Building the Electric Mobility Ecosystem

Partner: Oyika

Location: Phnom Penh

Background

The number of vehicles per year in Cambodia is growing at 14%, with 3.2 million vehicles registered in 2016. The Cambodia Climate Strategic Plan recognizes transportation as the highest consumption of energy and consequently a major driver of the carbon emissions in the Kingdom. Motorbikes are by far the greatest contributors to the pollution problem with almost 6 times more motorbikes than cars on the road in Cambodia. The objective of 'Building the Electric Mobility Ecosystem in Cambodia' is to mitigate the effects of climate change by reducing GHG emissions from fuel-powered motorbikes.





Objectives

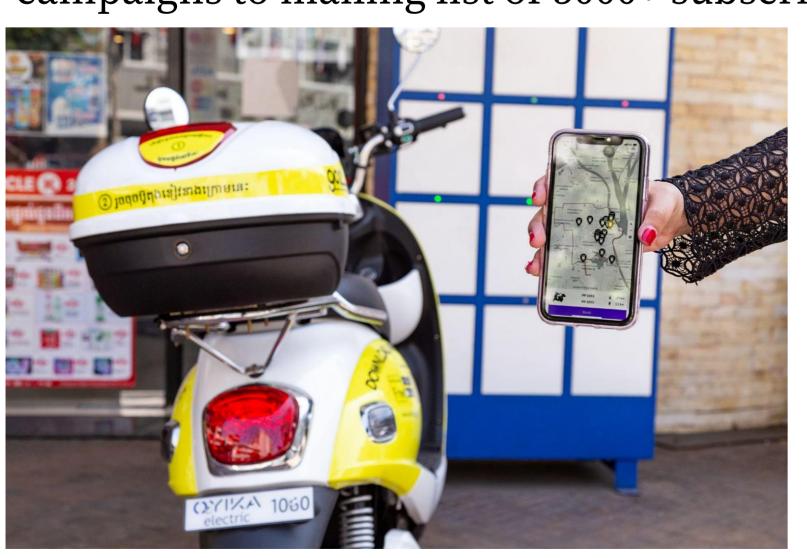
The objective of 'Building the Electric Mobility Ecosystem in Cambodia' is to **mitigate** the effects of climate change by reducing greenhouse gas (GHG) emissions from fuelpowered motorbikes.





Key technologies and approaches introduced

- · Data on electric ride share collected weekly through backend system: Demographic data including age, gender and also number of rides, kms ridden to calculate the distance treavelled based on average speed.
- · Over 400 local users and 300 foreign users of Go2 Bike share
- Approximately 25% of customers are female
- Survey conducted on general public in June 2021 to understand perception of electric vehicles. Over 100 people surveyed. Majority had heard of EVs but were yet to test drive them.
- · Direct engagement with public through showcase event and online events. Ideally all events have opportunity for physical driving of EVs but this was not possible for events in April-Sept 2021 due to COVID
- · Knowledge products and sharing conducted online via social media and primarily through educational videos in Khmer. Also shared through email campaigns to mailing list of 5000+ subscribers



Electric Vehicles Survey Result The market for electric vehicles is growing and electric vehicles are now present in Cambodia. But there seems to be a barrier for them to compete in the Cambodian market. Is it the lack of understanding of electric vehicles or misconception that is the obstacle? EnergyLab put out a public survey in June 2021 to gain an understanding of Cambodian people's perception and use of electric vehicles in Cambodia.	Where they heard of EVs: Social media News Video On the street Friends 0 25 50 75 100 The prominent source of information that respondents received are social media, news, and videos. Respondents awareness of electric vehicle brands in Cambodia
Among 103 responses, there are 97% of which have heard of electric vehicles while only 12.5% have experienced riding them. We received 103 responses from general public.	Oyika 11.2% Voltra 11.2% Electric bike Cambodia 36.8% BYD Cambodia 12.5% Onion mobility Thada 13.8% 14.5%
Although most respondents are aware of the presence of EVs in Cambodia, there are very few people who feel they hear about EVs 'frequently'	The impression from respondents is rather positive. They think that EVs are better for environment, reduce CO2 emissions, and the vehicles have good design.
Among 85.5% of respondents who have heard of EVs: Hear of EVs everyday 11.5% Hear of EVs 3-5 time a week Once or twice a week 16.1%	Only 13 out of 103 respondents have ridden an EV Although electric vehicles are known by many in Cambodia, there are very few who actually have experience riding one.

Outputs and key activities Activities Output 1.1. Establishment of electric Modify 300 e-bikes motorbike ride sharing fleet in Launch of motorbike ride Phnom Penh sharing pilot 2.1. Validate understanding of Run 1 focus group workshop to barriers to electric vehicle uptake validate 2.2. General public have a greater Create 6 educational videos understanding of the benefits of Run 6 public sessions electric vehicles 2.3. Increased visibility of careers in Online marketing campaign electric vehicle industry Recruit and train 2 interns 2.4. Physical exposure for the public Organize an annual electric to view and experience electric mobility showcase in 2020 and 2021 vehicle technology 2.5. MPWT, MEF and NCSD Officials Run 4 workshops with government officials have an increased understanding of the benefits of e-bikes for Cambodia

Implementation progress

- 237,000 kms ridden on ride share and 120,000 km on electric food delivery (goal 484,000km by end Feb 2022)
- modified 75 e-bikes for electric bike sharing
- Successful event on 'Electrification of Vehicles for a Cleaner Cambodia' held with British Ambassador, Australian Ambassador, Senior Minister of MPWT and Minister attached to the Prime Minister Managing Director of EDC. Total almost 20k views and shared by MPWT and EDC
- Organised mobility showcase in 2021 with over 100 attendees and in progress for showcase 2022
- Released 5 videos about EVs
- Prepared 4 campaign posters on EV careers to be released end Nov to early Dec







Key challenges and lessons leant

- Knowledge and interest in electric vehicles is more widespread than anticipated. Most people in the focus group and that answered the survey are aware of EVs. During one public event where a convoy of EVs was ridden through Phnom Penh, there were many curious observers who knew the bikes were EVs.
- Additionally, the events on EVs are highly attended relative to other EnergyLab events. However key barriers identified at the start of the project are still the key barriers to uptake and most identified concerns (battery charging/infrastructure, cost, range)
- Challenges for technology deployment given that the project also included development of the ride-sharing technology (specifically battery and onboard computer). This means a longer timeline should be accounted for since it is not an existing product
- COVID-19 proved most challenging for the actual implementation of rideshare since during lockdown it was not possible to have ride-share system operating. This has meant the project pivoted some available e-bikes in to food delivery, where there is much greater riding capacity





















