

**UYGHUR
FORCED LABOR
IN THE
NORWEGIAN
SOLAR PANEL
INDUSTRY**

UTJD

UYGHUR TRANSITIONAL JUSTICE DATABASE

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Uyghur Transitional Justice Database (UTJD) is an independent nonprofit organization that focuses on the documentation of human rights violations committed against the Uyghurs and other Turkic peoples in East Turkistan (aka. Xinjiang) through the collection of testimonies and research-based advocacy. UTJD was founded in 2017 as a project of the Norwegian Uyghur Committee and became an independent nonprofit organization in 2019.

We have started building reality-based detailed 3D models of internment camps in VR, and possibly in the foreseeable future also 3D models of historical mosques, sacred tombs, and other cultural relics/sites that have been (partially) demolished by the Chinese regime. We aim to create a virtual interactive museum in the future, featuring all things related to the Uyghurs and other Turkic peoples in East Turkistan.

Our work has been featured in various news outlets and in several documentaries. We publish reports and books, e.g., *100 Camp Testimonies* and *Remolding the Uyghurs to Fit the Han-ethnocentric Mold*. We also submit reports and policy recommendations to governments.

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Table of Contents

Acknowledgement	3
Introduction	5
Objectives	8
Uyghur Forced Labor and the Solar Panel Industry – Background	9
ILO Standards Applied in Uyghur Forced Labor	11
Regulations of Labor Standards in Global Supply Chains	13
United Nations Guiding Principles (UNGP) on Businesses and Human Rights	14
The Manufacture of Solar Panels	16
Company Responses to the Uyghur Forced Labor Questionnaire	17
Overview of Responses	18
1. Formal Complaint-Driven Responses:	18
2. Three Companies' Minimal Engagement:	18
Implications of the Responses	19
Conclusion	61
Key Findings	61
Summary	63
Limitations of the Transparency Act	63
Policy Recommendations	65
Bibliography	68
Appendix	76

Introduction

Over the past few decades, assimilative Han-ethnocentric sinicization policies along with concerning physical and psychological control measures of the Chinese Communist Party (CCP) have had a detrimental impact on Uyghurs and other Turkic peoples in East Turkistan (aka. Xinjiang). These measures attempted to create complete authority and subservience in the region while eradicating the Uyghur people's Turkic identity, including their language, culture, and religion. The current crisis in the region has already resulted in significant condemnations, particularly coming from the West. Since 2017, a great deal of news reports and a growing number of research papers have been documenting and exposing the serious human rights violations committed by the Chinese regime. Among these violations, the establishment of extrajudicial internment camps has been the most prominent over the last decade, which has been disguisedly referred to as “re-education” or “vocational training centers” by the Chinese regime.

According to the United Nations Committee on the Elimination of Racial Discrimination, up until 2018, more than one million Uyghurs and other minorities have been detained in so-called “Vocational Education and Training Centers” in East Turkistan (United Nations 2018). The detainees are regularly subjected to political indoctrination, torture, and other sexual and psychological form of abuse (Amnesty International 2021a). The arbitrary and discriminatory detention of Uyghurs and other Turkic peoples may even constitute international crimes, in particular crimes against humanity (“OHCHR Assessment of Human Rights Concerns in the Xinjiang Uyghur Autonomous Region, People's Republic of China” 2022). Life outside the internment camps is described as an “open-air prison”, where Turkic populations are constantly subjected to invasive mass surveillance (Byler 2022), coercive family separation (Amnesty International 2021b), sexual violence (Amnesty International 2021a), forced labor (Xu et al. 2020) forced contraception, sterilization, and abortion (Zenz 2020). In recent years, several parliaments around the world have declared that the mass atrocities committed against the Uyghur people constitute genocide. Despite these gross human rights violations, the international community has failed to deliver justice and hold perpetrators accountable.

In recent years, an increasing body of evidence has revealed the widespread prevalence of forced labor within the People's Republic of China (PRC). In March 2020, one of the first reports to be published on the subject of Uyghur forced labor was released. In its report entitled "Uyghur for sale: 'Re-education,' forced labor and surveillance beyond Xinjiang," the Australian Strategic Policy Institute (ASPI) identified 83 international fashion brands that were alleged to be directly or indirectly benefiting from the use of Uyghur workers outside East Turkistan through a state-sponsored labor transfer program. The report estimates that more than 80,000 Uyghurs were transferred out of East Turkistan to work in factories across China under conditions that strongly suggested forced labor (Xu et al. 2020). ASPI's estimation was conservative, while the actual statistics were expected to be far higher. It is important to highlight that the intentions behind the PRC's forced labor campaign are more political than economic. The 2022 report from the UN Special Rapporteur on Contemporary Forms of Slavery found that the extreme control exercised over workers subjected to forced labor, including excessive surveillance, abusive living and working conditions, restriction of movement through internment, threats, physical and/or sexual violence, and other inhuman or degrading treatment, some instances may amount to enslavement as a crime against humanity ("A/HRC/51/26: 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, Tomoya Obokata" 2022). Adrian Zenz's analysis of the Nankai report, which was released by the China Institute of Wealth and Economics at Nankai University, provides compelling evidence of widespread coercive state-led recruitment into labor transfer. The report highlights that these transfers serve not only to "reduce labor costs" for companies but also as a long-term strategy aimed at promoting "assimilation" and "reducing population density". Furthermore, the report suggests that such programs should be initiated quietly, with no need for excessive international publicity (Zenz 2021a).

The intensive political environment in China actively restricts third parties from conducting independent investigations and labor audits regarding the presence of forced labor. Development Finance Institutions and the UN were denied access to enter East Turkistan. Some audit firms in the private sector ceased to certify products made in the region ("Auditors

to Stop Inspecting Factories in China's Xinjiang Despite Forced-Labor Concerns" 2021), and the Fair Labor Association has banned all members from sourcing from East Turkistan (Murphy, Salcito, and Elimä 2022, p.49). However, existing evidence and facts suggest widespread forced labor practices consistent with ILO's definition of human trafficking and forced labor. The increasing involvement of Uyghur forced labor in global supply chains presents a new challenge for international businesses and corporations operating in China.

How can global companies operate responsibly, secure the integrity of their supply chains, and prevent their brands from being associated with reputational and legal risks? The complexity of the supply chain and its mixed workforce poses a significant challenge for global companies to ensure that their products are free from forced, discriminatory, or abusive labor practices. In light of the newly enforced [Transparency Act Law](#) in Norway, this research project aims to investigate the extent to which Uyghur forced labor is present in Norwegian supply chains, particularly in the solar panel industry, and the impact on businesses and consumers.

Objectives

The main objective of this research project is to investigate the extent to which Uyghur forced labor is present in Norwegian supply chains and the impact on businesses and consumers. It aims to:

- conduct a comprehensive secondary source analysis, synthesizing existing information from media, academic reports and companies own corporate reporting;
- assess the knowledge and awareness of businesses regarding the presence of Uyghur forced labor in global supply chains;
- evaluate businesses' compliance with the Transparency Act regarding their due diligence practices, risk assessment procedures, and adherence to their duty to provide relevant information on their supply chain activities;
- analyze the companies' annual reports concerning their supply chains in China and examine the extent to which Uyghur forced labor is acknowledged through their internal assessments and disclosure practices;
- identify and highlight the best practices and recommendations for businesses to prevent and address Uyghur forced labor in their supply chains.

Uyghur Forced Labor and the Solar Panel Industry – Background

In today's globalized economy, businesses and corporations throughout all industries are increasingly operating in a global production network involving interconnected supply chains. Outsourcing of labor overseas has become an ordinary phenomenon due to a globalized market economy. As a result, our daily consumption of goods and services extends to multiple countries involving complex multinational legal and regulatory systems, with varying degrees of labor practices. While globalization has accelerated economic growth and social development in the global south, we cannot ignore the fact that these developments often come with a high cost of human rights violations that businesses and governments have failed to address and tackle.

With the global shift towards greener energy and ethical production, the legitimacy of the solar panel industry as a source has arguably never been as relevant as it is today. In countries all over the world, companies and industries are being questioned for their ethics, and their involvement or complicity in injustice, leading to an increase in legislation that requires companies to identify human rights risks in their operations and supply chains, and address those negative human rights impact. This background section draws extensively from the report “In Broad Daylight: Uyghur Forced Labour and Global Solar Supply Chains” (Murphy & Elimä, 2021). In this report, it is shown how commonly global supply chains interact with Uyghur forced labor in the solar panel industry. According to the report, polysilicon is the primary material in 95% of solar panels worldwide. Previously this was produced in other countries with a minimal share produced in China, but in recent years, China has become the main source of this, particularly from East Turkistan. As of 2020, China accounted for 75% of polysilicon production, with 45% coming from the Uyghur region. And according to a 2023 report “Over-exposed: Uyghur Region Exposure Assessment for Solar Industry Sourcing” the percentage went down to 35% for the year 2022 (Crawford and Murphy, 2023).

As mentioned above, the polysilicon material is crucial and is the single primary material needed to produce most solar panels. All manufacturers of this material in East Turkistan are tied to Uyghur forced labor, this is because the metallurgical grade silicon that is used to make polysilicon, and the entire process, which ranges from mining the raw minerals to its production is highly dependent on state-sponsored labor transfer programs (Crawford and Murphy, 2023). The United States actively started implementing the Uyghur Forced Labor Prevention Act (UFLPA, 2021), bans the import on all products manufactured in East Turkistan unless the importer can provide clear and convincing evidence that forced labor was not involved in their production. The unique use of a rebuttable presumption clause makes this legislation unique and effective. Following the US, similar actions have also been initiated in other countries, however forced labor import prohibitions in other countries do not include a rebuttable presumption provision as the UFLPA does or specify target goods from East Turkistan.

ILO Standards Applied in Uyghur Forced Labor

Article 2(1) of the ILO Forced Labor Convention, 1930 (No. 29) defines forced labor as: “all work or service which is exacted from any person under the menace of any penalty and for which the said person has not offered himself [or herself] voluntarily” (‘Tool No. 2: Forced Labour and Related Concepts’, n.d.). In 1957 (No.105), the ILO further prohibited member states from having recourse to any form of compulsory labor, including compulsory prison labor, in five circumstances:

- 1) as a means of political coercion or as a punishment for expressing political views
- 2) as a sanction for participating in strikes
- 3) as a means of labor discipline
- 4) as a means of racial, social, national, or religious discrimination
- 5) as a method of mobilizing labor for economic development purposes

The available evidence on Uyghur forced labor suggests that it attains economic development built on forced labor, eliminates ethnic groups because of their distinct racial, social, and religious identity, and that it is a state-imposed labor transfer program that results in punishments such as detention or imprisonment for refusing to participate (Zenz 2024). The Chinese regime justifies its state-sponsored labor transfer programs as a “poverty alleviation” strategy (Zenz 2021b). However, ongoing studies show that most “workers” have a proper educational background and an established career before their detention. Uyghurs and other minority citizens cannot refuse participation in these programs as there is a threat of arbitrary detention hanging over them. It’s shown from a 2014, General Secretary Xi Jinping’s statement that large numbers of unemployed persons will “provoke trouble”; in contrast, enterprise employment is “conducive to ethnic interaction, exchanges and blending” and makes ethnic groups “study Chinese culture” (Zenz 2022).

