

Deep dive into Renewable Energy Supply Chain

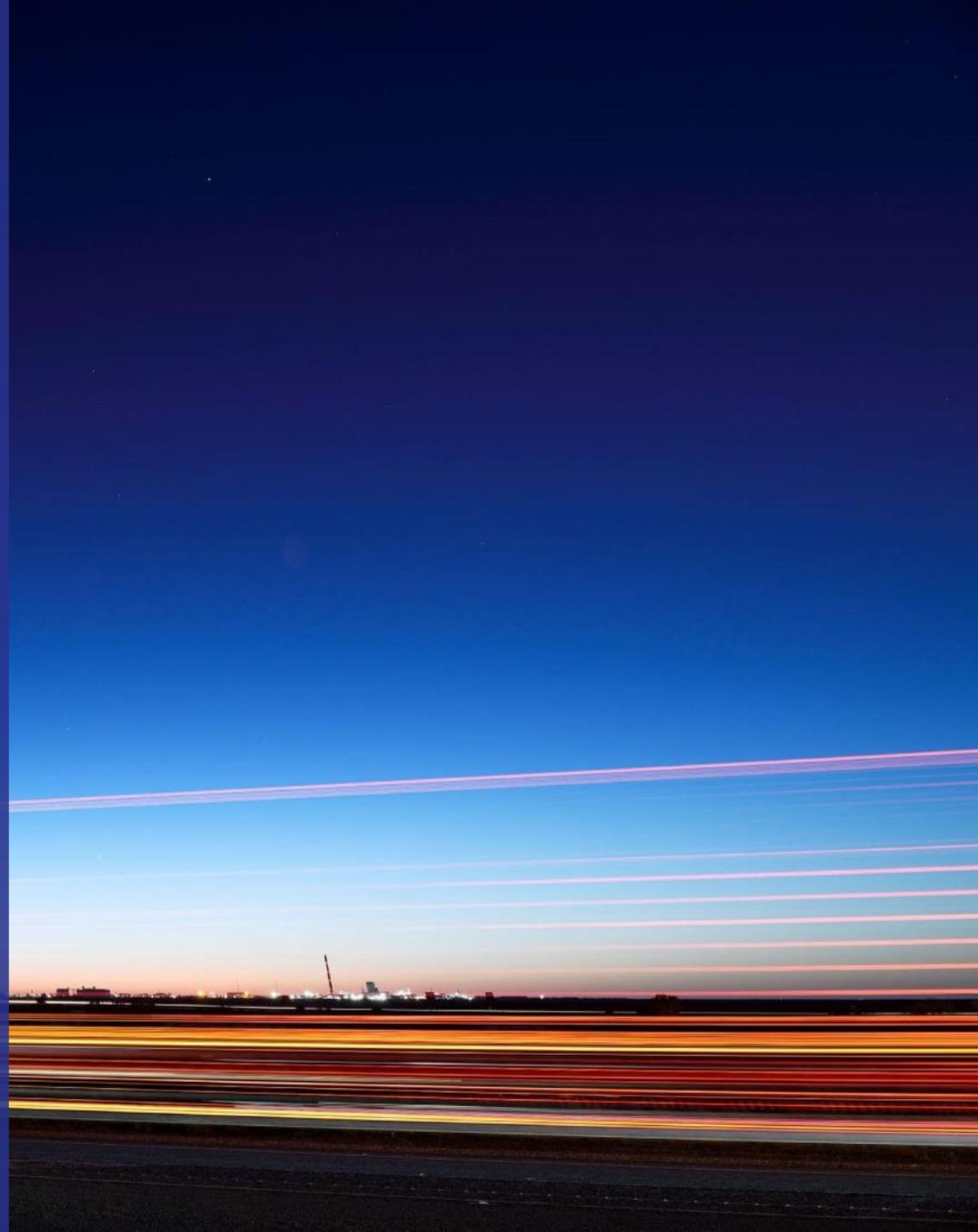
How to ensure your supplier is best in class for ESG

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SUNPOWER

FROM MAXEON
SOLAR TECHNOLOGIES



Why is supply chain oversight important?

