Real Assets Quarterly: The just transition.

December quarter, 2021

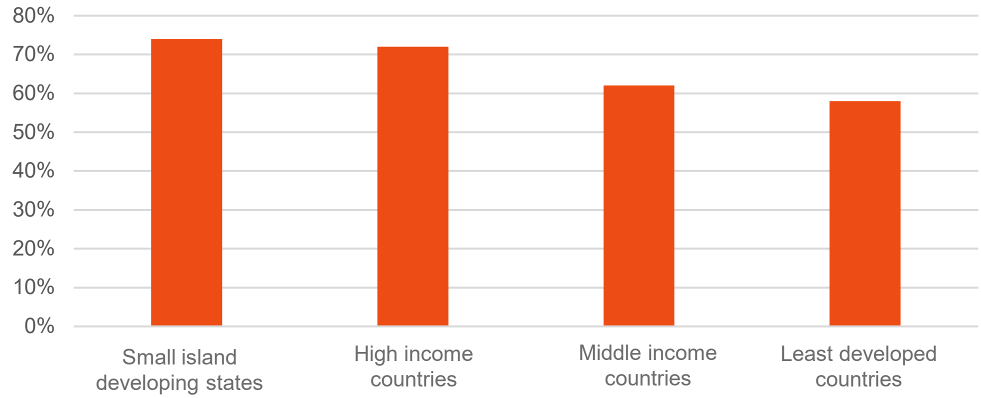
frontier

The climate imperative

Addressing climate change.

Consensus on the impact and importance of addressing climate change continues to solidify. The Intergovernmental Panel On Climate Change's (IPCC) sixth report reiterated its previous findings; "it is unequivocal that human influence has warmed the atmosphere, ocean and land". The IPCC's assessment is also supported by the majority of populations across the world, as was indicated by a survey of 1.2 million people spanning 50 countries (Chart 1).

Chart 1: Public belief in the need for climate action



Source: UN Development Program People's Climate Vote 2021

At the UN Climate Change Conference 26 (COP26), around 200 countries reinforced the message that it is not only the responsibility of governments but also businesses and individuals to address climate change. In doing so, entire economies must transition away from high 'greenhouse gas' (GHG) emitting activities.

Global commitments towards de-carbonisation were first broached in the 1922 RIO Earth Summit and were accelerated in the Kyoto Protocol of COP3. To limit global warming to 1.5 degrees Celsius, the world must halve emissions by 2030 and reach net zero by 2050. Today, country-level net zero carbon emissions targets cover over 70% of global emissions.[1] Over 70% of Australia's two-way trade is also expected to occur with countries that have net zero targets around 2050.[2]

These commitments also extend into the financial community, with AustralianSuper, Lendlease, Aware Super, Cbus Super, HESTA, IFM Investors and UniSuper, amongst others, making public commitments to target net zero across their portfolios.

Although there are other sources of emissions, the primary focus of reducing GHG emissions is typically transitioning away from burning fossil fuels and towards zero-emission sources of energy, such as renewables. While these efforts are intended to halt the damaging physical impacts of climate change, there is an increasing awareness of the implications the transition can have on certain communities. Addressing these socio-economic challenges is termed the 'just transition'.

[1] Climateactiontracker.org

[2] Investor Group on Climate Change (IGCC)