China has been a member of the Geneva-based ILO since 1919. According to the ILO, China ratified four out of eight fundamental labor conventions, including the Discrimination Convention (No. 111) and the Equal Remuneration Convention (No. 110). The Government of China has not ratified the Protocol of 2014 to the Forced Labour Convention, which

requires States to take measures regarding prevention, protection, and remedy in giving effect to the Convention's obligation to suppress forced labor (“Up-to-date Conventions not ratified by China”, n.d.). As an ILO member state, the Chinese government is firmly committed to respecting and promoting ILO’s principles and rights in four categories, whether or not they have ratified the relevant conventions. These principles include freedom of association and the effective recognition of the right to collective bargaining; the elimination of forced or compulsory labor; the abolition of child labor; and the elimination of discrimination regarding employment and occupation (1998). The ongoing systematic labor transfer program is a blatant breach of the ILO Convention. In a 2022, ILO report on the Application of International Labor Standards, the ILO expert committee expressed “deep concern” about China’s policies in East Turkistan. The committee has called China’s labor practices discriminatory and asked Beijing to align its labor practices with global standards (2022). However, China has denied all allegations.

The increasing involvement of Uyghur forced labor in global supply chains presents a new challenge for international businesses and corporations operating in China. How can global companies operate responsibly, secure the integrity of their supply chains, and prevent their brands from being associated with reputational and legal risks? The complexity of the supply chain and its mixed workforce poses a significant challenge for global companies to ensure that their products are free from forced, discriminatory, or abusive labor practices. More importantly, the “Xinjiang Aid” policy also presents a reputational risk for Chinese brands overseas. It is difficult to guarantee that products manufactured in China are free from forced labor. The situation poses risks for global investors and wealth funds that may indirectly be linked to forced labor practices.

Regulations of Labor Standards in Global Supply Chains

The primary responsibility for upholding human rights lies with the government. Most governments regulate their domestic businesses and their labor practices, but with varying degrees of stringency. Nevertheless, states and international bodies have continuously failed to regulate companies' extraterritorial human rights practices while taking part in global supply chains (2016). With a lack of legally binding global standards, it has been challenging for governments and international bodies to enforce business practices that are free from forced labor and other human rights violations. Establishing a legally binding global standard on corporate sustainability due diligence directive (CSDDD) and forced labor import bans is, therefore, a necessary step towards enhancing responsible business practices. We can find examples of mandatory human rights due diligence from the past, such as “German mandatory human rights due diligence law” and “French duty of vigilance law”.

United Nations Guiding Principles (UNGP) on Businesses and Human Rights

The existing international regulations on corporate responsibilities are parsed in non-binding standards. Under the UNGPs, companies respect human rights in their activities as well as through their business relationships in global supply chains; companies should “have in place to identify, mitigate, and respond to human rights risks throughout their supply chains”. The UNGPs encloses three important pillars which delineate how states and businesses should implement the framework (2011):

1. The state’s duty to protect human rights

The state’s duty to protect is a code of conduct; states are not themselves responsible for human rights violations taking place in private businesses, such as in the case of Bangladesh. However, the state must protect its citizens against human rights abuses through regulations, policymaking, and enforcement. The state’s duty to protect is also an existing obligation under international human rights law, per reference to the 1948 Universal Declaration of Human Rights (2011).

2. The corporate responsibility to respect human rights

Corporate responsibilities suggest that companies must act with due diligence to avoid infringing on workers’ rights and address any negative impact. In conducting due diligence, the UNGP urges businesses to adopt the “Human Right Impact Assessment,” a process for systematically identifying, predicting, and responding to potential human rights violations. Therefore, state and private businesses are expected to acknowledge their role in upholding and protecting human rights (2011).

3. Access to remedy for victims of business-related abuses

“Access to remedy” addresses both state and corporate responsibility. The state should ensure effective grievance mechanisms and provide access to remedy through judicial, administrative, and legislative means. In terms of corporate responsibility, businesses should

prevent and remediate any human rights violations. The UNGP introduces an effectiveness criterion for the non-judicial grievance mechanisms, whether state-based or independent, which are legitimate, accessible, predictable, equitable, transparent, and rights-compatible (2011).

The Manufacture of Solar Panels

One critical mineral used in the production of solar panel modules is Quartz. This particular mineral happens to be abundant among the natural resources present in East Turkistan. Quartz has been heavily extracted by the Xinjiang Production and Construction Corps, aka. Bingtuan (XPCC), a state-directed paramilitary conglomerate, exists only in East Turkistan, acts as a prefectural government, and is one of the primary contributors to China's speedy rise in the global solar panel dominance. Quartz is chemically reacted with carbon to produce metallurgical grade silicon (MGS), which is converted to polysilicon, one key component used in the production of 95% of solar modules. Within a series of chemical reactions, polysilicon is then converted to ingots, wafers, and cells, eventually making up the final solar module structure.

Company Responses to the Uyghur Forced Labor Questionnaire

According to the Norwegian Transparency Act, “Upon written request, any person has the right to information from an enterprise regarding how the enterprise addresses actual and potential adverse impacts to:

- a. Embed responsible business conduct into the enterprise's policies
- b. Identify and assess actual and potential adverse impacts on fundamental human rights and decent working conditions that the enterprise has either caused or contributed towards, or that are directly linked with the enterprise's operations, products or services via the supply chain or business partners
- c. Implement suitable measures to cease, prevent or mitigate adverse impacts based on the enterprise's prioritizations and assessments pursuant to (b)
- d. Track the implementation and results of measures pursuant to (c)
- e. Communicate with affected stakeholders and rights-holders regarding how adverse impacts are addressed pursuant to (c) and (d)
- f. Provide for or co-operate in remediation and compensation where this is required.

(“Act relating to enterprises' transparency and work on fundamental human rights and decent working conditions (Transparency Act)”, n.d.). Within the scope of the act, companies with no fewer than 50 employees should respond within three weeks, with an option for an extension of up to two months if needed. As part of our research, we reached out to the following 20 companies with a questionnaire (see Appendix) designed to assess their involvement or connection to forced labor in their supply chains: Statkraft, Equinor, Solar Technologies Scandinavia, Norsk Hydro, REC Solar, Solar Norge, Solenergiklyngen, Hafslund Vekst AS, Norsk Renewables AS, Skagerak Energi AS, EnergiEngasjement Norge AS, OneCo AS, Vardar AS, BTG Solenergi, Haugaland Kraft, HM Solar, XO Solar AS, Sol og vindkraft AS, Soleie, and Solkraft Sør.

Overview of Responses

Despite the legal obligations set forth by the Transparency Act, the overall response rate from the companies was alarmingly low, with only 5 out of the 20 companies providing any form of reply which are Equinor, Statkraft, Skagerak Energi, Hafslund Vekst, and Vardar AS.

1. Formal Complaint-Driven Responses:

Two Companies Responded Post-Complaint:

After initially failing to respond, two companies only provided answers following our formal complaints to the Norwegian Consumer Authority, which has enforcement power under the Transparency Act. These companies were subsequently issued notices regarding their legal obligation to respond to such inquiries.

Dissatisfactory Responses:

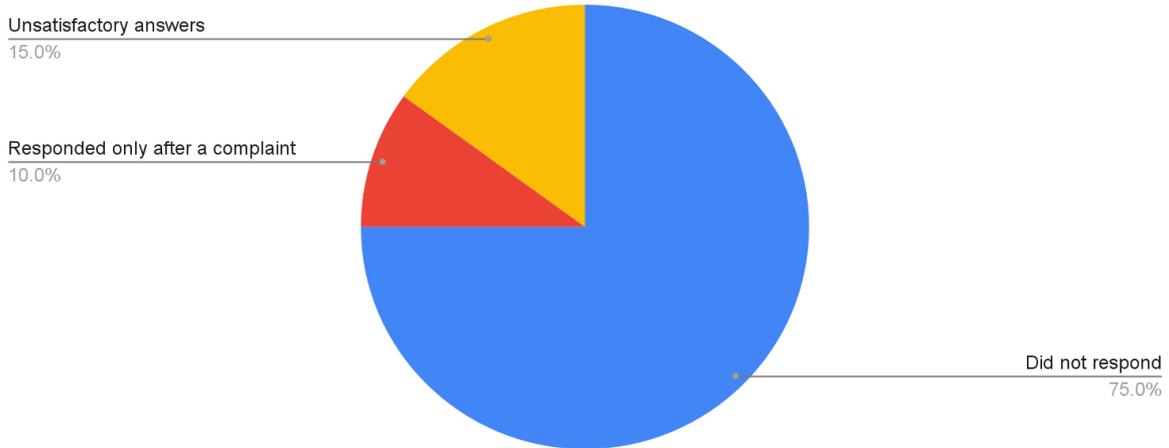
Despite eventually responding, the quality of their replies was extremely poor. Both companies essentially marked "N/A" for all questions in the questionnaire, offering no substantive information or transparency about their supply chains. This highlights a significant gap between the legal requirements and the actual compliance by these companies.

2. Three Companies' Minimal Engagement:

Annual Reports as Responses:

The remaining three companies that responded did not engage meaningfully with our questionnaire. Instead of providing specific answers to our questions regarding Uyghur forced labor, they simply sent their annual reports. These reports generally contained broad and non-specific information about their operations, with no direct or detailed reference to their supply chains or labor practices related to the issues we raised.

Summary of Company Engagement with Uyghur Forced Labour Inquiry



Implications of the Responses

The reluctance and inadequacy of the responses received raise serious concerns about the effectiveness of the Transparency Act in its current form. The lack of substantive engagement from the majority of companies indicates a potential disregard for the legal obligations imposed by the Act. Even when companies did respond, the information provided was often insufficient and did not address the critical issues of forced labor within their supply chains.

This response pattern suggests that companies may not be taking their responsibilities under the Transparency Act seriously, potentially undermining the law's purpose of promoting transparency and accountability in corporate supply chains. The failure to provide meaningful information also hampers efforts by journalists, researchers, and NGOs to hold these companies accountable and to advocate for the rights of vulnerable workers. This lack of engagement indicates the significant shortcomings in the enforcement and practical impact of the Transparency Act. Further action, including stricter enforcement measures and enhanced accountability mechanisms, may be necessary to ensure that companies comply with their legal obligations and provide the transparency required to combat forced labor effectively.

Statkraft

Statkraft AS, a Norwegian state-owned enterprise, is a prominent player in the global renewable energy sector. Established with a focus on energy production, Statkraft's operations encompass planning, designing, constructing, and managing energy facilities, as well as engaging in both physical and financial energy trading. The company is wholly owned by Statkraft SF, which in turn is owned by the Norwegian Ministry of Trade, Industry, and Fisheries. In 2020, Statkraft significantly bolstered its position in the solar energy market through the acquisition of Solarcentury, a British solar company (Statkraft 2020). This strategic move provided Statkraft with access to a 6 GW project pipeline in Europe and South America, making it a leading solar developer in Europe. The acquisition, valued at 117.7 million GBP, included 100% of Solarcentury Holdings and its subsidiaries, expanding Statkraft's footprint into high-growth markets such as Spain, the Netherlands, the United Kingdom, France, Greece, Italy, and Chile (Statkraft 2020).

