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THE TRANSATLANTIC
SUN  **WIND BELT**

U.S. ENERGY TRANSITION REPORT

BY CLEAN ENERGY ASSOCIATES

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The U.S. Department of Commerce building in Washington D.C. Photo credit: [John Sonderman, Flickr](#). Licensed under Creative Commons CC by-NC 2.0.

COMMERCE INITIATES SOLAR ANTI-CIRCUMVENTION INVESTIGATION

On March 28 the U.S. Department of Commerce announced that it will begin an investigation into circumvention of existing anti-dumping and anti-subsidy duties by solar manufacturers in Cambodia, Malaysia, Thailand, and Vietnam. The publication of this decision in the Federal Register, which is expected on April 1, will formally begin the investigation, which will take 300 – 365 days to conclude.

The American Clean Power Association has described the decision as a “disaster.” Solar Energy Industries Association says that this investigation will cause the loss of 14 gigawatts of solar development over time. Most U.S. manufacturers have also opposed the move. A notable exception is First Solar, whose manufacturing in Malaysia and Thailand is outside the scope of the duties, which focus on crystalline silicon and not thin film solar.

The immediate result of the investigation is a sudden halt to most shipments from countries that represented the large majority of solar module supply to the U.S. market. The United States imported 22.0 gigawatts of solar modules in 2021 according to the U.S. Department of Energy, and installed 23.6 gigawatts, according to Wood Mackenzie. Of these 22 gigawatts of 2021 imports, 85% came from the four nations named in the petition.

Module stockpiles are only expected to last through the second quarter of 2022, and developers and installers have few other options, particularly for utility-scale projects. The United States has roughly 8 gigawatts of module capacity, but a third of this is First Solar’s factories, and First Solar

is sold out for the next two years. Much of the crystalline silicon capacity that is not subject to duties, both in the United States and abroad, is geared for the rooftop market.

MIXED RESPONSES FROM SUPPLIERS

While most manufacturers operating in the four named countries have stated that they will no longer ship product to the U.S. market, CEA has identified four suppliers that plan to continue exports. JA Solar is the largest and has cited its non-China supply chain as a reason that it believes that it will not be subject to duties. Vietnamese PV maker VSUN has sent out a notice downplaying the risk from the anti-circumvention investigation and stating that will continue shipping to the U.S. market. VSUN's notice also states that as a Japanese-owned company they do not expect to have to pay duties.

CEA's reading of the scope of the investigation, which covers cells and modules made in the four countries using materials and equipment from China, does not vindicate VUSN's analysis. In fact, Hanwha Q Cells, which is Korean-owned and has operations in Malaysia, had argued in filings that the duties should be applied on a company-by-company basis and not country-wide.

U.S. module makers are not immune from the fallout from this decision. The United States has no domestic crystalline silicon cell manufacturing and as a result crystalline silicon module makers must import cells. CEA estimates that nearly half the cells used in U.S. module factories in 2021 came from the four named countries.

Commerce Department will now begin distributing surveys to companies which it selects to represent the industry and to the governments of the four nations. The responses to these surveys will form the basis of its preliminary report, which is due on or around August 29, 2022. At that time Commerce will set country-wide preliminary duty rates to serve as the basis for cash deposits.

Read more:

News coverage: [Anti-circumvention investigation begins](#) (E&E News)

Other source: CEA Research

UNITED STATES, EU REACH DEAL ON LNG SUPPLIES

On 25 March the United States and the European Union announced that the United States will work to supply 15 billion cubic meters of natural gas to Europe to help it cut its dependence on Russian gas. The announcement follows a statement by Russian gas suppliers that they will begin requiring payments in roubles for gas. Germany has stated that it will not comply with this change.

The United States has not said if the promised gas supplies will come from its own production or elsewhere. U.S. liquefied natural gas (LNG) export terminals are already running at full capacity and the long lead times to build new ones has led analysts to conclude that this promise involves

redirecting supplies. However, the United States is already running its export terminals at full capacity and sending most of its LNG to Europe.

But while the focus of the agreement and much action is on gas supplies for next winter, there are also longer-term goals for all parties involved, and new U.S. gas terminals could be important for meeting additional demand. On 1 March a new LNG terminal in Louisiana began operations and is slowly ramping to full capacity. There are additional LNG export projects in the United States that have not yet reached financial close, and these may see an opportunity in Europe's needs.

Read more:

News coverage: [U.S., EU strike LNG deal as Europe seeks to cut Russian gas](#) (Reuters)

News coverage: [Biden increases LNG exports as Europe faces energy crisis](#) (E&E News)

Context: [LNG Project Tracker: Signs of US LNG renaissance could kick-start construction](#) (S&P Global)

BIDEN MOVES TO INCREASE U.S. PRODUCTION OF CLEAN ENERGY

Bloomberg is reporting that President Biden plans to use Cold War-era legislation to invest in building a battery supply chain in the United States. Meanwhile, the President's proposed budget would begin to fund the building and re-building of supply chains for the solar and battery storage industries, but a key bill to enable solar manufacturing is still waiting.

