

REPORT REGARDING

06-09-2022 a residential fire occurred at 3506 Casanova Drive, San Mateo, CA 94403

SUBMITTED TO: Everett Dorey LLP  
IZAIAH CHACON  
Attorney at Law  
2030 Main Street, Suite 1200  
Irvine, CA 92614

PERTAINING TO: MID-CENTURYINSURANCE COMPANY,  
a California Interinsurance Exchange

Vs.

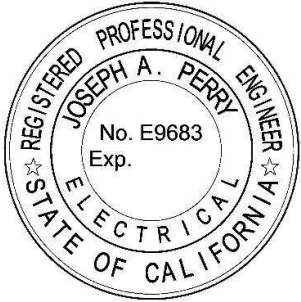
POWER ON SOLAR fka REPOWER TRI-VALLEY;  
RIKETY VENTURES, LLC dba POWER ON SOLAR;  
DOES 1 through 30, Inclusive

SUPERIOR COURT OF THE STATE OF CALIFORNIA  
COUNTY OF SAN MATEO CASE NO: 25-CIV-04284

PREPARED BY: JOSEPH PERRY, P.E.  
JOSEPH PERRY P.E., LLC  
3141 Stevens Creek Blvd # 40259  
San Jose, CA 95117

Report Dated: March 13, 2026

This report was prepared by the undersigned:



**Table of Contents**

- 1. Introduction ----- Page 3
- 2. Documents Reviewed ----- Page 4
- 3. Rebuttal to Mr. O’Neal’s deposition ----- Pages 5 through 8
- 4. Opinions and Conclusions ----- Pages 9 and 10
- 5. Attachments 1, 2 & 3 ----- Pages 11 through 17
- 6. Curriculum Vitae ----- Pages 18 though 20

This report has been prepared based on information and data available to Joseph Perry P.E. as of the date of issuance. The opinions and conclusions contained herein are subject to change should additional information become available.

**Qualifications of Joseph Perry P.E.:** I am a licensed Professional Electrical Engineer in the State of California, since 1978, also a California licensed: Electrical Contractor and Plumbing Contractor since 1981. My Curriculum Vitae is included.

#### **1. INTRODUCTION:**

On 06-09-2022 a residential fire occurred at 3506 Casanova Drive, San Mateo, CA 94403. It was later determined by the San Mateo Consolidated Fire Department to have started in the control panel of the horizontal furnace and fan coil in the attic.

The cause of the fire has been determined by San Mateo Consolidated Fire Department to be electrical in nature.

## 2. Documents reviewed:

- A. Mid-Century – Depo. Transcript of Nehemiah O'Neal
- B. Mid-Century – Exhibit (1-3) to the Depo. Transcript
- C. Michael Kolpack Investigation File
- D. Brian Rinna Information request files
- E. De Francesco, Alessio – San Mateo
- F. Post Install Pictures
- G. Site Survey & Pictures
- H. De Francesco HIC CASH & 3<sup>rd</sup> Party Finance
- I. Installation Plans for TESLA BATTERY PACK sheets E-0 through E-11
- J. Installation Plans for 5 KW solar install issued 03/30/2021 sheets Cover, PV1 through PV5, Placard Locations & Equipment cut sheets
- K. City of San Mateo Inspection Record Building Permit # MEP-2021-280450 TESLA Battery Install issued 06/15/2021
- L. Solar Production Data requested by Michael Kolpak
- M. City of San Mateo Inspection Record Building Permit # BD-2021-279382 5 KW solar install issued 03/30/2021
- N. CAL CSLB, Check a License #1052317
- O. CAL Energy Standards, CEC-400-2018-020-CMF
- P. CAL Secretary of State Records Search
- Q. PG&E Building and renovation Disconnect Policy
- R. Power on Solar Webpage
- S. Redfin 3506 Casanova Drive, San Mateo, CA
- T. City of San Mateo Building Permits Issued SEVENTEEN Separate Building Permits
- U. San Mateo County Tax Assessor statement
- V. San Mateo Fire Report, 3 separate reports
- W. Mid Century Pleadings, 5 separate documents

## Removal of the PG&E Electric meter by the Electrical Contractor:

I have included in Attachment 1 the “PG&E Temporary Electric Service Disconnect” bulletin. This bulletin notifies **PG&E Customers** that if a temporary service disconnect is required that PG&E be contacted by the customer NOT the contractor. This direction to the customer, not the contractor is clear. Please see the boxed statement in out attachment 1, “If you are not sure if your disconnect falls into one of these categories PG&E recommends you contact an electrical contractor to help you plan your service renovation.”