Additionally, Statkraft is exploring innovative renewable energy solutions, such as floating solar power. This project, currently in the testing phase in Albania, involves installing solar panels on floating structures in bodies of water like lakes, fjords, or hydropower reservoirs. The floating solar power initiative is being developed in collaboration with Ocean Sun, utilizing components sourced from China, though there are plans to procure these components locally in the future (Statkraft, n.d.).

Issue Analysis: Uyghur Forced Labor Concerns

Statkraft has come under scrutiny regarding the potential use of Uyghur forced labor in its supply chains, particularly in relation to solar panel components sourced from China. The company has acknowledged the risk of forced labor associated with polysilicon procurement. Several reports and investigations have indicated the likelihood of forced labor in the production of polysilicon in China, raising concerns about Statkraft's supply chain integrity. On March 29, 2023, the Norwegian news outlet Dagens Næringsliv reported on an internal Statkraft assessment, noting that it was very likely that the company was implicated in the use of Uyghur forced labor (Tjeldflaat Helle and Oterholm 2023).

The internal assessment of the solar supply chain risk at Statkraft expressed significant concerns. According to the assessment, the likelihood of forced labor was deemed “very likely,” and the consequences for those affected were described as “extreme.” The assessment also stated that Statkraft was directly linked to these consequences through its supply chains (Tjeldflaat Helle and Oterholm 2023). Dagens Næringsliv was able to obtain this internal assessment through the Norwegian Transparency Act, which mandates companies to disclose how they handle actual and potential consequences of their operations on human rights. The internal assessment revealed that the risk of being implicated in the use of forced labor was higher than any other business risks in Statkraft’s supply chains.

With the acquisition of Solarcentury, Statkraft inherited numerous large solar parks, now operating in countries like the Netherlands, India, and Ireland. These solar parks are equipped with solar panels primarily made from polysilicon, a material of which nearly 75% of the global supply is produced in China, with around 45% originating from East Turkistan, as reported by Bernreuter Research. Murphy & Elimä (Murphy and Elima 2021) highlighted how major Chinese panel manufacturers receive polysilicon from Xinjiang-based companies, impacting the supply chains of international solar power companies. Despite Statkraft’s refusal to disclose its suppliers, past press releases indicate that Solarcentury previously received supplies from Chinese solar panel manufacturers like JA Solar, Jinko Solar, and Trina Solar. The main polysilicon supplier to these companies is Daqo, a Xinjiang-based firm that was implicated in the use of forced labor (Murphy and Elima 2021). Although Daqo denies all implication, stating that their suppliers have complied with Chinese labor laws, the concerns remain. Professor Laura T. Murphy from Sheffield Hallam University, one of the report’s authors, criticized Statkraft’s lack of transparency regarding its suppliers. She emphasized that without public disclosure of suppliers and subcontractors, consumers, civil society, and authorities cannot verify the effectiveness of the company’s due diligence processes (Tjeldflaat Helle and Oterholm 2023).

Statkraft's response to forced labor concerns

Following the media coverage, Statkraft has acknowledged the serious risks associated with forced labor in its supply chains and announced that it has taken a firm stance against forced labor and has implemented measures to mitigate these risks. The company's mitigation measures are as follow (Statkraft 2023b):

- **Increased Traceability and Audit Rights:** Statkraft has established stringent requirements for traceability and has secured the right to audit its supply chain. This ensures that suppliers adhere to the company's ethical standards and that any risks of forced labor are promptly identified and addressed.
- **Future Contracts and Supplier Transparency:** Future contracts will prioritize suppliers who source materials from factories with limited risks of forced labor. These suppliers must be transparent and provide full visibility into their supply chains. This approach aims to minimize the risk of forced labor and ensure that all materials used in Statkraft's projects are ethically sourced.
- **Due Diligence in Procurement Processes:** Statkraft has conducted a thorough procurement process for framework agreements for Photovoltaic (PV) panels and inverters. Due diligence assessments indicated that some suppliers could be linked to human rights violations. These assessments have been discussed at the executive level, resulting in both short-term and long-term strategies to address these risks.

Additionally, Statkraft also highlighted the complexity of supply chains for Battery Energy Storage Systems (BESS). The main components of BESS include inverters, batteries, transformers, protective equipment, and cooling and control systems. These supply chains are extensive, with suppliers purchasing standard and processed components from various subcontractors. It is likely that BESS components contain rare metals and minerals, which may be sourced from conflict zones. Statkraft is actively working to analyze these risks and establish processes that ensure traceability, similar to the measures taken for solar power components. Furthermore, Statkraft's director of external communication, Torbjørn Steen, emphasized the company's commitment to human rights and the challenges associated with human rights violations in international supply chains. The company is aware of the

complexities and is dedicated to implementing robust measures to prevent the use of forced labor and ensure ethical practices across its operations (Statkraft 2023b).

Statkraft demonstrates its commitment to corporate social responsibility by adhering to OECD guidelines and incorporating a Supplier Code of Conduct in all contractual obligations. With a vast network of 13,000 suppliers across 15 countries, the company faces significant challenges in ensuring ethical practices throughout its supply chain. Despite the robust measures in place, such as integrity assessments through the Dow Jones Risk Center and evaluations by EcoVadis for strategic suppliers (Statkraft 2023a), media reports have raised questions about the practical implementation of these standards.

Statkraft's approach to managing risks involves initiating dialogues with suppliers upon identifying adverse impacts, aiming to halt or rectify the situation. If rectification is not possible, the company collaborates with the supplier to implement mitigating measures proportional to the severity and scope of the impact. These efforts are outlined in Statkraft's human rights statement, reflecting the company's ongoing commitment to ethical sourcing and human rights. However, continuous scrutiny and transparency are necessary to ensure that these commitments are effectively translated into practice.

Equinor

Equinor ASA is a Norwegian multinational energy company with a diverse portfolio in oil, gas, and renewables. The majority of Equinor is owned by the Norwegian Ministry of Trade, Industry, and Fisheries, with other shareholders primarily comprising Norwegian and European investment banks. Equinor's foray into solar energy began in 2019, targeting specific power markets with solutions tailored to meet customer and market needs. This approach involves developing an onshore renewables portfolio supported by storage solutions and trading capabilities. For host communities, solar energy offers the benefits of domestic energy production and contributes to a secure supply of renewable and affordable electricity over the long term (Equinor, n.d.-b).

The company is actively building a profitable solar portfolio in various countries, primarily Brazil and Poland. Equinor's initial step into solar energy was marked by the 162 MW Apodi Solar plant in Brazil, where Equinor holds a 43.5% share alongside operator Scatec. The plant began production in 2018. To further expand its presence in Brazil, Equinor started construction of the 531 MW Mendubim solar project in summer 2022, in partnership with Scatec and Hydro Rein, with Equinor holding a 33.3% stake. This project is expected to be operational by 2024. Additionally, in 2023, Equinor acquired Brazilian onshore renewables company Rio Energy, including the 0.2 GW Serra da Babilonia 1 onshore wind farm, a 0.6 GW pre-construction solar portfolio, and a project pipeline of about 1.2 GW of onshore wind and solar projects (Equinor, n.d.-b).

In Poland, Equinor acquired solar developer Wento in 2021, which included a 1.6 GW pipeline of solar projects. The first plant, Stępień (58 MW), commenced commercial production in Q4 of 2022, and the second plant, Zagórzycza (60 MW), started test production in June 2023. Another solar plant is currently under construction. Moreover, in November 2022, Equinor acquired Danish solar developer BeGreen, adding a project pipeline exceeding 6 GW across Denmark, Sweden, and Poland (Equinor, n.d.-b).

Issue Analysis: Uyghur Forced Labor Concerns

Equinor's 2023 Energy Perspective Report underscores China's dominance in the production of minerals essential for the energy transition, including silicon, which is crucial for expanding solar PV capacity. Despite acknowledging the significance of these minerals, the report does not address human rights abuses in China, focusing instead on issues in countries like the Democratic Republic of Congo (Equinor 2023). The potential risk of being implicated in the use of forced labor in China was not addressed in the report, although the broader industry concerns on this matter were already present.

Equinor has maintained an international office in Beijing since the 1980s, fostering close relationships with key Chinese stakeholders. In 2007, Equinor entered into a strategic cooperation with China National Petroleum Corporation (CNPC), covering domestic and international exploration and production, research and development, gas value chains, new energy, and downstream activities. In 2010, Equinor agreed with Sinopec to conduct a joint study on their Qiongdongnan deepwater block in the South China Sea. By 2014, Equinor had delivered its first liquefied natural gas (LNG) cargo to China. Today, the company has established a crude trading business with China and engages in international partnerships with other Chinese companies, including CNPC, CNOOC, and other large state-owned enterprises. The primary function of Equinor's China organization is to develop new commercial opportunities with Chinese counterparts (Equinor, n.d.-a).

Given Equinor's extensive networks and collaborations in China, the failure to report on forced labor and other potential human rights abuses in its 2023 Energy Perspective Report raised concerns about the company's commitment to transparency and accountability. While Equinor's strategic partnerships in China are essential for its business operations, they should also necessitate a thorough assessment and disclosure of potential human rights violations, particularly in regions suspected of forced labor practices.

Due Diligence Assessment of Equinor

Equinor has demonstrated a commitment to human rights due diligence, particularly in areas with known risks of forced labor. The company's 2022 annual report outlined a risk-based approach to human rights due diligence, focusing on suppliers involved in manufacturing and construction activities in countries where forced-labor-like conditions were prevalent (Equinor 2022). This approach ensured that their assessments were directed towards high-risk areas and suppliers.

For the period 2021–2023, Equinor established specific priorities for due diligence assessments within its supply chain. These priorities include (Equinor 2022):

- the construction of fixed and floating oil and gas installations
- solar cells and wind turbines
- maritime operations and installation of offshore wind facilities and oil and gas projects
- integrated drilling and oil well services
- services for onshore and offshore production facilities in Norway involving foreign personnel
- IT and business support services commissioned by Equinor
- security, catering, and cleaning services for selected Equinor offices based on known risks

Equinor's 2022 annual report detailed the implementation of these priorities, highlighting that the company's risk-based approach had directed their human rights assessments towards suppliers in high-risk countries. Through this process, Equinor has identified and addressed potential forced labor indicators in its supply chain, such as the payment of recruitment fees, withholding of identity documents, and restrictions on workers' freedom of movement.

In 2022, Equinor assessed 21 suppliers, conducting interviews with 808 workers through a third party. This effort revealed indicators of forced labor as defined by the International Labor Organization (ILO), with 61 individuals identified as subjected to one or more indicators of forced labor within active contracts (Equinor 2022). Furthermore, it is

noteworthy that Equinor has not reported on the labor practice situation in China regarding Uyghur forced labor concerns.

