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HUMAN RESOURCES CANADA

Electricity Competency Framework and National Occupational Standards
Employer Guide

Using Competencies to Build a Safety-focused, Highly-skilled, Diverse and Productive Electricity Workforce

Electricity Human Resources Canada

Electricity Human Resources Canada (EHRC) is Canada's most trusted source for objective human resource and market information, with the tools to guide business planning and development for the Canadian electricity industry. We provide a platform for current industry needs, identify ways to make Canadian businesses "best in class," and forecast industry trends and issues. Our work enables the industry to map workforce supply to demand and to foster growth and innovation in employers and employees. This improves the quality of service industry provides and improves the confidence Canadians have in the industry.

Technological innovation is reshaping jobs and skills that will support the electrical grid of the 21st century. Canada has been a global leader in capitalizing on these innovations, but the changing nature of work demands a rethinking of traditional occupational standards. Funded by the Government of Canada's Sectoral Initiatives Program, EHRC has spearheaded several initiatives including:

- **Electricity Competency Framework:** to lay the foundation for transferrable skills between and across occupations.
- **National Occupational Standards:** to capture the skills and abilities, i.e. competencies, required of specific in-demand occupations in the electricity and renewable energy sector.
- **Skills for Success Profiles:** to outline the foundational literacy and professional skills required of various occupational groups.

Electricity Human Resources Canada's specific objectives are to:

- Conduct and disseminate valuable research about human resources in Canada's electricity industry
- Help the industry create and sustain a skilled and diverse labour force

- Promote awareness of career and employment opportunities in the Industry
- Develop partnerships that better enable the industry to meet its human resource needs

Further information on EHRC is available at **electricityhr.ca**

Introduction

This guide provides HR personnel and employers with practical recommendations for using the Electricity Competency Framework and NOS throughout the human resources management cycle. Competency-based HR management assists with the development of the organization's human resources programs, talent management strategies and hiring initiatives, and supports the demand for and growth of a safety-focused, highly-skilled, diverse and productive workforce.

Electricity Competency Framework

The Electricity Competency Framework is a library of competencies that are required for a range of occupations and functions within the industry. The Framework codes and files the individual competencies within various categories including functional competencies (e.g., design, construction and installation, asset maintenance), management competencies (e.g., project management, human resources, finance) and foundational competencies (e.g., communication, safety, information technology foundations).

Each category includes a cluster of competencies. The Electricity Competency Framework can serve as the foundation to conduct skills assessments; identify and quantify skills gaps; create new (or modify existing) skills profiles; develop job descriptions; and create recruiting and onboarding processes that align to occupational standards, policies, and practices. Organizations can use competencies within the Framework to effectively optimize performance and set the benchmark to ensure a highly-skilled workforce.

Competency Format

The competencies are comprised of the performance, knowledge, and abilities that industry professionals need to do their jobs proficiently; that is, safely, effectively, and efficiently. An individual's performance, knowledge and abilities can be observed, assessed, and measured against the industry-validated competencies.

Sample Competency Area and Competency Units:

Category	Competency Area	Competency Unit		
Safety	Maintain a Safe Working Environment	Follow safe work practices	Use personal protective equipment (PPE)	Participate in safety meetings and emergency drills

As you can see in the graphic above, 'Maintain a Safe Working Environment' is a competency area within the Safety category. This competency area is further comprised of a series of competency units, including: Follow safe work practices; Use personal protective equipment (PPE); Participate in safety meetings and emergency drills, etc. HR professionals and employers can select specific competency categories, areas, and units from the Electricity Competency Framework for many uses, including: developing skills profiles; creating or modifying job descriptions; assessing and measuring employees' performance against benchmarked standards; and more.

National Occupational Standards (NOS)

National Occupational Standards (NOS) are voluntary guidelines that have been developed to provide employers, educators, and job seekers with practical guidance on the skills and knowledge requirements of a specific occupation or role.

NOS provide the information a person needs to know, and the skills they need to perform on the job, for them to be considered proficient in their role. NOS can be used by all organizations and are a valuable tool to inform the development of human resources strategies, programs, performance, and tools.

