EXETER AND HEART OF DEVON
LOW CARBON TASK FORCE
ELECTRIC VEHICLE STRATEGY
September 2014

1 Scope

1.1 Geographical

1.1.1 This strategy covers the geographical area of the Exeter and Heart of Devon Growth Board, namely the districts of Exeter, East Devon, and Teignbridge. Where relevant, it also extends to the rest of Devon County Council's administrative area.

1.2 Sectors

1.2.1 This strategy has been promoted by the Low Carbon Task Force, whose members represent both the public and private sector[1]. Chapter 6 considers the roles of both sectors in promoting appropriate ownership and use of electric vehicles.

1.3 Technologies

1.3.1 This strategy covers road vehicles powered by electricity with or without assistance from some other fuel source. It does not extend to other types of low emission vehicle (LEV), such as those powered by hydrogen fuel cells, of which a smaller range of products is available and take-up has been slower than for electric vehicles. A strategy for this and any other emerging types of low emission vehicle can be written if and when appropriate.

1.3.2 This strategy therefore covers:-

- plug-in electric vehicles;
- plug-in hybrid vehicles;
- hybrid vehicles.

1.3.3 It includes cars, commercial vehicles and cycles.

2 The national context

2.1 Government policy

2.1.1 The UK's carbon reduction targets are set out in the Climate Change Act 2008, and envisage an 80% reduction in emissions of greenhouse gases from a 1990 baseline by 2050.

[1] See Appendix 2.

2.1.2 The Committee on Climate Change, in its Fourth Carbon Budget Review (part 2)[2] published on 11 December 2013, has committed the UK to reduce greenhouse gas emissions by 50% by 2025 compared with 1990 levels. In doing so, it has placed significant reliance on reduction of emissions from the transport sector generally, and take-up of electric vehicles in particular. It recommends continuing to support market development for electric vehicles through purchase subsidy and investment in infrastructure[3].

2.1.3 The Government's aspiration is that by 2040 every new car will be an ultra low emission vehicle (ULEV), and that by 2050 ULEVs will account for almost every car and van in the UK fleet[4]. However, the Committee on Climate Change believes that grants towards the purchase of electric vehicles may need to remain available until 2030 to achieve this[5].

2.1.4 The Government has set up an Office for Low Emission Vehicles (OLEV), based in the DfT but including staff from BIS and DECC, to act as a one-stop shop in the developing market for ultra low emission vehicles.

2.2 Financial incentives

2.2.1 Various incentives exist to encourage the take-up of electric vehicles.

2.2.2 The Government provides grants towards the purchase of ultra low emission cars (including electric and plug-in hybrid vehicles); currently this is 25% or 20% of the respective costs of a car or van, up to a maximum of £5,000 or £8,000 respectively. It also provides funding towards the provision of charging points through the Plugged-in Places programme.

2.2.3 Purely electric cars are exempt from Vehicle Excise Duty. Hybrid models fall in tax band A for which no duty is currently chargeable in the first or subsequent years. For light commercial vehicles, there are reductions in duty for vehicles meeting Euro 4 or 5 standard. Purely electric company cars are exempt from income tax on private use.

2.2.4 Although very limited in the UK, tolls and road pricing provide another opportunity for favourable treatment of electric vehicles. In relation to the London congestion charge, certain vehicles used to qualify for the Greener Vehicle Discount or Electrically Propelled Vehicle Discount; however, these schemes have now closed to new registrations. Ultra low emission vehicles (ULEVs) still qualify for a 100% discount; this is stricter than the band A criteria for Vehicle Excise Duty and only electric and certain approved plug-in hybrid vehicles qualify automatically. Conventional hybrids only gain exemption if their emissions are 75g/km or less and they are Euro 5 compliant.

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[2] http://www.theccc.org.uk/publication/fourth-carbon-budget-review/

[3] At page 27 of the 4th Review.

[4] A Strategy for Ultra Low Emission Vehicles in the UK, para 6.1.

[5] At page 42 of the 4th Review.

2.2.5 It is thought that no local authority in the UK currently allows use of bus lanes by LEVs or ULEVs. Transport for London have specifically considered allowing use by electric vehicles and decided against it.[6]

2.2.6 Some local authorities apply no or reduced parking charges to certain low emission vehicles; however the national picture is patchy.

2.3 New car sales

2.3.1 Sales of electric vehicles are currently low but increasing. In Quarter 3 of 2013 there were a mere 1,149 registrations under the government's grant scheme, although this was 25% up on Quarter 2.

2.3.2 Pure electric vehicles accounted for a mere 0.15% of new car sales in 2013[7]. While the UK picture is not untypical, contrast this with Norway where electric cars make up 12% of new car sales[8]. The International Council on Clean Transportation has identified the UK as having a low take-up of electric vehicles despite relatively generous fiscal incentives[9].

2.3.3 A study by Element Energy for the University of Aberdeen[10] has identified the following barriers to the uptake of electric vehicles:-

- Vehicle price;
- Limited supply of models;
- Access to charging facilities;
- Driving range and charging time
- Awareness of plug-in vehicles and their capabilities and associated incentives.

