

# Electric vehicle chargepoints in buildings

## Introduction

Thank you for responding to the Electric vehicle chargepoints in buildings consultation. Your responses will define the:

- proposal of introducing a requirement for electric vehicle (EV) chargepoints to be installed in new homes with an associated car parking space
- manner we transpose 3 new requirements of the European Union's (EU) Energy Performance of Buildings Directive (EPBD)

The consultation will run until the 7 October 2019.

Print or save a copy of your response

When you get to the end of this questionnaire, you will be offered the chance to either print or save a copy of your response for your records. This option appears after you press 'Submit your response'.

You have an option to 'save and continue' your response at any time. If you do you will be sent a link via email to allow you to continue your response where you left off.

It's very important that you enter your correct email address if you choose to save and continue. If you make a mistake in the email address you won't receive the link.

### Confidentiality and data protection

The Office for Low Emissions is carrying out this consultation to decide whether to introduce a requirement for EV chargepoints to be installed in new homes with an associated car parking space and will define the way we transpose 3 new requirements of the EU's EPBD. This consultation and the processing of personal data that it entails is necessary for the exercise of our functions as a government department. If your answers contain any information that allows you to be identified, the Department for Transport will, under data protection law, be the controller for this information.

As part of this consultation we're asking for your name and email address. This is in case we need to ask you follow-up questions about any of your responses. You do not have to give us this personal information. If you do provide it, we will use it only for the purpose of asking follow-up questions.

[DfT's privacy policy](#) has more information about your rights in relation to your personal data, how to complain and how to contact the Data Protection Officer.

Your information will be kept securely and destroyed within 12 months after the consultation has been completed. Any information provided through the online questionnaire will be moved to our internal systems within 2 months of the consultation end date.

## Personal details

1. Your name and email address (only used if we need to contact you).

Your name

Your email

2. Are you responding as: \*

an individual? (Go to question 4)

on behalf of an organisation?

## Organisation details

3. Your organisation's name is?

## Building regulation changes: new residential and residential buildings undergoing major renovation

We want every:

- new dwelling
- buildings undergoing material change of use to create a new dwelling

with an associated dedicated car parking space to have a chargepoint, where the space is 'within the site boundary' of the building.

And for every residential building undergoing major renovations with more than 10 car parking spaces physically adjacent to the building to have cable routes for electric vehicle chargepoints in every space.

## New dwellings

4. Do you agree with our proposed policy position to require a chargepoint in new dwellings?

Yes for all dwellings (Go to question 6)

Yes for single-dwelling buildings only

Yes for multi-dwelling buildings only

No



Don't know? (Go to question 6)

## Against new dwellings proposal

5. Why not, including what requirement you think would be suitable (include any evidence you may have)? [Attach your evidence to your return]

Comments:

## Material change of use

6. Should we require the installation of an electric vehicle chargepoint in the car park of buildings converted into a new dwelling?



Yes (Go to question 8)



No



Don't know? (Go to question 8)

## Against material change of use proposal

7. Why not (including any evidence you have)? [Attach your evidence to your return]

Comments:

## Major renovation

For residential buildings undergoing major renovation we:

- do not propose requiring the installation of an electric vehicle chargepoint
- do propose requiring cable routes for electric vehicle chargepoints when the building has more than 10 parking spaces as per the minimum EPBD requirement

**The reason we are not proposing to apply the chargepoint requirement is that we are mindful that this requirement would increase the capital cost of major renovations, and that this capital cost might ultimately fall on existing leaseholders. We also do not wish to**

discourage major renovations taking place by adding unacceptable additional costs to works. In a single-dwelling setting, there are more potential problems where a renovation of a separate part of the dwelling could result in the requirements being triggered.

8. Do you agree not to apply the chargepoint requirement to residential buildings undergoing major renovations?



Yes (Go to question 10)



No



Don't know? (Go to question 10)

**Don't agree think they should be added**

## Against major renovation proposal

9. Why, including any evidence you have, and to which types of residential buildings you wish to apply the regulation to (such as residential buildings with more than 10 car parking spaces only)? [Attach your evidence to your return]

Comments:

The start point should be for maximum provision to enable charging from the home, therefore any major renovation should be required to provide a chargepoint. In addition, the draft definition in the approved document remains unclear and will require further clarification to make it robust for both enforcers and developers alike

## Scope of requirement

We propose that the requirement should be for one chargepoint per dwelling rather than every parking space associated with the building.

