



Energy for generations

# LEADING THE CHARGE – ESB ecars

[esb.ie/ecars](http://esb.ie/ecars)

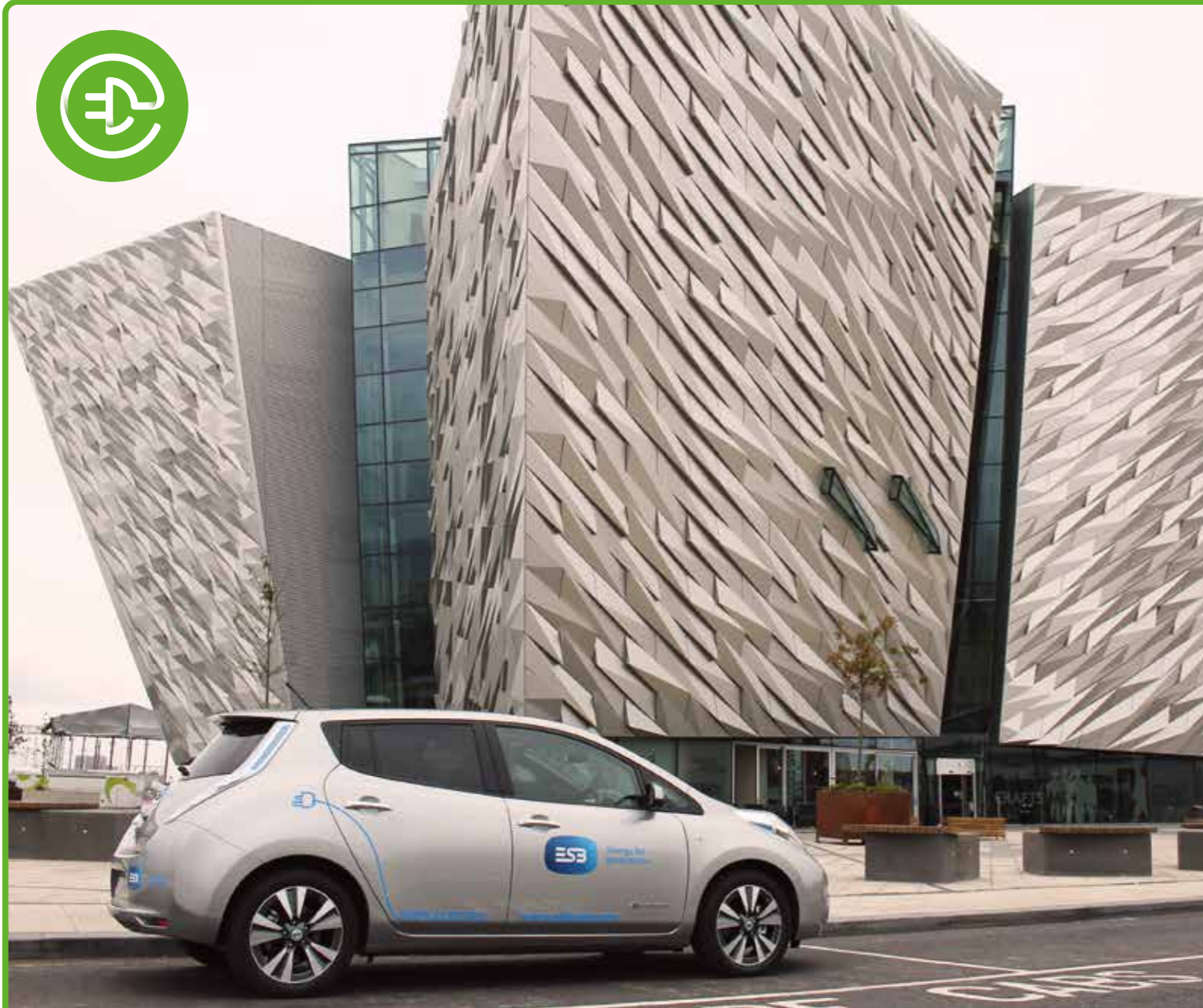


## ESB ecars – Electromobility Service Provider

EV Infrastructure Owner, Installer,  
Operator and Customer Service Provider

ESB ecars  
Tel +353 1 676 5831 / +353 1 2583799  
Address ESB Head Office,  
27 Lower Fitzwilliam St, Dublin 2, Ireland  
Email [ecars@esb.ie](mailto:ecars@esb.ie)  
Facebook [www.facebook.com/ESBecars](http://www.facebook.com/ESBecars)  
Youtube [www.youtube.com/ESBecars](http://www.youtube.com/ESBecars)  
App 'ecar connect' on Android and IOS





## About ESB's Electric Vehicle Programme

ESB ecars has led the development, deployment and operation of the national EV charging point infrastructure in the Republic of Ireland since being established in 2010. ESB ecars is part of the ESB Group, Ireland's foremost energy company.

