

Electricity Human Resources Canada is a non-profit organization supporting the human resources needs of the Canadian electricity sector.

## Skills for Success Profile: Project Manager



# Skills for Success Profile: **Project Manager**

**Project Managers** working in the electricity sector plan, execute and evaluate projects. They are employed by electrical utilities, independent power producers and private companies that build power infrastructure for utilities and municipalities.

Skills for Success Profiles provide real-world examples of how individuals use the various Skills for Success when performing their daily work activities.

These Profiles are meant to provide a snapshot of the skills used by job incumbents; additional examples of each skill are possible and not every example presented in the profile will apply to every job incumbent.

Learn more on the Office of Skills for Success (OSS) website.



## Skill for Success: Reading



The ability to find, understand, and use information presented through words, symbols, and images. For example, at work we use this skill to read memos, e-mails, reports, instructions, and safety manuals; as well as to locate information on forms and drawings.

#### Why Reading is Important

The changing labour market and advances in technology require reading skills for learning and work. Strong reading skills are needed to do our jobs and to work safely, and efficiently. We use reading skills to learn other skills, for example, by reading online learning resources. Reading is also important in day-to-day activities, for example to understand road signs, or to follow the instructions on a medicine bottle.

#### **Levels of Complexity**

LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5
Read relatively short texts to locate a single piece of infor- mation; follow simple written directions.	Read more complex texts to locate a single piece of information or read simpler texts to locate multiple pieces of information; make low-level inferences.	Choose and integrate information from various sources or from several parts of a single text; make low-level inferences from multiple sources.	Integrate and synthesize information from multiple sources or from complex and lengthy texts; make complex inferences and use general background knowledge; evaluate quality of text.	Interpret dense and complex texts; make high-level infer- ences and use specialized knowl- edge.

#### **Examples of Reading:**

- Scan lists and tables for information. For example, they may scan tables in electrical product specifications and checklists of technical specifications to find prices of electrical power from various sources. (1)
- Read e-mail messages from project staff. For example, they may read e-mail messages from project forepersons that describe schedule delays. They may read e-mail messages from suppliers that outline material specifications and delivery arrangements. (2)
- Locate data in completed forms. For example, they may read sections of contracts completed by project contractors and sub-contractors that detail proposed construction or consulting tasks and general information about contractors' and sub-contractors' capabilities and responsibilities. (2)
- Locate data in schedules. For example, they
  may refer to schedules and complex Gantt
  charts to find specific information about
  project phases, tasks, resources, milestones,
  and deadlines for their projects. (2)

2

- Read magazines and other periodicals. For example, they may read articles in trade magazines that describe new technological developments and trends in conventional and renewable energy. (3)
- Read paragraphs of text on work orders, contracts, and other forms. For example, they may read incident forms that briefly describe unsafe conditions leading up to incidents and accidents and detail injuries sustained by staff and damage to equipment. They may read entries in daily logs and reports written by site forepersons that give details about project progress and provide sign-off for submission to project stakeholders. (3)
- Read letters and memos from project contractors, sub-contractors, and utility staff that detail project responsibilities. For example, they may read memos from utility managers that describe changes to project team personnel and revisions to project policies that project managers must administer and oversee. (3)
- May read reports written by private utilities and electricity grid operators. For example, they may read interconnection evaluation reports that describe various electricity system impacts of new generating facility projects. Project managers must be able to understand how their projects will affect the bulk electrical system and how new infrastructure is integrated with existing networks and grids. (4)

- May read manuals and regulations. For example, they may read regulations from the Canadian Standards Association (CSA) to learn about recommended practices for installations of electricity generating systems such as wind turbines. They may read sections of the Canadian Electrical Code (CE code) to determine applicable standards for installing high voltage equipment such as switchgear assemblies, isolating switches, and interrupter switches. (4)
- May scan collective agreements to confirm the employment terms and conditions for unionized employees on their project work teams, inclusive of rights, privileges and duties of specific work groups and classifications. Non-compliance with collective agreements, including assigning work that is outside the duties outlined in the collective agreement, can result in grievances and investigations that can stall project progress. (4)
- Read technical specifications for project equipment and components prior to their installation, testing and commissioning.
   For example, they may read detailed specifications for generating equipment to learn about their individual components, compositions, and operating norms. They must interpret complex and industry-specific terminology to fully understand equipment and component specifications of major infrastructure projects. (4)

## Skills for Success: Writing



The ability to share information using written words, symbols, and images. For example, at work we use this skill to fill out forms and write e-mails, instructions, and reports.

