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March 20, 2024

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New Report Commissioned by the SEMA Coalition Underscores Critical Inflection Point for U.S. Solar Industry

The report outlines the significant headwinds faced by the U.S. silicon solar manufacturing reshoring effort and the opportunity for the Biden administration to foster success.

Washington, D.C. - Today, a new report, commissioned by the Solar Energy Manufacturers for America (SEMA) Coalition and authored by Guidehouse Insights **Inflection Point: The State of U.S. PV Solar Manufacturing & What's Next**, highlights the opportunity to onshore this critical strategic industry for U.S. energy security and investigates the challenges posed by the interests that currently dominate the industry. The report provides an assessment of the current U.S. silicon solar manufacturing capacity and capabilities, the benefits of onshoring, and policy recommendations for how the Biden administration can respond to recent pressures to facilitate the necessary transition to a U.S.-based solar manufacturing supply chain.

“Thanks to the efforts of Congress and the Administration, with the Inflation Reduction Act we have an opportunity to build a sustainable, strong American supply chain for solar that will make sure our country isn’t dependent on China for this critical energy resource,” said **SEMA Coalition Executive Director Mike Carr**. “This report shows that if we actually want a clean energy future in this country, we will require a continuing whole-of-government effort that doesn’t allow our trading adversaries to derail the reshoring effort.”

Some of the key findings:

- **Demand for solar is strong but relies too heavily on imported goods.** A thorough supply chain analysis identifies serious gaps for U.S. ingots, wafers, and cells and shows China’s dominance creates unnecessary risk for our climate and energy security goals.
- **It is critical to our energy security to break the current monopoly on needed components.** Chinese-headquartered companies now make up 99% of the world’s solar wafer and over 80% of the world's polysilicon production -- two core components that make up over half the value of the solar panel.
- **Large subsidies and insulation from traditional market forces in China and Southeast Asia are creating headwinds to U.S. reshoring efforts.** Overcapacity and exports far in excess of demand have already substantially eliminated manufacturing in



the EU; they are currently driving significant stockpiling of products in the U.S., pushing prices to new lows that don't reflect true production costs. This is undermining otherwise justified investment in US factories.

- As the report finds, depending on tariff scenarios, we will see 2.4 to 2.7 times the amount of module supply relative to demand in the U.S. in 2024. This is higher than the International Energy Agency's current estimate of 1.5 years of module supply in inventory.
- The report finds an effective duty rate of 0.4% for solar modules in 2023, down from 9.6% in 2021.
- **If America onshores its solar production, the industry, workers, and consumers will benefit.** Investing in domestic solar manufacturing capabilities increases our energy security, reduces our exposure to global supply chain disruptions, and creates middle-class enabling jobs. The report also found that module cost has a limited impact on the deployment of solar. Further, manufacturing solar materials and components in the U.S. means cleaner production and higher labor standards.

Policy Recommendations Include:

- Domestic Content: Policymakers should set strong standards for getting bonus tax credits for using domestic content and federal procurement in order to incentivize investment in the high-value, capital-intensive parts of the supply chain such as wafer and polysilicon production.
- Vigorous Enforcement of U.S. Trade Laws: Strong enforcement of antidumping trade laws and aggressively enforcing the UFLPA are crucial to maintaining a level playing field for domestic producers who adhere to higher labor and environmental standards.
- Procurement: Beyond instituting policies for bonuses associated with domestic solar manufacturing, the U.S. government could lead by example and require all solar power producers with which it has power purchase agreements to use solar panels with the highest standards for U.S.-made components.

These policy recommendations would push the market towards buying more expensive U.S. modules. However, as the report finds, total system cost increases only mildly depending on the application when incorporating the higher U.S. module cost. Potential cost reductions in other areas of solar deployment (i.e., permitting, installation/overhead, and balance-of-system operations) are likely to have a larger impact on market growth.

“Solar manufacturers in America are operating well below their full potential because the government is facilitating an over-reliance on China and failing to provide a level playing field to help fuel investment and innovation,” continued Carr. “The CHIPS Act and the IRA were



game-changing in the tools they provided to the Administration, but they must use the tools to their full effect to break China’s monopoly by onshoring the entire solar supply chain.”

Read the full report [here](#).

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About the SEMA Coalition:

The SEMA Coalition is a group of solar manufacturers united to rebuild the solar supply chain in the United States. Following the passage of the Inflation Reduction Act (IRA), the coalition looks to capitalize on this unique opportunity to implement a suite of policies to rebuild a competitive, environmentally friendly, and socially-responsible U.S. solar supply chain. SEMA represents the interests of the major non-Chinese solar manufacturers who are building or looking to build in the U.S. SEMA members include 3SUN USA, Caelux, Corning, CubicPV, First Solar, Heliene, Hemlock Semiconductor, Meyer Burger, Qcells, REC Americas, REC Silicon, Silfab Solar, Suniva, NexWafe, Highland Materials and Wacker.