2.4 Regulation

2.4.1 Apart from taxation and certain other privileges, electric cars or commercial vehicles are subject to the same rules of the road as those powered by petrol or diesel.

2.4.2 Electric cycles may be ridden on the same infrastructure as conventional cycles, as long as they comply with the legal requirements for electrically assisted pedal cycles (EAPCs)[11], although users must be aged 14 or over.

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[6] See Electric Vehicles in Bus Lanes (TfL)

[7] Source; Society of Motor Manufacturers and Traders.

[8] For December 2013 (6% of sales over 2013 as a whole); see http://www.greencarreports.com/news/1088856_electric-cars-12-percent-of-all-new-car-sales-in-norway-last-month. The article attributes this to comprehensive charging infrastructure, tax incentives, and a limited need to embark on long journeys.

[9] "Driving Electrification – a global comparison of fiscal incentive policy for electric vehicles (May 2014), Figure ES-1

[10] http://www.element-energy.co.uk/wordpress/wp-content/uploads/2014/01/CCC-EV-pathways_FINAL-REPORT_17-12-13-Final.pdf

[11] See https://www.gov.uk/electric-bike-rules

Electric cycles not complying with the EAPC requirements are subject to the same rules as motorcycles.

3 The merits (or otherwise) of electric vehicles

3.1 Emissions of oxides of nitrogen, and local air quality

3.1.1 The greatest benefit is clearly in terms of tailpipe emissions and therefore the contribution made to local air quality. This has significant advantages, particularly in Exeter where an Air Quality Management Area has been designated, broadly corresponding to the busiest road corridors, on account of high emissions of nitrogen dioxide[12]. Emissions of harmful particulates are also significantly reduced.

3.2 Carbon emissions

3.2.1 Even without progress towards decarbonisation of the UK's power supply, a shift to use of electric vehicles will make an effective contribution to overall reduction in consumption of fossil fuels and in corresponding carbon emissions. This is because electric motors are more efficient than internal combustion engines at converting fuel into kinetic energy[13].

3.2.2 Decarbonisation of the power supply on any significant scale is dependent on central government policy. However, businesses can use combined marketing initiatives to increase the demand for renewable energy. For example, purchasers of a VW electric car are offered the opportunity to sign up to an Ecotricity green tariff at point of sale.

3.2.3 Careful selection of sites for charging points can enable them to be powered from solar panels, minimising their consumption of electricity from the national grid. See further paragraph 6.1.3.

3.3 Electricity storage

3.3.1 Electric cars can fulfil a storage role in relation to surplus electricity generated at certain times, eg. by solar PV during the daytime, which could be used to charge the batteries in an electric car, or be stored in old batteries which are no longer fit for use in a vehicle. Technology exists for an electric car to provide backup power to a house during failure of the conventional electricity supply; this is already in use in Japan and is being developed in the USA[14]. In the UK we are seeing technological advances in the way buildings are wired (for example to enable electricity from domestic solar panels to be fed into the national grid), and these advances will make it simpler for electric vehicles plugged in to such a system to provide back-up power for the building.

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[12] See http://www.exeter.gov.uk/index.aspx?articleid=4261

[13] See http://spiral.imperial.ac.uk/bitstream/10044/1/6839/1/Howeyetal_measurements.pdf

[14] See http://www.greencarreports.com/news/1081901_electric-cars-used-as-emergency-power-dod-begins-tests.

3.4 Congestion

3.4.1 It should be recognised that uptake of electric vehicles in place of those powered by petrol or diesel will do nothing to reduce congestion in Exeter and elsewhere. Promotion of electric vehicles should therefore be targeted at current users of petrol or diesel vehicles rather than as an alternative to using more sustainable modes of transport, such as walking, cycling or using public transport. See section 6.

3.5 Noise

3.5.1 Electric vehicles are typically quieter than those powered by petrol or diesel, particularly at low speeds where road noise is not significant. There is however a debate about whether this creates potential safety problems, with pedestrians and cyclists being unable to hear electric vehicles approaching. The Equalities Impact Assessment of this Strategy considers this issue.

4 Policies

4.1 Planning policies

4.1.1 The UK Government's Strategy for Ultra Low Emission Vehicles in the UK notes that most charging takes place at home and overnight, with some at the workplace[15].

4.1.2 National planning policy is contained in the National Planning Policy Framework (NPPF)[16], which defines "sustainable transport modes" as including low and ultra low emission vehicles. A consequence of this is that much of Chapter 4 of the NPPF "Promoting Sustainable Transport" requires local planning policies to promote use of such vehicles to the same extent as walking, cycling and use of public transport.

4.1.3 One paragraph which still makes a distinction is paragraph 35, which requires developments to be located and designed (where practical) to give priority to pedestrian and cycle movements, and have access to high quality public transport facilities, although it also supports the incorporation of facilities for charging plug-in and other ultra low emission vehicles.

