



September 18, 2024

Mobilizing the Market: Barriers to Financing a More Scalable Climate Response

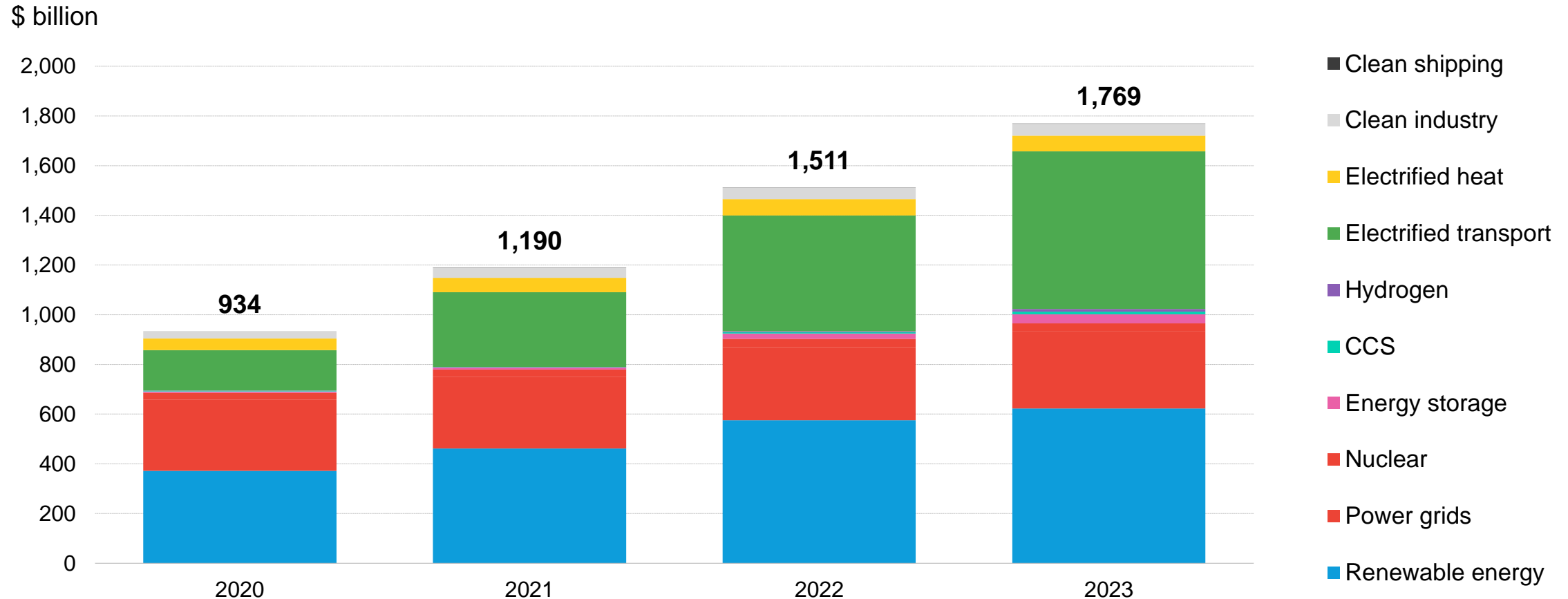
Ethan Zindler, U.S. Department of the Treasury

Disclaimers

- This deck provides an overview of certain Inflation Reduction Act tax provisions for general informational purposes only and is not itself tax guidance.
- The content in this presentation is based on proposed and temporary regulations and other tax guidance on IRS.gov.
- This deck relies on simplifications and generalizations to convey high-level points about Inflation Reduction Act tax provisions. Please refer to guidance issued by the IRS for detailed information on the rules associated with Inflation Reduction Act tax provisions.
- Treasury and the IRS will carefully consider feedback submitted during the public comment periods for proposed and temporary regulations before issuing final rules.
- We will not be able to provide substantive information beyond what is in the proposed and temporary rules themselves.
- Given that the proposed regulations are still under consideration, we will not be able to comment on opinions, interpretations, or specific-taxpayer related questions. You may also choose to consult with a tax advisor.

2023 global energy transition investment topped \$1.75 trillion

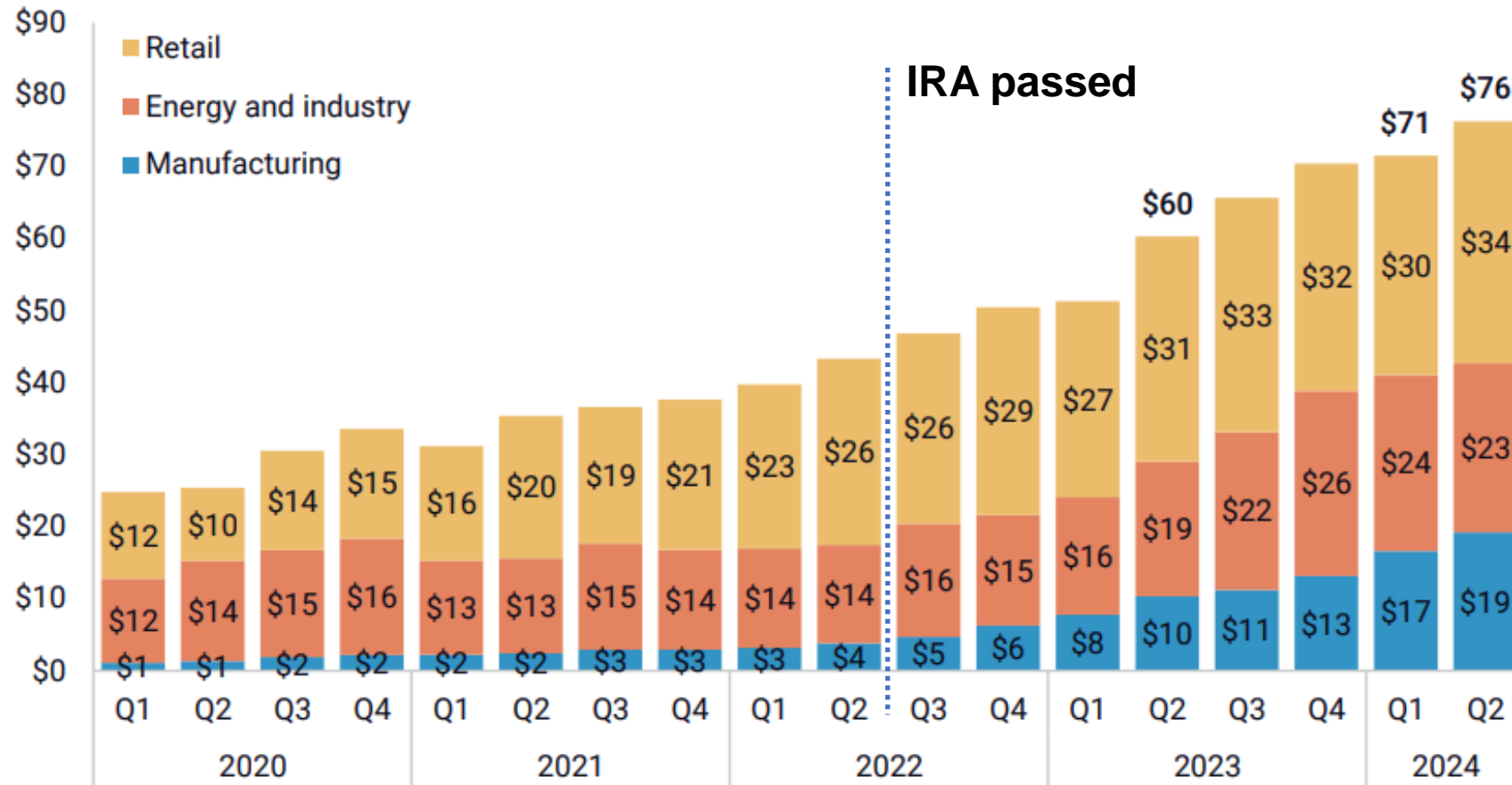
Global investment by sector (2023 USD, \$bn)



Source: BloombergNEF. Note: CCS refers to carbon capture and storage.

