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Campus solar roads: a feasibility analysis

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We study the possibility of replacing conventional roads and buses with solar powered panel roads and electric buses fueled by solar energy within a closed system at a university campus. We also examine an alternative option of using solar buses equipped with panels on the rooftop. We review the recent advances in the technology of solar roads and buses and examine the modeling challenges and uncertainties of a transportation system powered by solar energy. We evaluate the economic aspects as well as the advantages and limitations of the proposed systems. The feasibility of this project is examined in terms of its application in the NTUA campus and possible directions for further research are identified.