The bulletin is clear that PG&E be contacted by the customer BEFORE the work is done, the contractor is not responsible for contacting PG&E the customer must contact PG&E.

## The question “Can the Contractor Safely Disconnect the electrical service by pulling the Electric Meter” needs to be discussed?

When pulling the electric meter, it will disconnect a 200 amp residential service from PG&E and do NO HARM to the interior electrical wiring during this process. The specific danger is to the electrician’s health and safety. The electrician should always wear proper Personal Protection Equipment, aka “PPE” when performing any “HOT” work as there could be a “Spark Event” that can burn the electrician, possibly leading to death and possibly damage the customers equipment, leaving the electrical contractor liable for the damage.

When the meter is pulled either by PG&E or the electrician the same process is done. The main breaker must be turned off, so that there is NO LOAD on the meter when it is disconnected. Since the main breaker must be off the safety is enhanced and there cannot be a surge that can be created into the home to damage wiring or appliances or cause a fire when the meter disconnect happens.

To remove the meter the contractor would cut the PG&E Seal, thus damaging the seal beyond reuse and would need to notify PG&E to reinstall the meter after the building inspector approves the electrical work that was permitted and completed. NO permit, then NO inspection, then NO meter seal reinstalled by PG&E.

## Warning Labels on Disconnects are required when a Solar Photo Voltaic (PV) system is installed.

The National Electric Code (NEC) and the California Electric Code (CEC) for the safety of Firemen and others not familiar with PV systems requires that labeling on all disconnects to inform the Firemen that both sides of the disconnects may be live and dangerous even when a disconnect is turned off. In systems with only one power supply the disconnect will render the load terminals to be DEAD and safer.

Please see our attachment 2, which is from the plan set (Sheet PV5) that was submitted and approved by the City of San Mateo Building Department for an Electrical Permit at this home location.

I have boxed in red each label for PV Systems that are required by the NEC to be installed by the PV installers at the time of the PV installation. Each note specifically refers to the NEC Code section requiring the label. The fire inspector Mr. O'Neal on page 82 of his deposition states the PG&E troubleman, (W5) "Mr. Saba stated, that the panel on the right side was still energized and the load side was deenergized". On page 84: lines 3-10 of the same deposition Mr. O'Neal states Mr. Saba stated that the "Engine Company" said the house was fully energized. When asked if O'Neal independently confirmed with the fire department personnel that the house was fully energized? O'Neal's answer was "I don't – I don't recall that"

1. Saba did not test the house side of the electrical equipment to verify if it was energized, he relied on the Firemen's statement.
2. O'Neal did not test the house side of the electrical equipment to verify if it was energized, he relied on Saba's, statement and interpretation of the firemen(s) statement.
3. There was no verification by O'Neal with the firemen if they tested or just assumed that the house was fully energized due to the NEC required labeling for PV equipped homes?
4. O'Neal in his deposition Page 33 :14-18 made the statement that the house was fully energized because of the NEC required labels warned "the conductor(s) with an (PV) array remain energized in sunlight even after shutdown."

## **Can the PV installed microinverters “ISLAND” and cause the house wiring to become energized after the PG&E Electric meter is “Pulled” and there is no longer utility power going to the house and PV inverters?**

Please see attachment 3, CPCU Certification of PV Inverters used in this PV installation comply to RULE 21.

Explaining Rule 21 compliance:

- The solar AC modules use Enphase IQ7XS microinverters.
- The specific certified model is IQ7XS-96-ACM-US (QIKH.E341165).
- These modules have been evaluated and approved for CPUC Rule 21 compliance, which governs how solar systems interact with the utility grid in California.
- Testing confirmed support for:
  - Volt-Var functionality with reactive power priority (helps stabilize grid voltage)
  - Rapid shutdown capability, a required safety feature for rooftop solar systems.

Certification confirms the equipment is utility-approved, grid-compliant, and safety-tested, which is exactly what permitting and PG&E is expecting for modern PV systems.

The AC modules for this permitted installation incorporate Enphase IQ7XS microinverters that have been evaluated and approved for CPUC Rule 21 compliance, including tested Volt-Var voltage regulation with reactive power priority to support grid stability, as well as rapid shutdown functionality to meet current electrical safety requirements.