#### Why Writing is Important

The changing labour market and advances in technology require writing skills that are suitable for different situations and digital platforms. Writing skills are used in many ways. At work, they can be used to write memos, e-mails, or reports. Writing skills are also needed in daily life to fill out a credit card or job application. Knowing what to write, how much to write, and in which style to write is important. Writing skills ensure our writing is suitable for our purpose, the intended reader, and the context.

#### **Levels of Complexity**

LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5
Write less than a paragraph to organize, remind or inform.	Write brief text that is a para- graph or longer, to serve a variety of purposes. The content of writing is routine, with little vari- ation from one instance to the next.	Write either longer or shorter pieces to inform, explain, request information, express opinions or give directions.	Write longer pieces, which present consider- able information, and which may feature a compar- ison or analysis.	Write pieces of any length which demand originality and effectiveness. This includes creative writing. Appropriate tone and mood may be as important as the content.

#### **Examples of Writing:**

- Write brief reminders and notes to co-workers.
   For example, they may write lists of activities associated with daily project tasks and provide the lists to forepersons and team leads. They may write reminders to administrative staff about completing daily reports and telephone logs. (1)
- Enter data into forms. For example, they may fill out federal, provincial, and municipal forms to apply for work permits. They may complete work orders and change orders that indicate project work tasks to be completed and revised before forwarding the forms to administrative staff and project sponsors. (2)
- Write e-mail messages to project contractors, co-workers, colleagues, and stakeholders. For example, they may write e-mail messages to contractors requesting clarification on project milestones and completion of tasks. (2)

- May create tables and charts to gather, organize and analyze contractor and subcontractor data such as human resource complements, key contacts, and contract stipulations. (2)
- Write memos and letters. For example, they may write memoranda which provide technical details about project component design to all project staff. They compile information from engineers and technical experts to draft memoranda and obtain sign-off from project contractors, department leads and forepersons. (3)
- Create schedules. For example, they create project schedules that detail project design and construction phases, tasks, and resources. They may create material lists that itemize the construction materials and equipment required to complete their projects. (3)



- May write explanations and descriptions on work orders and change order forms. For example, they may write explanations for contractors' equipment problems that lead to project delays and provide descriptions of measures taken to alleviate the problems. (3)
- May create sketches and diagrams. For example, they may sketch rough layouts of new electrical substations that depict required components and forward their sketches to engineers, designers, and drafters to complete formal drawings. (3)
- Create project charters to provide a clear and cohesive vision for the deliverables of their projects and the role of all parties involved. For example, during project planning they create a formal project charter outlining the project objectives, how they will be completed and key project stakeholders. The project charter supports decision-making throughout the project life cycle and is used for managing expectations and assumptions as the project progresses. (3)
- May write briefing notes. For example, they
  may write briefing notes for management to
  summarize the activities performed to mitigate issues or complaints raised by project
  stakeholders. (4)
- Write project execution plans. For example, during the project planning phase, they develop a project executive plan (PEP) that describes policies, procedures and priorities that will be implemented and followed throughout the project by all stakeholders. The PEP outlines how the project will be executed, including major phases, milestones, and timelines; factors considered during the project planning phase; and the rationale for the project execution processes. The PEP is used as a communication tool for all parties involved in the project. (4)

