

Rapid charging fund: scheme design

Introduction

Thank you for responding to our public consultation on the rapid charging fund. Your information will be used to help inform the design of the fund.

The consultation will close at 11:59pm on 14 February 2024.

Accessibility statement

Read our [accessibility statement for SmartSurvey forms](#) [opens in a new window].

Confidentiality and data protection

The Department for Transport (DfT) is carrying out this public consultation on the rapid charging fund to help inform the design of the fund. View our [DfT online form and survey privacy notice](#) [opens in a new window] for more information on how your personal data is processed in relation to this survey.

In addition, we are asking individuals about your interest in the consultation, to better understand your relationship to the topic.

For organisations we are asking for the name of your organisation, for identification and a description of the organisation, to better understand your relationship to the topic.

Personal details

1. Are you responding on behalf of an organisation? *

Yes

No (Go to 'Individual interest')

Organisation details

2. What is the name of your organisation?

Energy UK

3. What describes your organisation?

Chargepoint operator

Motorway service area operator

Trade body

Energy network operator

Vehicle manufacturer

Another organisation:

[After answering go to 'Proposals']

Individual interest

4. What is your interest in this consultation?

Energy UK is the trade association for the energy industry with over 100 members - from established FTSE 100 companies right through to new, growing suppliers, generators and service providers across energy, transport, heat and technology. Our members deliver nearly 80% of the UK's power generation and over 95% of the energy supply for 28 million UK homes as well as businesses.

The sector invests £13bn annually and delivers nearly £30bn in gross value - on top of the nearly £100bn in economic activity through its supply chain and interaction with other sectors. The energy sector also supports 700,000 jobs in every corner of the country. The energy industry is key to delivering growth and plans to invest £100bn over the course of this decade in new energy sources.

Under this context, Energy UK wants to ensure our members' views are represented to the government as investment is made into electrifying our road network, ultimately ensuring a stable and affordable supply of electricity access to the general public, and working together in collaboration with the Government and our members towards a net-zero future.

Crucially, Energy UK's members provide a wide range of services related to energy and electric vehicle charging across the UK's homes, businesses, and communities, with many likely to be providers of rapid EV charging under the RCF approach

Proposals

This consultation focusses on the design of the rapid charging fund for motorway service areas.

We are looking for your views on:

- the requirement for funding on A-Roads on the strategic road network
- the requirement to future-proof connections at motorway service areas
- the applicant to the fund
- how to ensure competition at motorway service areas
- the charging provision for heavy goods vehicles at motorway service areas
- the design of the funding model
- how to maintain adequate provision of chargepoints at motorway service areas

To create taxpayer value for money, confirm viability of the fund and to enable successful delivery, we are seeking feedback and views on the proposals outlined in this consultation.

Evidence gathered will be used alongside the information we have from our extensive programme of industry engagement as well as learnings from the rapid charging fund pilot to help inform the design of the fund.

We are keen to hear from anyone with an interest in the future of electric vehicle charging infrastructure, but especially from related industries including manufacturers, chargepoint operators, motorway service area operators, electricity distribution organisations, motoring groups, fleet providers and businesses operating on the strategic road network.

[Greater detail is given in our consultation document \[opens in a new window\].](#)

A-roads on the strategic road network

A-road service areas and other areas to stop are located across the non-motorway portion of the strategic road network.

In comparison to motorways, the nature of A-roads allows for increased competition between sites. Specifically, there is the potential for more sites with fewer chargepoints at closer intervals. This means the electricity network capacity required could potentially be lower at many sites than it will be at motorway service areas.

The rapid charging fund will only target sites that are commercially unviable due to grid connection costs. Our evidence gathering to date suggests that at A-road sites, the cost of a grid connection may not be the factor causing a site to be uncommercial.

Due to these differences with the motorway network, and the significant private investment plans which stakeholders have told us about, it is challenging to predict whether and where public funding would be required on A-roads.

We are looking for your views as to whether the rapid charging fund will be required to ensure there are no gaps in provision of ultra-rapid chargepoints along A-roads on the strategic road network due to uncommercial grid connection costs.

[Refer to the A-roads section of the consultation for further details \[opens in new window\].](#)

5. Do you think that the rapid charging fund is or is not required to part fund uncommercial grid connection costs on the strategic road network A-roads?

