

Are new energy batteries outsourced

Does an electric vehicle manufacturer outsource battery production?

This paper examines an electric vehicle manufacturer's (EVM) battery outsourcing decision and product choice strategy in a two-stage supply chain consisting of a battery supplier and an EVM that have different power structures. We analyze two game scenarios: the EVM outsources battery production versus the EVM produces batteries in-house.

What is a battery outsourcing decision?

In addition, the battery outsourcing decision is related to not only the fixed operation cost of in-house production but also to its market position. We will elaborate this below. Proposition 3. When producing two EVs, the battery outsourcing decision of the EVM is as follows: 8 . 5 .

Why do EVMs outsource battery production?

Second, the EVM's battery outsourcing decision is related to not only the fixed in-house operation cost but also the power structure between the EVM and the BS. When the operation cost is very low, the EVM will always benefit from producing batteries in-house.

Does the EVM's battery outsourcing strategy affect supply chain profits?

In summary, there are very limited studies that combine the EVM's battery outsourcing decision and product choice strategy under different power structures, as well as the effect of the range anxiety and the government subsidy on the pricing strategies and profits of supply chain members.

Should we subsidize the recycling of used batteries?

The external market environment can mainly influence the performance of recycling. If we want to promote more enthusiasm for the battery manufacturer in the early implementation of echelon utilization, we should subsidize the recycling of the first type of used battery. The research can be extended in the following aspects: 1).

Does the government subsidy affect battery production?

However, for the EVM, the maximum profit in the case of producing batteries in-house is more sensitive to the subsidy than that in the case of outsourcing battery production, and the more powerful it is, the more sensitive it is with the government subsidy.

This report analyses the emissions related to batteries throughout the supply chain and over the full battery lifetime and highlights priorities for reducing emissions. Life cycle analysis of electric cars shows that they already offer emissions reductions benefits at the global level when compared to internal combustion engine cars. Further increasing the sustainability ...

First, there's a new special report from the International Energy Agency all about how crucial batteries are for

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our future energy systems. The report calls batteries a "master key," meaning ...

Approved in June 2023, the European Union's new battery regulations (2023/1542) represent what is arguably the most comprehensive effort on the part of a single ...

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Approved in June 2023, the European Union's new battery regulations (2023/1542) represent what is arguably the most comprehensive effort on the part of a single free trade area to regulate the full lifecycle of production, distribution, consumption, and disposal of long-life batteries, including the lithium-ion varieties that are now commonly ...

This special report by the International Energy Agency that examines EV battery supply chains from raw materials all the way to the finished product, spanning different segments of manufacturing steps: materials, components, cells and electric vehicles. It focuses on the challenges and opportunities that arise when developing secure, resilient and sustainable ...

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Since new energy batteries are the only source of power for new energy vehicles, and there is relatively fierce competition among new energy vehicle companies in the market, we assume the battery manufacturer be the leader of the game in this model, the third-party recycler and the car manufacturer are the followers of the game.

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McKinsey estimates that worldwide demand for passenger cars in the BEV segment will grow sixfold from 2021 through 2030, with annual unit sales ...

Soaring prices for battery raw materials -- such as lithium, cobalt and nickel -- have led commodities research provider BloombergNEF to predict the reversal of a long-held trend towards cheaper ...

With the increasing popularity of new energy vehicles (NEVs), a large number of automotive batteries are intensively reaching their end-of-life, which brings enormous challenges to...

Rechargeable batteries, which represent advanced energy storage technologies, are interconnected with renewable energy sources, new energy vehicles, energy ...

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