Since the IRA passed, the U.S. has seen record inflows into clean energy technologies

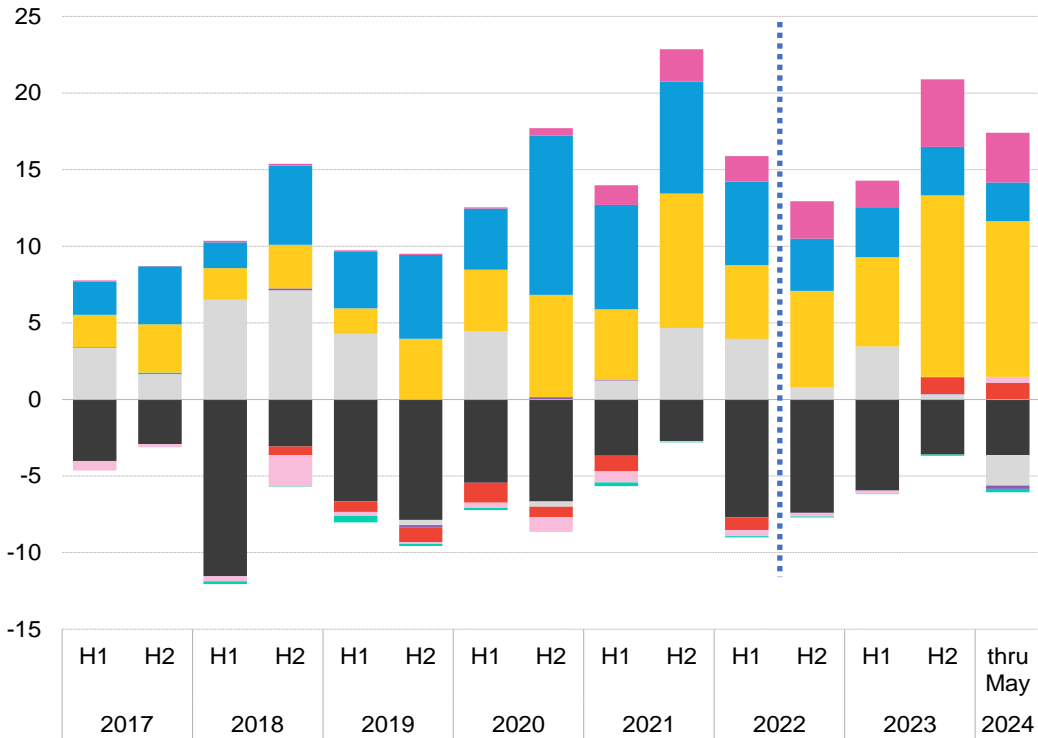
Clean investment by market segment (2023 USD, \$bn)



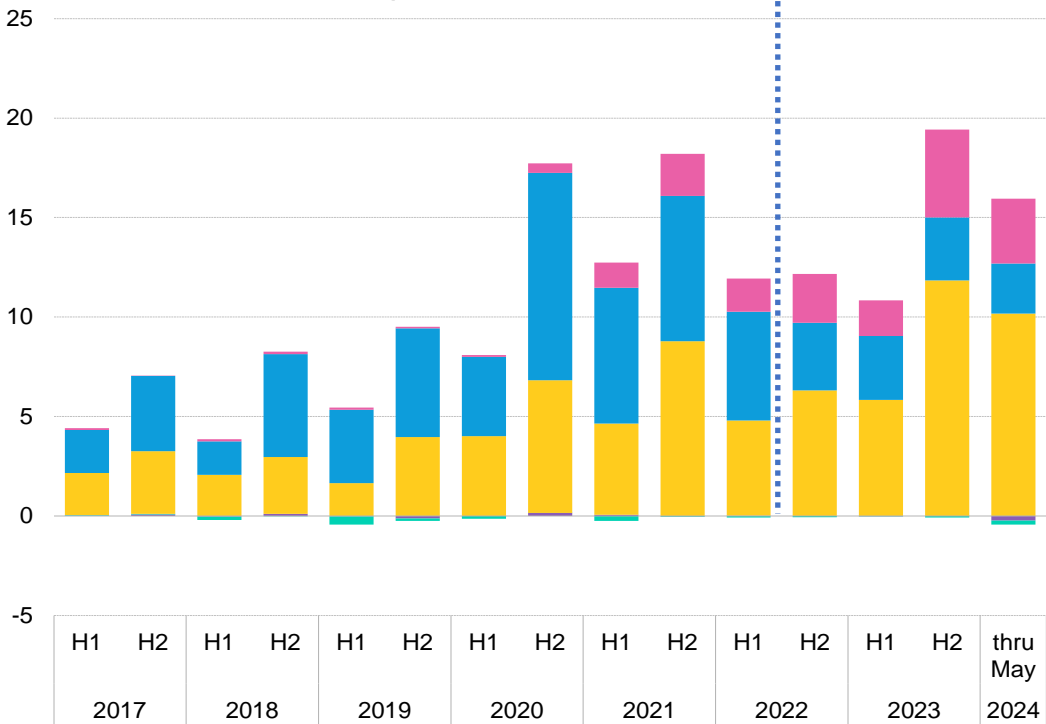
Source: Rhodium Group/MIT-CEEPR Clean Investment Monitor

U.S. clean energy build has surged

U.S. semi-annual capacity adds / subtracts, all technologies (gigawatts)



U.S. semi-annual additions, renewables + batteries only



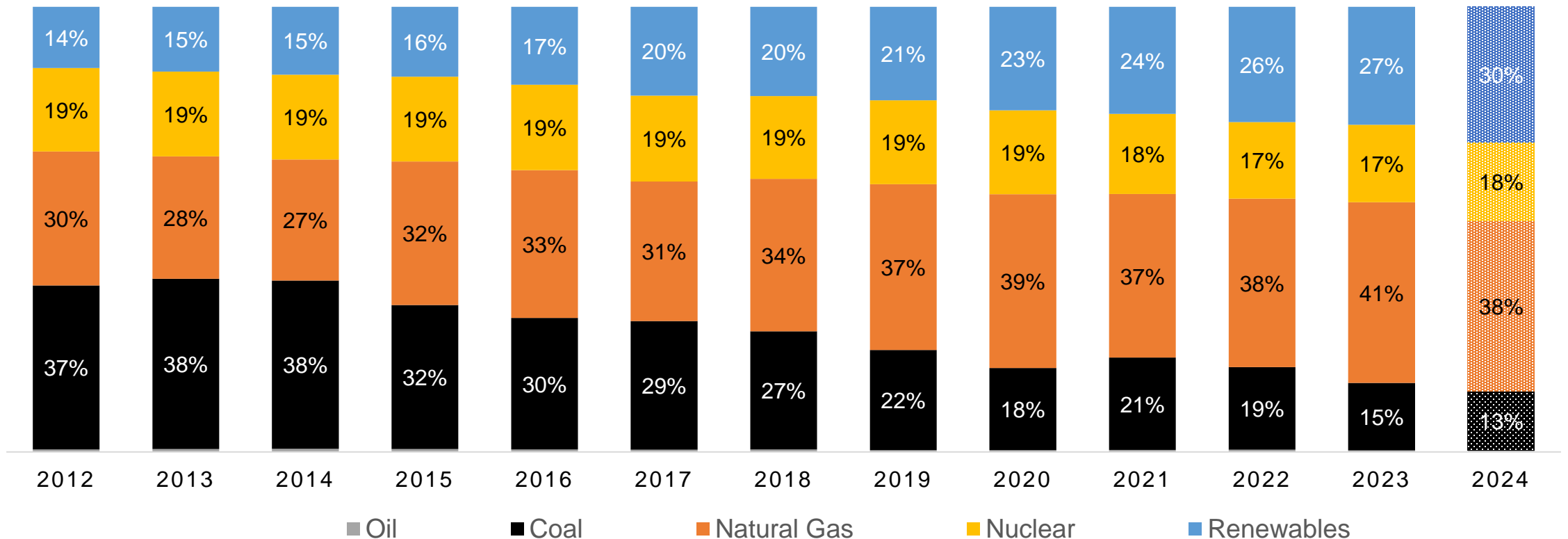
■ Coal
■ Gas
■ Hydro
■ Nuclear
■ Oil
■ Other
■ Solar
■ Wind
■ Batteries

Source: EIA July 2024 Electric power monthly, BloombergNEF. Note: "Other" includes geothermal, biomass, landfill gas, biomass, flywheels, municipal solid waste, natural gas with compressed air storage and all other technologies.