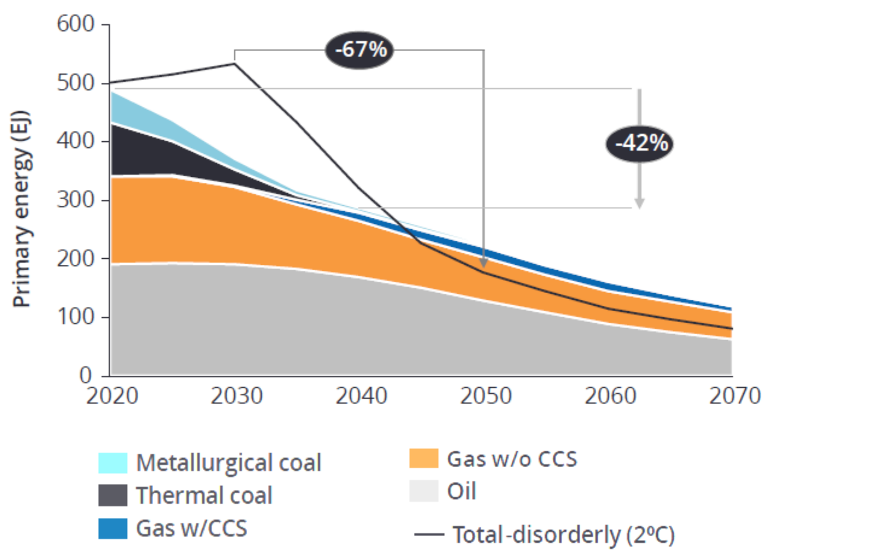
The energy transition

The evolution of energy markets.

To avoid the worst physical consequences of global warming, the global economy now needs to decarbonise rapidly due to general inaction over previous decades. Given the proportion of total GHG emissions accounted for by the energy sector, the decarbonisation of energy systems is key to this (Chart 2).

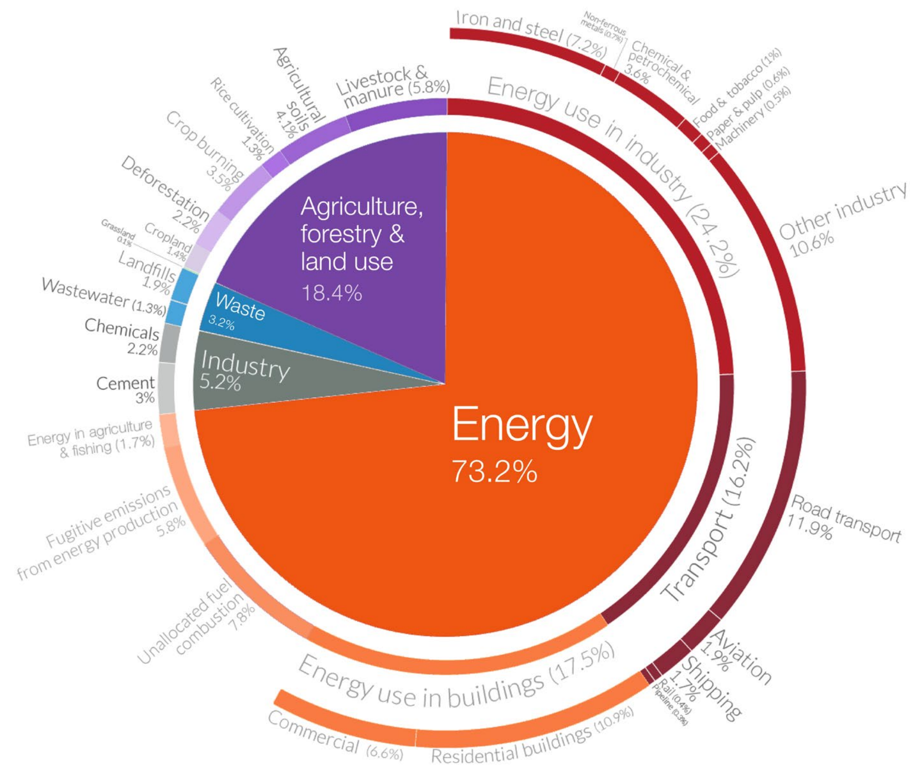
Central to the pathway towards decarbonisation is the phasing out-of fossil fuels in energy production as these emit large amounts of GHGs. This should result in significant reductions in global demand for coal, gas and oil, although forecasting the pace of decline is challenging (Chart 3).

Chart 3: Global primary fossil fuel demand (orderly and disorderly scenarios)



Source; IGCC, Network of Central Bank and Supervisors for Greening the Financial System

Chart 2: Global greenhouse gas emissions by sector (2016)



Source: Our World in Data; Climate Watch, the World Resources Institute (2020).

The just transition

What is the just transition and why is it important?

A just transition combines climate action with holistic consideration of the broader implications on society, including the existence of quality jobs and sustainable communities. Given the impacts on society, supporting a just transition is central to an investor's social license to operate.

