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12 July 2022

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11:00 am – 12:00 pm | EDT, New York City

8:00 am – 9:00 am | PDT, Los Angeles



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Navigating the UFLPA: Geopolitical Risk in the PV Supply Chain

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Do you have any questions? ? 

Send them in via the Q&A tab.  We aim to answer as many as we can today!

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We are recording this webinar today. 

We'll let you know by email where to find it and the slide deck, so you can re-watch it at your convenience.  



UFLPA and the Solar Supply Chain

July 2022



Context: Forced Labor and Solar Supply Chains

IN BROAD DAYLIGHT

Uyghur Forced Labour and
Global Solar Supply Chains



LAURA T. MURPHY & NYROLA ELIMÄ

Sheffield Hallam University
Helena Kennedy
Centre for
International Justice

Image: Sheffield Hallam Report

Human rights organizations published multiple reports of forced labor & other human rights abuses against Uyghurs, an ethnic minority in the Xinjiang region of Western China.

Sheffield Hallam University documented Uyghur forced labor in polysilicon & silicon metal.



June 2021: U.S. Customs' withhold release order (WRO, import ban) on Hoshine Silicon



Summer/Fall 2021: Customs seizes at least 140 MW of PV modules in summer/fall 2021



Fall 2021 – Spring 2022: The solar industry adapts to the Hoshine WRO, but imports shrink starting in H2 2021

Uyghur Forced Labor Prevention Act (UFLPA)

December 2021, President Biden signs UFLPA.

- 1) Creates a rebuttable presumption that goods made in Xinjiang are made using forced labor, and
- 2) directs Customs to prevent the import of these products.

Prohibited entities

Four polysilicon & MGS companies are named in a list of prohibited entities.

Stricter implementation

The government has warned that implementation will be stricter than under the Hoshine WRO, and goods from factories using Xinjiang and non-Xinjiang inputs will be at greater risk.

The federal government published guidance on June 13 and June 17 spelling out details of enforcement.



June 13: Customs' Operational Guidance for Importers





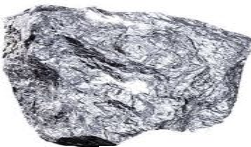

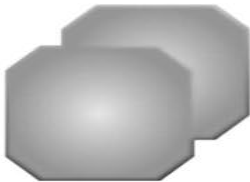


Image: Daqo New Energy

What we learned

- Suppliers should avoid processing material from Xinjiang in factories serving the U.S. market, even on different lines (p. 16)
- Traceability must go back to the level of the quartz supply (p. 16)

Traceability to Quartz

While rough conclusions about level of risk can be drawn from the source of polysilicon, to ensure a safe module supply traceability should go to the levels of metallurgical grade silicon (MGS) and quartz.

							
	Quartz	Silicon Metal	Polysilicon	Ingot	Wafer	Cell	Module
WRO	Not In Scope	In Scope & Implemented	In Scope & Implemented	In Scope & Implemented	In Scope & Implemented	In Scope & Implemented	In Scope & Implemented
UFLPA	In Scope & Implemented	In Scope & Implemented	In Scope & Implemented	In Scope & Implemented	In Scope & Implemented	In Scope & Implemented	In Scope & Implemented
Key Considerations:	CEA advises buyers to ask suppliers for information on traceability to the quartz level and whether the polysilicon makers they use get MGS from Xinjiang and/or Hoshine		Some of the largest polysilicon makers were recently customers of Hoshine and/or procured MGS from Xinjiang				

June 17: UFLPA Strategy Released

The strategy for UFLPA Implementation includes a list of prohibited entities

Solar supply chain entities on the list:

- Xinjiang Daqo (polysilicon)
- Xinjiang East Hope (polysilicon)
- Xinjiang GCL (polysilicon)
- Hoshine Silicon (MGS)



The list shows a targeted approach, focused on polysilicon in Xinjiang



There are still concerns about UFLPA implementation, per the widespread use of both Xinjiang poly and non-Xinjiang poly in Chinese ingot/wafer factories.



