



TSHISEVHE C&I ENERGY

Analysis of the original intention of new energy batteries



Overview

By setting up a multi-source comparative analysis scenario that includes thermal power, hydropower, photovoltaic, wind power, and hybrid power, we have performed an in-depth analysis of the impact of energy types on the sustainability of the power battery production process.

Frequently Asked Questions

Are Power Batteries A key development area for new energy vehicles?

In the Special Project Implementation Plan for Promoting Strategic Emerging Industries “New Energy Vehicles” (2012–2015), power batteries and their management system are key implementation areas for breakthroughs. However, since 2016, the Chinese government hasn't published similar policy support.

Are power batteries the core of new energy vehicles?

Power batteries are the core of new energy vehicles, especially pure electric vehicles. Owing to the rapid development of the new energy vehicle industry in recent years, the power battery industry has also grown at a fast pace (Andwari et al., 2017).

What is a power battery analysis process?

The analysis process primarily targets resource and environmental issues in the production stage of power batteries.



Why are power batteries insensitive to electric power energy?

Overall, the stratospheric ozone issue, acidification issue, fine particulate matter, ecological toxicity, eutrophication of water bodies, human health, mineral resources, and water resources during the life cycle of the power battery are all insensitive to electric power energy, with data fluctuations below 2 %.

Is there a theoretical basis for power battery policy research?

In summary, the literature provides an important theoretical basis for power battery policy research. However, previous research is far from systematic and in-depth. First, this research focused more on analysis of the technology, while research on policy is still scarce.

How have power batteries changed over time?

This article offers a summary of the evolution of power batteries, which have grown in tandem with new energy vehicles, oscillating between decline and resurgence in conjunction with industrial advancements, and have continually optimized their performance characteristics up to the present.

Article Content

Research on the Impact of New Energy Vehicle Companies

With the rapid advancement of battery technology and the demand for environmental sustainability, new energy vehicles (NEVs) are becoming more and more popular. This research paper delves into the impact of marketing strategies employed by new energy vehicle companies on consumers' purchase intentions. This paper begins by highlighting the ...

An analysis of China's power battery industry policy for new energy ...

The Chinese government attaches great importance to the power battery industry and has formulated a series of related policies. To conduct policy characteristics analysis, we analysed 188 policy texts on China's power battery industry issued on a national level from 1999 to 2020. We adopted a product life cycle perspective that combined four dimensions: ...

Multiple benefits of new-energy vehicle power battery recycling ...

To improve the recovery rate of power batteries and analyze the economic and environmental benefits of recycling, this paper introduced the SOR theory and the TPB and constructed the system dynamics model of power battery recycling for new-energy vehicles.

Analysis of Lithium Battery Recycling System of New Energy ...

This paper first briefly introduces the current status of China's new energy vehicle and battery industry, then analyzes the problems of China's new energy vehicle battery ...

The Analysis on the Principle and Advantages of Blade ...

THE MARKET ANALYSIS OF BATTERY OF DOMESTIC NEW ENERGY MANUFACTURERS In recent years, since responding to the national call, electric vehicles have stepped onto the stage. After seeing ... charged to restore it to the original lead dioxide and fluffy lead, so that the battery can continue to discharge. Another kind of battery is nickel-metal ...

Exploring the technology changes of new energy vehicles in ...

New energy vehicles (NEVs) are vehicles that use a new type of power system and are driven entirely or mainly by new energy sources, which can be divided into hybrid electric vehicles (HEVs), electric vehicles (EVs), fuel cell electric vehicles (FCEVs), and other vehicles using new energy sources (hydrogen, dimethyl ether, etc.) (Ma et al ...

(PDF) Consumers' Purchase Intention of New Energy

Consumers' Purchase Intention of New Energy Vehicles: Do Product-Life-Cycle Policy Portfolios Matter? February 2020; Sustainability 12(5):1711; ... power batteries, ...

Influencing factor analysis of household electric vehicle purchase ...

Xu Guohu et al. investigated the influencing factors of new energy vehicle purchase decision and obtained five influencing factors including post-sales service and purchase cost, etc. Beak's research in South Korea found that the low acceptance of electric vehicles is mainly owing to the lack of battery charging technologies and it is ...

Examination of the adoption intention of new energy vehicles ...

1. Introduction. Owing to the development of gasoline automobile industry, greenhouse gas emissions has brought great challenges to global warming, climate change, and air quality [1,2]. New energy vehicles (NEVs) are promoted as a solution to reduce the CO₂ emissions [1]. Switching to electricity in the ground transportation sector is a promising way to ...

What Increases Consumers' Purchase Intention of Battery ...

