# DEPARTMENT OF WORKFORCE DEVELOPMENT BUREAU OF APPRENTICESHIP STANDARDS

MADISON, WISCONSIN

# STATE APPRENTICESHIP STANDARDS FOR THE ELECTRIC UTILITY TRADES

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## APPROVED AND ADOPTED

April 30, 2012

#### FOREWORD

The Electric Utility Industry through long, practical experience has developed standards of workmanship that are recognized everywhere. To protect these standards, a sound and uniform system of apprenticeship training for oncoming workers is recognized as essential by employers and journey workers alike.

The increased skills and versatility needed today by journey level line workers and meter technicians require as never before the thorough all-around training and experience provided through apprenticeship as conducted under modern methods. To meet this need, the State Electric Utility Apprenticeship Advisory Committee, having been duly designated as advisory to the Department of Workforce Development, has revised and amplified the apprenticeship standards in the trade for the guidance of employers and journey workers throughout Wisconsin.

These standards are consistent with the Wisconsin Apprenticeship Law and the Wisconsin Apprenticeship Manual. It is hoped that all those concerned with the development of craftsmanship in the trade will make full use of these up-to-date standards in setting up, conducting, and improving apprenticeship programs.

The administration of these Standards shall be the responsibility of the employer. The employer is responsible for the apprentices' instruction and experience as outlined in the schedule of work processes, for the attendance at related instruction classes, and for notifying the Bureau of Apprenticeship Standards in writing of all action as required by the Standards.

## FINAL SECTION ALIGNMENT

- I. Definitions
- II. Personnel of State Electric Utility Apprenticeship Advisory Committee
- III. Duties of State Electric Utility Apprenticeship Advisory Committee
- IV. Personnel of In House Committees
- V. In House Apprenticeship Committee Functions and Duties
- VI. In House Apprenticeship Committee Operations
- VII. Minimum Qualifications of Apprentices
- VIII. Minimum Qualifications of Employers
  - IX. Ratio of Apprentices to Journeyworkers
  - X. Apprentice Contracts
- XI. Apprenticeship Terms
- XII. Probationary Period
- XIII. Related Instruction Attendance
- XIV. Schedule of Work Processes
- XV. Conditions of Work
- XVI. Continuity of Employment
- XVII. Evaluation and Completion of Apprentices
- XVIII. Cancellation of Apprentice Contracts
- XIX. Applicant, Apprentice, Employer, Committee Appeal Procedure
- XX. Modification of Standards

### I. Definitions

- A. Apprentice means any person who enters into an apprentice contract with the department and with a sponsor or an apprenticeship committee acting as an agent of the sponsor.
- B. Apprentice Contract means any contract or agreement of service, express or implied, between an apprentice, the department, and a sponsor or an apprenticeship committee acting as the agent of a sponsor whereby an apprentice is to receive directly from or through the apprentice's employer, in consideration for the apprentice's services in whole or in part, instruction in any trade, craft, or business.
- C. Apprenticeship Committee means a joint apprenticeship committee or a non-joint apprenticeship committee designated by a sponsor to administer an apprenticeship program.
- D. Assignment means the initial placement of an apprentice with an employer.
- E. Bureau of Apprenticeship Standards (BAS) is the agency within the Department of Workforce Development charged with the oversight responsibilities of Wisconsin's apprenticeship program.
- F. Cancellation means the termination of the registration or approval status of a program at the request of the sponsor or termination of an Apprentice contract at the request of any party to the contract.
- G. Certificate of Completion means the department has determined that an apprentice has successfully completed an apprenticeship shown by a certificate of completion.
- H. Certificate of Registration means the acceptance and recording of such program by the department as meeting the basic standards and requirements of the department for approval of such program for federal and state purposes, as shown by a certificate of registration.
- I. Competency means the attainment of manual, mechanical or technical skills and knowledge, as specified by an occupational standard and demonstrated by an appropriate written and hands-on proficiency measurement.
- J. Completion rate means the percentage of an apprenticeship cohort who receives a certificate of apprenticeship completion within 1 year of the projected completion date. An apprenticeship cohort is the group of individual apprentices registered to a specific program during a 1 year time frame, except that a cohort does not include the apprentices whose apprenticeship agreement has been cancelled during the probationary period or who have transferred.
- K. Department means the Department of Workforce Development (DWD) which is the state registration agency for the purposes of 29 CFR 29. The Bureau of Apprenticeship Standards is part of the Department of Workforce Development.
- L. Direct Supervision--quick and easy physical access either on the job site or immediately available to be on the job site to communicate about a job from a journey worker or a "qualified individual".

