

NORTHERN IRELAND ELECTRIC VEHICLE INTELLIGENT CHARGING PROJECT

Trial Information Pack



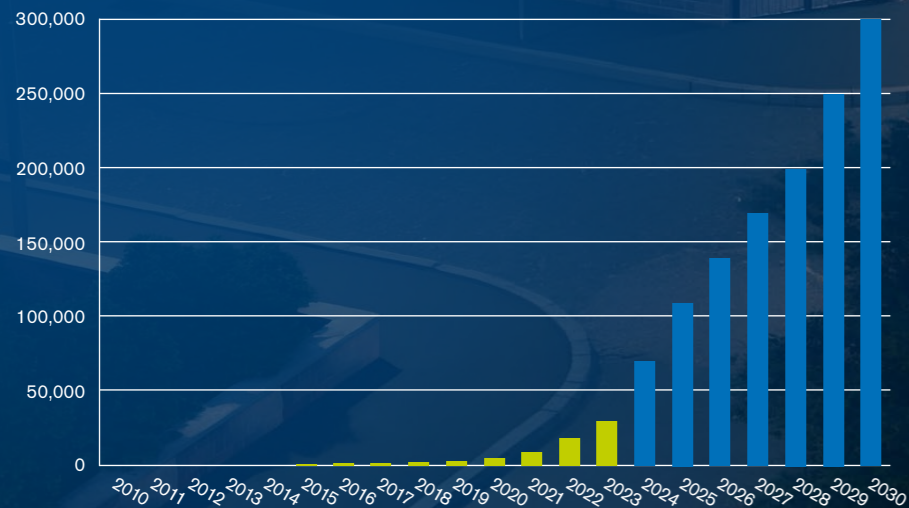
EV Intelligent Charging

The way we generate and consume electricity is changing.

As more people adopt electric vehicles (EVs) and we look towards a more sustainable future, we need to use the electricity network in a smarter, more flexible way.

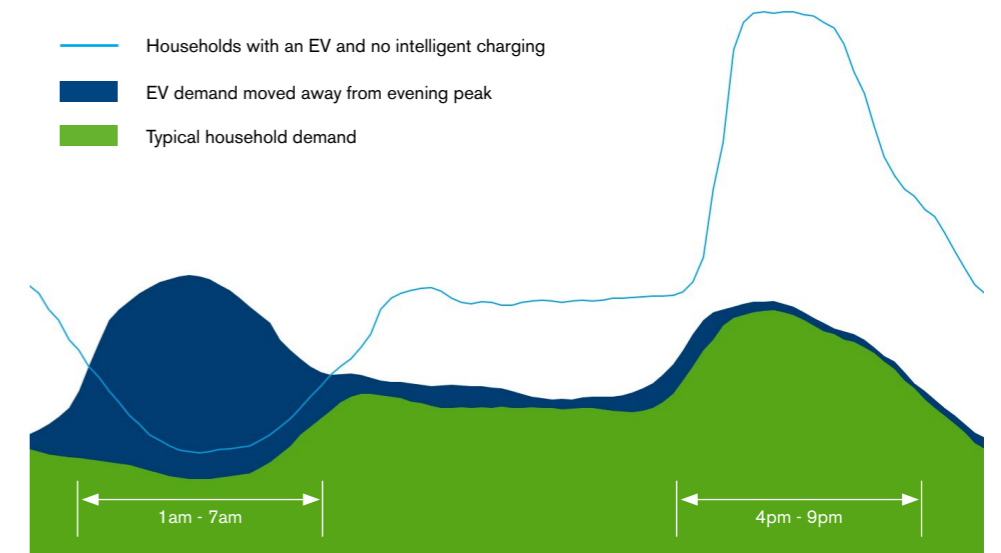
Sales of electric vehicles in Northern Ireland are rising rapidly. Cumulative numbers of cars and vans registered in Northern Ireland has exceeded 18,000 with 300,000 predicted by 2030.

The rise in the number of EVs on our roads presents a number of benefits but also increases the demand on our electricity networks.



