BMI Mergers & Acquisitions

DOWN, NOT OUT

U.S. Solar M&A Market Report

H1 2022

EXECUTIVE SUMMARY

M&A activity in the solar industry dipped 24% during the first two quarters of 2022. However, there are three reasons we believe the slowdown is a short-term phenomena versus a more concerning long-term trend:

1. M&A in H1 2022 is on par with past activity

Overall deal activity during the same period in 2021, for example, was unusually high. Likewise, the general U.S. solar market was experiencing unprecedented growth.

By comparison, the drop in solar-related M&A activity during the same period in 2022 is notable, but not relative to the annual number of deals recorded in previous years.

2. Countermeasures of U.S. government action

The U.S. Department of Commerce's anti-circumvention investigation, the recent SCOTUS decision in West Virginia v. the Environmental Protection Agency, and the package of clean energy incentives and tax breaks failing to pass in the Senate added uncertainty to solar's immediate future. However, the response of the Biden administration and the private sector has so far been promising.

Specifically, the president set a two-year moratorium on import duties affecting solar panels and invoked the Defense Production Act to rapidly expand American manufacturing of critical clean energy technologies, including solar panel parts like photovoltaic modules and module components.

What's more, a majority of sources within the renewables M&A community argue it will not deter the private sector's efforts to go green. We concur. While government actions are important, the positive industry trends will continue.

3. Long term signs remain positive

Despite recent dark clouds, the future for the U.S. solar market—and solar-related M&A activity—remains very bright. An estimated 4% penetration to date fuels expectations that the market for solar energy will grow at 10% CAGR over the next 5 years.

And provided costs continue to decline, there is good reason to expect even higher growth in deal volume and the market overall in the long-term.

Overall, we expect current headwinds to reduce M&A activity in the short-term, but do not expect the reduction to be dramatic relative to its historical trendline. In fact, given the solar market's short- and long-term tailwinds, we anticipate increased acquisition and division investment activity.

H1 2022 SOLAR MARKET ACTIVITY

The U.S. solar market experienced a significant downturn in the first and second quarters of 2022.

For example, 3.9 GWdc of solar capacity was installed in Q1, a 24% decrease from Q1 2021 and a 52% decrease from Q4 2021––the lowest amount since before the pandemic.

Quarterly volumes also dropped in commercial (↓ 28%) and community (↓ 59%) solar installations. And according to pipeline data from Wood Mackenzie, utility-scale projects took an especially big hit.

A full 17.6 GWdc of utility-scale solar projects in development were delayed by at least a year and 450 MW of projects were canceled outright. As a result, there were 41% fewer utility-scale solar installations in Q1 of 2022 than Q1 of 2021––the lowest since Q3 2019.

In short, the first half of 2022 was rough for solar. Why?

Supply chain woes

In Q4 of 2021, supply chains were already hurting.

Shipping prices were at record highs, particularly on containers from China, where the majority of solar panels are made. According to the Shanghai Freight Index, sending a container from Shanghai to ports around the globe was approximately six times more expensive than before the pandemic.

The price for key solar panel components also shot up. Most notable was polysilicon, the primary material used to make solar cells. Prices soared when miners and refiners of polysilicon were caught off guard after demand for raw materials shot back up following COVID-prompted lulls.

Trade and policy turbulence

These trends posed a threat to the Biden administration's clean energy goals. So on February 7, 2022, the president announced the extension of Section 201 tariffs by four years. The proclamation also reinstated the exclusion of bifacial modules from the safeguard tariffs and lowered the fourth year safeguard tariff to 15 percent.

Solar developers welcomed the decision, believing it would help their projects move forward.

Yet the industry's troubles got worse three days later. U.S. manufacturer Auxin Solar petitioned the Department of Commerce to review solar panel imports from Malaysia, Thailand, Vietnam and Cambodia. Auxin claimed suppliers in these countries were circumventing trade tariffs by using raw inputs from China.

Though prominent voices in the industry consider the petition to be meritless, the risk of incurring a retroactive tariff of up to 250% led many solar parts suppliers in Southeast Asia to halt shipments to the U.S.––a heavy blow to an industry that sources approximately 80% of its parts from this region.

President Biden intervened again in early June with a declaration of emergency, paving the way for a 24-month suspension of duties on imports from Southeast Asia. The president also invoked the Defense Production Act to rapidly expand U.S. manufacturing of "five critical clean energy technologies," including photovoltaic modules and module components.