In plain language: Standard Grid-Tied PV Systems (Enphase microinverters IQ7 and older)

For solar systems equipped with the iQ7 microinverters, it is normal behavior for the microinverters to shut off immediately when the utility grid goes down.

- This is a safety feature called anti-islanding. It prevents solar panels from sending electricity back onto the power lines while utility workers are trying to fix them.
- Your house power will go out even if the sun is shining.
- Result: you will not have power to your house, wiring or appliances because your house has no power from the PV system when there is no PG&E power connected.

Was there an absence of GROUNDING after the meter was pulled?

Mr. O'Neal stated many times during his deposition that the PV system was not grounded and on Page 42: 17-24 he stated "I just – you know this -- this is part of my, kinda investigation, but I'm going based off the scientific method and where the – you know if something is not grounded -- **if you take off the meter**, that electricity has to go somewhere, and that went to the furnace, and that's where the furnace caught fire"

Clarification: "if you take off the meter" This will not interrupt the grounding of the electrical system. The meter has four terminals, none of which are grounded. The grounded conductor is the neutral conductor from the utility which is to be continuous through the meter base (holder). The neutral conductor is bonded to ground at the PG&E transformer and on the customer side of the electric meter base. This house had a new 200 amp service installed that replaced the 100 amp original service, we know this because there was an electric permit taken out and included in the list of building permits. The new service with a new ground rod was inspected and approved by the inspector, after which PG&E connected the new service.

## Opinions and Conclusions:

1. The “PG&E Temporary Electric Service Disconnect” bulletin. This bulletin notifies **PG&E Customers** that if a temporary service disconnect is required that PG&E be contacted by the customer NOT the contractor. This direction to the customer, not the contractor is clear. While the bulletin is clear that PG&E be contacted by the customer BEFORE the work is done, the contractor is not responsible for contacting PG&E the customer must contact PG&E. It is not unusual that the electrical contractor pull the meter if the customer has not made timely arrangements to pull the meter before the workman arrive.
2. When pulling the electric meter, it will disconnect a 200 amp residential service from PG&E and do NO HARM to the interior electrical wiring during this process. The specific danger is to the electrician’s health and safety. The electrician should always wear proper Personal Protection Equipment, aka “PPE” when performing any “HOT” work as there could be a “Spark Event” that can burn the electrician, possibly leading to death and possibly damage the customers equipment, leaving the electrical contractor liable for the damage.
3. The National Electric Code (NEC) and the California Electric Code (CEC) for the safety of Firemen and others not familiar with PV systems requires that labeling on all disconnects inform the Firemen that both sides of the disconnects may be live and dangerous even when a disconnect is turned off. The plan set (Sheet PV5) that was submitted and approved by the City of San Mateo Building Department for an Electrical Permit showed each required label to be installed. Each label specifically refers to the NEC Code section requiring the label.
4. When asked if O’Neal independently confirmed with the fire department personnel that the house was fully energized? O’Neal’s answer was “I don’t – I don’t recall that”.
5. Saba did not test the house side of the electrical equipment to verify if it was energized, he relied on the Firemen’s statement. As stated by O’Neal in his depo. Par. 84 :3.
6. O’Neal did not test the house side of the electrical equipment to verify if it was energized, he relied on Saba’s statement and interpretation of the firemen(s) statement.
7. There was no verification by O’Neal with the firemen if they tested or just assumed that the house was fully energized due to the NEC required labeling for PV equipped homes?
8. Labeling electrical disconnects is required by the NEC and is general in nature for the protection of the firemen when a PV System is installed on the premise. The following statement by O’Neal is in error, just because the label says it may be energized, this

equipment needs to be tested to be sure it is energized! O’Neal in his deposition Page 33 :14-18 made the statement that the house was fully energized because of the NEC required labels warned “the conductor(s) with an (PV) array remain energized in sunlight even after shutdown.”

9. The micro inverters cannot power the house when there is no PG&E feeding the microinverters. Certification confirms the equipment is utility-approved, grid-compliant, and safety-tested, which is exactly what permitting and PG&E is expecting for modern PV systems.

Standard Grid-Tied PV Systems equipped with the iQ7 microinverters, normal behavior for the microinverters is to shut off immediately when the utility grid goes down.

- This is a safety feature called anti-islanding. It prevents solar panels from sending electricity back onto the power lines while utility workers are trying to fix them.
- Your house power will go out even if the sun is shining.
- Result: you will not have power to your house, wiring or appliances because your house has no power from the PV system when there is no PG&E power connected.