EV registrations up to March 2023, Department for Transport <https://www.gov.uk/government/statistical-data-sets/>
 Forecasted increase in EV registrations

EV INTELLIGENT CHARGING



Studies^[1] indicate that the presence of an EV chargepoint may double the peak demand of the average domestic property.

We've kicked off the NI EV Intelligent Charging project (NIEV) to investigate ways to mitigate the effect of additional EV chargepoints on our electricity networks.

The traditional way of increasing capacity and reducing demand on electricity networks is by means of reinforcement – more cables, more infrastructure. However, this can be a costly solution. The NIEV project is testing the concept of intelligent

charging here in Northern Ireland as an alternative.

Intelligent charging is based on optimising EV charging.

- Flattening peaks in demand
- Shifting charging to cheaper periods
- Matching EV demand with renewable generation

All of these variables need to be balanced whilst ensuring drivers' charging needs are met as far as possible.

^[1] <https://myelectricavenue.info/>

The Project

NIE Networks is seeking around 200 drivers with access to an EV and a home charger to participate in this first of its kind pilot in Northern Ireland.

The intelligent charging system will remotely connect into chargepoints, data will be gathered including vehicle availability preferences and tariff information. This will be used in conjunction with data from the electricity network to determine the best time for charging activity to occur. As an EV driver, you will have your vehicle charged and ready to go at the time you have indicated to the system.

What are the benefits to me as an EV driver?

- You will be helping to test out a cutting edge system
- We will upgrade your chargepoint free of charge if it is not deemed compatible
- You will be rewarded for your participation

What are the benefits to the wider population?

- EV charging could be matched with periods of high renewable generation – energy that may not be utilised effectively otherwise
- Better use of existing infrastructure means that spend on new equipment is reduced; reflected in use of system charges that all consumers pay

What are the benefits to the electricity network?

- The system should increase network resilience
- If the system is proven to be successful, more EV charger connections will be possible in the future



**A TYPICAL EV DRIVER
COULD EARN UP TO £200
FOR PARTICIPATING IN
OUR TRIAL**

How will it work?

We have partnered with ev.energy to develop our intelligent charging system. This system can either communicate with your chargepoint or with the vehicle directly. The system will determine the best time to charge your vehicle considering your tariff, your vehicle “ready by” time and the status of the electricity network.

To use our system, you will need to download the ev.energy app and complete their registration process when advised. We'll be in touch when we're ready to start.

The information NIE Networks receives from the system will allow us to plan for a future with large numbers of EVs on our roads.

In exchange for participation in our trial, we are offering the following:

- £25 sign up bonus
- £5 per month for 20 months

We have also partnered with SYSTRA in order to complete some research around intelligent charging. To facilitate this research, we would like you to complete a total of 5 surveys throughout the trial. We will reward you with £10 for each survey completed, with an additional £20 bonus on completing all 5 surveys.

Your opinions on the intelligent charging system will form a key part of the long-term solution.

A maximum of 12 participants will also be asked to join focus groups. These groups will further inform the long-term intelligent charging solution. For additional information, please refer to the Terms & Conditions on page 12 of this document.

How do I participate?

Joining this project is easy. We do have some criteria that need to be met:

- You must have access to an EV throughout the duration of the trial. We are currently unable to offer this trial to drivers of PHEV.
- You must already have a chargepoint installed at your property
- The location of your chargepoint must allow charging to take place off-street
- You will need to provide us with the details of your existing chargepoint and vehicle to allow us to assess the need for replacement
- You must use the ev.energy app throughout the duration of the trial

Project Partners

NIE Networks
www.nienetworks.co.uk



ev.energy
www.ev.energy



SYSTRA
www.systra.com/uk/



EA Technology Ltd.
<https://eatechnology.com/>



BI Electrical Ltd.
www.greenviewgroup.com

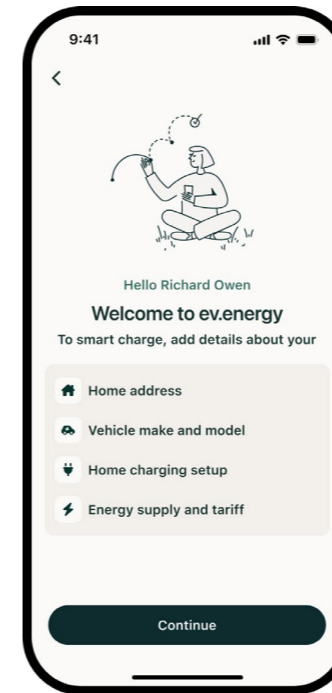
Contact Details

Trial Queries and Support

ev.energy support@ev.energy

If you have any further queries or concerns you can contact NIE Networks on 03457 643 643 or niev.project@nienetworks.co.uk