- M. Electronic media means media that utilize electronics or electromechanical energy for the end user (audience) to access the content; and includes, but is not limited to, electronic storage media, transmission media, the Internet, extranet, lease lines, dial-up lines, private networks, and the physical movement of removable/transportable electronic media and/or interactive distance learning.
- N. Employer Any employer or contractor who is engaged in the electrical utility employers qualified to employ apprentices as outlined in Section VIII of these standards.
- O. Indirect supervision is as having phone access to a journey worker or a "qualified individual"
- P. Interim credential means a credential issued by the department, upon request of the appropriate sponsor, as certification of competency attainment by an apprentice.
- Q. Joint Apprenticeship Committee means an apprenticeship committee that consists of an equal number of representatives of employers and of representatives of employees who are represented by a collective bargaining agent.
- R. Journeyworker means a worker who has attained a level of skill, abilities and competencies recognized within an industry as having mastered the skills and competencies required for the occupation and/or hold a State of Wisconsin certification.
- S. Local apprenticeship committee means an apprenticeship committee to which the department has delegated the authority to act under Administrative Code DWD 295.02 and 295.03.
- T. Nonjoint apprenticeship committee means an apprenticeship committee that consists of representatives of employers, but not of representatives of employees who are represented by a collective bargaining agent.
- U. Quality Assurance Assessment means a comprehensive review conducted by the department regarding all aspects of an apprenticeship program's performance (see section VI –In-House Apprenticeship Committee Operation).
- V. Reassignment means the assignment of an apprentice from one employer to another within the same apprenticeship program.
- W. Registration of an apprentice contract means the acceptance and recording of an apprentice contract by the department as evidence of the apprentice's participation in a particular registered apprenticeship program.
- X. Related instruction means an organized and systematic form of instruction designed to provide the apprentice with the knowledge of the theoretical and technical subjects related to the apprentice's occupation. Such instruction may be given in a classroom, through occupational or industrial courses, or by correspondence courses of equivalent value, electronic media, or other forms of self-study approved by the department.
- Y. Sponsor means any employer operating an apprenticeship program and in whose name the apprenticeship program is approved by the Bureau of Apprenticeship Standards.

- Z. Sponsor Training Center an education source that provides related instruction as approved by the Bureau of Apprenticeship Standards
- AA. State Committee The Wisconsin State Electrical Utility Apprenticeship Advisory Committee is advisory to the Department of Workforce Development and the Bureau of Apprenticeship Standards on matters of apprenticeship and to the Wisconsin Technical College System (WTCS) on matters of related instruction for apprentices.
- BB. Transfer means a shift of apprenticeship registration from one program to another where there is agreement between the apprentice and the affected apprenticeship committees or program sponsors.
- CC. Unassignment means the temporary interruption of an apprentice contract.
- DD. Wisconsin Apprenticeship Advisory Council means the council created by WI Stats. 15.227 (13).
- EE. Wisconsin Technical College System is a publicly funded system of colleges subject to Chapter 38 of the WI State Statutes and Technical College System Administrative Rules.

#### II. Personnel of the State Electric Utility Apprenticeship Advisory Committee

This Committee shall be composed of no less than ten (10) nor more than twenty (20) members. The intention is to have fair representation from employers on the state committee. The Bureau of Apprenticeship Standards (BAS) will ensure that all areas of the state are properly represented on each state trade committee.

- A. Employer representative names will include nominees submitted to the BAS by employers training apprentices in the Electric Utility trades.
- B. Employee representative names will include nominees submitted by employee organizations or in-plant local committees to BAS. In cases where there is no in-plant committee, nominees will be solicited from employers.
- C. Members will serve for a term of three years and may be re-appointed further terms. Committee memberships will be staggered to maintain continuity in functioning.
  - (1) Members must be currently and actively participating in the trade and are required to attend at least 75 percent of the meetings over the term of their appointment.
  - (2) Members must represent organizations that are actively involved with training apprentices at the local level; or
  - (3) Be involved in the development of emerging trades; or
  - (4) Have been involved in the training of apprentices in the last two years.
- D. Exceptions to these requirements can be made by the BAS in order to expand female and minority participation on committees.

- E. The BAS may also designate consultant members to serve as non-voting members, as needed. The WTCS representatives, industry apprenticeship coordinators, instructors and other interested parties in the apprenticeship program may advise and consult with state committee, but they are not allowed to serve as voting members
- F. The State Electric Utility Apprenticeship Advisory Committee generally meets at least twice each year and their membership includes equal numbers of employer and employee members who have been nominated by organizations involved at the local committee level
- G. The committee operates on a consensus based decision-making process. This means that there may be concerns after discussion, but the committee members may consent to the proposal anyway and allow it to be adopted. Therefore, reaching consensus does not assume that everyone must be in complete agreement, but that all members can live with the decision. When the committee cannot reach consensus, the BAS will make the final decision.
- H. The Bureau may remove a person from membership on a committee for one or more of the following reasons:
  - (1) Failure to attend at least 75% of the committee meetings over the term of the appointment, unless excused by the Bureau for good cause.
  - (2) Failure to meet the membership requirements under paragraph II D unless an exception is granted under II D as noted above.
  - (3) Violation of any state apprenticeship statute, rule or standard.
- I. Vacancies may be filled, or representatives changed in term, at the request of the appropriate association.

#### III. Duties of the State Electric Utility Apprenticeship Advisory Committee

- A. Recommend/advise on policy and/or program changes in the trade.
- B. Formulate minimum state standards (and review them every five years) for the trade and make recommendations on changes to the Bureau including:
  - (1) the period of training
  - (2) minimum work process requirements
  - (3) related instruction
  - (4) probation period
  - (5) employer requirements to serve as a trainer
  - (6) journey level worker/apprentice ratios
  - (7) apprentice reviews
  - (8) apprentice selection process (AA/EEO requirements)
  - (9) local committee review-assist local committees and/or sponsors in developing selection procedures which are bias free and which ensure minorities and women are considered
- C. Recommend curriculum, related instruction and delivery service requirements for the trade to the Bureau and the Wisconsin Technical College System (WTCS).
- D. Assume statewide leadership for the purpose of improving conditions and expanding the number of employers using apprentices in the trade.