Image: Kokodala News

European Union – Forced Labor

On June 9, the European Parliament (EP) adopted a resolution on human rights in Xinjiang, condemning repression of the ethnic minorities and citing a serious risk of genocide

- The resolution “*Calls on the [European] Commission to propose an import ban on all products produced by forced labor and on products produced by all Chinese companies listed as exploiting forced labor*”
- The directive, introducing import control methods for products made or transported by forced labor into the EU, is set to be defined by the European Commission by September 2022

European Parliament
2019-2024



TEXTS ADOPTED

P9_TA(2022)0237

The human rights situation in Xinjiang, including the Xinjiang police files

European Parliament resolution of 9 June 2022 on the human rights situation in Xinjiang, including the Xinjiang police files (2022/2700(RSP))

The European Parliament,

- having regard to its previous resolutions and reports on the situation in China, in particular those of 17 December 2020 on forced labour and the situation of the Uyghurs in the Xinjiang Uyghur Autonomous Region¹ and of 19 December 2019 on the situation of the Uyghurs in China (China Cables)²,
- having regard to the Universal Declaration of Human Rights of 1948,
- having regard to the International Covenant on Civil and Political Rights of 16 December 1966,
- having regard to Council Regulation (EU) 2020/1998³ and to Council Decision (CFSP) 2020/199 of 7 December 2020⁴ concerning restrictive measures against serious human rights violations and abuses,
- having regard to the UN Convention on the Rights of the Child of 1989,
- having regard to Article 36 of the Constitution of the People’s Republic of China, which guarantees all citizens the right to freedom of religious belief, and to Article 4 thereof, which upholds the rights of ethnic minorities,
- having regard to Rules 144(5) and 132(4) of its Rules of Procedure,
- A. whereas the promotion of and respect for human rights, democracy and the rule of law should be at the centre of the EU’s relations with China, in line with the EU’s commitment to uphold these values in its external action and China’s commitment to

Source: [Resolution P9_TA\(2022\)0237](#)

Getting Shipments Released: Two Paths

Out of Scope decisions

- › Proving that your product does not contain material from Xinjiang/associated with entities on the list
- › **Compliance:** Providing a supply chain map + documentation that confirms the source of materials
- › **Feasibility:** Potentially high if proper documentation can be obtained

Exceptions

- › Proving that material was not produced with forced labor, if components from Xinjiang and/or from “listed” companies
- › **Compliance:** Providing documentation that shows that material was not produced with forced labor, including independent labor audits and/or statements by suppliers
- › **Feasibility:** Likely impossible



Enforcement Details: UFLPA vs WRO



U.S. Customs and
Border Protection

Uyghur Forced Labor Prevention Act and Current Forced Labor Withhold Release Order, or WRO, Enforcement

The following is a summary of the Uyghur Forced Labor Prevention Act and forced labor WRO enforcement mechanisms.

Enforcement	Uyghur Forced Labor Prevention Act	WRO
Detention Authority	19 CFR 151.16	19 CFR 12.42(e)
Appeals Process	<ul style="list-style-type: none">▶ Detention 19 CFR 151.16 (30 days)▶ Exclusion 19 USC 1514 Protest▶ Seizure 19 CFR 171 – Petition Rights	<ul style="list-style-type: none">▶ Detention 19 CFR 12.43–44 (3 months)▶ Exclusion 19 USC 1514 Protest▶ Seizure 19 CFR 171 – Petition Rights
Evidentiary Level	Public Law No.: 117–78 Clear and Convincing Evidence*	19 CFR 12.43
Authorization	<ul style="list-style-type: none">▶ Uyghur Forced Labor Prevention Act (Public Law 117–18)▶ Section 307 of the Tariff Act of 1930 (19 USC 1307)▶ 22 USC 6901	<ul style="list-style-type: none">▶ Section 307 of the Tariff Act of 1930 (19 USC 1307)▶ 19 CFR 12.42–44
CBP Guidance	https://www.cbp.gov/trade/forced-labor/UFLPA	https://www.cbp.gov/trade/forced-labor/withhold-release-orders-and-findings

*See also: Forced Labor Enforcement Task Force Guidance as authorized by section (2)(d)(6) of the act and requirement to respond to CBP in section 3 of the act.

