

6 star rating



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# ENERGEX BUILDING

## GREEN BUILDING COUNCIL AUSTRALIA OVERVIEW

The Green Building Council of Australia's mission is to define and develop a sustainable property industry in Australia and to drive the adoption of green building practices through market-based solutions.

The Council's objective is to promote sustainable development and the transition of the property industry to implementing green building programs, technologies, design practice and operations. To do this, it advances and promotes the creation of a green building rating tool, economic incentives, government initiatives and programs, new technologies and industry knowledge.

## CONTACT US

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## GENERAL PROJECT DESCRIPTION

FKP Property Group is the proud developer and constructor of Queensland's first Six Star Green Star Office Design commercial office development.

Located at 33 Breakfast Creek Road at the gateway to FKP's Gasworks development, the seven storey 31,875sqm office building will house the headquarters of Energex Limited - one of Australia's largest and fastest growing electricity suppliers.

The Energex building will demonstrate world leading ESD practice across a wide range of indicators including energy, water, materials, land use, transport and emissions.

## ENERGEX BUILDING GASWORKS NEWSTEAD

### Address:

33 Breakfast Creek Road, Newstead

### Owner:

FKP Property Group

### Design:

FKP Property Group (development management), Cox Rayner (architect), Cundall (sustainability consultant, electrical, mechanical and hydraulic), Connell Wagner (structural), Bornhorst & Ward Consulting Engineers (civil), Gray Robinson & Cottrell (quantity surveyor), FKP Construction (quantity surveyor, project management and construction).

### Design and Construct:

FKP Property Group Pty Ltd,  
FKP Construction Pty Ltd.

### Total NLA:

28,600 sqm

## MANAGEMENT

- The Energex building will incorporate design, construction and operational practices that significantly reduce or eliminate its negative impact on the environment and its occupants, including a comprehensive Environmental Management Plan certified according to ISO 14001 and recycling of at least 80% of construction waste.

## INDOOR ENVIRONMENT QUALITY

- The building incorporates three atriums and a number of outdoor balconies, providing excellent connectivity to the external environment with improved daylight levels and external views.
- An active chilled beam air conditioning system will provide fresh air at rates 150% above Australian Standards, with high air change effectiveness and no recirculation.
- Localised exhaust risers will remove contaminants at the source, and active humidity control will discourage mould from developing in ductwork.
- High indoor air quality is ensured by improved ventilation and reduced indoor pollutant emissions, as well as post-occupancy air quality monitoring.
- These features underpin anticipated health benefits for staff, increased alertness and productivity gains ensuring workplace which is responsive to changing office demands.

## ENERGY

- CO<sub>2</sub> emissions predicted to be cut by more than 2100 tonnes annually, equivalent to removing more than 520 cars from the roads.
- A high performance façade will incorporate low-e double glazing and a combination of horizontal and vertical external shading to reject excess solar heat gains and minimise cooling loads, while ensuring good levels of glare-free natural light.
- Active chilled beam air conditioning with heat recovery and high efficiency water-cooled chillers will reduce air conditioning energy consumption.
- Energy efficient fluorescent lighting with high frequency electronic ballasts will reduce eye strain from flickering.
- Lighting systems will be daylight integrated and zoned, cutting lighting energy when electric lighting is not required.
- Extensive post occupancy monitoring of energy use will allow areas of excessive consumption to be identified and further improvements to be made.
- Photovoltaic cells will generate about 10kW of clean renewable energy to help offset the building's energy needs.

## TRANSPORT

- Delivers outstanding access to existing and planned public transport infrastructure- Bowen Hills Railway Station, proposed City Cat terminal and provisions for Mass Transit Link.
- Reduced car parking and smaller parking spaces will encourage travel by less emissions-intensive modes of transport such as public transport or smaller, fuel-efficient cars.
- Cycling facilities including showers and lockers will be provided to 10% of staff and visitors to encourage cycling.

## WATER

- Reduced water use by 55%, by supplementing mains water use with harvested rainwater from the roof, as well as AC condensate. More than 200kL of rainwater storage will supply all of the toilets and landscape irrigation for the building.
- An innovative fire sprinkler testing system will reuse maintenance test water for the fire systems, rather than drain to sewer.
- Efficient fittings and fixtures will include 4.5/3L dual-flush toilet cisterns, low-flow taps and showers and waterless urinals.
- A smart landscape irrigation system uses moisture sensors to disable irrigation during rainy periods, and supplies stored rainwater to the plant root zone when required.
- As a result, water use will be cut by 38ML per year, equivalent to 38 Olympic swimming pools.

## MATERIALS

- Construction materials will have a lower environmental impact, with preference given to materials with a low embodied energy and high recycled content, targeting 90% of the steel with a high recycled content and a high content of industrial waste product in all concrete.
- During construction, 80% of waste will be diverted from landfill, and storage space will be provided for recycling operational waste.
- All refrigerants and insulants used will have an Ozone Depletion Potential (ODP) of zero; and an integrated refrigerant leak detection and recovery system will ensure that refrigerant does not leak to the atmosphere.
- All stormwater runoff will be filtered, reducing contamination of waterways by rubbish and gross pollutants.

## LAND USE AND ECOLOGY

- The wider 17ha Newstead River Park site is an abandoned gas works which has undergone extensive remediation to remove soil contamination, greatly improving the ecology of the site and allowing its reuse for residential, retail and community uses such as parkland.

## EMISSIONS

Compared to an average office in Brisbane, 33 Breakfast Creek Road is expected to:

- Reduce electricity consumption by 64%
- Reduce green house gas emissions by 64%
- Reduce potable water use by 55%
- The building will utilise non-ozone depleting refrigerants and insulants, and incorporate a leak detection and recovery system for refrigerants.

## OVERALL GREEN STAR BUILDING PERFORMANCE