- Funding is required
- Funding is not required (Go to 'Disagreement: strategic road network A roads sections')
- Don't know (Go to 'Barriers')

Agreement: strategic road network A roads sections

6. Which sections of the strategic road network in your view require funding?

Energy UK agrees that this approach to part-funding uncommercial grid connection costs is needed and we welcome the funding allocated. It is, however, important to remember that not all of the UK is served by motorways, and while this funding will help to establish key transport channels for EV users, other parts of the UK will require wider and fully coordinated funding and provision of EV charging to ensure fairness across the UK. Given the delay of the RCF since its announcement in 2020, we would welcome immediate further workstreams to address public rapid chargepoint provision in other areas of the country.

As discussed in more detail in question 36, Energy UK believes focus is needed to ensure a considered distribution of rapid charging to urban and rural areas as well as the RCF's recommended super sites, motorways, and strategic-A roads strategy. This includes areas in the East of England, South West England, East Midlands, South Central England to prevent disparities in uptake of EVs, with resultant economic and health impacts, across the UK.

7. Why isn't private investment alone viable on this section of the strategic road network (supplying any supporting evidence)?

[Add any additional evidence documents to this response]

Comments:

As discussed in more detail in question 36, the RCF is designed to support the private sector to install ultra-rapid chargepoints where they are needed ahead of commercial viability, providing grants towards the cost of electricity network capacity at key sites, where it is not commercially viable for the private sector to do so alone.

[After answering go to 'Barriers']

Disagreement: strategic road network A roads sections

8. Why, in your view, is the rapid charging fund not required (supplying any supporting evidence)?

[Add any additional evidence documents to this response]

Comments:

Barriers

9. In your view what, if any, market barriers are holding back deployment of EV Charging Infrastructure on strategic road network A-roads?

There is a clear challenge in the level of demand certainty, with a need for consistent and effective mechanisms to assess anticipated levels of demand and to encourage and enable uptake of EVs, increasing utilisation of charging infrastructure. This is further complicated by the uncertainty surrounding HGVs, with refuelling and recharging demand still unclear.

Additional barriers also include the backlog of connections on the electricity network, and the high cost associated with these connections. Without certainty about how work to address the timelines and costs associated with network connections, alongside the uncertainty around estimated utilisation rates, it is difficult to justify investment. The current lack of alignment of price signals, from market signals to network charging arrangements, are also impacting the level of clarity for investors and developers about where and when to move ahead.

A lack of competition, or a non-competitive market, will also hold back deployment, and the RCF should look to bolster the developing market to ensure consumers benefit from the efficiencies and customer experience improvements that competition can deliver.

Future-proofing

The rapid charging fund will invest to ensure that grid connections at funded sites are future-proofed. Connections will be sized to meet future forecast demand levels which reflect the expected growth in demand for electric vehicle charging as the sales of petrol and diesel vehicles are phased out. This 'dig once' approach will be more time and cost efficient than smaller, incremental upgrades. Such incremental upgrades would risk periods of unmet consumer demand while upgrades are being built.

[Refer to the future-proofing section of the consultation for further details \[opens in a new window\].](#)

10. Do you agree or disagree with the proposal to oversize connections at motorway service area sites, so they are future-proofed to meet demand in the long-term?

- Agree
- Disagree
- Don't know (Go to 'Future-proofing')

Future-proofing: reasoning

11. Explain your rationale.

Energy UK agrees with this proposal, and would like to see greater anticipatory investment in network infrastructure and focus on unanswered questions around HGVs and wider decarbonisation efforts, for example in heating and in industrial use. Additionally, addressing long lead times for connections, and investing in connections that exceed the current and near-term demand expectations will also enable a level of future-proofing for both light vehicles and HGVs.

Ongoing reforms in the energy sector including the Connections Action Plan, Transmission Acceleration Action Plan, and GB Connections Reform workstream will look to address the current connections backlog, and this should be considered when developing the requirements of the RCF.

Future-proofing

12. What evidence and variables do you think we should consider when forecasting annual battery electric car, van and heavy goods vehicle charging demand at motorway service area sites, to inform the connection size required to meet future demand out to 2050 (supplying any supporting evidence)?

[Add any additional evidence documents to this response]

Comments:

The primary metrics for estimating future demand are the Government's own targets, and the trajectory of the ZEV mandate.