Therefore if a building has more car parking spaces than dwellings, there will be a single chargepoint per dwelling rather a chargepoint per parking space.

10. Do you agree the requirement should be for one chargepoint per dwelling rather than every parking space associated with the building?



Yes (Go to question 12)



No



Don't know? (Go to question 12)

**Against scope of requirement proposal**

11. Why not (including any evidence you may have)? [Attach your evidence to your return]

Comments:

## Optional building regulations

**12. Do you agree we should set the requirement as mandatory rather than optional in the building regulations?**



Yes (Go to question 14)



No



Don't know? (Go to question 14)

## Against optional building regulations

**13. Why?**

## Other issue to consider

**14. What other issues do you think, relevant to using building regulations to set standards for the provision and safety of electric vehicle chargepoint, we should consider?**

Building Control Surveyors are not qualified electricians therefore most electricians are self-regulated through the Government's Competent Person's Schemes. These schemes allow certified electricians to sign their work off and confirm acceptance to their registration body such as ELECSA, IEC etc. we ask for this certification to be provided once the work is completed on site.

There might be a need to ensure that for any new or unfamiliar units which are not currently commonplace that there is sufficient training and support available for electricians to call upon.

## Building regulation changes: new non-residential and non-residential buildings undergoing major renovation

We propose to transpose the EPBD requirement for new non-residential buildings and non-residential buildings undergoing major renovation directly.

This means that we want every new non-residential building, and every non-residential building undergoing a major renovation, with more than 10 car parking spaces to have:

- 1. one chargepoint
- 2. cable routes for electric vehicle chargepoint cabling for one in 5 spaces

15. Do you agree with our proposed policy position?



Yes (Go to question 17)



No



Don't know? (Go to question 17)

## Against new non-residential policy position

16. Why, including what alternative requirement you think would be suitable (note we are obliged under the EPBD to transpose the proposed requirements as a minimum)? [Attach your evidence to your return]

Comments:

## Existing non-residential buildings

The EPBD includes a requirement for the government to lay down requirements for the installation of a minimum number of chargepoints in all existing non-residential buildings with more than 20 parking spaces. This requirement must be set by March 2020 and will come into force by 1st January 2025.

We propose to set the minimum requirement at one chargepoint per existing non-residential building with more than 20 parking spaces.

17. Do you agree that one chargepoint per existing building with more than 20 car parking spaces is a suitable minimum requirement to transpose the EPBD?



Yes (Go to question 19)



No



Don't know? (Go to question 19)

## Against existing non-residential building proposal

18. Why, noting this is the minimum we must do under the EPBD?

## Existing non-residential buildings: application

19. How can the government apply these regulations in a way which balances the benefit to EV drivers and the requirements of the EPBD, with the burden on landowners?

Given the current level and proposed increase in uptake of EV this should become a minimum and landowners are simply fulfilling a need; this should be seen as no different to a maintenance exercise where expenditure is necessary to keep the building to relevant standards. Whilst this may be a small cost to them, there are exemptions for particular cases and perhaps there could be affordability exemptions based on the landowner's income, turnover, or profits.

## Existing non-residential buildings: enforcement

20. Do you agree that the appropriate enforcement regime for this power should see a sliding scale of penalties for non-compliance?

Yes (Go to question 22)

No

Don't know? (Go to question 22)

### Against sliding scale

21. Why, including what alternative enforcement regime you think is suitable?

## Existing non-residential buildings: enforcement

22. In your opinion the enforcement body should be:

Local Weights and Measures Authorities

Local Authority Building Control

I don't know?

another body:

## Mitigations

**23. What steps do you think we should take to mitigate against any potential negative impact of the implementation of these regulations?**

There should be some funding available to some landowners and homeowners to assist with the work, however, this must be on a needs basis. Additionally we would not want funding currently going to homeowners in existing buildings for new charge points to be diverted to this proposal instead – existing homes remains a major problem particularly for those who do not have off-street parking.

## Technical specifications for building regulation requirements

Approved Documents (ADs) are provided alongside the building regulations to provide guidance about how to comply with the regulations. We have published our [draft version of the AD text](#).