While well-known agreements and accords are often cited in reference to climate change, the principle of a just transition underpinning climate action is often overlooked. For example, the 2015 Paris Agreement calls out the need for pathways towards low GHG emissions. The Paris Agreement also pairs this requirement with plans for equity and decent jobs aligned with national development priorities. However, the latter element of the agreement (contained in article 2) is not often referenced.

Australia exports A$120 billion of coal and gas annually[1] and approximately 2% of Australia's total workforce is employed by coal mining, oil and gas extraction, and other associated industries[2]. If energy systems do transition, the potential impact on employment may be three times the job losses associated with the 2017 closures of car manufacturing in Australia[3].

To avoid social dislocation and potential adverse reactions from the community, it is beholden on governments, businesses, investors, and unions to work collaboratively.

> "South Africa's power system was originally set up around coal generation, mining and extraction. Renewable energy is deployable and cost effective in the region. In fact, South Africa has a great track record and there is a wonderful auction system in place. Indeed, in many ways, the South Africans have led the way in lots of aspects of scaling up renewable energy. But, at the same time, reducing coal fired consumption has knock on implications, politically and economically, that must be taken into account. So, a just transition really means contributing to solutions in a holistic way that takes on board the specific context of the country where you are operating. We think, not only in terms of the clean energy we are providing, but also about the jobs we create, the training we provide, investment in local communities and about long-term livelihood transformation. It isn't about spending money on handing out blankets to a nursery school or football shirts for the local team, it is about taking a long-term view on sustainable development. We drive and measure the impact that we have using our Actis Impact Score and Multiple methodology, which is externally verified, available and open source."
>
> Actis Head of Energy Infrastructure, Lucy Heintz, quoted in Infrastructure Investor Magazine

[1] Department of Industry, Science, Energy and Resources 2019.

[2] Australian Bureau of Statistics 2016.

[3] Stanwick et al., 'The end of car manufacturing in Australia: What is the role of training?', National Centre for Vocational Education Research.

The just transition

Real assets investors have a significant role to play in a just transition.

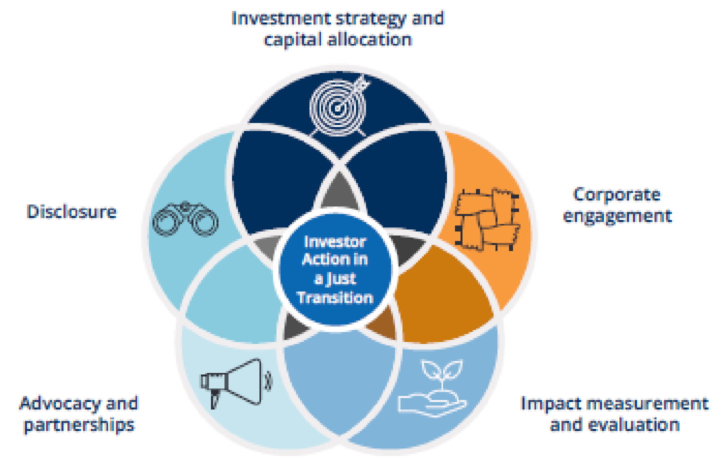
Given action to protect the climate is already occurring in a material way, there is likely to be an increasing push from workers, unions and governments to support a just transition. This may have direct reputational and political consequences for investors with exposure to impacted communities.

The Australian Council of Trade Unions is calling for a Just Transition Authority to help undertake planning, invest in re-skilling and redeploying workers, and to help diversify the economies of impacted communities. Although a formal body is yet to be implemented, it is possible that investors are faced with increasing regulation.

Real assets investors can proactively support the just transition in several ways:

1. **Investment strategy** – directing capital towards a sustainable economy, factoring in both environmental and social implications.
2. **Disclosure** – pushing for and producing more regular and transparent reporting and policy documents.
3. **Engagement** – interacting with investee companies to promote consideration and risk mitigation
4. **Advocacy** – utilising influence and partnering to advocate for action and to facilitate investment opportunities.
5. **Impact measurement and evaluation** – monitoring and assessing value creation, including measures of financial, environmental and social impact.

Chart 4: Just transition focus areas for investors



Source: IGCC

The just transition

Private investment has both risks and benefits.

The transition can create opportunity for savvy investors.[1] Supporting a just transition could also reinforce a positive public image and brand.

