

# PHILLIP L. WHEELER, P.E.

## Electrical Engineer

Mr. Phillip Wheeler has over 38 years of electrical engineering experience in the fields of design, construction, operation, and maintenance of electrical power systems. He specializes in equipment specification, application, and failure analysis. Mr. Wheeler also provides investigation and expert testimony in matters involving electrical equipment and systems.

### SPECIALIZED PROFESSIONAL COMPETENCE

- Electrical power systems design
- Failure analysis
- Fire investigations
- Consulting and expert testimony
- Incident investigation
- Electric system operation and maintenance
- Cogeneration interconnections
- Conductor loss evaluation
- Substation design
- Equipment inspections
- Capacitor applications
- Power Quality analysis
- Load Flow and Short Circuit studies
- Economic Loading studies
- Planning studies
- Equipment specifications

### EQUIPMENT

- Transformers
- Circuit breakers
- Conductors
- Cables
- Switches and relays
- Metal-clad switchgear
- Generators
- HVAC systems
- Appliances
- Lightning arresters
- Lighting equipment
- Motors

### INDUSTRIES

- Electric utility
- Manufacturing
- Petrochemical
- Agriculture
- Construction
- Independent power generators
- Chemical
- Nuclear power generation

### RECENT WORK

Failure Analysis – Electrical equipment including high voltage capacitor switches, air conditioning controls, underground cables, appliances, overhead conductors.

Fire and Explosion Investigation – Plastics recycling, oil field, rocket fuel storage, and residential appliances.

Planning and Design – Long range planning study for the Palestinian Authority Power System in Gaza, design of an overhead distribution line in California, and a 20-year planning study for a California utility company.

## EDUCATION AND PROFESSIONAL BACKGROUND

- M.S. (Electrical Engineering), University of Southern California (1971)
- B.S. (Electrical Engineering), California State Polytechnic University (1963)
- General Electric's Power Systems Engineering Course, Schenectady, New York (1969)
- Professional Engineer, Electrical, California No. E6916
- Memberships:
  - Institute of Electrical and Electronics Engineers (IEEE)
    - Chairman of the Orange County Section (2000)
    - Chairman of the Orange County Power Engineering Society (1998)
  - California Conference of Arson Investigators
  - Edison Electric Institute (EEI) Electrical Systems and Equipment Committee (1986-1990)
  - EEI, Transmission and Distribution Committee (1970-1978):
    - EEI-NEMA Joint Committee on Standards for Pole Line Hardware
    - EEI-NEMA Joint Committee on Cutouts and Fuses
    - EEI Underground Equipment Task force, Vice Chairman and Secretary
  - IEEE Task Force on Switching and Overcurrent Protection (1970-1975)
  - American National Standards Institute (ANSI) C57 .12.3 Subcommittee on Underground Secondary Network Transformers (1970-1977)
  - Electric Power Research Institute (EPRI) Distribution Advisory Task Force (1976-1978)

## SELECTED REPORTS, PUBLICATIONS, AND INVITED LECTURES

*Investigation of Capacitor Switch Failures*, Report to Chubb Insurance Company (December 1998).

*Investigation of a Refrigeration System Failure*, Report to Chubb Insurance (November 1998).

*Investigation of a Hydro Generation Plant Fire*, Report to Chubb Insurance Company (May 1998).

*Investigation of a Bus Duct Failure*, Report to McLarens Toplis Insurance Company (April 1998).

*Long Range Planning Study for the Gaza Distribution System*, Report to the Palestinian Authority (August 1996).

*Investigation Regarding Types of 220/kV Interconnections for Third Party-Owned Generators Allowed by Southern California Edison Company*, Cogeneration Service Bureau (October 1992).

*Distribution Circuit Loading Study*, San Diego Gas and Electric Company (December 1991).

## ADDITIONAL INFORMATION

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