

**Ashburner
Francis** consulting
engineers

energymenu

BY ASHBURNER FRANCIS CONSULTING ENGINEERS

Energy, Ecology and Sustainability Services



Company History

Established in 1976 by renowned engineers Harry Ashburner and Andris Francis, Ashburner Francis is today a multi disciplined consultancy practice operating from five offices in Queensland and the Northern Territory, and servicing all areas of Australia including remote regions.

Through astute management and quality of service, the company has expanded its workforce to over 65 employees, building on its core business and offering more diverse services in mechanical and electrical design and facility management.

The **energymenu** division offers specialist energy and sustainability consultancy services, which we have been providing to key clients for a number of years.

Today, under the management of Peter Caune, Ashburner Francis is a respected company within the Australian business community and continues to build upon three decades of experience, dedication and belief.

Our Philosophy

Our **energymenu** division is focused on providing energy and sustainability consultancy and advisory services for architects, builders, developers and property owners throughout Australia.

From simple Section J compliance through to Green Star design, we can help you reduce the energy usage of your building and reach your sustainability targets, ensuring compliance with current legislation.

We know energy and sustainability can be confusing. We take the time to monitor and understand every release and update of the energy and sustainability requirements, regulations and standards to ensure we can provide the best advice in compliance with the latest rules and regulations.

Ashburner Francis has been an advocate of energy efficient design since incorporation in 1976. We endorse ESD principals through design.

Through **energymenu** we offer a variety of energy services. Whether you are an Architect designing a modern facility, developer wishing to attract high-end tenants, or an organisation concerned about increasing operational costs, **energymenu** has an option for you.



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Category 1

BCA Energy Efficiency Compliance

James Watt Option

Section J Deemed To Satisfy Analysis

An analysis of the building, including materials and services to verify compliance with the Deemed-To-Satisfy (DTS) provisions of the BCA Section J. The report goes through the provisions set out in the BCA Section J and advises whether or not the building complies. If it does not advice is offered to ensure it does.

Anders Celsius

Option JV1 Verification Method

JV1 verification method applies to Class 2 buildings and Class 4 part of a building only. If the building is unable to achieve the Deemed-To-Satisfy provisions of the BCA Section J, compliance can be sought by verification method JV1.

Andre Ampere Option

JV3 Verification Method

JV3 verification method applies to Class 5 – 9 buildings only. If the building is unable to achieve the Deemed-To-Satisfy provisions of the BCA Section J, compliance can be sought by verification method JV3.

Michael Faraday Option

Residential Building Thermal Performance Method

An analysis of the building, including materials using computer modelling program, Solar Logic's BERSPro. The report includes the methodology and advises whether or not the building meets the required star values. If it does not advice is offered to ensure it does.

Lord Kelvin Option

BASIX

Building Sustainability Index (BASIX) was established by the NSW government to ensure homes are designed to be more energy and water efficient. In NSW, Class 1 and 2 buildings and Class 4 parts are subject to a BASIX assessment. A BASIX certificate lists all the commitments the user has agreed to, and the Certifying Authority will check these at various stages of construction. The BASIX Certificate must be attached to the development application before it can be processed. There are several methods to achieve a BASIX certificate.

The Lord Kelvin is an analysis of the building, including materials using computer modelling program, Solar Logic's BERSPro. The report includes the methodology and advises whether or not the building meets the required star values. If it does not, advice is offered to ensure it does. The results are for use in the Thermal Simulation section of BASIX.



James Watt



Michael Faraday



Category 2

NABERS

James Joule Option Predicted Analysis

An analysis, report and advice on how the project may attain the NABERS star rating they wish to achieve. This analysis is completed during design stage to assist in achieving a certified assessment at a later and more appropriate stage. It is only a self-assessment and may not be used for the purposes of advertising. Choose from one, all or a combination of the following:

- NABERS Energy
- NABERS Water
- NABERS Waste
- NABERS Indoor Air Quality

A predicted NABERS Energy analysis may be required for those projects which have entered into a formal NABERS commitment agreement. Refer to the NABERS website for further details on commitment agreements and whether they are suitable for your project.

Thomas Edison Option Third Party Assessment

Once your building has been operational and occupied for a continuous 12 months you are able to consider NABERS certification.

For buildings which were not designed with NABERS in mind we advise you to consider The Michael Faraday Predicted analysis prior to an actual Third Party Assessment to ensure that the building is able to be certified.