As environmental and energy issues are becoming more and more serious, China has seen the birth of a number of electric vehicle start-ups (EVSUs). Although there has been a dozen or so studies about consumers' purchase intention of battery electric vehicles, few of them were about electric vehicle start-ups. Therefore, it is necessary to explore the factors ...

Recycling the retired power batteries in new energy vehicles in ...

The recycling of retired new energy vehicle power batteries produces economic benefits and promotes the sustainable development of environment and society. However, few attentions have been paid to the design and optimization of sustainable reverse logistics network for the recycling of retired power batteries. To this end, we develop a six-level sustainable ...

Feasibility and economic analysis of electric vehicle battery ...

In terms of use, the new batteries, like the EV retired batteries, are sold for economic benefit by absorbing no-cost renewable energy; however, for a new battery ...

The Influence of Brand Greenwashing on EV Purchase Intention: ...

In the context of new energy Electric Vehicles (EVs), certain car manufacturers engage in deceptive behaviors known as “greenwashing”, including activities such as “subsidy cheating”, “exaggerating carbon reduction claims”, and “selective disclosure of environmental information”. These behaviors have a negative impact on industry progress. While previous ...

Consumer purchase intention of new energy vehicles with an ...

In China the ever-increasing number of vehicles is causing severe environmental pollution. New energy vehicles (NEVs) are highly valued by the Chinese government, as they represent a breakthrough in alleviating the energy crisis and reducing air pollution (Zhang & Qin, 2018) pared with fossil-fueled vehicles, NEVs can significantly reduce pollutant emissions ...

(PDF) Current state and future trends of power ...

This article offers a summary of the evolution of power batteries, which have grown in tandem with new energy vehicles, oscillating between decline and resurgence in conjunction with...

Purchase willingness of new energy vehicles: A case

The supporting infrastructure of new energy vehicles affects cars' energy supply, charging convenience, battery life, and other important performances, and plays a decisive role in the implementation of new energy vehicles in general. ... Analysis of consumer demand for new energy vehicles based on consumer questionnaires. Modern Economic ...

A system dynamics analysis about the recycling and reuse of new ...

In order to solve the problem about recycling and reuse of power batteries for new energy vehicles in China, the paper, from the perspective of closed-loop supply chain (CLSC), ...

The impact of NEV users' perceived benefits on purchase intention

The contributions of the current study are as follows. First, this study enriches the research field through an integrated model that test accounted for key attributes of perceived economic and environmental benefits in the Chinese NEVs industry and the moderating role of education level in the relationship between perceived benefits and buying intention.

Business Perspectives

Brand image and perceived value mediate consumers' perceived ESG factors and their purchase intention of new energy vehicles. Consumers' positive attitudes will increase the purchase intention of new energy vehicles. In addition, government incentives also have a positive and significant effect on the intention to purchase new energy vehicles.

Research on the application of nanomaterials in new energy batteries ...

A new energy battery is also one of the future development goals of mankind, it is an energy-saving battery that can reduce the pollution of the environment. ... it does not stop it from gradually ...

Analysis of Lithium Battery Recycling System of New Energy ...

China has actually become the world's largest new energy vehicle production and sales market. Batteries are the core components of new energy vehicles. The current research and development of power batteries mainly include lead-acid batteries, nickel metal batteries, lithium batteries, super capacitors, fuel cells, solar cells, etc.

Purchasing intentions of Chinese citizens on new energy ...

As shown in Fig. 1, in 2015, new-energy automobile production and sales amounted to 340,471 and 331,092, respectively, and year-on-year growth reached 3.3 times and 3.4 times, respectively. 2 By the end of 2015, the sales of NEVs in China (since 2011) had reached 447,183, which is just 52,817 short of the planned target mentioned in energy saving ...

The status quo and future trends of new energy vehicle power ...

In the Special Project Implementation Plan for Promoting Strategic Emerging Industries "New Energy Vehicles" (2012-2015), power batteries and their management system ...

Can the new energy vehicles (NEVs) and power battery industry ...

China is working to boost the manufacture, market share, sales, and use of NEVs to replace fuel vehicles in transportation sector to get carbon reduction target by 2060. In this research, using Simapro life cycle assessment software and Eco-invent database, the market share, carbon footprint, and life cycle analysis of fuel vehicles, NEVs, and batteries were ...

The influence of perceived ESG and policy incentives on ...

The new energy vehicle industry has proliferated in the face of global climate change and challenges to sustainable development. Understanding the factors that encourage consumers to purchase new ...

The rise of China's new energy vehicle lithium-ion battery industry ...

Empirically, we study the new energy vehicle battery (NEVB) industry in China since the early 2000s. ... Innovation Center as one of the five major projects under the MIC 25 program also showed the significance of the battery technology (a general purpose technology) in China's top-level innovation policy. ... A patent citation network analysis ...

Does value orientation predict buying intention of new energy ...

