Canberra's Pathway to Net Zero: Electrifying Commercial Spaces

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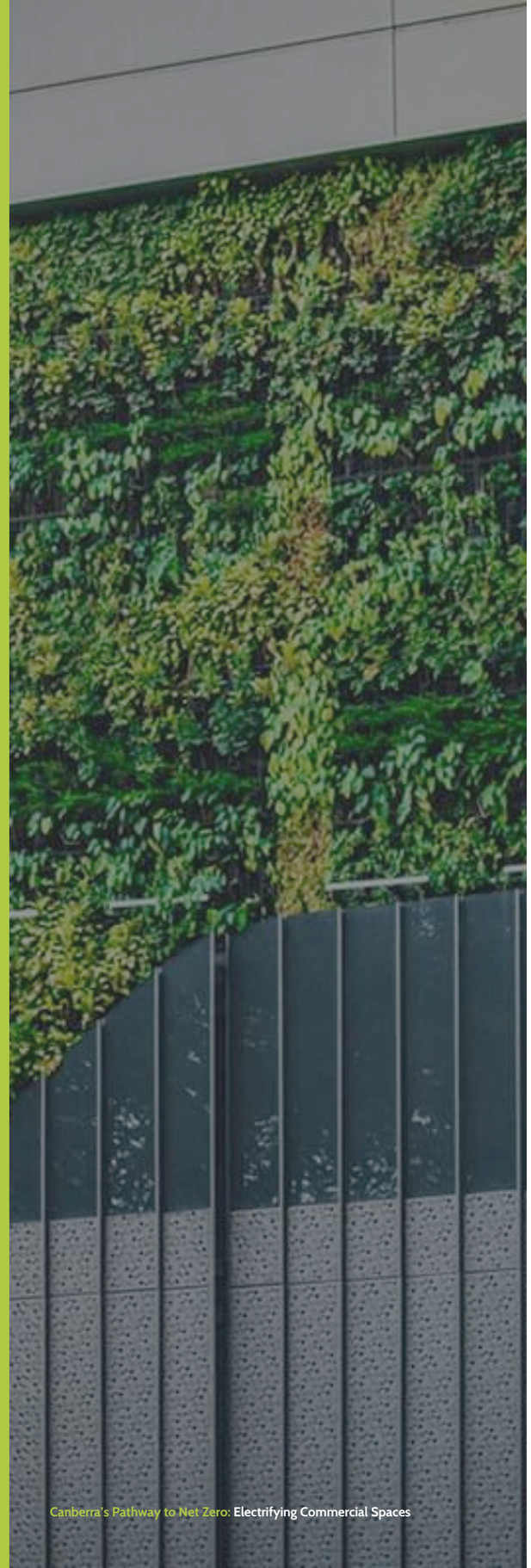

CANBERRA'S PATHWAY TO NET ZERO: ELECTRIFYING COMMERCIAL SPACES

This article examines the options and benefits of investing in electrifying existing commercial office buildings in Canberra, including key considerations for both landlords and tenants.

With the Australian government's billion dollar investments in decarbonising the grid, the electrification of commercial office buildings provides building owners and tenants with a clear pathway to achieve Net Zero operations.

In Canberra, the imperative to transition to all-electric buildings is pressing, with clear targets being set by both the State and Federal Government, including:

NET ZERO IN GOVERNMENT OPERATIONS

As outlined in the Australian Government's Net Zero in Government Operations Strategy, agencies are being encouraged to lease all-electric, energy efficient buildings, with a requirement to move to all electric buildings by 2040. The transition will be particularly relevant in the Canberra market where Commonwealth government tenants make up 66% of occupiers.

CANBERRA NET ZERO BY 2045

The ACT Government has set a target to be the first Australian city to reach Net Zero emissions and 100% renewable energy by 2045. A key part of the ACT government's plan to achieve Net Zero includes phasing out fossil fuels such as gas.

01

Pathway to electrification for commercial buildings: What needs to change?

Fossil fuels are commonly used in commercial buildings with applications ranging from natural gas to heat spaces, domestic hot water and cooking, as well as diesel for emergency or backup generators, and fire system pumps. Through technological advances, efficient, cost-effective electric alternatives are available with lower carbon intensity.

While many office buildings now achieve 5.5 Star and even 6 Star NABERS Energy ratings year-on-year, even the most efficient buildings still depend on gas for heating and hot water - making a pathway to Net Zero difficult to achieve.

As the ACT transitions away from fossil fuels such as gas, the supply of fuels and associated infrastructure is likely to become more expensive with price hikes passed on to both tenants and landlords through higher utilities costs.

02

Electrification now?

With the ACT having already achieved its 100% renewable electricity target, converting existing assets to electric will enable tenants and landlords to reach their Net Zero targets sooner.