Zero-carbon sources (renewables + nuclear) could account for nearly half of total U.S. power generation in 2024

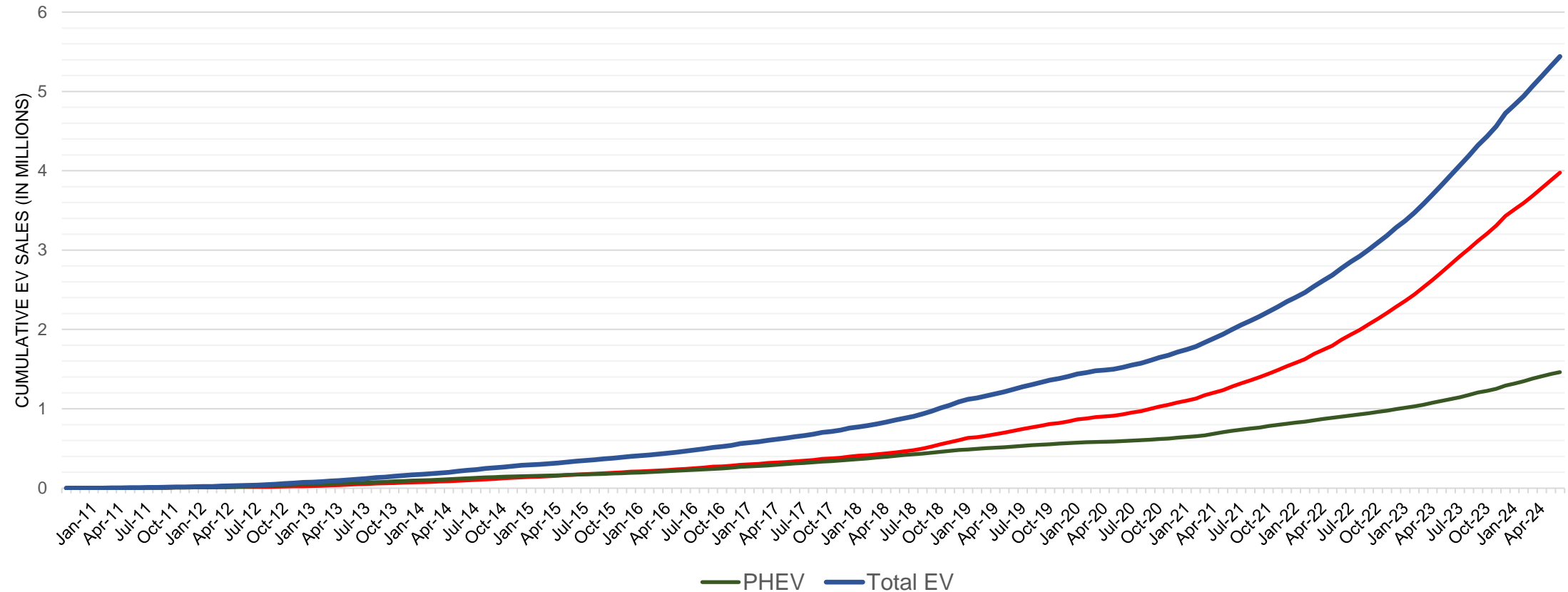
Share of U.S. electricity generation, by fuel type



Source: Energy Information Administration [Fossil-fuel stocks for electricity generation](#), July 24, 2024 file

Electric vehicle sales have accelerated despite headwinds

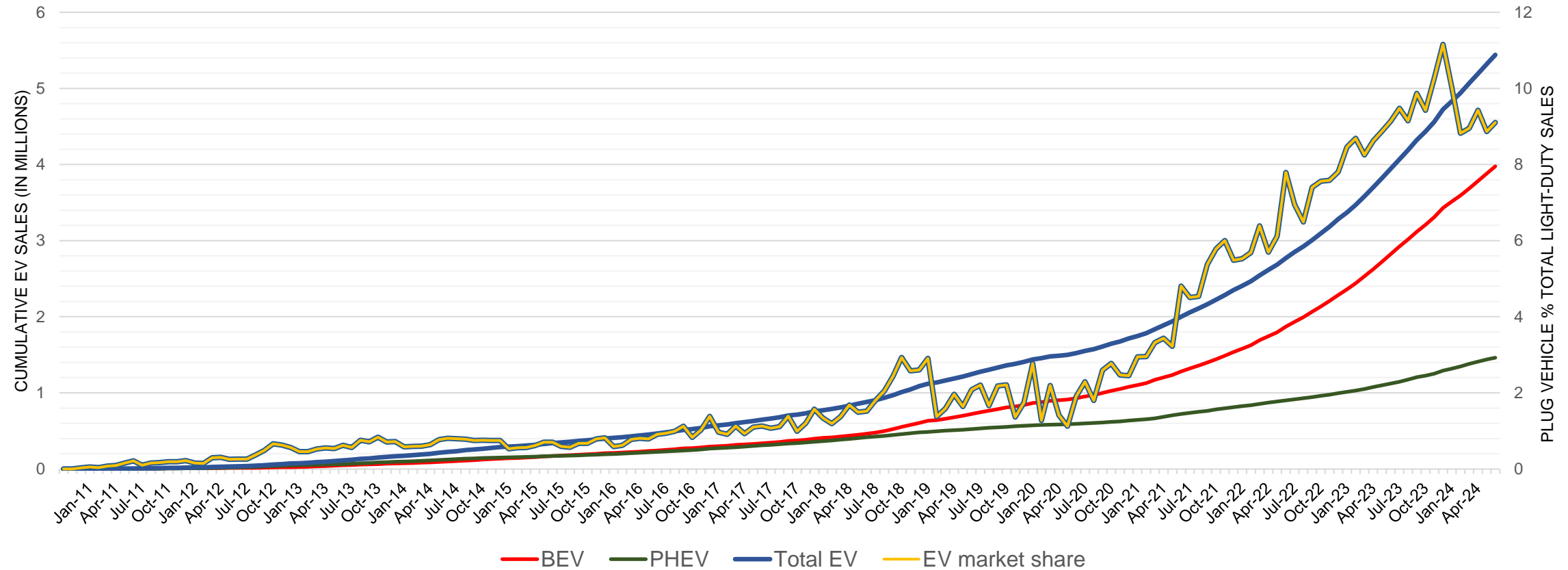
Cumulative EV sales



Source: [Argonne National Laboratory](#). Notes: BEV is battery-electric vehicles, PHEV is plug-in hybrid electric vehicles, Total EVs includes both categories

