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STATE OF WISCONSIN
CLASSIFICATION SPECIFICATION

PUBLIC SERVICE ENGINEER CLASSIFICATION SERIES

I. INTRODUCTION

A. Purpose of This Classification Specification

This classification specification is the basic authority under Wisconsin Administrative Code ER 2.04 for making classification decisions relative to present and future professional engineering positions located at the Public Service Commission of Wisconsin. Positions allocated to this classification series perform duties that are professional in nature, as defined in s. 111.81(15), Wis. Stats.

Classification decisions must be based on the “best fit” of the duties within the existing classification structure. The “best fit” is determined by the majority (i.e., more than 50%) of the work assigned to and performed by the position when compared to the classification concepts and definitions of this specification or through other methods of position analysis. Position analysis defines the nature and character of the work through the use of any or all of the following: definition statements; listing of areas of specialization; representative examples of work performed; allocation patterns of representative positions; job evaluation guide charts, standards, or factors; statements of inclusion and exclusion; license or certification requirements; and other such information necessary to facilitate the assignment of positions to the appropriate classification.

B. Inclusions

This classification specification encompasses positions performing professional engineering duties and providing professional engineering expertise for utility regulation engineering programs. The positions review utility proposals, analyze problems and issues, and make recommendations pertaining to the regulation of public utilities. Depending upon the area of program specialization, the employee conducts engineering analyses of utility applications for construction authorization, reviews current cost allocation and rate design methodologies and trends, reviews and critiques the integrity of utility plant investments, administers and enforces public utility service and safety rules, evaluates technologies used in energy conservation and efficiency improvements, and analyzes utility short- and long-range plans and alternative energy supply sources. The employee investigates a variety of subjects related to service adequacy, reliability, efficiency, economics, safety, and performance of overall utility operations; interacts with federal regulatory authorities; investigates consumer complaints of a technical nature; provides expert assistance and input into other regulatory proceedings; develops analytic tools and computer models; prepares special engineering studies related to public utility regulation; prepares and presents exhibits and testimony in formal state and federal proceedings; assists in the development and implementation of work unit objectives; and provides training, guidance, and assistance to less-experienced staff. Positions included in this series must meet the qualifications prescribed under Section I.C.

C. Qualifications

Positions included in this series have duties and responsibilities of such a nature that it is required (by federal or state law or by position review and analysis) that the incumbent have one of the following:

- PE (Registration as a Professional Engineer) as determined by the Department of Safety and Professional Services per s. 443.04, Wis. Stats.;
- a specific record, issued by the professional engineering section of the Department of Safety and Professional Services, showing 4 years or more of experience in engineering work of a character satisfactory to the professional engineering section and satisfactory completion of the fundamentals of engineering exam;
- have graduated from a recognized college or university with a degree in a related engineering field such as electrical, mechanical, civil or environmental engineering ; OR
- have equivalent professional training and practical experience so as to be deemed a professional engineer as defined by the Department of Safety and Professional Services per s. 443.01, Wis. Stats. and also deemed to be qualified to engage in professional engineering practice as determined by the Department of Safety and Professional Services per s. 443.04 or 443.05, Wis. Stats.

Positions not having duties and responsibilities that require such credentials shall be allocated to a different classification series.

D. Exclusions

Excluded from this classification series are the following types of positions:

1. Supervisory positions as defined in s. 111.81(19), Wis. Stats., and as administered and interpreted by the Wisconsin Employment Relations Commission.
2. Employees who are not engaged for a majority of time in professional employee work as defined in s. 111.81(15), Wis. Stats., and as administered and interpreted by the Wisconsin Employment Relations Commission.
3. Positions which do not require that the incumbent perform professional engineering duties and be a professional engineer by background and training for the successful performance of the tasks assigned to the position.
4. Positions which are not located at the Public Service Commission.
5. Positions which spend the majority of their time reviewing plans and/or inspecting buildings to assure that minimum safety codes are met.
6. All other positions which are more appropriately identified by other classification specifications.

E. Entrance Into and Progression Through This Series

Employees enter positions within this classification series by meeting the qualifications under I.C. and by competitive examination. Progression to the senior level will occur through reclassification. Progression to the advanced level will typically occur through some form of competition.

