

Solar Value Chain and Workers: Supporting a just transition in Australia by strengthening human rights due diligence

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Abstract

A just transition requires climate measures to be implemented in a way that engages and protects affected and vulnerable people and communities. However, due to the prevalence of modern slavery in global renewable energy supply chains, including evidence of people in China's Xinjiang Uyghur Autonomous Region being subjected to state-sanctioned forced labour at various stages of the solar supply chain, the transition to net zero is currently unjust. This paper examines whether Human Rights Due Diligence (HRDD) can be strengthened in Australia to better protect workers in solar value chains, and thus, more effectively support a just transition. By considering a case study of one of Australia's most prominent energy companies, AGL Energy Limited, this paper highlights the gaps in stakeholder engagement and in the identification of a broad range of human rights and environmental risks and impacts along the value chain. This case study also highlights the limitations of HRDD to protect rightsholders located in places with state-sanctioned forced labour programmes. The paper contends that for Australia to credibly position itself as a global leader in addressing modern slavery while advancing its transition to net zero, this aspiration must be underpinned by substantive legislative reform and enhanced regulatory measures to effectively support a just transition.

Keywords: modern slavery, solar value chain, human rights due diligence, Modern Slavery Act, AGL, just transition

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Introduction

There is currently a global push amongst states, businesses, and other actors to transition to net zero. This requires significantly reducing carbon emissions and taking other carbon dioxide removal measures, to the point that some residual emissions are absorbed or stored by nature and zero is left in the atmosphere.¹ In Australia, the transition to net zero will require a significant growth in renewable energy infrastructure. Current estimates indicate that 127 gigawatts (GW) of ‘utility scale’ solar and wind generation, 86 GW of rooftop and other solar, and 70–110 GW of battery storage will be needed by 2050.² However, this transition is not without ethical challenges. Workers within the global supply chains that produce these renewable energy technologies are vulnerable to exploitation, with mounting evidence of modern slavery practices.³ This includes evidence of people in China’s Xinjiang Uyghur Autonomous Region (‘Xinjiang’) being subject to state-sanctioned forced labour at various stages of the solar supply chain.⁴ Notably, the G20 countries import an estimated USD 14.8 billion worth of solar panels annually that are at risk of being produced using forced labour, making solar panels the fourth highest value at-risk product globally.⁵

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- ¹ United Nations Climate Action, ‘For a Livable Climate: Net-Zero Commitments Must Be Backed by Credible Action’, United Nations, n.d., <https://www.un.org/en/climatechange/net-zero-coalition>.
 - ² Australian Energy Market Operator Limited, *2024 Integrated System Plan for the National Electricity Market: A Roadmap for the Energy Transition*, Australian Energy Market Operator, 26 June 2024, p. 73, <https://aemo.com.au/-/media/files/major-publications/isp/2024/2024-integrated-system-plan-isp.pdf>; D Davis *et al.*, *Modelling Summary Report, Net Zero Australia*, 19 April 2023, p. 59, <https://www.netzeroaustralia.net.au/wp-content/uploads/2023/04/Net-Zero-Australia-Modelling-Summary-Report.pdf>.
 - ³ N.a., ‘Beyond Compliance in the Renewable Energy Sector: Assessing UK and Australian Modern Slavery Act Statements’, Walk Free, 2023, p. 1, <https://www.walkfree.org/reports/beyond-compliance-in-the-renewable-energy-sector> (‘Beyond Compliance’).
 - ⁴ L T Murphy and N Elimä, *In Broad Daylight: Uyghur Forced Labour and Global Solar Supply Chains*, Sheffield Hallam University Helena Kennedy Centre for International Justice, 2021, pp. 7–8, <https://www.shu.ac.uk/-/media/home/research/helena-kennedy-centre/projects/pdfs/evidence-base/in-broad-daylight.pdf>; N.a., *The Global Slavery Index 2023*, Walk Free, 2023, pp. 55, 67, 149, <https://cdn.walkfree.org/content/uploads/2023/05/17114737/Global-Slavery-Index-2023.pdf> (‘Global Slavery Index’); J Cockayne, E Rodriguez Huerta, and O Burcu, *‘The Energy of Freedom’? Solar Energy, Modern Slavery and the Just Transition*, University of Nottingham Rights Lab, 2022, pp. 5–6, 10–12, <https://www.nottingham.ac.uk/research/beacons-of-excellence/rights-lab/resources/reports-and-briefings/2022/march/the-energy-of-freedom-full-report.pdf>.
 - ⁵ ‘Global Slavery Index’, p. 147.

According to the 2023 Global Slavery Index, the Australian Government's response to modern slavery was ranked second out of 176 countries,⁶ positioning Australia as a leading actor in this space.⁷ Much of this is attributed to Australia's Modern Slavery Act 2018 (Commonwealth) ('Act'), which requires certain entities to report on the risks of modern slavery in their operations and supply chains, and on the actions they take to address those risks.⁸ Australia also aspires to be seen as a leader in the global transition to net zero, evidenced by its bid to co-host the 31st Conference of the Parties to the United Nations Framework Convention on Climate Change, alongside Pacific nations.⁹ A just transition¹⁰ to net zero should ensure climate measures are implemented 'in a way that engages and protects affected and vulnerable people and communities'.¹¹ To demonstrate leadership in both addressing modern slavery and advancing a just transition,

⁶ *Ibid*, pp. 28–29.

⁷ The methodology used in previous versions of the Global Slavery Index has been criticised. See AT Gallagher, 'What's Wrong with the Global Slavery Index?', *Anti-Trafficking Review*, issue 8, 2017, pp. 90–112, <https://doi.org/10.14197/atr.20121786>. However, some aspects of the methodology have since been updated. See Walk Free, 'Global Slavery Index Frequently Asked Questions', Walk Free, n.d., retrieved 21 August 2025, <https://www.walkfree.org/global-slavery-index/methodology/faqs>; 'Global Slavery Index', pp. 196–253. The Global Slavery Index can also be critiqued for providing a Western-centric lens and framing of modern slavery, which positions Western nations as the primary definers of the issue, while also attributing responsibility and culpability, often to others. See M Marmo and R Bandiera, 'Modern Slavery: The Harms of State-Corporate Benevolence and the Role of Academic Activism', in M Krambia-Kapardis *et al.* (eds.), *The Palgrave Handbook on Modern Slavery*, Palgrave Macmillan, Cham, 2024, pp. 499–521, p. 503, https://doi.org/10.1007/978-3-031-58614-9_24.

⁸ Reporting entities are those based or operating in Australia with an annual consolidated revenue of over AUD 100 million. See *Modern Slavery Act 2018* (Cth) sects. 3, 5. Please note that the two main functions of this Act are to establish reporting requirements for reporting entities and the position of the Australian Anti-Slavery Commissioner (see sect. 3).

