



EXECUTIVE SUMMARY

I am a solution provider. I have extensive technical knowledge in the fields of mechanical and electrical engineering and am licensed professional electrical engineer. I enjoy the challenge of solving technical problems with a systematic approach to determine the root cause and to provide a solution. I am results driven and focused on delivering the most cost effective solutions for a project.

CENTERS OF EXCELLENCE

Legal Support

- Research & fault determination
- Product & installation failures
- Codes & standards compliance

Solar Products

- Residential racking
- Flat roof commercial racking
- Module level power electronics
- DC optimizers
- Micro inverters
- String inverters
- Combiner boxes
- Monitoring systems

Codes and Standards

- UL 1703, 2703
- ASCE 7-05, 7-10
- Bonding and grounding
- Mechanical loading
- NEC

Product Development

- Product design
- Innovation
- Installation impacts
- Prototype construction
- Manufacturing processes
- Lean product design

Quality & Reliability

- 8d problem solving processes
- Failure analysis
- Test plans & test reports
- Data analysis
- Test equipment
- Solar installation audit
- Vendor/mfg audit
- FMEA

Construction Practices

- All aspects of residential and commercial buildings
- Roofs and roof systems
- PV construction quality inspection
- Site audits and audit tools

Testing and Design Validation

- Electrical validation testing
- Thermal validation testing
- Test equipment and sensors
- Predictive performance modeling
- Data acquisition
- Test facilities and providers
- Test plans and reports

Applications Engineering

- String & inverter sizing
- System performance modeling using: Helioscope, PVsyst, & PV Watts
- Financial modeling with tools such as Energy Toolbase
- Installation impacts for design concepts
- Permitting and permit docs including 3-line and 1-line electrical drawings
- Utility interconnection applications
- Solar installation practices
- Installation time study

RELEVANT EXPERIENCE

PREMIER RENEWABLES - Photovoltaic System Project Developer

Sr Electrical Engineering (2 years)

Responsible for engineering design, permitting and procurement and construction support of solar projects

- Electrical Engineer of Record (EOR) for commercial solar PV projects ranging from 250kW to 1MW
- Coordinated with local building jurisdictions for construction permitting
- Managed sub-contractors and build partners from project bid through construction and commissioning
- Worked with utilities to fulfill PV system design requirements for interconnection and new electrical services at greenfield sites
- Managed subcontracts with professional services and outside vendors to provide permitting and construction design packages

REC SOLAR - Photovoltaic System Project Developer and Installer

Project Engineer (4 years), **Commercial PV System Designer** (2 years)

Responsible for engineering design, permitting and procurement and construction support of solar projects.

- o Electrical Engineer of Record (EOR) for over 20 commercial Solar PV projects including rooftop, carports, and ground mounts ranging from 40kW to over 1MW
- o Managed a small design team of 3 to 6 from project contract through permitted construction package
- o Ensured project deliverables met project contract design and production performance requirements
- o Reviewed project budgets ranging from \$400,000 to over \$8,000,000 and managed project design to keep project under budget
- o Developed detailed electrical, mechanical, and structural plansets ready for construction
- o Created project bill of materials and managed RFIs from construction crew and subcontractors
- o Coordinated with local building jurisdictions across California, Hawaii, Arizona, Florida, and Federal government projects for construction permitting
- o Worked with utilities to fulfill PV system design requirements for interconnection
- o Established positive relationships with subcontractors, outside vendors and suppliers

SUNPOWER - Photovoltaic Racking & Module Manufacturer and System Installer

Testing Engineer (3 years)

Responsible for all aspects of product testing and certification.

- o Coordinated the qualification testing program for new and updated products.
- o Implemented lean design principles into the product design process for the T5 Solar Roof Tile
- o Worked with certification agencies, CSA and ASU-PRL, to certify new and updated products
- o Managed R&D testing laboratory, including budget and resource allocations
- o Established relationships with outside testing partners, vendors and suppliers

MAFI-TRENCH (Now part of Atlas Copco) - Turbo Machinery Manufacturer

Systems Engineer (1 year)

Responsible for design of turbomachinery support systems

- o Designed lubrication and sealing systems for turbomachinery
- o Interpreted customers' plant code requirements for turboexpander skids
- o Provided technical support to the sales department on new projects
- o Analyzed failures of outside manufactured turboexpanders

EDUCATION & CERTIFICATIONS

P.E., Electrical, State of California Lic# 20615

B.S., Mechanical Engineering, Cal Poly, SLO

PERSONAL INTERESTS

Family, mountain biking, kayak fishing, travel, hiking, camping, food.