POSITION DESCRIPTION
Academic Positions
(In addition to the Position Classification Standards)

Position Title:	SBRC Energy Efficiency Research Fellow
Level:	B
Limited Term:	2-year, Full-Time Appointment
Faculty/Division:	Engineering and Information Sciences
Department/Location:	Sustainable Buildings Research Centre (SBRC), SBRC Building (B237), Innovation Campus

Primary Purpose of the Position:

The Sustainable Buildings Research Centre (SBRC) is seeking a highly skilled and passionate researcher to join our team in the implementation of a number of research activities focussed on energy efficiency and sustainability in buildings.

The successful candidate will play a major role in the delivery of the "Energy Efficiency in the 3rd Age (EE3A)" project which is funded via a $2.3m grant under the Commonwealth Government's Low Income Energy Efficiency Program (LIEEP). This project firstly involves the recruitment and participation of 500 households in a social marketing and behaviour change education program (led by researchers from the UOW Centre for Health Initiatives, CHI).

The second part of the project, led by the SBRC, involves the retrofitting of approximately 200 households with a range of energy efficiency technologies (solar hot water systems, insulation, draft-stripping, shading, etc.). The successful candidate will drive the delivery of this program of retrofitting and evaluation of the economic, social and environmental effectiveness of the retrofit technologies.

The position also involves providing support to research staff and students in a number of other areas being developed by the SBRC.

Position Environment:

The SBRC is a new and unique research facility that has as its key focus research on the improvement of the sustainability and resilience of our existing building stock (see http://sbrc.uow.edu.au/). The appointee will be located in the SBRC building, one of the most sustainable and unique buildings in Australia, which is not only targeting a 6 Star Green Star sustainability rating (equivalent to LEED Platinum) but also to be the first ever building in Australia to win "Living Building Challenge" accreditation. The building has a 155kW PV array and will be both net-zero energy and net-zero water.

The SBRC building itself has just been completed and is now in the process of being fitted out with significant experimental equipment capabilities for a wide range of research on sustainable buildings. Examples of equipment that is either already in place or is planned to be situated within the SBRC include: indoor environmental test chamber; bench-top thermo-physical properties measurement equipment (e.g. thermal conductivity, DSC, etc.); refrigeration test facility; flow visualization facility; large building component test facility; construction area; rooftop solar test area; small wind turbine test facilities; green roof and green wall test equipment; micro-grid research facility; ground source heat pump research system.

In addition, the SBRC is investing in a significant capability for field testing of existing and new buildings. Mobile test facilities include: multiple high quality thermographic cameras; blower doors and other infiltration test equipment; weather stations; electrical energy monitoring and evaluation; indoor environmental quality measurement; particulates; etc. The SBRC is also undertaking research on Building Integrated Photovoltaic Solar Thermal (PVT) systems in collaboration with BlueScope Steel and the Fraunhofer Institute (Germany) under a $0.47 million grant from the Australian Renewable Energy Agency (ARENA).

One of the special highlights of recent work at the SBRC is the very recent win by Team UOW in the Solar Decathlon China 2013 competition in August 2013 (http://www.illawarraflame.com.au/). The SBRC was pivotal in providing research leadership and coordinating the Team UOW campaign. Many of the students involved in the development of the 'Illawarra Flame' house (a demonstration of how to retrofit a classic Australian 1960's 'fibro' home to become a net-zero home of the twenty-first century) are enrolled in research degrees at the SBRC.

In 2011 Team UOW were the first ever team from Australia to gain entry to a Solar Decathlon competition and the first to demonstrate how to retrofit and existing building. They then went on to win the Solar Decathlon China 2013 competition with the highest ever overall score of any team in the history of all Solar Decathlons. They placed first in the juried contests for 'Architecture', 'Engineering' and 'Solar Application' and were second by just one point in both 'Communications' and 'Market Appeal'.

The SBRC is one of two key Research Entities of the Faculty of Engineering and Information Sciences. EIS is one of the top Engineering Faculties in Australia with world-class research and teaching programs in a range of exciting technological areas. This is evidenced through the many recent successes by the Faculty in winning support for a number of new research initiatives such as: the SMART Infrastructure Research Facility (>$50m); the Energy Pipelines Cooperative Research Centre (EPCRC) $17m; the Retrofitting for Resilient and Sustainable Buildings (RRSB) $25m; the Defence Materials Research Centre (DMTC) and many other exciting fundamental, applied and commercial research projects.

