Clean Investment Monitor: Q2 2025 Update

August 28, 2025

Rhodium Group

MIT CEEPR
Center for Energy and Environmental Policy Research

Summary

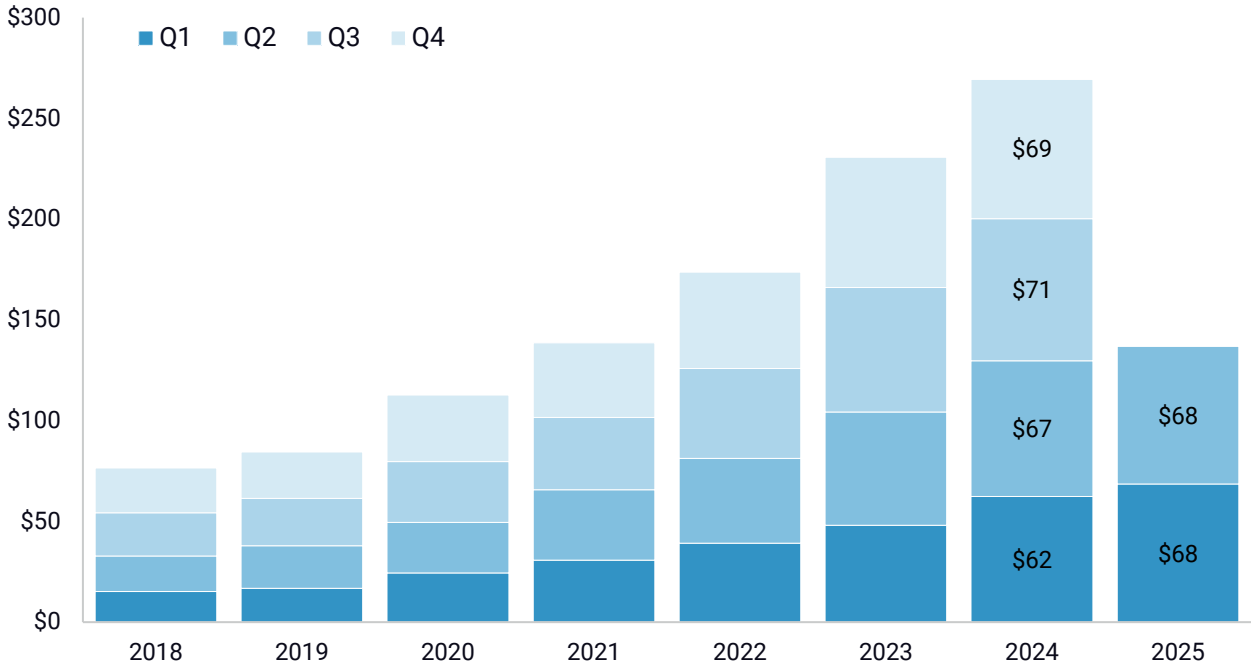
In the second quarter of 2025, clean energy and transportation investment in the United States totaled $68 billion, a 0.3% decrease from the previous quarter, but a 1% increase from the same period in 2024. Clean investment accounted for 4.8% of total private investment in structures, equipment, and durable consumer goods.

Investment activity was driven primarily by retail consumer purchases and installations of clean technology (zero-emission vehicles, heat pumps, distributed generation and storage), which accounted for just over half of the total at $34 billion. This segment saw a 3% decline quarter-on-quarter, but a 6% increase compared to Q2 2024. Investments in manufacturing were down for a second consecutive quarter to $11 billion, declining 15% from the previous quarter and 19% relative to this same period last year. Investments in utility-scale clean electricity and industrial decarbonization technologies increased by 13% quarter-on-quarter to $23 billion, up 7% from Q2 2024.

The pipeline of new project announcements contracted across segments. Utility-scale clean electricity announcements totaled $21 billion, mostly in solar and storage, down 51% relative to the previous quarter. New industrial decarbonization announcements stood at $2 billion, a 17% decline quarter-on-quarter and a 38% decline compared to Q2 2024. Developers canceled $5 billion of investments in energy and industry projects this quarter. In manufacturing, Q2 2025 marked the first quarter in which the value of cancellations exceeded the value of new announcements. Roughly $5 billion of investments were canceled—the second-largest amount on record, only less than in Q1 2025. Meanwhile, companies announced only around $4 billion in new manufacturing projects, a steep 59% decline relative to Q1 2025 and a 44% decrease from Q2 2024.