CBP Publication No. 1790-0522

China Anti-Foreign Sanctions Law



Image: China Briefing

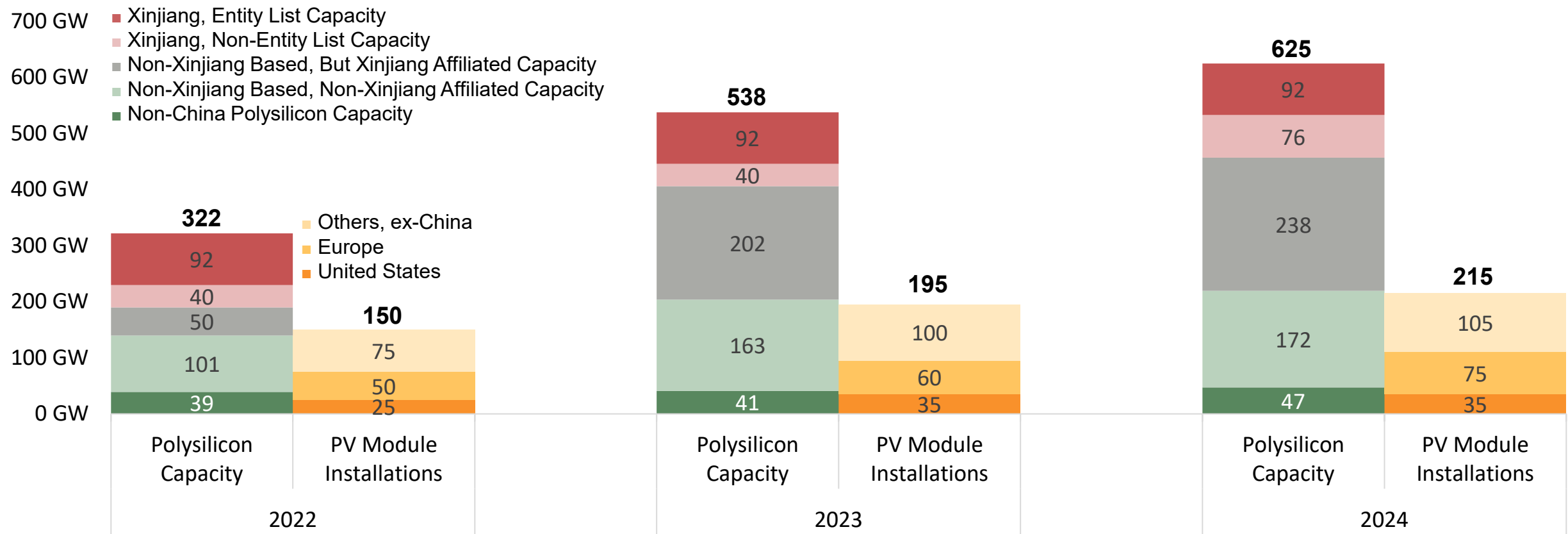
June 10, 2021: the Chinese government enacts the third in a series of “blocking laws” to counter foreign sanctions

Under the Anti-Foreign Sanctions Law (AFSL), Chinese citizens can sue in court for damages caused by another company's compliance with U.S. or other foreign sanctions

Calls for creation of a “list” of individuals complying with foreign sanctions + gives authority to prohibit visas and/or seize property of individuals on this list

UFLPA Impact On Polysilicon

(GW of polysilicon equivalent end-of-year capacity)



Notes | Polysilicon capacities represent end-of-year factory capacities per supplier statements and plans, not actual production estimates. First Solar's non-silicon module supply is not included. Solar installation figures are estimated in GWdc. Polysilicon capacity in tonnes is converted into GW of module equivalent production at 2.8 grams of polysilicon per watt of solar.