10. The electrical system is still solidly grounded even when the electric meter is removed. If you take off the meter” this will not interrupt the grounding of the electrical system. The meter has four terminals, none of which are grounded. The grounded conductor is the neutral conductor from the utility which is to be continuous through the meter base (holder). The neutral conductor is bonded to ground at the PG&E transformer and on the customer side of the electric meter base.

The conclusions and opinions expressed herein were formed with a reasonable degree of scientific certainty using the information available to Joseph Perry P.E. at the time this report was published. My conclusions and opinions are based on education, training and experience applied through scientific methodologies.

The substance of this report is derived from information available to date, if any new information should become available the content of this report may be altered.



P.E. Registration expires  
9-30-2026

Prepared by: *Joseph Perry*

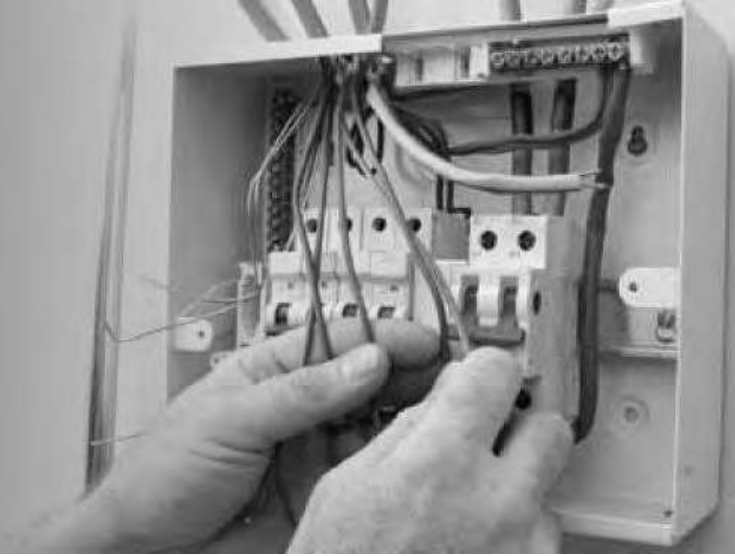
Joseph Perry P.E., President

Attachment 1

(“PG&E Temporary Electric Service Disconnect” bulletin)



# Electric Service Temporary Disconnect



## Getting started guide for your home

If you need to temporarily disconnect the electric service at your home to work on projects such as: electricians performing maintenance of electrical panels and circuit breakers; or to allow painters, tree trimmers and roofers to safely work around power lines, you will need to contact Pacific Gas and Electric (PG&E).

PG&E will temporarily and safely disconnect electric service and reconnect it when work is completed.

### Follow these steps to get started:

#### 1 Request temporary disconnect

Register or log on to Your Project at <https://yourprojects-pge.com>. You will be asked to provide the following information:

- Account number
- Address of requested disconnect
- Contact information
- Best time to call
- Phone number
- Date of requested disconnect
- Mailing address
- Reason for temporary disconnect request

If you are requesting the disconnection for any of the following reasons, you must also submit an application for relocation or rearrangement of service:

- Moving overhead connection to your home
- Moving meter panel location, even if there is no change in load
- Splitting service or load and adding a meter
- Meter panel change out (increasing panel size)
- Replacement with no change to service (ex. old 100 amp panel to a new 100 amp panel)
- Installation of photovoltaic solar generator connection or an Electric Vehicle

If you are not sure if your disconnect falls into one of these categories PG&E recommends you contact an electrical contractor to help you plan your service renovation.

For more details refer to the Getting Started Guide: Electric Service, Change Existing Service at [www.pge.com/GettingStarted](http://www.pge.com/GettingStarted).

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**2** Gather information

When calling to schedule your temporary disconnect be prepared to answer the following questions:

- Does your overhead service wire cross a street?
- Does your overhead service wire serve multi-family units?
- Is the main circuit breaker on your electric panel rated at 400 amps or above?
- Does your overhead service wire go through trees?
- Does your overhead service wire come from backyard?
- Is the overhead service connected to the upper level of multi-level building?

In most cases your temporary disconnect can be scheduled during the call. If you plan to arrange for the appropriate local government agency to inspect the electric panel on the same day as the disconnect, you will also need to schedule your service reconnect during the call. Once it has passed inspection, PG&E can return to your home and reconnect your service. Keep in mind that you will have to make sure that PG&E gets access to the meter. If access inside the house is required, someone at least 18 years or older must be present.