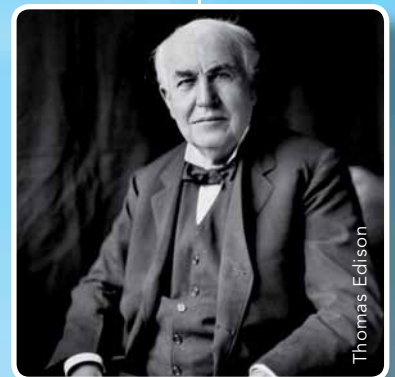
The Andre Ampere includes analysis, report and NABERS certification submission. Choose from one, all, or a combination of the following:

- NABERS Energy
- NABERS Water
- NABERS Waste
- NABERS Indoor Air Quality

The assessment is submitted to DECC for official accredited NABERS certification.

Robert Bosch Option Building Energy Efficiency Certificate (BEEC)

"Mandatory Disclosure" requires building owners to disclose the energy efficiency of any office building over 2,000 m² which they sell or lease. This disclosure is made by way of a Building Energy Efficiency Certificate. The Robert Bosch option encompasses a BEEC, including a NABERS Office Energy Star Rating, for your building. Energymenu can offer this service via our NABERS accredited professionals.



Category 3

Energy Audits to AS3598

Daniel Fahrenheit Option

Level 1 Energy Audit

A level 1 energy audit is a desktop audit and will not necessarily require a site visit. It principally involves an analysis of billing data and raw site details. It benchmarks the site and identifies the potential for energy cost reduction.

George Simon Ohm Option

Level 2 Energy Audit

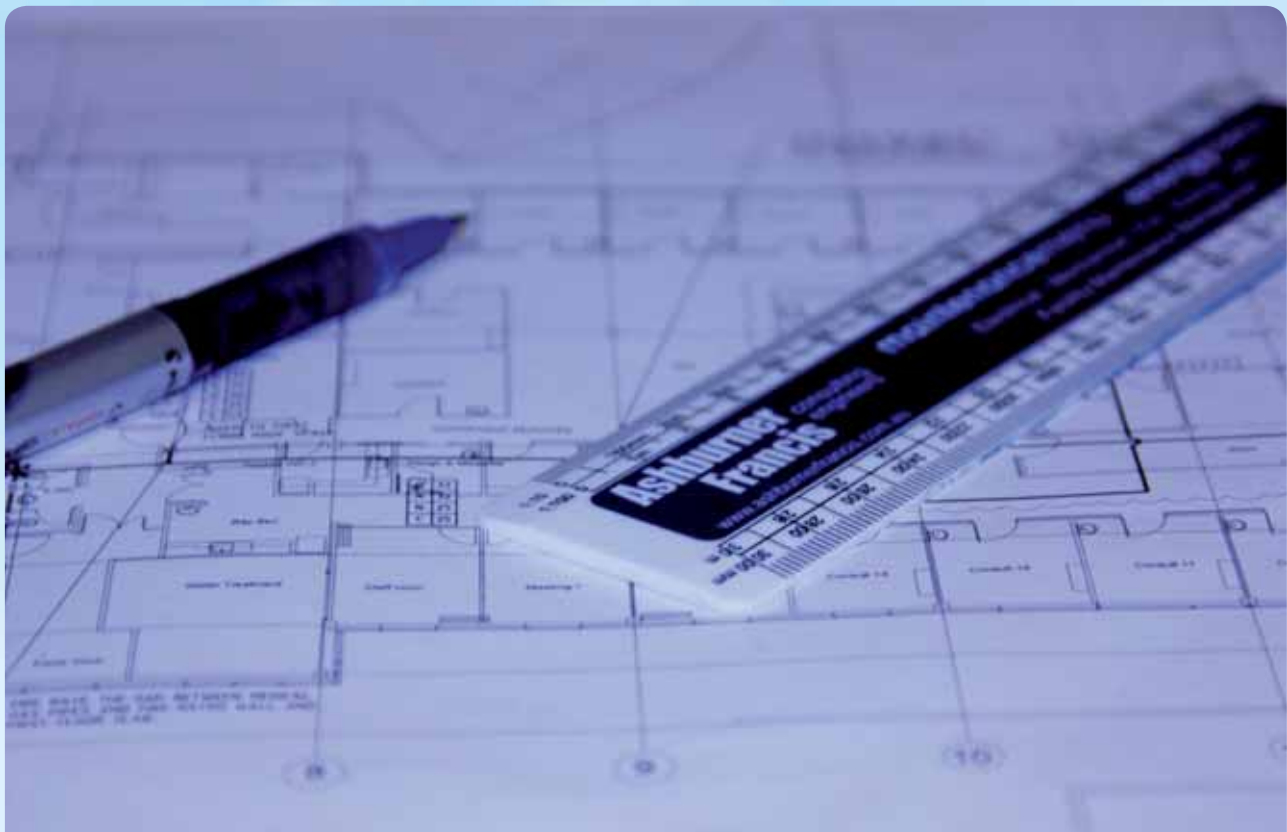
A level 2 audit is a walk through audit. It requires a site visit by the auditor and includes an analysis of historical billing data. It involves some interviews with site personnel, a brief review of site utility bills and other operating data. It allows us as auditors to become familiar with the building operation and identifies obvious areas of energy waste or inefficiency and provides statement of costs and potential savings.