⁹ Department of Foreign Affairs and Trade (DFAT), 'International Cooperation on Climate Change', DFAT, <https://www.dfat.gov.au/international-relations/themes/climate-change/international-cooperation-on-climate-change>; 'Joint Media Release: Australia's International Climate Engagement', Department of Climate Change, Energy, the Environment and Water, 5 November 2022, <https://minister.dcceew.gov.au/bowen/media-releases/australias-international-climate-engagement>.

¹⁰ There are various ways in which the 'just transition' concept has been interpreted. Due to the international law context for this paper, the international climate law interpretation has been favoured. For other interpretations, see: Cockayne, Rodriguez Huerta and Burcu, pp. 27–28; V Johansson, 'Just Transition as an Evolving Concept in International Climate Law', *Journal of Environmental Law*, vol. 35, issue 2, 2023, pp. 229–224, p. 230, <https://doi.org/10.1093/jel/eqad017>.

¹¹ *Ibid*, p. 248.

Australia must take decisive action to effectively identify and mitigate modern slavery risks within global renewable energy supply chains.

This paper argues that a critical and timely means for Australia to address these challenges is through the swift adoption of legislative reforms that embed Human Rights Due Diligence ('HRDD'). HRDD has emerged as the internationally recognised standard to prevent and mitigate modern slavery and other adverse human rights impacts by businesses. HRDD refers to a process that requires businesses to proactively identify, assess, and prevent or mitigate actual or potential negative human rights impacts associated with their operations or relationships. HRDD was first elaborated at the international level in the 2011 United Nations Guiding Principles on Business and Human Rights ('UNGPs'), a key soft law instrument in the business and human rights field.¹² The UNGPs establish the responsibility of businesses to respect, at a minimum, all internationally recognised human rights, including the right to freedom from slavery, servitude, and forced labour.¹³ By legislating and enforcing HRDD laws, states can take action to protect human rights, a duty which is also established in the UNGPs.¹⁴ Numerous jurisdictions have now passed mandatory HRDD laws, such as France, Germany, Norway, Switzerland, and the European Union.¹⁵

In Australia, HRDD is not a mandatory requirement. The Act currently requires reporting entities to describe any due diligence processes they undertake to address their modern slavery risks.¹⁶ However, following a recent review of the Act, it was recommended that reporting entities be required to have a due diligence

¹² F McGaughey, R Rowe, and C Lappel, 'Strengthening Australia's Response to Modern Slavery: Lessons from Comparative Human Rights Due Diligence Laws', *University of Western Australia Law Review*, vol. 51, issue 1, 2024, pp. 62–87.

¹³ See *International Covenant on Civil and Political Rights*, 19 December 1966, Art. 8; *Universal Declaration of Human Rights*, GA Res 217A (III), 10 December 1948, Art. 4.

¹⁴ J G Ruggie, *Report of the Special Representative of the Secretary-General on the Issue of Human Rights and Transnational Corporations and Other Business Enterprises: Guiding Principles on Business and Human Rights: Implementing the United Nations 'Protect, Respect and Remedy' Framework*, A/HRC/17/31, 21 March 2011, annex 13, 8 ('UNGPs').

¹⁵ See McGaughey, Rowe, and Lappel, pp. 68–70. For the EU Corporate Sustainability Due Diligence Directive, in June 2025, the EU Council agreed to simplify the sustainability reporting and due diligence requirements. See Council of the European Union, 'Simplification: Council Agrees Position on Sustainability Reporting and Due Diligence Requirements to Boost EU Competitiveness', EU Council, 23 June 2025, <https://www.consilium.europa.eu/en/press/press-releases/2025/06/23/simplification-council-agrees-position-on-sustainability-reporting-and-due-diligence-requirements-to-boost-eu-competitiveness>. We flag disappointment due to a weakening of the Directive's scope and implementation timeline, as well as concerns about its impact on corporate accountability and human rights protections.

¹⁶ *Modern Slavery Act 2018* (Cth) sect. 16(1)(d).

system in place, to explain the activities undertaken in accordance with that system, and to make it an offence for failing to have such a system in place.¹⁷ Should the Australian Government adopt these recommendations, it will be critical to ensure that any resulting HRDD law is effective at addressing modern slavery risks in business operations and supply chains.

This paper adopts a critical lens to examine these developments and acknowledges that the exploitation in global supply chains, including those linked to Australia's renewable energy transition, constitutes broader and serious human rights abuses, including state-imposed forced labour. At the same time, the paper argues that some Western-centric countries, such as Australia, are maintaining the conditions that enable exploitation by taking negligible actions that often normalise and exacerbate the very harms they claim to combat.¹⁸ While this paper focuses on the current legislative context in Australia, it recognises the value of critical interdisciplinary approaches to understanding and addressing such state-corporate harm.¹⁹ Indeed, an underlying argument advanced in this paper is that legislation alone will be insufficient if Australia continues to rely on supply chains connected to jurisdictions where state-imposed forced labour is documented,²⁰ such as in parts of China's solar manufacturing sector.²¹ Given Australia's ambition to lead in both the global shift to net zero and in the fight against modern slavery, it is imperative that HRDD laws be designed not only to meet reporting requirements, but also to effectively safeguard workers and address modern slavery throughout the renewable energy value chain.²²

¹⁷ J McMillan, *Report of the Statutory Review of the Modern Slavery Act 2018 (Cth) The First Three Years*, Attorney-General's Department, 2023, Recommendations 11, 20.

¹⁸ R Bandiera and M Marmo, "‘Knowingly Profiting’ from Forced Labour? Australia's Modern Slavery Laws, Ansell, and the Coloniality of State-Corporate Benevolence", in P Green *et al.* (eds), *The Routledge Handbook of State Crime*, Routledge, 2025 (forthcoming).

¹⁹ This concept refers to the ways in which state actions and corporate practices can combine to produce harmful outcomes. See M Marmo and R Bandiera, 'Modern Slavery as the New Moral Asset for the Production and Reproduction of State-Corporate Harm', *Journal of White Collar and Corporate Crime*, vol. 3, issue 2, 2022, pp. 64–75, pp. 71–72, <https://doi.org/10.1177/2631309X211020994>.

²⁰ Here, the focus is on state-imposed forced labour as HRDD laws are unlikely to address the issue on their own. This is because the leverage of one or more businesses is unlikely to be effective at addressing forced labour in supply chains where the forced labour practices are driven by the state. For more, see the 'Implications' section below.

²¹ Murphy and Elimä, pp. 7–8; 'Global Slavery Index', pp. 55, 67, 149; Cockayne, Rodriguez Huerta, and Burcu, pp. 5–6, 10–12.

²² UN Climate Change Conference UK 2021 'Supporting the Conditions for a Just Transition Internationally', *The National Archives*, 4 November 2021, <https://webarchive.nationalarchives.gov.uk/ukgwa/20230313132211/https://ukcop26.org/supporting-the-conditions-for-a-just-transition-internationally>.