Major Accountabilities/Responsibilities:

Responsibilities		Outcome	Office Use Only
1.	Drive the successful implementation of the SBRC's program of research under the Energy Efficiency in the 3rd Age project and assist in SBRC research activities in other projects.	Successful completion of EE3A project, and generation of high quality/quantity research outcomes.	
2.	Ensure on-time delivery of high quality research outputs while developing and maintaining relationships within SBRC and EE3A project stakeholders	Generation of high quality research outputs for EE3A project and related publications.	
3.	Collaborate strongly with various industry partners, government agencies and other research centres within and outside the Faculty of Engineering and Information Sciences and assist in development of grant applications, etc.	Secure substantial national competitive grant funding and commercial research funding to support research activities.	
4.	Assist in the supervision of SBRC research students as appropriate.	Improved progress by and support of PhD and Masters by research students.	
5.	Governance/Administrative duties as specified by Director of the SBRC.	On-time completion of assigned tasks to an acceptable standard	
6.	Supervisory roles: Communicate and consult with staff on workplace and staffing matters.	To foster direct relationships with staff and enhance engagement with the organisation.	Ongoing
7.	Observe principles and practices of Equal Employment Opportunity	To ensure fair treatment in the workplace	Ongoing
8.	Have WH&S responsibilities, accountabilities and authorities as outlined in the http://staff.uow.edu.au/ohs/commitment/responsibilities/ document	To ensure a safe working environment for self & others.	Ongoing

Inherent Requirements:

This position description outlines the major accountabilities/responsibilities and the selection criteria against which you will be assessed as suitable for the position. As such there will be specific job requirements that we refer to as Inherent Requirements.

Inherent Requirements refer to your ability to:

- Perform the essential duties and functional requirements of the job;
- Meet the productivity and quality requirements of the position;
- Work effectively in the team or other type of work organisation concerned; and
- Do the job without undue risk to your own or others health, safety and welfare at work.

If you have any injuries, illness, disorder, impairment, condition or incapacity that may affect your ability to perform the inherent requirements of the position, we encourage you to discuss this with the University to assist in the process of identifying reasonable adjustments to enable you to perform the duties of the position. The University wants to place you in the best situation to use your skills effectively in the position you are applying for at the University.

Reporting Relationships:

Position Reports to:	Director, Sustainable Buildings Research Centre (SBRC)
The position supervises the following positions:	N/A
Other Key Contacts:	EE3A Project Manager

Key Relationships:

Contact/Organisation:	Purpose & Frequency of contact
Administrative staff within and outside the Faculty of Engineering and Information Sciences.	Administrative and financial management of the SBRC program of work under the EE3A and other projects.

Key Challenges:

1. On-time delivery of high quality research outputs related to SBRC activities on EE3A program of work.
2. Successfully project managing the complex range of SBRC activities under the EE3A program of work.
3. Maintaining a high level of research productivity with large numbers of publications in high impact factor journals and assisting with research student completions.
4. Securing a longer-term sustainable research income stream from national competitive grants (e.g. ARC Discovery and Linkage Grants) and funding from industry and government agencies.

SELECTION CRITERIA - Knowledge & Skills:

Essential:

- High quality research experience, interests and capability in sustainable buildings and/or renewable energy and that must align with and will advance the research activities of the Sustainable Buildings Research Centre (SBRC).
- Laboratory/field/experimental research experience and capability, including data-logging, instrumentation, etc.
- Demonstrated track record of working in small teams on projects involving a high level of liaison with project stakeholders and/or participants.
- Demonstrated high quality project and technical report writing skills.
- A strong track record of publications relative to opportunity.
- Potential to win external competitive research grants (such as ARC grants).
- Australian drivers licence

Desirable

- Demonstrated leadership and project management skills on major projects (e.g. multiple stakeholder research or construction projects, industry or institutional competitions/projects).
- Knowledge of and strong capability in the use of green building and energy rating systems for buildings in Australia and/or overseas.
- Experience and in-depth capability in Computational Fluid Dynamics (CFD) and other engineering simulation tools (e.g. MatLab, ANSYS/Abacus, etc.).
- Experience and capability in modelling of buildings e.g. Building Information Modelling (BIM) energy modelling, structural, Life Cycle Analysis, etc. using software packages such as Revit, SimaPro, AccuRate, Energy Plus, DesignBuilder, IES, etc.).

SELECTION CRITERIA - Education & Experience:

Essential:

- Bachelor degree in appropriate discipline of: Engineering, Science or Architectural Science.
- Excellent research experience.