Driving investment into emerging industries can help create opportunities for re-deploying workers. Wind, solar and hydrogen energy are potentially lucrative investment opportunities that will also need skilled workforces. Businesses can also look to diversify revenue streams, which may enhance long-term financial resilience and therefore value.

For real estate investors, understanding the potential transition risks and credit quality of tenants may become increasingly important. Investors in the residential market may need to implement policies to consider how they will treat impacted workers. Broader implications for local economies will also need to be understood.

While some may focus on potential downside risks, a more comprehensive approach will contemplate potential benefits. For example, emerging industries may create more economic activity and jobs than those they displace.

Equally, a focus on embodied carbon in construction could increase the quantum of domestic manufacturing opportunities, and drive innovation in less carbon-intensive building materials. This could benefit the construction and logistics industries.

However, it is often difficult for institutional investors to direct capital specifically to just transition projects. This is because these projects are typically small, fragmented and have significant reliance on governments and other stakeholders. The impacts are also not always immediately evident (e.g. solar farms are often built-in different locations to coal mines), meaning it can be difficult to identify how the project supports a just transition. Equally, it can be difficult to underwrite additional capital expenditure in a competitive market.

> "The long-term outlook for coal is an existential threat to the Port of Newcastle and the Hunter region. We have to prepare for the further decline of coal as an energy source, but we see this as a huge opportunity. While world demand for our coal is beyond our control, our ability to invest in new sources of growth and innovation is not. The region is about to undergo another round of transition that is just as important, if not more important, than the closure of the blast furnace. It will define the region for decades to come. If it isn't able to make the Port part of that transition, there will be much greater difficulty in fulfilling the region's enormous potential in the development of its advanced manufacturing agribusiness and renewable energy capability"
>
> Chair of Port of Newcastle, Roy Green, quoted in Australian Institute of Company Directors Magazine

[1] Frontier International #56 discusses this opportunity in more detail. Link: https://www.frontieradvisors.com.au/wp-content/uploads/2021/12/Frontier-International-56-Infrastructure.pdf

The just transition

Summary.

The transition away from carbon intensive energy systems and activities continues to gather momentum globally. Governments, businesses, investors, and individuals are increasingly adopting net zero targets that will likely see an acceleration in this trend. While the transition is a global imperative, consideration needs to be given to the holistic implications for the broader community.

Traditionally, just transition has been a consideration left to governments (with varying levels of success). Intuitively, private capital can help in this regard.

Investors need to be mindful of potential reputation, political, social, economic, and possible legal risks associated with the energy transition. Utilising the principle of a just transition may help mitigate these risks. Equally, a just transition will help promote a more sustainable and prosperous society, limiting the potentially damaging implications of poorly considered policies and targets. For example, it should help make the move to a lower carbon economy smoother by proactively ensuring that vulnerable parts of society are not left behind. If a realistic and fair option for affected communities can be formulated, there will likely be less political pushback.

Although there are potential downside risks associate with the energy transition, there are also potential options available for investors to allocate capital to help promote economic and jobs growth, while concurrently benefitting from structural tailwinds to achieve robust financial returns.

In order to limit the impacts of a potential social dislocation, a high level of collaboration, advocacy, engagement, disclosure and transparency will be required. While this remains a significant task to effectively achieve and the process to do so is by no means straightforward , the Australian institutional investment community has a track record of working together to promote collective outcomes.