For more information on how PG&E can help with building and renovation projects for your home, visit [www.pge.com/renovation](http://www.pge.com/renovation) or call 1 877 743 7782.

Attachment 2

(PV System Labels required by the NEC)

**SIGNAGE REQUIREMENTS**

- > RED BACKGROUND
- > WHITE LETTERING
- > MIN. 3/8" LETTER HEIGHT
- > ALL CAPITAL LETTERS
- > ARIAL OR SIMILAR FONT
- > REFLECTIVE, WEATHER RESISTANT MATERIAL, UL 969

**WARNING**  
ELECTRIC SHOCK HAZARD. TERMINALS ON BOTH THE LINE AND LOAD SIDES MAY BE ENERGIZED IN THE OPEN POSITION.  
DC VOLTAGE IS ALWAYS PRESENT WHEN SOLAR MODULES ARE EXPOSED TO SUNLIGHT

REQ'D BY: NEC 690.13(B) **4**

APPLY TO:  
DISCONNECTS  
SOLAR LOAD CENTERS  
COMBINER BOXES

**SOLAR AC DISCONNECT**

REQ' BY: NEC 690.14(C)(2) **3**

APPLY TO:  
AC DISCONNECTS

**PV SYSTEM DISCONNECT**

REQ' BY: NEC 690.13(B) **7**

APPLY TO:  
AC DISCONNECTS

**CAUTION**  
DO NOT INSTALL ADDITIONAL LOADS IN THIS PANEL

REQ'D BY: NEC 690.64(B)(2) **8**

APPLY TO:  
SOLAR LOAD CENTER IF UTILIZED

**CAUTION: SOLAR CIRCUIT**

REQ'D BY: AHJ **11**

APPLY TO:  
SOLAR CONDUIT

REQ'D BY: NEC 690.54 **6**

APPLY TO:  
PV SYSTEM BREAKER

**WARNING**  
POWER SOURCE OUTPUT CONNECTION. DO NOT RELOCATE THIS OVERCURRENT DEVICE

REQ'D BY: NEC 705.12(B)(2)(3)(b) **9**

APPLY TO:  
PV SYSTEM BREAKER

**UPDATE VALUES**

**CAUTION**  
SOLAR PV SYSTEM MAY REMAIN ENERGIZED AFTER DISCONNECT DURING DAYLIGHT HOURS.

REQ'D BY: AHJ **10**

APPLY TO:  
MAIN SERVICE PANEL

**WARNING**  
THIS SERVICE IS SUPPLIED FROM MULTIPLE SOURCES UTILITY AND PHOTOVOLTAIC

REQ'D BY: NEC 690.56(B) **13**

APPLY TO:  
MAIN SERVICE PANEL

**PHOTOVOLTAIC MICRO INVERTERS LOCATED UNDER EACH PV MODULE IN ROOFTOP ARRAY**

REQ'D BY: NEC 690.14(D) **14**

APPLY TO:  
MAIN SERVICE PANEL IF PV SYSTEM UTILIZES MICRO INVERTERS

**WARNING**  
THIS EQUIPMENT FED BY MULTIPLE SOURCES. TOTAL RATING OF ALL OVERCURRENT DEVICES, EXCLUDING MAIN SUPPLY OVERCURRENT DEVICE, SHALL NOT EXCEED AMPACITY OF BUSBAR.

REQ'D BY: NEC 705.12(B)(2)(3)(c) **17**

APPLY TO:  
AC COMBINER/SOLAR LOAD CENTER

**WARNING**  
ELECTRIC SHOCK HAZARD. TERMINALS ON BOTH LINE AND LOAD SIDES MAY BE ENERGIZED IN THE OPEN POSITION

REQ'D BY: NEC 690.13(B) **12**

APPLY TO:  
UNGROUNDING ARRAYS ONLY  
JUNCTION BOXES  
COMBINER BOXES  
DC DISCONNECTS  
INVERTERS

**PV SYSTEM EQUIPPED WITH RAPID SHUTDOWN**

SOLAR PV SYSTEM EQUIPPED WITH RAPID SHUTDOWN. TURN SWITCH TO THE "OFF" POSITION TO SHUT DOWN PV SYSTEM AND REDUCE SHOCK HAZARD IN ARRAY

