

Job Description

Job Title:	Energy Engineer
Department:	Plant Operations
Reports To:	Energy Manager
Jobs Reporting:	Co-op students
Salary Grade:	USG 11-13 (career path)
Effective Date:	April 2022

Primary Purpose

Reporting to the Energy Manager, the Energy Engineer is accountable for two main areas:

- 1) Implementation, and ongoing management of key energy reduction and water conservation initiatives.
- 2) Technical guidance of all University Building Automation Systems balancing end-user requirements, system functionality, environmental sustainability, and financial impact.

University of Waterloo infrastructure comprises of over eight million square feet of space powered by a large 1st Class Central Power plant feeding a sophisticated district energy system connecting over eighty major academic buildings.

Responsibilities will align with the Plant Operations goal of contributing towards providing a safe and accessible, invitingly clean and comfortable, functionally-enriched and well-maintained campus environment through service excellence.

Key Accountabilities

Strategic Planning

- Provides a critical voice and technical leadership in the development of technical solutions for a wide variety of teaching, research, and infrastructure driven projects.
- Provides technical advice to the UW Energy Manager on various UW Sustainability and Energy Management initiatives to maximize efforts in Shift: Neutral and reduce Deferred Maintenance.

Utilities and Energy operations

- Works closely with the Associate Director, Utilities and the Chief Stationary Engineer on the support of daily campus operation, scheduled maintenance, preventative maintenance program development.
- Ensures the building re-commissioning is done when required to ensure energy efficient and reliable operation of various HVAC and electrical systems.
- Responsible for the collection of building automation system measurements (both automated & manual) and data analysis to coordinate testing, balancing, adjusting, and scheduling of systems as required to restore optimum operating efficiency or to make recommendations on potential projects.
- Ensures that processes within assigned division are in place, understood, and followed ensuring safety and compliance with applicable codes and standards.
- Represents Plant Operations in responding to complaints, concerns, and questions from UW campus community regarding air quality, temperature, and comfort. This includes investigating, trouble shooting and devising acceptable long-term solutions understanding the client needs, system capabilities, costs, and code requirements. Supports the Energy Manager in making decisions and announcements in this regard on a large and/or sensitive level.

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- Works with the Director of Design and Construction on the integration of project commissioning agents and compliance consultants with the University operation ensuring successful completion and hand-over of projects.
- Reviews design documentation prepared by various consultants to ensure that proposed designs meet UW energy efficiency and sustainability goals.
- Identifies and develops initiatives suitable for 4th year engineering or environmental capstone projects.

Project/program management:

- Leads and manages projects through scaled project initiation, planning, execution, and closure phases according to culture and processes, and methodologies defined by UW and Plant Operations Design & Construction
- Develops, monitors and controls programs through definition, benefit delivery, and closure phases
- Liaises to establish clear, concise agreed upon project/program objectives/goals/vision, benefits, scope and success criteria
- Identifies and communicates the impact of project implementation/service interruptions have on teaching/research/strategic initiatives of the UW campus
- Ensures alignment of outcomes and requirements with University and department strategies and values
- Creates an environment of shared purpose and collaboration amongst diverse group(s) of team members
- Motivates and manages project/program team(s)
- Offers strong, effective communication skills to enable facilitation, negotiation, information flow, buy in, and stakeholder engagement
- Demonstrates accountability to sponsor for visibility, management, and variances within schedule, budget, scope, and quality
- Demonstrates appropriate responses to others emotions and actions during difficult situations and conflicts
- Directs and/or coordinates the work of team members to enable appropriate allocation of resources while accounting for skills, availability, training requirements, and distribution of work
- Establishes realistic plans that proactively plan for and manage risks, issues, tasks, schedules, communications, quality, benefits, procurement, and delivery of solution(s) throughout the project/program life cycle
- Manages project constraints (schedule, scope, resources), dependencies (internal and external), and priorities
- Demonstrates strong analysis, problem solving, and conflict resolution skills towards diverse issues and risks
- Establishes and follows appropriate change processes to enable informed decision making as projects evolve
- Coaches and liaises to establish strong sponsorship and governance through the establishment of strong relationships with management and applicable senior leadership
- Removes obstacles for team(s), and escalates to management, governance bodies, and/or senior leadership, when appropriate
- Monitors and reports progress appropriately to interested and impacted stakeholders
- Ensures appropriate decision making occurs according to timelines and milestones
- Facilitates the procurement process, negotiates contracts and statements of work, and ensures vendor compliance
- Maintains project/program integrity and coherence
- Builds stakeholder relationships based on trust and integrity