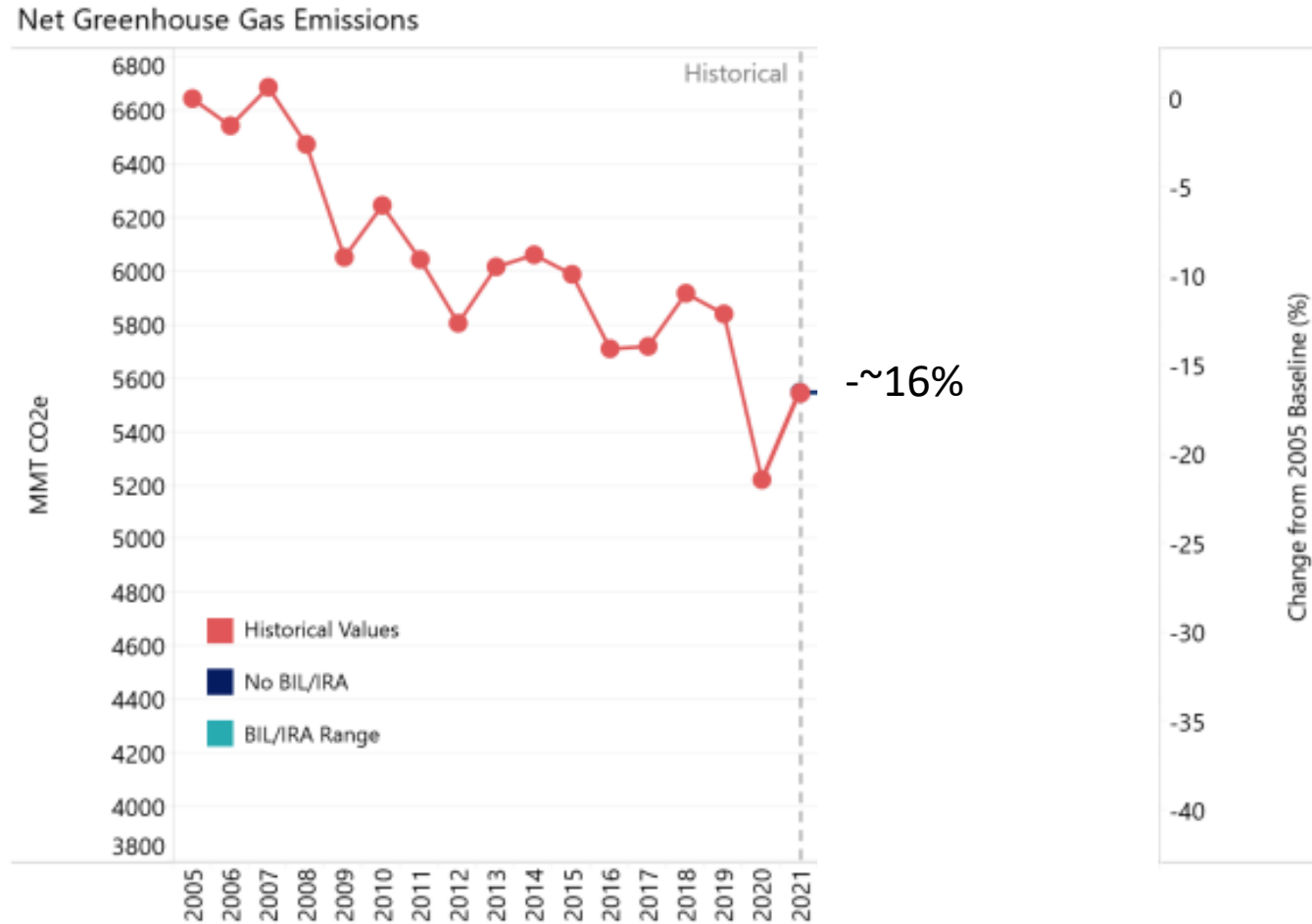
Electric vehicle sales have accelerated despite headwinds

Cumulative EV sales (left axis), share of total light-duty vehicle sales (right axis)



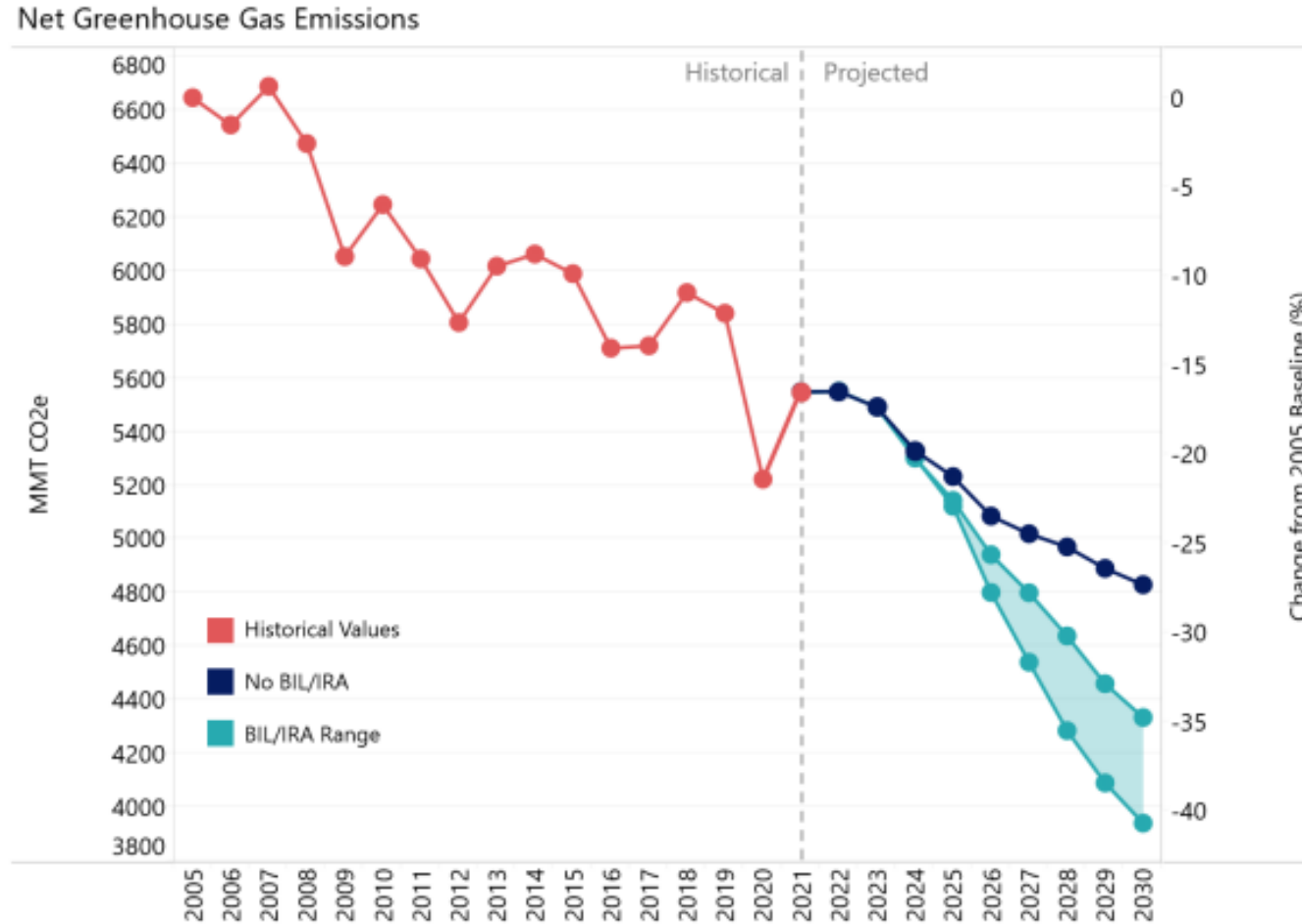
Source: [Argonne National Laboratory](#). Notes: BEV is battery-electric vehicles, PHEV is plug-in hybrid electric vehicles, Total EVs includes both categories

With IRA and the infrastructure law, the U.S. is poised for significant emissions cuts



Source: U.S. Department of Energy

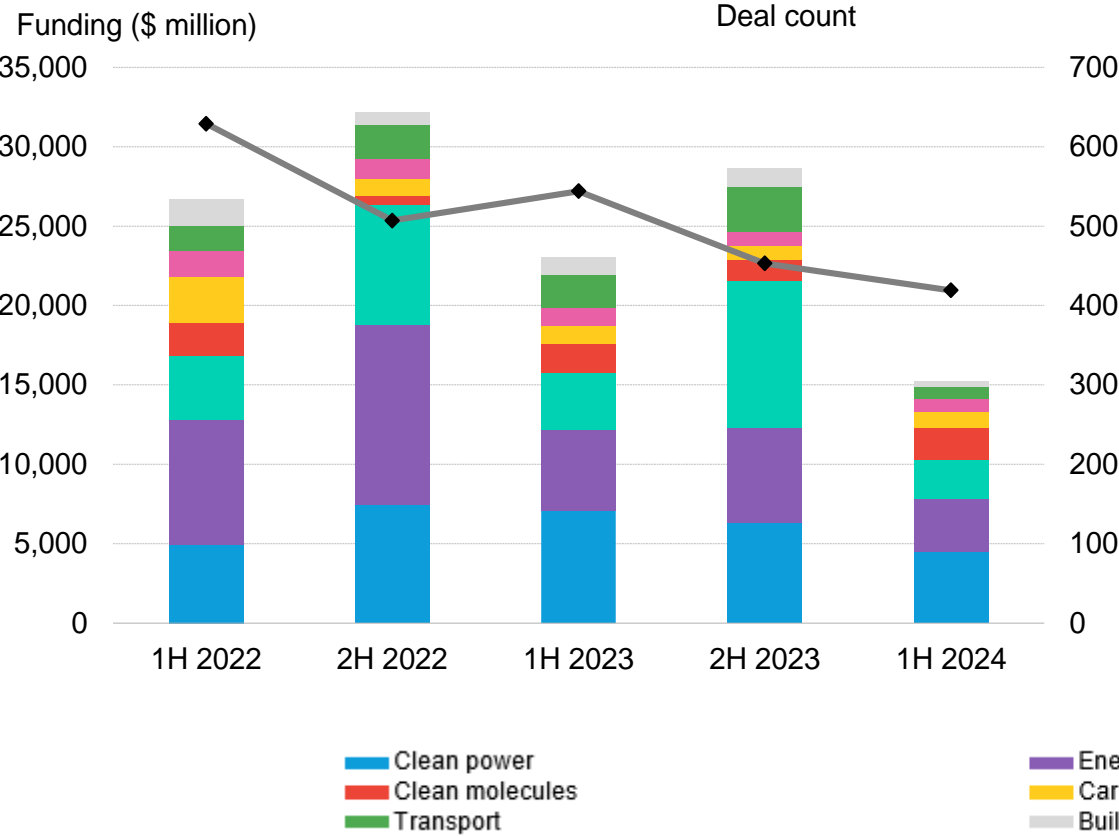
With IRA and the infrastructure law, the U.S. is poised for significant emissions cuts