Blaise Pascal Option

Level 3 Energy Audit

A level 3 audit provides a detailed inspection and analysis of energy usage, including energy demand monitoring and possible logging. Again, we will conduct an analysis of historical billing data.

In depth interviews with facility operating personnel are conducted to provide a deeper understanding of major energy use, with utility bills collected over 1-3 years. This allows us to evaluate the facility's energy habits and usage profile. This type of audit will be able to identify all energy conservation measures appropriate to the site given its operating parameters.



Category 4

Green Star

Heinrich Hertz Option Mechanical & Electrical Components only

The Heinrich Hertz Option includes analysis, advice and the required reporting and documentation for the mechanical and electrical services only, as set out by the Green Star Technical Manual. The report details the Green Star credits addressed by the Mechanical and Electrical services and how they comply with the Green Star requirements.

This report applies to the mechanical and electrical services components only and is for the inclusion of a complete submission (by others). The Heinrich Hertz also includes The Isaac Newton and The Alessandro Volta. It excludes The Nikola Tesla and The William Rankine options.

Isaac Newton Option Energy Conditional and ENE-1 Report

Based on the requirements as set out in the Green Star Technical manual, The Isaac Newton comprises of an analysis, calculation, advice and a report for inclusion in a Green Star submission for the Energy conditional and ENE-1 credits. It includes computer modelling simulation with ACADS-BSG Beaver software. The report will also highlight the number of points applicable to credit ENE-1.

Alessandro Volta Option Daylighting Analysis

The Alessandro Volta includes a computer modelled simulation of the daylight factor inside the building based on glazing and external reflectances. It comprises of a report for inclusion in a Green Star submission for the Daylight credit IEQ-4, which encourages and recognises designs that provide good levels of daylight for building users.

Nikola Tesla Option Thermal Comfort Analysis (Predicted Mean Vote)

The Nikola Tesla comprises of a computer modelled simulation of the predicted mean vote (PMV) and report for inclusion in a Green Star submission for the Thermal Comfort credit IEQ-9.

The predicted mean vote is an index that predicts the mean value of the votes of a large group of people on a 7 point thermal scale.

William Rankine Option Air Change Effectiveness Analysis

The William Rankine comprises of an analysis of the air change effectiveness of the building by computational fluid dynamics (CFD) simulation and report for inclusion in a Green Star submission for the Air Change Effectiveness (ACE) credit IEQ-2.

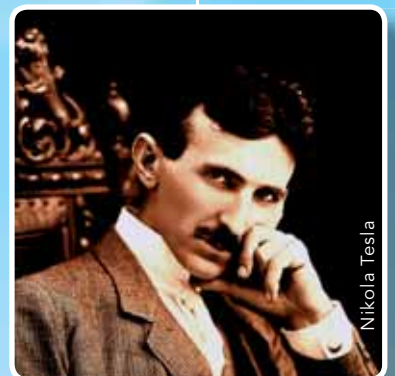
Albert Einstein Option Complete Green Star Submission

The Albert Einstein comprises of analysis, advice, compilation and submission of the formal Green Star submission. It includes The Isaac Newton, Alessandro Volta and Heinrich Hertz options.

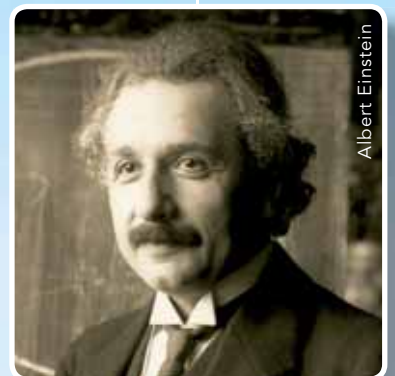
Submission requirements may require information and reports from suitably qualified consultants. Advice will be given to the design team on what they will be required to submit for the Green Star submission. Additional fees and consultants may be required if the client deems the credits in question are required. Excludes The Nikola Tesla and The William Rankine options.