It will further be important to consider market trends, both at the national and regional level, taking into account wider metrics relating to consumer behaviours, typical journey types, and wider technology advancements that may impact the kind of charger and power requirements required.

Who can apply for the rapid charging fund

We propose that at motorway service areas, motorway service area operators will be invited to apply for funding. Other parties such as chargepoint operators are welcomed and encouraged to collaborate with motorway service area operators in their applications to the fund, to jointly develop funded plans for long-term expansion of electric vehicle charging facilities.

[Refer to the 'When will the rapid charging fund' section of the consultation for further details \[opens in a new window\].](#)

13. Who do you think should be the rapid charging fund applicant at motorway service area sites and why?

The monopoly status of MSA parties and the intended approach to make MSAs the sole applicant could lead to practices that do not support a robust competitive market. It is, therefore, important that a competitive tender process be established to ensure that fair competition can deliver benefits to consumers and the market.

Competition

The Department for Transport is committed to designing the fund in a way that will minimise the distortive impacts on competition. We have been engaging closely with the Competition and Markets Authority and multiple industry stakeholders on competition requirements in the rapid charging fund. We propose that motorway service area sites funded by the rapid charging fund will be required to have at least 2 open-access chargepoint operators working on site, as per the Competition and Markets Authority's recommendation, from the point of the connection becoming available and for the duration of the rapid charging fund contractual term.

As part of the application process, we anticipate that motorway service area operators will need to provide evidence demonstrating that there will be arrangements on site to deliver this competition.

We are considering whether to require an open tender for chargepoint operators at rapid charging fund funded sites. We propose that applicants to the fund should be required to treat all chargepoint operators fairly and will not be allowed to offer preferential treatment to chargepoint operators to which they have an affiliation. This could include a requirement for legal separation between motorway service areas and affiliated chargepoint operators at rapid charging fund funded sites and/or measures to limit the market share of any one chargepoint operator on a motorway service area.

[Refer to the 'Competition section' of the consultation for further details \[opens in new window\].](#)

14. Do you agree or disagree that there should be a requirement for motorway service areas, funded via the rapid charging fund, to award contracts to chargepoint operators through an open tender process?

- Agree
- Disagree
- Don't know (Go to 'Competition')

Competition reasoning

15. Explain your rationale.

Energy UK fully agrees that there should be an open, transparent, and consistent competitive tender process across MSAs.

Competition

16. What policies, if any, would you like to see introduced to ensure fair treatment for chargepoint operators on motorway service area sites?

n/a

In cases where an agreement between a motorway service area operator and one of its chargepoint operators agreement is terminated unexpectedly, we expect the motorway service area operator to notify the rapid charging fund delivery body.

We are seeking views on how long the motorway service area operator would need to replace a chargepoint operator on a site. We are suggesting a period of 12 months in such cases, for example if one or more chargepoint operators are unable to operate after funding has been awarded and are seeking for your views on this timing.

17. Do you think a 12 month period from notification is a reasonable or unreasonable period of time for a replacement chargepoint operator to be fully operational?

- Reasonable (Go to 'Heavy good vehicles')
- Unreasonable
- Don't know (Go to 'Heavy good vehicles')

Alternative timeframe

18. What length of time do you think should be required (in months)?

A 12-month period seems reasonable in theory, but it is important to ensure some flexibility should any supply chain constraints emerge, or are exacerbated.

Heavy goods vehicles

The government has [announced that all new heavy goods vehicles in the UK must be zero emissions at the tailpipe by 2040 \[opens in a new window\]](#). To support this transition, we are considering whether to extend the scope of the rapid charging fund to also part-fund additional grid upgrades required for forecasted zero emission heavy goods vehicle demand. We are using this consultation as an opportunity to gather further information on stakeholder views on the inclusion of heavy goods vehicles in the scope of the fund.

19. What, in your view, would be the impact if the rapid charging fund did not include additional capacity for zero emission heavy goods vehicle charging infrastructure at motorway service areas as part of its scope?

It would be likely that further funding and work would be required in future, as market trends are toward increasing electric models being brought to market. This would represent a sub-optimal solution compared to an approach which, as far as is possible, future-proofs investment.