## Definitions

**24. Are the definitions in the draft Approved Document accurate and provide their intended meaning?**



Yes (Go to question 26)



No



Don't know? (Go to question 26)

## Against definitions

**25. How, in your opinion, could the definitions be improved?**

## Definitions

**26. Do you agree with using the concept "within the site boundary" to define which parking spaces are in scope of the regulations?**



Yes (Go to question 28)



No



Don't know? (Go to question 28)

## Against "in the site boundary" definition

27. Why not and what do you think an appropriate definition would be?

## Technical specifications for EV cable routes and chargepoints

The Approved Document includes some minimum technical specifications for the EV cable routes and chargepoint. The government proposes specifying that the chargepoints must have a minimum charging power of 7kW, be at least Mode 3 or equivalent and be untethered.

28. Do you agree that the government should specify a minimum charging power of 7 kW?



Yes (Go to question 30)



No



Don't know? (Go to question 30)

## Against 7 kW

29. Why, including any evidence you have, and specify what specification would be suitable? [Attach your evidence to your return]

Comments:

## Technical specifications for EV cable routes and chargepoints

30. Do you agree that we should specify that chargepoints installed under the building regulations should be at least Mode 3 or equivalent?



Yes (Go to question 32)



No



Don't know? (Go to question 32)

## Against Mode 3 or equivalent

31. Why, including any evidence you have, and specify what specification would be suitable? [Attach your evidence to your return]

Comments:

## Technical specifications for EV cable routes and chargepoints

32. Do you agree that we should specify that chargepoints installed under the building regulations must be untethered?



Yes (Go to question 34)



No



Don't know? (Go to question 34)

## Against untethered chargepoints

33. Why, including any evidence you have, and specify what specification would be suitable? [Attach your evidence to your return]

Comments:

## Technical specifications for EV cable routes and chargepoints

34. In your opinion do the draft Approved Document specifications adequately consider accessibility requirements with regards to location of the:

cabling routes?  Yes

No

Don't know?

chargepoints?  Yes

No

Don't know?

Why including alternatives?

**35. In your opinion what, if any, other accessibility requirements should we include in the Approved Document?**

## Technical specifications for EV cable routes and chargepoints

**36. Are the specifications with regards to safety standards outlined in the draft Approved Document appropriate?**

Yes (Go to question 38)

No



Don't know? (Go to question 38)

### Safety specification insufficient

**37. Why including what further safety specifications do you think we need to include? [Attach your evidence to your return]**

Comments:

### Notifiable building work

We propose that the installation, addition or alteration of dedicated circuits and earthing and bonding arrangements for electric vehicle chargepoints to be notifiable work under the building regulations.

38. Do you agree with our proposal?



Yes (Go to question 40)



No



Don't know? (Go to question 40)

## Against notifiable building work

39. Why?

## Approved Document scope

40. Does the proposed guidance in the draft Approved Document provide sufficient detail to comply with the requirements?



Yes (Go to question 42)



No



Don't know? (Go to question 42)

## Against approved document scope

41. Why including any suggestions for how to improve the guidance? [Attach your evidence to your return]

Comments:

With regard to major renovations, the draft definition in the approved document remains unclear and will require further clarification to make it robust for both enforcers and developers alike.

## Approved Document scope

42. The diagrams in the draft Approved Document are illustrative only but do you think they provide sufficient detail for compliance?



Yes (Go to question 44)



No



Don't know? (Go to question 44)

## Against approved document scope

43. Why? [Attach your evidence to your return]

Comments:

## Approved Document scope

44. Does the draft Approved Document meet our overall proposed policy intent?

- Yes (Go to question 46)
- No
- Don't know? (Go to question 46)

## Does not meet policy intent

45. What information do you think is missing from the draft Approved Document to meet the intended policy intent?

## Approved Document: additional information

46. What additional information, if any do you think needs to be added to the Approved Document? [Attach your evidence to your return]

Comments:

## Exemption to EV installation

We can include some exemptions both to:

- the EPBD requirements (defined in Article 8 of the EPBD)
  
- our domestic requirement of a chargepoint in every home

The intention is for the regulations to only apply to buildings where it is appropriate to install EV chargepoints.

## Lead in times

The EPBD allows for an exemption for buildings that have submitted their initial building notice or full plans applications by 10 March 2021.

This implies a period of one year between the implementation of the requirements in national building codes and the regulations coming into force.