II. DEFINITIONS

Section A, Levels, describes the appropriate placement of an employee based upon the specific level of skills, knowledge, and abilities required of the position and the amount of supervision received for the majority of time within the specific professional engineering program area.

Section B, Functional Work Activities, describes the full range of duties performed at the objective level. (The Senior level is the level an employee can reasonably expect to obtain if he/she performs the full range of functional work activities.)

Employees may also perform the following types of duties, but they are usually performed at the Senior or Advanced levels:

1. **Lead Worker**: An employee who trains, assigns the work, and reviews the work of other professional employees and/or technical employees.
2. **Program Leader**: An employee who is the technical expert for a specific area(s) and who may have some oversight to assure uniformity within a specific engineering program area(s).
3. **Project Leader**: An employee who has the responsibility for coordinating the work of another professional engineer(s) when a project requires two or more engineers for completion and which may also include other technical and professional employees. This function would last only as long as the duration of the project. An employee can be a project leader and a team member for another project simultaneously; **OR**, a project leader can be an employee who has the responsibility for oversight of nonpermanent, non-state, or contract engineers and related staff.

A. **Levels**

PUBLIC SERVICE ENGINEER

Positions work under close to limited supervision. The primary emphasis is developing skills and developing an understanding of and an ability to apply the statutes, rules, regulations, administrative codes, and standards required in the program area. Work assignments are established on both a long-and short-term basis. Objectives are usually well defined but are stated in general terms, with the employee determining specifics and priorities. Guidelines are available but may not be specific, and the supervisor normally reviews a draft of the work after it is completed to determine completeness, accuracy, and adherence to policy. Positions at this level make higher-level contacts with the supervisor's direction, and make decisions on items of narrower scope and impact.

PUBLIC SERVICE ENGINEER-SENIOR

Positions work under general supervision. This is the objective level where the work assignments the employee is expected to complete include the full range and scope of their specific program duties. The majority of the assignments are complex. Positions at this level have extensive authority in carrying out their assigned responsibilities including independently implementing the assigned responsibilities. The work at this level requires a high degree of interpretation and creativity in evaluating engineering aspects of new technologies. Positions at this level make decisions independent of supervisory oversight, with the work being reviewed after the decisions have been made.

PUBLIC SERVICE ENGINEER-ADVANCED

This level is for positions under general policy review which provide advanced professional engineering expertise in their assigned program. Positions at this level function as the primary engineer for a specific aspect of a department program or function as a program engineer within an assigned geographic area. Positions at this level perform the most complex, difficult, and advanced engineering work, which includes multi- and cross-program issues and includes policy-making responsibilities. Employees at this level have engineering responsibilities which require continually high-level contacts with public and private officials and engineers/engineering consultants on highly sensitive and complex engineering reviews. The engineering knowledge at this level includes a broader combination than found at the Senior level. Assignments are broad in scope and continually require the incumbent to use independent judgment in making professional engineering decisions. Positions at this level make independent decisions and perform work in response to program needs as interpreted by the employee, with the work being reviewed after the decisions have been made.

B. Functional Work Activities

Alternative Energy Supply Engineering Program: Policy and program development, interpretation, and administration relative to utility-promoted alternative energy supply sources, with emphasis on generation from cogenerating facilities, hydroelectric plants, wind machines, photovoltaic systems, refuse burning facilities and wood waste utilization plants. Evaluate alternative boiler fuels, long-range supply options, utility advance plans and specific project proposals for alternative energy supply sources, which consists of: engineering and economic analyses, least-cost integrated planning, policy and program evaluation, preparation of technical reports and other documents, preparation and presentation of testimony as an expert witness, and the development of recommendations to the Commission. Conduct special investigations into a variety of technical questions or problems related to utility energy supply options. Assist in the development and implementation of program objectives and policy formulation. Provide technical assistance and engineering input into other Commission proceedings. Develop analytic tools. Assist in the enforcement, interpretation, and revision of Wisconsin Statutes, Administrative Codes, and Commission orders.