REQ' BY: NEC 690.56(C)(1)(a) **15**

APPLY TO:  
WITHIN 3' OF SERVICE DISCONNECTING MEANS

**RAPID SHUTDOWN SWITCH FOR SOLAR PV SYSTEM**

REQ' BY: NEC 690.56(C)(3) **16**

APPLY TO:  
WITHIN 3' OF RAPID SHUTDOWN SWITCH  
AC DISCONNECT/PV BREAKER

**Power On Solar**  
**Rikety Ventures LLC**  
5729 Sonoma Dr, Suite G  
Pleasanton, CA 94566  
Main Line: 925.202.2238 License #: 1052317

**Alessio De Francesca**  
3506 Casanova Drive  
San Mateo, CA 94403  
415.412.4609  
AHJ: City of San Mateo

**System Spec:**

- System Type: Grid Tied
- Module Type: SunPower SPR-X22-360-E-AC
- # of Modules: 16
- Racking: Sunpower Invisimount
- Solar Mounts: Ironridge Flashfoot 2
- DC Watts: 5.76W DC STC

**Existing House Electrical:**

- (E) Main Service Panel: 200A
- Grid Voltage: 120/240V

**Special Info:**

- Roof Type: Comp Shingle
- Array 1 Rafter Size: 2x4 Rafters 24" O.C.
- Array 1 Pitch: 15° Azimuth: 145°
- Array 2 Rafter Size: 2x4 Rafters 24" O.C.
- Array 2 Pitch: 15° Azimuth: 145°
- Array 3 Rafter Size: 2x4 Rafters 24" O.C.
- Array 3 Pitch: 15° Azimuth: 55°
- Avg. High Temp.: 84.2°
- Rec. Low Temp: 35.6°

**Array info:**

- Module Weight (lb): 42.9 lbs.
- Avg. Standoff Spacing (ft): 6' Max.

Sign:

Drawn By: Lennard Lopez Date: 03/09/2021

**PV5**

Attachment 3

(CPCU Certification of PV Inverters used in this PV installation comply to RULE 21)

# CERTIFICATE OF COMPLIANCE

**Certificate Number** 20180922-E478330  
**Report Reference** E478330-20180919  
**Issue Date** 2018-SEPTEMBER-22

**Issued to:** SUNPOWER CORP  
77 RIO ROBLES  
SAN JOSE CA 95134-1859

**This is to certify that  
representative samples of**

AC MODULES AND PHOTOVOLTAIC MODULES WITH  
INTEGRATED ELECTRONICS

AC modules, Models: SPR-E19-xxx-BLK-E-AC, SPR-E20-xxx-BLK-E-AC, SPR-E19-xxx-E-AC, SPR-E20-xxx-E-AC, SPR-X20-xxx-BLK-E-AC, SPR-X21-xxx-BLK-E-AC, SPR-X22-xxx-BLK-E-AC, SPR-X20-xxx-E-AC, SPR-X21-xxx-E-AC, SPR-X22-xxx-E-AC.

Where "xxx" – can be 320 to 370.

These AC modules include Enphase inverter IQ7XS-96-ACM-US (QIKH.E341165) evaluated for CPCU rule 21 compliance, tested with Volt Var reactive power priority and Rapid shutdown functionality.

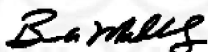
Have been investigated by UL in accordance with the Standard(s) indicated on this Certificate.

**Standard(s) for Safety:** UL 1741, Inverters, Converters, Controllers, and Interconnection System Equipment for Use with Distributed Energy Resources.  
UL 1703, Flat-Plate Photovoltaic Modules and Panels.

**Additional Information:** See the UL Online Certifications Directory at [www.ul.com/database](http://www.ul.com/database) for additional information

Only those products bearing the UL Certification Mark should be considered as being covered by UL's Certification and Follow-Up Service.

Look for the UL Certification Mark on the product.



Bruce Mahrenholz, Director North American Certification Program

UL LLC

Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL. For questions, please contact a local UL Customer Service Representative at <http://ul.com/aboutul/locations/>

-17-





## **JOSEPH PERRY P.E., CFLC**

**JP<sub>PE</sub>**

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**Website:** <http://www.ElectricalExpert.Solutions>  
**Video:** <http://www.ElectricalExpert.Solutions/#videoscroll>

### **Professional Experience**

With over 44 years' experience; Joseph A Perry P.E. is both a licensed Professional Electrical Engineer in California and Hawaii, and an Electrical Contractor in California. His multiple licenses require design, installation experience, and extensive knowledge of the National Electrical Code and construction. This practical foundation of electrical knowledge was primarily gained through working in the Electrical Trade and owning/operating a Design Build Electrical Contracting business. Joseph's hands on background in electrical design, project management, cost estimating, and field construction work, gives him a unique perspective that few engineers have.