Using the Competencies and NOS

The competencies and NOS serve as a benchmark for determining priorities for developing and enhancing human resources initiatives, programs and hiring. There are several ways for HR professionals and employers to use the competencies. Some of the most common uses of competencies related to human resources include:

- Supporting Competency-Based HR Management
- Developing Skills Profiles
- Creating Competency-Based Job Descriptions
- Applying Competency-Based Recruitment and Selection
- Conducting Performance Evaluations

These common uses will be explored within this guide. However employers and HR professionals are encouraged to use the competencies and NOS as foundational resources throughout the HR management cycle. The proposed uses and approaches are mere suggestions and are not presented as best practices or preferred methods.

Use 1: Supporting Competency-based HR Management

Competency-based HR planning serves as a link between human resources management and the overall strategic plan of an organization. Competencies are the observable skills and knowledge required for a job.

Competency-based HR management supports the integration of human resources planning with business planning by allowing organizations to assess their current HR capacity against the capacity needed to achieve the vision, mission, and business goals of the organization. Targeted human resource strategies, plans and programs to address gaps (e.g., hiring and staffing, learning, career development, succession management) are then designed, developed, and implemented.

1.1 Benefits of a Competency-Based HR System

There are numerous benefits of implementing an HR strategy centered on competencies:

Organization	Employees
Contributes to employee retention	Provides clear job requirements
Develops employees for a succession plan	Identifies skills needing development to move up in the organization
Identifies relevant training for job levels; supports training needs analysis	Identifies whether a performance issue can be attributed to an employee or to other organizational factors
Provides measures for performance required to meet organization's goals	Brings fairness and objectivity into the performance assessment process
Ensures effective employee selection; 'hire for attitude, train for skill'	Employees will know what the job truly entails during the hiring process

While competencies are not new to most organizations, what is new is their increased application across various human resource functions (i.e., recruitment/selection, learning and development, performance management, career development and succession planning, human resource planning). Organizations are looking for new ways to acquire, manage and retain the talent needed to achieve their business goals.

Properly designed competencies translate the strategic vision and goals for the organization into behaviours or actions employees must display for the organization to be successful. Competency-based HR management approaches standardize and integrate all HR activities based on competencies that support organizational goals.

Use 2: Developing Skills Profiles

Relevant skills and knowledge are foundational for maintaining a highly-skilled and competitive electricity workforce. Competencies combine a set of knowledge and skills employees need to perform proficiently in a specific job or occupation. Employees should be able to demonstrate the combined skills, knowledge, and abilities to perform the job duties. The collective competencies required of a specific job incumbent are known as Skills Profiles.

The Electricity Competency Framework contains over 250 competencies across a variety of categories and areas. Any combination of competency categories, areas, and units can be used to develop skills profiles based on the needs of the organization. As labour market needs change, the Framework can provide various competencies to create new skills profiles for emergent occupational areas.

As was illustrated previously, 'Maintain a Safe Working Environment' is a critical and foundational competency area under the major category 'Safety.' It is comprised of 10 individual competency units that outline tasks performed by job incumbents to 'Maintain a Safe Working Environment:'

Sample Competency Area and Competency Units:

Major Category	Competency Area	Competency Units		
Safety	**Maintain a Safe Working Environment**	Follow safe work practices	Use personal protective equipment (PPE)	Participate in safety meetings and emergency drills
		Isolate component, equipment or system	Perform lock-out, tag-out procedures	Handle, transport and store hazardous materials
		Work in confined spaces	Use fall arrest equipment	Minimize radiation exposure
		Climb wind turbine ladders		

When developing a Skills Profile for a Wind Turbine Blade Repair Technician, an HR manager may want to include all the competency units except 'Minimize radiation exposure' in the profile. However, if another HR manager wanted to develop a Skills Profile for an electrical engineering technologist working in a nuclear power station, they would want to include 'Minimize radiation exposure,' but not 'Climb wind turbine ladders' or 'Use fall arrest equipment' in the profile.