ESG is important across the value chain for many reasons



Legal compliance

- Modern Slavery
- Environmental
- Recycling



Customer considerations

- Trust
- Marketing
- Future asset value



Reputation management

- Avoidance of bad press
- Avoidance of activist campaigns

Solar supply chains under scrutiny

Forced labour is in the spotlight

Chinese Solar Companies Tied to Use of Forced Labor

A new report shows some of the world's biggest solar companies work with the Chinese government to absorb workers from Xinjiang, programs that are often seen as a red flag for forced labor.

US ports blocking shipments of solar components due to forced labor fears

US ports have been blocking shipments of solar components since the summer due to concerns about forced labor in China's Xinjiang region.

NOVEMBER 14, 2022 RYAN KENNEDY

MARKETS

MODULES & UPSTREAM MANUFACTURING

CHINA

UNITED STATES



How 'dark underbelly' and forced labour is helping to fuel Australia's love affair with cheap solar

By energy reporter Daniel Mercer

Posted Yesterday at 7:07am



— Rear Window

Slave labour links to Fortescue solar plant

Joe Aston Columnist



Australian solar industry remarkably silent as global pressure mounts around allegations of forced labour in supply chain

The solar industry in Europe and the United States is continuing to ramp up the pressure on the use of polysilicon produced in Xinjiang, China – in response to allegations that forced labour is being used in its production. By contrast, the Australian industry's response has been markedly muted. Although it is true that most global solar industries are heavily reliant on Chinese manufacturing, Australia is overwhelmingly so.

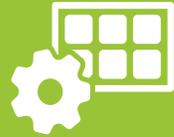
A robust compliance program

Supply chain policies and governance documentation

Policies for Employees & Contractors:

- Code of Business Ethics and Conduct
- Whistleblower Hotline

Suppliers



- Code of Business Ethics and Conduct
- Supplier's Sustainability Guidelines
- Live training

Suppliers' suppliers



- Code of Business Ethics and Conduct
- Supplier's Sustainability Guidelines
- Enhanced due diligence when applicable (such as certifications for any China-exposed suppliers regarding not being (i) in Xinjiang; and (ii) on sanctions list)

Raw materials



- SEIA Protocol / other traceability standards

Grievance Mechanism

- Reporting for internal and external stakeholders
- Remediation process

Reporting

- Conflict Minerals (US)
- Modern Slavery (Aus)