Does value orientation predict buying intention of new energy vehicles? ... Data curation, Funding acquisition, Investigation, Methodology, Project administration, Validation, Writing – original draft, Writing – review ... Effects of personal carbon trading on the decision to adopt battery electric vehicles: analysis based on a choice ...

The status quo and future trends of new energy vehicle power batteries ...

In March 2019, Premier Li Keqiang clearly stated in Report on the Work of the Government that “We will work to speed up the growth of emerging industries and foster clusters of emerging industries like new-energy automobiles, and new materials” , putting it as one of the essential annual works of the government the 2020 Report on the Work of the ...

The prospect of chassis structure design for new energy battery ...

Chassis layout of new energy vehicle hub electric models . The battery is integrated into the chassis of the new energy-pure electric car, which has a higher percentage of unsprung mass, a ...

Analysis and Visualization of New Energy Vehicle ...

Based on this, this paper uses the visualization method to preprocess, clean, and parse collected original battery data (hexadecimal), followed by visualization and analysis of the parsed...

Research on the Impact of New Energy Vehicle Companies" ...

With the rapid advancement of battery technology and the demand for environmental sustainability, new energy vehicles (NEVs) are becoming more and more popular.

Production and recycling of new energy vehicle power batteries ...

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

Identify and bridge the intention-behavior gap in new energy ...

Then we analyze the heterogeneities of different path relationships through a multi-group analysis method to explore how to narrow the gap between purchasing intention and actual behavior, by ...

Sustainability of new energy vehicles from a battery recycling ...

The keyword emergence analysis shows that since 2014, a large number of studies have focused on the energy storage properties of used NEV batteries, and the batteries removed from NEVs can be used in the grid as well as residential photovoltaic and other energy storage systems [80, 81]. This not only extends the service life of batteries but ...

Customer satisfaction leading the intention to adopt battery ...

The automotive industry is entering a new era with electric vehicles (Secinaro et al., 2020). The BEVs with an electric powertrain operating on battery signify a promising technological advancement that decreases CO₂ emissions neglected by automobiles. Energy demand and consumption have continually risen (Okada et al., 2019).

Research of Power Battery Risk Investment: Taking CATL as ...

In the CATL, it had the world's leading new energy battery technology, which ushered in a long period of bonus. Factors such as the continued promotion of various welfare policies, technological progress and cost reduction have brought about the rapid growth of the demand for ... original materials for the analysis of the investment value ...

The Influence of Psychological Factors on Consumer Purchase Intention ...

This paper examines the impact of psychological factors on consumer purchase intention for electric vehicles (EVs) through the lens of Self-Determination Theory (SDT). By integrating the three dimensions of autonomy, relatedness, and competence, this study addresses a research gap in consumer innovative consumption, offering a deeper understanding of green ...

Analysis and Visualization of New Energy Vehicle Battery Data

In order to safely and efficiently use their power as well as to extend the life of Li-ion batteries, it is important to accurately analyze original battery data and quickly predict SOC. However, today, most of them are analyzed directly for SOC, and the analysis of the original battery data and how to obtain the factors affecting SOC are still lacking. Based on this, this ...

A system dynamics analysis about the recycling and reuse of new energy ...

A system dynamics analysis about the recycling and reuse of new energy vehicle power batteries: an insight of closed-loop supply chain, Jian Yang, Dong Mu, Xin Li ... Purpose-led Publishing is a coalition of three not-for-profit publishers in the ... Analysis of cooling technology of power battery of new energy vehicles; Analysis on Echelon ...

Potential of electric vehicle batteries second use in energy ...

The difference in new battery demand between the two cases comes mainly from the increase in BESS scale, and B2U can significantly mitigate this increase. From the accumulation perspective, demand for new batteries till 2050 reaches 44.2–44.7 TWh without B2U, while B2U can reduce it to 40.2–40.4 TWh with a decrease of 9–10%.

Multiple benefits of new-energy vehicle power battery recycling ...

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 batteries have entered informal recycling channels, which has induced a series of environmental problems. Considering this issue, we introduced the system dynamics (SD), stimulus organism response ...

Does value orientation predict buying intention of new energy ...

Using new energy vehicles made me happy. 0.931: 0.015: 64.914: 0.000: HV3. Using new energy vehicles made me a better image of new energy vehicles. 0.000: HV4. Using new energy vehicles was interesting. 0.918: 0.023: 42.702: 0.000: HV5. Using new energy vehicles was a wonderful vehicle that I used. – Utilitarian value (PUV) UV1. Using new ...

Multiple benefits of new-energy vehicle power battery recycling ...

To improve the recovery rate of power batteries and analyze the economic and environmental benefits of recycling, this paper introduced the SOR theory and the TPB and ...

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