- E. Support the state program of training for apprentices.
- F. Prepare a policy for the trade on proficiency assessment/testing (for work experience and course work) to be utilized by local committees in determining apprenticeship credit for previous experience/education.
- G. Review and monitor local committee activity levels (including biennial reports) and recommend changes in AA/EEO operations where appropriate.
- H. Assist in the formation and promotion of in-house local committees where they do not exist.
- I. The committee will follow these operational guidelines:
  - (1) Meet at least a minimum of two times a year.
  - (2) Elect of the Committee co-chairs; an employer representative and an employee representative. The committee will hold an election of co-chairs annually.
  - (3) Conduct meetings in conformity with Wisconsin open meeting law.
  - (4) A meeting quorum exists when at least two employer and two employee representatives are present.
  - (5) Official meeting minutes will be prepared by the Bureau of Apprenticeship standards.
  - (6) Committee recommendations will be made by consensus.

### IV. Personnel of In House Committees (Individually Sponsored Programs)

The purpose of in-house, either joint or non-joint, is to oversee the training of apprentices and to ensure that the conductions of the Apprentice Contract are being satisfied by all parties.

- A. Multi-trade local committees are authorized provided that at least one member of the committee is a member of the apprentice's trade that is being reviewed.
- B. Where a firm has a bargaining agreement that establishes an in-house committee, the sponsor will follow the terms of that agreement, providing that the terms are not in conflict with state statutes or apprenticeship rules.
- C. Joint apprenticeship committees have equal numbers of employer and employee representatives.

1. The employer will nominate employer members. Employer members must be in involved in the training or supervision of skilled workers within the last five years.

2. Employee members must be active journeyworkers or represent active journeyworkers.

D. Non joint apprenticeship committees do not consist of an equal number of employer and employee members. The employer will nominate employer members. The employee members may be nominated by the employer. However, they must be skilled workers in the trades.

- E. Exceptions to these requirements can be made by the BAS in order to expand female and minority participation on the committees.
- F. All local committee rosters shall be submitted to the BAS.
- G. Members will serve for an established term and may be re-appointed for further terms. Terms will be staggered to ensure that continuity of the committee is maintained.
- H. An individual may be removed from membership for one or more of the following reasons:
  - (1) Failure to attend at least 75% of the committee meetings over the term of the appointment, unless excused by the Bureau for good cause.
  - (2) Failure to meet the membership requirements under paragraph IV G, unless an exception is granted under IV E as noted above.
  - (3) Violation of any state apprenticeship statute, rule or standard

#### V. In House Apprenticeship Committee Functions and Duties

- A. Ensure that apprentices receive the required range of work process experience and safeguard the training of apprentices on the job.
- B. Review the status and progress of every apprentice prior to the end of the probationary period and recommend any appropriate action to the employer.
- C. Review and make sure that adequate classroom and on-the-job learning (OJL) records are kept for apprentices. All reviews must be in writing.
- D. Review and evaluate classroom and work performance on a regular basis and before recommending completion to BAS.
- E. Recommend credit for previous experience/education to BAS in conformity with BAS policies and procedures.
- F. Advise BAS and the local technical colleges on all matters pertaining to related instruction in the employer's trade area(s). Assist in securing related instruction with the state, or local technical college, or other provider of related instruction.
- G. Respond to surveys and questionnaires sent by the BAS regarding information on participating employers, apprentices, meetings held, and AA/EEO progress.
- H. Conform to the state committee written meeting procedure requirements, if any.
- I. Actively participate in statewide trade or industry marketing and apprenticeship promotion.
- J. Recommend modifications to ratios in state standards to help meet area workforce needs in conformity with bargaining agreements, where applicable.
- K. Recommend completion of the apprentice to BAS.

## VI. In-House Apprenticeship Committee Operations

- A. The committee must meet at least twice each year.
- B. The committee must keep written minutes of all meetings.
- C. The committee must ensure that apprentices are properly registered in conformity with Wisconsin apprenticeship regulations.

In-plant committees must submit a biennial report to the state committee in a formal designed by the state committee, when requested.

### VII. Minimum Qualifications of Apprentices

- A. High School graduate or equivalency.
- B. Must be physically able to perform the work of the trade with reasonable accommodations and without hazard to themselves or others. Applicants may be required to furnish a statement of physical condition from a physician at the time of the job offer. Applicants may be required to undergo drug and/or alcohol testing at time of selection as an apprentice or any other time as an apprentice.
- C. Must have a valid driver's license.
- D. Must have a CDL or the ability to obtain the CDL.

### VIII. Minimum Qualifications of Employers

The employer must insure that apprentices are trained in the core work processes identified and employ a full time journey worker to supervise the apprentice and ensure safe training at all times.

The employer, when applying for training status, must provide evidence of Unemployment Insurance and Worker's Compensation coverage to the BAS.

#### IX. Ratio of Apprentices to Journeyworkers

In order to assure adequate supervision and instruction of all apprentices on-the-job, the minimum ratio of apprentices to journey workers shall be one (1) apprentice for the shop for one (1) journey worker.