Property performance

Performance to 30 September 2021

Property performance

Performance to 30 September 2021

	1 year return			Total returns						Index composition		
	Income	Capital	Total	3 years % p.a.	5 years % p.a.	10 years % p.a.	15 years % p.a.	20 years % p.a.	25 years % p.a.	Assets	Value A$m	%
All Australian property	**4.9**	**3.8**	**8.9**	**5.7**	**8.0**	**9.3**	**8.7**	**9.8**	**9.9**	**1,353**	**195,351**	**100**
Retail	5.3	-1.1	4.2	-1.4	2.6	6.2	6.5	8.8	9.1	340	61,283	31
Office	4.7	2.9	7.7	8.7	10.7	10.8	9.6	9.9	10.0	311	92,531	47
Industrial	4.9	18.2	23.9	16.2	14.0	13.2	10.6	11.4	11.8	456	29,285	15
Others	4.5	14.0	19.0	11.1	12.3	13.0	12.1	-	-	254	13,621	7
Retail - Australia												
Super regional and major regional	4.9	-1.5	3.4	-3.0	1.6	5.0	6.0	8.4	8.7	62	33,474	17
Regional	6.5	-0.3	6.1	-2.1	1.7	5.9	6.4	8.6	8.7	26	5,233	3
Sub regional	6.4	1.0	7.4	0.7	3.7	7.4	6.9	9.4	9.7	64	8,290	4
Neighbourhood	5.8	4.8	10.8	3.3	5.3	8.6	7.4	9.5	10.5	62	3,044	2
Other	4.9	-3.2	1.6	0.9	4.5	8.0	8.4	-	-	125	11,065	6
Office - Australia												
Premium grade CBD	4.9	2.4	7.4	8.0	9.8	10.4	9.6	9.9	9.9	64	32,595	17
Grade A CBD	4.5	2.4	7.0	8.5	10.9	10.7	9.6	9.8	9.7	112	41,578	21
Grade B CBD	4.2	4.1	8.4	8.1	11.8	11.4	9.8	10.7	10.4	22	2,631	1
Non CBD	5.0	5.6	10.8	10.8	11.7	11.5	9.8	10.0	10.6	94	14,014	7
Industrial - Australia												
Warehouse	4.6	19.3	24.8	16.5	14.3	14.3	11.5	12.1	12.1	170	8,847	5
Distribution	5.0	16.6	22.4	16.0	13.6	12.7	10.7	11.8	11.8	157	12,083	6
Industrial estate	5.0	21.2	27.1	16.8	15.0	13.1	9.8	10.7	11.9	34	3,065	2
International unlisted												
IPD UK All Property	5.3	7.9	13.6	4.4	6.6	7.9	4.7	7.1	6.1	N.A.	N.A.	N.A.
IPD Europe Ex-UK	1.7	3.6	5.4	7.8	8.2	7.1	6.6	6.7	N.A.	N.A.	N.A.	N.A.
NCREIF US Property Index	N.A.	N.A.	12.2	6.7	6.8	9.0	7.1	8.4	9.2	N.A.	N.A.	N.A.
REITs												
S&P/ASX 300 AREIT	N.A.	N.A.	30.7	9.2	7.7	13.5	3.6	6.9	8.0	N.A.	N.A.	N.A.
FTSE EPRA GREIT $A (H)	N.A.	N.A.	29.1	4.8	4.4	10.1	4.5	N.A.	N.A.	N.A.	N.A.	N.A.

Source: Bloomberg, NCREIF, MSCI, Frontier

Note: AU, US and UK data to 30 September 2021, EU data to 31 December 2020

Transactions

Key property transactions

Recent Australian property transactions

Key transactions – Q3 2021

Asset	Location	Grade/type	AUD ($m)	Yield	Buyer	Seller
Major office transactions ($200m+)						
Melbourne Quarter Tower, 681 Collins Street	Melbourne	A Grade	1,200	4.65%	NPS	Lendlease
200 George Street, EY Centre (50%)	Sydney	Premium	578.5	4.40%	M&G Real Estate & Mirvac	AMP Capital
Capital Square Tower 1, 98 Mounts Bay Road (49%)	Perth	Premium	475.3	5.10%	Dexus	AAIG
1 Woolworths Way, Bella Vista	Sydney	A Grade	455	5.17%	AIMS APAC REIT	Inmark AM
50 Marcus Clarke St	Canberra	A Grade	300	5.50%	CHC & GIC	Mirae
275 George Street (50%)	Brisbane	A Grade	264	5.00%	Charter Hall Prime Office Fund	Keppel REIT
2 Locomotive Street (49%)	Sydney	A Grade	231	4.75%	SunSuper	Mirvac
307 Queen Street	Brisbane	A Grade	214.5	-	Fortius & PGIM Real Estate	LaSalle
101 Moray Street	Melbourne	A Grade	205	4.90%	Centuria Office REIT	Deague Group

Source: CBRE, Cushman & Wakefield, CIP AM, AMP, Lendlease, Knight Frank, press releases