Without confronting the systemic and geopolitical dimensions of forced labour, Australia risks, at best, undermining the ethical foundations of its net zero transition and diminishing the credibility of its leadership claims, notwithstanding how well the country is assessed in modern slavery indexes. And, at worst, Australia will continue to operate within a framework of ‘state-corporate benevolence’, a model that invokes the language of humanitarianism while, in practice, advancing the interests of powerful actors, such as corporations, that are resisting changes to maximise profits.²³ This, in turn, will continue reinforcing existing inequalities and structures of exploitation.

This paper is structured into five sections. Following this Introduction, we present a case study examining how AGL applies HRDD to address modern slavery risks within its solar supply chain. This case study was selected due to AGL’s dominant market share and status as Australia’s largest greenhouse gas emitter, positioning it as pivotal to a just transition. Although focused on a single entity, the case study provides rich, contextualised insights into the practical application of HRDD in the energy sector. The subsequent section explores how HRDD laws could be formulated in Australia to more effectively contribute to a just transition. We then analyse the wider implications of such legislation for suppliers, stakeholders, and rightsholders, while also identifying key limitations, particularly in relation to addressing modern slavery linked to state-imposed forced labour. The paper concludes by emphasising the urgent need for Australia to take meaningful action to protect workers across global renewable energy value chains, and to ensure that its path to net zero is genuinely just. This should include replacing the Act with a standalone and robust Human Rights and Environmental Due Diligence (‘HREDD’) legislation, supported by complementary regulatory measures. In parallel, we argue that businesses must not passively await legislative reform but should instead proactively embed HREDD into their operations, thereby assuming responsibility for contributing to a just and ethical transition.

Human Rights Due Diligence in Australia: A case study

This case study examines how AGL, a major Australian energy company, addresses modern slavery risks within its solar supply chain. Through an analysis of the company’s public disclosures, the study assesses the extent to which AGL’s processes align with the HRDD principles articulated in the UNGPs. While the actions of individual corporations are important, this analysis underscores the central argument of this paper: that it is ultimately the responsibility of the Australian Government to adopt meaningful legislative reform and implement effective regulatory measures to address modern slavery risks. Strengthening

²³ Marmo and Bandiera, 2022.

HRDD is essential not only to uphold human rights standards but also to ensure that Australia's transition to net zero is genuinely just. This includes taking decisive domestic action to confront challenges posed by global supply chains, particularly in relation to state-imposed forced labour, rather than shifting responsibility onto corporations or external jurisdictions.

As at 2021, Australia led the world in the amount of rooftop solar installed per capita,²⁴ with rooftop solar accounting for 11.2 per cent of Australia's electricity supply in 2024.²⁵ However, it is estimated that USD 1.3 billion worth of at-risk solar panels are imported into Australia each year, with the source country listed as China.²⁶ Energy companies are likely to comprise a large share of this import market. For example, AGL disclosed it spent approximately AUD 33 million for the 2022–23 financial year, with four direct suppliers in China.²⁷ Although AGL did not disclose the product(s) supplied, these suppliers were identified as AGL's highest-risk suppliers for modern slavery, and as such, it is possible these are suppliers of solar products.

The modern slavery risk associated with solar panels in China stems from practices occurring in Xinjiang.²⁸ Xinjiang is a province located in the north-west of China, which is home to the indigenous Uyghur population, as well as other religious and ethnic groups. The Chinese Government has placed members from the Uyghur population and Xinjiang's other religious and ethnic groups into 'surplus labour' or 'labour transfer' programmes, with an estimated 2.6 million people placed as of a November 2020 government report.²⁹ While the government claims that the workers are engaged voluntarily and that the programmes form part of an overall strategy to alleviate poverty in the region, there is mounting evidence that suggests that these programmes utilise forced labour, with workers facing coercion, threats of re-education and incarceration, and

²⁴ R J Egan and L Koschier, *National Survey Report of PV Power Applications in Australia 2021*, Australian PV Institute, 2022, p. 18, https://ica-pvps.org/wp-content/uploads/2022/08/PViA-Report-2022-AUS_v3.pdf.

²⁵ N.a., 'Rooftop Solar Generates over 10 Per Cent of Australia's Electricity', Clean Energy Council, 16 April 2024, <https://cleanenergycouncil.org.au/news-resources/rooftop-solar-generates-over-10-per-cent-of-australias-electricity>.

²⁶ 'Global Slavery Index', pp. 256–258.

²⁷ AGL Energy Ltd, *Modern Slavery Statement 2023*, AGL, 2023, p. 8, <https://www.agl.com.au/content/dam/digital/agl/documents/about-agl/who-we-are/our-commitments/240229-agl-energy-modern-slavery-statement.pdf> ('2023 Statement').

²⁸ Murphy and Elimä; 'Global Slavery Index', pp. 55, 67, 149; Cockayne, Rodriguez Huerta and Burcu, pp. 5–6, 10–12.

²⁹ Murphy and Elimä, p. 7.

the inability to leave their jobs.³⁰ This regime of state-imposed forced labour of Uyghur people and other religious and ethnic groups is occurring against the backdrop of what has been described as a social crackdown on the region since 2017. This has seen the ‘mass incarceration of Uyghurs and other ethnic Turkic peoples, as well as mass sterilizations, family separations, ubiquitous surveillance, and cultural indoctrination’.³¹ In 2022, the UN High Commissioner for Human Rights concluded that the treatment of Uyghur people and other predominantly Muslim groups in Xinjiang, through arbitrary and discriminatory detention, may constitute crimes against humanity.³²

Global solar supply chains are exposed to the risk of state-imposed forced labour in Xinjiang at numerous stages. Firstly, the production of photovoltaic (‘PV’) cell solar panels requires quartz, a raw mineral that is mined and used to produce metallurgical-grade silicon (‘MGS’).³³ It is estimated that Xinjiang contains 10 per cent of China’s quartz reserves, with one site for mining and processing quartz in the province known to engage in labour transfers and host two internment camps. As such, there is a risk of forced labour in the quartz that is mined and processed at this site.³⁴ Secondly, the production of MGS is associated with a risk

³⁰ *Ibid.*, pp. 7, 9–13; Cockayne, Rodriguez Huerta, and Burcu, pp. 6, 12; International Labour Organization (ILO), *Report of the Committee of Experts on the Application of Conventions and Recommendations*, ILO, 2025, pp. 363–364, <https://www.ilo.org/sites/default/files/2025-02/Report%20III%28A%29-2025-%5BNORMES-241219-002%5D-EN.pdf>; D Mulvaney and M Bazilian, ‘Price Volatility, Human Rights, and Decarbonization Challenges in Global Solar Supply Chains’, *Energy Research & Social Science*, vol. 102, 2023, pp. 103167, <https://doi.org/10.1016/j.erss.2023.103167>; O Burcu and B Jackson, ‘China’s Solar Dominance: Worker Rights in the Pursuit of a Just Transition’, *Business and Human Rights Journal*, vol. 10, issue 1, 2025, pp. 172–195, pp. 172–173, <https://doi.org/10.1017/bhj.2025.16>; A Lehr and M Bechrakis, *Connecting the Dots in Xinjiang: Forced Labor, Forced Assimilation, and Western Supply Chains*, Center for Strategic and International Studies, 2019, pp. 4–8; V X Xu *et al.*, *Uyghurs for Sale: ‘Re-Education’, Forced Labour and Surveillance Beyond Xinjiang*, Australian Strategic Policy Institute, 2020, p. 29; A Zenz, *Coercive Labor and Forced Displacement in Xinjiang’s Cross-Regional Labor Transfer Program: A Process-Oriented Evaluation*, The Jamestown Foundation, 2021, p. 4.