### X. Apprentice Contracts

All apprentices shall have a contract in compliance DWD 295.07 with a sponsor.

Each copy of the contract will contain the term of the apprenticeship, the approved Trade Information (Exhibit A), the credit recommended (if any) and any special provisions.

## XI. Apprenticeship Terms

The term of the Electric Line Trade apprenticeship program shall be at least 8,000 hours.

The term of the Electric Meter Technician apprenticeship program shall be at least 6,240 hours.

The term of the Sub-Station Electrician apprenticeship program shall be at least 8,000 hours and in addition the apprentice must successfully attain the competencies described in the program provisions.

Sponsors have the option of choosing a longer term of apprenticeship and/or pursue implementing competency or hybrid apprentice programs in addition to time-based. Hybrid and competency based programs must be reviewed by the State Electric Utility Apprenticeship Advisory Committee and approved by the BAS.

A. Competency-Based Approach. Sponsors who choose to employ a competencybased approach to apprenticeship must comply with the following requirements:

(1) The occupation must be recognized and approved as a competency-based apprenticeable occupation. If the program is not approved by US DOL as a competency based program, the sponsor must consult with the BAS to determine if it is suitable as a competency based program.

(2) The on-the-job learning component of the apprenticeship program must be identified in the program standards.

(3) The related instruction component of the competency-based approach must comply with all of the provisions of DWD 295 as referenced in the Wisconsin Apprenticeship Manual.

(4) Program sponsors must identify within the program standards the required competencies that must be mastered within the program standards, and the required competencies that must be mastered by the apprentice during their apprenticeship.

(5) Successful completion of the term of apprenticeship will require that the apprentice demonstrate mastery of identified competencies.

(6) Demonstration of the acquisition of the identified competencies must be determined by both written and hands-on proficiency evaluations.

(7) All testing and evaluation of the identified competencies must occur in a controlled learning environment that permits accurate and verifiable results by a qualified proctor.

(8) Program sponsors must identify and document the methods and means used to qualify testing and evaluation proctors.

#### B. Time Based Approach

The time based approach is the traditional term of apprenticeship and the term is stated in years, months or hours or a combination of thereof.

C. Hybrid Approach

Sponsors that choose to use the hybrid approach to apprenticeship measures an individual's skills through a combination of hours of on-the-job learning and successful completion of competency as described in a work process schedule. The program must comply with the guidelines for the competency-based portion of the apprentice's term of apprenticeship.

## XII. Probationary Period:

The probationary period cannot exceed 25 percent of the length of the program, or one year, whichever is shorter.

- A. During the probationary period, the apprentice or the sponsor may void the contract by written notice to the Bureau.
- B. After expiration of the probationary period there must be good cause provided the Bureau for the cancellation of the Apprentice Contract.
- C. The probationary period remains 25% of the apprentice contract regardless of the number of employers involved.

### XIII. Related Instruction Attendance

- A. The apprentice shall attend school and satisfactorily complete the course of instruction required by the State Committee, unless otherwise approved by the Bureau and the State Committee.
- B. The apprentice shall be paid the same rate for regular school attendance as for work on the job. Apprentices are paid 'straight time' rate for paid school hours. An employer is not required to pay overtime (time and one-half) to apprentices while receiving paid related instruction, unless such requirements are contained in an applicable collective bargaining agreement.
- C. Apprentices shall attend unpaid related instruction on their own time and take such subjects as the sponsor committee requires. Required hours shall not exceed 120 hours unless approved by the State Committee in writing.
- D. Apprentices must attend school during the thirty day period following a lay-off. School attendance during this 30 day period shall be paid for by the most recent employer, as an obligation originally assumed by the employer unless the apprentice has been terminated for violation of the employer's written work rules.

### XIV. Schedule of Work Processes

See Trade Information (Exhibit A) attached.

### XV. Conditions of Work

A. Apprentices will have the same hours of employment and be subject to the same conditions for overtime as the journeyworkers with whom they work.

- B. An apprentice must be under supervision by a journey level worker at all times while working on an energized circuit. For those jobs they are trained and qualified, they may be under indirect supervision.
- C. All apprentices, when working on or near energized circuits, will follow all federal and state safety requirements.
- D. Hours of employment shall not conflict with the hours specified for related instruction or with Federal or State regulations.

#### XVI. Continuity of Employment

When an apprentice is temporarily laid off in a trade because of business conditions, the apprentice shall be offered reinstatement before any additional apprentices are employed in that trade. Contact the Bureau of Apprenticeship Standards when the apprentice is laid off for more than 30 days. An apprentice, suspended for this reason, when reinstated shall complete the time set forth in the training schedule before the next period may be started.

#### XVII. Evaluation and Completion of Apprentices

- A. Sponsors are expected to require apprentices to review the apprentices' progress at least once annually.
  - (1) The first such review of an apprentice shall be done in person prior to the expiration of the probationary period.
  - (2) The BAS must be provided with timely reports on attendance, progress, and grades on each apprentice, when requested. Sponsors shall make arrangements with the school that provides related instruction to receive grades and/or progress reports on each apprentice so these records can become a part of each apprentice's review.
- B. Sponsors are required to maintain a current "apprentice work record" system so feedback from each apprentice as to the type of work experience they are receiving and the hours of school they are attending. These records are required to be submitted to the sponsor at least monthly.
- C. Sponsors shall maintain an apprentice evaluation system so that the sponsor committee can review each apprentice's progress.
- D. A summary of each apprentice's review shall be made in writing to the apprentice and where deficiencies exist, a clear defined goal set for correction of the deficiencies and an indication of the penalty (i.e. cancellation) if the goals are not met.
- E. Within a reasonable period of time before expiration of the apprenticeship, the sponsor shall review the apprentice in person by a final review or examination.
  - (1) If the apprentice successfully completes such review or examination, the sponsor shall recommend to the BAS that a Certificate of Completion be granted by the BAS.