Sir Isaac Newton



Nikola Tesla



Albert Einstein

Category 5

General ESD Initiatives

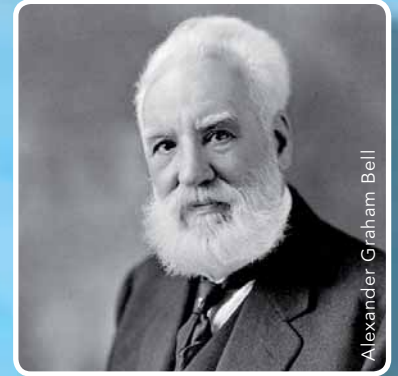
Alexander Graham Bell Option

Ecologically Sustainable Design Reports

For those who want a little bit of guidance in providing an ecologically sustainable building, the Alexander Graham Bell is a report which covers such ESD items as:

- Energy efficiency
- Water efficiency
- Passive and hybrid ventilation
- Indoor environmental quality

The report advises ESD options specific to your project for consideration during the design phase.



Isambard Brunel Option

Sustainable Design Solutions

Energymenu can undertake full mechanical and electrical design using alternative technologies and sustainability options including:

- Absorption refrigeration
- Solar air conditioning
- Photovoltaics
- Hybrid systems



Sectors we work with

- Aged care and nursing homes
- Airports and aviation facilities
- Churches, convents, religious buildings
- Commercial office buildings
- Defence buildings and structures
- Hospitals, surgeries and health care buildings
- Hotels, motels, backpackers and caravan parks
- Industrial warehouses and factories
- Laboratories and science facilities
- Local, state and federal government buildings
- Police stations, fire stations, ambulance garages
- Prisons and correctional / detention facilities
- Residential apartments
- Restaurants, bars and cafes
- Retail shops, shopping centres, supermarkets
- Schools, preschools, universities and colleges
- Sports facilities, sports halls and courts





William Rankine

Why the Scientist names?

In recognition of their work we have named each of our energymenu services after a scientist or pioneer who shaped the way we work today. These include noteworthy people such as James Watt, Alessandro Volta and Andre Ampere, who brought us the Watt, the Volt and the Amp respectively. Visit our website for more information on the careers of these scientists, and the others within our brochure.

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References

- **Gold Coast Institute of TAFE - QLD**

The "James Watt" Option Section J Deemed to Satisfy Analysis was completed to assist in the design of the facility.

- **Prince Charles Hospital - QLD**

A detailed audit was carried out under the "Alexander Graham Bell" option comparing air conditioning solutions using different product types focusing on the harnessing of waste energy to use elsewhere within the facility. This audit allowed the client to make a decision on future direction.

- **Harvey Norman – Adelaide and Toowoomba – QLD and SA**

The "Andre Ampere" Option JV3 Verification method was completed to assist in the design of the Harvey Norman facilities.

- **Narrabri Hospital - NSW**

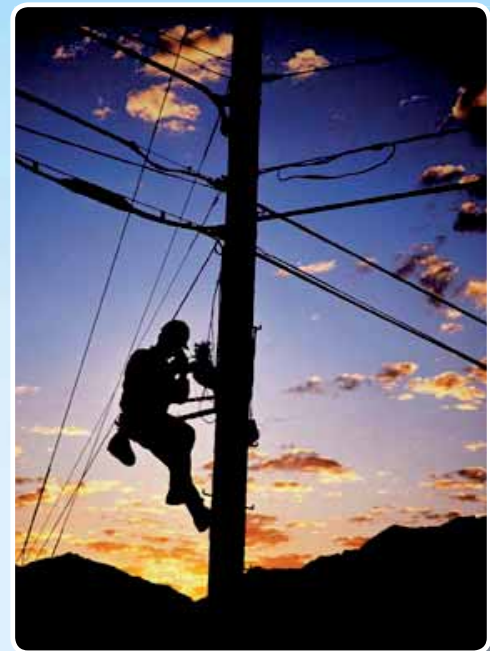
The "Heinrich Hertz" Option of the Green star programme covering Mechanical and Electrical components was completed to assist in the design of this new facility in New South Wales.

- **Network House – QLD**

The "Albert Einstein" Option covering a complete Green star submission was handled by the energymenu team to a commercial facility in Brisbane CBD.

- **Gladstone G80 Apartments**

The "Anders Celsius" Option JV1 was completed to assist in the design of this multi residential facility. Such a service has been completed to several similar facilities within Queensland.



Contact Us

For a personal introduction to the **energymenu** feature, please call us to arrange a visit. We cover all areas of Australia, including remote regions.

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