

Written evidence submitted by Anti-Slavery International

Founded in 1839, we are the oldest international human rights organisation in the world. We draw on our experience to work to eliminate all forms of slavery and slavery like practices throughout the world. We work in partnership with our supporters, governments, businesses, like-minded organisations and global movements to bring about long-term, sustainable change.

Anti-Slavery International welcomes the Environmental Audit Committee's enquiry, which recognises the important role of the solar industry in the UK Government's vital journey to net zero. However, we urge the Committee to recognise and assess the risk of the use of forced labour of Uyghurs and other Turkic and Muslim-majority peoples in the solar industry and energy storage technology industries, and to develop recommendations which map out a pathway for how the UK Government can support the UK solar industry to develop a truly 'clean' industry, which does not rely on the systemic forced labour of persecuted communities. This will require collaboration with like-minded governments and financial institutions.

1. Context: The urgent need for the global transition to clean energy

- 1.1 Anti-Slavery International welcomes the Environmental Audit Committee's enquiry into onshore solar technologies role in the UK's journey to net zero. The world has already experienced over 1°C of warming. It is vitally important that governments globally commit to limiting global temperature rise to 1.5°C, a commitment which is under significant threat as evidenced through the backsliding on this commitment at COP27. This commitment can only be met by a rapid transition from fossil fuels, the reduction of greenhouse gas emissions to 45% below their 2010 levels by 2030 and a commitment to reaching net zero emissions by 2050, as called for by the [Intergovernmental Panel on Climate Change](#).
- 1.2 Development of the UK solar industry is therefore a key part of this necessary transition from fossil fuels, and we welcome the Committee's considerations on how to ensure that UK market capacity for supply and installation meets this demand.
- 1.3 However, the transition to clean energy must be fair and respect everyone's fundamental rights. It is important, therefore, that the Committee recognises, understands and takes action against the pervasive forced labour present in the solar industry supply chain, including in key components used in solar panels (polysilicon) and in energy storage technology (lithium).
- 1.4 This submission will focus on the use of forced labour of Uyghurs and other Turkic and Muslim-majority peoples in the solar and lithium supply chains. However, we note that human rights abuses are also present in the lithium supply chain due to harms committed in other contexts, for example child labour in mining in the Democratic Republic Congo ('DRC') of cobalt, one of the elements used in lithium-ion batteries.¹ The DRC is the world's largest source of cobalt. We urge the Environmental Audit Committee to consider these harms in its analysis by conducting a human rights and environmental risk assessment of the various key components vital for the solar and lithium industries.

2. The forced labour of Uyghurs and other Turkic and Muslim-majority peoples

¹ See resources compiled by Human Trafficking Search <https://humantraffickingsearch.org/cobalt-mining/>

- 2.1 The Government of China is perpetrating human rights abuses on a massive scale in the Xinjiang Uyghur Autonomous Region (Uyghur Region), known to local people as East Turkistan, targeting the Uyghur population and other Turkic and Muslim-majority peoples on the basis of their religion and ethnicity. These abuses include arbitrary mass detention of an estimated range of 1 million to 1.8 million people and a programme of re-education and forced labour. This involves both detainee labour inside internment camps and prisons and multiple forms of involuntary labour at workplaces across the Region and cities across China.² These repressive policies are bolstered by a pervasive, technology-enabled system of surveillance.³ UN human rights experts have determined the abuses may constitute crimes against humanity⁴, and legal and human rights experts have determined that the abuses amount to genocide.⁵
- 2.2 Evidence has shown that the breadth of the forced labour policy creates significant risk of the presence of forced labour at virtually any workplace, industrial or agricultural, in the Uyghur Region.⁶
- 2.3 We have previously provided evidence to UK parliament committees and UN Special Mandates on this forced labour system, which are available for additional context.⁷

3. Uyghur forced labour in the solar supply chain

- 3.1 In 2021 Sheffield Hallam University published a [report](#) which concludes that almost the entire global solar panel industry is implicated in the forced labour of Uyghurs and other Turkic and Muslim-majority peoples. This report found that as Uyghur forced labour enters the solar supply chain in the first step - mining quartz and making metallurgical silicon - up to 97% of all polysilicon-based solar panels could be at risk. Specifically, the report found that:
- 95% of solar panels globally rely on one primary material – solar-grade polysilicon.
 - The Uyghur Region accounts for approximately 45% of the world’s solar-grade polysilicon supply.
 - The Uyghur Region’s largest raw materials supplier for the solar industry is heavily implicated in the forced labour of Uyghurs.
 - All four of the Uyghur Region’s polysilicon manufacturers are implicated in Uyghur forced labour either through direct participation in forced labour schemes, and/or through their raw material sourcing.

