

A High-Performance Solar Installation Under Tight Deadlines

Client Overview

Client : National Cart
Website : www.nationalcart.com
Location : St. Charles, Missouri
Industry : material handling and storage solutions

National Cart, a leading provider of material handling and storage solutions based in St. Charles, Missouri, partnered with Artisun Solar to install a 1.5 MW rooftop solar system. Their goal was to complete the project before the end of 2024 to maximize tax credit benefits. The timeline was exceptionally tight, with the contract signed on September 5, 2024, and the installation required to be fully operational by December 31, 2024.



CHALLENGES AND COMPLEXITIES



1. Tight Timeline:

The client's requirement to complete the installation by the end of the year meant the project timeline was condensed to just 12 weeks from the start of construction in late October. Industry standards suggest such a large-scale project typically takes 15 weeks.

"...we had to get custom electrical gear to upgrade their main service panel with a tight window to source, deliver, and install it prior to the end of the year."

- Steve Pascal, VP of Operations



2. Custom Electrical Equipment:

Due to the system's size, National Cart's existing electrical infrastructure could not support the solar installation. A 1600-amp main breaker was required, but such large-scale components typically have a 9-12 week lead time. Artisun Solar successfully expedited the manufacturing and delivery of this custom-built component.

"The system that they wanted was so large it wouldn't integrate with their existing service. We needed a 1600 amp main breaker to be put outside and whenever you get to amperages that large, they don't typically have those in stock, they build it for you. So, that was the major piece - we needed to have a quick turnaround on an exterior-rated 1600 amp main breaker enclosure by the end of the year."

- Andrew Scott, VP of Field Operations



3. Complex Electrical Upgrades:

Artisun Solar had to upgrade National Cart's electrical system to meet modern codes. This included installing outdoor metering equipment and ensuring a seamless integration with the local utility. These tasks involved shutting down the facility's power over an entire weekend, requiring precise coordination to avoid business disruptions.



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SOLUTIONS AND EXECUTION



1. Streamlined Project Management:

Artisun Solar immediately identified the potential bottleneck of sourcing custom electrical equipment and worked with trusted suppliers to expedite the manufacturing timeline. Their established relationships and industry reputation were critical in meeting this deadline.



2. Expert Contractor Network:

Collaborating with master electricians and trusted contractors, Artisun Solar ensured high-quality installation and compliance with all regulatory requirements. This expertise enabled them to manage a project that many solar companies would have found insurmountable.



3. Precision Coordination:

By anticipating potential delays, Artisun Solar began coordinating with the utility and contractors as soon as the contract was signed. The team's proactive approach ensured that all materials and approvals were in place before construction began.



4. On-Site Efficiency:

A well-coordinated crew of 8-12 professional electricians executed the installation with exceptional speed, allowing the project to meet its aggressive deadline without compromising quality.



RESULTS

- **System Performance:** The completed solar installation is producing 820 kW of power and generated 26 MWh of energy within just three weeks of January 2025—outperforming annual outputs of some systems despite snow coverage.
- **Tax Incentives Secured:** By completing the project before December 31, 2024, National Cart was able to take full advantage of solar tax credits for the year.
- **Operational Excellence:** Artisun Solar's real-time monitoring service ensures the system continues to perform optimally. This service, included with the installation, provides the client with valuable insights and proactive maintenance alerts without additional yearly fees.

KEY TAKEAWAYS

The National Cart project highlights Artisun Solar's ability to tackle large-scale, high-stakes projects under significant time constraints. Their expertise in managing complex electrical upgrades, leveraging supplier relationships, and coordinating skilled contractors demonstrates their capability to deliver professional, ROI-driven solar solutions.

For businesses seeking large-scale solar installations, Artisun Solar proves to be a reliable partner, capable of overcoming challenges to help clients take control of their energy future.

READY TO SEE HOW SOLAR CAN
TRANSFORM YOUR BUSINESS?

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