Electric Rate Engineering Program: Review, evaluate, and process utility rate applications, utility service rule change proposals, formal complaints, investigations, petitions, and other formal actions, requiring the application of professional engineering principles and methods. Develop engineering studies concerning alternative cost allocations, rate design methods, service rules, load management, cogeneration, alternative renewable resources and other electric utility related issues. Serve as liaison with other staff, utility officials, media, and the public. Assist in the development and implementation of program objectives and policy formulation. Analyze and process informal complaints and inquiries related to system engineering issues. Administer electric utility rules and regulations. Prepare and present exhibits and testimony in formal proceedings.

Electrical Construction Engineering Program: Review, evaluate, and process utility construction project applications and advance plans, which consists of engineering and economic analyses, coordination with other Commission staff and other state and federal agencies, and liaison and interaction with utility officials, the media, and the public. Prepare report notices, orders, and other documents. Prepare and present testimony as an expert witness. Develop recommendations to the Commission. Assist with enforcement, interpretation and revision of applicable Wisconsin Statutes and Wisconsin Administrative Code, to include securing compliance with Chapter PSC 113, Electric Service Rules, and Chapter PSC 114, Wisconsin State Electrical Code, and the day-do-day administration of PSC 104, PSC 113, and PSC 114. Conduct periodic field investigations into technical service and safety complaints and utility accidents. Assist in the revision of these codes. Perform special investigations into a variety of technical questions or problems related to service

adequacy, reliability, efficiency, economics, safety, and performance of overall utility operations. Assist in the development and implementation of program objectives and policy formulation. Provide technical assistance and engineering input into other Commission proceedings. Develop analytic tools. Investigate consumer complaints of a technical nature.

Electrical System Planning Engineering Program: Develop, interpret, and administer policy regarding utility planning, construction, and efficiency improvement in the regulation of electric public utilities. Analyze utility advance plans, least-cost plans, construction projects, and utility efficiency improvements, which consists of engineering and economic analyses, identification of need for and alternatives to system improvements, the development of alternatives, coordination with other Commission staff and other agencies; and liaison and interaction with utility officials, media, and the public. Prepare reports and other documents. Prepare and present testimony as an expert witness. Develop recommendations to the Commission. Assist in the development and implementation of program objectives and policy formulation. [Note: There are three sub-programs or specialties within the electric system planning engineering program: (1) Generation Planning, responsible primarily for generation and electric supply planning review and analysis; (2) Transmission Planning, responsible primarily for transmission system planning review and analysis; and (3) General Systems Planning, having broad responsibilities in overall electric system planning issues.]

Energy Management Engineering Program: Develop, interpret, and administer policy relative to utility-promoted energy conservation, cogeneration, and load management. Represent the agency relative to specialized conservation, cogeneration, or load management issues. Provide responses to oral and written complaints and inquiries which require interpretations of Commission policies, orders, or rules. Review current energy conservation, cogeneration, and load management technologies and trends to aid development of Commission policy. Develop special projects in cogeneration, load management, alternative energy costs, service rules, least-cost planning, program evaluation, budgeting for utility conservation activities, and computer applications. Analyze and process utility conservation budget and rate filings. Testify as an expert engineering witness in rate, planning, and rule proceedings.

Gas Service and Safety Engineering Program: Review and inspect the utility operation and maintenance procedures to ensure compliance with state and federal codes which ensure the safety of 20,000 miles of the natural gas distribution system in the State of Wisconsin. Review and critique utility construction projects, which consists of engineering and economic analyses, coordination with other Commission staff and other agencies, liaison and interaction with utility officials, preparation of reports and other documents, presentation of testimony, and development of recommendations to the Commission. Conduct special investigations into a variety of technical questions or problems related to service adequacy, reliability, efficiency, economics, and safety of overall utility operations. Assist in the development and implementation of program objectives and policy formulation. Develop analytic tools. Provide technical assistance and engineering input into other Commission proceedings. Enforce and interpret applicable rules, standards, and regulations, including Wisconsin Statutes, Wisconsin Administrative Code, Code of Federal Regulations, and nationally accepted codes and standards.

Nuclear Engineering Program: Monitor nuclear power plant operations. Review and critique utility construction projects, which consists of engineering and economic analyses, coordination and interaction with other Commission staff and other agencies, including U.S. Nuclear Regulatory Commission (NRC), liaison and interaction with utility officials, preparation of reports and other documents, preparation and presentation of testimony as an expert witness, and development of recommendations to the Commission. Conduct special investigations into a variety of technical questions or problems related to service adequacy, reliability, efficiency, economics, safety, and performance of overall utility operations. Assist in the development and implementation of program objectives and policy formulation. Provide technical assistance and engineering input into

other Commission proceedings. Develop analytic tools. Investigate consumer complaints of a technical nature. Assist in the enforcement, interpretation, and revision of applicable Wisconsin Statutes and Wisconsin Administrative Code, including the State Electrical Code.