- Create work breakdown structures (WBS). For example, they define all of the goals that the project needs to accomplish and presents them visually as work packages, i.e., a flowchart, diagram, or hierarchical table. The WBS serves as a useful communication tool for project team members and external project stakeholders. (4)
- Create project management plans. For example, they develop a number of different plans to set the direction of the project. Project management plans can include procurement plans, contract plans, risk management plans, environmental protection plans, and more. These plans are then used during the project execution phase to measure progress against documented project deliverables, milestones and targets. (4)
- Write reports to provide timely information to contractors, sub-contractors, co-workers, and project sponsors. For example, they may write project status reports describing progress made, difficulties encountered, and potential solutions being explored. They may write brief analysis reports for utilities that analyze and describe electrical and mechanical failures encountered during installation and commissioning. (4)
- May write business cases to justify projects.
  For example, they may write formal business
  cases that outline the background of the project, the expected benefits of the project, financial requirements, and risks of the project. Once completed, the business cases are
  often forwarded to project sponsors and are
  reviewed for accuracy throughout the project
  life cycle. (4)

## Skills for Success: Numeracy



The ability to find, understand, use, and report mathematical information presented through words, numbers, symbols, and graphics. For example, at work we use this skill to perform calculations, order and sort numbers, make estimations, and analyze and model data.

#### **Why Numeracy is Important**

The modern economy requires numeracy skills that go beyond basic arithmetic and understanding numbers remains critical to functioning in today's society. Many jobs require the ability to work with numbers and math. For example, we may use numeracy skills to measure materials or count inventory at work. Numeracy skills are also needed in a wide variety of daily contexts. For example, we use numeracy skills to manage our finances or to make sense of statistics in the news.

#### **Levels of Complexity**

LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5
Operations Required: Only the simplest operations are required and the operations to be used are clearly specified. Only one type of mathematical operation is used in a task.  Translation: Only minimal translation is required to turn the task into a mathematical operation. All information required is provided.	Operations Required: Only relatively simple operations are required. The specific operations to be performed may not be clearly specified. Tasks involve one or two types of mathemat- ical operation. Few steps of calcula- tions are required.  Translation: Some translation may be required, or the numbers need- ed for the solution may need to be collected from sev- eral sources. Simple formulae may be used.	Operations Required: Tasks may require a combination of operations or mul- tiple applications of a single opera- tion. Several steps of calculation are required. Translation: Some translation is required but the problem is well defined. Combina- tions of formulae may be used.	Operations Required: Tasks involved multiple steps of calculation. Translation: Considerable translation is required.	Operations Required: Tasks involve multiple steps of calculation. Advanced mathematical techniques may be required.  Translation: Numbers needed for calculations may need to be derived or estimated; approximations may need to be created in cases of uncertainty and ambiguity. Complex formulae, equations may be used.

electricity
HUMAN RESOURCES CANADA

#### **Examples of Numeracy:**

- May total amounts for project supplies, tools and parts on purchase orders and requisition forms. For example, they may purchase office supplies and record the associated costs for project accounting personnel. (1)
- May calculate amounts for personal travel expenses. They calculate amounts for travel in personal vehicles using per kilometre rates. They may add amounts for per diem allowances and meals. (1)
- Prepare draft project budgets. For example, they may prepare baseline budgets for construction project phases using contractor and sub-contractor estimates. They use these budgets to determine potential cost ranges and expenditures per project phase. (2)
- Locate data in assembly drawings. For example, they may scan assembly drawings to familiarize themselves with the size and number of components within an electrical system. (2)
- May estimate labour hours required to complete project tasks. For example, they consider their previous experience in similar projects and the number and qualifications of their current project contractors, sub-contractors, and staff to estimate how long various project tasks may take. They must estimate accurately to effectively plan and manage project timelines and budgets. (3)
- May interpret scale drawings. For example, they may review construction drawings depicting several different views of buildings to obtain data such as the dimensions of floor areas, walls, windows, and ceilings. (3)
- May take measurements from scale drawings. For example, they may measure distances between utilities and other structures on scale drawings when managing infrastructure projects to confirm proximities. (3)

