SOLAR Pro.

Replacing third-party batteries for new energy vehicles

Do new energy vehicle manufacturers have a responsibility for battery recycling?

The "Measures" clearly stipulate that the new energy vehicle manufacturers (NEVMs) should take the main responsibility of power battery recycling and supply chain companies should fulfill obligations in all aspects to ensure effective usage and environmental protection of the batteries.

Why is power battery recycling important for new energy vehicles?

The used power batteries of new energy vehicles have become a combined issue of environmental pollution, resource scarcity, and economic sustainability. Power battery recycling is inevitably becoming the key link in the formation of the green closed-loop supply chainfor new energy vehicles and the green cycle of the new energy vehicles industry.

Is the new energy battery recycling strategy optimal?

As finite rational individuals 24,the strategy choice of each participant in the new energy battery recycling process is not always theoretically optimal, and the new energy battery recycling strategy is also influenced by the carbon sentiment of manufacturers, retailers, and other participants.

How to improve battery recycling subsidy policy?

As the popularity of NEVs grows, the strength of the battery recycling subsidy policy should be enhanced to deal with the increase in the number of used batteries. Strengthen the supervision and subsidy standards in the battery recycling process to ensure high efficiency and transparency.

Does irrational state influence new energy vehicle battery recycling decisions?

In the process of new energy vehicle battery recycling, each participant will show irrational state and carbon sentiment will influence the battery recycling decisions of new energy vehicle manufacturers and new energy vehicle retailers.

What should be included in a used battery recycling policy?

Thirdly, in implementing a used battery recycling policy, the focus should be on extending the service life of power batteries and promoting their secondary use in the energy storage industry, thus leveraging the spillover effects of used battery recycling.

New energy vehicles (NEVs) refer to automobiles that utilize unconventional fuels as their power sources and feature novel structures and technologies. These primarily include ...

With the advancement of new energy vehicles, power battery recycling has gained prominence. We examine a power battery closed-loop supply chain, taking subsidy ...

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In 2013, the Notice of the State Council on Issuing the Development Plan for Energy Conservation and New Energy Vehicle Industry (2012-2020) required the ...

With the yearly increasing market penetration of new-energy vehicles in China, the retirement of power batteries has gradually become a scale, and most of the waste ...

The new energy vehicle manufacturer produces new energy vehicles and processes the recycled used batteries to obtain remanufactured batteries, after which the ...

The recycling of retired new energy vehicle power batteries produces economic benefits and promotes the sustainable development of environment and society. However, few ...

The battery swapping mode is one of the important ways of energy supply for new energy vehicles, which can effectively solve the pain points of slow and fast charging ...

The new energy vehicle manufacturer produces new energy vehicles and ...

3 ???· The global lithium-ion battery recycling capacity needs to increase by a factor of 50 ...

For batteries to realise their potential to contribute, policy makers need to establish effective ...

In conclusion, this piece identifies technical obstacles that need to be urgently overcome in the future of new energy vehicle power batteries and anticipates future development trends and ...

Using used batteries for residential energy storage can effectively reduce carbon emissions and promote a rational energy layout compared to new batteries [47, 48]. Used ...

Through this system, regulatory bodies, recycling enterprises, and consumers can track the status and location of the batteries, helping to monitor the entire lifecycle of the ...

The battery swapping mode is one of the important ways of energy supply ...

4 ???· As the demand for batteries as clean energy solutions grows, so does the need for effective battery recycling to ensure a sustainable and competitive industry. A new series of ...

The Chinese government will have to vigorously investigate and promote the ...

For batteries to realise their potential to contribute, policy makers need to establish effective frameworks for market access, ensure fair competition among technologies, and recognise the ...

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3 ???· The global lithium-ion battery recycling capacity needs to increase by a factor of 50 in the next decade to meet the projected adoption of electric vehicles. During this expansion of ...

The Chinese government will have to vigorously investigate and promote the new energy market, increase power battery performance, improve NEVs quality, and control ...

warming [1]. In this context, the replacement of fuel vehicles by new energy vehicles powered by power batteries has become the vane of the future in the automotive field. Sales of new ...

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