There will be enough polysilicon from non-Xinjiang-based and affiliated factories by the end of 2022 to support the annual installation expectations from the United States, Europe, and most other markets that may need traceable supply chains.

Non-China All-Grade Polysilicon Capacity By Supplier

(GW of polysilicon equivalent end-of-year capacity)



Hemlock
Saginaw, MI

2022	2023	2024
12.5	12.5	12.5



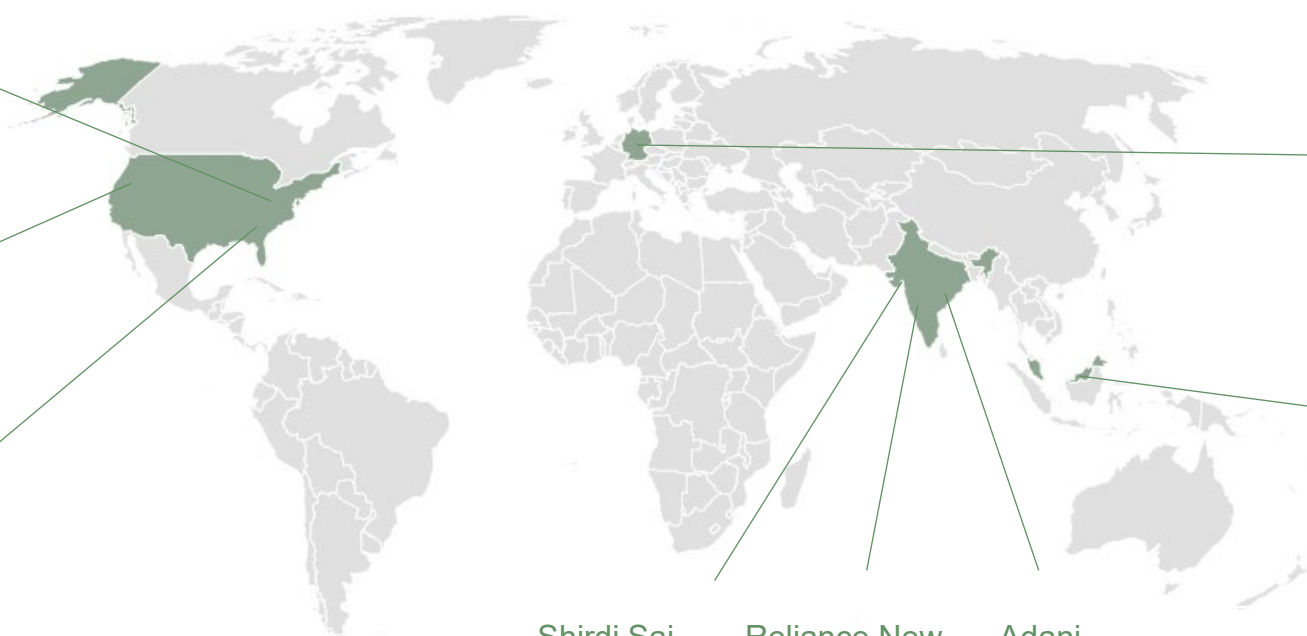
REC Silicon
Moses Lake, WA

2022	2023	2024
N/A	N/A	6.5



Wacker Polysilicon
Charleston, TN

2022	2023	2024
7	7	7



Wacker Chemie
Burghausen, BY Nunchritz, SN

2022	2023	2024
17	17	17



OCIMSB
Bintulu, Sarawak

2022	2023	2024
12.5	12.5	12.5

Shirdji Sai Electricals
4+ (2025+)

Reliance New Energy Solar
4+ (2025+)

Adani Infrastructure
10 (2025)