(2) If the apprentice fails to meet all provisions of their Apprentice Contract, the final review and/or examination, the sponsor may recommend to the BAS, that the apprentice's apprenticeship should be extended for a period of time, not to exceed one calendar year.

### **XVIII. Cancellation of Apprentice Contracts**

The BAS requires that each sponsor maintain clear records to substantiate a recommendation for cancellation of an apprenticeship. When a party to the contract requests cancellation of the contract, the BAS will send a 20-day Intent to Cancel Notice to all parties to the contract. The notice states that the contract will be cancelled 20 calendar days from the date of the Notice, unless the BAS receives written objection from any party within the 20 day period.

- A. Apprentices may request cancellation of the program by providing a written request to the sponsor.
- B. A sponsor may request cancellation of the Apprentice Contract after the probationary period has expired by making such request with reasons to the BAS.
- C. The BAS will consult the sponsor before taking final cancellation action.
- E. The sponsor may recommend cancellation to the BAS of an Apprentice Contract on its own motion, after proper notice to the parties of the Apprentice Contract.

#### XIX. Right of Appeal

In the case of a dispute between the apprentice and the employer with regard to an Apprentice Contract, either party may appeal in writing to the

- A. In cases of a problem or dispute involving a matter of policy or local standards, the matter shall be referred to the State Electric Utility Apprenticeship Advisory Committee for review.
- B. If the State committee cannot satisfactorily resolve the matter, it will provide the BAS with its recommendations.
- C. All applicants, employers or apprentices have the right of appeal to the BAS on any recommendation or action taken by the sponsor. The advisory status of a sponsor shall include the following statement in their disciplinary actions or denial correspondence:

"Should you feel the recommendation or action taken by the sponsor be contrary to the area apprenticeship standards, you have the right to appeal in writing to the Department of Workforce Development, Bureau of Apprenticeship Standards, stating the specific section of said standards or addendum to same which you feel was violated."

D. Any party to the contract may file an appeal in writing within 20 days of the final decision. When an appeal is received the BAS Director will review the appeal and issue a written determination within 40 days of the appeal.

- E. If requested in writing within ten days by one of the parties, the Bureau Director's decision may be appealed in writing the DWD Legal Counsel. The DWD Legal Counsel will review the case and issue a final determination within ten days.
- F. Right to Hearing. A dissatisfied party may file a written request with the BAS or the DWD Legal Counsel for a formal administrative hearing to review the reasonableness of a DWD order as outlined in Chapter 5 of the Wisconsin Apprenticeship Manual. DWD shall respond to a request for an administrative hearing within 20 days. DWD has the discretion to determine whether or not it will hold a hearing. DWD's final decision is reviewable in Circuit Court.
- G. Items not Subject to a Hearing. Actions of the employer that involve the employment relationship and not the apprenticeship program are not subject to a hearing. Violations of employer work rules may not be subject to a hearing contingent upon a review that the employer is not illegally discriminating in its administration of apprenticeship policy.

### XX Modification of Standards

- A. Local standards may be modified by the sponsor if such modifications are in conformance with these State Standards and approved by the BAS.
- B. The minimum requirements set forth in these Standards shall not be altered by virtue of any collective bargaining agreement.

#### Approved: April 30, 2012

**TERM OF APPRENTICESHIP:** The term of apprenticeship shall be Time-based, which has been established to be 8,000 hours to include 640 hours of paid related instruction. Hours of labor shall be the same as established for other skilled employees in the trade.

**PROBATIONARY PERIOD:** The probationary period shall be the first 2000 hours of employment, but in no case shall it exceed twelve calendar months. During the probationary period, this contract may be cancelled by the apprentice or the sponsor upon written notice to the Department, without adverse impact on the sponsor.

**SCHOOL ATTENDANCE:** The apprentice shall attend the Wisconsin Technical College System or other approved training provider, as assigned, for paid related instruction four hours per week or the equivalent and satisfactorily complete the prescribed course material for a minimum of 640 hours, unless otherwise approved by the Department. The employer must pay the apprentice for attended related instruction hours at the same rate per hour as for services performed.

**WORK PROCESS SCHEDULE:** In order to obtain well-rounded training and thereby qualify as a skilled worker in the trade, the apprentice shall have experience and training in the following areas. This instruction and experience shall include the following operations but not necessarily in the sequence given. Time spent on specific operations need not be continuous.