The Department of Commerce's investigation could continue into 2023. Uncertainty about what will happen in the meantime has prompted solar installation projections to be reduced for the remainder of 2022. The same projections that had already been cut due to existing supply chain constraints.

Not to be outdone, The Supreme Court's June 30th ruling added more uncertainty to the pace of solar adoption in the future. The Court's decision in West Virginia v. the Environmental Protection Agency limited the federal government's ability to regulate emissions, which is speculated to slow the replacement of fossil fuel power plants with wind and solar.

Still, at the time of this writing, it remains unclear how this will affect the adoption of clean technologies. However, we believe the positive trendline for solar will continue to be strong.

H1 2022 SOLAR ACQUISITION ACTIVITY

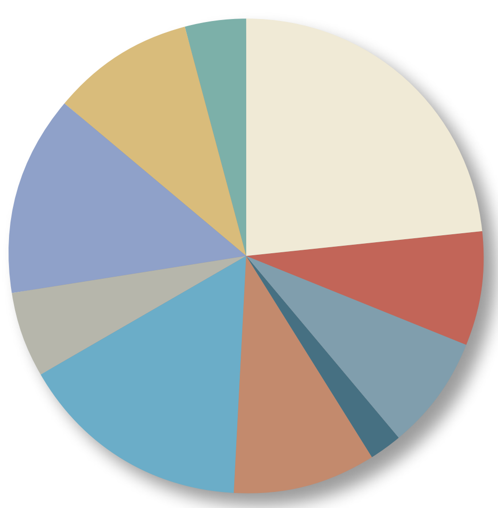
The pace of acquisitions in the solar industry slowed by 24% in the first half of 2022 (51), compared to activity during the same period in 2021 (65). This mirrors the general M&A market as a whole which was down in H1 2022 from a historical high in 2021 but remains strong relative to prior years. We believe this drop in solar M&A activity will reverse as supply chain issues abate and the federal government continues to incentivize the industry.

Acquirers

Manufacturers were the most active buyers, accounting for nearly 24% of all M&A transactions in Q1-Q2 of 2022––a 17% increase over the same time period in 2021. [FIG.1] Their most popular target were **Suppliers**, which represented 36% of the companies **Manufacturers** purchased overall.

In terms of top buyers, Suppliers were a close second. This group initiated nearly 18% of all solar deals completed within the first 6 months of 2022. Other Suppliers made up the majority of their acquisitions (22%), while the balance was spread across seven business types.

FIG. 1 Acquirers by Business Type



Business Type	%
Manufacturer	23.5
Investors	7.8
Private Equity	7.8
Installation	2.0
Services	9.8
Supplier	15.7
Utility	5.9
Developer	13.7
Finance	9.8
Construction	3.9

Acquirees

At the top of the acquirees list were **Developers** of solar assets (primarily energy collection facilities). [FIG. 2] This group accounted for nearly 24% of all deals made in Q1-Q2 of 2022––an 8% increase over the same period the previous year. **Investors** and other **Development** companies were the top two buyers of this business type, claiming 30% and 23% respectively.

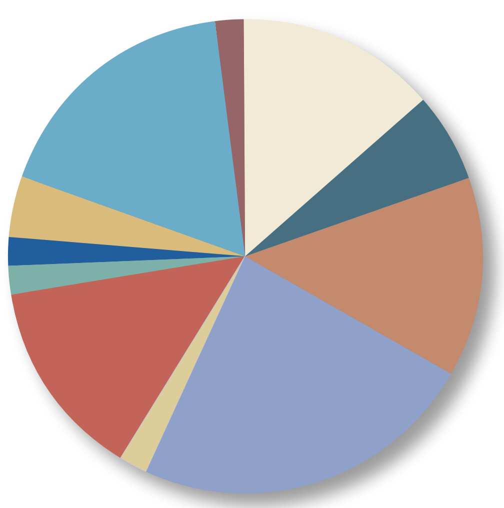
Manufacturers and solar development **Projects** shared the spot for second most popular acquisition, each accounting for almost 14% of Q1-Q2 deals made in 2022–a combined 9% increase over 2021 during the same period. **Manufacturers** purchased the majority of **Manufacturers** (43%), while Developers claimed the most solar development **Projects** (28%).

