THE UNIVERSITY OF QUEENSLAND
AUSTRALIA

CREATE CHANGE

POSITION DESCRIPTION

Position Title:	Energy Projects Engineer - Mechanical
Organisation Unit:	Property & Facilities Division
Position Number:	3067643
Type of Employment:	Full-time, fixed term
Classification:	HEW level 7

THE UNIVERSITY OF QUEENSLAND

The University of Queensland (UQ) contributes positively to society by engaging in the creation, preservation, transfer and application of knowledge. UQ helps shape the future by bringing together and developing leaders in their fields to inspire the next generation and to advance ideas that benefit the world. UQ strives for the personal and professional success of its students, staff and alumni. For more than a century, we have educated and worked with outstanding people to deliver **knowledge leadership for a better world**.

UQ ranks in the world's top universities, as measured by several key independent ranking, including the CWTS Leiden Ranking (32), the Performance Ranking of Scientific Papers for World Universities (40), the US News Best Global Universities Rankings (42), QS World University Rankings (47), Academic Ranking of World Universities (54), and the Times Higher Education World University Rankings (66). Excluding the award component, UQ is now ranked 45th in the world in the ARWU, and is one of the only two Australian universities to be included in the global top 50.

UQ has an outstanding reputation for the quality of its teachers, its educational programs and employment outcomes for its students. Our students remain at the heart of what we do. The UQ experience – the UQ Advantage – is distinguished by a research enriched curriculum, international collaborations, industry engagement and opportunities that nurture and develop future leaders. UQ has a strong focus on teaching excellence, winning more national teaching excellence awards than any other in the country and attracting the majority of Queensland's highest academic achievers, as well as top interstate and overseas students.

UQ is one of Australia's Group of Eight, a charter member of edX and a founding member of Universitas 21, an international consortium of leading research-intensive universities.

Our 53,000-plus strong student community includes more than 16,400 postgraduate scholars and more than 17,000 international students from 135 countries, adding to its proud 260,000-plus alumni. The University has more than 6,600 academic and professional staff (full-time equivalent) and a $2.15 billion annual operating budget. Its major campuses are at St Lucia, Gatton and Herston, in addition to teaching and research sites around Queensland and Brisbane city. The University has six Faculties and four University-level Institutes. The Institutes, funded by government and industry grants, philanthropy and commercialisation activities, have built scale and focus in research areas in neuroscience, biomolecular and biomedical sciences, sustainable minerals, bioengineering and nanotechnology, as well as social science research.

UQ has an outstanding track-record in commercialisation of our innovation with major technologies employed across the globe and integral to gross product sales of $11billion+.

UQ has a rapidly growing record of attracting philanthropic support for its activities and this will be a strategic focus going forward.

Organisational Environment

The Property & Facilities Division (P&F) is responsible for delivering comprehensive facilities operations to the University community by using integrated systems and services to support the University's teaching and learning, research endeavours and strategic objectives. To achieve this, and to further improve the environment in which members of the University community study, work and live, P&F provide a range of services under Campus Operations, Infrastructure & Sustainability, Planning & Property, and Project Delivery.

P&F's Infrastructure & Sustainability section have gained significant recognition for the environmental sustainability initiatives they have implemented across the University.

The Infrastructure team is responsible for campus infrastructure planning and augmentation, technical input and control across the range of engineering services including: civil, electrical, mechanical, and hydraulics. In addition, it maintains the Division's digital models, drawings and records of the built and natural environments covering the buildings and grounds.

The Energy team within are responsible for energy procurement, developing strategies to manage energy consumption on campus, and managing energy efficiency and renewable energy projects and initiatives (including the Warwick Solar Farm).

The Sustainability team manages the University's Environmental Management System and promotes best environmental practice at UQ. It also provides a range of sustainability support and advisory services to the University community and undertakes projects to reduce the University's environmental footprint.