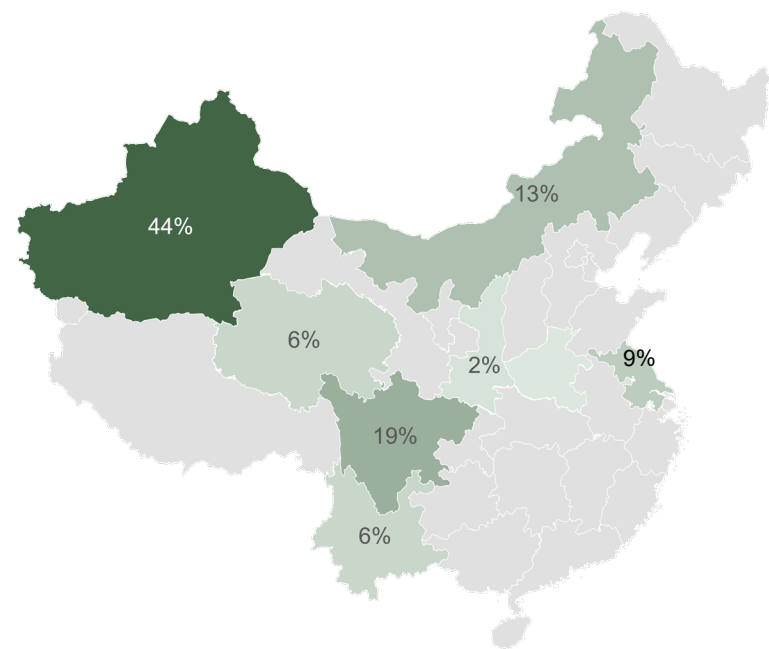
Notes | Data aggregated by CEA and based on supplier interviews, company announcements, and disclosures. Companies and factories producing polysilicon exclusively for non-solar applications are excluded. Polysilicon capacity in tonnes is converted into GW of module equivalent production at 2.8 grams of polysilicon per watt of solar.

2022 non-China polysilicon capacity is 60 GW but only 2/3 are used for solar. 2024 capacity is estimated at 47 GW, including REC Silicon’s U.S. facility. Three India-based suppliers should build additional 20+ GW by 2025 or later.

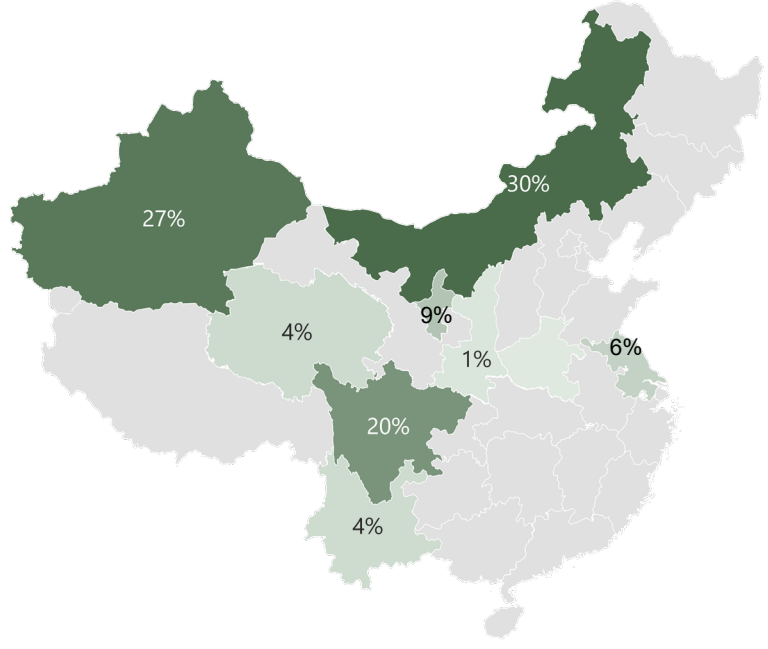
China Polysilicon Capacity Distribution By Province

(% of polysilicon equivalent end-of-year capacity)

