

Meet **ISO 15118** in the context of smart charging.

Smart Charging Webinar Series

26th November 2019



The Alan Turing Institute



Supergen
Energy Networks

EV Policy developments in the UK

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Title: Year: Number: Type: All Legislation (excluding draft)

Automated and Electric Vehicles Act 2018

UK Public General Acts ▶ 2018 c. 18 ▶ Table of contents

Table of Contents Content Explanatory Notes More Resources

What Version

- Latest available (Revised)
- Original (As enacted)

Opening Options

More Resources

Status: This is the original version (as it was originally enacted).

Introductory Text

PART 1 Automated vehicles: liability of insurers etc

- Listing of automated vehicles by the Secretary of State
- Liability of insurers etc where accident caused by automated vehicle
- Contributory negligence etc
- Accident resulting from unauthorised software alterations or failure to update software
- Right of insurer etc to claim against person responsible for accident
- Application of enactments
- Report by Secretary of State on operation of this Part
- Interpretation

PART 2 Electric vehicles: charging

Introductory

- Definitions

Requirements and prohibitions

- Public charging or refuelling points: access, standards and connection
- Large fuel retailers etc: provision of public charging or refuelling points
- Duty to consider making regulations under section 11(1)(a) on request by elected mayor
- Information for users of public charging or refuelling points
- Transmission of data relating to charge points
- Smart charge points

General and supplementary

- Enforcement
- Exceptions

Closed consultation Electric vehicle smart charging

Published 15 July 2019
Last updated 19 July 2019 — [see all updates](#)
From: [Department for Transport](#) and [Office for Low Emission Vehicles](#)

We are analysing your feedback

Visit this page again soon to download the outcome to this public feedback.

Summary

Proposals for regulations to ensure that electric vehicle chargepoints sold or installed in the UK have smart charging functionality included.

This consultation ran from
15 July 2019 to 11:45pm on 7 October 2019

Consultation description

Consultation on proposals for electric vehicle chargepoint smart technology regulations. The proposed regulations would require that electric vehicle chargepoints sold or installed in the UK have smart charging functionality included.

<https://www.gov.uk/government/consultations/electric-vehicle-smart-charging>

Annex E: Draft regulations

DRAFT STATUTORY INSTRUMENT

2020 No.

ROAD TRAFFIC

The Electric Vehicles (Smart Charge Points) Regulations 2020

Approved by Parliament

Made - - - - ***

Laid before Parliament ***

Coming into force in accordance with Regulation 1

The Secretary of State, in exercise of the powers conferred by sections 15, 16, 17 and 18 of the Automated and Electric Vehicles Act 2018 (a) ("the 2018 Act"), makes the following Regulations.

In accordance with section 18(4) of the 2018 Act, a draft of this instrument has been laid before Parliament and approved by a resolution of each House of Parliament.

The Secretary of State has consulted such persons as the Secretary of State considered appropriate in accordance with section 18(3) of the 2018 Act before making these Regulations.

PART 1

Introduction and application

1. These Regulations may be cited as the Electric Vehicles (Smart Charge Points) Regulations 2020 and come into force on [date].

Interpretation

2. In these Regulations—

"enforcement authority" means the Secretary of State or any person authorised by the Secretary of State in accordance with regulation 14;

"certification body" means a person authorised by the Secretary of State to carry out the functions referred to in regulations 8 and 12 or, if no such person has been authorised, the Secretary of State;

"cyber attack" means exploitation of a charge point's smart functionality or of systems or networks connected to it to cause harm or disruption;

