

Briefing

The cost of implementing the IRA's electric vehicle policies in the UK



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Summary

The US's [Inflation Reduction Act \(IRA\)](#) sets out policies to encourage the production and purchase of electric vehicles (EVs) in the US. If implemented in the UK, Green Alliance analysis estimates equivalent policies would cost £64 billion between now and 2030.

The IRA policies in detail

There are four relevant EV policies in IRA, which we discuss in turn below. An additional policy (Section 30C) covers charging infrastructure, but this is not included in this analysis as the UK already has funded policies for expanding charging infrastructure.

1. Section 30D: Clean vehicle credit

US buyers of EVs can claim \$3,750 if the vehicle meets the critical material requirement or if the vehicle meets the battery components requirement.

The critical material requirement relates to the proportion of the critical materials in the battery extracted or processed in the US, or in a country with which the US has a free trade agreement, or if the critical materials used were recycled in North America. The proportion of critical materials in the battery that must meet this requirement ramps up over time from 50 per cent in 2024 to 80 per cent after 2026.

For a buyer to claim the battery components tax credit, a minimum portion of the battery manufacturing and assembly must have taken place in North America. Again, the requirement ramps up over time from 50 per cent in 2024 to 100 per cent in 2028.

2. Section 25E: Previously-owned clean vehicles

Buyers of previously-owned EVs are eligible for a tax credit to whichever is the lesser amount: \$4,000 or 30 per cent of the sale price. Vehicles are eligible regardless of where they were manufactured.

3. Section 45W: Qualified commercial clean vehicle

Buyers of clean vehicles used for business purposes are eligible for a tax credit worth the lesser of 30 per cent of the cost of the EV, or the incremental cost of the EV over the price of a comparable vehicle, not exceeding \$7,500 for vehicles weighing below 14,000 pounds and \$40,000 for vehicles weighing over 14,000 pounds. There are no restrictions on where these vehicles are produced, however the policy does include hybrids as well as 100 per cent EVs. In applying it to the UK, we excluded hybrids due to the 2035 phase out date of hybrid vehicles.

4. Section 45X: Advanced manufacturing production credit

US battery manufacturers are eligible for a subsidy of \$45 per kilowatt hour.

What would equivalent IRA EV policies cost the UK?

We estimate that equivalent policies would cost a total of £64 billion between now and 2030. Given the large number of anticipated second hand vehicle sales, Section 25E would be the most costly policy, particularly as it is not constrained by whether the vehicle is manufactured domestically.

Our analysis used anticipated trends in the manufacturing of EVs, the second hand car market and commercial vehicle sales. There are some constraints on the IRA policy which we did not include in our analysis, such as that head of households must earn below \$225,000 a year to qualify for the tax credit on new vehicles. Our estimates should, therefore, be seen as upper bounds.

Cost of equivalent UK policy 2023-2030 (£bn)

	Section 30D				Total
	0.5	Section 25E	Section 45W	Section 45X	
2023	0.7	1.1	0.5	0.5	2.6
2024	0.8	1.6	0.7	0.8	3.7
2025	0.9	2.0	1.0	1.0	4.9
2026	1.0	2.7	1.3	1.4	6.3
2027	1.2	3.7	1.5	1.9	8.2
2028	1.3	4.7	1.8	2.4	10.1
2029	1.6	6.1	2.2	3.1	12.7
2030	8.1	7.5	2.8	3.7	15.7
Total	8.1	29.5	11.8	14.8	64.1

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