³¹ K Salcito, ‘Automotive Supply Chain Links to the Uyghur Genocide: Reversing a Growing Crisis’, *Business and Human Rights Journal*, vol. 8, issue 2, 2023, pp. 265–270, p. 266, <https://doi.org/10.1017/bhj.2023.15>.

³² United Nations Human Rights Office of the High Commissioner (OHCHR), OHCHR Assessment of Human Rights Concerns in the Xinjiang Uyghur Autonomous Region, People’s Republic of China, OHCHR, 31 August 2022, p. 44. See also Human Rights Watch (HRW), ‘Break Their Lineage, Break Their Roots’. China’s Crimes against Humanity Targeting Uyghurs and Other Turkic Muslims, HRW, 2021.

³³ Murphy and Elimä, p. 20.

³⁴ *Ibid.*, p. 22.

of forced labour, with Xinjiang being home to numerous MGS manufacturers. The world's largest producer of MGS is based in Xinjiang and has not only participated in the labour transfer programmes but is also exposed to forced labour through its quartz supplier, as described above.³⁵ Subsequently, the MGS is ground up and purified further using extremely high temperatures, resulting in polysilicon. As at 2020, four of the six highest-capacity polysilicon producing companies had significant manufacturing bases in Xinjiang, with all four participating in the labour transfer programmes.³⁶ Finally, polysilicon is then melted into ingots, which are cut into wafers and made into photovoltaic cells, which are then used in solar modules.³⁷ Regardless of where the manufacture of these final steps takes place, global solar supply chains are already exposed to forced labour from the mining of quartz to the production of MGS and polysilicon in Xinjiang.³⁸ The forced labour exposure is significant, with an estimated 97 per cent of global solar PV supply possibly containing components tainted by forced labour, as at 2022.³⁹

Solar forms part of AGL's principal business activities, such as electricity generation (including through two solar plants), the sale of electricity (including solar products) to customers, and investments in renewable energy.⁴⁰ AGL also has publicly available Modern Slavery Statements, which contain relevant information on how it manages its modern slavery risks. To date, AGL has published four Modern Slavery Statements from 2020 to 2023, which are publicly available through the Australian Government's Modern Slavery Statement Register.⁴¹ Finally, AGL was selected for this case study, as it was the only Australian energy company that incorporates solar into its principal business activities, and that also made a submission in its own name to the review of the *Modern Slavery Act 2018* (Cth) ('Act review').

AGL operates the largest private electricity generation portfolio, comprising approximately 20 per cent of Australia's total generation capacity. Accordingly, AGL is Australia's largest greenhouse gas emitter, constituting approximately eight per cent of total emissions. AGL also claims to operate 'the largest portfolio

³⁵ *Ibid.*, pp. 7, 20.

³⁶ *Ibid.*, p. 28.

³⁷ *Ibid.*, p. 37.

³⁸ *Ibid.*, p. 8.

³⁹ *Ibid.*, p. 37; Burcu and Jackson, p. 173.

⁴⁰ '2023 Statement', pp. 4–5.

⁴¹ Australian Government, 'Modern Slavery Statements Register', Attorney-General's Department, 2024, <https://modernslaveryregister.gov.au>. We note that AGL has since published a subsequent Modern Slavery Statement, which has not been captured in the research for this paper.

of renewable generation and storage assets of any ASX-listed company', with a plan to add a further 12 GW of renewable capacity by 2035.⁴² Despite these commitments, AGL, as one of Australia's largest energy providers, must do more to ensure a just transition, evidenced by its just transition score of 3.8/20 in the 2023 World Benchmarking Alliance Electric Utilities Benchmark.⁴³ As such, AGL has a significant role to play in ensuring Australia's transition to net zero is a just transition, and can be considered a suitable subject for the present case study analysis.

To understand whether AGL's modern slavery risk management approach aligns with the HRDD steps as set out in the UNGPs, each statement was analysed against UNGP Principles 18–21, which relate to risk identification and assessment, integrating findings and taking appropriate action, tracking effectiveness, and communication.⁴⁴ The key findings are set out below.

i. Principle 18

Principle 18 requires businesses to identify and assess adverse human rights impacts or risks within their operations and through their business relationships. This process should draw on human rights expertise and involve meaningful consultation with potentially affected groups and other relevant stakeholders.⁴⁵

It appears AGL complies with most of the requirements of Principle 18, despite a clear focus on identifying modern slavery risks, rather than human rights risks more broadly. Nevertheless, their use of human rights expertise, some stakeholder consultation, and ongoing risk identification processes go beyond the Act's requirements to merely describe the company's modern slavery risks. AGL's HRDD processes could be strengthened by meaningfully engaging with potentially affected groups and providing further information about its value chain. While Principle 18 does not provide any specific guidance on how deep into its value chain a business should investigate to identify modern slavery risks, it is expected that HRDD will vary in complexity depending on the size, risk profile, and nature of the business.⁴⁶ AGL has identified the risk of modern slavery in its solar supply chain, explicitly referring to the risk of exploitation of Uyghur and Kazakh minorities in Xinjiang associated with the manufacture of some solar products.

⁴² AGL Energy Ltd, *Climate Transition Action Plan 2025*, AGL, 2025, p. 5, <https://www.agl.com.au/content/dam/digital/agl/documents/about-agl/company-docs/250813-climate-transitionaction-plan-2025-final.pdf>.

⁴³ World Benchmarking Alliance (WBA), 'AGL Energy', WBA, 2023, <https://www.worldbenchmarkingalliance.org/publication/electric-utilities/companies/agl-energy-3>.

⁴⁴ 'UNGP's', pp. 17–20.

⁴⁵ *Ibid.*, p. 17.

⁴⁶ *Ibid.*, p. 16.