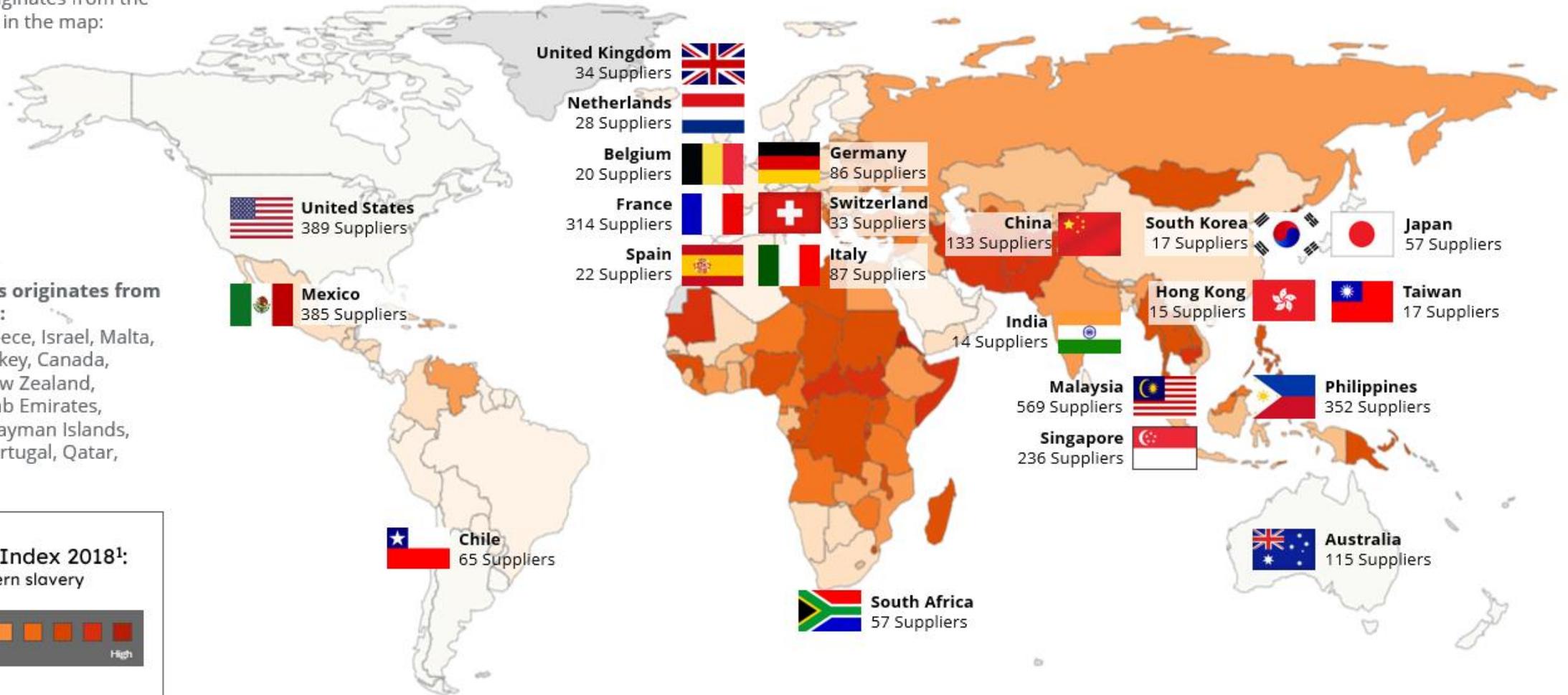
Auditing

- Chain of Custody
- Social

Mapping modern slavery – a risk-based approach

Risks of modern slavery in a solar supply chain

98% of suppliers originates from the 22 countries shown in the map:



*Remaining 2% of Maxeon's suppliers originates from these 23 countries:

Austria, Poland, Greece, Israel, Malta, Brazil, Thailand, Turkey, Canada, Ireland, Norway, New Zealand, Vietnam, United Arab Emirates, Bermuda, Jordan, Cayman Islands, Sri Lanka, Latvia, Portugal, Qatar, Sweden, Samoa



Traceability

In accordance with emerging regulations and best practices, identifying the source of raw materials incorporated in selected products:

1. Tracing such raw materials every step from the source through the factories where it is processed until it is delivered; and
2. Use of Manufacturer's Execution System (MES) tracing system as well as transportation documentation every step of the journey.

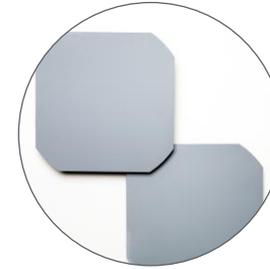
On the right is a sample of what tracing the MGSI / Polysilicon in a solar module looks like, which is a key area of scrutiny in the solar industry