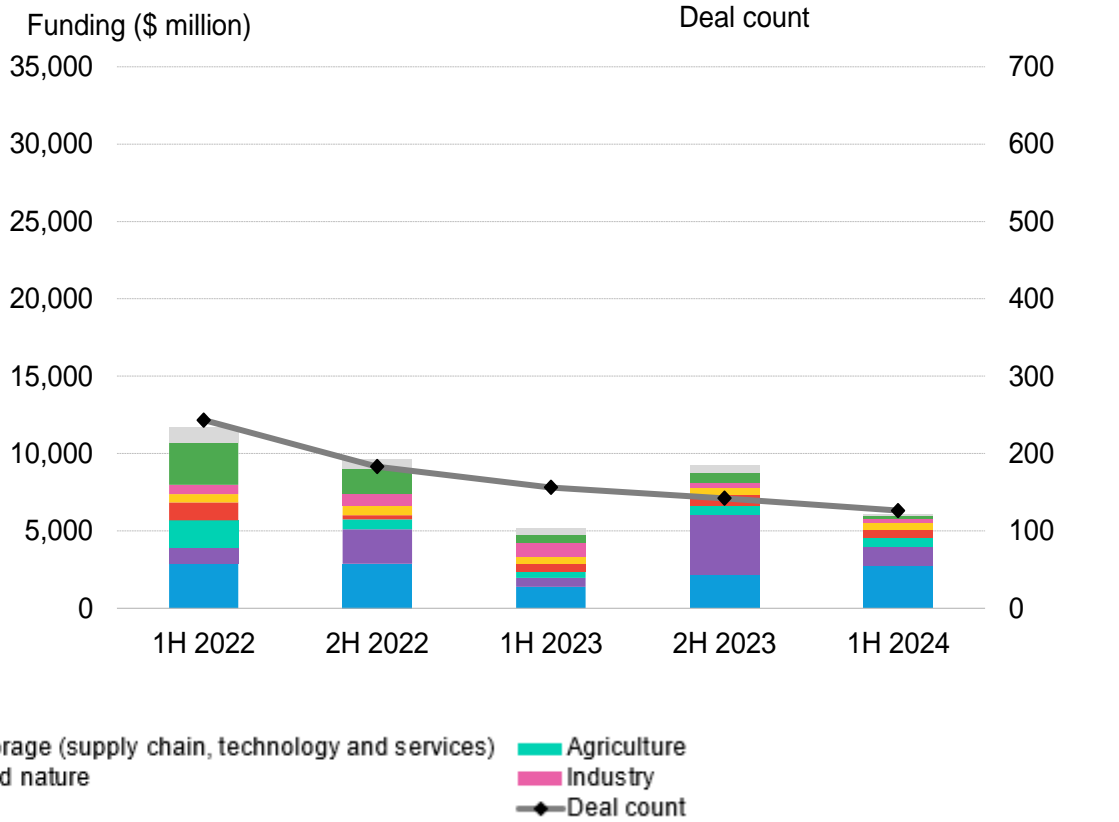
Source: U.S. Department of Energy

Private sector energy transition investment in the newest technologies has slowed but the U.S. remains a global leader

