

PACIFIC GAS AND ELECTRIC COMPANY

PG&E + 245 MARKET STREET • SAN FRANCISCO, CALIFORNIA 94106 • (415) 781-4211 • TWX 910-372-6587

February 22, 1988

Local Union No. 1245
International Brotherhood of
Electrical Workers, AFL-CIO
P. O. Box 4790
Walnut Creek, California 94596

Attention: Mr. Jack McNally, Business Manager

Gentlemen:

Company proposes the attached Guidelines for the Apprentice Metering Electronics Technician Training Program, pursuant to Section 109.2 of the Agreement. It is further proposed that the entrance examination be developed and agreed upon by April 1, 1988 and that either party may request to review the content for appropriateness at anytime by giving notice to the other party.

If you are in accord with the foregoing and attachment and agree thereto, please so indicate in the space provided below and return one executed copy of this letter to the Company.

Yours very truly,

PACIFIC GAS AND ELECTRIC COMPANY

By Richard B. Brady
Manager of Industrial Relations

The Union is in accord with the foregoing and attachment and it agrees thereto as of the date hereof.

LOCAL UNION NO. 1245, INTERNATIONAL
BROTHERHOOD OF ELECTRICAL WORKERS, AFL-CIO

March 8, 1988

By Jack McNally
Business Manager

GUIDELINES FOR THE
APPRENTICE METERING ELECTRONICS TECHNICIAN
TRAINING PROGRAM

I. OBJECTIVE

Pacific Gas and Electric Company has a need for fully qualified employees to perform the duties of the Metering Electronics Technician classification. These duties include testing and repairing all types of electronic metering equipment and associated systems according to company standards and governmental regulations. This program has been created to provide a combination of Academic and On-the-Job training to allow the development of trained journeymen who can perform these duties safely and skillfully.

II. DURATION

The duration of the Apprentice Metering Electronics Technician program is 24 months, divided into four time periods which coincide with the wage progression steps of the classification.

III. QUALIFYING TEST

To enter the Apprentice Metering Electronics Technician classification, an employee will be required to pass a written examination based on the minimum acceptable electronics knowledge necessary to enter the academic training portion of the program.

IV. ACADEMIC TRAINING

The academic portion of the program consists of self-study training courses and will normally be completed in the first 18 months of the apprenticeship. The training resources used in the program are ICS-INTEXT texts as listed in appendix A.

Self-check quizzes are included throughout the academic training period to provide feed back to the apprentice on progress in the program. Progress tests will be given as outlined in the ICS-INTEXT program and shall serve as the Standards of Achievement for the academic portion of training for the various levels of the wage rate progression. The minimum passing score for the progress tests will be consistent with the level established by ICS-INTEXT for satisfactory completion of the training courses.

V. On-The-Job Training

Progressive work experience in all phases of electric metering electronics will be provided to the apprentice by assignment to job duties at the System Electric Meter Test and Repair Facility. Apprentices will normally be trained by assignment to work with qualified Metering Electronics Technicians, however, assignment to work alone may be made in accordance with Section G of the Master Apprenticeship

Agreement and Exhibit VI-L, Job Definitions and Lines of Progression, of the Agreement between PG&E and IBEW Local 1245. Such assignments to work alone shall not be made to the extent that the apprentice is in jeopardy of failing to attain goals set forth in these Guidelines.

VI. GUIDELINES

A. General Guidelines

1. Except where otherwise specified, apprentices shall be trained by assignment to work with qualified journeyman.
2. Progressive work experience will be provided throughout the first three periods of the apprenticeship.
3. Assignments during the last or fourth period will be made for the purpose of rounding out the apprentice's experience.
4. Upon entering each new wage step and period of training, the work assignments in the period shall be such that the apprentice will gain the basic knowledge and confidence in himself, the equipment and the procedure being used. More complex assignments shall be made progressively as the apprentice gains in knowledge and capability.
5. When an apprentice is not maintaining an acceptable level of effort in the academic training or on-the job training portions of the program, notice shall be given to the Apprenticeship Committee.

B. Guidelines for Training Periods

1. 0 to 6 Months' Step

During this period, the apprentice will be instructed in the following areas.

a. Academic training

98 Hrs.

1. Complete ICS-INTEXT Block B05, Electronic Systems and Block B06, Troubleshooting Electronic Equipment and Systems

b. On-the-Job Training

800 Hrs.

1. The apprentice will normally receive work experience by assignment to work with a Metering Electronics Technician in areas that will reinforce the academic portion of the program in process. However, due to the limitations of personnel and job assignments at the System Electric Meter Test and Repair Facility the apprentice may, at times, assist in work that will exceed his technical ability. In these cases, he will not be expected to perform any duty that is

inconsistent with his level of academic training in this program.