This report provides a snapshot of clean investment activity during debate and passage of the “One Big Beautiful Bill Act,” and briefly explores implications for our outstanding investment pipeline. The final budget reconciliation law shortens eligibility timelines and adds stricter rules on the sourcing of products and materials for tax credits tied to $517 billion of outstanding investment across 2,203 projects that are not yet online. Manufacturing makes up $112 billion of this pipeline, with the electric vehicle (EV) supply chain accounting for 88% of that total, including $56 billion worth of battery projects. These investments will likely be impacted by the addition of Foreign Entity of Concern restrictions to 45X and the loss of the 30D EV credit as a key demand-side pull for domestic sourcing. In energy, to be eligible for tax credits, $171 billion worth of outstanding investment in solar and wind electricity generation projects must come online before 2027 or commence construction by July 2026. Clean firm projects such as nuclear and geothermal will continue to benefit from longer-term clean electricity tax credit support. However, at $7 billion, they currently represent a much smaller share of outstanding investment.

FIGURE 1
Clean investment by quarter
Billion 2024 USD



Source: Rhodium Group/MIT-CEEPR Clean Investment Monitor

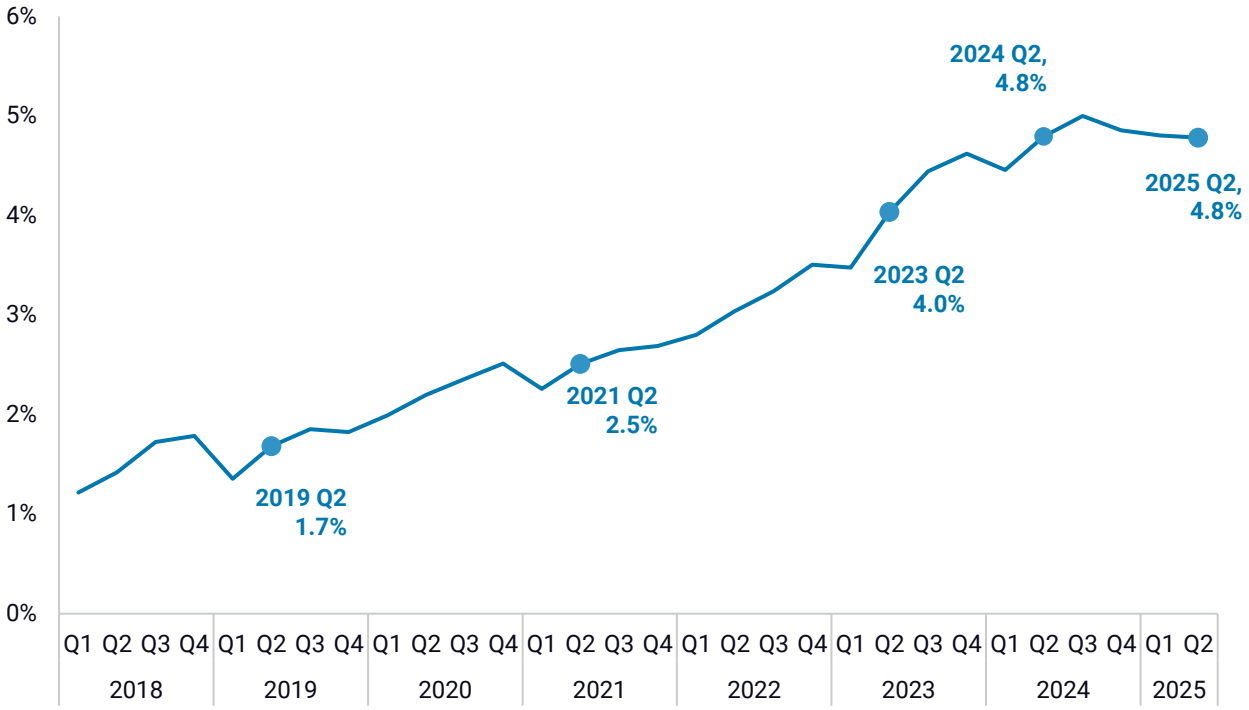
Investment trends

Actual clean energy and transportation investment in the US in Q2 2025 totaled $68 billion (Figure 1). While this represents a 1% increase from Q2 2024, it is the third consecutive quarterly decline, with a slight 0.3% decrease from Q1 2025. In Q2 2025, clean investment accounted for 4.8% of total US private investment in structures, equipment, and durable consumer goods nationwide, roughly on par with the previous quarter and with the same period last year (Figure 2).