Global venture capital and private equity investment and number of deals



U.S. venture capital and private equity investment and number of deals

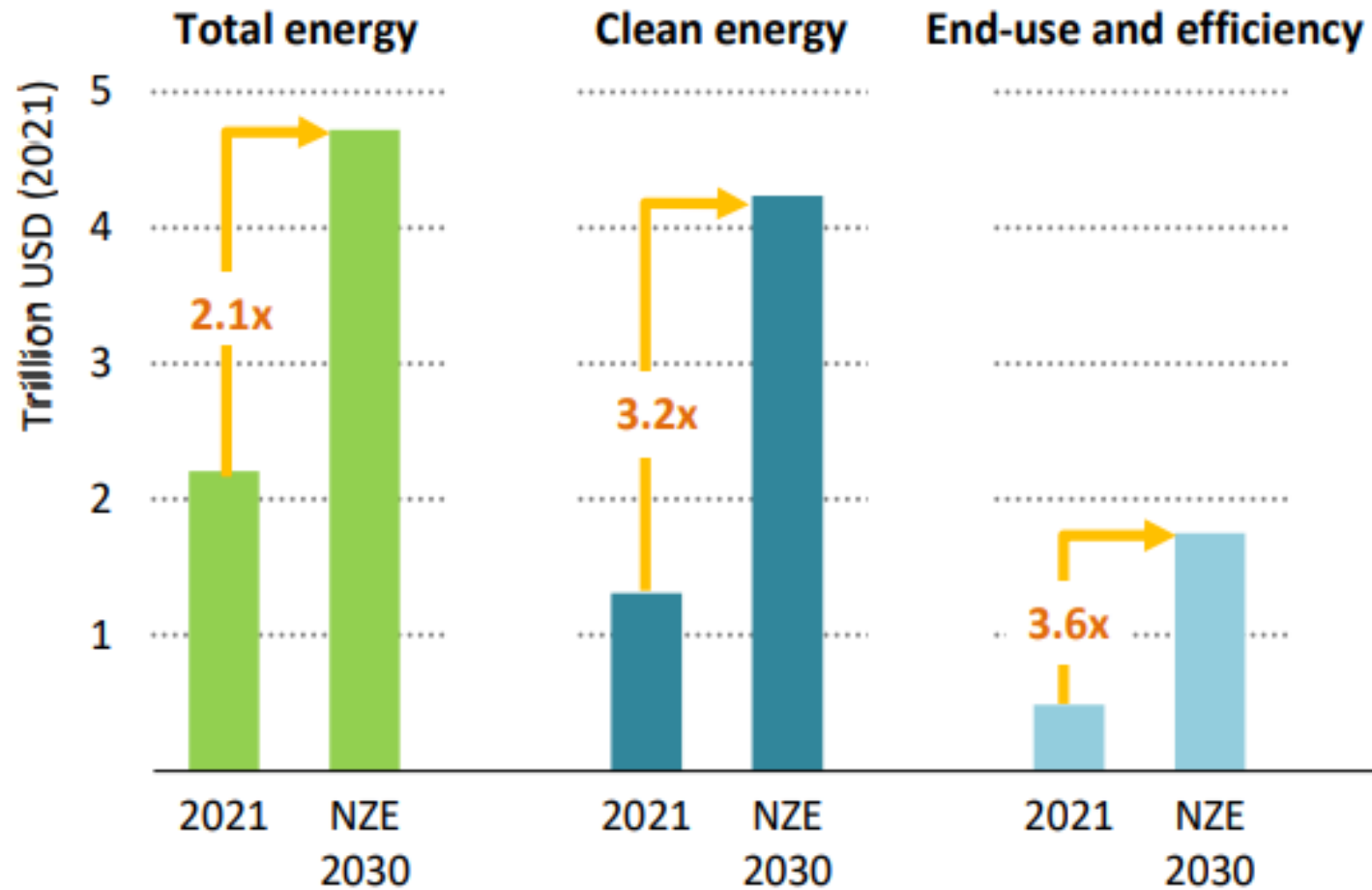


Source: BloombergNEF



The net-zero path will require a significant step-up this decade

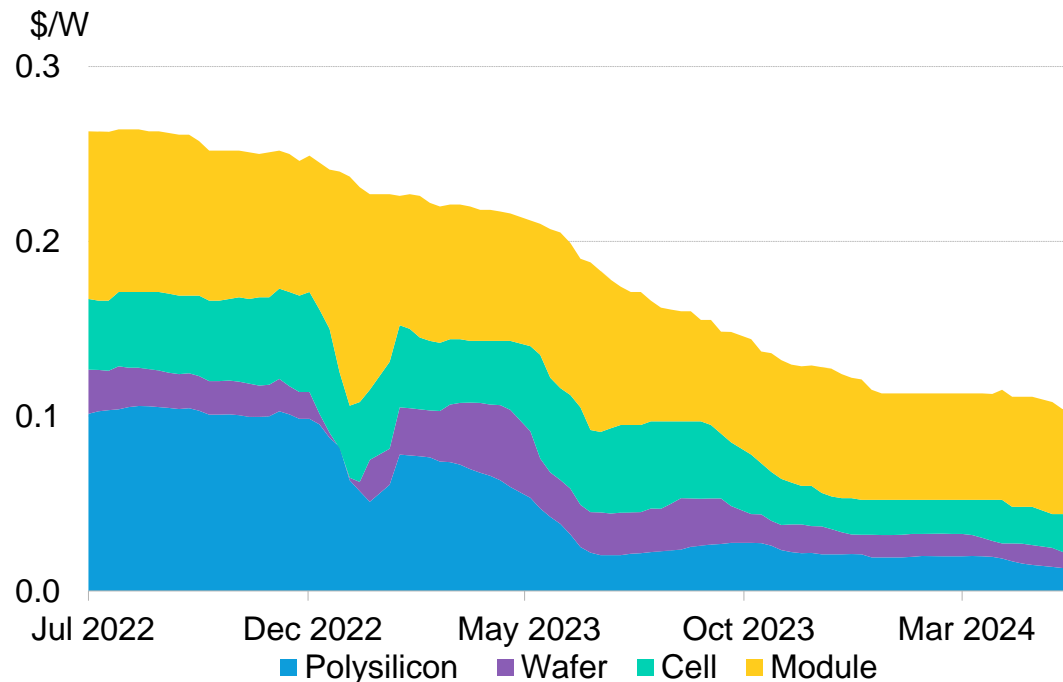
Energy investment under the IEA's Net Zero Emissions by 2050 Scenario



Source: IEA World Energy Outlook 2022

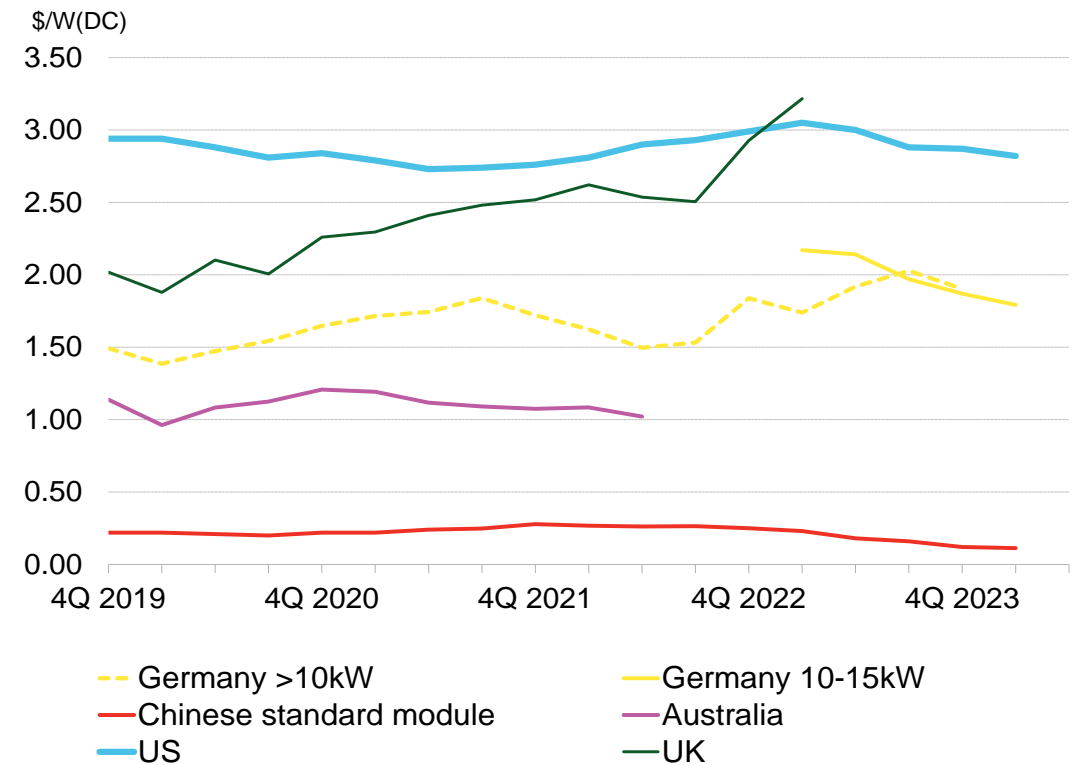
Solar equipment costs have touched new lows creating space for consumer prices to drop

Global average solar module prices



Source: BloombergNEF

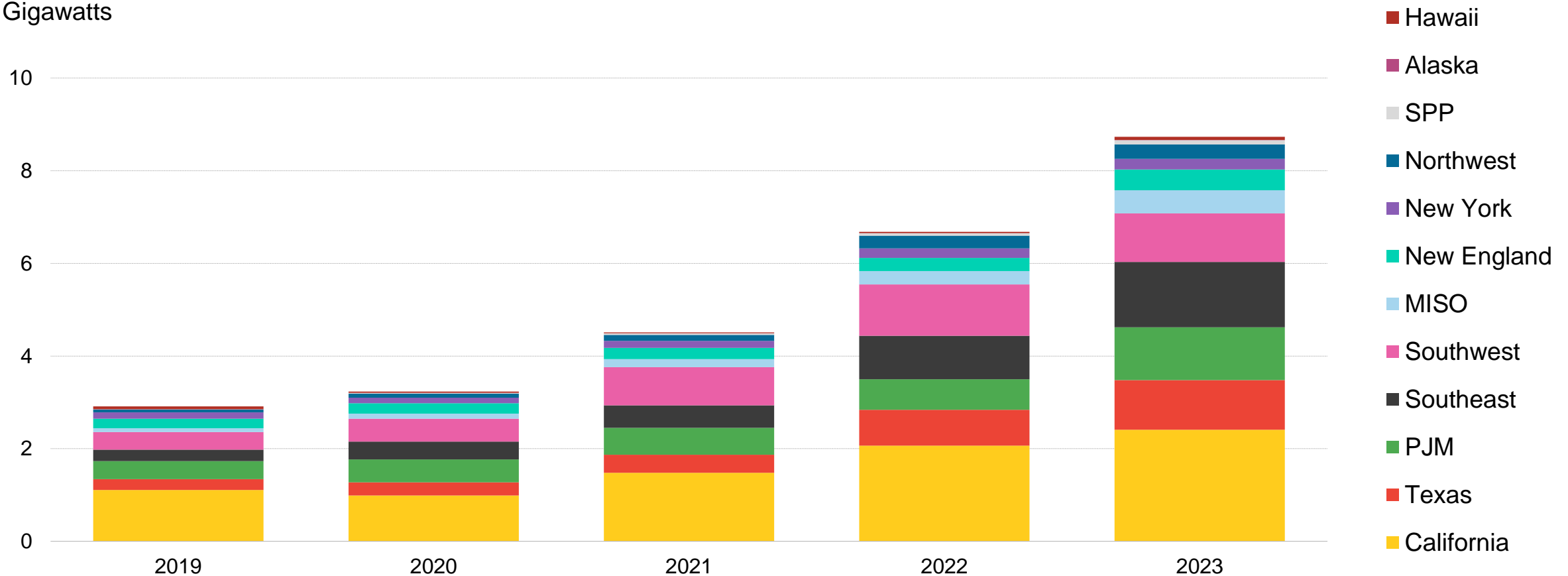
Rooftop solar system costs compared



The U.S. residential solar market has become more diverse geographically

Annual U.S. residential solar installs (GW), 2019-2023

Gigawatts



Source: BloombergNEF / Energy Information Administration.