- May calculate the dimensions of project buildings, equipment, components, and structures from scale drawings. For example, they may check construction drawings to make sure rooms are large enough to accommodate electrical equipment and components. (4)
- May monitor and adjust project budgets. For example, they may review weekly, bi-weekly, and monthly project expenditure reports and balance sheets, monitor project labour, materials and consultancy costs, and adjust expenditures to meet project budget constraints. They compare budgeted amounts to actual costs and may use cost-projecting calculations to see if projects will be over- or under-budget, identify trends and prevent cash flow problems. (4)
- Monitor and adjust project schedules. For example, they may scrutinize project schedules and associated milestones and deliverables to confirm that project tasks are being completed on time. They may calculate the time and resources required to complete various project tasks as scheduled, forecast potential project lag and downtime and adjust schedules to ensure projects and individual project phases stay on time. They must ensure that all project staff members are notified in advance of these schedule adjustments and that contractors, sub-contractors and co-workers know how their deadlines and milestones may have changed. (4)
- Calculate costs associated with contractor and sub-contractor hiring, materials procurement and project administration. For example, they may calculate hourly labour costs using contractors' invoices and timesheets and may calculate office expenditures by adding and subtracting capital costs such as business machines, cellular telephones, and project vehicles. They may insert values in digital worksheets to calculate costs. (4)

- Analyze cost, schedule, and scope data from past projects to adequately plan current projects. For example, they may review costing data associated with hiring contactors and sub-contractors in past projects and compare those costs with estimates received from current contractors to determine potential labour expenditures. They may compare past projects' schedules and work breakdown structures to identify common leads, lags and floats when assigning durations to work packages. (4)
- Interpret data in schematics and flowcharts. For example, they may interpret technical data in electrical schematics that describe connections between electrical components. They may study flowcharts to determine electricity flows and control points between new generating plants and existing transmission infrastructure. (4)
- May record and monitor productivity data of project human resources. For example, they

- may track work productivity by monitoring the number of contractors' change orders, project phase budgets, inventory and lostdays reports, contract waivers and work instructions and assign numerical values that represent the relative difficulties of project tasks to develop performance benchmarks. These analyses may form bases of contractor and co-worker incentives, rewards, and motivations. (4)
- Locate data and interpret trends in graphs.
   For example, they may refer to graphs that display contractors' adherence to project milestones and deliverables to identify performance patterns. They may refer to graphs of testing results with engineers and other project staff to determine if equipment and machinery are functioning according to specifications. (4)

## Skills for Success: **Digital**



The ability to use digital technology and tools to find, manage, apply, create, and share information and content. For example, at work we use this skill to take measurements, create spreadsheets, safely use social media, and make online purchases using digital devices such as smartphones, sensors, and computers.

#### **Why Digital Skills are Important**

Digital technology is being introduced to all jobs and has changed the way we find and share information, solve problems, and communicate with others. We need digital skills when we apply other skills such as reading, writing, and numeracy to working on computers or online. Digital skills help us keep up with changing demands in the modern workplace. In daily life, we need digital skills to be safely connected socially and to make use of online resources and services.



#### **Levels of Complexity**

ENTRY (E)	Individuals at the entry level can use basic functions of familiar digital devices.  They need guidance to find and evaluate the relevance and reliability of online information, and to engage in safe online practices.
INTERMEDIATE (I)	Individuals at the intermediate level can use a wider range of functions of familiar and unfamiliar digital devices, including customizing devices for specific purposes (e.g., download and use an app, set up macros to automate tasks).  They can find and use relevant and reliable online information and engage in safe online practices
ADVANCED (A)	Individuals at the advanced level have in-depth knowledge of digital device operations and information technology system.  They can find, use, and build on relevant and reliable online information to improve digital processes, including enhancing their own online safety.  They can assess future digital needs and keep their own digital skills up to date.

#### **Examples of Digital Skills:**

- Use word processing software. For example, they may use features of ms word to write, edit and format change orders, contracts, progress reports and other documents. (E)
- Use the internet. For example, they may access suppliers' websites to research products, download specifications, retrieve assembly and application instructions, and obtain corporate information. They may download electronic copies of policies and guidelines published by regulatory bodies and electricity industry associations. (E)
- Use communication software. For example, they may use communication software to create and maintain project contact lists, send and receive e-mail and text messages and retrieve attachments from contractors, suppliers and site workers. They may relay information to field crews via their cellular telephones. (E)
- May use graphics software. For example, they may use graphics software to create slide