After examining Equinor's internal and external reports, we can conclude that there are both adequacies and inadequacies in the company's reporting. In terms of forced labor and risk assessment, the company itself has reported that "[b]ased on our current portfolio, specific priorities, and experience from previous due diligence assessments, we now consider the most significant risk factor to be the risk of forced labor-like conditions in parts of the supply chain." Despite this acknowledgment, the company's reporting falls short with respect to several critical areas:

- First, while Equinor claims to prioritize human rights issues and assess labor conditions within its supply chains, the absence of specific details regarding certain high-risk regions, particularly China, raises concerns. Given China's significant role in the global supply chain for renewable energy components, the lack of explicit reporting on potential human rights abuses, especially with regard to Uyghur forced labor, is embarrassingly notable.
- Second, Equinor's reports provide extensive details on countries like Tanzania, Brazil, Argentina, and Libya, addressing various human rights violations. However, the deliberate lack of country-specific details in the section on forced labor undermines the transparency and comprehensiveness of their assessments. This selective reporting suggests a potential reluctance to fully address and disclose all areas of concern, which raises questions about the thoroughness and sincerity of their due diligence processes.
- Third, Equinor's engagement with Chinese companies and their strategic cooperation with entities such as China National Petroleum Corporation, Sinopec, and CNOOC highlights their deep integration into the Chinese market. Despite these extensive collaborations, the company has not provided adequate information on how it mitigates the risks of forced labor and other human rights abuses within these partnerships.

Although Equinor has made efforts to report on labor conditions in its supply chains, the lack of specific details regarding China and the Uyghurs, coupled with selective reporting on forced labor issues, detracts from the overall credibility and transparency of their assessments. If Equinor desires to be a respected multinational corporation, it should commit

to more comprehensive and candid reporting in the future to truly address and mitigate human rights risks in their supply chains and global operations.

Solar Technologies Scandinavia

Solar Technologies Scandinavia (STS), established in January 2016, is a leading Norwegian supplier specializing in solar panels and battery storage solutions. The company provides comprehensive support to authorized installers with system design and solution proposals. Known for its extensive range of products, STS offers mounting materials, inverters tailored to Norwegian grids, and high-quality solar panels from globally recognized manufacturers.

The company's portfolio extends across various sectors, demonstrating the versatility and advantages of solar technology. In agriculture, STS promotes the use of solar cells to offset the high energy demands of farms, taking advantage of large roof surfaces to generate electricity. For private residences, their solutions enable users to charge electric vehicles with solar power, reduce monthly electricity bills, and sell excess electricity for use during the winter months. In the industrial sector, the company highlights the dual benefits of showcasing environmental responsibility while achieving financial returns on investments, thus supporting Norway's climate goals.

According to their website, STS states that they are committed to adhering to the Transparency Act. This includes conducting due diligence assessments and publishing an annual report. The company actively maps its supply chain and business partners, assessing human rights and working conditions in line with OECD principles. Their approach aims to identify, prevent, mitigate, and account for potential human rights violations in their operations and supply chain (Solar Technologies Scandinavia, n.d.).

Issue Analysis: Forced Labor Concerns

STS's reliance on JinkoSolar, a major supplier, raises significant concerns regarding the use of forced labor. According to its website, JinkoSolar is highlighted as a primary supplier for the company. This partnership should give cause for concern following the evidence presented in Murphy & Elimä's report (Murphy and Elima 2021), in which the operations and supply chains of JinkoSolar had likely been linked to the use of forced labor.

JinkoSolar Holdings Company, a major player in the photovoltaic materials industry, is vertically integrated and focuses on the research, development, and production of photovoltaic products. With a substantial market share of 12.6% in global solar modules as of 2019, JinkoSolar's operations include a significant presence in East Turkistan. The company produces 42% of its ingots and wafers at its facility in East Turkistan, which was established in 2016—coinciding with the onset of a mass internment campaign against the Uyghurs and other Turkic peoples (Murphy and Elima 2021).

JinkoSolar's involvement in labor transfers further compounds these issues. In 2020, the company accepted 78 "registered unemployed personnel" from Kunas County, with additional reports indicating the acceptance of subsidized workers from southern East Turkistan. Notably, 54% of JinkoSolar's employees at the Kunas plant were non-Hans, with some potentially recruited through state-sponsored labor transfer programs (Murphy and Elima 2021).

Furthermore, JinkoSolar's factory complex is located in the Xinyuan Industrial Park, which also houses a high-security prison and an internment camp. While there is no direct evidence linking the labor from these facilities to JinkoSolar's operations, the proximity to such facilities raises stakes in the risk of forced labor practices (Murphy and Elima 2021). The industrial park's development coincided with the construction of these detention centers, further highlighting the potential ethical and legal issues.

The company's exposure to forced labor is also evident in its supply chain. JinkoSolar is a major customer of Daqo New Energy, a supplier whose polysilicon production is entirely based in East Turkistan. Daqo's involvement in the regime's labor transfer programs adds another layer of risk to JinkoSolar's operations, reflecting a broader pattern of forced labor in the supply chain.

STS's reliance on JinkoSolar, a company with documented links to forced labor practices, indicates its implication in the use of forced labor in its Chinese supply chain. Despite JinkoSolar's global market presence, the company's operational practices in East Turkistan and its connections to forced labor raise important ethical questions about the integrity of STS's supply chain and its commitment to human rights standards.

The review of STS shows several critical issues related to human rights and forced labor, particularly concerning its primary supplier JinkoSolar, a leading manufacturer in the photovoltaic industry that had likely been implicated in forced labor practices (Murphy & Elimä, 2021). The company has benefited from the Chinese regime's labor transfers from East Turkistan (notorious for its human rights abuses), and its operations are suspiciously situated in the immediate proximity of internment camps and high-security prisons. These red flags should raise serious ethical concerns for STS.

Despite STS's commitment to mapping its supply chain and assessing human rights impacts, the company's lack of human rights statement, code of conduct, or supplier code of conduct is a glaring oversight at best. This absence of formal policies and commitments severely limits the company's ability to effectively manage and mitigate human rights risks within its supply chain. Moreover, the company's failure to address its supply chain's connection to problematic actors like JinkoSolar reflects a lack of thorough due diligence and transparency. Solar Technologies Scandinavia's inaction in providing detailed information about its human rights practices and supplier management further exacerbates these concerns. As such, we can conclude that Solar Technologies Scandinavia's current practices fall short of international human rights standards. STS likely runs the risk of being complicit in the human rights abuses associated with its suppliers, undermining its credibility and ethical standing in the industry.

Norsk Hydro

Norsk Hydro ASA is a globally recognized industrial company headquartered in Oslo, Norway, with a significant presence in the energy and solar industries. The company is one of the world's leading suppliers of aluminum and aluminum products, catering to various industries, including the solar energy sector (Norsk Hydro, n.d.-b). Norsk Hydro's solar portfolio is extensive, offering a wide range of products and services essential to solar energy projects. These include photovoltaic (PV) mounting systems, PV module frames and components, concentrated solar power collectors, thermal management solutions, and inverter housings and components (Norsk Hydro, n.d.-a).

Norsk Hydro specializes in providing extruded aluminum components and specialist systems for the solar industry. These offerings extend to architectural solutions that contribute to both passive and active energy constructions, such as heat sinks, inverter cabinets, and aluminum tubing for connecting lines. Additionally, the company delivers structural frames for concentrating solar power projects. Norsk Hydro also offers project consulting, engineering and design support, a complete PV and aluminum product range, a fabrication and installation network, and after-sales services, positioning itself as a comprehensive solutions provider in the solar energy sector (Norsk Hydro, n.d.-a).

Background Information

Norsk Hydro operates as a public limited company, with a business model focused on industrial, commercial, and transport activities, as well as the utilization of energy and raw material resources. The company also engages in other activities related to these core objectives. Hydro is a state-owned enterprise, with the Norwegian Ministry of Trade and Fisheries holding a 35% stake in the company.

Although Norsk Hydro is primarily known for its aluminum production, which is heavily based in China, the company has limited direct involvement in the Chinese solar panel industry. However, its operations in China are significant, with representative offices in Beijing, Xi'an, Suzhou, and Taicang, and manufacturing plants in Suzhou and Taicang. The company serves customers in various industries, including automotive, HVACR, and building

and construction. Norsk Hydro's annual report indicates that 3% of its raw materials, including primary aluminum (anodes, fluoride, coke, pitch) and casting alloying metals, are sourced from China.

Issue Analysis: Forced Labor Concerns

Norsk Hydro's partnerships in China raises several concerns, particularly regarding Uyghur forced labor. The company's aluminum production is heavily reliant on Chinese operations, which are situated in a sector exposed to forced labor risks. Although there are no direct reports of Hydro's involvement in forced labor, the company's annual report for 2022 acknowledges the human rights risks associated with its supply chains in China. Specifically, the report highlights the risks of forced and compulsory labor among suppliers in regions like the Middle East, South America, and Asia, including China (Norsk Hydro 2023).

In its due diligence, Norsk Hydro has identified China as a high-risk country, marked in red on their human rights risk assessment for 2022. The report also indicated the potential risks related to Uyghur forced labor in East Turkistan. The report states that in early 2021, several countries introduced sanctions on officials in China over alleged human right violations against the mostly Muslim Uyghur minority group, mainly in the Xinjiang region. 2022 saw the US ban on imports from China's Xinjiang region take effect, emphasizing the need to remain duly diligent. It goes on to add that Hydro does not source material and alloys from the Xinjiang region, but given the complexity of internal Chinese supply chains we continue to monitor the situation (Norsk Hydro 2023).

Norsk Hydro's operations and supply chain in China raise significant concerns. Despite the company's claim that it does not source materials from East Turkistan, it still couldn't ensure forced-labor-free conditions in its supply chain in China. The company's acknowledgment of these risks in its annual report is an important first step, but it does not fully mitigate the potential ethical issues associated with its operations. Additionally, while Norsk Hydro has implemented some due diligence measures, the absence of a more robust and transparent approach suggests that there's more it can do to ensure that its supply chain is free from forced labor.

REC Solar

Founded in 1996, REC Solar is a pioneering solar energy company focused on providing clean, affordable solar power. With a strong emphasis on high-quality production, innovation, and maintaining a low carbon footprint. It has positioned itself as a trusted name in the solar industry. Originally established in Norway, REC Solar benefited from the country's hydroelectricity, which made it a cost-effective location for producing silicon. However, in 2010, to reduce costs, the company moved its solar panel production to Singapore, eventually ceasing all solar cell production in Norway (REC, n.d.).

In 2015, REC Solar was acquired by Elkem for \$778 million. Elkem, in turn, is owned by Bluestar, a large Chinese corporation also known as ChemChina. This acquisition has raised questions about the extent of Norwegian leadership within REC Solar, given that Bluestar is a state-owned entity in China, focused primarily on chemical production (Brakels 2018).

Chinese Operations and Potential Concerns

REC Solar operates in China and sources raw materials from East Turkistan. The company's operations in China are complex and concerning as it is a subsidiary of Bluestar, which has ties to the Chinese regime and the People's Liberation Army (PLA). In August 2020, the United States Department of Defense identified ChemChina as a company operating with links to the PLA, resulting in sanctions and bans on American investments in the company. With these developments, REC Solar's operations and supply chain should be placed under scrutiny.

Forced Labor Allegations/Exposure in the Solar Industry

One of the concerns surrounding REC Solar is its potential involvement with forced labor in China, particularly in East Turkistan. In their report, Crawford & Murphy (Murphy and Crawford 2023) has brought REC Solar's supply chains into question. It specifically

examined the company's TwinPeak 4 solar modules, produced and sold by REC Solar, and found that their exposure to potential use of forced labor was highly likely.

In 2021, REC Solar published a report on its suppliers, including a commitment to a supplier code of conduct that ostensibly excludes the use of materials sourced from East Turkistan. However, the report lists LONGi and Yuze Semiconductor as wafer suppliers for REC Solar's N-Peak and Alpha modules, with no updated disclosures since then. Furthermore, Aiko Solar, one of REC's cell suppliers, sources silicon with high exposure to East Turkistan, further complicating the company's claims of ethical sourcing (Murphy and Crawford 2023).

