



# LETTER AGREEMENT NO. R1-02-24-PGE



PACIFIC GAS AND ELECTRIC COMPANY  
INDUSTRIAL RELATIONS DEPARTMENT  
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INTERNATIONAL BROTHERHOOD OF  
ELECTRICAL WORKERS, AFL-CIO  
LOCAL UNION 1245, I.B.E.W.  
P.O. BOX 4790  
WALNUT CREEK, CALIFORNIA 94596  
925-933-6060

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STEPHEN A. RAYBURN  
DIRECTOR AND CHIEF NEGOTIATOR

PERRY ZIMMERMAN  
BUSINESS MANAGER

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July 24, 2002

Local Union No. 1245  
International Brotherhood of  
Electrical Workers, AFL-CIO  
P.O. Box 4790  
Walnut Creek, CA 94598

Attention: Mr. Perry Zimmerman, Business Manager

Dear Mr. Zimmerman:

A joint Company-Union Committee was established as agreed to in Letter Agreement R2-94-34 to develop the Apprentice Electric Metering Systems Technician (2433) Training Program. The completion of this program was unfortunately delayed for an extensive period due to the limitation of technically trained and skilled resources available to participate in this process. The joint committee has completed the 36 month training program and presented the guidelines to the Joint Apprenticeship and Training Committee for review and approval.

A subcommittee of the JATC reviewed the training material and other related Letter Agreements that were approved following implementation of LA 94-34 to identify issues that need to be addressed as a result of the completed training program. The subcommittee recommends that Apprentice Committee Case 99-14 and Letter Agreements 98-78, 97-03 and 96-104 be cancelled and superceded based on the content proposed in this Letter Agreement. In addition, the subcommittee recognizes that revisions will be required to amend the Job Definitions and Lines of Progression for the Electric Meter Department, Exhibit VI-L, Section 600.12 of the Physical Agreement.

The subcommittee agrees that all Apprentice Metering Systems Technicians will progress through and complete the training program based on the attached guidelines.

Employees currently classified as Unassigned Metering Systems Technicians will be considered to have met the requirements for the Apprentice Metering Systems Technician Training Program, and are eligible for a Senior Meterperson State apprenticeship certificate. This is contingent, however, upon the employee having completed the required paperwork for State certification upon entering the Sr. Meterperson State Apprenticeship Program.

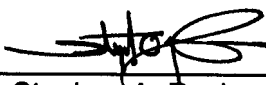
In addition, all Meter Systems Technicians & (Un.) 2431 (2432) including Provisional Meter Systems Technicians that have been reclassified to Meter Systems Technician, as well as Meter Technician Crew Leads will complete the Solid State Metering and Solid State Fundamentals training as journeyman enhancement training without the risk of being returned to the Sr. Meterperson classification.

Based on the above, the Joint Apprenticeship and Training Committee recommends approval of the training program for immediate implementation.

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

Very truly yours,


PACIFIC GAS & ELECTRIC COMPANY

By:   
Stephen A. Rayburn  
Director and Chief Negotiator

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

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

July 29, 2002

By:   
Perry Zimmerman  
Business Manager

GUIDELINES FOR THE  
APPRENTICE METERING SYSTEMS TECHNICIAN TRAINING PROGRAM  
LA 02-24-PGE

I. Objective of the Apprentice Metering Systems Technician Training Program

The need for trained and fully qualified employees to accomplish the duties specified in the Metering Systems Technician definition, in a manner consistent with the Company's Standards of Construction, Safety, and Performance, has resulted in this program which uses on-the-job and related academic training. The acquisition of knowledge and skill offers the apprentice-in-training the opportunity to attain self-confidence, competence, and satisfaction in their work as well as the correct and safe method of performing the required work.

II. Training

The length of this apprenticeship is 36 months and the apprentice will be offered 30 months of academic and on-the-job training. The six months following the training program will be used to refine the skills acquired during training. Employees who complete all training requirements before 30 months will be eligible to bid journeyman Metering System Technician vacancies after completing 30 months in the program. Employees who have completed all training requirements will become unassigned journeymen after 36 months. State certificates will be issued after all training requirements have been satisfied.

