



AM Building Efficiency is a private Australian business wholly owned by Adrian Michaels. AM Building Efficiency delivers a wide range of professional sustainability and associated services for the built environment.

Core Services

- **Sustainability,**
 - Energy, water and waste program development and implementation.
 - Energy and water audits and opportunity business case development.
 - Dashboard development and analysis.
 - Delivery of skills training and awareness programs.

- **Energy and Utility Metering Systems,**
 - Metering requirements analysis.
 - Scope and specification development, system design and installation.
 - Billing and Bill Validation
 - Troubleshooting.
 - Meter and meter recording systems validation (NABERS).

- **Building Automation,**
 - Training programs.
 - Building Analytics system development and optimization.
 - Commissioning and recommissioning.
 - Control strategy development, system engineering and programming.
 - Certified Tridium Niagara System Integrator Niagara AX & N4.

- **CSR Reporting**
 - Building automation and associated building information systems integration.
 - Implementation and ongoing management of integration platforms.
 - Sustainability Data Management Systems and Reporting (iSystain)

- **NABERS and CBD Ratings**

A built environment engineering services professional, Adrian takes a hands-on leadership role in the development and implementation of energy efficiency and greenhouse gas emission reduction programmes in the built environment. With extensive industry practice and knowledge Adrian has a proven record of developing and delivering environmentally effective and commercially successful outcomes to the property sector.

Adrian holds qualifications in electrical engineering and management, Adrian is a member of AIRAH (Australian Institute of Refrigeration, Air Conditioning and Heating Engineers) and is a NABERS (NAtional Building Emissions Ratings Scheme) and Commercial Building Disclosure Accredited Assessor.



Accreditations NABERS (Office/Retail/Hotels) Qualified Assessor (2007)
CBD Accredited Assessor (2011)
Tridium Niagara R2 and AX Certified (1999, 2002)
Tridium Niagara 4 Certified (2016)
Workplace Training Certificate (1997)

Affiliations Member AIRAH

ABN 84 619 368 786

Insurances: Public Liability (\$10M), Professional Indemnity (\$2M), Workers Compensation (NSW)

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CASE STUDIES

1. Energy Efficiency and Optimisation Project, Macquarie University

While employed at Zamatech Pty Limited, Zamatech was selected to undertake an Energy Efficiency and Optimisation Project (EEOP) for Macquarie Universities Property Sustainability team.

The project included the systematic analysis of a representative sample of the University's building portfolio on a staged basis in order to identify opportunities for energy efficiency, analyse the benefits in energy savings and emissions avoided, financial benefits and to prioritise implementation.

This project also included the development of performance benchmarks for the various representative building types found on a typically Australian university campus. The project was wide ranging and covered the following key areas:

- Building Assessments
- Existing Energy Sub-Metering Systems Review and Improvement
- Development of Opportunity and Assessment Tool
- Development of Building Energy Benchmarks

The project was completed in January 2013.

Contact: Hilary Bekmann, Associate Director of Sustainability at University of California Office of the President (San Francisco Area, USA)

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2. Building Management Systems Engineering Services, University of Sydney

AM Building Efficiency was retained to develop a scope of works to upgrade aging BMS systems at the University of Sydney, specifically at the Cumberland Campus and Plant Breeding Institute, Cobbity NSW.

In addition AMBE developed BMS schedules and reviewed submissions to support University wide BMS supply tender. The purpose of the tender was to provide technical and pricing certainty over a three year period in support of a large building programme..

On an ongoing basis AMBE provides detailed engineering services to support the University's building management and energy metering and monitoring systems.

Contact: David Dunn, Services Engineer – Mechanical, Engineering & Sustainability Group University of Sydney. p: +61 2 9351 5195 e: david.dunn@sydney.edu.au



3. Campus Metering System, University of Technology Sydney

While employed at Zamatech Pty Limited, Zamatech developed a project brief for UTS in 2009 for the metering of all buildings on the Broadway Campus, following up in 2011 with a review of the specifications and finally joining the project Technical Working Group (TWG) implementing the roll out monitoring and reporting of some 300-500 electricity meters, gas meters, water meters, Variable Speed Drives and Heat meters.

Adrian Michaels took a lead role in engaging with the successful contractor to undertake comprehensive project acceptance testing programme.

The acceptance programme was instrumental in ensuring that a number of key changes and improvements were undertaken by the resulting in key improvements in the usability of the system.

*Contact: Eric Lyianage, Engineer Energy Management - University of Technology Sydney
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4. Mirvac Asset Management (MAM) – Sustainability Manager

Adrian previously held the role of Manager, Sustainable Building Operations with Mirvac is an ASX listed integrated property development business with an extensive investment property portfolio comprising commercial office, retail and industrial properties.

- Tasked with forming and leading MAM's Sustainability Team.
- Successfully developed and implemented a wide ranging operational and capital works programme to deliver extensive energy and water savings. Average NABERS Energy Rating lifted from under 2.5 in 2007 to over 4.0 by December 2011.
- Led the Energy Audit programme to meet Mirvac EEO obligations and to underpin the Mirvac's NABERS Energy Improvement programme.
- Develop Building Operational Efficiency Improvement processes and procedures for Facility Managers to systematically approach energy efficiency in their buildings using Building Automation and Energy Monitoring Systems.
- Develop reporting methodologies to facilities Mirvac National Greenhouse and Energy Reporting System (NGERS) and EEO obligations.
- Managed Green Building Fund (GBF) programme resulting in securing over \$4M in funding in 2008 – 2010 to support capital works programmes.
- Worked extensively with NABERS team to develop the ratings process to allow buildings with Cogeneration Plant to be effectively rated for NABERS Energy.

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