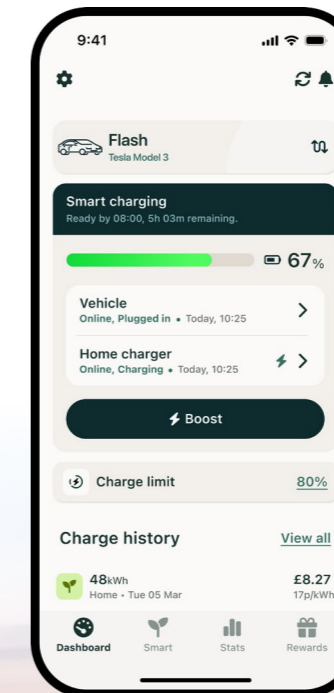
The Mobile App



The project will use ev.energy's app, which is available via Google Play or the Apple App Store.

Once registered with the project, you will be asked to register on the ev.energy app. As part of the registration process you will be asked to input the following:

- Home address
- Vehicle make and model
- Details of your home charging set up
- Your energy supplier and current electricity tariff



The app will be where all your charging preferences are set throughout the duration of the trial:

- Ready by time
- Use of home solar (where applicable)
- Energy tariff

If required, a temporary opt-out feature is also provided within the app allowing the vehicle to be charged immediately.

A more detailed user guide will be provided by ev.energy on registration for the project.

Q. Why is intelligent charging needed?

A. Intelligent charging is based on optimising EV charging. Intelligent charging balances up a number of requirements whilst ensuring that vehicle drivers' needs are met as far as possible. Intelligent charging can be used to flatten peaks in demand on electricity networks. It can also be used to shift charging to cheaper periods and align charging demand with renewable generation. Intelligent charging therefore has benefits for both customers and network operators.

Q. What makes intelligent charging “intelligent”?

A. Intelligent charging balances multiple inputs to come up with the best charging time for both the customer and the network.

Q. What do I have to do to participate in this trial?

A. Visit nienetworks.co.uk/futurenetworks where you can find our project registration form.

Q. How do I earn £5 per month?

A. The £25 sign up bonus will be paid to you following the completion of your first intelligent charging event. £5 per month can be earned by ensuring your vehicle is available for at least 12 charging sessions per calendar month. Up to 3 of these sessions can be boosted i.e. not intelligent charging.

Q. Will my vehicle be ready when I need it?

A. Under most circumstances yes, the system will have your vehicle ready at the user set time. There may however be circumstances where the overall security of the electricity networks may take precedence e.g. following severe weather conditions. This would be in an extreme situation and is considered highly unlikely.

Q. Do I need to leave the vehicle plugged in more often than I usually do?

A. We would ask that you do not change your charging habits at the outset of the trial. Throughout the trial we may request that you change your charging routine to maximise the benefits of intelligent charging.

Q. Does it matter what supplier I am with?

A. No it makes no difference. If you are participating in the trial we will ask you to input details of your supplier and tariff to ensure that the system is optimising your charging activity correctly.

Q. Will it cost me more to charge my vehicle?

A. By entering your tariff information into the app, the system will try as far as possible to keep charging activity during the cheapest periods.

Q. Do I need any new equipment to participate in the trial?

A. No unless there are issues with compatibility. As part of the sign up process, we will ask you what vehicle you drive and what chargepoint you own. We will advise you if your current setup is suitable for the trial. If we determine that there are issues with compatibility, we will offer you the opportunity to have a new chargepoint fitted free of charge.

