

Sembcorp: “Carbon footprint arbitrage of a lifetime”

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Public-to-private transactions that shift fossil ‘assets’ into private hands are a key theme in global sustainable finance and pose several important questions around investors’ role as providers of capital. Singaporean infrastructure/energy owner Sembcorp (Ticker: SCISP) is a particularly relevant example, also with implications for the sustainability-linked bond (SLB) market.

The company is seeking to sell its subsidiary Sembcorp Energy India Limited (SEIL) with a 2GW thermal coal capacity to an Omani private consortium. Sembcorp appears to argue that the transaction allows it to immediately de-consolidate the thermal coal assets’ carbon footprint and reduce its overall carbon intensity.¹ The transaction will be funded by Sembcorp through a deferred payment (in kind) note, with payments coming due in 15 to 24 years, and Sembcorp will retain substantial liabilities of SEIL as well as operational influence.

AFII’s view is that the coal generation/carbon footprint of SEIL should not be de-consolidated from Sembcorp’s footprint until full payment for the transaction has come through (2038 or 2047), or alternatively a de-consolidation should be pro-rated as partial repayments come through. The key argument for this is that Sembcorp is simply shifting operation emissions into financed emissions through the transaction structure, with minimal real emissions reductions. In this deal, a physical asset simply shifts to become a financial asset on the balance sheet.

Sembcorp is explicit in its communication that a key benefit of the transaction is the avoidance of coupon step-ups on the SLBs.¹ However, an argument should be made on behalf of bondholders that the sustainability performance targets in the SLB should include both operational and financed emissions: this is a matter of fiduciary duty and protection of future coupon flows. We are also of the view that green bond /SLB investors in SCISP should verify that the SEIL transaction strategy was fully disclosed at the time of the sale of the securities (2021-22).

Bondholders, as well as shareholders, should review their policies around the exposure to coal financing vehicles and if Sembcorp constitutes such an entity post-transaction.

Sembcorp makes it clear in their communication that they are stepping in as a provider of capital because banks/markets are not keen to finance the SEIL assets due to the coal exposure. Using that logic, one could consider Sembcorp partially as a coal financing bank/vehicle, and many investors have restrictions on that. It would be unfortunate if shareholders make a decision on the upcoming 8 Nov extra general meeting that would put them at risk of being in breach of internal coal financing exclusion guidelines or sustainability targets.

¹ “[CIRCULAR TO SHAREHOLDERS in relation to THE PROPOSED SALE OF THE ENTIRE SHAREHOLDING IN SEMBCORP ENERGY INDIA LIMITED BY SEMBCORP UTILITIES PTE LTD](#)”, Sembcorp, 22 Oct 2022.