Desirable

- PhD in an appropriate area of Engineering, Science or Architectural Science.
- Industrial experience or substantial engagement with industry (e.g. through academic/commercial research) in an area related to sustainable buildings, building energy systems and technologies, etc.

Personal Attributes:

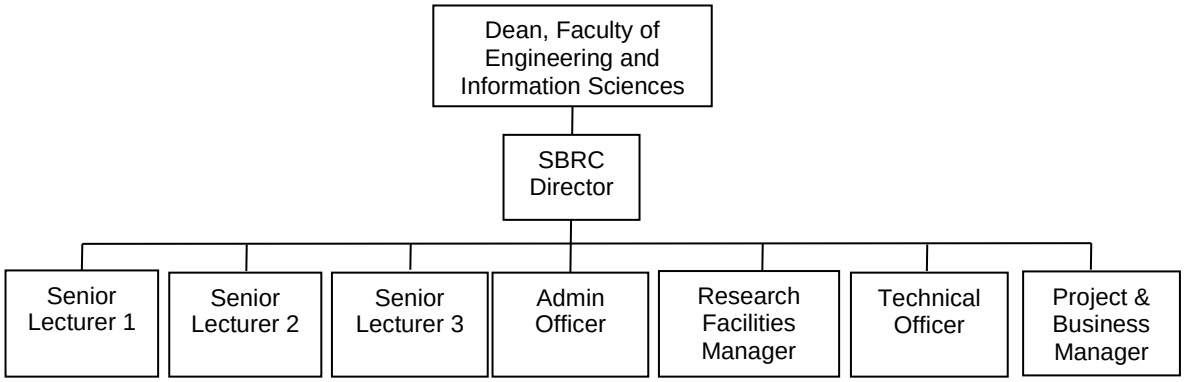
Essential:

- Team player
- Excellent interpersonal and communication skills
- Flexibility and adaptability in a wide range of teaching and research situations
- Capacity to develop or use existing links professional networks and the industrial community.

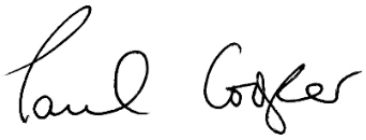
Special Job Requirements:

- May be required to occasionally work during week-ends and out of normal work hours.
- Will be required to work in the field, including inspection of households during feasibility, installation and evaluation stages of retrofit program.

Organisational Chart:



Approval:

Approved by Head of Unit:  Prof Paul Cooper

Date: 12th March 2014

Approved by Human Resources: _____

Date: _____

POSITION CLASSIFICATION STANDARD - Research Only
Level: B
Title: Fellow

Description

A position classification standard describes the broad categories of responsibility attached to research-only academic staff at different levels. The standards are not exhaustive of all tasks in research-only academic employment, which is by its nature multi-skilled and involves an overlap of duties between levels. The standards provide an adequate basis to differentiate between the various levels of employment and define the broad relationships between classifications.

Progression through an academic career will normally be based on research, teaching, administrative functions and contribution to the profession. The balance of functions will vary according to level and position over time. It is only in exceptional circumstances that promotion would be solely on the research only position classification standards.

- General Standard
- Specific Duties
- Skill Base

General Standard

A Level B research-only academic is expected to carry out independent and/or team research within the field in which he/she is appointed and to carry out activities to develop his/her research expertise relevant to the particular field of research

Specific Duties

Specific duties required of a Level B research-only academic may include

- The conduct of research either as a member of a team or independently, and the production of conference and seminar papers and publications from that research.
- Supervision of research-support staff involved in the staff members' research.
- Guidance in the research effort of junior members of research-only academic staff in his/her research area.
- Contribution to the preparation, or where appropriate individual preparation, of research proposal submissions to external funding bodies.
- Involvement in professional activities including, subject to availability of funds, attendance at conferences and seminars in the field of expertise.
- Administrative functions primarily connected with his/her area of research.
- Occasional contributions in the teaching program within the field of the staff member's research.
- Co-supervision, or where appropriate supervision, of major honours or postgraduate research projects within the field of the staff member's area of research.
- Attendance at meetings associated with research or the work of the organisational unit to which the research is connected and/or at departmental and/pr faculty meetings and/or membership of a limited number of committees.

Skill Base

A Level B research-only academic will normally have completed a doctoral qualification or have equivalent qualifications or research experience. In addition he/she may be expected to have had post-doctoral research experience which has resulted in publications, conference papers, reports or professional or technical contributions which give evidence of research ability.