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<ul style="list-style-type: none">• Understands and adheres to university policies and procedures as they relate to assigned projects/programs• Ensures appropriate representation and/or collaboration on the project with other areas of expertise such as business/process analysis, enterprise architecture, integration stakeholders, and others
Project recovery <ul style="list-style-type: none">• Engages appropriate stakeholders such as project sponsor, applicable senior leadership, representative of a regulatory body• Analyzes projects in trouble through the application of specific analysis and problem-solving skills and expertise to identify issues and offer appropriate recommendations• Works closely with Energy Manager to provide resolution to projects in trouble, making appropriate changes to ensure project recovery• Resolves complex conflicts that reside within troubled projects and teams• Facilitates discussions and educates stakeholders, team members, sponsors and governance bodies on appropriate roles and responsibilities• Communicates in a non-judgmental persuasive manner
Health & Safety <ul style="list-style-type: none">• In consideration of the University's commitment to the safety and well-being of all faculty, support staff, students, and visitors, responsible for ensuring University facilities and departmental activities are compliant with all applicable legislation, regulations, codes and standards related to facilities operations as well as occupational health and environmental safety.• Maintains current health, safety and regulatory certifications in the areas required to perform the function of the position.
Other <ul style="list-style-type: none">• Performs other related duties and responsibilities as assigned and supports departmental activities, including performing work of other classifications within the level of incumbent's capability/ competency/ skills, and/or regulatory requirements.• Promotes the participation of faculty, students, and staff relative to energy conservation initiatives.

**All employees of the University are expected to follow University and departmental health and safety policy, procedures and work practices at all times. Employees are also responsible for the completion of all health and safety training, as assigned. Employees with staff supervision and/or management responsibilities will ensure that assigned staff abide by the above, and actively identify, assess and correct health and safety hazards, as required.*

Required Qualifications

Education <ul style="list-style-type: none">• Bachelor's Degree in Mechanical Engineering• Current Professional Engineering license (P.Eng.) within Ontario• Certified Energy Manager and/or Certified Commissioning Building Professional is an asset.
Experience <ul style="list-style-type: none">• The incumbent will have minimum ten (5) years of progressive experience as a licensed professional designing, planning and construction of building mechanical systems within a major institutional sector such as education, post-secondary education, hospital or consulting service industry in Canada.

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- Demonstrated project management experience developing project plans, schedules, and budgets.
- Physical Plant design experience within the building construction industry will be considered an asset.
- Extensive knowledge related to applicable codes, building HVAC, automation and mechanical infrastructure systems is essential.

Knowledge/Skills/Abilities

- Demonstrated track record of effective leadership and collaboration with colleagues and direct reports.
- Excellent judgment and strong problem-solving skills, including the ability to understand the financial impact of relevant options
- Excellent communication and interpersonal skills, with a deep commitment to customer service, proven innovative approach to problem solving and an aptitude towards service excellence and responsiveness.
- Outstanding analytical and time management abilities.
- Strong ethics and diplomacy.
- Ability to supervise & review design to ensure safety, code compliance, and operational efficiency.
- Ability to stamp (take legal responsibility) for design work.
- Proficiency in the latest version of AutoCAD is an asset.
- Sound understanding of drawing principles and standards.
- Demonstrated track record of design, and implementation of energy conservation and sustainability measures.
- Demonstrated ability to manage complex and high-risk construction projects.
- PMP accreditation is an asset.
- Strong current knowledge of HVAC design and operation.
- Understanding of Building Code, Fire Code, TSSA regulations.
- Experience in institutional projects is preferred.
- Proficient in using MS Office.

Nature and Scope

- **Contacts:** This position comes in contact with a wide variety of internal and external people at all levels of responsibility. Must maintain excellent relationships with all of these people. This requires excellent personal and communication skills.
- **Level of Responsibility:** Implements environmental initiatives and environmental sustainability functions and processes that are highly specialized and have high level of financial impact.
- **Decision-Making Authority:** Prepares proposals for prioritization of University initiatives in the areas of environmental initiatives and environmental sustainability. Makes decisions on BAS and HVACR updates, retrofits and programming while balancing end-user requirements, system functionality, environmental sustainability, and financial impact. Oversees energy project implementation.
- **Physical and Sensory Demands:** Minimal demands typical of a position operating within an office environment.
- **Working Environment:** Team environment predominately in an office-based setting and involving collaboration with all business and operating units within the department and across the University.