AGL has also described the risk of modern slavery at each stage of the supply chain, including the extraction and processing of raw minerals, manufacturing of polysilicon and solar panels, as well as the transport and installation of solar panels.⁴⁷ Due to the risk profile of the solar supply chain, it would be reasonable to expect for further information to be reported beyond the source country and international procurement spend information (i.e. percentage of international spend by source country) provided about their tier one suppliers.⁴⁸ This could include the location of any suppliers (including sub-suppliers beyond tier one) in China, if those suppliers have suspected or confirmed participation in China's labour transfer programmes, or other similar information about their suppliers beyond tier one, ideally as close as possible to the suppliers sourcing the raw materials.

ii. Principle 19

Principle 19 requires businesses to integrate the findings from impact assessments across relevant functions of the business, and to take appropriate actions to respond to adverse human rights risks and impacts.⁴⁹

It appears AGL has adhered to the requirements of Principle 19 and, by discussing governance structures, has gone beyond the requirements of the Act. AGL has taken action to respond to its modern slavery risks, including supplier due diligence processes⁵⁰ and a deep dive on its solar installation business, where their approach to solar procurement, management of modern slavery, and solar supply chain risks were assessed and validated by a third-party consultant.⁵¹

Despite following the steps of HRDD required by Principle 19, it is unclear whether AGL's actions are 'appropriate' without further information. In its 2023 Statement, AGL determined that 'it is more likely that AGL is directly linked to

⁴⁷ AGL Energy Ltd, *Modern Slavery Act Statement 2020*, AGL, 2020, p. 11, <https://www.agl.com.au/content/dam/digital/agl/documents/about-agl/who-we-are/company-policy/agl-modern-slavery-statement-fy2020.pdf> ('2020 Statement'); AGL Energy Ltd, *Modern Slavery Act Statement 2021*, AGL, 2021, p. 12, <https://www.agl.com.au/content/dam/digital/agl/documents/about-agl/who-we-are/our-commitments/220215-2021-modern-slavery-statement-nov-2021.pdf> ('2021 Statement'); AGL Energy Ltd, *Modern Slavery Act Statement 2022*, AGL, 2022, p. 10, <https://modernslaveryregister.gov.au/statements/11142> ('2022 Statement'); '2023 Statement', pp. 16–19.

⁴⁸ '2023 Statement', p. 8.

⁴⁹ 'UNGP's', pp. 18–19.

⁵⁰ '2020 Statement', pp. 13–14; '2021 Statement', pp. 14–16; '2022 Statement', pp. 12–14; '2023 Statement', pp. 26–31.

⁵¹ '2022 Statement', p. 12.

modern slavery rather than causing or contributing to [it].⁵² However, they only included hypothetical scenarios as to how they may be directly linked, rather than disclosing specific instances where they have identified that they are, or are at risk of being, directly linked. Consequently, it is difficult to determine whether further actions—such as considering whether to exit a business relationship in accordance with the commentary under this Principle⁵³—would be appropriate.

iii. Principle 20

Principle 20 requires businesses to track the effectiveness of their response, which should be based on appropriate indicators, and draw on feedback from internal and external sources, including affected stakeholders.⁵⁴

Overall, it appears AGL has adhered to the requirements of Principle 20 and has gone beyond the requirements of the Act by including qualitative and quantitative measures to track the effectiveness of its response. However, it is unclear to what extent the feedback of affected stakeholders is sought and considered.

iv. Principle 21

Principle 21 establishes that businesses should communicate how they address their human rights impacts in a way that is accessible and provides adequate information to be able to evaluate a business' response to a particular human rights impact.⁵⁵

As AGL's statements are publicly available, they have provided adequate information to undertake the present analysis, and describe the processes by which the company identifies and assesses modern slavery risks, it is reasonable to conclude that AGL meets the requirements of this principle.

Although AGL do not explicitly state that they undertake HRDD and have sought clarification on what is meant by HRDD,⁵⁶ a review of their modern slavery statements demonstrates that AGL are largely meeting the requirements of the HRDD processes outlined in the UNGPs. The key gaps in AGL's HRDD approach identified from this review include the company's lack of meaningful engagement with affected or potentially affected stakeholders, considering risks

⁵² *Ibid.*, p. 15.

⁵³ This would require considering how critical the business relationship is, the severity of the abuse, and whether exiting the relationship is likely to have adverse human rights consequences. See 'UNGPs', p. 18.

⁵⁴ 'UNGPs', p. 19.

⁵⁵ *Ibid.*, p. 20.

⁵⁶ N Andrews, *AGL Response to the Review of Australia's Modern Slavery Act 2018 Issues Paper*, AGL, 22 November 2022, pp. 5, 8, <https://www.agl.com.au/content/dam/agl-thehub/221129-agl-response-to-ms-issues-paper.pdf>.

within its value chain, and the focus on modern slavery risks over other human rights risks more broadly. There are also concerns about whether its risk mitigation actions go far enough to be considered appropriate.

Strengthening Human Rights Due Diligence in Australia to Support a Just Transition

In 2022, a review of the Act commenced, which focused on its effectiveness in combatting modern slavery. The subsequent report contained thirty recommendations, largely aimed at enhancing the standard and compatibility of reporting, and the enforceability of the reporting obligation.⁵⁷ As indicated earlier, there were several recommendations about HRDD, which would require businesses to implement a HRDD system and make it an offence for failing to do so. While it is anticipated that such changes can improve the effectiveness of the Act in combatting modern slavery, the report fails to consider human rights more broadly, the interconnection between environmental and human rights impacts, or the effectiveness of the Act in relation to state-imposed forced labour (see next section), thereby impacting the just transition.

It is imperative that any changes to the Act consider the just transition as Australia implements key strategies and policies to achieve its transition targets. In accordance with its obligations under the Paris Agreement, Australia has committed to reducing its greenhouse gas emissions by 43 per cent below 2005 levels by 2030, and to reduce its net greenhouse gas emissions to zero by 2050.⁵⁸

As Australia's existing policy landscape makes no explicit commitments to a just transition⁵⁹ and fails to take the people working as part of global supply chains into consideration, HRDD should be mandated through legislation, consistent with the recommendations made following the review of the Act. The following considerations should also be mandated as part of the HRDD process to ensure modern slavery is addressed more effectively and to better support a just transition.

⁵⁷ McMillan, p. 9.

⁵⁸ *Climate Change Act 2022* (Cth) sect. 10. While these remain the legislated commitments at the time of writing, Australia has since announced its 2035 target, in which it has committed to reducing emissions by 62–70% below 2025 levels. See Department of Climate Change, Energy, the Environment and Water (DCCEW), 'Setting Our 2035 Target and Path to Net Zero', DCCEW, 18 September 2025, https://www.dcceew.gov.au/about/news/setting-2035-target-path-net-zero#toc_0.

⁵⁹ R Eckersley and E Fitz-Henry, 'What is a "Just" Transition to Net Zero – and Why is Australia Struggling to get there?', *The Conversation*, 29 November 2023, <https://theconversation.com/what-is-a-just-transition-to-net-zero-and-why-is-australia-struggling-to-get-there-218706>.

Although the existing Act could be amended to include a HRDD requirement that incorporates the Act review recommendations and following considerations, it is recommended that the Act be replaced by a standalone HREDD law encompassing, at a minimum, these elements, whilst maintaining the provisions that established the Australian Anti-Slavery Commissioner.

