

ECONOMIC COMMISSION FOR EUROPE

INLAND TRANSPORT COMMITTEE

Working Party on Road Traffic Safety

Sixty-first session

Geneva, 21–23 March 2011

Item 8 of the provisional agenda

**Standardization of the Charging of Electric Vehicles
and ideas for the Road Sign**

The secretariat has been requested by the Working Party on Road Traffic Safety to provide an informal document about the standardized charging of electric vehicles and ideas for the relevant road sign.

Demand for electricity-powered vehicles is increasing in Europe and elsewhere. It is, therefore, a growing concern that all types of electric cars, scooters and bicycles should be uniformly and safely charged throughout the EU countries, using the same standardized “smart plug”, thus avoiding the fragmented situation which prevails for mobile phones.

To this end, on 29 June 2010 a Standardization Mandate was given by the European Commission to the European Committee for Standardization (CEN), the European Committee for Electrotechnical Standardization (CENLEC) and the European Telecommunications Standards Institute (ETSI) for the collaborative development of such standards that would not only simplify the charging process by being the same independently of vehicle brand or type, but would also increase safety. This is especially important as the charging sockets will likely be accessible to children. Additionally, plugs and sockets ought to be proofed from water, grease, dust and rust as well as be protected from corrosion. Due attention should also be given to the issue of safety shutters.

The three mandated institutions were requested to invite, as appropriate, other institutional stakeholders such as organizations representing consumers’ interests, environmental protection, workers, small and medium-sized enterprises, electrical industry and car manufacturers and suppliers to participate in their work. The European Automobile Manufacturers Association welcomed the initiative taken by the European Commission.

The new harmonised standard for the interface between vehicles and the charging infrastructure is expected in mid-2011 and will become obligatory for all new electric vehicles by 2017.

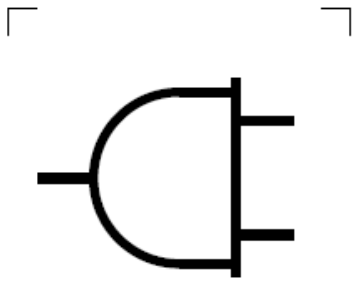
Potential Road Signs

The ISO, following consultations with the UNECE, has proposed the following sign (symbol 1) as a potentially suitable idea:

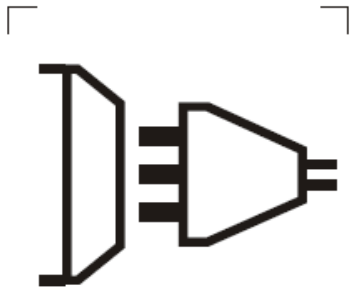


Symbol 1

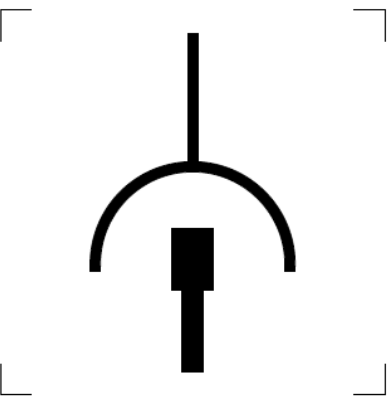
The UNECE conducted relevant research and involved other potential stakeholders to present alternative and additional standard engineering signs for the electricity outlets (as background ideas). These are presented below (symbols 2-5), for information only.



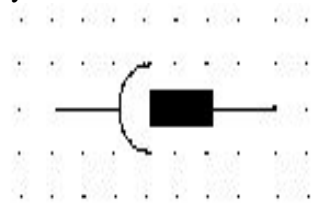
Symbol 2



Symbol 3



Symbol 4



Symbol 5