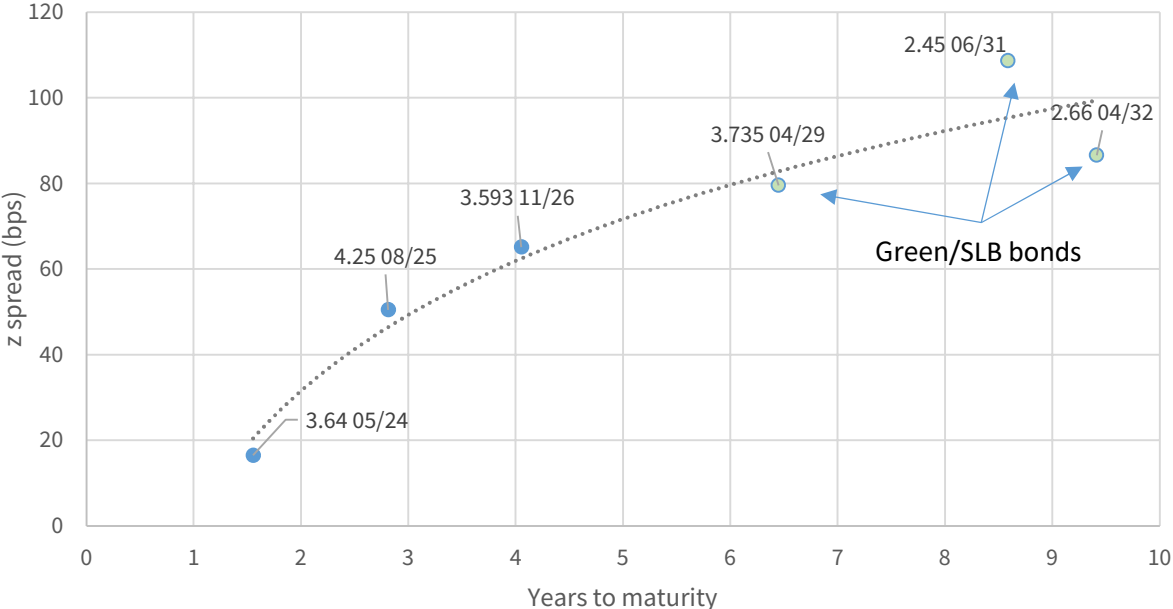
Background on Sembcorp

Sembcorp Industries (Ticker: SCISP) is a Singapore-based holding company, listed on Singapore Stock Exchange (SGX) that owns and operates an infrastructure development and energy generation business. It is considered a prominent state-backed enterprise in Singapore and is one of the largest independent power producers in India, operating through Sembcorp Energy India Limited (SEIL).

Sembcorp or its operating companies are regular issuers in the Indian and Singaporean bond markets, with a total of USD5.6bn of debt across bonds (11) and loans. From a bond perspective, it is really the Singapore dollar (SGD) curve that is relevant, with the outstanding curve highlighted in Figure 1. Bonds are not externally rated and do not carry a guarantee from either Temasek (49.5% owner) or the Singapore government. But it is a reputable issuer in the SGD market, which gives ample access to liquidity pools in the regional institutional markets. All recent issuance since 2021 has been in the form of labelled bonds.

In May 2021, Sembcorp announced plans to transition from a fossil-intensive to a green company. Sembcorp’s vision is to be “a leading provider of sustainable solutions” and seeks to achieve 70% of its net profit contribution, up from 40% in 2020, from sustainable solutions, sustainable urban developments, renewable energy (by increasing its gross installed capacity from 2.6GW to 10GW) and lower its absolute GHG emissions by 90% by 2030 and reach “net zero” by 2050. The group has committed to no new coal-fired energy asset investments. Sembcorp’s sustainability commitments appear aligned with global standards, having committed to reach “net zero” by 2050. Recently, Sembcorp has announced a strategic collaboration with the Japanese government and Japanese companies to develop ‘decarbonised’ hydrogen as an alternative to fossil fuels.³

Figure 1. Sembcorp SGD credit curve. Pricing date 2 Nov 2022. Source: AFII, Bloomberg.



³ “Sembcorp ties up with Japanese players to advance low-carbon initiatives”, Upstream Online, October 2022.

Table 1. Sembcorp green/sustainability-linked bonds. Total debt in SCISP amounts to approximately SGD4bn. Source: Bloomberg, AFII, company documentation.

Bond	ISIN	Tenor	Issued	Volume	Characteristic
SCISP 2.45 06/31	SGXF23837739	10yr	Jun- 2021	SGD400m	Green bond, the first certified climate bond under the Climate Bond Standard by a Singapore-based energy company
SCISP 2.66 04/32	SGXF52048042	10.5yr	Sep- 2021	SGD675m	SLB with SPTs 1. GHG emissions intensity (Scope 1+2); 2. GHG absolute emissions (Scope 1+2); and 3. Gross installed renewable energy capacity. Step-up margin of 25bps from April 2026 if the SPT of GHG emissions intensity reduction to 0.40 tCO ₂ e/MWh by Dec-2025. 2020 GHG emissions intensity was 0.54 tCO ₂ e/MWh. The SLB framework indicates that Sembcorp would revise its SPT in case of change of parameter.
SCISP 3.735 04/29	SGXF59468540	7yr	Apr- 2022	SGD300m	SLB, 25bps coupon step-up based on GHG emissions intensity reaching 0.40 tCO ₂ e/MWh also by Dec-2025. 2020 GHG emissions intensity was 0.54 tCO ₂ e/MWh. The SLB framework indicates that Sembcorp would revise its SPT in case of change of parameter.