In Response to the Issue of Ethical Sourcing

REC Solar has acknowledged in correspondence with Sheffield Hallam University researchers that the TwinPeak 4 module was no longer in production as of the end of 2022. However, this could not be independently verified, as REC continued to advertise the model on its website at the time of the report's publication (Murphy and Crawford 2023). The company did not provide any updates or clarifications when inquiries were made, leaving the status of its supply chains and the exact nature of its East Turkistan exposure ambiguous.

The REC Solar N-Peak and Alpha module product lines were produced in Singapore using wafers from OCI and Wacker polysilicon in 2021, with no confirmed East Turkistan exposure. However, the TwinPeak 4 module, also produced in Singapore, has been identified as having very high exposure to polysilicon sourced from East Turkistan. REC Solar's apparent shift away from the TwinPeak 4 and towards products that avoid East Turkistan source materials suggests a significant change in its supply chain strategy, likely in response to growing concerns over forced labor.

REC Solar's operations and supply chain management present significant ethical and human rights concerns, particularly in light of its connections to Chinese state-owned entities and the potential use of forced labor in its supply chains. The company's recent efforts to pivot away from products with high East Turkistan exposure indicate a recognition of these risks, but the lack of transparency and public disclosure leaves many questions unanswered. As REC Solar

continues to navigate these challenges, its commitment to ethical practices and corporate responsibility will be continuously scrutinized by industry observers and human rights advocates alike.

Solar Norge

As a subsidiary of the Danish company Solar Group, Solar Norge has stores, drive-in centers, and a web store providing several solar products and modules in Norway. According to their website as of July 2024, they have 14 drive-in locations, and 120,000 products. Some of these products include brands such as FuturaSun, Growatt and Solplanet, whereas FuturaSun has their main production plants in Taizhou, China, according to their own website. Growatt is largely based in Shenzhen, China, but the location of their main production plants is unclear. Solplanet is a brand of AISWEI that is based in Shanghai. When we talk about products of Chinese origin, it is not our intention to automatically link them to forced labor, but it does suggest likelihood.

From our initial research, we found that one of the panels listed on their web store was produced by Astronergy, a subsidiary of Chint Group that is based in Shanghai. Murphy & Elimä (2021) have shown that Astronergy had received supplies from GCL-Poly and LONGi, companies that are reported to have a high risk of ties to forced labor. Additionally, Solar Norge confirmed in their due diligence assessment of 2022 that they have two suppliers from China, with no specific information. This is insufficient to confirm any direct ties to Uyghur forced labor, but it shows that the company has a supply chain linked to China.

In its annual report of 2023, Solar Norge notes that one of their risk assessments is on product documentation, acknowledging the risks associated with forced labor in solar production. In its sustainability report of 2023, Solar Norge reported that its market revenue stream was largely from Europe, with little to no interaction with China on the revenue front. Overall, the company's supply chains seem to carry some risk of ties to forced labor, but it needs to require proper documentation of their entire supply chains.

We first reached out to Solar Norge with a questionnaire in September 2023 following the Transparency Act, but we haven't received any reply. In February 2024, we reached out to Solar Norge through an email asking for additional information on their relationship to Astroenergy and on their listed products' supply chain, but again with no reply. Overall, the

company has not been responsive following the Transparency Act, and has in comparison to other companies been less open and engaged with the increasing demand on the supply chain transparency, without addressing the issue of forced labor as actively as others.

Solenergiklyngen

Solenergiklyngen is an industry association consisting of over 160 partners, and with over 2000 employees within the solar industry. Their main task is to work with innovation, competence and development of solar projects. Some of their partners include AIKO Solar, Huawei Technologies Norway AS, and GNE Solar AS. As the company does not directly supply or produce solar products, but rather funds and contributes in other aspects, their main risks of ties to forced labor comes through their partners, several of which have branches in China. Solenergiklyngen have no listed documentation nor information on their partner companies' supply chains or product documentation. One of their ethical guidelines as found on their website regarding partners includes; the partner should abide by laws, conventions and guidelines on sustainability and ethics on a production and supply level. It also includes that they must ensure that the partner has no forced or child labour occur at any stadium in the value chain.

One of their partners, Scatec Solar, was listed in the report of Murphy & Elimä (2021) as a company with possible affected supply chain of forced labor, being one of the customers listed by Trina Solar Energy Company known to have been active in East Turkistan. Additionally, Scatec is largely owned by Equinor, which is also one of Solenergiklyngen's partners and has had several partnerships with Chinese companies including a solar project with Xinjiang Goldwind Science & Technology CO. Ltd and Oxford Photovoltaics. Lastly, the industry association also partners with Huawei Technologies Norway AS, a company that has been linked to the provision of surveillance equipment to the Chinese regime for the surveillance of Uyghurs (Dou, 2021).

We first reached out to Solenergiklyngen in September 2023 to no reply. In June 2024, we reached out once again to ask if they have any mapping of the scope of their supply chains, and where their components and modules have their origin from. This was followed with a reply stating that they have an expert group where this is discussed frequently, and that they have a supervisor working with this in mind. This expert group is responsible for meeting five times a year to discuss responsible supply chains, with additional working groups

working with this theme between the meetings. The response also clarified that they do not map specifics on the supply chain, but rather have decided to focus on advising their members who buy products from China, ensuring that they are aware of the risks, and help with resources and information on how to deal with this problem

Solenergiklyngen has both been responsive and is highly aware of current challenges in the solar industry. The company published an article in June 2023 acknowledging the difficulty in getting an overview of Uyghur forced labor in the solar industry's supply chains and stating their interest in working towards more transparency in their supply chains, and to be socially conscious.

Hafslund Vekst AS

As an energy and infrastructure group, Hafslund Vekst AS's main focus lies within sustainable energy. Hafslund Vekst AS owns 40% of Hafslund Magnora Sol, a company that develops solar panel parks in Norway. On their website, there is no information on where Hafslund Magnora Sol source their various components and materials from. Upon initial research, we found that Hafslund Vekst has a stake in Magnora ASA, whose portfolio company Evolar has opened factories in China according to Magnora ASA's annual report of 2022. Furthermore, Hafslund Vekst AS is involved in several solar projects beyond Norway and Europe.

We reached out to Hafslund Vekst AS in September 2023 and asked them to fill out a questionnaire, but did not receive a reply. Following this, through a complaint to the Norwegian Consumer Authority, we received a response including an answered questionnaire and additional information from the company (e.g. their annual report). They shared that they do not import solar panels, have a Corporate Social Responsibility (CSR) policy which forbids the use of forced labor, commission an outside party to perform audits on the company's overall social compliance program. They also added that they company carries out audits if and before contracts are signed.

An additional email was therefore sent from UTJD with follow-up questions on why the company answered N/A in the rest of the questionnaire, considering that no imported products in a production chain is highly unlikely since many materials are not produced in Norway. As of September 2024, no responses were received.

Norsk Renewables AS

Norsk Renewables AS, formerly known as Norsk Solar, is a power producer (IPP) and a publicly listed company that specializes in solar photovoltaic power plants. They have an international portfolio, with solar projects in Ukraine, Pakistan, and Brazil, contributing to companies and projects in various regions of the world.

Their third-quarter financial report confirms that they have 15 subsidiaries that have non-Norwegian incorporation, based in countries such as Nicaragua, Brazil, and Ukraine. Two of the others are based in Asia — Norsk Solar Maldives PVT Ltd, and Norsk Solar AS Vietnam Ltd Company. Their possible ties to Uyghur forced labor comes from their undocumented supply chain. DSV is a Danish global transport and logistics company that has worked with Norsk Solar in delivering solar panels since 2021. In a 2022 article published on its website, DSV confirmed that they had received supplies from Shanghai, China to various sites in Vietnam, but with no additional information. This suggested that their branches in Vietnam are receiving supplies from China, thereby having possible ties to forced labor. As of January 2024, their commitment to uphold human rights standards was expressed as follows: “We have a zero-tolerance approach to modern slavery and human trafficking and shall not use child labor or tolerate working conditions that are in conflict with international laws and practices. (...) We are prepared to say no to business opportunities that risk infringing on human or labor rights rather than risk negatively impacting people.”

We first reached out to Norsk Solar with a questionnaire back in September 2023, but no reply. In May 2024, we inquired about their suppliers, but once again we received no reply. Additionally, the company has seemingly made no official statements regarding the use of Uyghur forced labor in the solar industry.

Skagerak Energi AS

The company is largely concentrated with production, turnover, and transfer of electric energy and other energy. Skagerak's main stakeholder is Statkraft, who was suspected of having a tainted supply chain.

In its supplier code of conduct, Skagerak has stated the following:

Skagerak Energy may require the supplier to document how the supplier addresses actual and potential adverse impacts identified in their human rights due diligence within limits of applicable law (...). This applies to both more generic information about the supplier's approach to and the result of human rights due diligence, and information relating to a specific product or service offered by the supplier to Skagerak Energy.

This implies that the company should be able to gather sufficient information on their various suppliers and producers, and that human rights due diligence has a role in its relationship with the suppliers. Additionally, its stance on forced labor is as follows: "Suppliers shall not use forced or compulsory labor, nor restrict the free movement of its employees. Suppliers shall ensure that the work carried out by the workforce is freely chosen and free from threats."

We reached out to Skagerak Energi AS in September 2023 to fill out a questionnaire, but did not receive a response. Following a complaint sent to the Norwegian Consumer Ombudsmann, we received an answered questionnaire, in which most of the answers were answered with *non-applicable*. In an email exchanged in April 2024, the company stated the following:

(...) Skagerak Energi AS has not yet performed any of its own procurements of solar panels that is subject to the requirements in the Transparency Act. However, since solar technology is a part of our Strategy in the coming years, we have described some of the challenges in general terms in our annual report on the Transparency Act "Redegjørelse" published in June 2023. (...) If Skagerak will enter into procurement

processes related to solar technology, we will implement risk mitigating measures according to the OECD Guidelines. In such a case we will also describe relevant measures in our forthcoming annual report on the Transparency Act.

In a follow-up email, we asked the company if they could provide additional information on where its materials were sourced from, given that Skagerak Kraft has several solar projects. This was responded to, stating that the company within Skagerak have not done any purchases of components for solar power after the Transparency Act was passed. Two acquisitions by the company, of which Skagerak has part ownership, counts as "affiliated companies" and would therefore not be applicable to the Transparency Act either. However, they state in the reply that they know of the risk of forced labor in China, and recognize the importance within the energy industry to work towards solutions.

Skagerak Energi AS has been somewhat responsive following the complaint sent to the Norwegian Consumer Ombudsmann, but has yet to provide any specific information on its supply chains in their various projects. It has several solar projects, and we couldn't find any information on its supply chain. And we suspect that many of its components and materials used for its projects could not have been produced in Norway. It is difficult to determine whether the lack of sufficient response stems from gaps within the Transparency Act, or the company's own willingness to answer. Regardless, we believe that it is aware of the risks of forced labor in the solar industry, and that it will take this into consideration in future assessments.