The work of the Freight Energy Forum should be linked to this decision as it looks to map out where future HGV recharging and refuelling demand could emerge. Existing industry analysis should also be considered to further understand the potential impact of the RCF in meeting demand from HGVs, for example National Grid's report "[Supporting the growth of clean transport](#)".

20. In your view, in what timeframe should the rapid charging fund require heavy goods vehicle ultra-rapid charging to be available at motorway station areas?

The timeframe should be aligned with Government targets and the 2050 Net Zero and Carbon Budget requirements.

21. Explain your rationale.

n/a

‘Funding model’ and ‘Chargepoint provision and availability’

These remaining questions are aimed at motorway service area operators, chargepoint operators or any other party directly involved in providing chargepoints on the Strategic Road Network. This is to target the questions at those within the industry who are best placed to respond in an informed way.

22. Are you a motorway service area operator, chargepoint operator or any other party directly involved in providing chargepoints on the Strategic Road Network?

Yes

No (Go to ‘Final comments on the Rapid Charging Fund’)

Funding model

The rapid charging fund will provide grant funding to part fund the cost of future-proofed grid connection upgrades. This will be based on quotes that applicants must obtain from a connection provider.

One approach that we are considering is to use a consistent threshold below which the market would fully fund infrastructure provision and above which investment would not generally be considered financially viable and grant funding will be required. A possible option to do this includes using a metric such as a £ per MW funding threshold which could potentially be banded to group sites with similar characteristics.

This could work either as a single threshold approach, or as a banded threshold approach.

[Refer to the 'Funding Model' section of the consultation for further details \[opens in a new window\].](#)

23. Do you agree or disagree that it is feasible to establish a single or banded funding threshold for all sites below which costs are considered to be financially viable and above which grid connection costs should be considered eligible for rapid charging fund grant

support (for example, is there a consistent £ per MW level of investment that is generally considered to be financially viable)?

	Agree	Disagree	Don't know
Single funding threshold	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Banded funding threshold	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

24. What would your preferred option for funding be?

- Single funding threshold approach (Go to 'Preferred choice reasoning')
- Banded funding threshold approach (Go to 'Preferred choice reasoning')
- Alternative approach
- Don't know (Go to 'Chargepoint provision and availability')

Alternative approach

25. Explain your alternative funding approach and rationale.

26. What benefits or disadvantages do you think use of a single or banded threshold approach brings?

[After answering go to 'Chargepoint provision and availability']

Preferred choice reasoning

27. Explain your rationale.

Investment will be needed across all SRN-A roads and there are discrepancies in costs based on area (connection costs vary) and business capabilities (on-site generation potential, existing connection). There is a risk that a limit results in a post-code lottery based on this variation so some consideration of this should be factored into the process.

While the banded threshold could be an appropriate approach, we would need to see additional evidence of how this would be applied and what the qualifying criteria for this approach would be before we can support this approach.

Chargepoint provision and availability

To ensure sufficient chargepoint availability at motorway service areas and avoid queuing, we are looking to mandate (through conditions of funding) that motorway service area operators must meet a minimum level of provision at their sites which would expand in line with growth in demand over time.

We are considering the following options to ensure provision keeps pace with demand. The options are maintaining a maximum of 25% average charge point usage per day either over a:

- 3 month rolling period
- 12 month rolling period

To minimise queuing at sites with very high peaks in demand, we are also considering combining the proposed 25% average utilisation threshold with a metric based on maintaining a maximum number of hours at 90% or above chargepoint usage over a specific period.

The Department for Transport are also considering whether other levers, such as secondary legislation under the [Automated Electric Vehicles Act 2018 \[opens in a new window\]](#) should be used to require motorway service area operators to ensure there is a minimum provision of chargepoints available across all motorway service area sites (regardless of rapid charging fund funding). The rationale for this is to ensure that if operators decide not to apply to the rapid charging fund they may still be required to provide sufficient chargepoints to meet future demand due to legislative requirements. The intention is that the requirements of legislation will mirror the conditions of the rapid charging fund, leaving no applicant to the rapid charging fund required to meet stricter conditions than those in legislation.