During the first 30 months, the apprentice will be offered job training, divided into six month time periods. To insure that uniform and safe practices will be followed during the training period, assignment of duties and work procedures shall be provided in each of the steps as outlined in this guideline. The apprentice must complete each requirement listed for that training period before being allowed to proceed to the next training period. The completion of on-the-job requirements is evaluated through employee performance. This guideline specifies the related academic requirements of each training period and how testing will be administered.

On-the-job training in the duties, and the amount of such training as specified in the guideline, shall apply to the extent that journeymen perform such duties where the apprentice is headquartered. In the event journeymen at the employee's headquarters do not perform such work and, therefore such work is not available in the training of an apprentice, it shall be noted in the employee's work record. However, an employee's progression through the apprenticeship, or to journeyman, or to higher classifications shall not be deterred for this reason.

If in the course of an employee's apprenticeship, or if, as a journeyman, such duty later becomes available, the employee shall receive on-the-job training as may be required to attain the expected journeyman proficiency. If, after a reasonable opportunity, an employee fails to attain such proficiency, bids for progression to higher classifications may be subject to the provisions of Section 205.11 of the agreement.

## A. General Guidelines

1. It is intended that assignment of the specified tasks required for each period of time will be made to the apprentice as early in the period as practicable.
2. Except where otherwise specified, apprentices shall be trained by assignment to work with qualified journeymen.
3. Progressive work experience in all phases of meter work will be provided throughout the first five periods of the apprenticeship in accordance with this guideline.
4. Assignments during the last six months will be made for the purpose of refining skills and enhancing performance.
5. Upon entering each new period of training, the work assignments in the period shall be such that the apprentice will gain the basic knowledge and confidence in him/herself, the equipment, and the procedure being used. More complex assignments shall be made progressively as the apprentice gains in knowledge and capability.
6. Assignments of duties and work procedures in any period of training shall be confined to those specified for the period, or of a prior period.
7. During the first 18 months, an apprentice shall not be assigned to work on any circuit energized in excess of 240 volts. After 18 months, an apprentice may only work on 480-volt circuits while under the direct supervision of a journeyman.
8. Working alone as an apprentice, an employee may be assigned to perform certain duties of a Metering Systems Technician. Those certain duties to which an employee may be assigned shall be limited to those within the employee's current or prior training periods for which an employee is qualified and which are within the duties normally performed by a journeyman, in the course of the employee's work. The apprentice must also have the ability to perform the assigned work. Further, such assignments shall include as a purpose, the development of the apprentice's proficiency and self-confidence to perform such work as a journeyman and shall not be made to the extent that the apprentice is in jeopardy of failing to attain goals set forth in this guideline. An apprentice in training should not be assigned production work normally assigned to a journeyman.
9. Although DC metering training is not provided specifically in the schedule, it is expected that in those divisions where DC metering is located, training on DC metering shall be given in the same manner as AC metering.
10. A tracking sheet listing all training requirements will be provided to each apprentice. It is the responsibility of each apprentice to maintain his/her tracking sheets with the appropriate dates of completion. The supervisor should also keep an updated copy of the tracking sheets. The qualified supervisor or a qualified designee has responsibility to sign-off on each requirement listed on the tracking sheets.
11. Notices

- a) An apprentice who is scheduled to attend any of the centralized training classes shall be given notice of such assignment as early as possible by his/her immediate supervisor. Two weeks prior to the assignment the apprentice will be provided all necessary training materials.
- b) When the roster is available, the Company shall notify the Joint Apprentice Training Committee of the apprentices attending a centralized training school.
- c) When an apprentice attending a centralized training school is not maintaining an acceptable level of work, notice shall be given to the Joint Apprentice Training Committee. Such notice shall also be given in the event an apprentice fails the school or if the Company drops an apprentice from the school.
- d) Upon completion of the centralized training school, the Joint Apprentice Training Committee shall be notified of the apprentices' status. Such notice will be given, whether an apprentice passes or fails the school.
- e) If an apprentice does not maintain an acceptable on-the-job work level, notice shall be given to the Joint Apprentice Training Committee.