Recent Australian property transactions

Key transactions – Q3 2021

Asset	Location	Grade/type	AUD ($m)	Yield	Buyer	Seller
Major retail transactions ($100m+)						
Macquarie Centre (50%)	Sydney	Neighbourhood Retail	2,200[1]	4.50%	Cbus Property, UniSuper, & AMP Capital	ADIA, CPPIB, AMP Life Property Fund
Pacific Fair (80%)	Gold Coast	Neighbourhood Retail	2,200[1]	4.75%	CBUS, UniSuper & AMP Capital	ADIA, CPPIB, AMP Life Property Fund
Casuarina Shopping Centre	Darwin	Neighbourhood Retail	420	6.25%	Sentinel	GPT
Wollongong Central	Wollongong	Neighbourhood Retail	402	6.00%	Haben & JY Group	GPT
Harbour Town Shopping Centre (50%)	Gold Coast	Outlet	358	5.00%	Vicinity	Lendlease
Roselands Shopping Centre (50%)	Sydney	Neighbourhood Retail	167	6.30%	JY Group	CIP AM
Mount Pleasant Centre	Mackay	Neighbourhood Retail	162.5	6.40%	Fawkner	CBA Super
Stockland Bundaberg	Bundaberg	Neighbourhood Retail	140	6.75%	MA Financial	Stockland
Runaway Bay Shopping Centre (50%)	Gold Coast	Neighbourhood Retail	128	6.50%	Greenpool Capital & Qualitas	Perron Group

[1]The $2.2b sale price reflects a combined value for both the 50% stake at Macquarie Centre (NSW) & 80% stake at Pacific Fair (QLD).

Source: CBRE, Cushman & Wakefield, CIP AM, AMP, Lendlease, Knight Frank, press releases

Recent Australian property transactions

Key transactions – Q3 2021

Asset	Location	Grade/type	AUD ($m)	Yield	Buyer	Seller
Major industrial transactions ($50m+)						
52 Lisbon St, Fairfield	Sydney	Industrial	200	3.75%	Centuria Industrial REIT	AMP Capital
884-928 Mamre Rd, Kemps Creek	Sydney	Industrial	125	3.96%	Dexus	Altis
262 Lorimer St, Port Melbourne	Melbourne	Industrial	82	3.68%	Institutional Investor Group	Jreissati Family
235-239 Boundary Rd, Laverton North	Melbourne	Industrial	73	3.80%	GPT Group	-
300 Richmond Rd, Netley	Adelaide	Industrial	71	4.42%	Charter Hall	MTS Property
2 Maker Pl, Truganina	Melbourne	Industrial	69	4.00%	Dexus	McPhee Distribution Services
26-38 Harcourt Rd, Altona	Melbourne	Industrial	63	4.35%	Lendlease	Mirvac / Morgan Stanley
2580 & 2596-2602 Ipswich Rd, Darra	Brisbane	Industrial	60	3.77%	Fife Capital	Denmac
47-67 Westgate Dr, Altona North	Melbourne	Industrial	54	4.25%	Lendlease	Mirvac / Morgan Stanley
22 & 72 Hyne Rd, South Guildford[1]	Perth	Industrial	51	8.58%	Charter Hall (DIF4)	-

[1]Includes an 8,354 sqm development site

Source: CBRE, Cushman & Wakefield, CIP AM, AMP, Lendlease, Knight Frank, press releases