Sembcorp Energy India (SEIL) spin-out

On 5th Sep 2022, Sembcorp announced⁴ that its subsidiary Sembcorp Utilities had agreed with Tanweer Infrastructure Pte Ltd, a leading Private Equity firm owned by a consortium of state-owned investors from Oman, the sale of 100% of Sembcorp Energy India Limited (SEIL), one of the largest independent power producers in India, operating 2.6GW of coal-fired electricity generation. The transaction price has been set at USD1.5bn (SGD2.1bn). SEIL was established in early 2015, when 2.66GW coal-fired power plants were built in Andhra Pradesh for an investment of USD1.5bn. SEIL is still valued at USD1.5bn in Sembcorp's books as of 30 Jun 2022 and, in its bond prospectus, climate-related costs of keeping this asset are estimated to USD240mn (SGD340m).

According to company statements, the divestment of SEIL would lead to the following emissions-related changes of Sembcorp:

- Absolute carbon emissions would drop from 26.2Mtpa CO₂e to 10.4Mtpa CO₂e, and GHG emissions intensity would fall from 0.51 to 0.31 tCO₂e/MWh, ahead of its target to achieve a reduction to 0.40 tCO₂e/MWh.
- Share of renewable energy in its energy mix would jump from 43% to 51% (pro-forma).
- Net profit from sustainable solution would increase from 25% to 31% (pro-forma).

These numbers are based on a de-consolidation of the SEIL assets and footprint from Sembcorp's balance sheet and total emissions, and implies a transfer of those exposures to the private buyer. From our understanding, the private buyers are not intending to decommission the generation capacity, meaning that there will be no change to the electricity generation and only a marginal reduction in actual carbon emissions from the plants.⁵ This is a fundamental issue in the public-to-private debate: as divestment from an asset does not necessarily imply reduced emissions.

⁴ "Singapore's Sembcorp Industries to sell India energy unit for \$1.5bn", Reuters, 5 Sep 2022.

⁵ There is an incentive built into the financing to reduce the emissions from coal, up to 20% of emissions.

Question 1: Does the financing structure mean that investors are exposed to coal financing rather than coal operations?

“Given the limited availability of funding for coal-related projects due to ESG considerations of financial institutions globally, bidders were given the option of vendor financing via a deferred payment note, in addition to the options of using an all-cash bid or a combination of the two.”

Sembcorp [letter](#) to shareholders⁶

Tanweer Infrastructure Pte Ltd does not provide full payment for the assets at the start of the transaction. Instead, Sembcorp will provide financing to the consortium for the purchase through a 15-year deferred payment note, with an option to extend its maturity up to 24 years. Effectively, Tanweer does not need to make an upfront payment for SEIL but will pay an interest for any remaining outstanding of the purchase sum. Better still, the notes allow the capitalization of interest and an option for Tanweer to extinguish its total liability to Sembcorp at the end of the 24th year.⁷

Tanweer could of course seek financing for the purchase from another party, such as a bank or the bond market, but as Sembcorp ‘s own disclosure (quoted above) highlights, such financing would come at steep costs, if at all, due to ESG commitments that restricts many lenders to contemplate this kind of funding. Conceptually, Sembcorp is acting as lender-of-last-resort for the coal assets, with recourse. As such, we would consider Sembcorp’s role as a ‘shadow-bank’ in the context of this transaction. Furthermore, any lender to Sembcorp will have to consider that their lending will provide liquidity to a coal financing entity.

There are many investors that have restrictions on investing in banks that fund coal investments. The discussion needs to be had if such restrictions should apply in “shadow-bank” cases like the SEIL sale financing.

The International Finance Corporation’s (IFC), with its role as an anchor investor in Sembcorp’s 2.66 04/32s (SLB), can be used as an example to illustrate the issue. The IFC has publicly announced restrictions of financing to coal,⁸ and as the SLB investment is ‘general corporate purpose’, there is clearly a risk that it could be enabling the deferred payment financing. It would be diligent for the IFC and other investors to verify that Sembcorp fully disclosed its intentions to provide last-resort coal financing in this way, when it marketed its green- and sustainability linked bonds.⁹ The company is clearly aware that coal exposure is a material question to investors:

⁶ [“CIRCULAR TO SHAREHOLDERS in relation to THE PROPOSED SALE OF THE ENTIRE SHAREHOLDING IN SEMBCORP ENERGY INDIA LIMITED BY SEMBCORP UTILITIES PTE LTD”](#), Sembcorp, 22 Oct 2022.