Outliers

A notable difference between the first halves of 2021 and 2022 was the drop in acquisition of **Installation** companies. Arguably representing the largest segment of the solar industry, the number of Installation companies acquired was unsurprisingly high (17%) in Q1-Q2 2021, coming in behind only **Services** (19%).

Yet during the same period in 2022, Installation company acquisitions dropped to 6% of all deals made.

FIG. 2 Acquirees by Business Type



Business Type	%
Manufacturer	13.7
Installation	5.9
Services	13.7
Developer	23.5
EPC	2.0
Project	13,7
Construction	2.0
Other	2.0
Finance	3.9
Supplier	17.6
Distributor	2.0

SELECT 2022 TRANSACTIONS

SinglePoint acquires The Boston Solar Company

Installation company rollup

SinglePoint Inc. acquired The Boston Solar Company, a provider of solar installation services catering to residential and commercial customers, for an undisclosed amount as part of its national solar installation roll-up strategy. This represents SinglePoint's first EPC acquisition and, according to a statement released about the deal, it "moves us in the right direction to achieve our goals of expanding our operational footprint and building a leading solar services network."

Kokosing Construction acquires Third Sun Solar

Construction company buys solar installer

Kokosing Construction, one of the largest family-owned construction companies in the Midwest and Mid-Atlantic, acquired Third Sun Solar, a designer and installer of residential and commercial solar systems. The acquisition adds solar energy to Kokosing's portfolio of construction services and Third Sun is expected to benefit from Kokosing's infrastructure in the region.

Enphase Energy acquires SolarLeadFactory

Manufacturer of micro-inverters buys solar marketing company

Enphase Energy, a manufacturer of solar micro-inverters, acquired SolarLeadFactory, a provider of online marketing, data analytics, lead generation services to solar companies, for an undisclosed amount. Enphase said in a statement their objective is to drive down customer acquisition costs for solar installers.

Harness Power acquires LarSun

Installation company acquires installation company

Harness Power, a solar & roofing installation company, acquired LarSun, a solar installation company serving five counties in California, for $2.5 million. Harness said the acquisition boosts their "goal of helping households navigate the world of solar installation, with the objective of making the transition to clean energy as simple and stress-free as possible."

Energy Capital Partners acquire Borrego Development business unit

Private equity investors acquire development business unit

Energy Capital Partners reached a definitive agreement to acquire the Development business unit of Borrego for an undisclosed amount on May 25, 2022. The Borrego business unit develops large-scale solar and energy storage projects intended to serve the electricity, renewable and sustainable solutions sector. The company develops pipeline projects of over 8.4 gigawatts of solar and 6.4 GW/25 GWh of energy storage, thereby accelerating the development and delivery of large commercial, community solar and utility-scale solar and energy storage projects in the United States.

Sighten acquired by EverBright

Solar software provider acquired by solar financing company

Sighten, provides a solar software platform, for solar installers, that supports the entire sales workflow, from initial lead through installation. EverBright is a solar financing company that partners with installers to provide financing for residential installations. This is one of two software related transactions in H1 2022.

TotalEnergies acquires SunPower

Power generation company acquires US solar installation business.

TotalEnergies, a distributed energy business including biofuels, natural gas, renewables and electricity, has acquired SunPower to add 100MW of additional capacity per year. SunPower provides solar installation services for residential and commercial customers in the U.S. The acquisition will allow TotalEnergies "to extend its distributed generation footprint to the U.S." and "will create synergies with TotalEnergies' large scale solar energy portfolio in the U.S."

BMI M&A OUTLOOK

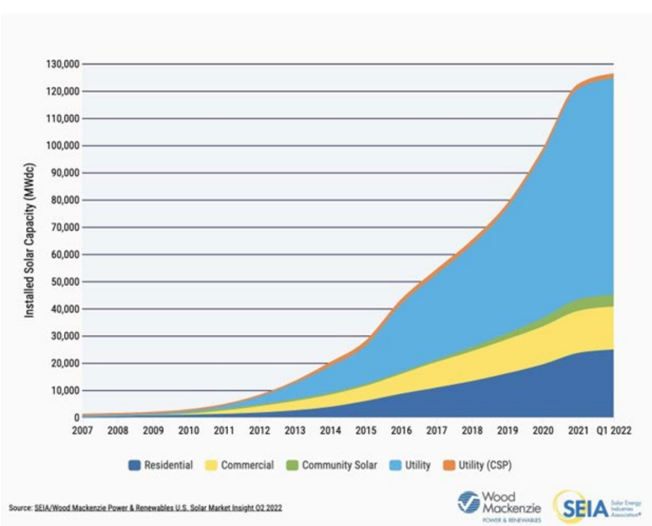
Despite 2022 challenges, we believe M&A solar market activity will continue to grow in the short- and long-term. Here's why:

M&A in 2022 is on par with past activity

With 194 deals recorded, 2021 was a record year for solar M&A, so it's important to compare 2022 activity in context.