Being both an Electrical Engineer and Electrical Contractor brings a unique perspective to the investigation of your cases. As an Electrical Engineer, he is interested in the forensics of the design and details of the plans and specifications as to how the contractor was required to build the system. As an Electrical Contractor, he is interested in the materials, and how the installation was completed. This unique combination of experience will lead to a quick and thorough investigation into your case.

Past Expert Witness assignments include Pump Station construction and failures, Emergency Generator failures, Personal Injuries due to traffic light failure, electrical shock and electrocution, Electrical Equipment Control failures, Electrical Construction Defects for wineries, condominiums, and Mega Residences, Cost Estimates, Sewer, and Flood Control Systems, underground utility's locating services failures. During Joseph's career, he has acted as a Consulting and Testifying Electrical Engineering Expert Witness on cases for both plaintiffs and defendants.

As a Professional Member of the Forensic Expert Witness Association (FEWA), Joseph has been continuing his professional Expert Witness Training by attending FEWA sponsored Video Conferences, Joseph has attended seven National FEWA Conferences.

### **Licenses and Certifications**

Professional Electrical Engineer California & Hawaii	CA# E9683 & HI# E12924
Licensed Contractor, Electrical, & Plumbing	CA# 402494 (C-10, C-36)
Master Certified Forensic Litigation Consultant (FEWA)	Certificate # 018

### **Skills**

SCADA, Telemetry Supervisory Control	Underground Electrical Construction
Variable Frequency Drive (VFD) Motor Control	Well, Storage Tank, Pumping Control and Design
Reduced Voltage Soft Start (RVSS) Motor Control	Cellular and Radio Communication Networks
Habitability Studies, Ca Civil Code 1941.1	Critical Load and Standby Generator Applications
National Electrical Code, NFPA 70 compliance	Programmable Logic Controllers (PLC) Hardware
Electrical Estimating, Project Management	UL508A & UL698A Industrial Control Panel Standards
Solar PV System Electrical Design and Construction	Standard of Care, Forensic Analysis, Product Liability

## Educational Foundation

Healds Engineering College, San Francisco, BSEE Electrical Engineering (Power and Control Systems Focus)

## Current Employment

**Electrical Design and Forensic Engineer** Joseph Perry P.E., LLC

2016 - Present

My primary duties are to provide electrical design, review, and approval of electrical construction including Commercial and Industrial projects, and Solar PV projects for electrical contractors and owners. I provide Electrical Forensic engineering review and litigation support to law firms and insurance carriers for cases regarding Electrical Construction Defects, Personal Injury due to Electrical Accidents, Shock, Electrocutation, Electric Arc Flash, Lock out-Tag out violations, Standards of Care by Electrical Engineers, Contractors and their workmen, Electricity Theft, Cost Estimating, Fire Analysis when the fire is suspected to be caused by Electricity, Photovoltaic Solar Systems design and installation, Underground Utility location accidents, Electrical Power and Controls for Water \ Wastewater, Pump Station, Tank, or Treatment Plant and related causes of Sewage Spills or Tank over filling causing flooding.

I have 22 years of experience with the design and application of Underwriters Laboratory UL 508A and UL698A standards as they relate to industrial control panels for the energy management and water/wastewater industry. I have extensive National Electrical Code and California Electrical Code compliance understanding as they relate to electrical construction projects. I have designed the electrical system for several RV parks in California to bring them in to compliance with today's rigorous power requirements for the larger RVs with increased power requirements.

### Work History

**Engineering and Design Manager** MCC Control Systems, 3/2016 acquired by SJE Rhombus, PRIMEX

2014 – 2016.

While managing the Engineering Design and Drafting team, I was also responsible for the design of power and control panels for water/wastewater pump stations, medium size wastewater treatment plant control panels and Motor Control Centers. Designs included PLC Panels, Motor Control Centers and chemical monitoring systems. I was the responsible Electrical Engineer for all MCC Control Systems California projects that require an electrical engineer's design approval and engineering stamp.

**Independent Consulting Electrical Engineer** Control Systems West, Inc.

2002 – 2014.

