

INFORMATION SHEET

Research Study Title: ChargeUp!

SETREC number: 22IC7820

Project code: PA1449

Principal Investigator: Professor Tim Green

Purpose of the study

This project will involve the use of real analytics data from electric motorcycles and battery swap stations in Nairobi, supplied as secondary data by commercial e-mobility partners (ARC Ride and Fika Mobility), to perform modelling and analysis to determine optimal battery swap station locations and technical configurations. This work will be used to plan battery swap infrastructure in Nairobi and to inform related policy recommendations, with the aim of enabling e-mobility to reduce transport related emissions and air pollution in the city and improve the livelihoods of riders.

The primary objectives of the study are to use real analytics data from electric motorcycles, batteries, and swap stations in Nairobi to:

1. Determine the optimal number of charging/swap stations and batteries needed per vehicle to have a cost-effective and complete Battery-as-a-Service (BaaS) ecosystem for various scenarios of electric motorcycle market penetration in Nairobi.
2. Determine the optimal locations for the deployment of charging/swap stations for various scenarios of electric motorcycle market penetration in Nairobi.
3. Quantify the localised well-to-wheel pollution and carbon emissions mitigated by shifting to electric motorcycles from internal combustion engine (ICE) motorcycles in Nairobi.
 - a. Investigate the effect of charging time on emissions.
4. Investigate how different reduced electricity tariff structures would affect the operating costs of electric motorcycles and battery swap stations in Nairobi.

What will happen to the results of the research study?

The project will produce reports to be shared publicly. Fully anonymised aggregate data shall be made available where necessary. Principles of academic publishing shall be applied for all publications produced from the project.

Who is organising and funding the research?

P4G [<https://p4gpartnerships.org/chargeup>] are funding this research. Energy 4 Impact (E4I) [<https://energy4impact.org>] are the Administrative Partner for the study.

Who has reviewed the study?

This study was given approval by Professor Anna Korre, Head of Department (Co-Director of Energy Futures Lab) and the Research Governance and Integrity Team (RGIT).

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Contact for Further Information

For further information related to this research, please use the following contact details:

E-mail: energyfutureslab@imperial.ac.uk

Thank you for agreeing to share your data for this research.

Transparency Notice

SUMMARY INFORMATION SHEET

In this research study we (Imperial College London) will use information from you, shared with us by either ARC Ride Kenya LTD or Fika Mobility PTE LTD. We will only use information that we need for the research study. We will not receive your name or contact details as part of the data supplied to us.

Everyone involved in this study will keep the data collated as part of this study, including your personal data, safe and secure. We will also follow all privacy laws and legislation that are relevant to the specifics of the study.

At the end of the study we will save some of the data in case we need to check it and/or for future research.

We will make sure no-one can work out who you are from the reports we write. The following information pack tells you more about this.

How will we use information about you?

Research Study Title: ChargeUp! PA1449

Imperial College London is the sponsor for this study and will act as the data Controller for this study. This means that we are responsible for looking after your information and using it appropriately. Imperial College London will keep your personal data for:

- 10 years after the study has completed in relation to primary research data.

The study is stated to finish in March / 2023

We will need to use information (including potentially personal data and data created as part of the study), shared with us by either ARC Ride Kenya LTD or Fika Mobility PTE LTD, for this research project.

This information will include your:

- Vehicle/battery location data
- Battery analytics data which will link to the vehicle being driven
 - state of charge
 - voltage
 - charging state
 - vehicle state

People within Imperial College London and study team (see section 'Sharing your information with others') will use this information to do the research or to check your records (see information to be collected) to make sure that the research is being done properly and the information held is accurate. We will keep all information about you safe and secure. Once we have finished the study, we will keep

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some of the data so we can check the results. We will write our reports in a way that no-one can work out that you took part in the study.