We would like to hear opinions on a reasonable lead-in time between introducing the new regulations and the regulations coming into force, for the:

- EPBD requirements for new non-residential buildings
- chargepoint requirements for new residential buildings

**47. What do you believe is a reasonable transition period between publishing the new regulations plus guidance and the requirements coming into force?**

As soon as practicable, and would suggest 01/04/2020. The sooner the better, however, others (e.g. developers, power companies and CP suppliers) may have issues meeting demand, so their opinion should be considered.

## Proposed exemptions for residential buildings

**48. Do you think we should apply an exemption to our proposal to require a chargepoint in every new home when the grid connection cost is high?**



Yes (Go to question 50)



No



Don't know? (Go to question 50)

## Against grid connection cost exemption

**49. Why not, including any potential exemption you think is suitable?**

If we are suggesting that charging should be at home and EV is the only viable alternative currently, housing must provide charge points, otherwise this suggests the house should not have parking and should be car free. The grid should also be encouraged to provide additional capacity, taking into account likely reduction in gas usage and so possible transfer to electricity. This needs wider consideration with PV and other onsite power and heating options recommended to support. Also worth noting that with smart metering there are methods already available to manage the demand of electricity, such as that used by "PodPoint" where they estimate that the 7kw chargers in practice add about 1kW and the demand can be managed in the winter early evening peaks, typically 5-7pm if a suitable management system is in place.

## Proposed exemptions for residential buildings

Our quoted technical feasibility criteria for new dwellings is:

"the installation of an electric vehicle chargepoint should be considered technically feasible if the additional costs of reinforcement and upgrades to the local electrical distribution network would not exceed [£3,600] per dwelling. This cost should be calculated as the additional capital cost for electrical infrastructure, as compared to that which would be required without the chargepoints. This cost may be calculated either:

- a. for a development containing multiple new dwellings; or
- b. for an individual dwelling

Note for new dwellings where the installation of an electric vehicle chargepoint is not technically feasible, enabling infrastructure might be required."

50. Does this text capture the intended exemption?



Yes (Go to question 52)



No



Don't know? (Go to question 52)

### Not capturing intended exemption

Do not agree here and think they should be a requirement. Developers will use this as a way to avoid the implementation of EV chargers

51. Suggest an alternative drafting.

There should be no exemptions. If a dwelling cannot supply a 7kw EV charger then it should not be built

## Proposed exemptions for residential buildings

We propose setting a threshold of three times the high scenario cost of the average electrical capacity connection needed for a chargepoint in a multi-dwelling building.

According to the costs we have collated for the associated impact assessment this would be £3,600 per chargepoint.

52. Do you agree with our suggested threshold?



Yes (Go to question 54)



No



Don't know? (Go to question 54)

### Against threshold

53. What do you think is a reasonable threshold including any evidence? [Attach your evidence to your return]

Comments:

As above, this should be much higher. The charge should be passed on to the buyer as they will benefit from the infrastructure; this must not impact on CIL and S106 requirements and should not be used as an argument for this in negotiations. There should be no exemptions. If a dwelling cannot supply a 7kw EV charger then it should not be built.

## Mitigation

54. Does this exemption sufficiently mitigate any negative impact on housing supply?



Yes (Go to question 56)



No



Don't know? (Go to question 56)

## Against mitigation

55. Why? [Attach your evidence to your return]

Comments:

## Other technical feasibility considerations to include

56. What other technical considerations do you think should be included? [Attach your evidence to your return]

Comments:

## Proposed exemptions for residential buildings

57. For our a chargepoint in every new home created from a material change of use requirement do you agree that we should apply an exemption for:

listed buildings?

Yes



No



Don't know?



buildings in conservation areas?  Yes  No  Don't know?

Explain your reasoning if you disagree.

This should be dealt with in a case by case basis, there are instances where this might be appropriate, though the cabling or difficulty in digging should be the primary concern. If we allow motor vehicles in these areas then why not charge points? They represent a smaller visual impact.

**58. For our a chargepoint in every new home created from a material change of use requirement should we apply an exemption in cases where there is adequate spare capacity in the incoming electrical supply to the car park?**

Yes (Go to question 60)  
 No  
 Don't know? (Go to question 60)

## Against exemption for adequate spare capacity

**59. Why not?**

Capacity needs to be created and paid for as part of making the new home fit for the future. As per above, there might be an affordability issue and we do not want to stymie development, however, we need to be bold and the starting point should be for our residents to have the ability to own ULEV instead of fossil fuelled vehicles wherever possible.