Work Process Description	<u>Approxi</u> (Min	<u>mate Hours</u> - Max)
A. Safety	500	
B. ClimbingAll Structures	300	
C. Operation of Utility VehiclesDigger/Bucket Trucks, Pullers, Trenchers, etc.	400	
D. Hand and Power Tools	100	
E. Ropes and Rigging	40	
F. Pole Work	700	
G. Guying & Anchors	200	
H. Overhead Secondary	600	
I. Overhead Primary	1000	
J. Electrical Apparatus, including Overhead Transformers, Voltage Regulators, Capacitor Banks, Switching/Sectionalizing	1000	
K. Underground	1000	
L. Distribution Grounding	100	
M. Local Optional Work Processes, Including: Metering, Transmission, Lighting, Tree Trimming Right of Way, Basic Computer Skills, Radio Communications Skills, Map Drawing/Reading, Surveying,	1420	

DETA-10408-E (R. 12/2010)

## State Electric Utility Trades Adv. Comm. • Madison WI Electric Line Worker • 3-821261014-01-T Exhibit A - Program Provisions

Staking, Protective Devices Coordination, Other Equipment Operation, such as: Forklift Operation, ATV Operation, Snowmobile Operation

Paid Related Instruction

TOTAL

640

8000

The above schedule is to include all operations and such other work as is customary in the trade.

## MINIMUM COMPENSATION TO BE PAID:

The apprentice's wage must average no less than 60% of the skilled wage during the term of the apprenticeship. (DWD 295.04) The apprentice may not be started at less than minimum wage.

Base skilled wage rate N/A per hour.

If at any time the base skilled wage rate rises or falls, the apprentice's wage shall be adjusted proportionately. The wage rate of apprentices employed in this trade and this firm shall be based on the base skilled wage rate stated above.

All apprentices are covered by State and Federal Wage and Hour Standard requirements. All apprentices shall be paid no less than the minimum wage established under regulations.

**CREDIT PROVISIONS:** The apprentice, granted credit at the start or during the term of the apprenticeship, shall be paid the wage rate of the pay period to which such credit advanced the apprentice.

Work credit hours approved:	N/A
School credit hours approved:	
Paid related instruction:	N/A
Unpaid related instruction:	N/A
Total credit hours to be applied to the term of the apprenticeship:	N/A

## **SPECIAL PROVISIONS:**

The apprentice will complete a standard First Aid and CPR/AED course during the first year of the apprenticeship and maintain such certification throughout the apprenticeship.

An apprentice in his/her final year must participate in the Transition to Trainer Course. This Course will be included in the current hours of Paid Related Instruction (PRI).

#### Approved: April 30, 2012

**TERM OF APPRENTICESHIP:** The term of apprenticeship shall be Hybrid, which has been established to be 8,000 hours. In addition to the specified hours, the apprentice must successfully attain the competencies described in these program provisions. Hours of labor shall be the same as established for other skilled employees in the trade.

**PROBATIONARY PERIOD:** The probationary period shall be the first 12 months of employment, but in no case shall it exceed twelve calendar months. During the probationary period, this contract may be cancelled by the apprentice or the sponsor upon written notice to the Department, without adverse impact on the sponsor.

**SCHOOL ATTENDANCE:** The apprentice shall attend the Wisconsin Technical College System or other approved training provider, as assigned, for paid related instruction four hours per week or the equivalent and satisfactorily complete the prescribed course material for a minimum of 640 hours, unless otherwise approved by the Department. The employer must pay the apprentice for attended related instruction hours at the same rate per hour as for services performed.

**WORK PROCESS SCHEDULE:** In order to obtain well-rounded training and thereby qualify as a skilled worker in the trade, the apprentice shall have experience and training in the following areas and shall demonstrate competency, as specified herein. This instruction and experience shall include the following operations but not necessarily in the sequence given. Time spent on specific operations need not be continuous.

Work Process Description	Approximate Hours	
	(Min	- Max)
<ul> <li>Substation Safety</li> <li>Adhere to applicable codes, standards and regulations, and employer operating procedures (National Electrical Safety Code, Public Service Commission, National Electric Code, Occupational Safety &amp; Health Administration 1910.269)</li> <li>Adhere to lockout and tagout procedures</li> <li>Apply construction safety competencies</li> <li>Inspect, use and maintain proper personal protective equipment</li> <li>Operate trucks and moving equipment safely</li> <li>Follow testing and grounding procedures</li> <li>Protect people and equipment from arc flash</li> <li>Follow confined space entry procedures</li> <li>Use safe lifting, moving, and rigging techniques</li> <li>Protect self and others from falls and overhead dangers</li> <li>Adhere to hazard communication procedures</li> <li>Follow machine and power tool safety guidelines</li> <li>Follow trenching, shoring, and excavating procedures</li> </ul>	400	
Substation Operations •Verify the operational status of the substation •Inspect the condition of a substation (fence, security, damage, washouts, gravel, signage, grounding) •Perform required lockout and tagout procedures •Perform required grounding procedures •Operate single phase or gang operated switches •Operate automatic switch or breaker controls •Operate load tap changers and voltage regulators •Take action to resolve power and annunciator alarms •Extract or record event information from relays or substation equipment •Read, interpret and record nameplate information	1000	