2. 7 to 12 Months' Step

The apprentice shall continue to perform the functions of the prior period and in addition shall be instructed in the following:

a. Academic Training

98 Hrs.

1. Complete ICS-INTEXT Block B08, Logic Circuits and Block B09, Linear/Digital Integrated Circuits.

b. On-the-Job Training

800 Hrs.

1. The apprentice will normally receive work experience by assignment to work with a Metering Electronics Technician in areas that will reinforce the academic portion of the program in process. However, due to the limitations of personnel and job assignments at the System Electric Meter Test and Repair Facility the apprentice may, at times, assist in work that will exceed his technical ability. In these cases, he will not be expected to perform any duty that is inconsistent with his level of academic training in this program.

3. 13 to 18 Months' Step

The apprentice shall continue to perform the duties specified for prior periods and in addition learn the duties outlined for this period of his apprenticeship.

a. Academic Training

1. Complete ICS-INTEXT Block B11, Introduction to Microprocessors and Block B12, Microprocessor Applications.

b. On-the-Job Training

800 Hrs

1. The apprentice will normally receive work experience by assignment to work with a Metering Electronics Technician in areas that will reinforce the academic portion of the program in process. However, due to the limitations of personnel and job assignments at the System Electric Meter Test and Repair Facility the apprentice may, at times, assist in work that will exceed his technical ability. In these cases, he will not be expected to perform any duty that is inconsistent with his level of academic training in this program.

4. 19 to 24 Months' Step

The apprentice will be allowed to do any work normally performed by a journeyman. It will be the object of this step to attain satisfactory proficiency in all the areas where the apprentice has been instructed.

VI. RECORDS

- A. It will be the responsibility of the apprentice to maintain an individual record of progress in the academic portion of the program in collaboration with the supervisor. Progress reviews will be conducted periodically (three month maximum) with the apprentice and so noted by the apprentice's and supervisor's signature on the progress record.
- B. It shall be the responsibility of each Supervisor to maintain necessary files of records on each apprentice and to ascertain that each apprentice has a reasonable opportunity of meeting the Standards of Achievement set forth in these guidelines.
- C. Such records shall at all times be available during the apprenticeship for review by the Regional Staff of higher levels of supervision, the employee, and representatives of Union.
- D. In addition to and precedent to these guidelines, the provisions of the Master Apprenticeship Agreement are applicable.

BLOCK B05 ELECTRONIC SYSTEMS

- B0501 Electronic Devices and Amplification
- B0502 Audio and RF Circuits
- B0503 Oscillators, Feedback, and Waveform Generators
- B0504 Industrial Receivers, Transmitters, and Video Systems
- B0506 Servo and Control Systems
- B0507 Pulse and Logic Circuits
- B0508 Programmable Controllers and Microprocessors

BLOCK B06 TROUBLESHOOTING ELECTRONIC EQUIPMENT AND SYSTEMS

- B0601 Introduction to Troubleshooting
- B0602 Basic Troubleshooting Methods
- B0603 Selecting Instruments for Troubleshooting
- B0604 Measuring Techniques in troubleshooting
- B0605 Support Services for Troubleshooting
- B0606 Practical Troubleshooting Problems

BLOCK B08 LOGIC CIRCUITS

- B0801 Logic Circuit Fundamentals
- B0802 Introduction to Number Systems
- B0803 Logic devices and Diagrams
- B0804 Logic Families
- B0805 Applications of Logic Circuits
- B0806 Troubleshooting Logic Circuits

BLOCK B09 LINEAR/DIGITAL INTEGRATED CIRCUITS

- B0901 Linear/Digital Principles
- B0902 Integrated Circuit Techniques
- B0903 Linear Integrated Circuits
- B0904 Digital Integrated Circuits
- B0905 Integrated Circuit Logic
- B0906 Troubleshooting Integrated Circuit Systems

BLOCK B11 INTRODUCTION TO MICROPROCESSORS

- B1101 Introduction to Computers
- B1102 Introduction to Microprocessor Applications
- B1103 Microprocessor Basics, Part 1
- B1104 Microprocessor Basics, Part 2

BLOCK B12 MICROPROCESSOR APPLICATIONS

- B1201 Working with an Uncomplicated Microprocessor, The MC6802, Part 1
- B1202 Microprocessor Programming Principles, Part 1
- B1203 Working with an Uncomplicated Microprocessor, The MC6802, Part 2
- B1204 Microprocessor Programming Principles, Part 2
- B1205 Interfacing Through Serial and Parallel Ports
- B1206 Troubleshooting Microprocessor Equipment, Part 1
- B1207 Troubleshooting Microprocessor Equipment, Part 2
- B1208 Other Families of Microprocessors

XK-200 Digital Trainer and Associated Experiments Workbook
XK-300 Microprocessor Trainer and Associated Experiments Workbook