## Proposed exemptions for residential buildings

**60. If we apply the chargepoint requirement to residential buildings undergoing major renovations should we allow an exemption in cases where there is adequate spare capacity in the incoming electrical supply to the car park?**

Yes (Go to question 62)  
 No  
 Don't know? (Go to question 62)

## Against adequate spare capacity in the incoming electrical supply to the car park exemption

**61. Why not?**

As Above.

## Cable routes exceeds 7%

62. Should we apply an exemption where the cost of installing the cable routes exceeds 7% of the total cost of a major renovations within:

	Yes	No	Don't know?
residential buildings?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
non-residential buildings?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Why?

This depends on what the renovation is, however, there is unlikely to be a better/cheaper time to have the cabling installed. Perhaps a government fund to cover costs where it exceeds 7% would appropriate?

## Small medium enterprise exemptions

63. Should we apply an exemption for the requirement for existing non-residential buildings to small and medium enterprises?

- Yes (Go to question 65)
- No
- Don't know? (Go to question 65)

## Against small medium enterprise exemptions

64. Why not including any evidence you think is relevant? [Attach your evidence to your return]

Comments:

This should be based on affordability rather than size of business, as discussed earlier. Again, if we want all buildings to have charge points a government fund to assist with this would be welcome.

## Evidence and analysis

We have published 2 consultation stage Impact Assessments alongside this consultation, to capture the residential and non-residential building requirements. The Impact Assessments includes information about the costs of the proposed policies and are based on some key assumptions around the development of the EV and the EV chargepoint markets. We are, through this consultation, seeking further evidence to inform the final stage impact assessments. In particular, we welcome views on the

costings we are relying on and the robustness of our main assumptions. We also welcome views on any impacts or benefits not reflected in the impact assessment.

**65. Do you agree with the:**

	Yes	No	Don't know?
assumptions set out in the Impact Assessment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
costs set out in the Impact Assessment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
impacts set out in the Impact Assessment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Explain your reasons if you disagree.

We are not in the correct part of the industry of make a judgment on the assessments.

**66. Provide any evidence you think relevant to the impact assessment. [Attach your evidence to your return]**

Comments:

**67. How do you think these costs are likely to change over time? [Attach your evidence to your return]**

Comments:

**68. What do you think are the likely cost reductions from economies of scale specifying whether the cost reductions will be relevant for both installation and hardware costs? [Attach your evidence to your return]**

Comments:

**69. Do you think there are groups who would be impacted by these regulations that have not been captured by this assessment?**

- Yes
- No (Go to question 71)
- Don't know? (Go to question 71)

**Additional groups**

**70. What additional groups and why? [Attach your evidence to your return]**

Comments:

## Evidence and analysis

**71. Do you think multiple single-occupancy developments (such as housing estates) will be able to take advantage of economies of scale savings for chargepoint installation?**

Yes

No

Don't know? (Go to question 73)

## Multiple single-occupancy developments

**72. Why? [Attach your evidence to your return]**

Comments:

## Evidence and analysis

**73. What are the likely technological learning rates that chargepoint hardware would experience and why? [Attach your evidence to your return]**

Comments:

**74. Do you think our methodology for capturing grid connection cost variation is suitable?**

Yes (Go to question 76)

No

Don't know? (Go to question 76)

## Better methodology

**75. What do you think is a more suitable methodology for capturing the variation in grid connection costs? [Attach your evidence to your return]**

Comments:

## Evidence and analysis

**76. Does the assessment of cost incidence seem accurate?**



Yes (Go to question 78)



No



Don't know? (Go to question 78)

## Against cost assessment

77. Why not, including any evidence you have? [Attach your evidence to your return]

Comments:

## Evidence and analysis

78. Do you think there are likely to be disruption costs in a retrofit scenario, and if so how large do you think these will be? [Attach your evidence to your return]

Comments:

79. In your opinion have we captured all of the benefits?



Yes (Go to question 81)



No



Don't know? (Go to question 81)

## Other benefits in impact assessment

80. What additional benefits do you suggest including and why? [Attach your evidence to your return]

Comments:

## Evidence and analysis

81. What do you think will be the impact on housing supply of introducing a requirement for chargepoint infrastructure on new dwellings? [Attach your evidence to your return]

Comments:

## Final comments

82. Any other comments?