**B. Guidelines for Training Periods**

**0 to 6 Months' Step**

During this period, the apprentice will be instructed using one or more of four teaching methods. These methods are as follows:

- Formal classroom training
- Self-study lessons
- Job aids
- Field training outlines (FTOs)

Using these methods, the apprentice will be instructed in the following areas:

Academic Training

AC/DC Lab

CBT labs conducted at the San Ramon Learning Center will be scheduled as needed. Testing on CD-ROM modules will be conducted at the end of each CBT course. Each apprentice must pass the post-test at the end of each course with a score of 70% or higher. The apprentice will be allowed up to three attempts to pass. If the apprentice does not pass on the third attempt, the apprentice's records will be forwarded to the Joint Apprenticeship Training Committee for review and action.

The course outline is as follows:

Course	CD-ROM	Lab
DC Unit-7 Series Resistive Circuits		X
DC Unit-8 Parallel resistive Circuits		X
DC Unit-9 Series/Parallel Resistive Circuits		X
DC Unit-12 Voltage and Current Divider Circuits		X
DC Unit-14 Troubleshooting		X
AC Unit-3 Inductance		X
AC Unit-4 Inductive Reactance		X
AC Unit-5 Transformers		X
AC Unit-6 Capacitance		X
AC Unit-7 Capacitive Reactance		X
AC Unit-8 Time Constants		X

If this course was previously completed by the apprentice, the apprentice will not be required to repeat it.

Basic Metering

Basic Metering training is administered through formal classroom training. It is a three-week course conducted at the San Ramon Learning Center. The course will be scheduled as needed.

Testing for Basic Metering is conducted throughout the course. Each apprentice must pass the final written test, given at the end of the course, with a score of 70% or higher. The apprentice will be allowed up to three attempts to pass, but must wait at least 30 days between attempts. If the apprentice does not pass a given attempt, feedback will be given on the areas needing more study. If the apprentice does not pass on the third attempt, the apprentice's records will be forwarded to the Joint Apprenticeship Training Committee for review and action.

The course outline is as follows:

- Introduction
- General Safety
- Safety in Metering
- Customer Courtesy
- How to Read Meters
- Review of Basic Electricity
- Watthour Components
- Watthour for Different Types of Service
- Diagram of Connections for Metering Single and Polyphase Loads
- Watthour Testing Principles
- Watthour Testing
- Documentation
- Energy Diversion
- Instrument Transformers

*On-the-Job Training*

On-the-job training during this period is administered through the use of job aids and field training outlines (FTOs). Requirements are listed in three categories:

- Shop Operations and Practices
- Field Operation and Testing
- Records and Related Procedures

Requirements within these categories are listed in alphabetical order and should be completed as work is available. A journeyman, or other experienced employee, will cover each requirement, and its accompanying job aid and/or FTO, to make sure the apprentice understands the work to be performed. The apprentice will be allowed sufficient practice under the direction of a journeyman to become proficient at performing the work safely.

Shop Operations and Practices

Requirements	Job Aids	FTOs
Explain and Demonstrate the Inventory Process		X
Identify A-Base Meter Adapters	X	
Identify Meter Test Blocks and Switches	X	
Identify Reactiformers	X	
Identify Wire Color Codes	X	
Locate and Identify Meter Information	X	
Operate a Laptop Computer		X
Operate a Warm-Up Board	X	
Retire a Meter or Transformer		X
Ship and Receive Meters		X

Field Operation and Testing

Requirements	Job Aids	FTOs
Clock Customer Load	X	
Identify 1-Phase Services		X
Identify and Operate a Multimeter	X	
Inspect and Evaluate a Meter Site		X
Investigate Meter Tampering		X
Read Various Meters		X

Records and Related Procedures

Requirements	Job Aids	FTOs
Locate Meter History Using the TP System	X	

Spend 1 day with a Technical Crew Leader learning about proper documentation and the paperwork process. Also learning about the different systems used to issue and complete work: Access, MITSS, FAS, etc.