EnergiEngasjement Norge AS

EnergiEngasjement Norge AS is a supplier-independent leading company in large-scale solar plants and solar cell solutions. Founded in 2012, headquartered in Strangnas, Sweden, and has 103 total employees. EnergiEngasjement Norge AS has been in the solar cell installation business since 2012. The company runs 3 large-scale solar parks in Sweden. It was building Sweden's largest solar park with 41,600 solar panels in its first phase within 35 hectares and an energy production equivalent to the annual consumption of nearly 5000 apartments. In 2020, EnergiEngagemang had a turnover of 16 million dollars.

Due Diligence and Audit Rights

EnergiEngasjement has not shared any information on its ties with other countries or the sourcing of its products. No publicly shared code of conduct statements is available on its website. However, since EnergiEngagemang is mostly owned by AxSol, its parent company Axel Johnson International can be investigated though any findings will not directly construct the assumption that EnergiEngasjement itself is linked with Chinese suppliers, yet it warrants more investigation. AxSol group has a sourcing and sustainability office in Ningbo, China, appointed to help the group's companies with quality and sustainability audits, purchase orders, and shipping. "With our own sourcing office, we have easier access to the factories, and we can be 'the eyes and ears' for our colleagues in Europe, which allows us to make quicker decisions. Our team members come with rich experience of working with Chinese suppliers and various trading practices. Our goal is to support as many sourcing activities in China as possible for all the group companies" says Livvy Chen, the Managing Director for the operations. The Ningbo office is established to work on minimizing risks related to product quality and sustainability and to focus on Chinese suppliers when addressing potential business risks in the supply chain which they state they are aware of. This office performs sustainability audits onsite at their Chinese suppliers to ensure compliance with the groups's Code of Conduct, which demands "responsible production and good working conditions" in their supply chain. When suppliers have been audited, they are marked as high-risk, medium-risk, or low-risk. The group classifies China as a "high-risk country" due

to its social and environmental challenges, hence by performing audits, they aim to improve suppliers' sustainability performance based on minimum standards outlined in their Code of Conduct. "The results from the 2020 audits show that 10% of the group's Chinese suppliers are high risk and the most common misconducts are related to human rights issues such as overtime remuneration and hours of work". Suppliers with high-risk evaluation get feedback documents from the Axel Johnson group together with an action plan given to be achieved within a deadline for improvement, while providing training and support if needed. When the supplier agrees, the group performs follow-up visits to ensure that working conditions are in accordance with their standard. Although the group shows transparency in performing frequent audits with its suppliers to ensure its performance alongside its ethical guidelines. However, EnergiEngasjement itself does not provide any.

Issue Analysis: Uyghur Forced Labor Concerns

EnergiEngasjement hasn't been explicitly named in Uyghur forced labor reports or in relevant news coverage. However, the absence of EnergiEngagemang's code of conduct on its website is worth questioning. The company hasn't provided any human rights/ethical sourcing-related statements online. EnergiEngagemang's website mentions that they provide solar panels, inverters, and mounting systems, which include products from various manufacturers, a crucial one being Huawei. The United States Department of Commerce enlisted this Chinese telecommunication giant for its implication in human rights violations against Uyghurs to its Entity List. This economic blacklist restricts the export of items subject to Export Administration Regulations (EAR). EnergiEngagemang's feature of a Huawei product on their website could suggest they either collaborate or purchase from them, a company with human rights abuse allegations. Another product was from Guangzhou Sanjing Electric Co., LTD also referred to as SAJ which is an e-energy management solution provider and a state-level high-tech enterprise specializing in photovoltaic inverters, focusing on motor drive and control technology, renewable energy conversion, transmission, and storage solutions. Established in 2005, with a registered capital of 7 million USD applying 1 million of product sets around the world. Yet, this company could not be investigated more on its

potential tie with Uyghur forced labor. These two China-based companies' products on EnergiEngagemang's site do not signal positive signs of holding human rights standards.

The Company's Response to Forced Labor Concerns

We have reached out to the company twice, questioning where they sourced their products from and if they could ensure that their products were free from forced labor. The initial attempt was made through EnergiEngasjement's website online chat tool. One of their employees responded that they only sell their products to corporate businesses and not to individuals, and didn't answer the ethical sourcing question. Afterwards, we emailed them as a potential customer and sent them an inquiry mail, but it was not as responsive as we had hoped, and we found their answers insufficient. They have not been outright and transparent about their supply chain, which suggested that they didn't want to be implicated in the potential use of forced labor due to the business practices of their supply chain.

The company hasn't given us satisfactory answers on whether or not it is affiliated with suppliers suspected of using Uyghur forced labor. As for their investor company, the high-risk evaluation of the Axel Johnson group towards their suppliers in China poses incertitude when its connection with EnergiEngasjement is linked as an investor company group.

OneCo AS

OneCo is a Norwegian industrial group established in 2011 with core electronics, automation, and telecommunication activities. The company delivers system-integrated solutions and is a system-independent supplier within installation deliveries for water and wind power plants. In addition, OneCo supplies solar energy systems for homes and industrial buildings, offering analysis, design, equipment, and installation, delivering over 100 solar cell and battery systems in Norway and Sweden. OneCo currently has around 9,000 employees in Norway, Sweden, Denmark, Finland, and the Baltics and an annual turnover of around 450 million USD. The company shares that it has a mission to a green shift in the usage of energy production in a climate-friendly manner, and to digitalize their value creation through the use of the latest technological innovation sustainably.

OC Industrier AS is a holding company where the business includes owning shares in companies in the group. Group management is employed by OneCo AS, a subsidiary of OC Industrier AS. OneCo also has a Norwegian ownership structure through Aars A, a financial service Møller family company that offers investments, asset management, and strategy since 2014, as well as management and key personnel in the OneCo group.

The operations of OneCo are organized in six different business areas with independent responsibility for results. The six business areas include the following. 1- OneCo Telekom - the core business is related to the operation, maintenance, and development of telecom infrastructure (fixed network and mobile) in Norway. FO Telekom had a turnover in 2023 of NOK 1,921 million, which is 11% lower than in 2022. 2- OneCo Ocean - their business is related to maintenance and modifications within Marine and Offshore. FO Ocean had a turnover in 2022 of NOK 278 million. 3 - OneCo Elektro, provides services and projects within electricity, electricity, and renewable energy in Norway. FO Elektro had a turnover in 2023 of NOK 1,567 million. 4 - OneCo Technologies, the core business is related to service and projects within security and automation in Norway. FO Technologies had a turnover in 2023 of NOK 258 million. 5 - OneCo Infra, the core business is related to projects within transport (road, tunnels, and railways). FO Infra had a turnover in 2023 of NOK 271 million.

6 - OneCo Sweden operates projects within telecoms, electricity, and power/IoT. FO Sweden had a turnover in 2023 of NOK 666 million.

Due Diligence Assessment

OneCo's CEO Tore Sjursten states that the company safeguards human rights and decent working conditions throughout its value chain, following national legislation and having internal routines applied to their subcontractors and partners.

OneCo is a member of the UN Global Compact, which is a non-binding United Nations pact to get businesses and firms worldwide to adopt sustainable and socially responsible policies and to report on their implementation. The company states that it works towards social responsibility and contributes to sound and sustainable corporate practice. The company's Code of Conduct mentions that it complies with the core conventions on human rights and the prohibition of child and forced labor. The Code of Conduct also addresses issues related to freedom of association, diversity, and gender equality, bullying, harassment, and threats, as well as health and safety.

Apart from their published code of conduct, they have an External Environment Policy also referred to as HSE in which they affirm that they "monitor to ensure that our suppliers maintain as a minimum the same standard as ourselves, we use the HSE as evaluation criteria when choosing suppliers".

In 2022, OneCO took action against one of its subcontractors who met the conditions of forced labor and emphasized it will prioritize checks in the future. The company also has a separate "Agreement on supplier conduct" that is agreed upon to create a formal framework between OneCo and its suppliers, to ensure responsible supplier behavior throughout OneCo's supply chain. Additionally, in OneCo's Risk Assessment report, they state that OneCo has an agreement with an external company ITP Group, a member of Ethical Trade Norway, to carry out checks from their production line.

Issue Analysis: Forced Labor Concerns

On page 23 of their Sustainability Report of 2021, they address forced labor, stating “OneCo performs regular supervision of its subcontractors, making sure that their terms of employment comply with universal tariff agreements and other conditions in the industry”. The short text on forced labor fails to mention any concerns about the supply chains, within their solar cell suppliers.

Despite the company posting many statements on ethical guidelines showing its commitment to adhering to the laws of the Transparency Act and the criteria it had set with supplies, there is no mapping of its supply chain or partners' names. When the same customer inquiry email was sent regarding their ethical sourcing, OneCo shortly responded with them needing to know our address so we are directed to the right department, again ignoring the main question we proposed. The absence of factories' and suppliers' data which they work with along with their reply that does not answer the concern directly creates a suspicious ground in OneCo's production and supply line.

Vardar AS

Vardar AS is a development group that produces renewable energy, extending its business areas to hydropower, wind power, bioenergy, and solar power, and is an industrial investor in sustainable energy solutions. The company is owned by the 18 municipalities in Buskerud County municipality, in addition to Asker Municipality with a total of 49,054 shares. It is also a former majority shareholder of Nelja Energia AS which is a renewable energy developer based in Tallinn, Estonia. In 2023, Vardar established the wholly-owned subsidiaries Vardar Sol AS and Soldekke AS and began investing in renewable energy production from solar energy. The solar power investment in Vardar is organized in Vardar Sol AS. The company includes investment in ground-mounted solar parks, while roof-mounted solar systems are organized under Vardar Sol's subsidiary Soldekke AS. Vardar also has assets in and collaborates with the company Solcellespesialisten AS, Norway's largest supplier of solar cells. Since 2005, the company has delivered over 3,000 solar cell systems to customers all over the country, and Sunease AS. Vardar also has assets in Sunly AS, which builds, operates, and owns solar parks in the Baltics and Poland.

Issue Analysis: Forced Labor Concerns

Vardar states it supports and respects internationally recognized human rights and employee rights in its operations and value chain. Due diligence assessments under the Transparency Act are found in their annual report. As part of Vardar's due diligence routine, the company's "Supplier Declaration" must be signed by its supplier and partners. The declaration covers requirements for a focus on sustainable operations, environmental considerations, compliance with laws and regulations, human rights, and labor rights, including the ILO's core conventions. The document is sent to its suppliers to fill in a supplier form which obliges them to comply with the values and international standards. 70% of their suppliers have answered the form in 2023. Periodic mappings are then drawn of their supply chain to assess potential risks among their partners. Based on the findings, measures to stop, prevent, or limit consequences are raised. The company also affirms that it compensates any damaged parties and all findings are published in their annual report.

The mapping includes in which countries the companies have their operation, which industries the companies are part of, and which products they deliver. From their risk assessment surveys and checkups, Vardar states they did not uncover actual negative consequences on human rights during the survey of these companies, but they recognize a “potential risk negative impact”.

