EVault: For the Advancement of Energy Storage Technology

Alqasem, Adham (School: Al-Hassad Al-Tarbawi Schools)
Attia, Hussein (School: AlHassad AlTarbawi Schools)
Al-Dalaeen, Ahmad (School: Al-Hassad Al-Tarbawi Schools)

The use of renewable energy sources is growing globally, but the storage of this energy remains a major challenge. Traditional Methods rely on non-renewable energy. To address this issue, a new technology called EVault has been developed that utilizes superconductors, the flywheel energy storage system and magnetic levitation to conserve mechanical energy with almost zero losses. The purpose of this study is to evaluate the potential of EVault as a solution for energy storage and to assess its economic and environmental feasibility. Previous studies on energy storage have mainly focused on batteries and capacitors, and few have explored the use of superconductors and magnetic levitation for energy storage. The study involved a review of existing literature on energy storage, as well as an analysis of data and information related to EVault technology. Economic and environmental assessments were conducted to evaluate the feasibility of EVault as an energy storage solution. The results of this study suggest that EVault has the potential to be a highly efficient and cost-effective solution for energy storage with a maximum storage capacity of 843 KWh and an efficiency of 95-99.99% while the cost being 17400JD. It offers many advantages over traditional energy storage methods, including higher efficiency, longer lifespan, and lower environmental impact. In conclusion, the study highlights the potential of EVault as a practical and effective solution for energy storage. Evault shows promising results and potential for practical application in various fields, such as transportation and household use, paving the way for a sustainable future.