Stakeholder and Rightsholder Engagement

Despite being a requirement of the HRDD process and a key feature of a just transition, the case study analysis demonstrated a lack of evidence that AGL has carried out meaningful engagement with potentially affected stakeholders. It also found that any engagement with stakeholders appeared to involve third-party business and human rights experts, as opposed to rightsholders. Here, ‘stakeholders’ refers to people or groups whose interests are or could be impacted by business activities, whereas ‘rightsholders’ refers to the ‘stakeholders whose human rights are or may be affected’.⁶⁰ Examples of impacted and potentially impacted stakeholders and rightsholders include workers within supply chains; unions; local, regional, or national communities; civil society organisations; and governments.⁶¹

Meaningfully engaging with affected and potentially affected stakeholders and rightsholders is important for businesses to understand the local issues and impacts of their operations and supply chains, and to obtain insights and perspectives regarding adverse impacts and effective remediation;⁶² in turn, this can help to address power imbalances inherent in the relationship. Furthermore, given the solar industry is expected to employ approximately 18 million workers by 2050 and has already had a disproportionately negative impact on rural and marginalised populations in less developed states,⁶³ ensuring meaningful engagement with such groups will be critical for addressing modern slavery and supporting a just transition.

⁶⁰ Organisation for Economic Co-operation and Development (OECD), *OECD Due Diligence Guidance for Responsible Business Conduct*, OECD, 2018, p. 48, <https://mneguidelines.oecd.org/OECD-Due-Diligence-Guidance-for-Responsible-Business-Conduct.pdf>.

⁶¹ *Ibid.*

⁶² M-T Gustafsson, A Schilling-Vacaflor, and A Lenschow, ‘The Politics of Supply Chain Regulations: Towards Foreign Corporate Accountability in the Area of Human Rights and the Environment?’, *Regulation & Governance*, vol. 17, issue 4, 2023, pp. 853–869, <https://doi.org/10.1111/rego.12526>.

⁶³ R Stock, ‘Praeclariat: Theorising Precarious Labour Geographies of Solar Energy’, *Antipode*, vol. 53, issue 3, 2021, pp. 928–949, <https://doi.org/10.1111/anti.12698>.

Therefore, the requirement to meaningfully engage with affected and potentially affected stakeholders and rightsholders should be legislated as part of the HRDD obligations. This approach would align with many of the mandatory HRDD laws in other jurisdictions, which require engagement with stakeholders at certain stages of the HRDD process.⁶⁴ Consideration should be given to framing this provision as a requirement to ensure the effective participation of such groups in the consultation process to ensure active, rather than passive, participation.⁶⁵

Environmental Due Diligence

In addition to human rights impacts, the solar value chain also has environmental impacts. Generally, the environmental impacts of mining for raw minerals include greenhouse gas emissions, land clearing, biodiversity loss, destruction of natural habitats, and air and water pollution.⁶⁶ Additionally, there have been reports of damage to land and marine ecosystems near solar PV production facilities in China as a result of air, water, and solid waste pollution and exposure to toxic substances linked to the production of solar PV in Xinjiang, where coal, chlorine, and mercury are used.⁶⁷ The production of polysilicon for solar PV panels also requires extremely high temperatures. These are produced using cheap coal from the Xinjiang region, resulting in high carbon emissions, thereby hindering the objectives of the transition to renewable energy.⁶⁸ As such, undertaking Environmental Due Diligence (EDD) to identify, assess, avoid, and address a business's adverse environmental impacts and risks associated with its operations, products, or services⁶⁹ is also key to supporting a transition to net zero and environmental sustainability more broadly.

⁶⁴ See McGaughey, Rowe, and Lappel, pp. 81–82.

⁶⁵ S Deva, 'Mandatory Human Rights Due Diligence Laws in Europe: A Mirage for Rightsholders?', *Leiden Journal of International Law*, vol. 36, issue 2, 2023, pp. 389–414, <https://doi.org/10.1017/S0922156522000802>.

⁶⁶ K Bales and B K Sovacool, 'From Forests to Factories: How Modern Slavery Deepens the Crisis of Climate Change', *Energy Research & Social Science*, vol. 77, 2021, pp. 1–9, <https://doi.org/10.1016/j.erss.2021.102096>.

⁶⁷ Stock, p. 931; L T Murphy, J Vallette, and N Elimä, *Built on Repression: PVC Building Materials' Reliance on Labor and Environmental Abuses in the Uyghur Region*, Sheffield Hallam University Helena Kennedy Centre for International Justice, 2022, pp. 7–8.

⁶⁸ *Ibid.*, p. 8; Murphy and Elimä, pp. 8, 28; Mulvaney and Bazilian, p. 3.

⁶⁹ See generally: Organisation for Economic Co-operation and Development (OECD), *OECD Guidelines for Multinational Enterprises on Responsible Business Conduct*, OECD, 2023, pp. 33–38; C Macchi, 'The Climate Change Dimension of Business and Human Rights: The Gradual Consolidation of a Concept of "Climate Due Diligence"', *Business and Human Rights Journal*, vol. 6, issue 1, 2021, pp. 93–119, <https://doi.org/10.1017/bhj.2020.25>.

Furthermore, there is a growing understanding about the interconnection between human rights and environmental impacts,⁷⁰ where human rights are directly affected by environmental degradation and loss of biodiversity,⁷¹ and environmental harms often have corresponding adverse human rights impacts.⁷² Specific to modern slavery, there is a two-way relationship with climate change.⁷³ Firstly, climate change can increase vulnerability to modern slavery due to climate-induced displacement or otherwise create conditions that may drive people to migrate. Secondly, climate change can result in ‘resource scarcity, loss of livelihoods, increases in poverty, and unequal access to health and education’,⁷⁴ which often disproportionately impact those with existing vulnerabilities to modern slavery.⁷⁵ On the other hand, modern slavery activities have also been linked to ecological degradation and climate change. This is due to the prevalence of forced labour and debt bondage in environmentally damaging and carbon-intensive industries, such as charcoal, cattle, palm oil, and extractive industries.⁷⁶ Therefore, not only is there an overlap between modern slavery risks and environmental risks and impacts,⁷⁷ but modern slavery and climate change are connected in a way whereby they may impact and exacerbate the other.⁷⁸

As such, human rights and environmental risks and impacts should be addressed together, not in siloes,⁷⁹ such as through an integrated HREDD approach. The

⁷⁰ F Dehbi and O Martin-Ortega, ‘An Integrated Approach to Corporate Due Diligence from a Human Rights, Environmental and TWAAIL Perspective’, *Regulation & Governance*, vol. 17, issue 4, 2023, pp. 927–943, <https://doi.org/10.1111/rego.12538>; Gustafsson, Schilling-Vacaflor, and Lenschow, p. 862; Bales and Sovacool.

⁷¹ Dehbi and Martin-Ortega; Macchi, pp. 93, 108; United Nations Human Rights Office of the High Commissioner (OHCHR), *Understanding Human Rights and Climate Change*, OHCHR, 27 November 2015, pp. 13–26, <https://www.ohchr.org/sites/default/files/Documents/Issues/ClimateChange/COP21.pdf>.