Stray Voltage Engineering Program: Investigate the causes of stray voltage on farms. Recommend solutions to stray voltage problems to farm customers and the serving utility. Evaluate the effectiveness of on-site technical assistance. Conduct on-site investigations and prepare field and final reports. Coordinate activities with other members of the Stray Voltage Analysis Team. Assist in the development and implementation of program objectives and policy formulation. Develop and present expert testimony in formal proceedings pertaining to the regulation of electric public utilities.

Telecommunications Engineering Program: Develop, interpret, and administer policy relative to the regulation of telecommunications utility network planning, construction and operation. Conduct technical studies, analyses and investigations into utility matters relating to telecommunications infrastructure, network operations, network adequacy, quality of service and reliability. Analyze, resolve and respond to complaints and inquiries from the public, media, legislators and other governmental agencies. Testify at hearings, prepare technical reports and other documents, and develop recommendations to management and to the Commission. Assist in the enforcement, interpretation and revision of Wisconsin Statutes, Administrative Code and Commission orders. Assist in the development and implementation of program objectives and policy formulation.

Valuation Engineering Program: Develop, interpret, and administer policy and program relative to the regulation of utility plant valuation and property record systems. Conduct audits of utility plant records and investigate utility construction sites and installations. Monitor and enforce compliance with Commission orders, rules, and policy relating to utility plant and equipment investment, operation, and utilization. Oversee establishment and maintenance of continuing property record systems at utilities. Determine value of utility property subject to sale or acquisition. Testify at hearings. Prepare technical reports and other documents, and develop recommendations to management and the Commission. Assist in the development and implementation of program objectives and policy formulation.

Water and Sewer Construction Engineering Program: Review and critique utility construction projects, which includes conducting engineering and economic analyses, coordination with other Commission staff and other agencies, and liaison and interaction with utility officials. Prepare reports and other documents. Prepare and present testimony as an expert witness and develop recommendations to the Commission. Conduct special investigations into a variety of technical questions or problems related to service adequacy, reliability, efficiency, economics, safety, and performance of overall utility operations. Assist management in the development and implementation of program objectives and policy formulation. Develop analytic tools. Assist in the enforcement, interpretation, and revision of applicable Wisconsin Statutes and Wisconsin Administrative Code.

Water and Sewer Rate Engineering Program: Review, evaluate, and process utility rate applications, rule change proposals, formal complaints, investigations, petitions, and other formal actions, requiring the application of professional engineering principles and methods. Develop engineering studies concerning alternative cost allocations, rate design methods, service rules, and other water and sewer utility-related issues. Conduct engineering analyses of unregulated sewer complaints filed under ss. 66.076(9) and 66.912(5), Wis. Stats. Analyze and process other informal complaints and inquiries related to system engineering issues. Serve as liaison with other staff, utility officials, media, and the public. Assist in development and implementation of program objectives and policy formulation. Administer water and sewer utility rules and regulations. Prepare and present exhibits and testimony in formal proceedings.

III. ADMINISTRATIVE INFORMATION

This classification series was created effective October 12, 1997, and announced in Bulletin CC/SC-74, in order to describe positions which perform engineering work for the Public Service Commission. The creation of this classification series resulted from the Governor's Human Resource Reform Commission recommendation to simplify the classification system. This action resulted in the abolishment of the Public Service Engineer classification series (class codes 25611 through 25615).

The classification specifications were modified effective December 5, 1999, and announced in Bulletin CLR/SC-106, in order to reflect the elimination of management positions and the abolishment of the Public Service Engineer-Advanced-Management classification. The series was again modified effective August 12, 2001, and announced in Bulletin CLR/SC-132 to update the allocation for the Telecommunications Engineering Program. The classification specification was modified effective June 30, 2013 and announced in Bulletin OSER-0327-MRS/SC to reflect changes to the qualification language that better communicates the minimum qualifications that are required.

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