Q. What if I no longer own or have access to an EV?

A. You must notify the project team by contacting niev.project@nienetworks.co.uk that you are no longer able to participate in the trial. The project team will ensure that any payments owed up until the date of departure are processed.

Q. What if I move house during the trial period?

A. Please contact the team at ev.energy at support@ev.energy to discuss. Pending a further assessment of compatibility, you may be able to continue participating from your new address.

Q. What if I change my vehicle during the trial period?

A. Please contact the team at ev.energy at support@ev.energy where they will advise how to update the app with your new vehicle details

Q. How will I be notified about any upcoming surveys related to the trial?

A. You will receive a notification via the [ev.energy](https://www.ev.energy) app. This will include instructions on how to complete the survey. SYSTRA may also contact you directly.

Q. What data will be gathered as part of this trial?

A. Details of this can be found in the privacy statement <https://www.nienetworks.co.uk/niev-privacy-statement> All project partners have completed rigorous checks to ensure that your data is kept safe.

Q. What if I have a problem during the trial?

A. [ev.energy](https://www.ev.energy) will be acting as point of contact for all trial queries. Each contact will be triaged and then assigned to the relevant project partner.

Q. Who are all the project partners?

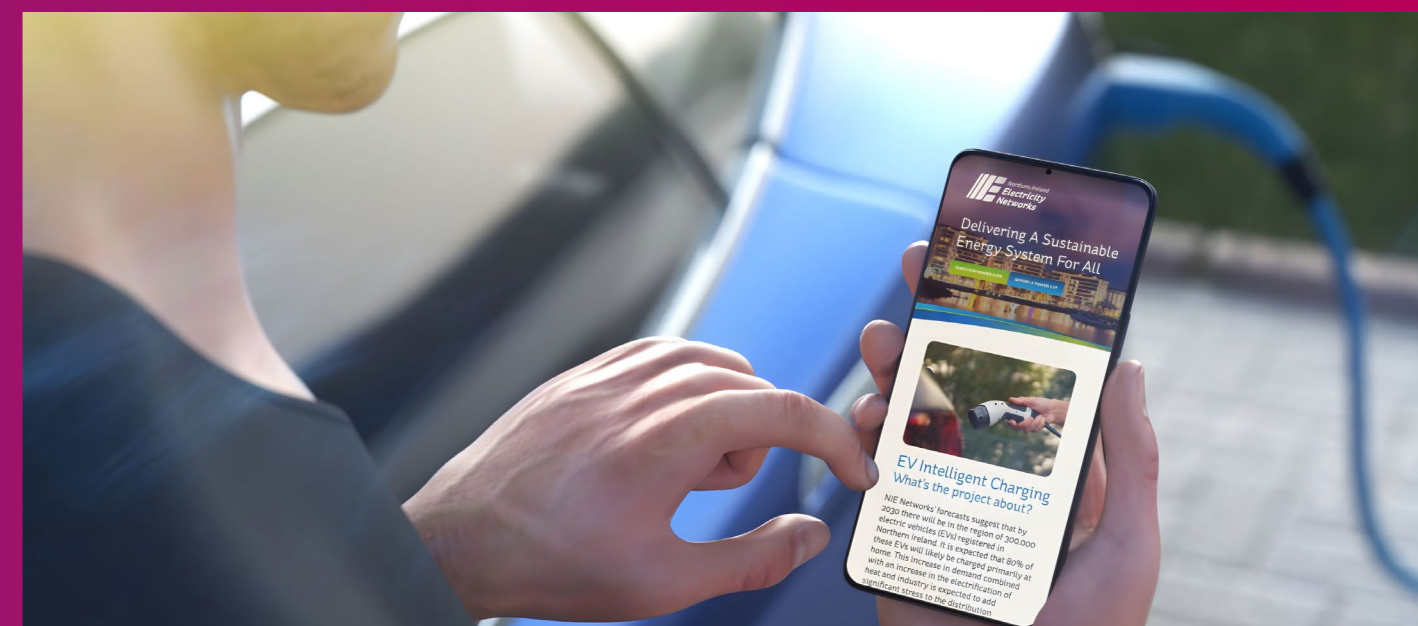
There are 4 project partners.