Transactions

Key infrastructure transactions

Notable infrastructure transactions

Key transactions – Q3 2021

Region	Transaction	Sector	Vendors	Equity providers	AUD ($m)	Description
Australasia	Gladstone LNG	Energy	Total Energies	Global Infrastructure Partners	1,004	LNG project including a 400km gas transportation system to the Port of Gladstone
	Vocus	Telecom	Vocus	MIRA; Aware Super	4,600	Vertically integrated telecommunications service provider focuses on home broadband and dark fibre business.
	Tilt Renewables (65.15%)	Renewables	Infratril	Mercury; Powering Australian Renewables Fund	2,900	Eight wind farms across Australia and New Zealand
	Amplitel InfraCo Towers (49%)	Telecom	Telstra	Future Fund; SunSuper; Commonwealth Superannuation Corporation	2,800	Telstra's mobile telecommunications towers portfolio.
Europe	CEZ Romanian Distribution and Renewables Portfolio	Power	CEZ	Macquarie European Infrastructure Fund 6	1,586	Seven of CEZ's electricity distribution and renewable energy subsidiaries in Romania.
	Fortum Baltic District Heating Portfolio	Energy	Fortum Corporation	Partners Group Direct Infrastructure	1,264	District heating networks in Estonia, Latvia and Lithuania
	Polkomtel Infrastruktura	Telecoms	Cyfrowy Polsat	Cellnex Telecom	2,536	Cyfrowy Polsat's mobile tower business
	Sicily Cruise Ports Concession	Transport	Port Authority of Western Sicily	Mediterranean Shipping Company; Costa Crociere S.p.A	1,039	Four cruise ports in Sicily under a 30-year contract.
	Helia Renovables	Renewables	Helia Renovables; Plenium Partners	Northland Power	1,693	Helia Renovables 581MW wind and solar portfolio

Source: Inframation

Notable infrastructure transactions

Key transactions – Q3 2021

Region	Transaction	Sector	Vendors	Equity providers	AUD ($m)	Description
Europe	Southern Water	Environment	Management	Macquarie Super Core Infrastructure Fund	1,904	Public wastewater collection and treatment in Southern UK
	Parmaco	Social Infrastructure	Metric Capital; Sung Hung Kai & Co; Terra Firma	Partners Group Direct Infrastructure 2020	1,604	Finnish portable building provider
	Stockholm Exergi District Heating Network (50%)	Energy	Fortum Corporation	Alecta; AXA Investment; APG Group; PGGM; Finnish Local Government Pensions Institution	4,687	Swedish district heating network
	Grandir	Social Infrastructure	Bpifrance; Eurazeo Group; Jean-Emmanuel Rodocanachi	InfraVia European Fund V	1,284	French nursery group
	Adapteo	Social Infrastructure	EQT Public Value Investments; Fjarde AP4-Fonden	West Street Global Infrastructure Partners III AIV	2,005	Modular and circular building developer based in Sweden
North America	Enwave Energy US (CenTrio)	Energy	Brookfield Asset Management	(QIC); Ullico Infrastructure Master Fund	2,565	Residential heating and cooling services customers in the US and Canada
	FirstGroup NA Student Busing	Transport	First Group	EQT Infrastructure Fund V	6,264	Contract public transit and paratransit services, transit management services and transit consulting throughout North America
	Sol Systems Shovel-Ready Renewable Energy	Renewables	Sol Systems	KKR Global Infrastructure Investors III	1,355	Shovel-ready renewable energy projects across the US
	Sila Realty Trust 29 US Data Centers	Telecom	Sila Realty Trust	Mapletree Industrial Trust	1,793	29 Data centers in the US

Source: Inframation

Notable infrastructure transactions

Key transactions – Q3 2021

Region	Transaction	Sector	Vendors	Equity providers	AUD ($m)	Description
North America	Elawan Energy Sale (80%)	Renewables	ACEK Renewables	Orix Corporation	1,230	Vertically integrated renewables developer
	Brookfield Renewable Wind Farm Portfolio	Renewables	Brookfield Renewable Partners	NextEra Energy	1,008	391 MW portfolio of wind farms in California and New Hampshire
	REIT QTS Realty Trust Data Center	Telecoms	QTS Realty Trust	Blackstone	13,686	Data center assets in Kansas
	WideOpenWest (WOW) Ohio	Telecoms	Crestview Partners	Congeco Communications	1,696	Operator of cable television and broadband internet networks across the US
	Inter Pipeline	Energy	Inter Pipelines	Brookfield Infrastructure Fund IV	14,470	Energy infrastructure across Western Canada and Europe
	GTT Communications Data Center	Telecoms	GTT Communications	ISQ Global Infrastructure Fund III	2,956	Data center network of assets across Europe and North America
	Atlantic Aviation	Transport	Macquarie Infrastructure Corporation	KKR; KKR Global Infrastructure Investors IV	6,141	Fixed-base operator across 60+ airports in the US

Source: Inframation

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