⁷ The note will be carrying a floating interest of Indian government 10-year yield+180bps, equivalent to an outright rate 9% as of today (in INR terms). It comes with a sustainability-linked adjustment, such that the interest rate will reduce over time, subject to the reduction of GHG emissions at SEIL. For every 1% of reduction in GHG intensity by the buyer, the interest rate is cut by 9bps, subject to a maximum reduction of 20% and meaning that the spread over the government bond would be cancelled out. The note contains provisions to be amortizing, i.e. the payment for the transaction notional can be paid in advance.

⁸ [“World Bank’s IFC adopts new climate rules to deter lenders from backing coal”](#), Reuters, Sep 2020,

⁹ For avoidance of doubt, AFII does not provide legal advice.

“In addition, SCI [Sembcorp] is of the view that the investor base that would be able to invest in the securities of SCI would decrease as a significant proportion of institutional funds exclude investments in companies that have coal-related exposure. This would likely result in lower liquidity and thereby an increase in cost of capital for SCI.”

Sembcorp [letter](#) to shareholders

Operational versus financed exposure should also be a relevant discussion for shareholders as well. We hypothesize that the controlling shareholder Temasek, a Singapore-based investor¹⁰ with significant decarbonization targets of its own, could have different views on whether the deal should go through or not, based on the question of de-consolidation (or not) of SEIL carbon emissions through SCISP.¹¹

For purposes of the discussion on operational versus financed exposure, investors should also note that Sembcorp continues to be in the sphere of (operational) influence of SEIL through a “Technical Services Agreement” with a tenure equal to that of the deferred payment note. Tanweer would grant Sembcorp “a first ranking security interest over all the shares in the Purchaser.” Furthermore, under the terms of the payment note, it appears that Sembcorp would retain some default exposure to SEIL’s current facilities.¹²

Question 2: How does this affect (bond) investors in terms of sustainability-performance targets?

“The option of retaining SEIL was considered, however, this could lead to a step-up in interest costs for SCI’s sustainability-linked financing instruments. In particular, the interest rates relating to SCI’s sustainability-linked bonds, totalling S\$975 million issued in October 2021 and April 2027, will be subject to a step-up margin of 0.25 per cent. from the first interest payment date on or after 1 April 2026 if the stated Sustainability Performance Target is not achieved.”

Sembcorp [letter](#) to shareholders

Table 1 above highlights the SLB performance targets for the two outstanding SCIGP SLBs around carbon intensity, as well as absolute carbon emissions.¹⁴ Both have a 0.40 tCO₂e/MWh carbon intensity target, and the company expects its operational emissions intensity to drop to 0.31 tCO₂e/MWh after the SEIL transaction. This means that Sembcorp will most likely, and as mentioned in the quote above, meet the SPTs as they are observed in 2025.

From the perspective of SLB-holders, if shareholders vote to allow this transaction through and Sembcorp does not revise down its intensity targets, the probability of getting a step-up would decrease, without any meaningful carbon emissions reduction. If assigning a financial value to the

¹⁰ Temasek clearly has ambitious decarbonization financing targets on its own, c.f. [“Singapore’s Temasek commits \\$3.6bn to new decarbonization vehicle”](#), Nikkei Asia, June 2022.

¹¹ Other investors include Norges Bank Investment Management with a 0.85% stake. NBIM has at the time of writing (5 Nov 2022) pre-approved the sale ([link](#)) but may change the vote at any point up until the vote at the EGM.

¹² “In an event of default by SEIL under the Existing Facilities, the Existing Lenders will be able to enforce the Relevant Corporate Guarantees against SCU, and in such event, SCU will have no recourse against the Purchaser in relation to such enforcement action by the Existing Lenders.”, Sembcorp shareholder letter, 22 October 2022. Please note that AFII does not have insight to exactly what those “Existing Facilities” are but note an INR50.9bn (USD1.4bn) 2036 facility (BBG00F7QYT82) that appears to be linked to SEIL.

