BTR SERIES PART 8: BTR AND SUSTAINABILITY—AN OPPORTUNITY TO DRIVE DECARBONISATION IN THE BUILT ENVIRONMENT

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In Part 8 of our build-to-rent (BTR) series, we highlight the significant opportunity for new build residential developments to adopt sustainability and energy efficiency initiatives in the BTR market in Australia and help drive decarbonisation in the built environment.

DUALITY OF CHALLENGES

As mentioned earlier in our series, the importance of BTR developments as an alternative to traditional residential leasing is mounting, particularly when viewed concurrently with the ability to unlock increased housing supply for renters, and potentially alleviate rental price growth.

At the same time, Australia's electricity system is in the midst of an energy transition that has been described as "… a once-in-a-generation opportunity to reshape our electricity system for the future". The National Electricity Market (NEM) (consisting of Queensland, New South Wales, the Australian Capital Territory, Victoria, South Australia, and Tasmania) is shifting from a centralised energy generation system to a "decentralised smart grid." With Australia's ageing fleet of coal-fired generators reaching the end of their life (becoming less reliable and closing), new and emerging generation, storage, and demand side management technologies are being connected and integrated to the grid.

The duality of these significant "once-in-a-generation" challenges in the Australian housing and energy markets provides a significant opportunity for industry to drive meaningful change in decarbonising the residential development sector.

Energy efficiency and energy management[1] will become one of the key means of reaching sustainability targets in Australia by 2030 and beyond, along with renewables and the decarbonisation of the means of production.

Importantly, it is becoming clear that a focus on sustainability will also be driven by generational shifts in attitude as much as, or perhaps even more than, policy or government intervention.

DECARBONISING THE BUILT ENVIRONMENT

To date, the energy transition has mainly focused on supply-side initiatives, including replacing carbon intensive electricity generation with more economical new build generation in the form of renewables together with firming capacity in the form of storage.

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Addressing the other side of the energy consumption equation (i.e., demand-side management) will result in meaningful abatement in consumption. This will in turn translate into a reduced need for the high levels of new build generation assets.

A report on the global energy efficiency market by the International Energy Agency (IEA) describes energy efficiency as a “hidden fuel,” one that extends energy supplies, increases energy security, lowers carbon emissions, and generally supports sustainable economic growth.

> “Not since the founding of the IEA in 1974 has the need for a coordinated effort on energy efficiency to reduce wasteful and inefficient use of energy been so great. No other energy resource can compare with energy efficiency as a solution to the energy affordability, security of supply and climate change crises. This is why the IEA calls energy efficiency the "first fuel" of all energy transitions.”[2]

Stephen Chu, the former US Secretary of Energy, has said that “energy efficiency is not just low hanging fruit; it is fruit that is lying on the ground.”

The IEA believe that energy efficiency needs to be considered as a fuel, alongside oil, gas, or renewable energy, even though it cannot be seen or transported as with other energy commodities. The IEA has concluded that “the significant potential of energy efficiency is still far from being realised.”

Energy efficiency measures in new build developments or retrofit are designed to reduce a building's electricity and gas usage, water usage, and waste management as well as regenerate the indoor environment.

At a high level, these benefits include electricity and gas cost savings, protection of competitiveness, meeting climate change targets, and addressing energy security concerns.

INVESTMENT CASE

The requirement for novel financing solutions in a growing energy efficiency sector presents a distinctive opportunity for investors. The market holds significant potential but in order to achieve this, a key focus is supporting the finance market.

In terms of the level of capital expenditure invested into energy efficiency initiatives globally, the IEA reported that:

> “Since 2020, governments worldwide have helped mobilise around US$1 trillion for energy efficiency-related actions such as building retrofits, public transport and infrastructure projects, and electric vehicle support. This amounts to approximately US$250 billion a year being deployed from 2020 to 2023, equivalent to two-thirds of total clean energy recovery spending.”[3]

Barriers

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Despite the clear benefits to the private and public sector of implementing energy saving measures, it remains an under-invested market. The key reasons for the lack of investment to date have been a lack of expertise, available funding, and time resources. Energy efficiency investment requires high upfront expenditure with a medium to long-term payback period–often irreconcilable with other priorities.

For larger projects, which often have a higher financial saving potential, property owners are frequently unwilling or unable to finance them themselves as they are either cash constrained or they do not want to bring external finance onto their balance sheets.

Drivers

From an equity perspective, a greater uptake of a portfolio approach to energy management in this sector by developers and owners of buildings can result in increased return on investment. Many market analysts expect power prices to continue to rise in both real and nominal terms as the generating capacity of the NEM is transformed, with older coal capacity being replaced by gas, renewables, and storage. Medium-to-long term energy power price forecasting for electricity and gas indicates sustained volatility with real power prices steadily increasing. In addition, the demand for electricity is forecast to increase over time, even as increased energy efficiency counters the natural trend for ever-increasing electricity usage.

It is clear that the untapped economic potential of energy efficiency remains considerable. Decarbonising the buildings sector, whether new build or retrofit, will be vital if sustainability targets are to be met.

INSIGHTS INTO ENERGY PERFORMANCE CONTRACTING

One way of implementing energy efficiency projects is to consider an energy performance contract (EnPC) arrangement with an energy service company (ESCO).

