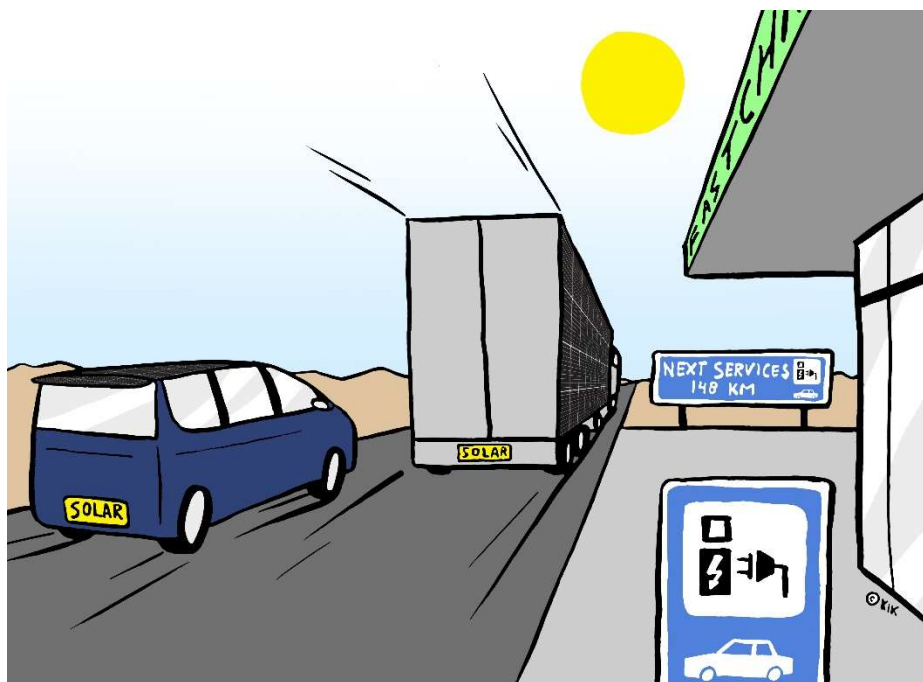


## Europe explores potential of solar powered vehicles



An international public-private consortium will address how solar-powered vehicles can support the transition to an all-electric transport system in the EU. The group named SolarMOVES consists of TNO (The Netherlands Organization for Applied Scientific Research), Fraunhofer Institute for Solar Energy Systems ISE, Lightyear Layer, Sono Motors, and IM Efficiency. This pilot project comes at the behest of the European Commission's Directorate-General for Mobility and Transport (DG MOVE) to explore the potential of solar-powered vehicles and its impact on the electrical recharging infrastructure policy and regulations in Europe in the coming years.

In the coming decade, the EU and Member States have ambitious targets to transition to a zero-emissions transport system. This requires significant investments in recharging infrastructure. Solar technology for mobility applications can potentially ease this investment and help to overcome some of the challenges users of electric vehicles experience. For instance by diminishing the dependence from recharging. Earlier research shows estimates that it's possible to charge about 25% fewer times annually when driving electric vehicles with solar panels installed. In sunny places it can be reduced to as much as 40%.

### Growing market

Electric vehicles with solar panels may represent 10% of the entire market in 2030. Last year, the first commercially available solar-powered car, the Lightyear One, was launched on the market. Furthermore, already more than 30 trailers are driving through Europe, with the SolarOnTop of IM Efficiency on its trailer roof, making commercial transport more sustainable by using solar energy. Next to that Sono Motors introduced its "Solar Bus Kit" to reduce emissions and fuel costs of inner-city public transport fleets.

### Monitoring efficiency to predict required infrastructure

A three-years pilot project will be conducted in which modelling will be combined with and verified by on-the-road monitoring and testing. Various vehicles (cars, trucks, buses, and vans) will be equipped with integrated solar panels for their daily use throughout the year. The vehicles will also

be equipped with sensors to measure and determine solar irradiation in real-world conditions across Europe. The results of this monitoring will give insight into the increase in efficiency of electric vehicles when solar technology is integrated and will be used to ascertain the overall potential of this technology and make predictions on the required recharging infrastructure for the potential scenario in which a significant part of the electrical vehicles are equipped with solar modules in the next years. The findings will finally be translated into a set of policy recommendations for the European Commission.