¹⁴ Full framework can be found here: [“Sustainable Financing Framework \(2021\)”](#), Company website, accessed 4 Nov 2022.

step-up, this would constitute a potential economic loss to the investor which could be acceptable if it were associated with a real reduction in emissions. Alternatively, investors could retain the economic value (as well as decarbonisation impact) if Sembcorp's SPTs were adjusted down to reflect the change in perimeter, where we note that:

“Sembcorp will also review this Framework in case of material changes in the perimeter, methodology, and in particular KPIs and / or the SPT’s calibration.”

Sembcorp’s SLB framework (p.11)

This means that investors in this case should, from a pure economic perspective, make the argument that financed emissions should be included in the carbon-accounting of the company, if Sembcorp does not revise down its carbon intensity targets.¹⁶ This is an important point with regards to the broader SLB market: investors can play an important role in verifying that issuers drive real decarbonisation, rather than engage in shifting emissions between balance sheets.

However, it would be good to confirm what information was conveyed to investors at the time of the sale of the green bonds and SLBs (Jun-21, Sep-21, and Apr-22 respectively).¹⁷ Were investors made aware that the decarbonisation of SEIL would happen through a (financed) sale of the assets rather through transitioning of the assets to less carbon-intensive alternatives (i.e. accounting versus real-world carbon emission reductions)? SCI explains their information set over time:

“Hence, SCI conducted a broad market sounding for a potential sale of SEIL in 2020 and followed up with a targeted market sounding exercise in 2021 with potential bidders to gauge the market’s appetite for a transaction. Bidders were then invited to participate in the current sale process which culminated in the Proposed Sale.”

Sembcorp [letter](#) to shareholders

Therefore, it seems that the strategy was clear within the company at the time of the sale of the green/SLB securities. One could argue that the proposed revision of the KPI/SPT calibration included in the SLB framework was laying the ground for the protection of SLB investors against such significant change in perimeter.¹⁹

¹⁶ Investors could also make this argument out of a decarbonisation perspective, in order to keep Sembcorp focused on decarbonization among the non-SEIL activities.

¹⁷ AFII was not party to any such discussions. Looking at public material posted at the time, there was little mention of coal assets being shifted into private hands as part of the strategy, e.g. see [“IFC Marks First-Ever Investment in a Sustainability-Linked Bond Globally With S\\$675 Million Offering by Pan-Asian Energy and Sustainable Solutions Provider Sembcorp Industries”](#), IFC press-release, 29 Sep 2021.

¹⁹ According to Sembcorp’s SLB framework (p. 11): “Sembcorp will also review this framework in case of significant changes to the perimeter, methodology, and in particular KPI and/or the SPT’s calibration.”

Conclusion

The Sembcorp/SEIL/Tanweer transaction appears to do little to actually drive a faster decommissioning of coal related emissions and thus cumulative CO₂e emissions.²¹ It does serve as an interesting case study in the debate on public-to-private transactions that often appear to be shifting carbon burdens into less transparent corners of the market.²²

A critical point with this transaction is that Sembcorp argues for an instant de-consolidation of carbon emissions, as they shift from operating the coal assets to financing them, and do not plan to recalibrate its KPI/SPT following this change.²³ Reasonably, the carbon exposure should only be de-consolidated when it actually leaves Sembcorp's balance sheet, i.e. as Sembcorp removes its financial (and operational) exposure to the assets.

We see three main consequences with regards to whether deconsolidation should be used or not:

1. By not allowing deconsolidation, investors' carbon footprint from holding Sembcorp stock would not fall as quickly. However, this would drive real incentives to produce carbon-reductive solutions within the company rather than a focus on activities to "pass the buck."
2. However, if deconsolidation were to be accepted, investors with restrictions on being invested in entities with significant coal *funding* operations, would need to review the 'new' Sembcorp such that it is in line with coal *funding* restriction policies.
3. Finally, if there is no deconsolidation, Sembcorp's SLBs retain the value of their step-up options and reduces reputational risk. If deconsolidation goes through, the economic value of the step-up is more or less voided. Of course, SLB investors should have an interest in protecting the economic value of their investment and should leverage the documentation that any change in perimeter would lead to a recalibration of the KPI/SPTs.