Substation Repairs •Identify damaged foundations and plan for required repairs •Clean insulators and bushings •Replace damaged arrestors, insulators, bushings and conductors	1000
<ul> <li>Troubleshoot and repair breakers, regulators, LTCs, and switches</li> <li>Troubleshoot SCADA and communication systems</li> <li>Repair or replace security equipment and devices</li> <li>Produce written reports, field logs, service/repair orders, and technical information</li> <li>Troubleshoot power transformers and plan for required repairs</li> </ul>	
Substation Testing & Maintenance •Perform inspection of substation equipment and components according to schedules •Perform ground grid resistivity and resistance checks •Perform infrared testing •Perform insulation integrity test •Perform transformer turns ratio testing •Collect insulation oil samples from transformers, breakers, bushings, and regulators •Test integrity of batteries, breakers and relays •Test integrity of power cables •Commission new substation construction and equipment	1000
<ul> <li>Relays &amp; Controls</li> <li>Mount prefabricated status and control panels</li> <li>Install and assemble AC panel and transfer switches</li> <li>Install building service lights, outlets, and service switches</li> <li>Install building service heating, ventilation, and air conditioning equipment</li> <li>Assemble battery bank systems following safety training</li> <li>Assemble DC panel boards</li> <li>Install relays, test switches, selector switches, light transducers, and other devices into existing control panels</li> <li>Install SCADA &amp; other communication systems</li> <li>Install and maintain security equipment for substations and equipment</li> <li>Acquaint self with pre-fabricated control buildings</li> <li>Identify and evaluate zones of protection &amp; interpret relay targets</li> <li>Apply knowledge of over/under frequency (NERC)</li> <li>Interrogate relays for fault locating, metering, current flows for switching operations</li> <li>Apply knowledge of reverse power flow during testing, service, and repair</li> </ul>	1000
<ul> <li>Substation Equipment Installation</li> <li>Install current transformers, potential transformers, and power transformers</li> <li>Install and assemble: single and gang pole switches; circuit breakers; gang operated switches; motor operated switch devices; capacitor banks; arrestors; and voltage regulators</li> <li>Operate processing rig for circuit breakers and transformers</li> <li>Operate gas cart for surface insertion and reclamation</li> <li>Demonstrate awareness of prefabricated control buildings</li> </ul>	600
Environmental Protection & Oil Handling •Control erosion and ground water runoff •Handle environmentally friendly and mineral oils properly •Handle SF6 gas reporting and control procedures •Recycle used oil and equipment appropriately •Respond to spill related incidents properly	500

## State Electric Utility Trades Adv. Comm. • Madison WI Substation Electrician • 3-820261018-01-H Exhibit A - Program Provisions

<ul> <li>Manage evasive plant species</li> <li>Comply with DNR, EPA and other agency requirements including spill prevention control and countermeasures (SPCC)</li> <li>Apply knowledge of absorption and containments methods and techniques</li> <li>Reports spills following company or State rules promptly</li> </ul>	
<ul> <li>Substation Grounding Systems</li> <li>Apply theories of ground grid, switching grates, equipment grounds, step potential, and subgrade soil/rock to jobsites</li> <li>Demonstrate exothermic welding &amp; electrical theory to grounding systems</li> <li>Connect above grade ground connections (steel, equipment, fence, enclosures, control house, etc.)</li> <li>Interpret construction prints, electrical schematics and grounding plans</li> <li>Perform assurance testing for grounding systems</li> <li>Produce written records, as-built drawings, field installation notes, and technical reports</li> </ul>	400
Cabling •Interpret electrical schematics, drawings, and substation plans related to electrical cabling •Measure, cut, label, install and terminate communication and control cables per installation drawing or schematic • Measure, cut, label, install and terminate high and low voltage cables per installation drawing or schematic •Perform tasks in accordance with cable classes and specifications •Test cable installations	400
Bus Systems •Measure and cut bus to length according to prints or plans •Clean and polish bus for proper connections •Erect rigid bus on equipment or structures •String bus between structures and equipment •Install compression, welded, and mechanical terminals on bus compression •Install and inspect bus, insulators, support fittings, and related devices	300
<ul> <li>OPTIONAL</li> <li>Substation Construction, including working effectively with substation owners, civil engineering personnel, or subcontractors to complete all aspects of constructing a substation</li> <li>Raceways, including bending, threading, mounting, connecting and assembling raceway equipment and/or components.</li> <li>Steel Construction, including rigging, bolting, cutting, drilling, spot galvanizing and welding</li> <li>Supervisory Control And Data Acquisition (SCADA), including working with interfaces, protective devices and communication systems</li> </ul>	760
Paid Related Instruction	640
TOTAL	8000

The above schedule is to include all operations and such other work as is customary in the trade.

# MINIMUM COMPENSATION TO BE PAID:

DETA-10408-E (R. 12/2010)

## State Electric Utility Trades Adv. Comm. • Madison WI Substation Electrician • 3-820261018-01-H Exhibit A - Program Provisions

The apprentice's wage must average no less than 60% of the skilled wage during the term of the apprenticeship. (DWD 295.05) The apprentice may not be started at less than minimum wage.

Base skilled wage rate N/A per hour.

If at any time the base skilled wage rate rises or falls, the apprentice's wage shall be adjusted proportionately. The wage rate of apprentices employed in this trade and this firm shall be based on the base skilled wage rate stated above.

All apprentices are covered by State and Federal Wage and Hour Standard requirements. All apprentices shall be paid no less than the minimum wage established under regulations.

**CREDIT PROVISIONS:** The apprentice, granted credit at the start or during the term of the apprenticeship, shall be paid the wage rate of the pay period to which such credit advanced the apprentice.