[Refer to the 'Chargepoint provision and availability' section of the consultation for further details \[opens in a new window\].](#)

28. Do you agree or disagree that a:

	Agree	Disagree	Don't know
metric where additional chargepoints are required if utilisation exceeds 25% average over a 3 month period will be effective in achieving a balance between adequate provision of chargepoints and minimised queuing?	X	<input type="checkbox"/>	<input type="checkbox"/>
metric where additional chargepoints are	X	<input type="checkbox"/>	<input type="checkbox"/>

required if utilisation exceeds 25% average over a 12 month period will be effective in achieving a balance between adequate provision of chargepoints and minimised queuing?

Agree

Disagree

Don't know

What is your preferred approach and why?

n/a

29. What, if any, challenges do you anticipate with a metric that requires additional provision if average utilisation exceeds 25% over a 3 month period?

Connection timelines are overly long at the moment given unprecedented demand, and this may result in a long delay between the initial investment and latter investments.

30. What, if any, challenges do you anticipate with a metric that requires additional provision if average utilisation exceeds 25% over a 12 month period?

n/a

31. Do you agree or disagree that to minimise queuing at sites with very high peaks in demand, a metric where additional chargepoints are required if utilisation exceeds 90% over 50 hours, over a 12 month rolling period, in combination with an average utilisation metric, will be effective in minimising queuing?

Agree

Disagree

Don't know

32. What, if any, challenges do you anticipate with a metric that requires additional provision if average utilisation exceeds 90% for over 50 hours over a 12 month rolling period?

n/a

33. Do you agree or disagree with our suggested approaches to ensure provision keeps pace with demand?

- Agree
- Disagree
- Don't know

34. What, if any, alternatives are there to ensure provision keeps pace with demand, and queues are kept to a minimum?

Consideration of the alternatives to grid connection should be part of the fund – if investment in storage and generation enable additional on-site charging, this could address some of the peak demand while also becoming an additional revenue source via participation in flexibility markets.

RCF funding should only be allocated to address the cost of connections, but decisions on additional provision to meet growing demand should include some consideration of which sites have invested in on-site assets already and still see demand beyond their ability to deliver.

Additional points for consideration include larger charging bays for larger light commercial vehicles (LCVs) and accessibility considerations, ensuring diverse types of cars and consumers can access bays easily and swiftly. A faster adoption of a standardised payment operation, as well as a standardised booking system for charging spaces, could help to reduce queues at chargepoints whilst improving also customer experience.

35. What metrics and associated target values do you currently use to ensure adequate provision of chargepoints to keep pace with demand at a site level?

n/a

Final comments on the rapid charging fund

36. What, if any, other comments and concerns do you have that you would like to share regarding the rapid charging fund?

Timeframe for delivery

The delays already seen to the approach and funding allocation must be addressed to meet the demand for charging in line with the ZEV and government targets. A plan for delivery is urgently required in order to meet the increasing demand for charging.

Locational concerns

The RCF was originally designed to ensure the provision of rapid charging infrastructure across the Strategic Road Network of motorways and A-roads to ensure that the private sector can install ultra-rapid chargepoints where they are needed ahead of commercial viability, providing grants towards the cost of electricity network capacity at key sites, where it is not commercially viable for the private sector to do so alone.

The consultation's focus on MSAs, which by their nature are already areas where the commercial case for EV charging is clear, does leave the potential for A-roads and the communities dependent on these routes being left behind. The model proposed in this consultation could result in market distortion which promotes a system of EV charging which is structured predominately around motorways, overlooking the commercial activity which depends on roads outside of the major road network.

This potential for omission of areas of the East of England, South West England, East Midlands, South Central England, and parts of Wales is concerning, and could lead to disparities in uptake of EVs, with resultant economic and health impacts, across the UK. Additional focus would therefore be needed to ensure a considered distribution of rapid charging to urban and rural areas as well as the RCF's recommended super sites, motorways, and strategic-A roads strategy.

CP of last resort

There is a need for further clarity on the CP provider of last resort approach, and it is critical that an open, competitive process is used to ensure the best value for consumers in that area. The provider of last resort would be responsible for providing chargepoints in areas where it is unprofitable to do so, and there will be areas where the initial investment will be sensible but the operation and maintenance of assets may result in an unprofitable model for some years to come.

Accessibility

Some consideration of the approach taken to ensure appropriate access for varying vehicle types and varying consumer needs will also be important to ensuring all consumers are able to utilise these chargepoints. Both Light Commercial Vehicles and Wheelchair Accessible Vehicles may require larger parking bays, and this should be a required consideration in all proposed projects.