The SEIL transaction illustrates a potential weak point with current SLB structures: less well-calibrated targets can drive incentives to divest rather than decommission: a company could opt for a quick-and-dirty solution rather than a longer-term, credible option, in order to reach targets and not experience detrimental changes in bond interest rates. We are of the opinion that more work needs to be done in terms of SLB conditionalities linked to changes in the corporate structure. One suggestion would be to include firm language in the bond terms that specifically sets the targets on operational and financed emissions, rather than just operational emissions.

Alternatively, the transaction could also serve to illustrate the case for SLBs, as it will be SLB investors who have the most incentive to actually make the argument that SEIL's carbon footprint should not be de-consolidated, and thus contribute to real decarbonisation (through increasing incentives for decommissioning) rather than a balance sheet switch "decarbonisation".

²¹ See background in the Appendix for a context of South-East Asia emissions and decommissioning.

²² For more AFII work on this, see for example "[Oil, gas and bond pipelines: the case of Aramco/EIG/BLK](#)", AFII, 5 Feb 2022.

²³ Again, we refer to Sembcorp's [letter](#) to shareholders mentioning the achievement of SPTs as a reason for the transaction.

Appendix: Coal in South-East Asia- decommissioning required IEA SDS

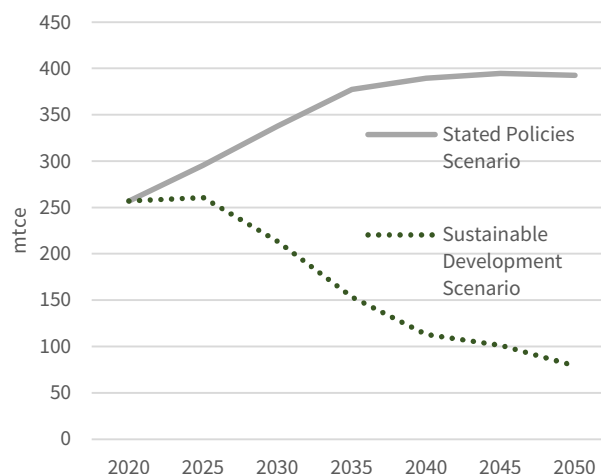
The main contributor to carbon emissions in ASEAN is electricity generation, representing about 40% of the total emissions, and it is growing²⁴. The carbon intensity of the various coal-related technologies ranges from 813 and 1,253g-CO₂/kWh, compared to an average of CO₂ emissions from electricity production of 579g/kWh for the region as a whole.

ASEAN is experiencing high levels of growth: in 2022 and 2023 alone, the Asian Development bank expects growth to be 4.3% and 4.9%, respectively²⁵. As the region's electricity need is going to be multiplied by 3 by 2040, a baseline scenario estimates that CO₂ emissions in ASEAN will increase from +47% from 2017 to 2040, from 1,686m to 4,171m tons²⁶.

Several countries have committed to specific targets of the share of RE: Singapore seeks to meet 4% of its energy demand with solar energy by 2030, while more ambitious targets have been set by Indonesia, Malaysia, the Philippines and Thailand²⁷. This alone will be insufficient to achieve the reduction in greenhouse gas emissions that is needed to cope with the additional growth and energy demand.

As illustrated in Figure 2, decommissioning pathways need to be fairly aggressive relative to stated policies today. One potential perspective on this, from a public investor perspective, is to consider the valuation of future rights to decommission certain assets. An example of how such processes could look was given in Germany, in terms of the reverse decommissioning auctions conducted in 2020/21.²⁸

Figure 2. Coal demand in Southeast Asia. Source: [IEA World Energy Outlook 2022](#).



²⁴ [Carbon intensity of electricity in ASEAN: Drivers, performance and outlook](#), B.W. Ang, Tian Goh, Energy Policy, Vol. 98, November 2016, p. 170-179

²⁵ [Asian Development Outlook \(ADO\) 2022 Update: Key Messages](#), ADB, September 2022

²⁶ [6th ASEAN Energy Outlook 2017-2040](#), ASEAN Center for Energy, 2020

²⁷ [Powering ASEAN's Energy Transition](#), EU-ASEAN Business Council, February 2022

²⁸ "Hard coal auction" pieces

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