⁷² B Albuquerque, ‘The Interplay Between Environmental Crime and Corporate Sustainability Due Diligence’, *New Journal of European Criminal Law*, vol. 15, issue 2, 2024, pp. 209–224, <https://doi.org/10.1177/20322844241253182>; B Davidson, ‘Labour on the Leading Edge: A Critical Review of Labour Rights and Standards in Renewable Energy’, *Energy Research & Social Science*, vol. 97, 2023, pp. 1–18, p. 8, <https://doi.org/10.1016/j.erss.2022.102928>.

⁷³ D Boyd *et al.*, *Modern Slavery, Environmental Destruction and Climate Change: Fisheries, Fields, Forests and Factories*, University of Nottingham Rights Lab, 2018, p. 9.

⁷⁴ ‘Global Slavery Index’, p. 14.

⁷⁵ *Ibid.*, p. 63.

⁷⁶ Boyd *et al.*, pp. 9–11. See also ‘Global Slavery Index’, pp. 65–66.

⁷⁷ Cockayne, Rodriguez Huerta, and Burcu, p. 51; ‘Beyond Compliance’.

⁷⁸ Bales and Sovacool, p. 3.

⁷⁹ See Dehbi and Martin-Ortega, pp. 928–929.

HREDD laws in France, Germany, and the EU have made explicit reference to the need to consider both human rights and environmental impacts throughout the due diligence process.⁸⁰ It is, therefore, recommended that Australia's Act be replaced by a standalone HREDD law. Consideration should be given to how to frame the provision to ensure HREDD is undertaken in an integrated and holistic manner to avoid human rights or environmental risks or impacts prioritised over the other. Finally, HREDD laws should prioritise accountability for local environmental impacts, such as pollution impacting access to clean water, while also ensuring accountability for impacts that are more of a global concern, such as climate change and deforestation.⁸¹

Human Rights

Human rights impacts in global renewable energy supply chains go beyond modern slavery, with the potential for impacts on labour rights, the environment, land rights, and indigenous peoples' rights and culture.⁸² In Australia, it is projected that '43 per cent of all clean energy infrastructure required ... would need to be sited on Indigenous lands',⁸³ which demonstrates the potentially large impact of the transition on Indigenous rights and culture. Furthermore, the solar supply chain carries specific risks to the human right to safe and healthy working conditions. Industrial accidents, such as fires and explosions, have occurred at silicon and polysilicon production facilities in China, which have resulted in both fatality and injuries.⁸⁴ These sites also expose workers to a range of health hazards, such as coal and PVC dust, carcinogens, and mercury waste, which can lead to respiratory diseases; lung, liver and other cancers; and death.⁸⁵ Workers installing solar panels are exposed to the risks of arc flash burns, electric shock, falls, and burn hazards, and workers mining quartz who are exposed to high amounts of silica dust are also at risk of lung diseases and specific forms of lung cancer.⁸⁶

⁸⁰ *Ibid.*, p. 931; McGaughey, Rowe, and Lappel, pp. 69–71.

⁸¹ See M Mason, L Partzsch, and T Kramarz, 'The Devil Is in the Detail – The Need for a Decolonizing Turn and Better Environmental Accountability in Global Supply Chain Regulations: A Comment', *Regulation & Governance*, vol. 17, issue 4, 2023, pp. 970–979, <https://doi.org/10.1111/rego.12539>.

⁸² World Benchmarking Alliance (WBA), *How Ambitious and Credible are Electric Utilities' Transition Plans? An Analysis of Keystone Companies in 2023*, WBA, November 2023, p. 16, <https://assets.worldbenchmarkingalliance.org/app/uploads/2023/11/Electric-Utilities-Benchmark-Insights-Report-2023.pdf>.

⁸³ D Prestipino, 'Indigenous Involvement Crucial to Australia's Renewable Energy Dreams', *National Indigenous Times*, 3 May 2024, <https://nit.com.au/03-05-2024/11193/indigenous-involvement-crucial-to-australias-renewable-energy-dreams>.

⁸⁴ Mulvaney and Bazilian, p. 3.

⁸⁵ Murphy, Vallette, and Elimä, p. 9.

⁸⁶ Stock, pp. 931–933.

Although HRDD as articulated in the UNGPs requires a focus on all human rights, the Act has a specific focus on modern slavery. It is recommended that HREDD legislation mandates entities to conduct holistic HREDD, in order to consider all human rights, labour rights, Indigenous rights, and environmental rights, as well as their environmental impacts.⁸⁷

Value Chain

Solar products have impacts on human rights and the environment throughout the value chain. Impacts can occur during mining, manufacturing, and shipping of raw minerals and solar PV products (upstream), during the installation of solar panels and construction of solar plants (operations), and in the disposal and recycling of solar panels and energy systems (downstream).⁸⁸ Regarding the downstream impacts, it is projected that there will be 200 million tonnes of solar waste globally by 2050. Through recycling solar waste, silicon, glass, and metals such as silver and copper that are necessary for the energy transition can be extracted and re-used. However, recycling solar panels can also be complex, costly, and can carry environmental risks from other toxic metals, such as lead and cadmium. While research is underway to improve the costs and methods involved in recycling solar waste, in the meantime, much of the solar waste is sent to landfill, usually in less developed states.⁸⁹ There is a large dumpsite in Ghana, to which e-waste is commonly sent, where poor and socially vulnerable workers are exposed to hazardous substances and are at a heightened risk of severe respiratory illnesses, accidents, and other injuries.⁹⁰ To address such impacts, HREDD legislation should require entities to consider the *value chain* when conducting HREDD, as opposed to the *supply chain*, thereby mandating businesses to identify and assess both upstream and downstream risks and impacts as part of its risk screening and assessment activities.

Remediation

Remediation is considered outside the scope of this paper, as it is not part of the HRDD process. However, remediation is a key aspect of the UNGPs,⁹¹ and strong access to remedy provisions help to eradicate barriers that survivors often face

⁸⁷ Deva, pp. 404–405.

⁸⁸ Davidson, p. 11; Stock, p. 943.

⁸⁹ ARENA, 'Low-Cost Recycling Technology for Solar PV', *ARENAWIRE*, 22 September 2023, <https://arena.gov.au/blog/low-cost-recycling-technology-for-solar-pv>.

⁹⁰ Stock, p. 935.

⁹¹ See 'UNGPs', pp. 20–27.

in accessing grievance mechanisms and remedy.⁹² It is suggested that HREDD legislation should provide for effective access to remedy in a way that addresses these barriers and considers the needs of survivors and rightsholders.

Not only should legislation mandate HREDD in accordance with the above requirements, but transparency on the HREDD process and outcomes should also be required in reporting. Where the reporting requirements are strengthened, this can drive stronger and more transparent disclosures and reduce situations where companies may use ambiguity or lack of transparency to maintain the status quo, reduce their accountability, and delay action on modern slavery or other human rights and environmental harms in their value chains.⁹³

Implications

The above section suggests replacing the Act with a standalone HREDD law, which prioritises stakeholders and rightsholders and ensures accountability for a broad range of human rights and environmental harms along the value chain, thereby better supporting a just transition. While this recommendation follows a case study analysis of just one company in the renewable energy sector, the proposed HREDD approach should be mandated across all sectors. Not only are there other sectors that are likely to have moderate to high impacts on human rights or the environment, but many businesses will also need to consider these human rights and environment risks and impacts as they decarbonise their operations and value chains.

