The Cost Of Battery Production Tax Credits Provided In The IRA

Christine McDaniel
How to the production credits work?

$45 per kwh of capacity

$35 per kwh of battery capacity for battery cells

$10 per kwh of capacity for battery modules

$45 per kwh for batteries that do not use cells (and have capacity of 7 kwh or more)

...Plus 10% of cost to produce the electrode active materials

...Plus 10% of the cost of producing or purifying critical minerals in the US

...Plus ....
Evaluating the cost

Estimates of the budget impact of electric vehicle battery production credits are soaring far beyond what Congress was told before passage in August.

Source: CBO estimate from Congressional Budget Office. Estimates based on recent data from author's estimates based on US share of North America's announced battery plant capacity as reported in Argonne National Labs report. Christine McDaniel, Mercatus Center, George Mason University.
IRA Energy Provision Costs Have Risen

Estimated cost of IRA Energy Spending and Tax Credits (2022-2031)

$700b
$600b
$500b
$400b
$300b
$200b
$100b
$0b

$659 billion
Advanced Manufacturing $133 billion
Electric Vehicles: $72 billion
Energy Efficiency: $38 billion
Carbon Capture & Clean Fuel: $51 billion
Energy & Electricity: $233 billion
Direct Spending: $132 billion

$402 billion
Advanced Manufacturing: $31 billion
Electric Vehicles: $14 billion
Energy Efficiency: $38 billion
Carbon Capture & Clean Fuel: $25 billion
Energy & Electricity: $163 billion
Direct Spending: $132 billion

Original (2022)
Updated (2023)

Note: Updating the estimated budget effect of the IRA in full would require re-estimating the non-energy provisions as well.
Sources: Committee for a Responsible Federal Budget, Congressional Budget Office, Joint Committee on Taxation
Untangling the US economy from China and other authoritarian regimes....

Not easy. Not cheap.
The Inflation Reduction Act is a landmark piece of legislation that directs more than $1 trillion in subsidies and incentives toward clean energy production. It includes tax credits for buyers of new clean vehicles, production tax credits for clean energy like wind and solar, and more production tax credits for advanced energy technologies like batteries. The U.S. government has been waving around big financial incentives to lure manufacturing to the country, and many producers have taken notice.