Self-Study Lessons

Self-study lessons are provided in hard-copy text to each apprentice. There are 8 self-study lessons that must be completed during the 0 to 6 month period. Each apprentice will receive the appropriate materials in order to complete the reading assignments and answer the questions of the self-test at the end of each lesson. Each apprentice should review the completed self-test with the supervisor or other qualified designee



<b>Lesson #</b>	<b>Lesson Title</b>
1.	Personal Safety
2.	Driving Safety
3.	Reading Meters
4.	Meter Nameplate/Register Information
5.	Identifying Electric Services
6.	Identifying and Processing Meters for Retirement
7.	Documentation
8.	Downloading Meter Data

Progression to the next step of the apprentice classification shall be in accordance with Paragraph G3 and G4 of the Master Apprenticeship Agreement.

### **7 to 12 Months' Step**

During this period, the apprentice will be instructed using one or more of four teaching methods. These methods are as follows:

- Formal classroom training
- Self-study lessons
- Job aids
- Field training outlines (FTOs)

Using these methods, the apprentice will be instructed in the following areas:

#### **Academic Training**

##### **Solid State Fundamentals**

Solid State Fundamentals training is administered through formal classroom training. It is a two-week course conducted at the San Ramon Learning Center. Requirements for Basic Metering must be completed before attending Solid State Fundamentals Metering. The course will be scheduled as needed.

Testing for Solid State Fundamentals is conducted throughout the course. Each apprentice must pass the final written test, given at the end of the course, with a score of 70% or higher. The apprentice will be allowed up to three attempts to pass, but must wait at least 30 days between attempts. If the apprentice does not pass a given attempt, feedback will be given on the areas needing more study. If the apprentice does not pass on the third attempt, the apprentice's records will be forwarded to the Joint Apprenticeship Training Committee for review and action.

The course outline is as follows:

- Diodes
- Transistor Basics
- Transistor Circuits 1
- Transistor Circuits 2
- Coupling And Servicing
- DC Amps, Integrated Circuits (ICS) And Logic's
- Oscillators And Flip-Flops

On-the Job Training

On-the-job training during this period is administered through the use of job aids and field training outlines (FTOs). Requirements are listed in three categories:

- Shop Operations
- Field Operation and Testing
- Records and Related Procedures

Requirements within these categories are listed in alphabetical order and should be completed as work is available. A journeyman, or other experienced employee, will cover each requirement, and its accompanying job aid and/or FTO, to make sure the apprentice understands the work to be performed. The apprentice will be allowed sufficient practice under the direction of a journeyman to become proficient at performing the work safely.

Shop Operations and Practices

There are no requirements under this category.

Field Operation and Testing

<b>Requirements</b>	<b>Job Aids</b>	<b>FTOs</b>
Build and Operate a Portable Standard Test Kit	X	X
Identify a 3W, Delta, 3-Phase Panel	X	
Identify a 4W, Y or Delta, 3-Phase Panel	X	
Identify Overhead Transformer Configurations	X	
Identify Test Bypass Facilities	X	
Inspect a Switchboard		X
Install a 4W, Y or Delta, 3-Phase, Transformer-Rated Meter System	X	X
Install a Meter Transformer Bracket		X
Install Current and Potential Transformers		X
Install a Transformer Metering System in a Transformer Compartment	X	
Install a Transformer Metering System with a Remote Meter Panel	X	
Operate the Phase Sequence Indicator	X	
Replace an A-Base Adapter	X	
Test a 240V, 3W, 1-Phase, Form 2S Meter		X
Test a 120V, 3W, Network, Form 12S Meter		X
Test a 240V, 3W, 1-Phase, K-Base Meter	X	X
Test a 240V, 3W, 1-Phase, Transformer-Rated, Form 4S Meter	X	X
Test and Replace a 1-Phase Meter	X	
Test a 120V, 2W, 1-Phase, Form 3S Meter		X

Records and Related Procedures

Spend 1 day with a Senior New Business Representative learning:

- The new business process, how customers apply and receive a new service.

