

## A Systems-Level Approach towards Transition to Electrical Vehicles

**Authors :** Mayuri Roy Choudhury, Deepti Paul

**Abstract :** Many states in the United States are aiming for high renewable energy targets by the year 2045. In order to achieve this goal, they must do transition to Electrical Vehicles (EVs). We first applied the Multi-Level perspective framework to describe the inter-disciplinary complexities associated with the transition to EVs. Thereafter we addressed these complexities by creating an inter-disciplinary policy framework that uses data science algorithms to create evidence-based policies in favor of EVs. Our policy framework uses a systems level approach as it addresses transitions to EVs from a technology, economic, business and social perspective. By Systems-Level we mean approaching a problem from a multi-disciplinary perspective. Our systems-level approach could be a beneficial decision-making tool to a diverse number of stakeholders such as engineers, entrepreneurs, researchers, and policymakers. In addition, it will add value to the literature of electrical vehicles, sustainable energy, energy economics, and management as well as efficient policymaking.

**Keywords :** transition, electrical vehicles, systems-level, algorithms

**Conference Title :** ICGEES 2021 : International Conference on Green Energy, Environment and Sustainability

**Conference Location :** London, United Kingdom

**Conference Dates :** September 23-24, 2021