- presentations and other promotional materials for their projects and to present these materials to project stakeholders during meetings and consultations. They may also use graphics software to develop charts. (I)
- May use database software. For example, they may use database software to view and retrieve data which describes the procurement, delivery, and installation of suppliers' equipment on project sites. They may enter data to record project contractor and sub-contractor names, addresses, equipment lists, and staff complement. (I)
- May use spreadsheet software. For example, they may enter quantitative data into spreadsheets and apply formulae within the spreadsheet to track sections of project budgets and calculate resource scheduling for specific project phases. (I)
- May use financial software. For example, they may use accounting functions to consolidate project spending and monitor

- project finances related to labour, consulting, inventory, and equipment. They may use advanced functions to forecast project costs and create accurate cost estimates. (I)
- Use other computer and software applications. For example, they may use advanced functions of project management software to create detailed project schedules, assign task interdependencies and human resources and predict completion of project milestones and deliverables. They may use the software
- to administer project contracts and subcontracts and to view updated plans, drawings, change orders, purchase orders, meeting minutes, requests for information (RFIs) and other project-related documents. (A)
- May use computer-assisted design software.
   For example, they may use autocad and associated viewing software to review prints and make field marks for revisions to be completed by the engineering and drafting departments. (A)

## Skills for Success: Problem-Solving



The ability to identify, analyze, propose solutions, and make decisions to address issues; monitor success; and learn from the experience. For example, at work we use this skill to make hiring decisions, select courses of action, and troubleshoot technical failures.

#### **Why Problem-Solving is Important**

Every day we use information to make decisions, solve problems, and take actions. This can include thinking about different ways to complete a task and choosing the best solution or deciding what to do first when several activities are competing for our attention. The ability to think, make decisions, and solve problems effectively can improve the way we carry out activities, and meet goals and deadlines at work or in other daily life situations. Strong problem-solving skills help us gather the right information, to identify and solve problems and make better decisions. As we learn from these experiences, we strengthen our problem-solving skills and more quickly and effectively adapt to change.

#### **Levels of Complexity**

NTRY (E) Individuals at the entry level can make decisions or solve problems when there are limited or familiar variables, all the information is provided, and the stakes are low with few consequences.

They can use their general knowledge and skills to process information, do simple or routine troubleshooting if needed, identify the decision or solution, and confirm the issue is resolved.

INTERMEDIATE

Individuals at the intermediate level can make decisions or solve problems when there are multiple well-defined variables, information is not provided but easily identified, and the stakes are moderate with some consequences.

They can identify useful information sources, analyze the information, select the best option from multiple choices, and evaluate the effectiveness of the solution or decision based on given or standard criteria.



Individuals at the advanced level can make decisions or solve problems when there are many complex unfamiliar variables that can be unpredictable or contradictory, little information is provided or certain, and the stakes are high with significant consequences.

They can search for information using diverse unfamiliar sources or conduct your own research, synthesize and analyze complex information to determine multiple options, select the best option, and determine how to assess the effectiveness of the process and solution or decision.

#### **Examples of Problem-Solving:**

- May discover during site visits and conversations with technical staff that project work has not been completed to specifications. For example, they may talk to electrical engineers who notice installation and interconnection deficiencies between generators and transmission lines. They consult with installation contractors and review project drawings and specifications to identify the deficiencies, review safety risks and tolerances and ask technical experts for opinions about solutions. (I)
- May choose project staff to lead various project departments. For example, they review personnel qualifications and related past work experience to select directors and managers for project areas such as procurement, finance, human resources, and others. (I)
- May choose equipment and supply contractors. For example, they check contractors' product information, speak with contractors to determine product availability and delivery terms, and may gauge other project managers' opinions to select appropriate suppliers. (I)
- Decide when to seek technical assistance or technical expert consultation during their projects. For example, they may approach electrical engineers and utility workers to gather technical data and obtain explanations when project tasks fall outside their specific technical expertise. (I)

