



Green bonds

The biggest investment theme of our generation is underway, with estimates that globally \$5-7 trillion in capital will need to be deployed annually by 2030 into decarbonisation for alignment with the 1.5 deg Paris agreement¹. In 2022 for the first time ever, clean energy attracted as much capital as new fossil fuel investments and over 2023, clean energy investment was estimated at a record \$1.7 trillion – out of a total of \$2.8 trillion invested in energy for the year².

This has given rise to a 'green industry race' between the United States and the European Union as both regions implement generous green subsidy programs to incentivise investment and innovation in renewable technologies. Globally, countries are intent on securing positions in the nascent supply chains that will challenge the dominance of China in this new industry, for both economic and national security reasons.

Financing by governments and companies to deploy green capital at scale is fundamentally changing the landscape of capital markets, sparking innovation in financial structuring. Large-scale renewable energy infrastructure lends itself to higher gearing, with longer pay-off period and a lower, but more predictable, return on capital than fossil fuel investments.

In this environment Green, Social, Sustainability, Sustainability-linked and transition bonds (GSS+) are ideally suited to be a key pillar of the funding mix. For the Australian Sustainable Finance market, a red-letter day is fast approaching with the federal government's office of financial management (AOFM) recently announcing that the first Green Treasury Bond will be issued between April and June 2024, carrying a June 2034 maturity date.

The GSS+ Bond Market Today

Last year about US\$858 billion was issued – steady from the previous year in being a 5% share of the global bond market according to the Climate Bonds Initiative³. Green Bonds were the largest share, with 58% of the total, while Sustainability Bonds and Sustainability Linked Bonds (SLBs) were the next largest category. SLBs encourage impact on sustainability at the company level, while Green bonds fund projects with clear environmental benefits and reduce carbon emissions.

Renewable energy, green transport and green buildings make up the bulk of green bond-financed projects. Encouragingly, S&P Global Ratings estimate that GSS+ accounted for around 15% of total bond issuance in 2023, with circa \$1 trillion worth of issuance for the year. Resilience bonds are a developing area in GSS+ aimed at addressing the underlying vulnerability of people and ecosystems to climate change by funding emergency response and adaptation measures.

Demand typically far outstrips supply, meaning value for money must be constantly assessed by investors. Ongoing confidence in market integrity is also essential with investors and regulators on the lookout for greenwashing. This means clear definitions and rulesets particularly as the universe of green investments expands to include new targets (resilience, transition) and structure (blended finance).

A race for resources

Against the backdrop of intensifying competition for global capital for the energy transition, analysis by the Clean Energy Finance Corporation (CEFC) suggests that new investment of

Strengthened by



\$USD120 billion is needed in the National Electricity Market (NEM) to finance the solar, wind, transmission, storage, and ancillary services needed to reach 82 per cent renewables by 2030, to achieve the Australian Energy Market Operator (AEMO) 2022 integrated system plan step change scenario designed to implement the government's targeted energy transition policy.

The largest part is this is in new generation and battery storage, followed by transmission. Estimates suggest storage capacity needs to expand from the current 2 GW to 19 GW in 2031, grid-scale solar and wind from 19 GW to 48 and Solar PV 15 GW to 37. The remaining capital deployment will be in transmission to enable major grid projects in the NEM.

Beyond energy transition, capital will also be needed to decarbonise transport, other infrastructure, agriculture, manufacturing, etc. Many estimate this will require investment at least comparable to the \$400 billion+ mining boom of last decade (in today's \$) but with activity more widespread and integrated than for the mining boom. Aggressive Industry transition policies overseas mean competition for resources, technology, and skills. Inflation is likely to be persistent as a result.

Australia's Plan

The government has committed to respond to renewable industry policies overseas, including the Inflation Reduction Act in the United States.

Industry groups and research foundations⁴ have called for a ten-year \$USD100 billion Australian Renewables Industry Package to drive \$USD200-300 billion in investment.

Financing for the transition

To date the Federal Government has committed over A\$25

billion in the Budget in addition to existing Australian Renewable Energy Agency (ARENA) and Clean Energy Finance Corporation programmes and additional funding initiatives are being made regularly, such as the recently announced \$2 billion directed at mining and processing critical minerals to address overreliance on China as the dominant source of supply.

The role for GSS+ Bonds

Investment in large-scale renewable energy generation tends to be highly geared (60 - 85%), with local banks providing most of that finance.

Alternative project financing arrangements are evolving – utilising offshore investment and greater financial engineering. Blended finance structures are particularly effective in leveraging government support (CEFC notes \$1 billion of capital attracts \$5 billion in private sector capital).

