (6 months):** We'll conduct thorough feasibility studies and secure all necessary permits and approvals for the chosen site.
- **Engineering & Design (2 months):** Our team of engineers will finalize the detailed design and engineering plans, ensuring optimal performance and efficiency.
- **Construction & Commissioning (4 months):** We'll prepare the site, procure all necessary equipment and materials, and meticulously install and test every component to ensure reliability and safety.
- **Operation & Maintenance (Ongoing):** Once operational, we'll implement proactive maintenance programs and continuously monitor and optimize the plant's performance to maximize energy production and longevity.



*Disclaimer: This is a preliminary design. Final equipment selection, site specifics, and timeline will be determined based on funding levels and feasibility studies.*

**For more info,  
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