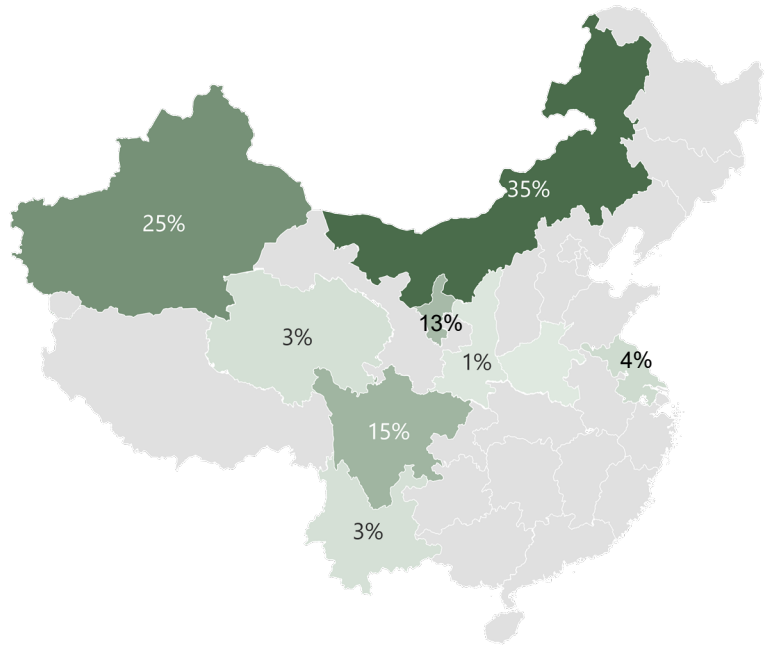
2022



2023



2024



Notes | Data aggregated by CEA and based on supplier interviews, company announcements, and disclosures.

Between 2022 and 2024, the proportion of Xinjiang-made polysilicon capacity in China will fall from 44% to 25%. Polysilicon capacities in Inner Mongolia, Sichuan, and Ningxia will increase most rapidly. Multiple new facilities will include silicon metal.

(Supplier) Size Matters

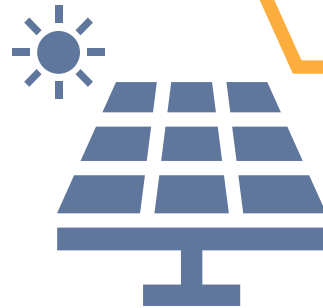
Greater vertical integration = **more control over supply chains**

Opportunities for dedicated **U.S./EU factories**

Experience navigating the Hoshine WRO, including **getting shipments released from detention**



Larger cell/module makers



Smaller cell/module makers



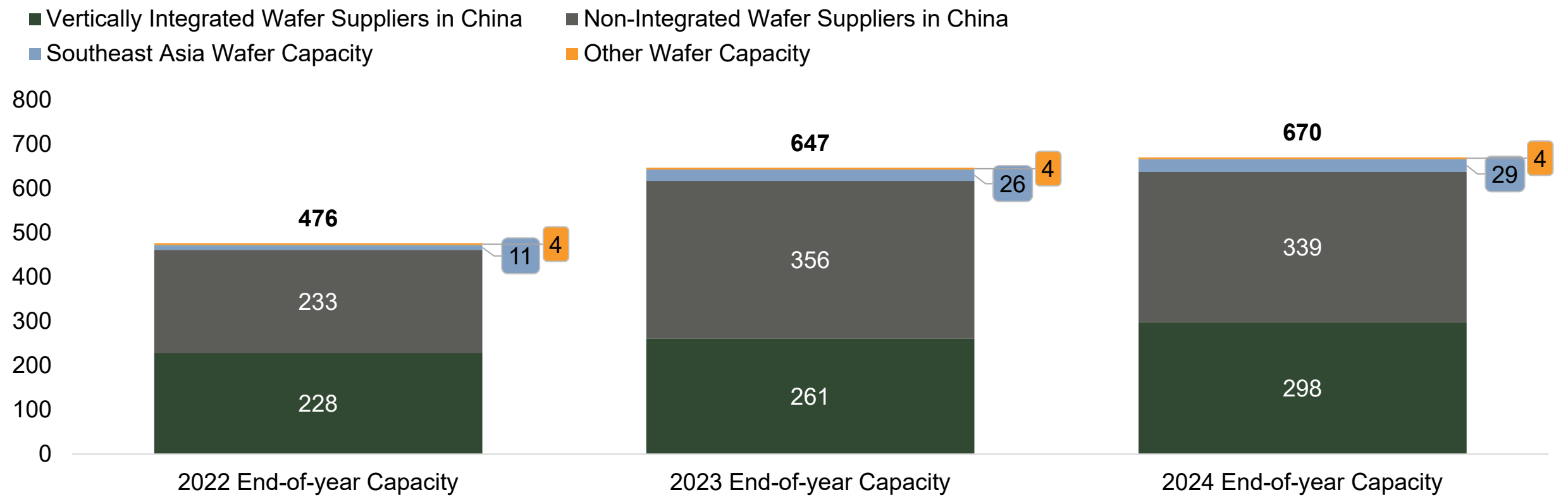
Less vertical integration = **less control over supply chains**