FIGURE 2

Actual clean investment as a share of total US private investment

Annualized basis, total investment in all private structures, equipment, and durable consumer goods



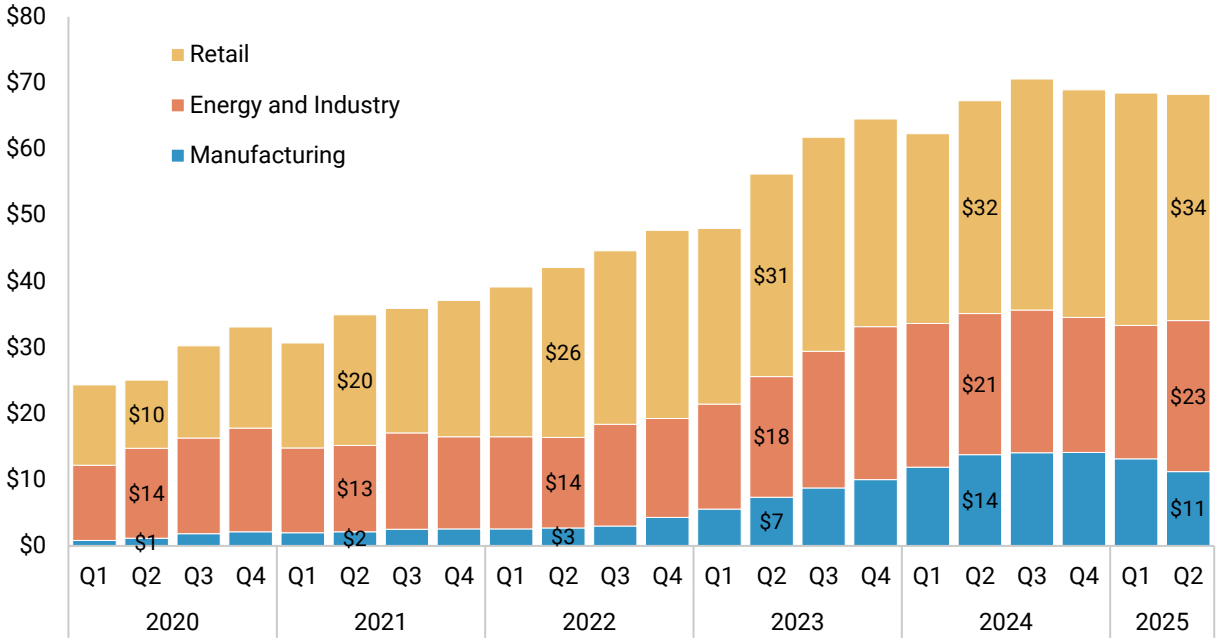
Source: Rhodium Group/MIT-CEEPR Clean Investment Monitor and Bureau of Economic Analysis

We categorize our clean investment tracking into three segments: investment in the manufacture of GHG emission-reducing technology ("manufacturing"); investment in the deployment of that technology, both to produce clean energy or decarbonize industrial production ("energy and industry"); and investment through the purchase and installation of that technology by individual households and businesses ("retail"). Each dollar figure in this report reflects actual investment—the real dollars spent in the given quarter on retail purchases, facility construction, and equipment purchase and installation. For facilities, we track actual capital expenditures invested over the construction timeline once a project breaks ground. In the following sections of this report, we summarize actual and announced investments, which provide context and insight into potential future actual investments.

Retail investment again drove clean investment in Q2 2025, accounting for more than half of total clean investment at 50%, representing an investment of $34 billion. While actual retail investment decreased 3% relative to the previous quarter, it was up 6% compared to Q2 2024. In the energy and industry segment, $23 billion was invested in clean energy production and industrial decarbonization, a 13% increase from the previous quarter, and a 7% increase compared to Q2 2024. Manufacturing investment decreased for a second consecutive quarter to $11 billion, down 15% quarter-on-quarter and 19%

compared to Q2 2024. This quarter saw cancellations of $5 billion worth of investment in clean technology manufacturing projects, and another $5 billion in clean electricity and industrial decarbonization projects.