Self-Study Lessons

Self-study lessons are provided in hard-copy text to each apprentice. There are 8 self-study lessons that must be completed during the first 7 to 12 month period. Each apprentice will receive the appropriate materials in order to complete the reading assignments and answer the questions of the self-test at the end of each lesson. Each apprentice should review the completed self-test with the supervisor or qualified designee.

<b>Lesson #</b>	<b>Lesson Title</b>
1.	Verifying Metering Information
2.	Meter and Meter Data Security
3.	Induction Watt-hour Meter Wiring Diagrams
4.	Company Standards for Meter Testing
5.	Portable Standard Test Kit
6.	Test Jacks
7.	Customer-Owned Metering Equipment and Service Conductor
8.	Electric Metering (General)

Progression to the next step of the apprentice classification shall be in accordance with Paragraph G3 and G4 of the Master Apprenticeship Agreement.

**13 to 18 Months' Step**

During this period, the apprentice will be instructed using one or more of four teaching methods. These methods are as follows:

- Formal classroom training
- Self-study lessons
- Job aids
- Field training outlines (FTOs)

Using these methods, the apprentice will be instructed in the following areas:

**Academic Training**

**Advanced Metering**

Advanced Metering training is administered through formal classroom training. It is a three-week course conducted at the San Ramon Learning Center. Requirements for Solid State Fundamentals must be completed before attending Advanced Metering. The course will be scheduled as needed.

Testing for Advanced Metering is conducted throughout the course. Each apprentice must pass the final written test, given at the end of the course, with a score of 70% or higher. The apprentice will be allowed up to three attempts to pass, but must wait at least 30 days between attempts. If the apprentice does not pass a given attempt, feedback will be given on the areas needing more study. If the apprentice does not pass on the third attempt, the apprentice's records will be forwarded to the Joint Apprenticeship Training Committee for review and action.

The course outline is as follows:

- Trigonometric Solutions of Right Triangles
- Phasor Representation
- Phasor Diagram of a 2W, 1-Phase Meter
- Phasor Diagram of a 3W, 1-Phase, Delta Meter
- Phasor Diagram of a 3W, 1-Phase, Network Meter
- Phasor Diagram of 1-Phase Meters Incorrectly Connected
- Phasor Diagram of a 3W, 3-Phase, Delta Meter
- Phasor Diagram Y Circuit and Meter
- Phasor Diagram and Review of a 4W, 3-Phase, Y Meter
- Phasor Diagram of a 4W, 3-Phase, Delta Meter
- Introduction and Phasor Diagram of Instrument Transformers
- Power Factor and Reactive Metering
- Lab Reactive Metering

#### On-the-Job Training

On-the-job training during this period is administered through the use of job aids, and field training outlines (FTOs). Requirements are listed in three categories:

- Shop Operations and Practices
- Field Operation and Testing
- Records and Related Procedures

Requirements within these categories are listed in alphabetical order and should be completed as work is available. A journeyman, or other experienced employee, will cover each requirement, and its accompanying job aid and/or FTO, to make sure the apprentice understands the work to be performed. The apprentice will be allowed sufficient practice under the direction of a journeyman to become proficient at performing the work safely.

#### Shop Operations and Practices

There are no requirements under this category.