According to an anonymous source, this week Biden will sign an order adding battery materials to the items supported by the 1950 Defense Production Act. This will allow companies involved in the lithium-ion battery supply chain to access to \$750 million to fund production at current operations, productivity and safety upgrades, and feasibility studies.

This move is part of larger moves by the Biden Administration to “onshore” domestic clean energy supply chains. As part of President Biden's request for \$48.2 billion to fund the Department of Energy in fiscal year 2023 is a request for \$27 million to fund the newly established Office of Manufacturing and Energy Supply chains. This request also includes \$200 million for a Solar Manufacturing Accelerator, and \$1 billion for a Global Clean Energy Manufacturing effort that would work with U.S. allies to build a more secure supply chain.

One factor alluded to in these efforts and in other legislation is rising concerns over forced labor in Xinjiang, China, and the Biden Administration generally has shown a preference for domestic production. However, a main support for rebuilding a solar supply chain, Senator Ossoff's Solar Energy Manufacturing for America (SEMA) act, is still waiting to be heard in the U.S. Senate Finance Committee.

A number of companies are planning solar manufacturing pending the passage of SEMA. Hanwha Q-Cells, which is based in Korea but has the second-largest U.S. module production after First Solar, has taken the unusual step of stating that it will invest across the solar manufacturing supply chain if the bill goes forward.

Read More:

News coverage/source: [Biden Poised to Use Cold-War Powers to Boost Battery Metals](#) (Bloomberg)

Source: [Department of Energy FY 2023 Congressional Budget Request](#) (U.S. Department of Energy)

News coverage: [Hanwha commits to US manufacturing across the supply chain](#) (pv magazine USA)

GRID OPERATORS PROVIDE VARIED PLANS TO INCORPORATE DISTRIBUTED ENERGY

The Federal Energy Regulatory Commission (FERC) issued Order No. 2222 in September 2020, requiring grid operators to adopt rules that allow Distributed Energy Resources (DERs) to participate in the regional wholesale markets through aggregations. DERs include small generation units like rooftop PV, battery storage, wind turbines, and fuel cells.

Effective from February 2022, Order 2222 allows different sources of distributed electricity to aggregate in order to fulfil minimum size and performance requirements that each may not be able to meet individually. Under this rule, regional grid operators are required to revise their tariffs to permit the aggregation of DERs in wholesale markets. Tariff revisions must establish a minimum size requirement of not more than 100 kilowatts for DER aggregations.

Most of the country's grid operators have already filed their plans to comply with Order 2222. The California Independent System Operator (CAISO) and New York Independent System Operator (NYISO) submitted their proposals in July 2021. Both grid operators already had DER aggregation programs before the implementation of FERC 2222, however, both have proposed changes to ensure the compliance of their proposals with Order 2222's directives. In February 2022, the New England Independent System Operator (ISO-NE) and PJM Interconnection filed their plans to support the aggregation of DERs.

The Midcontinent Independent System Operator (MISO) and Southwest Power Pool (SPP) have not yet filed their compliance plans, which have due dates on April 18, 2022, and April 16, 2022, respectively. Texas grid operator ERCOT does not fall under FERC's jurisdiction and so, is not required to comply with Order 2222.

However, the compliance process for each grid operator is still ongoing, while variations in proposed implementation timelines along with numerous legal and technical challenges are still obstructing the full implementation of this rule. First, it is a challenging task for grid operators to use

DERs, which are small-scale generation units, for large-scale grid assets. Second, it is not clear how much control utilities should have over the activities of DERs.

There are both pros and cons of each grid operator's Order 2222 compliance filings. For instance, CAISO's rule requires DERs as participants to be available 24 hours per day, 7 days a week for CAISO dispatch, which means the owners must forgo making money through other services. CAISO's rule also has stringent telemetry and metering requirements which might lead to a smaller number of devices that can participate in the wholesale electricity market. NYISO's rule, on the other hand, offers structures that allow DERs to participate in both wholesale and retail-level markets. However, NYISO's Order 2222 compliance filing includes different market structures for different DERs.

ISO New England allows battery-equipped virtual power plants to measure load reduction and grid injection as a single value, making profitable for batteries to participate in the market. PJM has proposed to use calculated values than can be spot-checked for accuracy in order to avoid metering end devices and thus, excessive costs to DER aggregators. PJM rule also enables both retail and wholesale participation while preventing double counting of the same product.

One of the biggest challenges to the full implementation of Order 2222 is the variation in timing of implementation across the grid operators, which is expected to create a barrier in establishing a timely DER market. Compliance filed by various grid operators still needs to focus on many key points since there are still ambiguities about the process, transparency, and dispute resolution process.

Source: CEA Research