FIGURE 3
Actual clean investment by segment
Billion 2024 USD

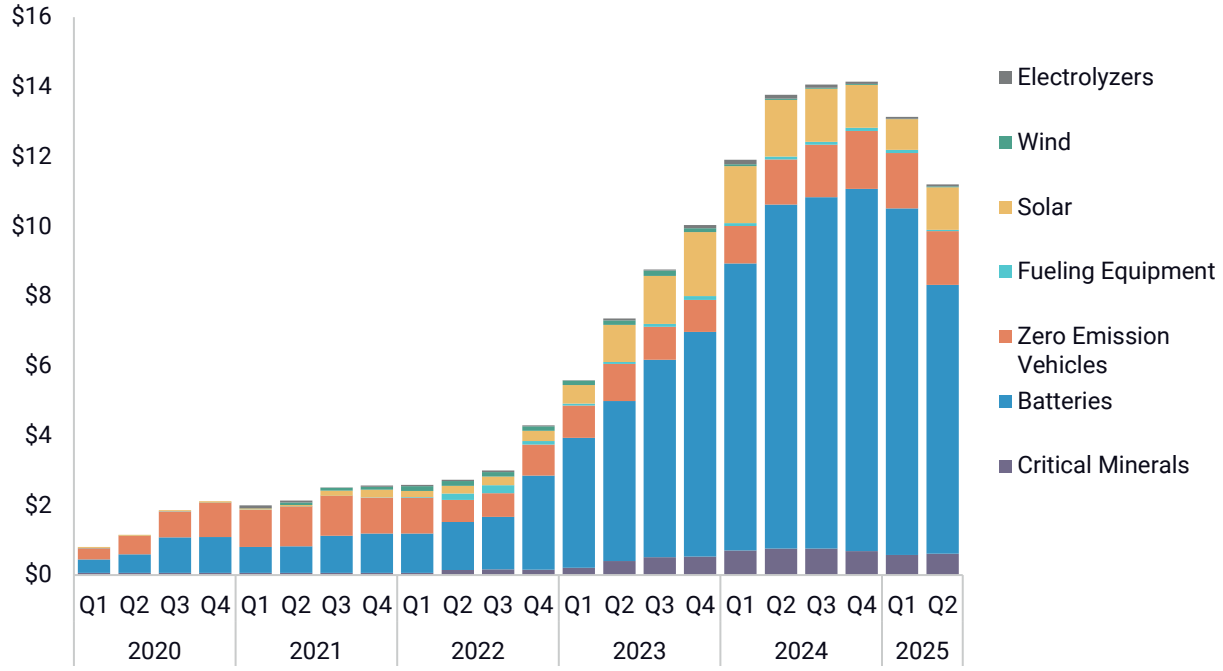


Source: Rhodium Group/MIT-CEEPR Clean Investment Monitor

Manufacturing

Manufacturing investment dropped by 15% from Q1 2025 and declined 19% compared to Q2 2024. The EV supply chain—critical minerals, batteries, vehicle assembly, and charging equipment—remained the dominant force in clean manufacturing investment, accounting for $10 billion (88%) of the total $11 billion in actual investment (Figure 4). Battery manufacturing investment fell by 22% quarter-on-quarter to $8 billion and declined 22% relative to Q2 2024. Investment in solar manufacturing projects totaled $1 billion in Q2 2025, up 38% from Q1 2025, breaking a five-quarter consecutive decline trend. However, investment was still down 25% relative to Q2 2024.

FIGURE 4
Manufacturing investment by technology
Billion 2024 USD



Source: Rhodium Group/MIT-CEEPR Clean Investment Monitor

Companies announced $4 billion in new manufacturing projects in Q2, a 59% decline from Q1 2025, and a 44% drop from the level announced in Q2 2024. Of these Q2 2025 announcements, 85% were in the EV supply chain, specifically almost $3 billion worth of announced critical minerals projects, with a small contribution from solar ($613 million).

During this period, companies canceled $5 billion worth of projects, the second-highest quarter on record after $7 billion of cancellations in Q1 2025. ZEV manufacturing made up most of the total cancellations for Q2 2025, while battery manufacturing projects drove most of last quarter's record-high cancellations.