Renewable/green infrastructure financing structures can comprise up 80% debt financing and debt raising of this scale will necessarily increasingly come through a combination of direct government borrowing in public bond markets (and potentially through off-balance sheet government guarantees) as well as from the banking system which will look at ways to securitise lending (through corporate green bonds for instance) to free up capital.

Larger projects lend themselves to standalone listed trusts that will be able to borrow in their own right, expanding the green bond segment currently dominated by property trusts.

Financial engineering is also useful (with and without government support) to create debt that is credit-enhanced enough to sit in mainstream defensive debt portfolios, with mezzanine debt appealing to high yielding investors, enabling green projects to be funded by GSS+ bonds across the credit spectrum.

Case Studies for blended Finance in Australia



The CEFC has committed \$160 million to Powerlink to build transmission infrastructure that will unlock greater renewable generation capacity in the Southern Downs Renewable Energy Zone (REZ) in Queensland.

The CEFC commitment will finance an additional 500 MW of new network hosting capacity, adding to the proposed 1000MW of renewable plant capacity, while "unique contracting arrangements help Powerlink bridge the financing gap for generators through an initial lower connection charge".

https://www.cefc.com.au/where-we-invest/case-studies/powerlink-infrastructure-future-proofing-ald-rez/



energy**connect.**

EnergyConnect is the second CEFC commitment to major electricity infrastructure, following the \$125 million investment backing of Snowy 2.0 grid needs.

EnergyConnect is a vital piece of energy infrastructure spanning more than 900 kilometres. TransGrid is building the NSW portion of the new interconnector, which will connect the energy grids of NSW and SA, with an additional link to Northwest Victoria. The Australian Energy Market Operator forecasts that EnergyConnect will unlock as much as 1,800 MW of renewable energy generation across Renewable Energy Zones.

https://www.cefc.com.au/where-we-invest/casestudies/energyconnect-to-unlock-cheaper-greener-power/

³ Climate Bonds Institute https://www.climatebonds.net/files/reports/cbi sotm 2022 03e.pdf

⁴ Including the Australian Conservation Foundation, Australian Council of Trade Unions, Clean Energy Council, Climate Action Network Australia, Climate Energy Finance https://www.energymagazine.com.au/organisations-call-for-critical-100b-renewable-industry-package/

Where do mitigation, transition bonds fit in?

Bonds also play a role in financing the transition by incumbent high emitters willing and able to participate in the low carbon economy. However, the lack of robust, industry-wide standards for transition instruments and some egregious examples of greenwashing by corporate borrowers (and investment funds), have left sceptics unconvinced about the place of these bonds in the GSS+ universe.

As noted by the Climate Bond Institute, accommodation will be necessary for financing a successful transition, although possibly through a secondary category of sustainable debt that captures "green ambition".

"Large GHG emitters, however, are still largely absent and present an opportunity for the markets to aid their sustainable transition. But while such actors have not played a significant role in the green finance market to date, they have a vital role to play in reducing global emissions – and are often key constituents in mainstream investment portfolios"⁵

GSS+ bonds have several advantages making them an instrument of choice for financing the low carbon transition, including equitable intergenerational burden sharing and their inherent suitability in providing a well-defined longer term debt pool for long-term infrastructure investments.

Looking to international experience in markets with a head start on Australia in this decarbonation funding task supports the probability of substantial growth in our sustainable debt market and the key role of Green bonds which we believe will quite quickly make up 5-10% of the domestic bond market.

GSS+ bonds pioneered by World Bank in 2008

As part of its Climate Change Action Plan, the World Bank's Green Bond Program aims to:

"Galvanise investment for private sector projects that support renewable energy, clean transportation, solar, hydro and energy efficiency"

This framework is a proven mechanism for mobilizing capital through partnerships with investors.

GSS+ Bond Principles and Taxonomies

The ICMA Green Bond Principles framework guides market rules for what constitutes green finance.

The four core components for alignment are:

- Use of Proceeds
- Process for Project Evaluation and Selection
- Management of Proceeds
- Reporting

Many of these steps are strengthened by external review and/or certification

International experience also gives some clues about the development of a "Greenium" (the differential pricing afforded sustainable debt compared to standard debt).

As noted by the Climate Bond Institute, "there is no reason why a bond being green should impact its price, since green bonds rank pari-passu (on equal footing) with bonds of the same payment rank and issuer. There is no credit enhancement to explain pricing differences and issuers of green bonds often incur costs such as Second Party Opinions and Certification, although these are typically negligible". Experience to date suggests that while it may be persistent, it is not generally significant and more a function of "point in time" imbalance in demand and supply of green assets.