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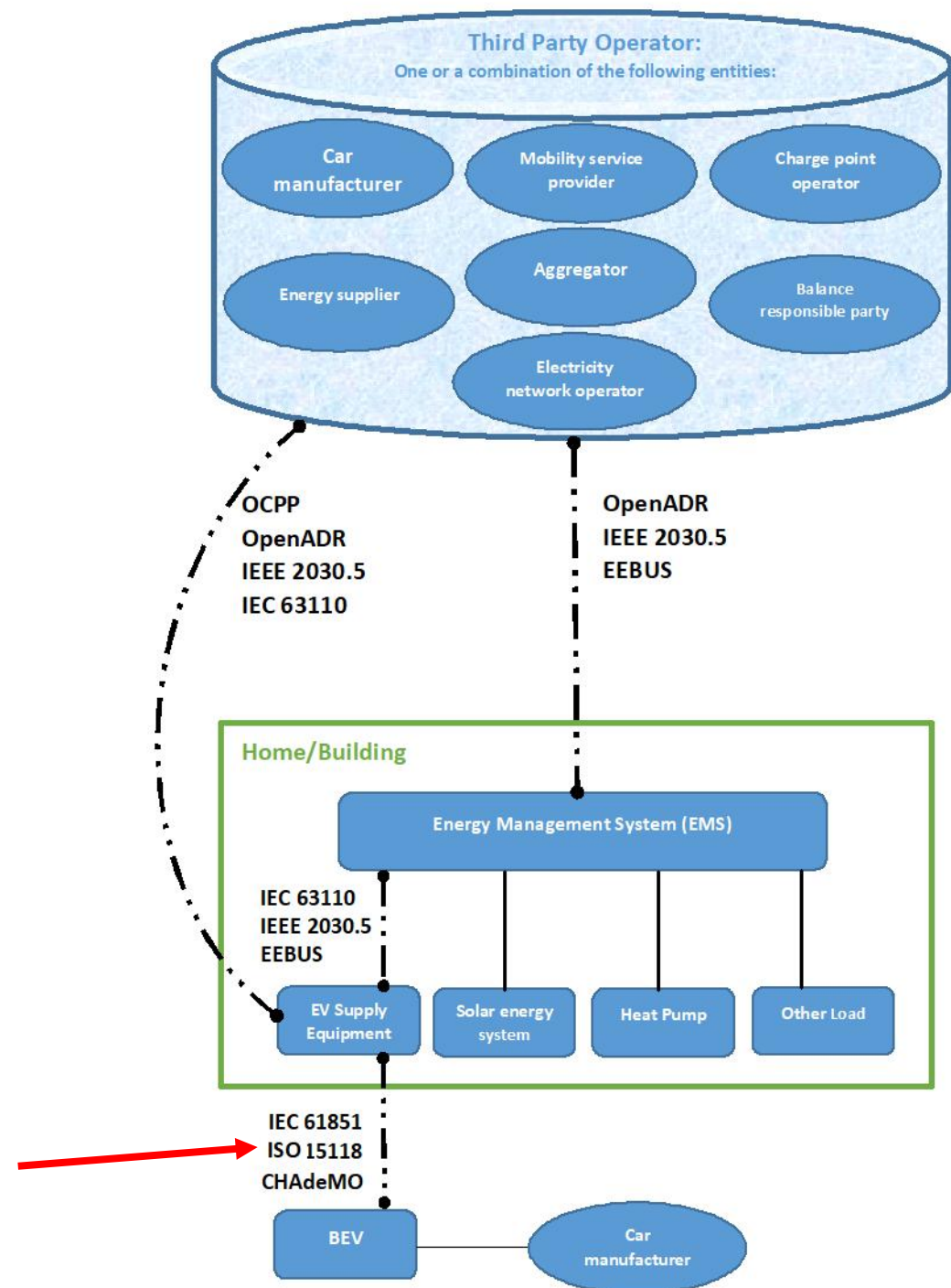
Consultation on proposals for electric vehicle chargepoint smart technology regulations. The proposed regulations would require that electric vehicle chargepoints sold or installed in the UK have smart charging functionality included.

1.46 It is proposed that smart chargepoints will ordinarily be required to comply with British Standards Institution (BSI) standards, which are currently under development for smart chargepoints and smart appliances (see [BSI Standards](#)), before they can be installed. Chargepoints will need to undergo an independent testing and assurance regime that refers to the BSI standards and we propose to appoint the Office for Product Safety and Standards as the enforcement body.

2.16 These standards will include an ESA classification PAS, which will describe device requirements relating to the smart device, and a Demand Side Response (DSR) framework PAS, which will describe the smart services. The aim of these is to address the Government's policy principles relating to effective smart operation of ESAs: grid stability, cyber security, interoperability and data privacy.²⁴ They will also provide the basis for certification in accordance with these principles.

EV ecosystem for smart charging-communication protocols

- EV charging management strategies is key.
- Energy and mobility entities involved.
- Information and control objects exchange.
- Communication protocols provide a set of rules and guidelines to facilitate the communication and data exchange between two or more entities.