Use 3: Creating Competency-Based Job Descriptions

Historically, many job descriptions assign credentials to occupations as opposed to job-related tasks and competencies. Competency-based job descriptions are part of a human resource (HR) management system where competencies inform key practices including: recruitment, assessment, and selection; employee performance management; training and development; career and workforce planning, compensation; and organizational change. Effective competency-based job descriptions are essential to improved HR practice which will allow employers to hire candidates based on the needs of the positions benchmarked against the individual's demonstrated skills and aptitudes.

Although there are several tools available for employers, using competency-based job descriptions can add value to the existing workforce development resources and offer additional solutions for trained professionals. Competency-based job descriptions serve many purposes for both employers and employees including:

• Identifying roles and responsibilities of the job/role based on established competencies

• Serving as a resource in recruiting efforts, candidate screening and interviewing

• Outlining specific duties, tasks and responsibilities that an employee should be able to perform in the position/job/function based on specific competencies

3.1 Differences Between Traditional Job Descriptions and Competency-Based Job Descriptions

Typically, when employers develop a job description, they ask themselves "What tasks, duties and responsibilities are required to perform the job well?" To be more effective, they should be asking "What competencies are required to succeed on the job?" For example, 'leadership' is a competency that may require knowledge of various management techniques, including effective verbal communication skills, the ability to empower others, and the ability to motivate change.

Traditional Job Descriptions	Competency-Based Job Descriptions
Focus on tasks and duties, knowledge, skills, abilities, education and required certifications	Focus on tasks and duties, knowledge, skills, abilities, education and required certifications, and on-the-job behaviours
Account for observable skills	Account for observable skills and on-the-job behaviours
Define responsibilities	Describe responsibilities and how they are tied to competencies
Focus on individual performance	Link individual performance to organizational performance
Work is not described consistently	Work is described consistently using a common vocabulary
Employees are not able to align their skills and competencies with their job, identify performance expectations, nor see how they contribute to strategic goals	Employees can align their skills and competencies with their job, identify performance expectations and see how they contribute to strategic goals

Figure 1: Extracted from Marianna Bodnarchuk's The Role of Job Descriptions and Competencies in an International Organization - Case: Foster Wheeler Energia Oy. Table cited to Modernizing California's HR Program (Sacramento State College of Continuing Education)

Job descriptions serve as a foundational document for many other HR recruitment processes, such as job advertisements, interview processes, and onboarding of new hires. Because it is a foundational document, it is important that the job description for a position clearly defines the skills, knowledge, and abilities (i.e., competencies) required to perform the job.

3.2 Creating Competency-based Job Descriptions

On the next page is an example of a competency-based job description for a PV Installer, developed using EHRC's National Occupational Standards for PV Installer.

Sample Competency-Based Job Description:

Position Description

Job Title: **PV Installer**	Department: **Operations**	Manager: **Alex Doe**
Business Unit:	Job Code: **1234**	Work Location: **Canada – Remote**

Position Summary:

Use the occupational description from the NOS or from own organization.

PV Installers assemble and install photovoltaic (PV) systems on roofs or other structures in compliance with site assessment and schematics. May include measuring, cutting, assembling, and bolting structural framing and solar modules. Utility-scale installation requires a wider skill set related to high voltage interconnection and substation knowledge.

Functional Competencies:

Select competency areas that are unique to the occupation – select from relevant NOS or Electricity Competency Framework:

1. Construct and install PV Systems – 85% of work day

- Plan installations
- Perform foundational electrical installation tasks
- Install PV systems
- Install generating, distribution and service equipment and systems (*Certified Electricians Only)
- Install wiring systems (*Certified Electricians only)
- Complete installation process
- Conduct tests for commissioning
- Commission equipment and systems

Foundational Competencies:

Select the Foundational Competencies (major categories and competency areas) from the NOS or Electricity Competency Framework.