The Inflation Reduction Act and Treasury's role

- The Inflation Reduction Act makes the **largest investment in clean energy** in United States history, and much of that investment is **delivered via tax incentives**.
- The Treasury Department is the federal agency responsible for **administering the tax code** and is **proud to be playing a central role** in implementing the Inflation Reduction Act's clean energy tax incentives in partnership with DOE, EPA, and other agencies.
- The Inflation Reduction Act includes **tax incentives** for a broad range of activities that support building a **clean energy economy**, certain **bonuses** that apply to multiple incentives, and two novel **credit monetization** provisions.

Overview of IRA clean energy-related provisions

Incentives

- **Clean Energy Generation**
 - §§ 45, 45Y, 48, 48E, 45U
- **Carbon Capture**
 - § 45Q
- **Clean Vehicles**
 - §§ 30D, 45W, 25E, 30C
- **Clean Hydrogen & Transportation Fuels**
 - §§ 45V, 45Z, 40/40A, 40B
- **Clean Energy Manufacturing**
 - §§ 45X, 48C
- **Energy Efficiency**
 - §§ 25C, 25D, 45L, 179D

Bonus Provisions

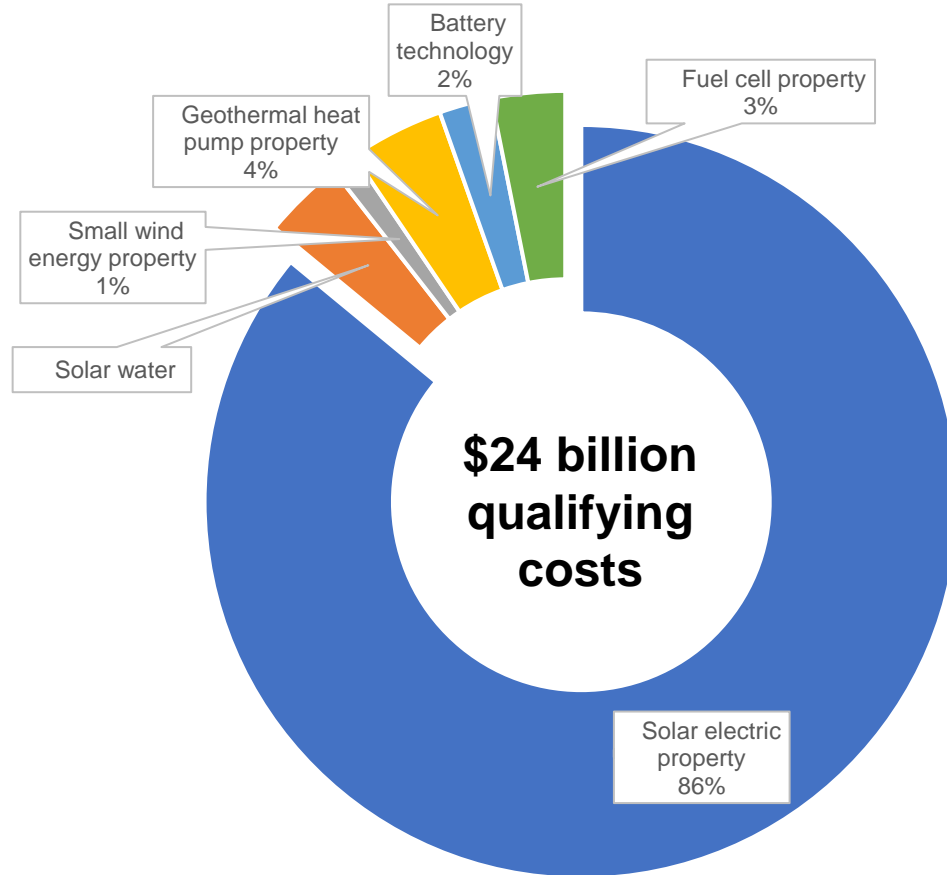
- **Prevailing Wage & Apprenticeship**
- **Energy Communities**
- **Low-Income Communities**
- **Domestic Content**

Credit Monetization Mechanisms

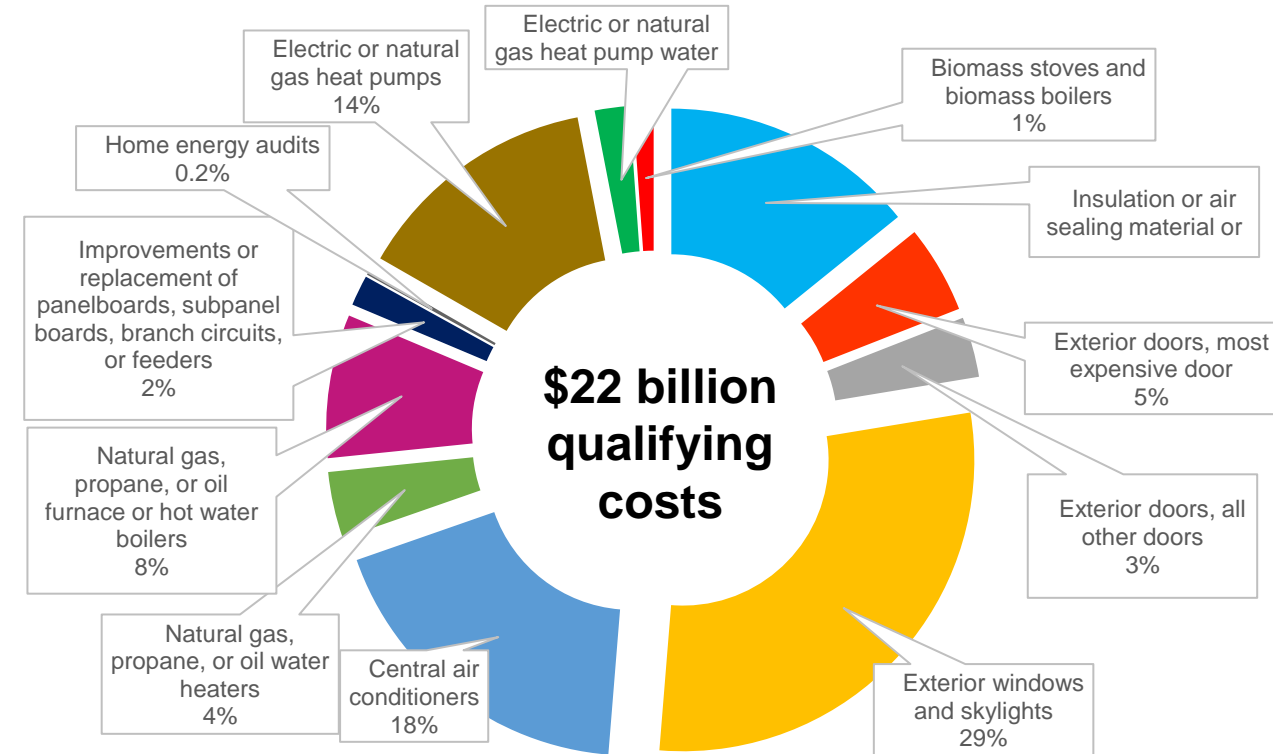
- **Elective Pay**
- **Transferability**

