Muscat energy storage for electric vehicles

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Muscat – A groundbreaking study has brought to light the significant potential of repurposing retired electric vehicle batteries (REVB) to bolster the reliability of clean energy technologies and cutting costs of new storage systems.

The study – titled Techno-economic feasibility of retired electric vehicle batteries repurpose/reuse in second-life applications: A systematic review - was conducted by Mohammed Khalifa al Alawi, a PhD candidate at Canterbury Christ Church University.

Alawi"s research delved into the state-of-art modelling and experimental studies focusing on second-life applications of REVB. The findings revealed that these retired batteries could play a crucial role in stabilising cleaner energy technologies and reducing the financial burden of new storage systems.

In particularly, the study highlighted the integration of photovoltaics (PV) with REVB, showcasing promising results in grid services. Nonetheless, Alawi pointed out that some applications, such as frequency regulation, present technical hurdles that could accelerate battery degradation, an area needing further research.

The study suggests that 35% of the cost of a new lithium battery could serve as a benchmark for pricing REVBs in the market. This pricing strategy holds relevance despite potential decrease in battery prices, ensuring the economic feasibility of repurposing REVB.

For the research community, this study is a treasure trove of information, consolidating existing knowledge and paving the way for future innovations in REVB utilisation. Industry stakeholders, too, stand to gain from these insights, which could inform investment and business strategies, fostering confidence in the market for repurposed batteries, Alawi said.

Authorities in the EV and energy sectors can also derive significant benefits from this study. As highlighted by it, policy intervention is crucial in establishing an environment conducive for the repurposing sector, aligning with sustainability goals and promoting a circular economy.

In conclusion, Alawi emphasised the multifaceted impact of the study. It not only sheds light on the potential of repurposing REVBs but also underscores the importance of market regulation and standardisation for second-life batteries. "The insights provided are invaluable for the research community, industry players and policymakers, supporting the advancement of sustainable energy storage solutions."

Launched on October 10, 2009, Muscat Daily is now the largest selling broadsheet newspaper in the Sultanate of Oman with 33,500 daily copies and 28,000 subscribers.. Muscat Daily provides unrivalled national news

coverage from Oman, the region and internationally.

Muscat: Oman Investment Authority (OIA) announced its investment in the US-based company ‘Our Next Energy (ONE)’, which specializes in innovative battery technology for electric vehicles (EVs) and energy storage.

This step comes in continuation of Oman Investment Authority"s efforts to diversify its international investment portfolio and achieve optimal benefit for the Sultanate of Oman in terms of return on investment and sustainable investments that align with Oman"s commitment to net zero emissions by 2050. As part of the investment, OIA and ONE signed a Strategic Collaboration Agreement (SCA) to explore potential areas of collaboration in energy storage and battery manufacturing in Oman.

"OIA is proud to be part of this pioneering technology and vision, which aligns with its strategy to focus on sustainable energy and is compatible with national strategies and commitments such as Oman Vision 2040 and the net zero emissions goal by 2050," said Ibrahim Al Eisari, Director of Private Equity at OIA.

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