² United Nations Human Rights Office of the High Commissioner. “OHCHR Assessment of human rights concerns in the Xinjiang Uyghur Autonomous Region, People’s Republic of China”, August 2022 <https://www.ohchr.org/sites/default/files/documents/countries/2022-08-31/22-08-31-final-assessment.pdf>, Amnesty International. “Like We Were Enemies in a War’: China’s Mass Internment, Torture, and Persecution of Muslims in Xinjiang”, June 2021 <https://www.amnesty.org/en/latest/news/2021/06/china-draconian-repression-of-muslims-in-xinjiangamounts-to-crimes-against-humanity/>, Human Rights Watch, “Break Their Lineage, Break Their Roots’: China’s Crimes against Humanity Targeting Uyghurs and Other Turkic Muslims”, April 2021, <https://www.hrw.org/news/2021/04/19/china-crimesagainst-humanity-xinjiang>; Luke Adams, Steve Andrews, Scott Flipse, Megan Fluker, and Amy Reger, “Staff Research Report: Global Supply Chains, Forced Labor, and the Xinjiang Uyghur Autonomous Region,” Congressional-Executive Commission on China, March 2020, <https://www.cecc.gov/sites/chinacommission.house.gov/files/documents/CECC%20Staff%20Report%20March%202020%20-%20Global%20Supply%20Chains%20Forced%20Labor%20and%20the%20Xinjiang%20Uyghur%20Autonomous%20Region.pdf>; Adrian Zenz, “Wash Brains, Cleanse Hearts’: Evidence from Chinese Government Documents about the Nature and Extent of Xinjiang’s Extrajudicial Internment Campaign,” Journal of Political Risk, 7 (11), November 2019, <http://www.jpolarisk.com/wash-brains-cleanse-hearts/>; Fergus Ryan, Danielle Cave, and Nathan Ruser, “Mapping Xinjiang’s ‘ReEducation’ Camps,” Australian Strategic Policy Institute, 1 November 2018, <https://www.aspi.org.au/report/mapping-xinjiangsre-education-camps>; “World Report 2019: Events of 2018: China,” Human Rights Watch, 2019, <https://www.hrw.org/worldreport/2019/country-chapters/china-and-tibe>

³ Chris Buckley and Paul Mozur, “How China Uses High-Tech Surveillance to Subdue Minorities,” The New York Times, 22 May 2019, <https://www.nytimes.com/2019/05/22/world/asia/china-surveillance-xinjiang.html>

⁴ United Nations Human Rights Office of the High Commissioner. “OHCHR Assessment of human rights concerns in the Xinjiang Uyghur Autonomous Region, People’s Republic of China” August 2022 <https://www.ohchr.org/sites/default/files/documents/countries/2022-08-31/22-08-31-final-assessment.pdf>, Tomoya Obokata, “Contemporary forms of slavery affecting persons belonging to ethnic, religious and linguistic minority communities Report of the Special Rapporteur on contemporary forms of slavery, including its causes and consequences” July 2022 <https://documents-dds-ny.un.org/doc/UNDOC/GEN/G22/408/97/PDF/G2240897.pdf?OpenElement>

⁵ Uyghur Tribunal Judgement, December 2021, <https://uyghurtribunal.com/wp-content/uploads/2022/09/UYGHUR-TRIBUNAL-Judgment-2022.09.20.pdf>. The Uyghur Human Rights Project has also compiled resolutions by national governments and parliaments <https://uhrp.org/responses/>

⁶ Research organisations, including the Center for Strategic and International Studies, the Worker Rights Consortium, the Helena Kennedy Centre for International Justice at Sheffield Hallam University, and the Australian Strategic Policy Institute, and investigative journalists from The Wall Street Journal, the BBC Associated Press, The New York Times, The Globe and Mail, ABC Australia, Radio Free Asia, Reuters and other outlets have documented specific cases of forced labour in the apparel and textile industry, including in gloves and shoe manufacturing, in PPE production, in the solar industries, in the automotive industry, in electronics, in PVC, in hair products and in tomato processing in the Uyghur Region and wider China. For key reports see <https://enduyghurforcedlabour.org/home/reports/>

⁷ Written submission to the Foreign Affairs Committee enquiry on ‘Xinjiang detention camps’, December 2020, <https://committees.parliament.uk/writtenevidence/13587/html/>, Oral evidence to the Foreign Affairs Committee on ‘Xinjiang detention camps’, March 2021, <https://committees.parliament.uk/oralevidence/1769/html/>, Response to the Special Rapporteur on Contemporary Forms of Slavery’s call for input on contemporary forms of slavery as affecting persons belonging to ethnic, religious, and linguistic minorities: State imposed forced labour in the Xinjiang Uyghur Autonomous Region (the Uyghur Region), February 2022, <https://www.antislavery.org/wp-content/uploads/2022/04/2022-Joint-Submission-to-SR-Slavery-Minorities-State-imposed-forced-labour-of-the-Uyghur-population.pdf>