In addition, ESB ecars supports and advocates the introduction and demand for electric vehicles nationally.

After an intensive five year programme, the national charge point infrastructure is now built as a comprehensive network of public, rapid and domestic charge points with open systems and platforms accessible to all supply companies and all types of electric vehicles. The network of 1,200 public charge points is 'smart' using an integrated communications and management system, accessible with a single charge point access card, which allows users access to charge points both in the Republic of Ireland and Northern Ireland.

## ESB ecars - Our Capabilities Delivering EV Charging

### Charge Point Owner/Provider

- Power networks expertise
- Extensive knowledge of charge points and charge point manufacturers
- Host and commercial negotiations and SLAs

### Charge Point Network Operators

- Operations and Maintenance
  - ▶ SLA management, business process management, customer service
- Charge point management system
  - ▶ ICT and telecoms expertise
- Metering and billing capabilities
- Smart grid interface
  - ▶ Network management
  - ▶ Smart charging

### Electromobility Service Provider

- Customer service and operations
- Digital assets
- Data analytics
- Sales and marketing

### ✓ ESB has the ability to act as:

- An infrastructure investor (e.g. owner/part owner)
- Installer and operator
- Provide a managed service offering to these rapid charging networks

## Partners and Research Projects



## Ireland's Electric Vehicle Network

- Public charge points
- Rapid charge points



### ESB ecars - Key Achievements and Expertise

Since 2010, ESB has rolled out a network of EV smart charging infrastructure across the island of Ireland. As a result,

ESB ecars own and operate charging infrastructure in the Republic of Ireland comprised of:

- ▶ 832 AC charge points
- ▶ 75 rapid charge points

ESB ecars own and operate the charging infrastructure in Northern Ireland comprised of:

- ▶ 320 AC charge points
- ▶ 17 Rapid charge points.

The EV networks in the Republic of Ireland and Northern Ireland are interoperable and the charge points can be accessed by using a single charge point access card.

ESB ecars has extensive technical and commercial experience with a range of charge point manufacturers and charge point types. This includes:

- ▶ Public Rapid - DC CHAdeMO 50kW, DC/AC CCS 50kW, Fast AC 44kW
- ▶ Public AC - Majority of our AC public charge points are 22kW, double socket (three-phase 32 amps), with RFID card readers, GPRS communications with ESB back office and internal MID metering.

The company plays an ongoing leadership role on Eurelectric's Task Force on Electromobility and is a global pioneer in the development of a worldwide standard Open Charge Point Protocol (OCPP).

ESB ecars has demonstrated successful involvement and delivered the completion of European Projects, including Ten-T, Green eMotion, Mobi.Europe & RCN UK (Rapid Charge Network).



### About ESB Group

ESB is Ireland's foremost energy company. ESB is the owner of the distribution and transmission networks in the Republic of Ireland and Northern Ireland (through its subsidiary Northern Ireland Electricity), with a combined Regulated Asset Base of c. €9 billion. This includes 4.3GW of generation, comprised of 10 hydro stations, 10 thermal power stations and 17 wind farms which are located throughout Ireland and the UK. ESB, through its subsidiary Electric Ireland, supplies energy to 1.5 million customers.

ESB International, the engineering consultancy arm of ESB, has a 40 year track record of international operations and experience in over 120 countries. ESB has also been responsible for the roll out of a comprehensive electric vehicle charging infrastructure across the island of Ireland.

### ESB Group in the UK

In the past five years ESB has invested £2 billion in the UK. As a result, ESB currently owns 1,000MW of gas and wind generation assets in the UK, with a pipeline of future projects including gas, onshore, wind, biomass and solar. We are currently building a new gas fired plant at Carrington in Manchester. This will substantially increase our UK presence by 900MW, once operational, in 2016.