- Verify the accuracy and validity of contractors' and sub-contractors' invoices. They ensure that all invoice items are complete and justified by reviewing contract terms, work agreements and project schedules for work completion before issuing payments. (I)
- Discover that contractors and sub-contractors are struggling to meet deadlines and may be delaying project completion. They meet with contractors and staff to determine the causes of the delays and refer to contracted obligations to encourage contractors' compliance to project schedules and deliverables. They use tact and collaboration to ensure that contractors and sub-contractors stay on task and on target. (I)
- Encounter construction delays and project complications caused by inadequate resources and insufficient planning. For example, they may find that estimated project tasks are taking longer than originally scheduled because of inclement weather. They consult with contractors, sub-contractors, utility staff and other colleagues to re-examine project phases and discuss their options. They may expand the durations and budgets of projects and renegotiate revised deadlines and deliverables to ensure all project activities can be completed. (I)
- Assess the completeness and quality of project tasks completed by contractors, sub-contractors, and utility workers. For example, they may review procurement documents, delivery schedules and work orders

- to confirm that appropriate tasks have been performed. They may call in technical experts to test equipment after installations to determine if equipment is functioning correctly and visually inspect work areas to ensure commissioning is complete. (I)
- May decide to reprimand and dismiss project contractors and sub-contractors for inadequate work, missed deadlines and unsafe performance. They review the specifics of organizations' contracts, discuss any events directly with contractors and point out stipulations, consequences, and penalties for non-compliance. They make these decisions carefully to maintain original project schedules and budgets. (A)
- Evaluate new and innovative construction methods and processes to use in their projects. For example, they may examine associated costs, sources of qualified and experienced contractors and other workers and any safety concerns related to construction advancements. They review these criteria to determine the feasibility of integrating new

- methods and processes into their personal project management styles. (A)
- May evaluate their personal performance in leading projects. For example, they may review expected and unexpected project alterations and assess the positive and negative effects of their responses and reactions to project changes. They may review project deadlines, milestones, and budgets after project completion to determine their ability to meet contracted expectations and to identify personal areas of management strengths and limitations. (A)
- Evaluate the rationality of change requests made by contractors, sub-contractors, and project sponsors. They consider the need for the changes, the feasibility of performing tasks associated with project changes in terms of time and budget and the degree to which they think the changes will satisfy terms of contracts. They gather information by discussing changes with contractors, sub-contractors and project sponsors and reviewing past related project data. (A)

### Skills for Success: Communication



The ability to receive, understand, consider, and share information and ideas through speaking, listening, and interacting with others. For example, at work we use this skill to discuss ideas, listen to instructions, and serve customers in a socially appropriate manner.

#### Why Communication is Important

Strong communication skills help us share information in a way that others can clearly understand. We also need strong communication skills to listen to, pay attention to, and understand others. In all jobs, communication skills are important for developing good working relationships with coworkers and clients, including those from different backgrounds and cultures. We also need these skills to work effectively in a team, and to gather and share information while problem-solving.



#### **Levels of Complexity**

ENTRY (E) Individuals at the entry level can speak and listen to a narrow range of subject matter, using factual and concrete language in predictable and familiar contexts, interacting one-on-one. They can use and interpret straightforward non-verbal cues (e.g., facial expression, eye contact).

INTERMEDIATE

Individuals at the intermediate level can speak and listen to a moderate range of subject matter, using both factual and abstract language, in less predictable contexts, interacting one-on-one or in small groups. They can interpret more complex non-verbal cues, including those with cultural implications, to better understand a speaker's intention and purpose.

ADVANCED (A)

Individuals at the advanced level can speak and listen to a wide range and depth of subject matter, using both factual and abstract or conceptual language, in a variety of contexts shifting from routine to unpredictable, interacting with familiar and unfamiliar audiences of various sizes. They can interpret complex and subtle non-verbal cues, and use them to adapt their own communication styles.