Field Operation and Testing

Requirements	Job Aids	FTOs
Burden Test Current Transformers	X	
Check Separate Meter Elements on 4W, Delta, Self-Contained, Hybrid and Solid State Meters Using the Bypass Section	X	
Check Separate Meter Elements on 4W, Delta, Self-Contained, Hybrid and Solid State Meters with a Test Block	X	
Check Separate Meter Elements on 4W, Delta, Transformer-Rated, Hybrid and Solid State Meters	X	
Check Separate Meter Elements on 4W, Y, Self-Contained, Hybrid and Solid State Meters Using the Bypass Section	X	
Check Separate Meter Elements on 4W, Y, Self-Contained, Hybrid and Solid State Meters with a Test Block	X	
Check Separate Meter Elements on 4W, Y, Transformer-Rated, Hybrid and Solid State Meters	X	
Check Separate Meter Elements on a 4W, Delta, Self-Contained, Mechanical Induction Meter with a Test Block	X	
Check Separate Meter Elements on a 4W, Delta, Transformer-Rated, Mechanical Induction Meter	X	
Check Separate Meter Elements on a 4W, Y, Self-Contained, Mechanical Induction Meter using the Bypass Section	X	
Check Separate Meter Elements on a 4W, Y, Self-Contained, Mechanical Induction Meter with a Test Block	X	
Check Separate Meter Elements on a 4W, Y, Transformer-Rated, Mechanical Induction Meter	X	
Install a Transformer Metering System in a 1001-3000 Amps Switchboard	X	
Communicate with the Telemetry Support Center		X
Operate MVL T Software		X
Test a 120V, 4W, Y, 3-Phase, Form 9S Meter		X
Test a 120V, 3W, Y, 3-Phase, Form 16S Meter		X
Test a 240V, 3W, Delta, 3-Phase, Form 5S Meter		X
Test a 240V, 3W, Delta, 3-Phase, Form 12S Meter		X
Test a 240V, 4W, Delta, 3-Phase, Form 8S Meter		X
Test a 240V, 4W, Delta, 3-Phase, Form 15S Meter		X

Spend 3 days with a Troubleman learning about the distribution system, switching and other types of customer service work.

Spend 3 days with a Distribution Line Crew learning how to safely work with and around them on jobs.

Spend 2 days with a Substation Electrician/Electrical Technician learning about proper procedures while working in Substations.

Records and Related Procedures

Spend 1 day with a Records Clerk learning:

- How Customer Services process tags completed in the field.
- The importance of complete and accurate paperwork.
- About the different types of field requests.

Self-Study Lessons

Self-study lessons are provided in hard-copy text to each apprentice. There are 4 self-study lessons that must be completed during the 13 to 18 month period. Each apprentice will receive the appropriate materials in order to complete the reading assignments and answer the questions of the self-test at the end of each lesson. Each apprentice should review the completed self-test with the supervisor or qualified designee.

<b>Lesson #</b>	<b>Lesson Title</b>
1.	Test Switches, Blocks and Bypasses
2.	Meter Malfunctions
3.	Metering Troubleshooting Techniques
4.	Truck Inventory

Progression to the next step of the apprentice classification shall be in accordance with Paragraph G3 and G4 of the Master Apprenticeship Agreement.

19 to 24 Months' Step

During this period, the apprentice will be instructed using one or more of four teaching methods. These methods are as follows:

- Formal classroom training
- Self-study lessons
- Job aids
- Field training outlines (FTOs)

Using these methods, the apprentice will be instructed in the following areas:

Academic Training

Solid State Metering

Solid State Metering training is administered through formal classroom training. It is a two-week course conducted at the San Ramon Learning Center. Requirements for Advanced Metering must be completed before attending Solid State Metering. The course will be scheduled as needed.

Testing for Solid State Metering is conducted throughout the course. Each apprentice must pass the final written test, given at the end of the course, with a score of 70% or higher. The apprentice will be allowed up to three attempts to pass, but must wait at least 30 days between attempts. If the apprentice does not pass a given attempt, feedback will be given on the areas needing more study. If the apprentice does not pass on the third attempt, the apprentice's records will be forwarded to the Joint Apprenticeship Training Committee for review and action.

The course outline is as follows:

Operation, maintenance, and testing of the latest versions currently in use of the following meters and recording devices:

- GE
- Schlumberger
- ABB
- Siemens
- JEM
- Others

Communications:

- Cell phone
- Land lines
- Radio Frequency (RF)

Power Quality

On-the-Job Training

On-the-job training during this period is administered through the use of job aids, and field training outlines (FTOs). Requirements are listed in three categories:

- Shop Operations and Practices
- Field Operation and Testing
- Records and Related Procedures



Requirements within these categories are listed in alphabetical order and should be completed as work is available. A journeyman, or other experienced employee, will cover each requirement, and its accompanying job aid and/or FTO, to make sure the apprentice understands the work to be performed. The apprentice will be allowed sufficient practice under the direction of a journeyman to become proficient at performing the work safely.