Vardar is however aware of its exposure to solar cell production in China. The company has identified that solar cells that have a production site in China are purchased from Vardar’s part-owned companies. They assess the risk of working conditions as highly linked to their cell and raw mineral production. The Solar Specialist and Sunly which work on the sale, installation, development, and ownership of solar farms that both belong to Vardar have companies operating in China. The Solar cell specialist which Vardar partly owns 32.78% as of 2022 has documented solar cell value chains and reduced the risk of negative consequences which led to the blacklisting of existing and potential suppliers. The solar cell specialist's ownership is distributed as of 31/12/2023 by four owners: FSN Capital, Carl C.S. Strømberg, Vardar AS, Letron AS, and Ingvarda AS. In 2023, the company carried out a new risk assessment and identified areas with low to medium risk. The risk of forced labor during raw material extraction and processing in the value chains and other less serious violations of human rights in value chains were raised in China along with other Asian countries without specifying them.

Vardar admits that the greatest risk of negative impact exists in the supply chain. The company particularly considers the supply chains with production and extraction in Asia as risk areas. In particular, there are risks in the extraction and processing of raw materials for solar panels in China. The solar cell specialist has revealed that there are risks with some of the company's solar cell suppliers and that there is a high probability that these companies have value chains that can get polysilicon originating in East Turkistan. For these suppliers, there is a risk of the use of forced labor in raw material extraction and processing. Solar Cell Specialist claims to have carried out steps in recent years, reducing the risk in the value chains through stakeholder dialogue meetings held with the Norwegian Uyghur Committee,

Amnesty, and LO's international department to work on preventing and reducing the risk of human rights violations as a result of its operations. In addition, it carries out desk studies of the suppliers and has engaged an independent researcher in China to do in-depth work on the value chains in Chinese sources. This means that it has multi-source and anonymized information about, for example, salaries available in advance of supplier visits.

In 2023, the Solar Cell Specialist, conducted a two-week visit to their major suppliers in China and Europe. They assessed suppliers based on turnover, purchase volume, and future purchase projections. The visit included 10 suppliers in China without detailing their names, down to the polysilicon stage, and two significant suppliers in Europe. During these visits, one supplier was put on hold due to inadequate documentation. Another Chinese manufacturer was found to be below industry standards for salary and compensation, despite complying with local and national laws. The company initiated collaboration with this supplier to improve their standards. Additionally, the Chief Officer led a specialist group for responsible supply chains within the Solar Energy Cluster. This effort resulted in the publication of a guide and working document for responsible supply chains in October 2023.

Based on Vardar and its subsidiary's reports found online, it can be concluded that the company does admit a high risk of using forced labor, especially from East Turkistan, admitting the import of polysilicon from there. However, the company does not detail if it took any action against that or not. When approached as a customer to ask about their ethical sourcing, Vardar responded as the following “Thank you for your email! Vardar is a holding company and is not able to answer your survey regarding the supply chain directly. The Companies we own, execute the necessary import and the completion of the projects. Vardar monitors and follows through membership of the board”. The company seems to have failed to comply with the Transparency Act.

BTG Solenergi

The company is headquartered in Birkeland in Agder with 2-10 employees. It operates in the development and sale of solar energy solutions to private individuals, households, and the public sector, nationally and internationally. The company supplies solar-powered street lights adapted to Nordic conditions and designs and delivers rooftop solar systems. They have their own developed control system for solar-powered lighting solutions: Ilume 1.0 / 1.5 / 2.0, Flexi, and Sports. BTG Solenergi is owned by smaller investment banks in Norway. It has a 50% stake in the company Solutvikling AS - a company working in the development of ground-mounted solar power plants in Norway. Through the company Solutvikling, BTG Solenergi also plans and develops ground-mounted solar power plants.

Arne Knudsen is BTG Solenergi AS's co-founder, he was the general manager of the production company TTS Marine Shanghai. The only China-related point is the founder's background, but there isn't other information beyond that. Information on ethical business guidelines is not found either. The only sustainable statement they provide is them using local subcontractors to increase the degree of local production and initiating a project to use recycled components in their products.

BTG Solenergi responded with this email to our Code of Conduct inquiry "Hello, We do solar installation for residential customers in the general Agder area. So as long as the location is in our area; I would be happy to answer the questions you posed, produce an analysis, and give you an offer regarding a potential installation".

Haugaland Kraft

The company was established in 1998. Since 2018 Haugaland Kraft has sold, designed, and installed tailored solar system solutions (EY Sky Norway, 2022) as well as energy storage for business and industrial customers. The group's ownership is divided among the municipalities of Karmøy, Haugesund, Tysvær, Vindafjord, Sveio, Utsira, Suldal, Sauda, Ullensvang, Etne, Fitjar and Bømlo as well as the companies Finnås Kraftlag SA, SØK AS and Fitjar Kraftlag SA. Their code of conduct document emphasizes compliance with laws and regulations, respect for human rights, and ethical business practices. Although an explicit mention of forced labor is addressed in the code, it's limited by only discussing how the supplier should act and what coercive behaviors they should not perform toward their employed workers (Haugaland Kraft, 2021).

Upon contacting them as customers for installation inquiry purposes, the company responded by asking where our address was for the delivery and did not comment any further on the forced labor concerned part in our question.

HM solar

The company provides services in the renewable energy sector through solar panel installation and battery storage. One of the challenges with this company is its website's unavailability. Despite the link is attached immediately when googling this company, as the link keeps forwarding the user to an IT company's site. Additionally, there are two other Türkiye and Nigeria-based solar companies with the same name as the Norway-based "HM Solar" which draws some confusion. Therefore, information regarding this company was found through utilizing LinkedIn and ENF Solar, which is a renewable energy trading platform, headquartered in China & the UK. LinkedIn shows the number of staff to be 2-10 employees, founded in August 2022, and the company shows to be headquartered in Agder, Norway.

HM Solar is a total supplier of solar cell systems for the private and business markets as well as providing solutions for energy optimization in buildings. Being a small new company, along with the inability to access its official site, enough information regarding its suppliers or any ties with China could not be found unlike most of the other companies searched in this report. Nevertheless, as per mentioned in the ENF solar's site, 2 out of the 3 publicly accessible inverter suppliers are Chinese. Shenzhen Growatt New Energy Technology Co., Ltd. and Hoymiles Power Electronics Inc.

Unfortunately due to the unsuccessful access to their website, no information was found regarding their human rights due diligence. No emails were sent since their contact was not found either. In fact, since the company states to have less than 10 employees, it does not fall under the Transparency Act hence this is one of the cases where customers cannot ask a company directly about their ethical sourcing. This case is one example which demonstrates the act's limitation in requesting companies' answers about the potential of their involvement in Uyghur forced labor.

XO Solar AS

XO Solar established in 2023 offers counseling, selling & assembling services to solar installers. The company states its prioritization of environmental consequences, such as becoming an Environmental Lighthouse Company. Meaning that they work to reduce their impact on the external environment, taking part in the globe's green transition. Yet, there isn't enough information on their website other than the type of services they provide. Nevertheless, they state that XO Solar only purchases from suppliers who take sustainability seriously, though they do not elaborate any further. Hence, XO Solar affirms that the equipment and products they supply are approved for use in Norway. According to proof TM, XO solar has two owners, ESA Holding AS and Tore H Amdahl AS. No China related traces were found on either from the publicly available information regarding the company. The same email template that utilized the Transparency Act was sent to XO Solar's post@xosolar.no in May 2024, but no replies have been received.

Sol og vindkraft AS

The company was founded in January 2022 with a goal of offering environmentally friendly energy solutions for both private homes and businesses. It is a full supplier of solar panels for residence , agriculture and commercial building. They import, sell and install solar cells for private individuals and businesses. Its main operation areas are western-Norway. Given that the company consists of 5 employees, it may not fall under the jurisdiction of the Transparency Act. However, the number of its contractors may influence its requirements under the Transparency Act. Sol og vindkraft AS is a general contractor that specializes in the assembly and certification of solar cell and wind turbine systems. It offers a comprehensive service portfolio that includes direct sales of solar panels, inverters, fastening material and wind turbines. They have a service called Enova Support. The extra amount of electricity that the client does not use from installed panels with the support of Sol og vindkraft AS can be sold to the electricity company when the production facility is connected to the electricity grid through a plus customer agreement. The company is based in Bjørnarfjorden outside Bergen and seems to have 5 employees. When it comes to searching for its ethical sourcing or questioning its potential complicity in forced labor, nothing could be found on this company, no statements on the Transparency Act nor on its ties with China. Hence an email has been sent on house installation inquiry. However, no response has been received since May 2024.

Soleie

Soleie is entirely owned by Akershus Energi AS and Østfold Energi AS. They state on their website that their main focus is investment and maintenance. Akershus Energi is 100% owned by Akershus country municipality. On Akershus Energi's website, they list goals for sustainability and social responsibility. For 2023, one of their goals was to maintain health, environment, safety and human rights in their supplier chain. Additionally, Akershus Energi's code of conduct is supposed to be based on their main values of security, cohesion, and future-orientedness. Under "integrity and decent working life", they state that they are actively working towards securing a responsible working life and basic human rights for their employees, partners and their entire supplier chain, additionally ensuring transparency. Along with this, the mother company stated how they work with the Transparency Act within the company to ensure all laws are being followed, and to ensure no modern slavery is involved in the company. Their website also lists 17 current projects, all based in Norway. One of the projects is for DSV, a logistics company that has previously worked with Norsk Solar for transportation of solar panels to the solar company's sites in Vietnam. An article on their website from December 2020 presents their goals for the company, stating that they will be responsible for the entire procurement process, including the building and maintenance of the projects. According to LinkedIn, they have approximately 2-10 employees, and are therefore not included by the terms of the Transparency Act, although they are owned by the larger Akershus Energi.

They were first contacted by UTJD in September 2023 with an invitation to participate in the survey. Additionally, the company's leadership was contacted in May 2024 with typical consumer questions such as where they supply from and such, but no reply. There is no information available to conclude whether the company has any ties to forced labor - however, Akershus Energi is seemingly both willing to be transparent, and socially aware.

Solkraft Sør

Based in the Southern region of Norway, Solkraft Sør was founded in 2021. They work with building solar parks, typically working with private landowners. On their website, they state that they are responsible for the financing, development and construction of large solar projects. They currently have 7 projects, all based in municipalities in southern Norway. The company has no listed code of conduct, supplier code of conduct, due diligence reports, or other additional information to review.

Their offices in Kristiansand have approximately 2-10 employees according to LinkedIn, and would in that case not be under the terms of the Transparency Act. Two contacts within the company have nevertheless been contacted with questions regarding suppliers and origin of their modules in May 2024, but no reply. Due to the lack of information about the solar projects, there is not enough information to conclude whether or not they have ties to forced labor.

Conclusion

The investigation into Uyghur forced labor reveals a troubling landscape of exploitation across multiple industries and supply chains. Despite global awareness and regulatory efforts, Uyghur forced labor remains a persistent issue, impacting a wide range of companies and sectors. This analysis synthesizes findings from extensive research, where companies exhibited a lack of transparency. Many companies did not publicly disclose relevant information, and those contacted directly often provided insufficient or no response to inquiries, effectively constituting a reply in itself. Our review highlights the pervasive and complex nature of tracing Uyghur forced labor and underscores the urgent need for more robust measures to address and eradicate forced labor from global supply chains.