NIE Networks –NIE Networks own and maintain all electricity transmission and distribution equipment in Northern Ireland whilst operating the distribution network.

EA Technology –EA Technology have many years of experience managing specialist innovation projects for electricity network operators, with particular depth in projects assessing the impact of, and helping electricity networks adapt to, low carbon technologies.

ev.energy –[ev.energy](https://www.ev.energy) are providing the app and associated management system in order to facilitate this trial. [ev.energy](https://www.ev.energy) have been involved in several smart charging projects in both GB and the US.

SYSTRA –As a world leading engineering and consulting group, SYSTRA has supported clients to solve challenges across the transport, energy, environmental and built-environment sectors. Our multi-disciplinary expertise includes developing robust plans to decarbonise transport and social and market research, providing decision makers with robust evidence.



Glossary

BEV – Battery Electric Vehicle

EV – Electric Vehicle (for the purposes of this trial, we are only considering BEV)

PHEV – Plug in Hybrid Electric Vehicle

Intelligent charging event – charging session of at least one hour duration where the session is initiated by our intelligent charging system

Boosted event – the system will permit users to override the system and initiate a charging session immediately if required. This is referred to as a boost or boosted event.

'NIE Networks' means Northern Ireland Electricity Networks Limited having its registered office at 120 Malone Road, Belfast, BT9 5HT

'**System Provider**' means ev.energy Limited having its registered office at 86-90 Paul Street, London, EC2A 4NE, United Kingdom

'**Installation Partner**' means BI Electrical Services (NI) Limited having its registered office at 11 Michelin Road, Mallusk, Newtownabbey, Co Antrim, BT36 4PT

'**Insights Provider**' means SYSTRA Limited having its registered office at 2nd Floor Riverview House, 21-23 city quay, Republic of Ireland, Dublin 2

Joining the trial

Participation in this trial is conditional upon you already having an existing chargepoint installed at your property.

In order to assess the compatibility of your existing chargepoint, NIE Networks ('we/us/our') will ask you to provide the make and model of both your chargepoint and your vehicle which will be shared with our back-office system provider ('System Provider').

Our System Provider will then confirm whether your existing chargepoint is compatible with our trial system. If your existing chargepoint is not deemed compatible, it may need to be replaced before you can participate in the trial.

Commissioning/Onboarding

Where an existing chargepoint is not being replaced as part of the trial, a short onboarding process will be required to ensure communications are put in place between the existing chargepoint and the back-office system.

Where possible, this onboarding process may be completed by you, the trial participant. However, where this is not possible, a visit from our Installation Partner will be required.

During the trial

Following completion of your registration with us, you will also be required to register your chargepoint with our System Provider. Details on how to complete registration will be provided directly to you by our System Provider, along with their terms and conditions.

By registering for the trial, you are consenting to our System Provider sending charging instructions to your chargepoint for the duration of the trial.

The trial period will last for a total of 20 months from the trial commencement date, which will be notified to you by our System Provider.

During the trial, data will be collected remotely

from your charging equipment by our System Provider and provided to us for the purposes of the trial. We would refer you to our privacy statement <https://www.nienetworks.co.uk/niev-privacy-statement> and that of our System Provider (<https://www.ev.energy/privacy>) for further details on how the data collected from your charging equipment may be processed. During the trial, we may also send you advice or recommendations with the intention of maximising the benefits of the trial for you, the project and our distribution network as a whole.

You consent to NIE Networks and our System Provider, accessing data from your EV and chargepoint, including vehicle make/model/trim, vehicle identification number (VIN), battery size, charger make/model, charger serial number or other unique identifier, vehicle battery state of charge, plug-in/unplug times, start/stop times of charging sessions, kWh of energy consumed, vehicle charging location and similar data ("Collected Data") and sharing aggregated and pseudonymised Collected Data with each other and with our Insights Provider for purposes of administering incentives and evaluating the trial. Additional data (e.g. connected hardware metadata, vehicle location, technical data and application usage data) may be stored and processed by NIE Networks, our System Provider and our Insights Provider in line with our respective privacy statements for the purpose of administering and evaluating the trial.