#### **Examples of Communication:**

- Discuss ongoing work with co-workers. For example, they may talk to administrative assistants to obtain telephone messages and gather information about contractor invoices. They may speak to forepersons and contractors about project status and task progress. (E)
- Participate in group discussions. For example, they attend periodic project meetings with project stakeholders, project department heads, forepersons, and contractors to discuss project tasks and obtain current information. They may take part in project completion meetings with sponsors and other stakeholders to share insights about their experiences, successes, and areas for improvement. (I)
- May discuss products, prices and deliveries with suppliers and contractors. For example, project managers overseeing small infrastructure projects may ask suppliers of materials for prices and lead times. (I)
- May speak to project staff and other co-workers to diffuse disagreements, confrontations and personality conflicts which negatively affect project work. For example, they may ask forepersons to intervene in personality conflicts between workers to maintain safe and effective work habits. They may meet with discontented contractors and sub-contractors to discover the reasons for their displeasure and tactfully suggest potential solutions. Project managers must ensure they listen effectively to all parties involved to seek resolutions to conflicts. (A)
- May speak to the public to provide project information. For example, they may speak to landowners, farmers and community residents of nearby utility infrastructure and construction projects to provide information. They provide reassurance to public citizens by answering their questions carefully and work to gain public trust by speaking honestly and sincerely. (A)

- May negotiate with project stakeholders, project sponsors and contractors. For example, they may meet with utility managers and financial staff to discuss re-financing possibilities for project cost overruns and may speak to contractors to offer incentives for the safe and efficient completion of work tasks. (A)
- Consult with colleagues to obtain their input on technical topics and challenging project problems. For example, they may talk to electrical engineers and utility workers with specific technical knowledge to troubleshoot equipment and component installations that are not working properly.
- They ask questions to ensure they understand complex technical theory related to electricity generation, transmission and distribution and obtain colleagues' opinions and perspectives regarding the causes and solutions to project challenges. (A)
- Present information and progress updates to large groups of corporate clients, project sponsors, utility executives and engineering colleagues on project topics such as task analysis reports, budget estimates, project scope descriptions and responsibilities of their contractors and sub-contractors. Project managers field questions and offer professional opinions. (A)

## Skills for Success: Creativity & Innovation

The ability to imagine, develop, express, encourage, and apply ideas in ways that are novel, unexpected, or challenge existing methods and norms. For example, at work we use this skill to discover better ways to complete tasks, to develop new products, and to deliver services in a new way.

#### Why Creativity and Innovation is Important

Creativity and innovation skills help us come up with new, unique, or "outside the box" ideas or to approach something completely differently than in the past. A curious mindset that finds inspiration from a broad range of experiences and perspectives helps develop creativity and innovation skills. Employers are increasingly seeking people who can apply creativity and innovation skills to their work in our increasingly diverse settings, and to come up with new solutions or approaches to tackling challenges. With strong creativity and innovation skills, we can also support and inspire others to do the same.

#### **Levels of Complexity**



Individuals at the entry level can generate a limited number of novel ideas under guidance and support.

They are open to applying new ideas but are quick to revert to norms and habits when the new ideas fail or face uncertainties.



INTERMEDIATE Individuals at the intermediate level can generate a larger number of novel ideas on their own. They acknowledge and work with uncertainties, accept failures, and learn from failures to improve their ideas. They are receptive to new ideas from others. **ADVANCED** Individuals at the advanced level can generate a wider range of novel ideas, with diverse dimensions of originality. They evaluate limitations of novel ideas and find ways to improve them to minimize failures

#### **Description:**

Project Managers in the electricity sector come from varied backgrounds inclusive of trades, engineering and technology. They balance their technical and project management skills to manage complex projects and initiatives. As organizations are seeking ways to be more energy efficient and environmentally-conscious in their endeavours, Project Managers play a significant role in using their technical and management skills to innovate processes, projects, and methods. They must remain agile throughout the project life cycle to address problems as they arise; brainstorm innovative approaches to maximize efficiencies; and provide the guidance required to ensure that projects are completed on-time, on-scope and on-budget. Project Managers play a critical role in putting ideas into action. (Advanced)

and uncertainties. They facilitate an environment for others to be creative and innovative.

## Skills for Success: Collaboration



The ability to contribute and support others to achieve a common goal. For example, at work we use this skill to provide meaningful support to team members while completing a project.

#### **Why Collaboration is Important**

Today people are more connected within communities, across the country, and around the world. Modern workplaces are more diverse, and many jobs require us to work with others from different backgrounds and cultures to complete tasks and solve problems. It is important to be able to work respectfully with people who have different professions, experiences, cultures, and backgrounds. Collaboration skills help us perform better in a team by understanding how to support and value others, manage difficult interactions, and contribute to the team's work. Strong collaboration skills help us build and maintain positive relationships with others at work, in school, and in other parts of our lives.