My primary design duties were to design power and controls for water/wastewater pump stations and medium size wastewater treatment plant control panels. I was the responsible Electrical Engineer for all Control Systems West, Inc. California and Hawaii projects that require an electrical engineer's design approval and engineering stamp. I was the Contract Administrator for most of the Control Systems West, Inc. contracts to provide control panels, which are used by municipalities in California and Hawaii. I was the primary contact for Underwriters Laboratory (UL) certification of Industrial Control Panels (UL508A and UL698) that are designed and built at Control Systems West, Inc.

**Owner** California Energy Experts

2001 – 2002

I was an independent Engineering Consultant and Electrical Contractor for the City of Cotati Department of Public Works Water/Wastewater Pump Stations. Also, I worked for various clients performing electrical contracting services. Working with Control Systems West, Inc. with its established volume of business, offered a superb opportunity to utilize my Engineering Design talents in the design of industrial control panels dedicated to the water/wastewater industry.

**Investment Broker** Edward Jones Investments

1998 – 2001

After passing the Securities and Exchange Commission Series 7 License, I opened an Edward Jones Investment office in Rohnert Park, CA. I serviced my clients by selling stocks, mutual funds, bonds, annuities, life and long-term care insurance. I enjoyed the sales aspect of the business; however, this business was much too distant from the finite business of Electrical Engineering.

**Outside Sales** Cal Air, Inc.

1997 – 1998

Outside sales of Heating Ventilation and Air Conditioning (HVAC) Services. Cal Air purchased my previous Electrical Engineering; Electrical, HVAC, and Plumbing contracting business. I agreed to stay on in the sales capacity for one year to expand their presence in the Sonoma County area and provide continuity with our existing client base.

**President** California Energy Experts, Inc., (CEE)

1984 – 1997

We designed and built Facility Automation Systems (FAS) totaling 7.6 million square feet of municipal, school, commercial and light industrial building spaces in 15 states. Project makeup was approximately 36% new and 64% retrofit installations. We incorporated, programmed, and supported dedicated technically advanced controllers for HVAC Systems. Our Lighting Control Systems incorporated daylighting and time of day scheduling. Variable Frequency Drives (VFD), were used on cooling towers, pumps, supply and return fans to enhance the energy efficiency of HVAC systems, economizer damper positioning and monitoring were an integral part of our control designs which led to further energy reductions. Demand control routines were incorporated in the designs when there was an advantage to the customer. All systems included remote communication abilities to allow offsite monitoring and minor software revisions. We expanded our company's expertise by bidding and installing well, water/wastewater, flood control, power and control systems. We designed and built Standby Generator Systems (up to 250 KW), including single and multiple transfer switches and isolation of critical/non-critical loads. We incorporated peak shaving strategies into the design when applicable. California Energy Experts was further expanded by incorporating HVAC and plumbing contracting under our umbrella. California Energy Experts was sold to Cal Air, Inc. which provided me an opportunity to explore Outside Sales.

**Owner** Energy Experts

1982 – 1984

When Energy Experts was formed, my goal was to design and install control systems dedicated to energy management in commercial buildings, utilizing the most recent computerized advancements in HVAC and Lighting Controls. I began by selling the concept to businessmen in our county, then designing and installing the control system. After landing Energy Management System design and installation contracts with a major department store chain, Energy Experts quickly grew and earned the respect of the Facilities Managers for this chain. As the company volume grew, Energy Experts was incorporated and renamed to California Energy Experts, Inc.

**Electrical Engineer P.E.** RE Corp. Inc., DBA Reliance Enterprises

1979 –1982

After obtaining Professional Engineer status, I began estimating electrical construction projects and assisted in contract administration and purchasing materials that were required to successfully complete bid projects. I also earned my Electrical Contractors' License during this period. The Engineering and Contracting foundation established at RE Corp afforded me the knowledge, experience, and confidence to start my own engineering/contracting business, Energy Experts specializing in energy management and control systems.

### Membership in Trade Associations

Institute of Electrical Electronic Engineers, (IEEE), my IEEE # 90393171

Senior Member Status: Less than 8% of all IEEE Members are Senior Members.

Forensic Expert Witness Association, (FEWA), Northwest Region Northern CA, OR, WA, MT, ID, Wy.)

Northern CA: Past President 2018, President 2017, Board of Directors Member (9 years), Past Assistant to the Chapter Secretary, Past Membership Chairman, and 2016 National FEWA Conference Co-Chairman