LEGAL BASIS

As a university we use personal information to conduct research that will either be in the public interest, or the 'legitimate interests' of Imperial College whose interests are to conduct world leading research and innovation aiming to deliver transformative impact for society. Our legal basis for using your information under the General Data Protection Regulation (GDPR) and the Data Protection Act 2018, is as follows:

- Imperial College London - "performance of a task carried out in the public interest"

We will conduct scientific research in compliance with the law and the recommendations and guidance published by the UK Information Commissioners Office (ICO). Scientific research should serve the public interest, which means that we have to demonstrate that our research has societal impact serving the interests of society as a whole.

INTERNATIONAL TRANSFERS

There may be a requirement to transfer information to countries outside the United Kingdom for example, to a research partner, either within the European Economic Area (EEA) or to other countries outside the EEA. Where this information contains your personal information, Imperial College London will ensure that it is transferred in accordance with data protection legislation. If the data is transferred to a country which is not subject to a UK adequacy decision in respect of its data protection standards, Imperial College London will enter into a data sharing agreement with the recipient organisation that incorporates UK approved standard contractual clauses or use another transfer mechanism that safeguards how your personal data is processed.

SHARING YOUR INFORMATION WITH OTHERS

We will only share your personal data with certain third parties for the purposes referred to in this participant information sheet and by relying on the legal basis for processing your data as set out above.

- Other Imperial College London employees (including staff involved directly with the research study or as part of defined secondary activities which may include support functions, internal audits, ensuring accuracy of contact details etc.), College agents, contractors and service providers (for example, suppliers of printing and mailing services, email communication services or web services, or suppliers who help us carry out any of the activities described above). Our third party service providers are required to enter into data processing agreements with us. We only permit them to process your personal data for specified purposes and in accordance with our policies.

POTENTIAL USE OF STUDY DATA FOR FUTURE RESEARCH

When you agree to take part in a research study, the information collected either as part of the study or in preparation (such as contact details) may, with your consent, be provided to researchers

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running other research studies in this organisation and in other organisations. These organisations may be universities or organisations involved in research in this country or abroad. Your information will only be used by organisations and researchers to conduct research in accordance with all relevant legislation including the GDPR (UK GDPR and EU GDPR 2016/679), the Data Protection Act 2018.

This information will not identify you and will not be combined with other information in a way that could identify you, used against you or used to make decisions about you.

COMMERCIALISATION

Data from the study may also be provided to organisations not named in this participant information sheet, e.g. commercial organisations or non-commercial organisations for the purposes of undertaking the current study, future research studies or commercial purposes such as development by a company of a new test, product, service or treatment. We will ensure your identifying details will NOT be given to these third parties, instead you will be identified by a unique study number with any sample analysis having the potential to generate 'personal data'.

Aggregated (combined) or anonymised data sets (all identifying information is removed) may also be created using your data (in a way which does not identify you individually) and be used for such research or commercial purposes where the purposes align to relevant legislation (including the GDPR) and wider aims of the study. Your data will not be shared with a commercial organisation for marketing purposes.

WHERE CAN YOU FIND OUT MORE ABOUT HOW YOUR INFORMATION IS USED

You can find out more about how we use your information:

- by asking one of the research team
- by sending an email to energyfutureslab@imperial.ac.uk or
- by ringing us on +44 (0)20 7589 5111

COMPLAINT

If you wish to raise a complaint about how we have handled your personal data, please contact the research team first by sending an email to energyfutureslab@imperial.ac.uk, or by ringing us on +44 (0)20 7589 5111.

Following our response, if you are not satisfied please contact Imperial College London's Data Protection Officer via email at dpo@imperial.ac.uk, via telephone on 020 7594 3502 and/or via post at Imperial College London, Data Protection Officer, Faculty Building Level 4, London SW7 2AZ.

If you remain unsatisfied with our response or believe we are processing your personal data in a way that is not lawful you can complain to the Information Commissioner's Office (ICO) via www.ico.org.uk. The ICO does recommend that you seek to resolve matters with the data controller (us) first before involving them.