2. Ensure safety of self and others: 100% of the time

- Maintain a safe working environment
- Maintain a sustainable environment
- Respond to emergencies

3. Follow security practices: 100% of the time

4. Follow organizational policies and procedures: 100% of the time

5. Complete information/record management tasks: 5% of work day

6. Apply foundational information and communication technology (ICT) skills: 5% of the work day

- Use Digital Technology
- Use Organization's ICT System

7. Perform routine trade tasks: 5% of work day

8. Demonstrate personal competencies: 100% of the time

- Demonstrate professionalism
- Communicate effectively

Qualifications:	Working Conditions:	Equipment/Tools:
Certain functional competencies require trade certification as an Industrial/Construction Electrician	Outdoors, varying weather conditions, working from heights	Hand and power tools, electrical measuring and testing equipment, access equipment and work platforms, vehicles and motorized equipment, communication devices

The functional and foundational competencies required for the occupation are derived from the major categories and competency areas within the Framework and/or NOS for the occupation. To provide further detail within the job description, a percentage value of the amount of time spent performing each competency can be assigned. Some foundational competencies, such as a safety and personal competencies are performed constantly.

The job description should also outline key qualifications for the role (i.e., required trade certification), the common working conditions as well as the equipment and tools required. Information regarding required tools and equipment is available in each competency unit.

Competency-based job descriptions provide a consistent approach for recruitment, and increases the likelihood that the selected candidates can perform the work proficiently and be successful in the role.

Use 4: Applying Competency-based Recruitment and Selection

Prior to starting a competency-based recruitment process, HR managers and employers should identify the key roles and positions required and confirm the accuracy of the job descriptions and specifications for the roles. Hiring managers need to consider what requirements they are looking for in the position and apply the competencies that will provide them with the desired hiring outcome. Job analysis can be used to assist with attaining the desired hiring outcome by applying the following requirements:

- Identify work activities, tasks, competencies, and behavioural indicators that can be observed and measured
- Confirm the competencies are valid in their purpose statements and for the role required
- Review major competencies with hiring managers and validate the job requirements
- Assess existing employee competencies and review high-performance indicators in the organization to identify successful hires and why they are successful

4.1 Competency-based Selection

Competency-based selection is a process of evaluating candidates' skills, knowledge, and attributes by using situational, behavioural, and knowledge-based interviewing techniques to determine if the candidate demonstrates the ability to perform the job. In the selection process, different interview methods may be applied. Situational and behavioural-based interview questions require the candidate to provide examples on a specific situation or task they have previously performed. The STAR method (specific, task, action, result) describes the specific work situations, how the task was accomplished, and qualitative or quantitative measurable results. Knowledge-based questions validate the candidate possesses the required knowledge identified in the job description.

4.2 Competency-based Interviewing

Competencies define what employees need to know and the skills needed to perform the job. The competencies in the Electricity Competency Framework and NOS can be selected and used to develop various interview questions that align with the position and job description. The interview questions should be developed by reviewing the core responsibilities identified in the job description and should be formulated by reviewing the work activities, tasks, competencies, behavioural indicators, knowledge, and education required for the role.

For example, the *Sample Competency-based Interview Questions* graphic illustrates questions that are formulated to include the following components: what the situation was, actions that were taken, and what was the outcome.

Sample Competency-based Interview Questions

Sample Interview Questions
Competency Assessed: Follow Safe Work Practices
Key Behaviors Required: Identify hazards on site, e.g., personal safety, work site, environment. Minimize or remove hazards, as necessary.

Example Interview Questions: Describe a situation that best describes your ability to follow safe practices. Specifically, describe a situation where you encountered hazardous conditions at work, and what actions did you take?
 	
• **What was the situation?**
  • What hazards did you identify?
  • What safety issue did it pose?
  • Who else was involved?
• **What actions did you take?**
  • What exactly did you do?
  • How did you determine the actions you should take?
  • Why did you feel that this was the safest practice?
• **What was the outcome?**
  • How did your actions minimize or remove the hazards presented?

Use 5: Conducting Performance Evaluations

The Electricity Competency Framework and the NOS are effective tools for the performance evaluation process to: assess performance, set objectives, identify strengths, and outline development needs by analyzing an individual's level of proficiency for the skills required to perform a specific job. Being 'proficient' in a skill requires knowledge, experience, feedback, and a positive attitude.

Performance evaluation criteria clearly define the acceptable level of ability for each task required to perform the job. The individual's ability in each skill/knowledge is measured against the competencies, which are recognized as a 'current practice' benchmark against which performance can be objectively

and fairly assessed, and upon which professional development activities can be planned. Performance evaluations are often conducted through an interview-style process, which involves both the assessor (e.g., supervisor, manager) and the individual. The most effective performance evaluations will assess skills through performance-based approaches.

