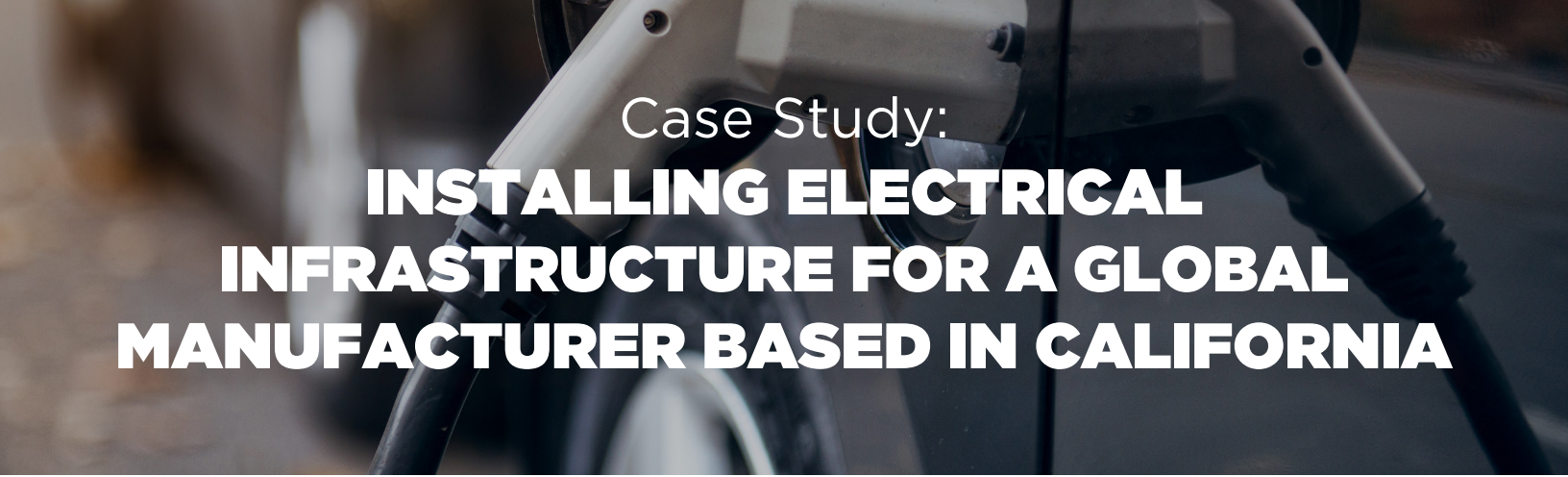




Case Study: **INSTALLING ELECTRICAL INFRASTRUCTURE FOR A GLOBAL MANUFACTURER BASED IN CALIFORNIA**

PROJECT OVERVIEW

A large manufacturer based in California contracted Spark Power to perform electrical infrastructure installation on its new production line. This allowed the manufacturer to expedite its production targets and global go-to-market strategy.

SCOPE

Disconnect and remove existing electrical in the area being modified. On-site electrical installation comprising of:

- Two customer-supplied 12kV substations
- 500 ft of cable tray across facility roof top
- 1,250 ft of 500 mcm 12kV cable
- Five thousand linear feet of 3,000-amp, 480V bus duct
- Feeders to new and relocated panels and switchboards
- Additional lighting in the area

Support the de-energization of all 12kV switches and 480V breakers to de-energize power, confirm zero energy, and apply locks to lockout. On site cable splicing and terminations for the site's entire electrical power distribution system.

- This includes splices: 7BX7A1 and 7BX7A2, Terminations: 7A and 7B and Sub#25 commissioning prior to outage.

- Cable testing and demolition using NETA Acceptance software to test the connection quality of the new cable and remove any cables no longer required in the electrical power system.

Removal of bus caps and installation of busway supports

- This included two inch all thread drops from beam clamps mounted to structural steel and vertical bus removals.
- Disconnection of vertical bus sections, installation of cable tap boxes with two 1600-amp bus switches.
- Installation of DLO cable, core drilling, closing of bus ties, and removal of breakers to prevent any possible back feeds.
- Re-energization of individual feeders and affected substations to bring all loads back online.



Challenges

- The work being performed was in and around multiple other trades.
- The ongoing robotic and tooling installs occupied large space within the limited working area.
- Over the course of the project it became evident that the customer's self-engineered project was only ~60% complete and as time went on, the remainder of the project was up to Spark Power to solve.
- The customer derived much of the feasibility for installations using a generated 3D imaging model which did not account for all obstructions and lacked secondary checks to confirm layout accuracy, thus preventing installations from occurring as originally designed.



Solutions

Within the six-month project timeline, Spark Power was able to deliver the following:

- Significant cost savings solutions for the customer having come in 25% less than the next closest bidder.
- Full utilization of all available lines of Spark Power (Eastern Canada, Western Canada, Renewables, Sustainability Solutions, and U.S.).
- Daily and weekly coordination to overcome and work through engineering and design challenges to ensure project milestones were met consistently within budget and within the compressed project schedule.
- Meticulous planning to ensure work was completed ahead of tooling installs and to ensure that tooling was properly contained (LOTO) during the times when work occurred post-installation and connection.
- Collaborate with customer's engineering department to ensure all facets of the project were addressed and up to code.
- Efficiently adapt field installs to accommodate the BIM (3D imaging) model shortcomings.



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