ENTRY (E)	Individuals at the entry level can interact with familiar people or a small number of diverse unfamiliar people to share information to complete routine independent tasks.  They can maintain cooperative respectful behaviours toward others and minimize conflict.
INTERMEDIATE (I)	Individuals at the intermediate level can work with familiar and diverse unfamiliar groups of people to coordinate tasks or work together to achieve simple or well-defined goals.  They can support and adapt to others when appropriate and manage conflicts when needed.
ADVANCED (A)	Individuals at the advanced level can work in large teams of diverse people to achieve complex goals that might involve unpredictable situations.  They can take on responsibility for integrating work, coaching and motivating others, managing conflicts, and evaluating and improving teamwork.

#### **Description:**

Project Managers in the electricity sector coordinate and integrate their work tasks with contractors, sub-contractors, suppliers, and utility workers to complete projects in electricity generation, transmission, and distribution. They direct the work of project staff and may oversee the work of various project teams. Project Managers adjust their direct involvement with other workers to address issues such as quality of work concerns and missed project deadlines.

Project Managers may be responsible for assigning work tasks to team members and spend many hours per day communicating with project teams and seeking others' input. They are responsible for evaluating contractors, sub-contractors, suppliers, and employees' work performance. (Advanced)

## Skills for Success: Adaptability



The ability to achieve or adjust goals and behaviours when expected or unexpected change occurs, by planning, staying focused, persisting, and overcoming setbacks. For example, at work we use this skill to change our work plans to meet new deadlines, to learn how to work with new tools, and to improve our skills through feedback.

#### Why Adaptability is Important

Major changes in society are affecting how we work, live, and learn and requiring us to constantly adapt to change. Strong adaptability skills will help us deal effectively with change and to learn new skills and



behaviours when needed, stay focused on our responsibilities and goals, and not giving up when situations are difficult. They will help us stay positive and manage the stress that can come from change in the workplace, community, and our lives at home.

#### **Levels of Complexity**

Individuals at the entry level can follow direction to adjust and complete plans, tasks, and goals in response to expected and unexpected changes requiring minor adjustment or learning that is provided. They can stay positive, persist, and manage emotions in response to minor stress.

# INTERMEDIATE (I)

Individuals at the intermediate level can adjust and complete plans, tasks, and goals with some supervision in response to expected and unexpected changes requiring moderate adjustment or learning with some resources provided. They can stay positive, persist, and manage emotions in response to moderate stress.

# ADVANCED (A)

Individuals at the advanced level can adjust plans, tasks, and goals independently in response to expected and unexpected complex changes requiring significant adjustment or learning that is self-directed using diverse resources. They can stay positive, persist, and manage emotions in response to high stress.

#### **Description:**

Project Managers working in the electricity sector set their own work priorities and plan their daily activities within the framework of project schedules and deadlines. They must manage their time effectively to produce high quality work on time and within approved budgets. Their work is often interrupted by unpredictable issues such as project design changes, contract change requests, equipment breakdowns and work delays caused by underestimation of project complexity, communication errors and many other factors that may interfere with expected results. Project Managers must be proficient at revising their priorities and adapting project schedules to achieve required results.

Project Managers must continually update their skills to succeed in their work. They must be able to process and integrate information related to advancements in project management processes into their skillsets and keep up-to-date with standards and regulations. They may be responsible for maintaining personal learning plans for review by their direct supervisors and personally identify beneficial areas of training and learning in both project management and technical areas to better understand the needs of project stakeholders such as individual contractors, utility workers and the general public. Much of their learning is self-directed as they may read professional project management journals, books, and periodicals. They may also expand their continuous learning initiatives to encompass other areas of expertise relating to their projects and to broaden their knowledge base. (*Advanced*)





Skills for Success are the skills needed to participate and thrive in learning, work and life.

Skills for Success include skills that are foundational for building other skills and knowledge and are important for effective social interaction. These skills overlap and interact with each other, and with other technical and life skills. They are inclusive and can be adapted to different contexts.

Skills for Success are for everyone – employers, workers, training providers, governments and communities.