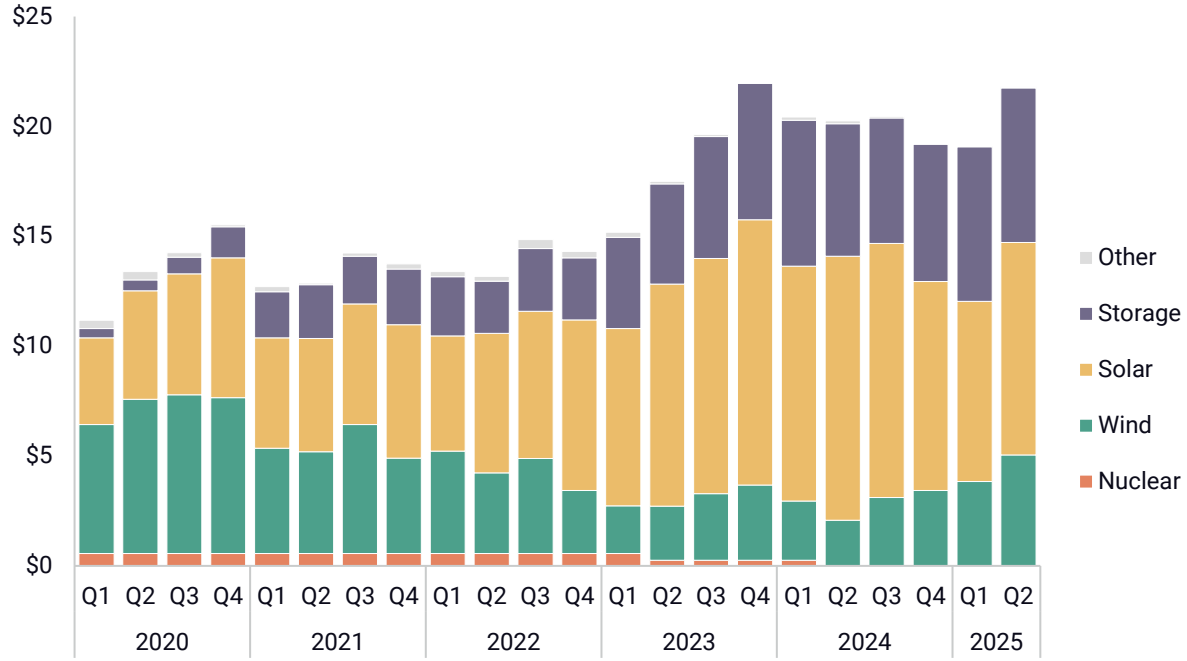
Energy and industry

In Q2 2025, the US saw a total of $23 billion in actual investment in clean energy production and industrial decarbonization, up 13% quarter-on-quarter and up 7% relative to the same period in 2024. Within this segment, $22 billion (95%) went toward clean electricity, and $1 billion (5%) supported industrial decarbonization projects.

Utility-scale solar and storage installations continued to dominate clean electricity investment, accounting for $17 billion, up 10% from Q1 2025 but down 7% from Q2 2024 (Figure 5). In contrast, wind investment recorded a fourth

consecutive quarterly increase, rising by 31% from the previous quarter to $5 billion in Q2 2025, marking the highest quarter of investment since 2021.

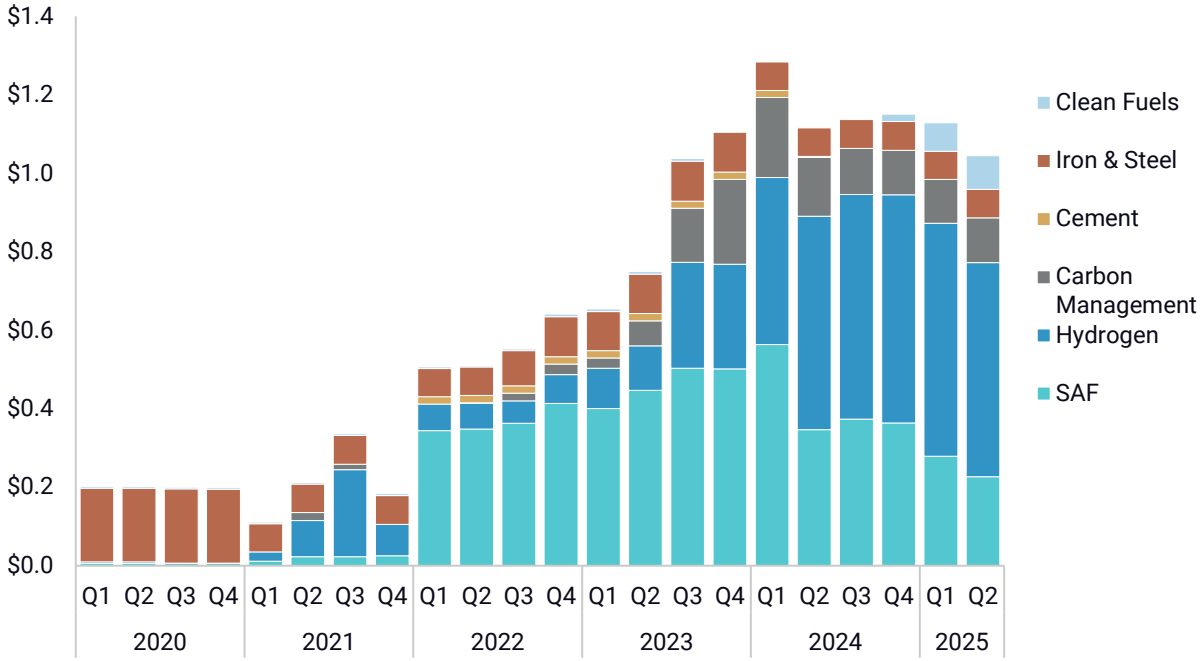
FIGURE 5
Electric power investment by technology
Billion 2024 USD