Key Findings

1. **Prevalence of Uyghur Forced Labor:** Our analysis shows that Uyghur forced labor is widespread across the solar industry globally, including manufacturing, construction, and technology. The presence of Uyghur forced labor is particularly concerning in companies with complex and global supply chains, where oversight and transparency are often limited.
2. **Insufficient Transparency and Monitoring:** A common issue across many companies is insufficient transparency and monitoring of labor practices. The lack of detailed reporting and effective oversight has allowed Uyghur forced labor practices to continue. Companies such as Statkraft and Norsk Hydro have been identified as having limited visibility into their supply chains, complicating efforts to identify and address forced labor issues.
3. **Challenges in High-Risk Forced Labor Supply Chains:** Companies operating in or sourcing from high-risk regions face significant challenges in managing forced labor practices. The difficulties experienced by companies like Equinor and Solar Technologies Scandinavia highlight the complexities involved in ensuring ethical labor practices in these supply chains.

4. **Need for Enhanced Due Diligence:** The findings emphasize the urgent need for improved due diligence to address Uyghur forced labor. Companies must implement more rigorous monitoring and reporting mechanisms to ensure their supply chains are free from forced labor practices. This involves engaging with suppliers, and enhancing transparency in reporting labor practices. Highly recommending the methods set out in the evidence brief by the Sheffield Hallam University “Know Your Supply Chains: Desk-Based Research Strategies to Identify Uyghur Region Exposure” (“Evidence Briefs”, n.d.) strategy for companies to identify potential exposure to Uyghur forced labor.
5. **Importance of Accountability:** Effective remediation and accountability are essential in tackling Uyghur forced labor. Companies must take proactive steps, such as mainly ceasing their work and exiting East Turkistan to address issues identified in their supply chains and ensure the eradication of forced labor practices. While some companies have made efforts to address these issues, the actions taken have often been insufficient in fully resolving the problem.

Summary

The analysis highlights significant issues related to Uyghur forced labor across various companies and industries. Key findings include the widespread presence of forced labor, insufficient transparency and monitoring, challenges in high-risk supply chains, the need to fully exiting East Turkistan and address any links to Uyghur forced labor outside the region. Companies such as Statkraft, Equinor, Norsk Hydro, Solar Technologies Scandinavia, Hafslund Vekst, Norsk Renewable AS, and Skagerak Energi have been identified with links to Uyghur forced labor, demonstrating varying levels of involvement and response. Addressing these issues requires companies for an immediate disengagement and leaving East Turkistan to eliminate further complicity in Uyghur forced labor.

Limitations of the Transparency Act

The Transparency Act, intended to enhance corporate accountability and labor practices within supply chains, has demonstrated significant limitations in the context of this research on Uyghur forced labor. Despite the Act's goals of promoting transparency and ethical practices, several issues have emerged that undermine its effectiveness in addressing the concerns identified during this project.

Lack of Responsiveness and Collaboration

One of the most notable weaknesses of the Transparency Act is the lack of enforcement mechanism and accountability when companies fail to provide information upon request. Despite repeated attempts to engage with the companies through detailed questionnaires, there has been a marked absence of meaningful responses. This lack of cooperation has significantly hindered the research process, as essential information required to assess forced labor involvement was either inadequately provided or ignored. The companies' disregard for the questionnaires has been a substantial barrier, preventing a comprehensive evaluation of their supply chains and labor practices. This non-compliance underscores a critical flaw in the Act's ability to enforce transparency and accountability.

Challenges with Norwegian Consumer Authority

The Norwegian Consumer Authority, tasked with overseeing compliance with the Transparency Act, also faced challenges that impacted the effectiveness of this legislation. The processing time for complaints lodged under the Act has been notably prolonged, causing delays in addressing forced labor issues. This extended processing time impeded timely intervention and resolution of the concerns raised. Moreover, many complaints submitted were rejected without clear reasons, leaving significant gaps in understanding the rationale behind these decisions. The lack of transparency in the complaint handling process further complicates efforts to address and resolve forced labor issues effectively.

Companies' Failure to Meaningfully Comply with the TA

The Act's provisions for seeking information from companies have not been fully effective. While the legislation allows for information requests, the response from the companies involved has been inadequate. Even when information was sought, the responses provided were often insufficient or unhelpful, failing to address the specific concerns related to Uyghur forced labor. The two companies approved to provide information under the Act also demonstrated a lack of substantive engagement. Their responses, when received, were not comprehensive and did not facilitate a clear understanding of their labor practices or supply chain management.

Policy Recommendations

Based on the identified limitations of the Transparency Act and the key findings from our analysis of Uyghur forced labor, several policy recommendations are proposed to enhance the effectiveness of corporate transparency and accountability in addressing forced labor issues. These recommendations aim to address the current shortcomings and ensure more robust action against forced labor practices.

1. Strengthen Enforcement Mechanisms

To address the lack of responsiveness and collaboration from companies, it is crucial to implement stronger enforcement mechanisms. This might include:

- **Bill Introduction:** The US passed an act “Uyghur Forced Labor Prevention Act” that presumes all goods imported from East Turkistan are made with Uyghur Forced Labor and bans their entrance unless proven otherwise. The Norwegian government should adopt a rebuttable presumption approach similar to that of the UFLPA and strengthen the Transparency Act and/or implement an import ban to prevent all industries, not just the solar industry, from exploiting Uyghur workers.
- **Consequences for Non-Compliance:** Establish clear actions to be taken for companies that fail to respond to information requests or do not comply with transparency requirements. Penalties should include fines, sanctions, or restrictions on their operations within the jurisdiction.

2. Improve Complaint Handling Procedures

The delays and lack of clarity in the complaint handling process need to be addressed to ensure timely and effective resolution of forced labor concerns:

- **Streamline Complaint Processing:** Expedite the processing time for complaints lodged under the Transparency Act. Implement clear guidelines and timelines for resolving complaints to ensure prompt action.
- **Provide Transparent Feedback:** Ensure that all complaints are addressed with transparent explanations for any decisions made. This will help maintain trust in the complaint handling process and provide clarity on the reasons for complaint outcomes.

3. Enhance Corporate Reporting Requirements

To improve the quality and comprehensiveness of the information provided by companies, the following measures should be adopted:

- **Detailed Reporting Requirements:** Revise the reporting requirements to mandate detailed disclosures on labor practices, including the sourcing of materials, labor conditions, and measures taken to prevent forced labor. Reports should be made publicly available to facilitate transparency.
- **Mandatory Disclosure of Supply Chains:** Require companies to disclose their entire supply chain down to raw material (quartz), including subcontractors and suppliers, to ensure comprehensive monitoring and accountability for labor practices at all levels. Ideally require solar companies to disengage immediately from any East Turkistan located suppliers when identified.

4. Increase Government Oversight and Support

The role of government bodies in overseeing compliance with the Transparency Act needs to be strengthened:

- **Enhanced Oversight by Authorities:** Increase the resources and authority of regulatory bodies such as the Norwegian Consumer Authority to conduct thorough investigations

and enforce compliance. Provide training and support to improve their effectiveness in handling forced labor cases.

- Support for Affected Parties: Offer support and resources to organizations and individuals who report forced labor issues, including legal assistance and protection for whistleblowers.

5. Foster Collaboration with Civil Society

Engaging with civil society organizations can provide valuable insights and support in addressing forced labor issues:

- Partnerships with NGOs: Collaborate with non-governmental organizations (NGOs) and human rights groups to leverage their expertise and resources in monitoring and reporting on forced labor practices.
- Public Awareness Campaigns: Launch public awareness campaigns to educate consumers and businesses about the importance of transparency and the impact of forced labor. Encourage ethical purchasing practices and corporate responsibility.

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Appendix

Solar Panel Industry, Procedural Questionnaire Part I

General Questions

1. What is the legal name of the company?
2. How long has the company been in business?
3. How is the company structured? Provide an organization chart, if possible.
4. How long has the company been an importer?
5. What Importer of Record (IOR) number(s) does the company use?
6. Do you act as the “consignee only” on any imports? If so, who is the IOR?

Imported Product Questions

7. Describe how your import containing polysilicon from the PRC are made, from raw materials to finished goods, by whom, where and under what labour conditions:
 - a. Map your supply chain, from cultivation/extraction of raw materials to export shipment.
 - b. Identify the manufacturers and suppliers for each step (include entity names and addresses).
 - c. Identify the country or countries for each step.
 - d. Describe and/or provide any information on the manufacturer/supplier’s employment contracts for its employees.
8. Explain your business relationships with each of the companies identified in question #7
9. When conducting risk assessment analysis under the Transparency in Supply Chains Act, has your company identified any areas of risk for being mined, manufactured, or produced with a prohibited form of labour, in relation to your import of products containing polysilicon? Please explain for each manufacturer/supplier.

Control and Environment Questions

10. Does your company have a Corporate Social Responsibility (CSR) policy?
 YES NO

11. Does the CSR policy forbid the use of forced labour?

YES NO

12. Does your company maintain a code of conduct/supply chain standards?

YES NO

13. Does your code of conduct/supply chain standards address the following areas covered by International Labour Organization (ILO)'s core labour standards?

Freedom of association and collective bargaining?

Discrimination in employment?

Child labour?

Forced Labour?

Compensation?

Hours of work?

Occupational safety and health?

14. Does your company perform or commission an outside party to perform audits on the company's overall social compliance program (CSR policy, code of conduct/supply chain standards, etc.), specifically addressing forced labour social compliance within the company?

YES NO

15. How often are these audits performed?

YES NO

16. Describe the protocol and questions used during the audits.

YES NO

Control Activity Questions (YES AND NO QUESTIONS)

17. Do any of the following pertain to your company?

- Contracts with manufacturers/suppliers prohibit the use of forced labour.
- Contracts with manufacturers/suppliers contain consequences for using forced labour by the company or any of its subcontractors.

18. Prior to a contractual arrangement, does your company ensure that a social audit or other types of evaluation is carried out, either by an internal or external party, to ensure that the manufacturer/supplier is low-risk for using forced labour?

- YES NO

19. Have any of your current manufacturers/suppliers of imports containing polysilicon from the PRC been identified to be at risk for using forced labour?

- YES NO

20. Are any current manufacturers/suppliers located in the Uyghur region of the PRC?

- YES NO

21. Do any current manufacturers/suppliers outsource or subcontract their orders?

- YES NO

22. Do any current manufacturers/suppliers employ Uyghur workers under the “Poverty Alleviation through labour transfer” program?

- YES NO

23. Do your contracts with first-tier suppliers prohibit worker payment of labour recruitment fees or require the supplier to explain how any recruitment fees are charged?

- YES NO

24. Do your contracts with first-tier suppliers prohibit the use of labour recruiters or require the supplier to disclose when labour recruiters are used in its supply chains?

- YES NO

25. Do your contracts with first-tier suppliers forbid forced or involuntary labour, trafficking of recruits, abuse of vulnerability, deception, physical/sexual violence, intimidation and threats, withholding of wages, abusive working/living conditions, debt bondage, and isolation from authorities, as well as require proof of wage payment and include grievance procedures?

YES NO

Monitoring Questions

26. Does your company perform or commission an outside party to perform audits of high-risk manufacturers/suppliers of imports containing polysilicon from PRC to ensure labour conditions comply with international labour standards and the importer's code of conduct (i.e., supply chain standards)?

27. If yes to #26, answer the following:

- a. How often are these audits performed?
- b. Describe the protocol and questions used during the audits (be as specific as possible).
- c. Provide a copy of the results of the most recent internal and/or external audits.
- d. Provide the contact person who conducted the audit.
- e. Provide evidence of the supplier's corrective action plans for cases of noncompliance.