Performance evaluations are very useful for both the assessor and the individual employee. They can acknowledge superior performance and strengths and provide a foundation for career planning and professional development. Performance evaluations should be tailored to address the professional skills development level, maturity, and experience of the employee. The performance evaluation should meet the needs of the employee at each stage of their professional development. Performance evaluations are often performed within the initial probationary period and thereafter, typically, on an annual basis.

5.1 Selecting a performance rating scale or method

To conduct a performance evaluation, the assessor requires a clearly defined rating scale to measure an individual's performance of a competency unit or area. There are several scales that can be used for evaluating performance. Some scales will assign levels (e.g., Level 1, 2 and 3), some will assign titles (e.g., expert, proficient, some experience, no experience), and others will assign letter grades (e.g., A, B, and C). What is important for any performance evaluation scale is that the criteria for each ordinal are clearly defined, measurable, and performance-based.

An example of a Rating Scale is provided below using 'Maintain a Safe Working Environment' as an example:

Maintain a Safe Working Environment	1 Novice No experience	2 Developing Developing skills and knowledge	3 Functional Performing skills with guidance	4 Proficient Works independently and shows initiative	5 Mentor Demonstrates expertise and can mentor others	N/A Not applicable
Follow safe work practices				✓		
Use Personal Protective Equipment (PPE)				✓		
Participate in safety meetings and emergency drills				✓		
Perform lock-out, tag-out procedures			✓			
Handle, transport and store hazardous materials		✓				
Work in confined spaces						✓
Use fall arrest equipment						✓
Minimize radiation exposure						✓

5.2 Developing Performance Evaluation Forms

The fifteen (15) National Occupational Standards (NOS) developed by EHRC contain all of the competencies that are required by the majority of individuals who perform each specific job. However, if an assessor wants to evaluate an individual performing a job that has not yet been captured in an NOS, a Skills Profile can be developed to outline the key competencies required for the job (See Use 2: Developing Skills Profiles). It is important to remember that not every employee may be expected to perform all competencies within the NOS, or the assessor may not want to evaluate every competency during an evaluation. It is critical that the appropriate competencies are selected for each performance evaluation based on the individual to ensure that the evaluation is reflective of the activities that the employee performs.

The performance evaluation form will typically contain a section for each applicable category, competency area, and competency unit from the Framework or NOS. For each competency unit, the applicable performance elements can be summarized and identified as performance indicators. The individual's proficiency level for each competency unit will be measured using the rating scale defined for the evaluation. Also included in this form should be areas for both the assessor, individual employee, and supervisor to provide comments, identify major achievements and contributions, define personal development activities, and set goals and objectives.

5.3 Conducting Performance Evaluations

One of the most significant features of performance evaluations is that they require interaction between the assessor and the employee. The performance evaluation serves as a catalyst for meaningful discussion of job performance which leads to mutual understanding and appreciation. The assessor and the employee have a common perception of expectations due to the specific nature of the performance requirements (i.e., competencies) related to the job.

During the performance evaluation, the assessor and the employee must confirm the evaluation, which requires a high degree of trust and communication. The employee must feel comfortable in sharing their self-assessments and the assessor must also be open to discussing reasons why their performance rating for specific competencies may differ from the employee. The discussion encourages the attainment of the designated performance rating through mutual understanding between the employee and the assessor. The discussion of the employee's current performance will lead to several positive outcomes including setting goals and objectives for the next review period and identifying areas for additional training and professional development.

All goals should be SMART (Specific, Measurable, Attainable, Realistic and Timely). Setting SMART goals helps the assessor and employee to determine if goals have been met during the evaluation period, and can help to address specific issues, employment requirements, or responsibilities.

Conclusion

We hope this guide is useful and informative. The potential uses presented in this guide are just a few examples of the many ways that the Electricity Competency Framework and NOS can be used throughout the human resources management cycle.

For more information and assistance, please visit the EHRC website at **electricityhr.ca**