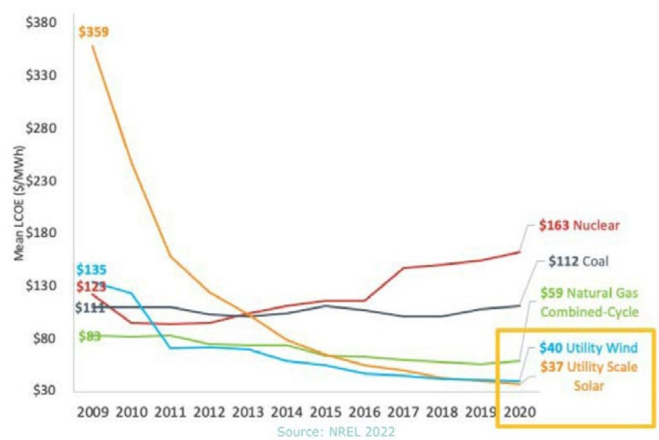
Consider that between 2012 and 2019, solar capacity grew by approximately 10,000 MWdc every year. [FIG. 3] Yet by the end of 2021, capacity had grown by roughly 20,000 MWdc for two years running about double the historic rate.

FIG. 3 Cumulative U.S. Solar Instalations



In fact, the industry surpassed three million solar installations in 2021. And by Q1 2022, solar accounted for 50% of all new electricity-generating capacity added to the US grid. All thanks to the fact that solar is now extremely cost competitive[FIG 4] with fossil fuels and provides certainty in future power generation costs.

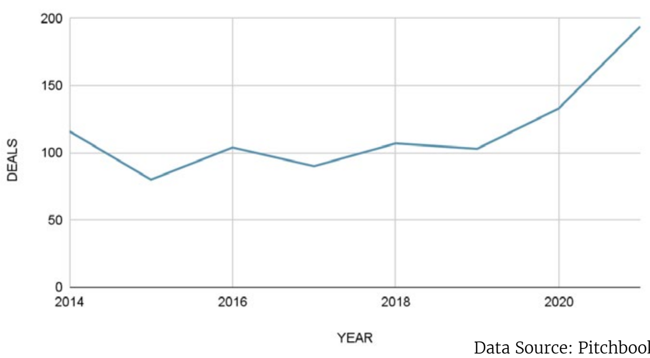
FIG. 4 Mean Levelized Cost of Electricity ($/MWh)



Solar sector Investment activity in 2021 was also especially vigorous. Total corporate funding (including venture capital funding, public market and debt financing) in H1 2021 came to $13.5 billion compared to $4.6 billion in H1 2020. This is a 193% year-over-year increase and an indication of the building interest in the solar sector.

In other words, 2020 and 2021 represented a cumulative spike in activity uncharacteristic of solar's more steady rise over the last decade. [FIG 5]

FIG. 5 Solar M&A Activity 2014-H1 2022



Data Source: Pitchbook

We contend that had the solar industry followed those historic growth patterns in 2020 and 2021 rather than exceed them, its H1 2022 performance would have been par for the course.

Solar M&A performance in H1 2022 is, we believe, likewise a victim of the unusually high levels of the previous two years and current short term headwinds. Therefore, we think the drop in activity is best understood as part of a larger market correction versus a more concerning long-term trend.