Canberra building owners and tenants should aim to achieve 100% electrification as a priority for every building, but will need to consider the timing, remaining useful life of assets, and availability of capital to fund any electrification transition.

03

Benefits of early investment in electrification

While 2040 seems like a long time away, there are clear benefits and a strong investment case for building owners to start transitioning existing assets off gas now. Early investment in electrification can reduce whole-of-life costs, carbon emissions, and help to attract and retain tenants.

04

Reducing whole-of-life carbon

The Australian Government's Net Zero in Government Operations Strategy states that entities should consider the emissions that will be embodied in any new construction works associated with a new lease or fitout. According to the Australian Sustainable Built Environment Council (ASBEC), embodied emissions (i.e., those generated during the production, transportation, and construction of building materials and components) account for approximately 20-50% of a standard building's the total life cycle emissions, while operational emissions make up the remaining 50-80%.

EMBODIED EMISSIONS ACCOUNT FOR 20-50% OF THE TOTAL LIFECYCLE EMISSIONS

The stark level of embodied emissions a new build generates means that building owners and tenants should retain, adapt, and enhance existing assets as the 'greenest' option. Building owners should highlight the differences in carbon production to tenants and investors when they seek to make eco-friendly investment decisions.

05

Leveraging the advantage of location

A decisive factor in clients' search for office space is often the location, with many government agencies seeking spaces located close to the Parliamentary Triangle. Building owners with well-located assets that demonstrate a pathway to electrification by 2040 and can consistently achieve a 5.5-star or higher NABERS Energy rating annually, will be well-placed to secure long-term government tenants.

06

Smoothing cashflows

Electrification can be implemented in stages to allow for a more manageable and steady cash flow. The financial burden can be spread out over time and reduce the need for a large, upfront investment.

07

Realising cost savings

Planning for electrification can also help building owners take advantage of replacement opportunities as they arise, rather than waiting until the building reaches its end-of-life. Buildings require ongoing maintenance, and systems need replacing at their individual end-of-life. Taking the opportunity to switch to all-electric solutions will reduce the need to upgrade systems twice: first with like-for-like replacements, then with electrification when the building itself reaches end-of-life.

Savings will also flow through the operational costs. For example, items such as heat pumps carry higher installation costs, but provides a long-term benefit and saving through much more efficient operational costs. The process also decarbonises building operations earlier and demonstrates the electrification commitment to existing and prospective tenants.

08

Mapping out the pathway to electrification for existing buildings

In a building's lifetime, there are key points of opportunity to implement electrification projects, including:

END-OF-LIFE REPLACEMENTS:

When equipment is close to the end-of-life, change to all electric. Upgrades could include gas boilers and heaters, diesel generators, gas fired co-generation systems, as well as gas cooktops, and burners in tenant kitchens.

TENANT REFIT OR LEASE RENEWAL:

Remove all gas connections and change the new lease agreements to remove gas supplies to tenancies.

END-OF-TRIP FACILITIES:

Consider a dedicated localised electric heat pump system and water efficiency measures to reduce hot water demand, alongside point-of-use electric water heaters for bathrooms elsewhere in the building.

COMMON AREAS OR LOBBY UPGRADES:

Opportunity to undertake electrification works by integrating common or lobby areas into the overall capital works budget.

INFRASTRUCTURE UPGRADES:

Install electric vehicle chargers, renewable energy, and energy storage systems to review and enhance the electrical infrastructure for electrification of natural gas systems.

CONTINUOUS IMPROVEMENT:

Fine tune the building systems and controls to optimise energy efficiency and reduce peak demands, particularly during tenants' reduced occupation periods.

Building owners, operators, and tenants can work together to decide when electrification upgrades occur. By doing so, each can minimise operational impacts and optimise upgrades to reflect the occupancy of buildings for energy efficiency.

Conclusion

Building owners should develop a transition plan early for a clear roadmap to 100% electric buildings. A well-structured plan will demonstrate to tenants and investors a clear pathway to achieve Net Zero in operations.

Tenants seeking to enter a new lease should consider whole-of-life carbon impacts when assessing a building's 'sustainability' credentials, including embodied emissions.

How we can help

As leading infrastructure advisors **ConnellGriffin** and **MBM** are well equipped to support asset owners, operators and tenants to drive their decarbonisation targets.

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ConnellGriffin is a leading independent specialist infrastructure advisory firm working across the energy, social infrastructure, rail, disaster recovery, roads, ports and service contracts, and water.

Known for our expertise in commercial and contract management, we have organically grown to deliver services across the whole project lifecycle with our five service lines: Develop, Procure, Deliver, Resolve and Operate. We empower our clients by providing them with the knowledge and tools required for the successful delivery of their projects.

In 2024 we launched our Net Zero capability, helping our clients to drive decarbonisation outcomes by incorporating carbon management principles at every phase of the project lifecycle.

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