Source: Rhodium Group/MIT-CEEPR Clean Investment Monitor

Industrial decarbonization investment declined 7% quarter-on-quarter and 6% relative to Q2 2024. Actual investment in these types of projects continues to represent a small fraction of the total value of announced projects, with most facilities not yet started and a small number of facilities moving into construction and operation. Hydrogen continues to lead actual investment in industry at $545 million, down 8% from the previous quarter and flat compared to Q2 2024. Sustainable aviation fuel (SAF) investment dropped by 19% quarter-on-quarter to $227 million, a 35% decline from Q2 2024. The remainder of Q1 industry investment included carbon management at $114 million and clean fuels at $86 million, reflecting the highest quarter on record for the latter. Another $73 million was invested in clean iron and steel production.

FIGURE 6
Industry investment by technology
Billion 2024 USD



Source: Rhodium Group/MIT-CEEPR Clean Investment Monitor

The pipeline of new energy projects expanded in Q2 2025 with the addition of $21 billion in new utility electricity project announcements, which puts the average announced electricity projects per quarter at $31 billion for 2025—about 28% smaller than the average in 2024, but 18% greater than that of 2023. We focus on averages to provide clarity on the annual momentum for US clean electricity investment and industrial decarbonization. Most of these announcements ($18 billion) were for solar and storage projects.

Industry announcements totaled $2 billion, consistent with the average value of announcements so far in 2025. That's a stark difference from the average announced investment per quarter of $8 billion in 2024 and $10 billion in 2023.

Cancellations across the energy and industry segment reached $5 billion this quarter, down from a peak of $7 billion in Q1 2025.

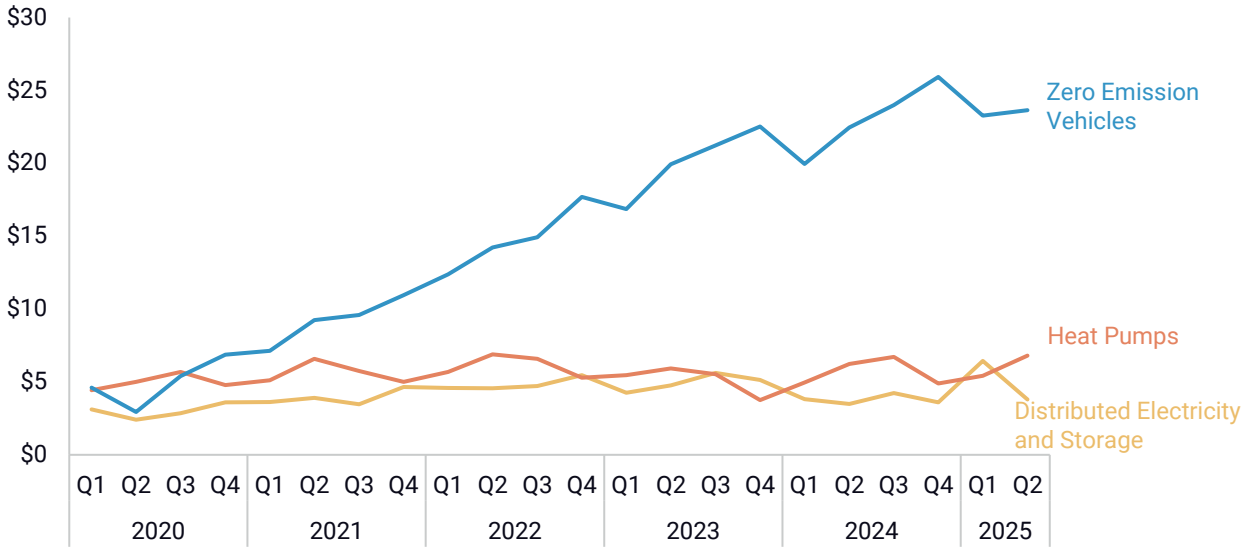
Retail

Consumer spending on zero-emission vehicles (ZEVs), distributed renewable electricity generation and storage, and heat pumps totaled $34 billion in Q2 2025, a 3% decline from Q1 2025, but a 6% increase compared to Q2 2024.

Investments in ZEVs increased slightly by 2% quarter-on-quarter to $24 billion. This quarter also represents a 5% increase in ZEV investments relative to Q2 2024 (Figure 7).

Distributed electricity generation and storage investment fell from a $6 billion post-IRA peak in Q1 2025 to $4 billion in Q2 2025, a 41% decline. Despite the decline quarter-on-quarter, investment is still up 9% relative to Q2 2024. Heat pump investments saw noticeable growth, rising by 26% quarter-on-quarter to roughly $7 billion, and a 9% increase compared to Q2 2024.