Shop Operations and Practices

Requirements	Job Aids	FTOs
Test a JEM Meter		X
Test a Voltage Stabilizer	X	X

Field Operation and Testing

Requirements	Job Aids	FTOs
Complete an Installation Request or a Change Request Form		X
Install an Isolation Relay and Transformer	X	
Install and Remove a Voltage Stabilizer	X	X
Install and Test a Line-Sharing Switch	X	X
Install and Initialize Stand-Alone Recorders	X	
Basic Telephone Maintenance	X	X
Install a Cell Phone		X
Install Land Lines		X
Replace a Test Block	X	X
Rewire Current Transformer Secondary Wire	X	
Set Up and Install Modems		X
Test a 277V/480V, 4W, Y, 3-Phase, Form 9S Meter		X
Test a 277V/480V, 4W, Y, 3-Phase, Form 16S Meter		X
Test a 480V, 3W, Delta, 3-Phase, Form 5S Meter		X
Test a 480V, 3W, Delta, 3-Phase, Form 12S Meter		X
Test the Phase Angle of a Meter		X
Test a Circuit with a Power Master IIIA	X	
Test a Circuit with a 911A Phase Angle Meter	X	
Test an Electric Meter from the Bypass Section of a Safety Socket Panel	X	

Records and Related Procedures

Spend 1 day with an Account Services Representative learning about rates and special contracts in relationship to metering requirements.

Self-Study Lessons

Self-study lessons are provided in hard-copy text to each apprentice. There are 4 self-study lessons that must be completed during the 19 to 24 month period. Each apprentice will receive the appropriate materials in order to complete the reading assignments and answer the questions of the self-test at the end of each lesson. Each apprentice should review the completed self-test with the supervisor or other designated representative.

<b>Lesson #</b>	<b>Lesson Title</b>
1.	Stabilizers
2.	Install Additive and Subtractive Transformers
3.	Activating and Programming Cell Phones
4.	Identifying and Learning Electrical Drawings

Progression to the next step of the apprentice classification shall be in accordance with Paragraph G3 and G4 of the Master Apprenticeship Agreement.

25 to 30 Months' Step

During this period, the apprentice will be instructed using one or more of five teaching methods. These methods are as follows:

- Formal classroom training
- Self-study lessons
- Job aids
- Field training outlines (FTOs)

Using these methods, the apprentice will be instructed in the following areas:

Academic Training

There are no requirements under this category.

On-the-Job Training

On-the-job training during this period is administered through the use of job aids, and field training outlines (FTOs). Requirements are listed in three categories:

- Shop Operations and Practices
- Field Operation and Testing
- Records and Related Procedures

Requirements within these categories are listed in alphabetical order and should be completed, as work is available. A journeyman, or other experienced employee, will cover each requirement, and its accompanying job aid and/or FTO, to make sure the apprentice understands the work to be performed. The apprentice will be allowed sufficient practice under the direction of a journeyman to become proficient at performing the work safely.

Shop Operations and Practices

Requirements	Job Aids	FTOs
Pre-Wire a Primary Pole-Top Job		X
Select the Correct Current Transformer and Potential Transformer Type and Size		X

Field Operation and Testing

Requirements	Job Aids	FTOs
Energize a Pole-Top Primary Job		X
Energize a Transmission Job		X
Energize an Underground Primary Job		X
Inspect a Pole-Top Primary Job		X
Inspect a Transmission Job		X
Inspect an Underground Primary Job		X
Install a Pole-Top Primary Job at the Site		X
Install a Transmission Job		X
Install an Underground Primary Job		X
Intertie Test Meters for Load-Only, Generation, and Co-Generation Customers		X

Records and Related Procedures

There are no requirements under this category.

*Self-Study Lessons*

There are no self-study lessons for the 25 to 30 month period.

Once the 25 to 30 months' step is successfully completed, the apprentice will continue in the apprenticeship program for six months to refine the skills acquired during training before becoming a journeyman.