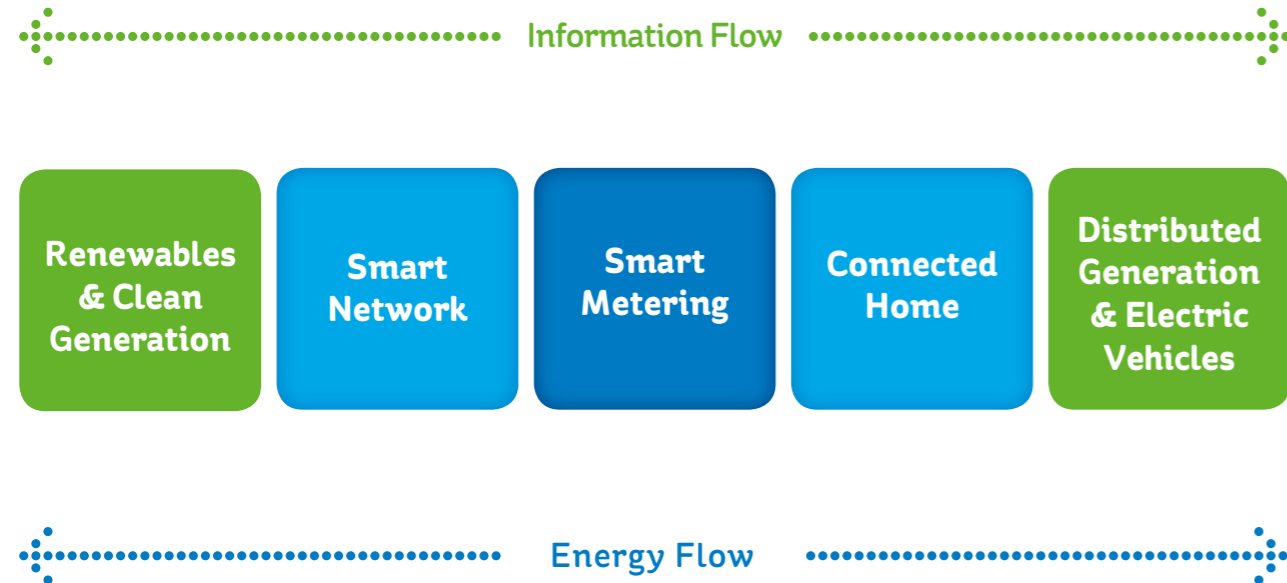
In addition, ESB, through its €200 million cleantech and renewable energy investment fund, Novus Modus, is investing in emerging technologies and energy efficiency sectors in the UK, Ireland and Northwestern Europe. This fund is managed on our behalf by Greencoat Capital.

ESB has been a partner in Northern Ireland's electric vehicle Plugged in Places (PiP) since the outset of the project, with responsibility for all the back office/ICT operations. More recently, ESB ecars has taken over the operation of the charge point network in Northern Ireland, making ESB the operator of the interoperable charging network for the island of Ireland.



## ESB – A World Leader in Smart Grids

There are five main themes underpinning ESB's Smart Grids vision:



## ESB has Extensive Power Networks Expertise including

### Power Networks - Leadership

- ▶ ESB's power network is ranked the third most advanced network in the world by IBM.

### Power Networks - Scale

- ▶ ESB Networks has approximately 3 million network customers on the island of Ireland and a €9 billion RAB (Regulated Asset Base).

### Power Networks - Smart Metering

- ▶ ESB Networks has the largest smart metering behaviour trial underway in Europe.

### Power Networks - Renewable Energy Integration

- ▶ On track to accommodate 40% intermittent wind generation by 2020.

### International Collaborations

- ▶ ESB has formalised collaboration partnerships, both commercial and technical knowledge sharing, with organisations including Vodafone, Electric Power Research Institute (EPRI) and the European Union.

## EVs in the UK – Sparking Opportunities

As Europe's fastest growing electric vehicle market, many opportunities exist to support and help develop electromobility in the UK, thus ensuring a consistent and reliable user experience as drivers move to cleaner, more sustainable transport options.

Given ESB's background as the leading utility company in Ireland, we have the knowledge and experience of how to best situate charge points in the most appropriate locations, whilst minimising the impact on the existing electricity network.

We have functioned in a variety of roles in national and international consortia, including the ecar NI Plugged in Places (PiP) project in Northern Ireland as well as the EU TEN-T fast charge point project funded by the Trans European Transport Network programme.

ESB ecars has an extensive range of relationships as well as operation and commercial experience with a wide selection of stakeholders including:

- ▶ Charge point manufacturers
- ▶ Car manufacturers
- ▶ Government bodies
- ▶ Local authorities
- ▶ European bodies
- ▶ Representative bodies

This broad scope of expertise and experience, makes ESB ecars the ideal partner at every stage of the electromobility value chain.