FIGURE 7
Retail investment by technology
Billion 2024 USD



Source: Rhodium Group/MIT-CEEPR Clean Investment Monitor

The pipeline of outstanding investments post-OBBBA

In the three years since the IRA was enacted, companies have tapped its tax credits to finance clean energy generation and clean energy technology manufacturing, investing $351 billion in new or expanded facilities. Over this period, 2,586 new facilities have opened across the US. Looking ahead, $517 billion of outstanding investment remains to be spent on construction and installation for 2,203 facilities that are not yet online.

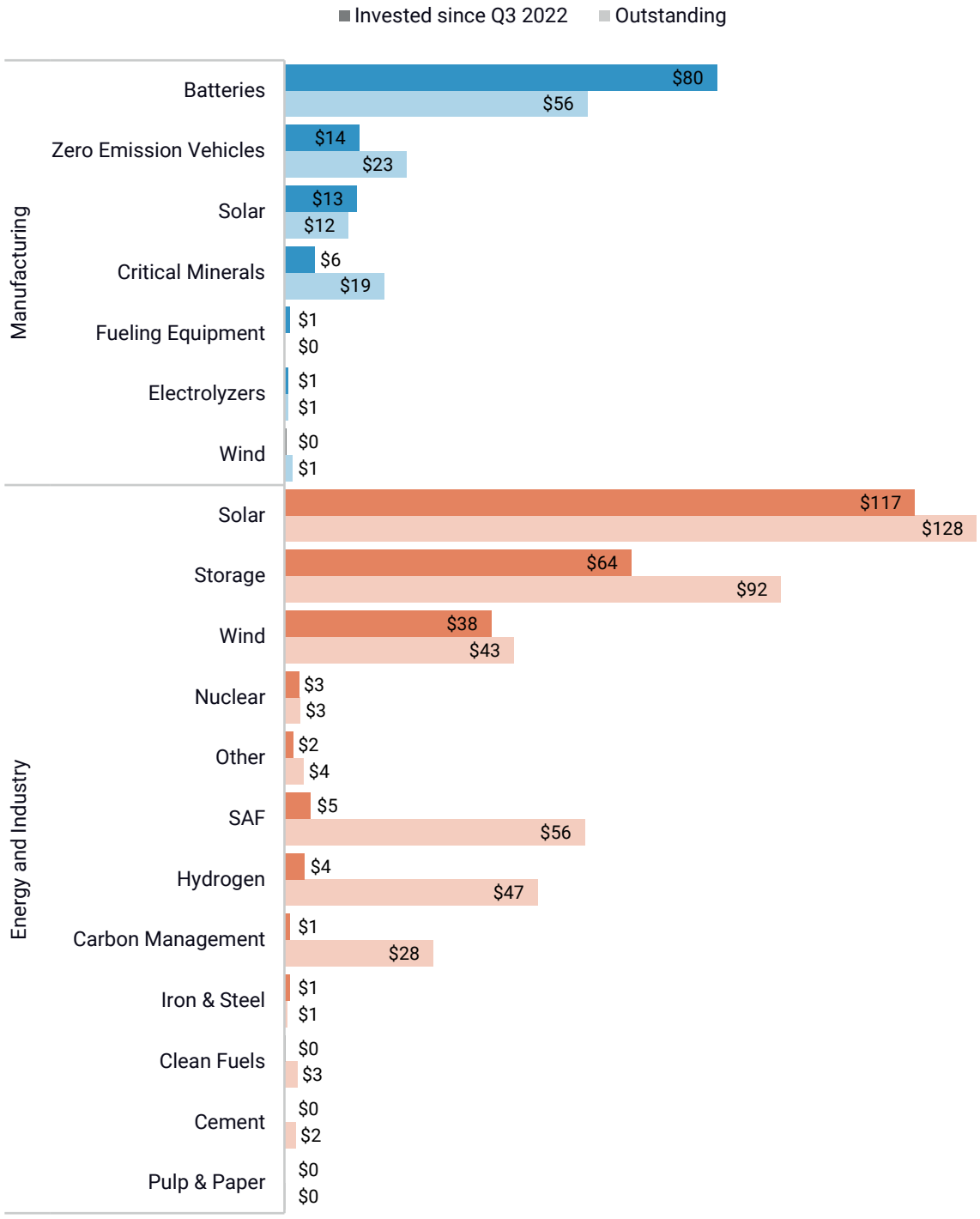
This report provides a snapshot of clean investment activity during Q2 2025, a period that spanned the debate and passage of the "One Big Beautiful Bill Act." Under the final budget reconciliation law, the tax credits expected to support many announced facilities now face shorter eligibility timelines and more restrictions on sourcing products and materials.

