Qatar energy storage for electric vehicles

Renewable Energy Support Center Menu; Service Centers. Service Center List. ...

Citation: Al-Shaiba A, Wilson A, Cochrane L (2023) The enablers, opportunities and challenges of electric vehicle adoption in Qatar: A systematic review of the literature and assessment of progress toward transportation transformation targets. PLOS Clim 2(9): e0000271. https://doi /10.1371/journal.pclm.0000271

Editor: William Usher, KTH Royal Institute of Technology: Kungliga Tekniska Hogskolan, SWEDEN

Received: May 16, 2023; Accepted: July 24, 2023; Published: September 5, 2023

Data Availability: All data used for the analysis in this paper are shown in this paper and/or referenced.

Funding: The authors received no specific funding for this work.

Competing interests: The authors have declared that no competing interests exist.

The systematic review process identified 26 relevant publications, which were synthesized and critically assessed, grouped into three thematic clusters: (a) assessments related to the electrical grid and diversifying the energy mix, (b) the planning and distribution of EVCSs, and (c) knowledge, attitudes, and behaviors as it relates to the socio-cultural dimensions of EV adoption. Within these clusters, the focus is on two main components in the analysis. Firstly, there is an inquiry as to what the emerging evidence is, what challenges are being identified, and what potential solutions are being proposed. Secondly, where relevant, reflections are made with regard to how these studies contribute to the objectives of this study.

To complement the literature, updated data is contributed (where available) in three domains: private EV trends, public transportation EV transition, and EVCS trends. The data is presented and the analysis reflects on these trends to inform the derived implications and recommendations.

As noted in the literature, one of the barriers to adoption and consumer confidence is relatively sparse charging infrastructure, an expansion of which is required to increase consumer confidence in EVs [4]. The current public charging infrastructure in Qatar is provided by Kahramaa (Qatar General Electricity & Water Corporation) and is made up of 100 current EVCS as of 2022, with plans to add an additional 150 in 2023, with a final goal of 600-1000 EVCS by 2025. The number of current EVCS appears to be an under-estimate, however, as Kahramaa awarded a contract in 2022 to install 100 EVCS [42], and recently announced that all Woqod fuel stations (of which there are over 100) would offer EV charging [43, 44].

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