For further information on information on UQ's sustainability work, you are encouraged to visit https://sustainability.uq.edu.au/home

Further information about the Property and Facilities Division may be accessed on the Division's web site at http://www.pf.uq.edu.au

Information for Prospective Staff

Information about life at UQ including staff benefits, relocation and UQ campuses is available at - http://www.uq.edu.au/current-staff/working-at-uq

DUTY STATEMENT

Primary Purpose of Position

The position is responsible for the delivery of mechanical services projects which significantly reduce UQ's energy/utility usage and spend. The role takes a whole of life approach to project delivery. Responsibility spans from identifying opportunities for energy saving to analysis, to developing a business case, to engagement with relevant stakeholders to confirm viability. The role follows projects through to working with consultant and contractors to practical completion, and evaluates the effectiveness of work undertaken to calculate energy and cost savings. The role also provides assistance to other teams within P&F, such as the Infrastructure and Campus Operation teams.

Duties

Duties and responsibilities of this role include, but are not limited to:

- Identify opportunities for economical reduction in mechanical services utility usage across UQ's building portfolio. Utilise a number of avenues for identification of such opportunities, including analysis of large datasets in order to identify unusual or suboptimal system behaviour.

- Troubleshoot building HVAC 'problem areas' identified by the campus operations team using the BMS to ensure any solutions are energy efficient.

- Develop concept solutions to identified opportunities through HVAC modelling and data analysis. Where necessary, conduct first-pass feasibility assessment of service coordination such as power supply, floor loads, etc.

- Implement solutions to identified problems through varying approaches depending on the scope of the opportunity. The solution may be as simple as a direct programming change in a BMS controller to optimise behaviour, right up to managing a million-dollar capital retrofit.

- Liaise with contractors and consultants, as well as UQ stakeholders, to investigate, scope, and implement projects to support the Energy Management team's strategic goals

- Undertake tasks related to project management of specific opportunities including seeking quotes, preparing procurement plans, and tracking project budgets

- Troubleshoot commissioning issues that may arise from implemented projects, and review their implementation to calculate energy and cost savings

- Any other duties as reasonably directed by your supervisor

Other

Ensure you are aware of and comply with legislation and University policy relevant to the duties undertaken, including but not exclusive to:

- the University's Code of Conduct
- requirements of the Queensland occupational health and safety (OH&S) legislation and related OH&S responsibilities and procedures developed by the University or Institute/School
- the adoption of sustainable practices in all work activities and compliance with associated legislation and related University sustainability responsibilities and procedures
- requirements of the Education Services for Overseas Students Act 2000, the National Code 2007 and associated legislation, and related responsibilities and procedures developed by the University

Organisational Relationships

The position reports to the *Program Manager – Energy Management* who in turn reports to the *Senior Manager - Energy & Sustainability*.

SELECTION CRITERIA

- A degree in a relevant engineering discipline (i.e. Mechanical, Mechatronics) plus at least 2 years experience in the HVAC industry
- Advanced statistical knowledge and application skills.
- Excellent understanding of the fundamentals underlying mechanical building services, including psychrometric design, heat transfer, equipment selection, as well as an understanding of control theory and practical application to HVAC systems.
- Experience with a BMS platform in program design, commissioning and installation.
- Basic cross discipline understanding of other building services disciplines for service coordination and initial feasibility investigations.
- Basic business case development and financial analysis skills
- Excellent interpersonal skills including the ability to communicate effectively with a variety of stakeholders
- Ability to implement highly organised work practices with an attention to detail, a high level of diligence and the ability to check work and maintain high standards

Desirable

- Experience working with Metasys and Metasys CCT
- Experience working in a client-side HVAC facility management environment
- Programming experience in data analysis. Python and SQL preferred.
- Competency working with IP networking infrastructure

The University of Queensland values diversity and inclusion and actively encourages applications from those who bring diversity to the University. Please refer to the University's Diversity and Inclusion webpage for further information and points of contact if you require additional support.

Accessibility requirements and/or adjustments can be directed to recruitment@uq.edu.au