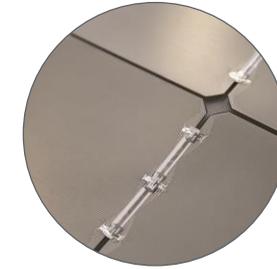
Polysilicon



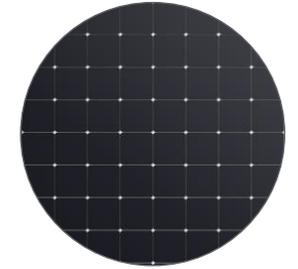
Ingot



Wafer



Cell



Module



Auditing

Chain of Custody Audit

A chain of custody audit for traceability goes through every step of the process to ensure inputs are tracked from the source of the raw materials to the final product received by the customer

Focus is on documentation such as purchase orders and transportation documents and systems to track lot numbers at factories such as usage of Manufacturer's Execution System (MES)

Social Audit

These audits focus on working conditions at a factory, compliance with forced labor laws and other ESG factors in a holistic evaluation of the site audited

One leading standard is the SMETA (Sedex Members Ethical Trade Audit) methodology, the most widely used format for social audits in the world

It is challenging but we are seeing that these audits, both chain of custody and social, can be conducted in China at present with the right parameters and sensitivity to the local context



Social Supply Chain Audit

Ethical and responsible sourcing



- More than **60,000** member organisations from over 180 countries use Sedex's online platform to operate responsibly and sustainably, protect workers and ensure ethical sourcing.
- Maxeon has engaged an audit firm to audit supply chain operations and working conditions. The audited results were uploaded on the Sedex platform.
- All registered members of Sedex can request for a copy of the audit report from Sedex via the platform.



PRE-AUDIT

Supplier completes the Sedex Self-Assessment Questionnaire (SAQ)

Supplier shares existing audits, including the SAQ, with buyer

Buyer reviews inherent risk score in Sedex risk assessment tool

Buyer prioritizes supplier sites and defines requirements for audit



AUDIT

SMETA process assesses a site's standards of labour, health and safety, environment and business ethics

Auditor will conduct supplier site visit, consisting of a site tour, interviews, and document review

Auditor will hold a closing meeting to review the Corrective Action Plan Report



POST-AUDIT

Supplier and buyer review final audit report on Sedex digital platform to assess findings and areas of non-compliance

Supplier and buyer work to resolve corrective action, auditor ultimately verifies resolution

Once a site undergoes a SMETA audit, supplier can share report with other customers via the Sedex platform

Case study

Malaysia: withholding passports

Issue uncovered during in person code of conduct training.

Some jobs in Malaysia are described as the **three Ds**:

dirty, difficult and dangerous.

Malaysians don't want to do these jobs.

Agencies find workers to do jobs with the Three Ds and contract workers from countries such as **Bangladesh, Indonesia, Myanmar, Nepal**, etc., where **human rights are not as protected.**

>> Investigation & action >>



In-person visits and interviews:

1. Contract agencies
2. Dormitories
3. Workers

Actions:

1. Certifications from agencies
2. Signs in dormitories in native languages
3. Remediation and termination

A checklist for modern slavery practices

- ✓ Does the supplier share your values?
- ✓ Does the supplier have the right policies?
- ✓ Does the supplier have a risk-based approach?
- ✓ Where are the components sourced and manufactured? **NOT** where the product is assembled.
- ✓ Can your supplier certify non-Xinjiang provenance?
- ✓ Does the supplier conduct third-party audits?

**Any questions on modern slavery
in the supply chain?**

Circular economy practices

How they apply to a solar supply chain



MATERIALS SOURCING

- Screen suppliers for carbon footprint and other environmental metrics
- Public disclosure of all panel materials (i.e. Declare label)
- Meet strictest standards set for harmful chemicals (such as lead-free)



PRODUCTION

- Use products manufactured in facilities that demonstrate they use the best practices (LEED is one such body)
- Demonstrate high standards in material health, water stewardship and social fairness (Cradle to Cradle)



PRODUCT

- Use highest efficiency product – this will maximize the electricity you produce in the lowest amount of space which is limited with a rooftop
- Install products correctly (maximize sun – flat commercial rooftops are perfect)



