FACTSHEET KATHMANDU

solutions plus

Demonstration City | Kathmandu - Nepal

In Kathmandu, a demonstration action will contribute to create an ecosystem for electric mobility in Kathmandu by demonstrating different EVs to enhance public transport, as well as suitable charging solutions and related services. It will support the integration of several innovative last-mile solutions such as 30 new and 50 remodelled E-3-wheelers (for public transport) and 20 E-scooters/e-bikes (provided by the city/ Valeo) with 5 E-minibuses, (e.g. 8-meter length) (co-funded by the city), the buses in use currently and forthcoming E-buses. 2 diesel buses will be converted to E-buses replacing the drive system (motor, transmission and rear axle) and the suitable business model will be developed.
The E-buses/E-minibuses and E-3-wheelers (refurbished and new with an innovative Valeo 48V all-electric prototype) are planned to run on the existing routes. As charging infrastructure is poor or non-existent in public, suitable options for charging EVs and batteries will be suggested. E-buses and E-minibuses with Lithium-ion (Li-ion) battery large enough to allow for the daily operation (without charging) up to 14 hours will be sought, together with charging strategies such as plug-in overnight charging located in the depot. Several existing E-3-wheelers will be remodelled - mainly converting lead-acid batteries into Li-ion batteries and refurbishing the chassis, assembling the vehicle parts locally. New E-3-wheelers with Li-ion batteries and fast charging system will be introduced together with innovative business model, such as battery leasing/pay-per-use model. This will provide better services for E-3-wheelers as public transportation in the city. E-scooters/e-bike sharing system, that reduce the dependence on owning private vehicles, will also be sought in the demonstration project with state-of the-art technologies such as GPS positioning, contactless payments and 2 docking stations integrated into charging facilities.

E-mobility in public transportation

The approach/ innovative aspect

- Demonstrate different EVs to enhance public transport, charging solutions and services
- Integrate renewable in charging system
- Convert 2 diesel buses to E-buses
- E-3-wheelers business model - battery leasing/pay-per-use model
- Introduce new and remodeled E-3-wheelers, E-scooters, E-minibus for last mile solutions
- E-scooters - GPS positioning, contactless payments and docking stations

Fact and figures

- No fuel reserves
- Major part of electricity - hydropower
- National policies favouring EVs
- Poor charging infrastructure

	Demonstration actions		
	Convert 2 diesel buses to E-buses	Business model for retrofitting E-buses	SOL+ Maas App
	5 E-minibuses	Fast charging for E-bus and E-minibuses	Smart services (apps, smart card)
	30 new and 50 re-modelled E-3-wheelers	Li-ion battery swapping	Fleet management
	20 E-scooters	2 docking-cum charging for E-scooters	Business model on energy integration