IRA tax credits are driving down the costs of home energy improvements

2023 Residential Clean Energy Credit uptake

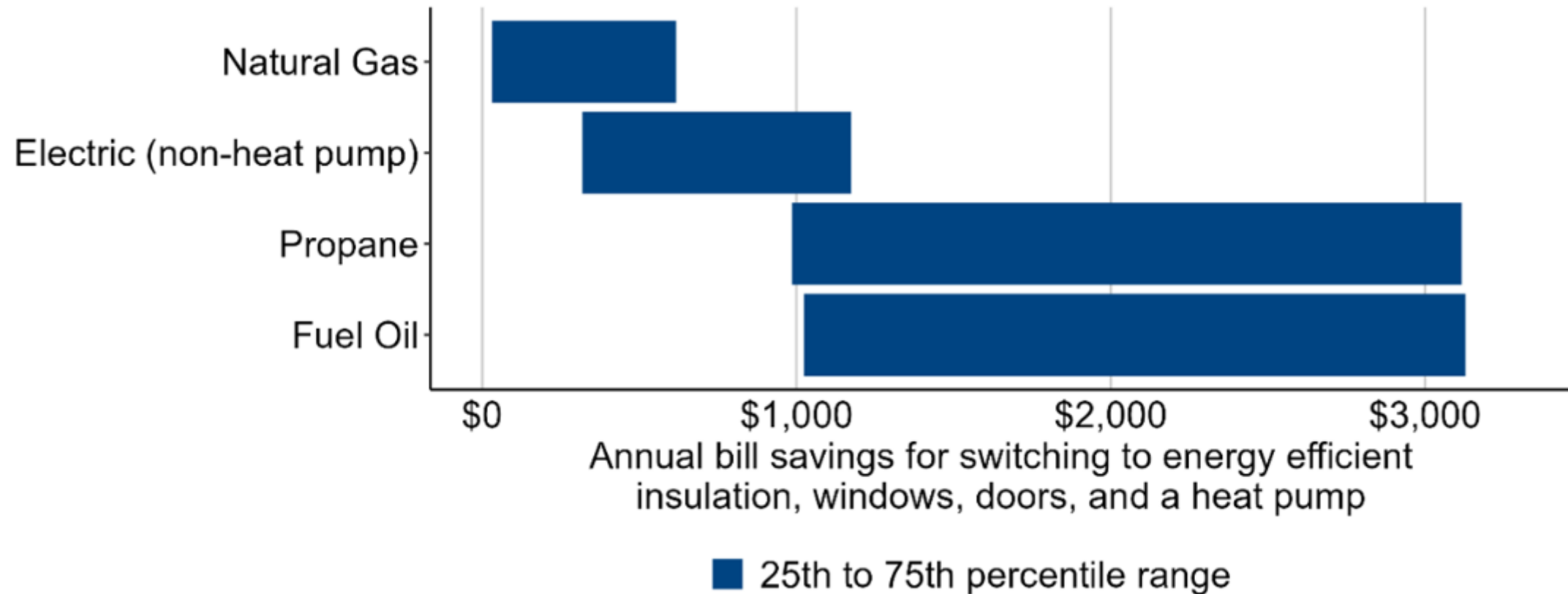


2023 Energy Efficient Home Improvement Credit uptake



Source: IRS Form 5695 data as collected through May 23, 2024 for calendar year 2023. **Note:** Dollar amounts depicted are costs as reported on tax returns, and may not reflect the full amount of the taxpayer's investments

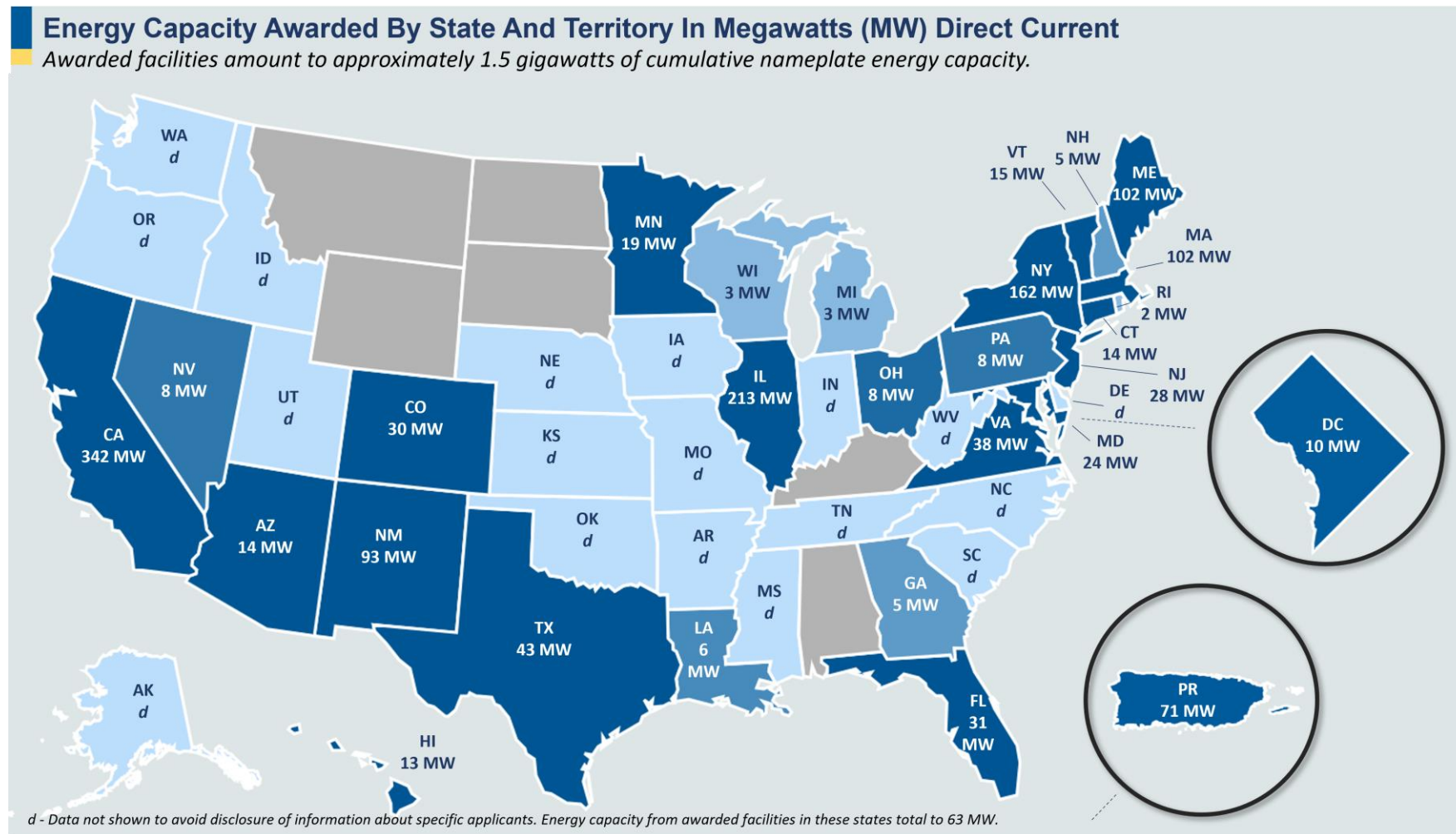
Households can save substantially on their utility bills by switching from another heat source to an electric heat pump



Source: U.S. Department of Treasury / National Renewable Energy Lab



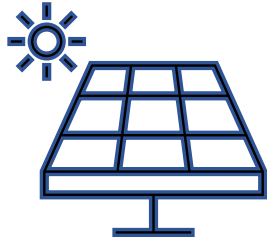
IRA Low-Income Communities Bonus Credit supported nearly 1.5GW / 49,000 mostly behind-the-meter solar systems in underserved communities in first year



Source: IRS, RAAS, Statistics of Income, August 2024. Note: figure depicts megawatts (MW) per state in direct current (DC).

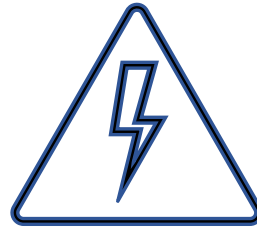
The 49,000 awarded energy facilities are expected to...

Spur Investments



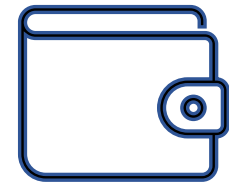
\$3.5 billion in public and private investment into underserved communities

Generate Clean Electricity



2 billion kWh of clean electricity / year equivalent to the annual electricity use of **200,000 average-sized US homes**

Offset Energy Costs



\$270 million in offset energy costs annually



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Thank you!

Ethan Zindler, Climate Counselor, U.S. Department of Treasury