The EnPC structure typically involves an ESCO being engaged by the developers or owners of new build developments or existing buildings to improve the energy efficiency of such buildings. The improvements are commonly referred to as energy conservation measures for the operation of the building and include, as an example, the following types of interventions:

- *Building Management*: new or upgraded building management system; smart energy products including smart technology solutions that make use of artificial intelligence, data analytics, and Internet of Things;
- *Electricity Saving Measures:* LED lighting; air handling unit upgrades; variable speed drives;
- *Cooling and Heating Saving Measures:* Air conditioning systems; sustainable window systems; boiler optimisation; valve insulation; and
- *Renewable Technologies:* Rooftop solar; storage (including batteries); biomass boilers; combined heat and power networks.

Importantly, the ESCO provides the developer / owner with a guaranteed energy savings paying for the capital investment required to implement improvements.

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Under a performance contract for energy saving, the ESCO examines a facility, evaluates the level of energy savings that could be achieved, and then offers to implement the project and guarantee those savings over an agreed term. Such an arrangement may also allow the assets under the EnPC to be kept off-balance sheet.

There are several options for financing an EnPC, each with particular characteristics that may appeal to owners' varying needs and constraints. Key considerations include: financing term; balance sheet treatment of the assets; costs of capital; ease of accessing capital, and transaction costs.

AN INTERNATIONAL PERSPECTIVE

Energy prices are one of the key factors driving expansion of the energy efficiency market. Lowering record-high consumer bills and securing reliable access to supply is a central political and economic imperative for almost all governments. As countries around the world wrestle with climate change, carbon reduction initiatives are also stimulating change in the approach of organisations and individuals to energy efficiency. Carbon taxes can improve the viability of projects that might otherwise have an unacceptably long payback period.

With many countries facing dwindling domestic fuel reserves, fuel security has also become an issue for governments. The geopolitical implications of being increasingly dependent on foreign, sometimes unstable or unfriendly, regimes is an unappealing prospect for politicians designing national energy strategies. Improving energy efficiency, and thus maintaining a level of output for less energy, is an attractive solution to the fuel security issue.

Europe

A leading example of international policy promoting demand-side energy market participation, energy efficiency is one of the cornerstones of EU energy policy. The European Union has implemented the “energy efficiency first” guiding principle in European climate and energy policies for many years.

The “energy efficiency first” guiding principle considers energy efficiency as a source of energy in its own right and as a “first fuel” in planning processes and investment decisions. It has been an essential element of the energy union and the “Clean energy for all Europeans” package. In the European Green Deal package, adopted in July 2021, the European Commission proposed to incorporate the principle as a legal provision in the Energy Efficiency Directive.

In addition to the above, REPowerEU is a plan adopted by EU leaders in the European Council[4] in May 2022 to phase out Europe's dependency on Russian energy imports as soon as possible by rapidly reducing dependence on Russian fossil fuels through fast forwarding the clean transition and joining forces to achieve a more resilient energy system and a true energy union.

It was noted by the European Council that:

> “Savings are the quickest and cheapest way to address the current energy crisis. Reducing energy consumption cuts households’ and companies’ high energy bills in the short and long term, and decreases imports of Russian fossil fuels. Reducing energy consumption through higher efficiency is a vital component of the clean energy transition which increases the resilience of the EU economy and shields its

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> competitiveness against high fossil fuel prices."[5]

United Kingdom

Given the politically sensitive nature of energy supply and pricing combined with issues around the United Kingdom's electricity generation capacity, reliance on overseas energy imports and binding EU CO2 emission requirements the UK government have been supportive of the energy efficiency agenda. The formation of an Energy Efficiency Deployment Office and a number of subsidy initiatives have given confidence in long-term support for the sector.

> "Measures that reduce [energy] demand can contribute in a more cost-effective way to meeting our energy and climate goals than supply-side measures. That's why energy efficiency – as a way of reducing demand – takes pride of place at the centre of the Government's policy framework."[6]

Case Study—UK Private Equity Fund

Members of our team have been involved in structuring, establishing, and launching an innovative energy efficiency fund in the private equity sector in the United Kingdom. Deploying unique finance mechanisms, thought to be the first of its kind in the United Kingdom, the fund supported businesses that provide energy efficiency services in commercial and industrial properties, including hotels, logistics centres, industrial facilities, schools, and hospitals.

A key feature of this fund structure involved investment in special purpose vehicles (SPVs) financing energy savings performance contracts, where energy saving equipment was retrofitted into existing buildings and infrastructure. The investment in the equipment and associated installation is made by the SPV in return for a share of the savings generated for a contracted period of time. It is this share of the savings that repays the initial capital outlay and generates the SPV's project returns.

FOOTNOTES

[1]Examples of demand-side management / energy efficiency include: energy savings performance contracts; energy supply contracting; off-site power purchase agreements; balancing services arrangements; flexible supply contracts; smart metering; and sustainable supply chain management.
[2] International Energy Agency: Energy Efficiency 2022, Page 19. International Energy Agency Website: www.iea.org
[3] International Energy Agency: Energy Efficiency 2022, Page 12. International Energy Agency Website: www.iea.org
[4]European Council Conclusions (24 and 25 March 2022)

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[5] COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE EUROPEAN COUNCIL, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS REPowerEU Plan COM/2022/230 final, page 3.
[6] DECC – 'The Energy Efficiency Strategy: The Energy Opportunity in the UK'

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