Below, we break out investment totals for the past three years plus outstanding investment (capital not yet invested in projects that are announced or under construction) by segment and technology, and discuss how the legislation has impacted tax credit eligibility in each category (Figure 8).

FIGURE 8

Amount invested and outstanding investment since IRA passage by technology, Q3 2022-Q2 2025

Billion 2024 USD



Note: Excludes canceled projects. “Other” category includes technology-neutral clean energy generation projects: Geothermal, Hydroelectric, Biomass, and additional types of clean energy projects.

In manufacturing, $98 billion of investment tied to the EV supply chain remains outstanding, including $56 billion in battery manufacturing, $23 billion in electric vehicle production, and $19 billion in critical minerals projects. Solar manufacturing accounts for another $12 billion in outstanding investment, while more modest sums are associated with electrolyzer manufacturing ($654 million) and wind components manufacturing ($1 billion). Manufacturing projects, except for wind, will continue to benefit from the 45X tax credit through the rest of this decade. 45X credits for wind components will sunset after 2027. However, all projects must now comply with new Foreign Entity of Concern (FEOC) requirements that restrict ownership, control, or "material assistance" by entities of concern. Manufacturing facilities in the EV supply chain are likely to be affected by the repeal of the 30D consumer EV credit and 45W commercial EV credit for vehicles sold after September 30, 2025. The loss of 30D is likely to be especially significant, as its domestic content and North American final assembly requirements created a strong demand for building a domestic battery supply chain.

In energy and industry, $171 billion of the segment's total $406 billion outstanding investment (42%) is tied to wind and solar electricity generation projects, which were subject to some of the most significant changes to tax credit eligibility. To qualify for 45Y or 48E, projects must commence construction by July 4, 2026, or be placed in service by the end of 2027. In addition, the Trump administration's subsequent executive order and new Treasury Department guidance narrowed the definition of "commence construction," eliminating the 5% capital expenditure threshold and requiring developers to demonstrate physical work on a project. A comparatively much smaller $7 billion of outstanding announced investment is associated with clean firm electricity projects, including nuclear, geothermal, and other zero-emissions technologies, that will continue to benefit from the clean electricity tax credits through 2033. Storage projects tied to $92 billion of outstanding investment will remain eligible under existing rules. However, all energy projects must meet new FEOC requirements to qualify for tax credits, and provisions targeting China, a dominant battery manufacturer, pose a significant challenge to developers.

Tax credit changes will also impact industrial decarbonization projects tied to $136 billion of outstanding investment, roughly one-third of the total outstanding in the energy and industry segment. SAF projects, representing $56 billion, benefit from a narrow two-year extension of the 45Z Clean Fuel Production Credit through 2029, but from 2026 onward must source feedstocks from North America, tightening supply chains. Hydrogen projects, representing $47 billion, are under greater pressure to qualify for 45V, with a drastically shortened timeline requiring projects to commence construction by the end of 2027. Carbon capture and storage projects, tied to $28 billion in outstanding investment, remain supported by 45Q, now with increased credit values for Class II wells and enhanced oil recovery applications. Beyond tax credit changes, recent terminations of awards issued by the Department of Energy Office of Clean Energy Demonstrations

expose new federal funding risk to $3 billion worth of outstanding investment in novel low-carbon iron, steel, and cement projects that rely on this funding for first-of-a-kind plants.

Looking ahead, we will be watching for potential shifts in the investment landscape in response to these policy changes. The tax credit eligibility changes may influence how quickly announced investments materialize in actual capital expenditures. The early sunset for EV, heat pump, and distributed energy consumer tax credits could reshape the composition of US clean investment, which has been strongly driven by the retail segment, in the quarters ahead.

ABOUT THE CLEAN INVESTMENT MONITOR

The Clean Investment Monitor (CIM) is a joint project of Rhodium Group and MIT's Center for Energy and Environmental Policy Research. The CIM tracks public and private investments in manufacturing and deployment of climate technologies in the United States. Through this data and analysis, the CIM provides insights into investment trends, the effects of federal and state policies, and on-the-ground progress in the US toward net-zero greenhouse gas emissions.

ACKNOWLEDGMENTS

This nonpartisan, independent research was conducted with support from Invest in our Future and the William and Flora Hewlett Foundation. The results presented in this report reflect the views of the authors and not necessarily those of the supporting organization. The authors would like to thank Rhodium Group colleagues Jaspreet Sohal, Ian Hutchinson, and Maggie Young for their contributions.

Website: **www.cleaninvestmentmonitor.org**

Rhodium Group

MIT Center for Energy and Environmental Policy Research