You are responsible for notifying everyone who owns or uses the EV enrolled in the trial of the information that will be collected and available to you, NIE Networks, our System Provider and our Insights Provider. By participating in the trial, you confirm that you have the consent of the registered vehicle owner and the users of the EV enrolled in the trial and that you, NIE Networks, our System Provider and our Insights Provider are permitted to view and use the data and information collected for the purposes of administering and evaluating the trial.

Neither NIE Networks nor our System Provider make any representations or warranties as to the effectiveness of the trial or the project app to

reduce your charging costs or reduce emissions. Further, NIE Networks and our System Provider make no representations, express or implied, regarding the reliability, performance, or operation of the project app.

You agree that, to the fullest extent permitted by law, neither NIE Networks nor our System Provider will be liable for any indirect, incidental, punitive, special or consequential losses whatsoever, including, without limitation, loss or damage to vehicles or other property, in connection with, arising from or related to this agreement, even if such party has been advised of the possibility of such damages, or for any loss of profits, loss of revenue or loss of reputation. You also agree that in no event shall NIE Networks or our System Provider be responsible for problems, damages or losses caused by you, third parties, or by an act of God.

Surveys and focus groups

By signing up to participate in this trial you are also committing to support survey activities throughout the 20-month trial period. There will be 5 online surveys to complete during this period with an estimated completion time of 10 minutes per survey. NIE Networks will make a bonus payment to you upon satisfactory completion by you of each survey.

You may also be invited to participate in focus groups. Trial participants will be randomly selected for these groups. Details of what is involved in these groups will be provided to you separately should you be selected.

We would refer you to our privacy statement <https://www.nienetworks.co.uk/niev-privacy-statement> for further details on how the data collected from your charging equipment may be processed.

Assistance

If you experience any issues during the trial, you must contact our System Provider directly. Our System Provider will then seek to address any issues raised by you in accordance with the following timescales:

Unable to charge vehicle	<24h
Unable to use app but vehicle will still charge	<48h
General queries	5 days

Trial payments

There will be payments made to you in exchange for your participation in this trial.

These payments will be divided into two distinct groups.

- Smart charging
- Surveys

Smart charging

After you have completed the registration process, there will be a sign up bonus of £25 which will be paid upon completion of the first tracked charge session using the project app.

There will be a payment of £5 per month for participation in the trial. This is dependent on the following criteria:

- 12 smart charge events to be completed per calendar month
- A maximum of 3 "boosted" charge events will be permitted per calendar month

The first 3 months of the trial will be designated as "baseline". Within this section of the trial there will be no expectations on you in terms of the number of charging events. You will receive communication from our System Provider when smart charging is due to commence.

Where multiple EVs are utilising one chargepoint, payment will be determined on a per chargepoint basis. The total number of charging sessions across all vehicles will be used to determine eligibility for monthly payments.

Payment will be made to you by the System Provider via PayPal.

Surveys and focus groups

Surveys will be rewarded at £10 per survey completed with a bonus payment of £20 if all 5 surveys are completed.

Each £10 payment will be made following successful completion of each survey.

Payment will be made to you by the Insights Provider via their payment provider, Ayda.

Ending the trial

We ask that you would commit to the entire 20-month trial period in order to maximise the benefits. However, if you choose to leave before the end of the trial, the following caveats apply:

- Any ongoing benefits to participation in the trial will cease at the date of exit.
- You will waive any bonus payments that may have been due upon successful trial completion.
- Where applicable, you may be liable to repay the cost of installing any replacement chargepoint at your property (pro-rated based on date of trial exit).
- NIE Networks reserve the right to end your participation in the trial (or the trial in its entirety) at any stage.

If you choose to leave the trial at any stage, please contact the project team at niev.project@nienetworks.co.uk

NIE Networks will write to you at the end of the trial confirming the trial completion date.

At the end of the trial;

- Any payments associated with your participation in the trial will cease.
- NIE Networks will no longer be responsible for the maintenance and repair of any replacement chargepoint installed at your property.



CUSTOMER SERVICES
03457 643 643