

DETERMINING ELECTRIC VEHICLE CHARGING STATION REQUIREMENTS AT MILITARY INSTALLATIONS

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ABSTRACT

Executive Order No. 14057 mandates U.S. federal agencies to transition to electric non-tactical vehicles by 2035. This study attempts to find the optimal solution for various electric vehicle support equipment (EVSE) types using a linear programming model, which minimizes total procurement and installation costs by considering real-world constraints such as the weekly vehicle mileage demand, charging time, and EVSE capacity. This study contributes to the broader effort of the U.S. military initiative to combat climate changes and enhances understanding of efficient EVSE deployment strategies in large institutions.

Keywords: Electric Vehicle; Charging Stations; Linear Programming; Military