Landing Page- Smart Charging Webinar series

- ▶ YouTube Recordings
- ▶ Slides
- ▶ Details for future events

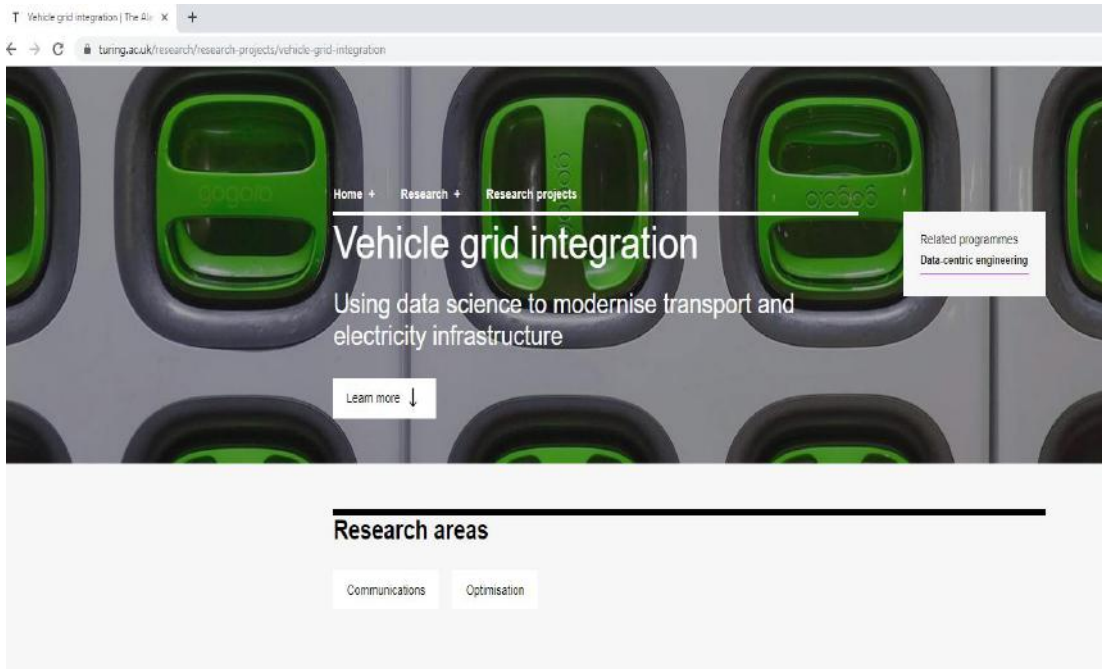
The screenshot shows the Newcastle University website. At the top, there is a navigation bar with links for 'Who we Are', 'Work with Us', 'Research', 'Study', 'Alumni', and 'Staff & Students', along with a search icon. Below the navigation bar is the Newcastle University logo and the text 'National Centre for Energy Systems Integration'. A breadcrumb trail reads: 'Newcastle University > National Centre for Energy Systems Integration > Events > Webinars > Webinar Series - EV Smart charging'. On the left side, there is a vertical menu with links for 'Research', 'Working with industry', 'About Us', 'Our Team', 'News', 'Events', 'Launch Event', 'Webinars', 'Webinar Series - EV Smart charging', 'Contact Us', 'Twitter', 'Blog', and 'CESI Flex Fund'. The main content area features the title 'Electric Vehicles' Smart Charging Webinar Series' and a description: 'This series of webinars provides an introduction to vehicle to grid (V2G) and smart charging projects and topics, with invited guest speakers from institutions in the UK and overseas. View the [webinar playlist here](#).' Below the description is a list of five webinar events, each with a green plus icon to its right: 'Smart Charging and V2G Webinar: Caltech and Idaho National Laboratory', 'Communication Protocols for Electrical Vehicle Charging - Introduction to OCPP', 'Electric Vehicles and Demand Response using OpenADR', 'Open Communication Protocols for Smart Charging: real world demonstrators - GreenFlux and Carbon Co-op', and 'Open Communication Protocols for Smart Charging: real world demonstrators - Allego'.

<https://www.ncl.ac.uk/cesi/events/webinars/v2gwebinars/>

Upcoming events

- ▶ *3rd December 2019. Noel Crisostomo, [California Energy Commission](#). Smart Charging Electric Vehicles in California*
- ▶ *10th December 2019. Peter Bach Andersen, [Danmarks Tekniske Universitet \(DTU\)](#). A sufficient and intelligent charging infrastructure - examples from Denmark*
- ▶ *Date TBC. Paul Bertrand. IEC 63110-Management of Electric Vehicles charging and discharging infrastructures*

Alan Turing Institute- Vehicle Grid Integration Group



- ▶ Apply and develop data science methods and tools to help in the transformation of electricity and transport infrastructure.
- ▶ Contribute to open communication protocols for vehicle grid integration.
- ▶ Assess security of communication, hardware and software of grid-integrated EV charging infrastructure.

<https://www.turing.ac.uk/research/research-projects/vehicle-grid-integration>

Today's speaker

- ▶ **Dr. Marc Mültin, [V2G Clarity](#)**- Communication Protocols for Electric Vehicles charging: Meet ISO 15118

Topics discussed will include:

- ISO 15118 as a key communication protocol for the EV ecosystem.
- How does it enable smart charging?
- How does ISO 15118-20 enable bidirectional charging;
- Some of the cyber-security provisions in place;
- Some information on the resources available ([Knowledge Base](#) , [Blog](#))