PRODUCT RE-USE

- Use longest lasting product
- Use a product designed for upcycling, recycling when only necessary
- Have a robust process for screening recycling partners

Energy Payback Time (EPT)

The key metric to make energy positive buildings

$$EPBT = \frac{E_{mat} + E_{manuf} + E_{trans} + E_{inst} + E_{EOL}}{E_{agen} - E_{aoper}}$$

- EPBT is the period required for a renewable energy system to generate the same amount of energy that was used to produce the system
- A comprehensive life-cycle analysis of emissions in the (i) materials, (ii) manufacture, (iii) transmission, (iv) installation and (v) anticipated end-of-life needs to be performed and then divided by (a) the electricity generated minus (b) the energy used in operations as below
- A calculation can be performed with the buildings inputs to create EPBT for the building

In Australia, as an example, with the right conditions, **EPBT for solar panels can be as little as 3 months.**

This is **150x** energy positivity!

(above is for SunPower Maxeon - 3x normal panels)

A checklist for circular economy practices

- ✓ Materials used
- ✓ Manufacturing procedures
- ✓ Efficiency / degradation of panels
- ✓ Warranty period (product not performance)
- ✓ Does the supplier disclose robustly on energy use in manufacture? (calculate energy payback time of a building)

Any questions on circular economy in the solar supply chain?

Our sustainability journey thus far



2020



2021



2022



2023

Establish New ESG Team

Dedicated team with global and local diversified ESG experiences

Joined United Nations Global Compact

Issued CEO Letter of Commitment on our support of the SDGs



United Nations Global Compact

Inaugural Sustainability Report

Benchmarking exercise and materiality assessment to shape our ESG focus areas and sustainability report

Conflict Minerals Reporting

Completed first Conflict Minerals disclosure report post-spinoff

Green Finance Reporting (and Sustainability-Linked Loans)

Target Setting for Material Topics

Develop long-term targets around material topics by the end of 2021

Published 2nd Sustainability Report

Energy Payback Time Assessment

Cradle to Cradle – Silver



Modern Slavery Statement

Filed its inaugural Modern Slavery Statement in 2022 which aligns with Australia, California and United Kingdom reporting standards

Launch of CSR Program – Maxeon Gives

Green Bond Framework & Final Green Finance Reporting (with external assurance)

Climate Risks (TCFD) and CDP disclosures



Powering a Circular Economy Policy*



Named by Corporate Knights a Top 100 Most Sustainable Company



*Policy for recycling and beyond

Our sustainability journey to come



2024

Climate Risks Phase 2 - Climate Scenario Analysis

Further develop the climate scenario analysis with quantitative outcomes



More LEED Certifications

Achieve LEED certification for Singapore office and The Philippines site



2025

Climate Risks Phase 3 – Quantitative Impacts

Develops the quantitative impacts for additional prioritized risks and quantify response measures

Review mid-term ESG Targets

Review 2025 ESG targets

- **Environmental:** Reduction of emission intensity
- **Social:** Improve safety, diversity and community investment targets
- **Governance:** Improve product quality and innovation; maintain business integrity



2030

Review long-term ESG targets

Review 2030 ESG targets

- **Environmental:** Further reduction of emission intensity
- **Social:** Attain better than industry safety standards, improve diversity and community investment targets
- **Governance:** Achieve better than industry product quality and innovation; maintain business integrity

Finalise 2050 Net Zero Decarbonization Plans

Implement action plans to meet net zero goals

Key learnings

Sustainability is a journey

Sustainability is a long-term project. Apply principles of 'Kaizen' and continuously improve there is no such thing as perfection!

Find the right partner

More important than words or reports in a partner are values and trust!

Don't accept easy answers

If anybody says this is easy they are probably lying! Expect difficult and inconvenient conversations... it means you are asking the right questions!

The good news: progress is being made every day!

As painful as it can be, know that progress is happening all the time!

Thank you!

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