However, mandatory HREDD provisions can result in subcontractors and suppliers throughout the supply chain bearing the costs of meeting due diligence requirements imposed on them by entities to whom they provide goods or services, and they can also reinforce unequal power structures between such parties. To ensure amendments to the Act do not entrench existing unequal power structures between corporations and rightsholders, or further impose Western-centric standards on others, stakeholders and rightsholders must be engaged as active participants in the design, implementation, and monitoring of any HREDD legislative instruments or amendments.⁹⁴

⁹² See Dehbi and Martin-Ortega, pp. 937–938.

⁹³ Business and Human Rights Resource Centre (BHRRC), *Modern Slavery Act: Five Years of Reporting*, BHRRC, February 2021, p. 10, https://media.business-humanrights.org/media/documents/MSR_Embargoed.pdf; J Meehan and B D Pinnington, 'Modern Slavery in Supply Chains: Insights through Strategic Ambiguity', *International Journal of Operations & Production Management*, vol. 41, issue 2, 2021, pp. 77–101, <https://doi.org/10.1108/IJOPM-05-2020-0292>.

⁹⁴ See Dehbi and Martin-Ortega, p. 932-4, 940.

Furthermore, while the proposed HREDD legislation may improve the effectiveness of HREDD to address the human rights and environmental risks and impacts in business operations and value chains, HREDD is limited in its ability to prevent or mitigate state-imposed forced labour.⁹⁵ This is because where a supplier is part of a broader programme using state-imposed forced labour, the leverage of one or even multiple businesses collectively is unlikely to be effective at preventing or mitigating the conduct of the state. Where there remain markets and consumers who will continue to accept ‘dirty’ products, suppliers (and the state) may continue to use forced labour in those products.⁹⁶ Therefore, HREDD laws are considered insufficient on their own. Additional regulatory tools and measures, such as economic sanctions (including import bans on goods made with forced labour),⁹⁷ corporate and competition law reform,⁹⁸ and diplomatic measures⁹⁹ should be considered to both target state-imposed forced labour and form a holistic approach to addressing modern slavery and supporting a just transition.¹⁰⁰

⁹⁵ We recognise that there are likely to be other limitations to HREDD that may influence its effectiveness at addressing human rights and environmental risks and impacts, outside the context of state-imposed forced labour—for example, mapping value chains beyond tiers one and two, and building or exercising leverage to address risks or remediate workers deeper in value chains. Although HREDD efforts might not reach all affected or at-risk workers (or other rightsholders), the UNGPs allow for a risk-based approach, where the most severe risks and impacts to people should be prioritised, wherever prioritisation is necessary (see Principle 24). There are adequate guidance documents (including the UNGPs), tools, platforms, and other resources and initiatives to assist businesses with identifying, appropriately addressing, and remediating risks and impacts—particularly the most salient ones—to ensure that HREDD efforts can yield positive outcomes in many cases.

⁹⁶ Cockayne, Rodriguez Huerta, and Burcu, p. 47.

⁹⁷ Such bans have been enacted in the United States (See United States Congress, *Uyghur Forced Labor Prevention Act 19 USC § 1307-4 (2021)*); in Canada (Public Safety Canada (PS), ‘Import Prohibition on Goods Produced by Forced Labour’, PS, 8 February 2021, <https://www.publicsafety.gc.ca/cnt/trnsprnc/brfng-mtrls/prlmntry-bndrs/20210625/10-en.aspx>); and in the European Union (See European Parliament, *Prohibiting Products Made with Forced Labour on the Union Market* (Europe) 2022/0269 (COD), [https://oeil.secure.europarl.europa.eu/oeil/en/procedure-file?reference=2022/0269\(COD\)](https://oeil.secure.europarl.europa.eu/oeil/en/procedure-file?reference=2022/0269(COD))).

⁹⁸ B Choudhury, ‘Corporate Law’s Threat to Human Rights: Why Human Rights Due Diligence Might Not Be Enough’, *Business and Human Rights Journal*, vol. 8, issue 2, 2023, pp. 180–196, <https://doi.org/10.1017/bhj.2023.29>; B Sjäfjell, ‘How Company Law Has Failed Human Rights – and What to Do About It’, *Business and Human Rights Journal*, vol. 5, issue 2, 2020, pp. 179–199, <https://doi.org/10.1017/bhj.2020.9>.

⁹⁹ Cockayne, Rodriguez Huerta, and Burcu, p. 82.

¹⁰⁰ Regarding the importance of a holistic approach, see: Deva, pp. 413–414.

Conclusion

This paper uses a case study of AGL—one of Australia’s largest energy providers with a significant role to play in the transition to net zero—to demonstrate the inadequacy of the current HRDD framing under the Act in supporting a just transition in Australia. Despite Australia being assessed as a leading country in its response to modern slavery, this reputation is insufficient if it is not matched by substantive action. To demonstrate genuine leadership, Australia must strengthen its legislative and regulatory frameworks to more effectively address the human rights and environmental risks embedded in global renewable energy value chains. Ensuring meaningful protection for workers within these supply chains is not only a moral imperative but also essential to realising a truly just and credible transition to net zero.

To strengthen HRDD in Australia, it is recommended that the Act be replaced by standalone HREDD legislation, which includes stakeholder and rightsholder engagement, EDD, and a broad focus on all human rights along the entire value chain. Such new legislation should also provide for effective access to remedy and maintain the provisions that established the Australian Anti-Slavery Commissioner. Moreover, to ensure such legislation does not entrench existing unequal power structures, stakeholders and rightsholders must be engaged as active participants in the design, implementation, and monitoring of any HREDD legislative instruments or amendments.¹⁰¹ HREDD laws should also be supported by complementary regulatory measures.

Although it appears that further deliberation is required on how to support a truly just transition, the transition is already underway. This paper recommends that businesses should not wait for legislative amendments to be passed to take action. They should take a proactive role in the just transition¹⁰² by conducting HREDD in line with the above recommendations and taking active steps to break down existing unequal power structures with affected and potentially affected stakeholders and rightsholders. Additionally, businesses should make their best efforts to avoid importing products made with forced labour and should promote a culture of transparency in reporting to encourage a collaborative effort to eradicate modern slavery and support a just transition. Such efforts should not be limited to businesses in the renewable energy sector. Given the likelihood that other sectors will also find human rights and environmental risks or impacts in their operations and value chains, particularly as they decarbonise, these efforts should be replicated by businesses across these sectors to promote respect for both human rights and the environment.

¹⁰¹ See Dehbi and Martin-Ortega, pp. 932, 940.

¹⁰² Johansson, p. 248.

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