Fewer factories/harder to dedicate individual plants to U.S./EU production

Less experience navigating the Hoshine WRO / **no experience getting shipments released from detention**

Wafer Capacity By Supplier Type

(GW)



Notes | Data aggregated by CEA and based on supplier interviews, company announcements, and disclosures. Several suppliers are floating plans for non-China ingot and wafer production, but final decisions are all pending UFLPA and circumvention investigation information releases.

End-of-year 2022 capacities will reach around 15 GW from 10 established suppliers. Many suppliers in Southeast Asia are expanding rapidly in 2023 to meet UFLPA and AD/CVD circumvention challenges.

UFLPA In Module Procurement Agreements

Raw Materials

- Bill of Materials should include supplier(s) and factory location(s) for wafer, ingot, and polysilicon, and preferably also silicon metal and quartz. As the Entity List may be expanded, manufacturing locations should ideally be specified for all module components.
- Supplier should warrant the exclusive use of listed materials.

ESG

- Audits of labor standards in China-based factories are virtually impossible to implement due to Anti-Foreign Sanctions Laws.
- Suppliers should warrant compliance with their own ESG policies, and preferably also with buyer's ESG policies, and subject their vendors to the same standards.

Detention & Inability to Import

- Supplier should provide buyer with real-time updates about any CBP actions with respect to UFLPA implementation, and its own responses thereto.
- Treatment and remedies should be determined in advance for cases when CBP prohibits importation as a result of non-compliance with UFLPA.

Preparation

- Buyer should be able to access traceability documentation along the entire silica-based value chain and conduct onsite audits of raw material traceability systems. The recommendation is to follow the SEIA protocol and CBP guidance from June 13.
- Buyer may require supplier to undergo the administrative (advance) ruling process.

Administrative (Advance) Ruling



- The process enables companies to make business decisions that are dependent on how their goods will be treated on importation
- Importers can verify compliance with UFLPA *prior to* importing
- The process is typically used for tariff classification and determining the country of origin but may also address exclusion from entry
- Request must relate to existing tangible goods that can be imported
- Documentation requirements are same as those to appeal a detention
- Decision is binding for all ports, with respect to the prospective transaction
- Decision is made public (with a delay)
- There is no required period for CBP to deliver a decision

UFLPA Detentions Have Begun

As of July 1, CEA has confirmed that Customs has detained shipments from at least two large Chinese module makers under UFLPA.

These are some of the same companies that were detained under the Hoshine WRO.



Customs has stated that it requires documentation to the level of the quartz supply, whereas under the Hoshine WRO it only required documentation of MGS supply – and we believe that was loosened to the source of the polysilicon supply.



Suppliers appear optimistic, at least initially, about their ability to navigate detentions. This optimism is backed by reports that they continue to ship to the United States.



Customs appears to be focused on large importers, as was also the case under the Hoshine WRO. It is possible Customs will later expand its reach to smaller module makers.



Thank You

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