Work credit hours approved:	N/A
School credit hours approved: Paid related instruction:	N/A
Unpaid related instruction:	N/A
Total credit hours to be applied to the term of the apprenticeship:	N/A

## **SPECIAL PROVISIONS:**

The apprentice must take First AID & CPR during the first year of the program and maintain certification throughout the program.

An apprentice in his or her final year must participate in the Transition to Trainer Course. The course is currently included in Paid Related Instruction.

#### Approved: April 30, 2012

**TERM OF APPRENTICESHIP:** The term of apprenticeship shall be Time-based, which has been established to be 3 years of 6,240 hours. Hours of labor shall be the same as established for other skilled employees in the trade.

**PROBATIONARY PERIOD:** The probationary period shall be the first 6 months of employment, but in no case shall it exceed twelve calendar months. During the probationary period, this contract may be cancelled by the apprentice or the sponsor upon written notice to the Department, without adverse impact on the sponsor.

**SCHOOL ATTENDANCE:** The apprentice shall attend the Wisconsin Technical College System or other approved training provider, as assigned, for paid related instruction four hours per week or the equivalent and satisfactorily complete the prescribed course material for a minimum of 480 hours, unless otherwise approved by the Department. The employer must pay the apprentice for attended related instruction hours at the same rate per hour as for services performed.

**WORK PROCESS SCHEDULE:** In order to obtain well-rounded training and thereby qualify as a skilled worker in the trade, the apprentice shall have experience and training in the following areas. This instruction and experience shall include the following operations but not necessarily in the sequence given. Time spent on specific operations need not be continuous.

Work Process Description		Approximate Hours	
	(Min	- Max)	
ASSURE SAFE WORK ENVIRONMENT: Participate in safety meetings, assess potential hazards, determine PPE requirements, install protective barriers, perform housekeeping activities, apply safety standards, alert others of safety issues.	500		
PERFORM METER TESTING: Set up test equipment, perform "as-found" tests, address meter programming, perform component inspections, perform meter calibration, perform "as-left" tests, record meter test results.	500		
INSTALL REVENUE METERING EQUIPMENT: Review work order, determine meter application, determine CT/VT ratio, inspect service entrance requirements, install CT/VTs, install CT/VT secondary wiring, calculate meter multiplier, install revenue meter, schedule metering audit, complete service order paperwork.	600		
AUDIT METERING SYSTEMS: Verify meter equipment security, verify meter application, verify IT application, verify wiring (size, connections, configuration), collect AC power system measurements, verify accuracy against meter load, test instrument transformers, compare field against billing information, record audit information.	600		
FIELD INVESTIGATION AND RESOLUTION:	2000		
RESPOND TO FIELD WORK ORDERS: Disconnect/reconnect existing services, investigate high-bill complaints, respond to trouble calls, survey the job site, apply troubleshooting procedures, develop work plan, execute work plan, complete field work order documentation.			
INVESTIGATE POWER DIVERSIONS: Review customer account history, conduct on- site investigation, collect physical evidence, check for illegal taps, perform dual-amp check, install check-meter, maintain chain of evidence, prepare power diversion report.			
INVESTIGATE POWER QUALITY PROBLEMS: Develop location history profile,			

DETA-10408-E (R. 12/2010)

determine customer problem, assure adequate equipment size, check service connections, install recording equipment, provide result analysis.	
PERFORM ADMINISTRATIVE FUNCTIONS: Maintain inventory supplies, process meter shop records, interface with other departments, maintain test equipment, interface with the public, schedule work activities, consult manufacturer representative, develop computer programs for metering equipment.	1000
OPTIONAL: MAINTAIN SUBSTATION METERING EQUIPMENT: Review station blueprints, install substation metering equipment, program metering devices, perform substation equipment tests, perform data collection, record equipment test results.	560
OTHER DUTIES AS ASSIGNED BY EMPLOYER:	
Paid Related Instruction	480
TOTAL	6240

The above schedule is to include all operations and such other work as is customary in the trade.

## MINIMUM COMPENSATION TO BE PAID:

Must average at lest 60% of the skilled wage rate over the period of the apprenticeship contract per DWD 295.04(1).

Base skilled wage rate N/A per hour.

If at any time the base skilled wage rate rises or falls, the apprentice's wage shall be adjusted proportionately. The wage rate of apprentices employed in this trade and this firm shall be based on the base skilled wage rate stated above.

All apprentices are covered by State and Federal Wage and Hour Standard requirements. All apprentices shall be paid no less than the minimum wage established under regulations.

**CREDIT PROVISIONS:** The apprentice, granted credit at the start or during the term of the apprenticeship, shall be paid the wage rate of the pay period to which such credit advanced the apprentice.

Work credit hours approved:	N/A
School credit hours approved: Paid related instruction:	N/A
Unpaid related instruction:	N/A
Total credit hours to be applied to the term of the apprenticeship:	N/A

## SPECIAL PROVISIONS:

The apprentice will complete standard First Aid and CPR/CRR courses during the first year of the apprenticeship and maintain such certification throughout the apprenticeship.

The apprentice in his/her final year must participate in the Transition to Trainer Course.

DETA-10408-E (R. 12/2010)

State Electric Utility Trades Adv. Comm. • Madison WI Metering Technician • 3-710281034-01-T Exhibit A - Program Provisions