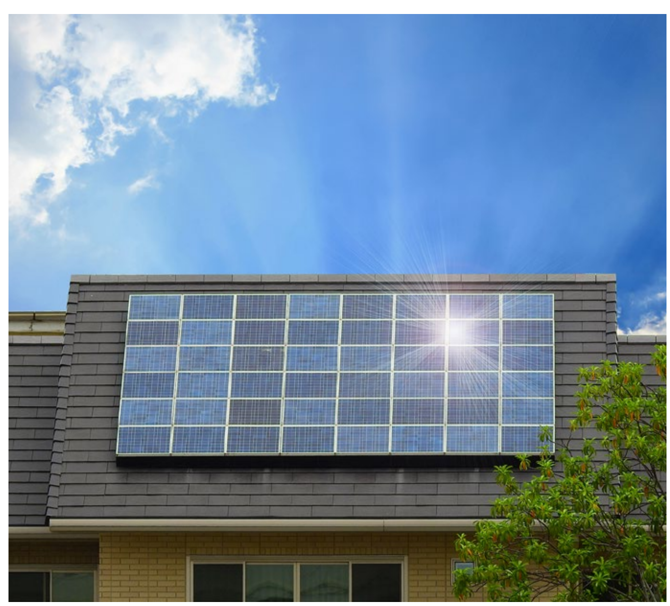
Government countermeasures and private sector determination

The most impactful governmental developments for the solar industry in H1 2022 were the U.S. Department of Commerce's anti-circumvention investigation and the Supreme Court ruling against the EPA.

The investigation sparked chaos as it tightened an already strained supply of vital solar panel components. The SCOTUS decision scaled back the power of the EPA to regulate carbon emissions and its ability to compel power plants to go green.

Yet while both developments have obscured the immediate future for the solar industry and M&A, we believe the response of the Biden administration and the private sector are promising signs for solar's medium- and long-term outlook.

The president's suspension of tariffs and the invocation of DPA were not only, in our opinion, the right moves to make, they were made swiftly. Some may disagree with those actions, yet the advantage of an Executive Branch with a vested interest in the health of the clean energy market is undeniable.



Separately yet similarly, the U.S. Securities and Exchange Commission proposed a set of rules requiring publicly traded firms to disclose climate risks, including emissions. If the rule is finalized, the requirements would be a windfall for startups in carbon accounting, tracking, and reporting while adding further pressure on the private sector to reduce emissions.

And judging by the response from the M&A community, activity in the clean energy space is not expected to change due to the EPA's shortened leash.

"The private sector has become far and away the biggest driver of renewable energy in the U.S. and increasingly in other markets around the world," Giji John, a partner at Orrick told Axios after the Supreme Court ruling."There are more potential buyers than there are available projects. Strategic investors, particularly oil and gas companies and private equity investors, have made larger and larger investments in the renewables space as part of a broader ESG effort. All of that is arguably in spite of, and not owing to, the Clean Power Plan or any other government mandate."

Long term signs remain strongly positive

The future for solar in the U.S.—and solar-related M&A activity—remains very bright.

Adoption of the technology is fueled by year-over-year increases in utility prices and a 60% drop in installation costs over the past decade.

Still, note that the industry maintained its record-level 2021 performance while component pricing continued to climb and supply chain issues got worse. And despite the industry cool-off come 2022, residential solar had its largest quarter in history in Q2 with 1.2 GWdc installed. It marked a 30% increase over Q1 2021 and 5% over Q4 2021.

Robust, persistent demand in the residential segment is clear and appears to be growing. And an estimated 4% penetration of solar in the U.S. to date fuels expectations that the market will grow at 10% CAGR over the next 5 years.

Given solars' low cost position, increasing awareness around ESG and global warming, and continued gains in productivity, there is good reason to expect even higher growth and a concurrent increase in M&A deal volume over the long-term.

CONCLUSION

We expect current headwinds to reduce M&A activity in the short-term, but do not expect the reduction to be dramatic relative to its historical trendline.

In fact, given the solar market's short- and long-term tailwinds, we anticipate increased acquisition and investment activity.

Industry Headwinds & Tailwinds That Will Drive Solar M&A

Headwinds	Tailwinds
Demand-driven supply chain issues	Biden Administration DPA proclamation to drive more US production of clean energy components.
Non-circumvention investigation	SEC proposed requirement that public companies disclose climate risks and emissions to investors
Rise in material costs	National climate goals around the globe
Some politicians not yet convinced about clean energy and creating roadblocks	Increasing public awareness of climate risks and opportunities
SCOTUS decision limiting EPA power to enforce emissions standards	War in Ukraine accelerating diversification away from oil and gas
	Continuing trend of solar cost reductions
	Increasing costs of electricity
	Retirement of fossil fuel and nuclear powered plants

ABOUT BMI MERGERS & ACQUISITIONS

BMI is a team of experienced M&A advisors and investment bankers specializing in selling lower-middle market companies with revenues between $3 million and $100 million. We have extensive experience in Electronics, Solar and Technology.

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