The growth of the green market is likely to lower the Greenium for high grade issuers, although it may persist more for lower grade debt issuers where spreads are already wider and price discovery more imprecise. It is also possible that greenwashing concerns will assist the demand for GSS+ as taxonomies are defined and the verified impact credentials of certified green bonds become more valued, supporting a modest but persistent Greenium.

Why a "Greenium" not a discount?

Investment theory supports the notion of lower return for lower risk (in accordance with the 'return for risk' principle). The well documented resilience of GSS+ bonds support the notion that better secondary market trading characteristics might compensate for potentially lower primary market yield, provided the differential is limited.

Active portfolio management strategies can also partially or entirely recover that primary issue differential.

https://www.linkedin.com/posts/bill-bovingdon-6039979_resilience-ingreen-activity-6772335456735637504-oY-Y/

We believe this underscores the benefit of a dedicated portfolio of seasoned green bonds, with a specialised manager that has demonstratable expertise in managing some of the unique risks and opportunities in sustainable finance markets. Recognised sustainable or green bond funds are often also given preferential access to bonds when demand is high for a primary issue. Climate Bonds Institute notes that on average 2/3rds of bonds issued by participants in their survey were "allocated to investors describing themselves as green or socially responsible (green investors)"6.

An actively managed bond fund that has built up diversified holdings in green bonds over time is less captive to the vagaries of the new issue market. Having a seasoned portfolio allows a manager to discriminate between new issues if there are concerns due to the nature of the issuer credit, credit pricing, structure (and therefore impact) or the Greenium. An active rather than buy and hold approach can also exploit primary issue demand by selling at an even greater Greenium in the secondary market.

The ability to manage the performance impact of the Greenium in a portfolio is effectively a new active strategy, with the risk joining other second-order metrics such as convexity, liquidity margins, and first-order risks such as credit spread and duration risks.

⁵ https://www.climatebonds.net/files/reports/cbi_fincredtransitions_final.pdf

https://www.climatebonds.net/resources/reports/green-bond-pricing-paper-h1-2023

This suggests an advantage is to be had by being early in building a diversified portfolio of green bonds and developing the specialised skills to manage the unique features of GSS+ within the sustainable finance market. This is in some ways analogous to the skills displayed by a specialised subinvestment grade or emerging market debt manager taking advantage of market confidence and plentiful liquidity to restructure and term-out a portfolio, rather than doing so when choice and trading spreads are prohibitive.

As noted earlier, green bonds are projected to become four or five percent of the Commonwealth bond market as well as a substantial part of state, supra sovereign and eventually asset backed and corporate markets going forward. This represents a core element of investor portfolios, and it will be increasingly important to effectively manage the ebb and flow of demand for GBB+ and assess the reasonableness of the quantum of Greenium at new issue, secondary market trade opportunities, etc.

For investors, whether the primary focus is impact or return it makes sense to optimise value for money in investing in the GSS+ market and actively managing the Greenium paid, using preferential access to assets, and exploiting opportunities in the secondary market, will become additional ways to add value for an active fund manager.

Divestment, engagement, and Impact

Impactful investing in the context of the carbon transition can contemplate bonds from current high-carbon industries. However, careful consideration and ongoing vigilance is required to ensure that the GSS+ issuer is acting in good faith and not engaging in tokenism, greenwashing or later abandons the strategy.

Utilising divestment for climate impact investing is essential to its overall success. Engagement can influence decisions but is often overestimated as some institutions have the experience and resources to successfully greenwash sustainable investors. So as impact objectives are not compromised, ultimately investment decisions need to reflect, in a timely way, the progress of engagement activities to discourage delay, deflection, or back-flips in strategy.

Bill Bovingdon, Chief Investment Officer, Altius Asset Management.



Bill has over 35 years of experience and is highly regarded in fixed interest asset management, particularly sustainable or ESG informed finance.

Prior to co-founding Altius in 2011, Bill was with Aberdeen Asset Management, where he was head of Australian fixed income and the chief executive officer. He has also worked as head of fixed income for Schroder Investment Management and Deutsche Asset Management.

In his many investment roles, Bill has built successful fixed income businesses by developing proven investment processes and assembling strong investment teams.

Bill's career in investment and financial services began in 1984 with the Treasury Corporation of Victoria as a fixed income portfolio manager. He has a long working relationship with both Chris Dickman and Gavin Goodhand, formed over many years.

Bill holds a Bachelor of Economics from Monash University.

For more information on the Altius Green Bond Fund, please contact your financial adviser or our Investor Services Team.

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