- The four largest solar panel suppliers in the world all source from at least one of these polysilicon manufacturers.
 - The supply chains of at least 90 Chinese and international solar companies are/were affected.
- 3.2 Solar panel modules are also often made of aluminium. Eight major Uyghur Region-based aluminium producers – accounting for roughly 17% of China’s total aluminium output – also reportedly have possible ties to state-sponsored transfer of labour programmes.⁸
- 3.3 The solar industry supply chain in the Uyghur Region is also environmentally damaging. As recounted in the Sheffield Hallam report, polysilicon production in the Region has been made economically competitive due to a heavy reliance on coal-fired power plants for the production of metallurgical-grade silicon and polysilicon. 100% of polysilicon produced in the Uyghur Region is reportedly manufactured with coal power.
- 3.4 Earlier research published by the Guardian in 2021 reported that up to 40% of UK solar farms were using panels made by Chinese solar companies accused of used Uyghur forced labour.⁹ This included solar projects commissioned by the Ministry of Defence, the government’s Coal Authority, and United Utilities. This research was focused upon Chinese solar panel manufacturers, and came prior to the Sheffield Hallam research, which provided greater detail as to how the solar industry is exposed to Uyghur forced labour at earlier stages of the solar supply chain, namely from the first stages of production from the crushing of quartz rocks and the processing of metallurgical-grade silicon (which is then processed into polysilicon). As Anti-Slavery International, we would therefore suggest that the estimate that 40% of the UK’s industry is implicated is an underestimate, and the exposure of the UK solar industry is likely far higher.

4. Uyghur forced labour in the lithium supply chain

4.1 As referenced above, the world’s largest source of cobalt is the DRC, in an industry rife with child labour. Less understood is that three quarters of the world’s cobalt is refined and alloyed in China, often in processing plants which are powered by coal, and increasingly linked to the Uyghur Region and forced labour at various phases in the lithium-ion battery supply chain.¹⁰

5. Recommendations to the UK Government

5.1 The UK Government must urgently advance all routes to transition from fossil fuels, to meet net zero commitments and its commitment to limit global temperature rise to 1.5°C. However, this opportunity to transition to sustainable renewable energy must be a just transition which provides decent work for all workers in the renewable energy sector. The UK Government must therefore tackle instances where forced labour is used in mineral extraction and manufacture of solar panels and renewable energy supply chains.

5.2 Specifically, on the prevalence of forced labour of Uyghurs and other Turkic- and Muslim-majority peoples in the solar supply chain, the UK Government should urgently recognise that the transition to the use of clean energy must not be undertaken through a reliance on products produced with the systemic forced labour of persecuted communities, and through coal-based energy.

5.3 In seeking to expand the UK solar industry, the UK Government therefore should urgently focus resources and investment on efforts which will support the UK, and global, solar industry to source alternative supplies of the key components, including polysilicon and lithium, necessary for the solar

⁸ Global Trade Review, “Warnings sounded over Xinjiang-made aluminium in global supply chains”, April 2022, <https://www.gtreview.com/news/americas/warnings-sounded-xinjiang-made-aluminium-global-supply-chains/>

⁹ The Guardian, “Revealed: UK solar projects using panels from firms linked to Xinjiang forced labour”, April 2021, <https://www.theguardian.com/environment/2021/apr/23/revealed-uk-solar-projects-using-panels-from-firms-linked-to-xinjiang-forced-labour>

¹⁰ See, for example, New York Times, “Red Flags for Forced Labor Found in China’s Car Battery Supply Chain” 20 June 2022, <https://www.nytimes.com/2022/06/20/business/economy/forced-labor-china-supply-chain.html>

industry and related industries. This will require collaboration with like-minded governments and financial institutions.

5.4 We also recommend that the UK Government urgently introduces new legislation which will incentivise the UK solar industry to identify and address the risk of forced labour in its supply chain. This requires the introduction of new primary legislation which introduces a corporate duty to prevent adverse human rights and environmental impacts, a Business, Human Rights and Environment Act¹¹, as well as complementary legislation which will enable the banning of imports of products made wholly or partially with forced labour¹². Comparable legislation has been introduced, or is under development, in the United States, Canada and the European Union.¹³

5.5 We underscore the paramount urgency for global collaboration on the human rights catastrophe of Uyghur forced labour in our transition to clean energy. This issue must therefore feature high on the agenda in key policy discussions and negotiations, including the forthcoming G7, G20 and COP28 conferences in 2023.

December 2022

¹¹ See our briefing paper on the need for a UK Business, Human Rights and Environment Act, January 2022, https://www.antislavery.org/wp-content/uploads/2022/01/ASI_Report_UKBHREA_FULL.pdf

¹² We've joined with over 20 civil society and trade union organisations in the UK, including Amnesty International, Justice and Care, Human Rights Watch, the TUC, and Unseen, to outline the principles we need to see in a UK legal framework on import controls. These principles also detail how the UK's existing approach on Transparency in Supply Chains should be improved. <https://www.antislavery.org/wp-content/uploads/2022/10/Modern-Slavery-Bill-Supply-Chain-Principles.pdf>

¹³ Read more in our FAQ <https://www.antislavery.org/wp-content/uploads/2022/10/FAQ-forced-labour-global-supply-chains.pdf>