4.1.4 Accordingly there is currently significant national support for requiring developers to provide charging points. Whether this remains the case in relation to new dwellings will depend on the outcome of the Housing Standards Review[17], in particular whether local planning authorities can set their own standards and if not, what national standards will apply.

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[15] See https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/239317/ultra-low-emission-vehicle-strategy.pdf at para 5.27.

[16] https://www.gov.uk/government/publications/national-planning-policy-framework--2

[17] https://www.gov.uk/government/consultations/housing-standards-review-consultation. The Government has responded to the consultation but full details are still awaited.

4.1.5 For the present, Exeter City Council has adopted a Residential Design SPD[18] which requires developers to plan for the future installation of charging points for all residential parking, including on-street locations, by at least providing ducting with the potential for easy connection to the electricity network[19]. A Sustainable Transport SPD extends this to workplace, retail and public parking facilities[20]. However, to date this has not been routinely secured by condition.

4.1.6 These SPDs also set out the quantity and standard of cycle parking required to satisfy the relevant Local Plan policy, and the Sustainable Transport SPD promotes the provision of safe and convenient routes for cyclists. Electric cycles can make use of the same parking facilities and infrastructure, so no additional provision is required in order to encourage their use.

4.1.7 In East Devon, Local Plan policy TA4 encourages the provision of cycle routes and facilities in conjunction with new development, and TA9 sets minimum cycle parking standards[21]. In the emerging replacement Local Plan, policy TC9 requires all major developments[22] to include charging points for electric cars.

4.1.8 In the Teignbridge Local Plan, policy S9(e) requires new development to support infrastructure for electric vehicles. Policy S2 (d) requires priority to be given to the needs of cyclists.

4.1.9 Policy and practice will need to be kept under review following the detailed outcome of the Housing Standards Review.

4.2 Parking policies

4.2.1 None of the District Councils represented on the Growth Board gives any discount in parking charges to electric vehicles, nor does Devon County Council.

4.2.2 Exeter City Council has installed some charging points in its own car parks, which are available for the public to use. The normal parking charge applies, and users require a PodPoint membership card, but at the present time no additional charge is made by the Council for use of the charging point.

4.3 Fleets

4.3.1 Exeter City Council, East Devon District Council and Devon County Council have been undergoing reviews of their own fleets by the Energy Saving Trust, to establish whether there is a business case for introducing electric vehicles to those fleets. Exeter is acquiring a number of electric vehicles as a result.

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[18] http://www.exeter.gov.uk/index.aspx?articleid=12730

[19] Para 6.34 of the Residential Design SPD.

[20] Para 6.5.1 of the Sustainable Transport SPD.

[21] http://www.eastdevon.gov.uk/forwardplan1995-2011.htm#top

[22] 10+ dwellings, 1000+ square metres floorspace or 1+ hectares site area

5 Infrastructure provision

5.1.1 The Government has largely left the industry to its own devices, resulting in piecemeal provision of charging points across the UK, with a multitude of membership and pay-as-you-go schemes[23].

5.1.2 The availability of information is not particularly satisfactory, with various websites showing inconsistent information. The establishment by OLEV of a National Chargepoint Registry was supposed to help, but its website excludes some charging points shown on other websites.

5.1.3 With that caveat, the position is that there are around ten charging points available for public use in and around Exeter, with approximately forty across Devon (including Plymouth and Torbay)[24]. See Figure 1.

5.1.4 Nevertheless, provision is increasing with more players entering the market; for example Ecotricity have installed charging points at all Ikea stores[25]. The provision of a network of rapid charging points is identified as being necessary to encourage high uptake of electric vehicles[26].

Figure 1: charging points in Devon. Reproduced with kind permission of nextgreencar.com.

[23] UK Strategy, para 5.31.

[24] According to http://www.nextgreencar.com/electric-cars/charging-points.php

[25] Exeter City Council has recently resolved to grant permission for an Ikea store in Exeter.

[26] See http://www.element-energy.co.uk/wordpress/wp-content/uploads/2014/01/CCC-EV-pathways_FINAL-REPORT_17-12-13-Final.pdf, page ix.

6 Discussion

6.1 General principles

6.1.1 It follows from section 3 that ownership and use of electric vehicles is to be encouraged.

6.1.2 Where electric vehicles replace those powered by petrol or diesel, the advantages are considered to outweigh any disadvantages. There are significant benefits in reducing local emissions of nitrogen oxides, and the relative efficiency of electric motors compared with internal combustion engines brings advantages in terms of reduced fossil fuel consumption and corresponding carbon emissions.

6.1.3 Promoting the use of electric vehicles where they complement other sustainable transport initiatives can capitalise on their respective advantages, compensating for the fact that using an electric vehicle does not in itself reduce congestion. So for example, provision of charging points at park and ride sites or at rail stations combines two “green” initiatives: electric cars and onward travel by a sustainable mode – plus a third (renewable energy) if the charging points are powered by solar PV.

6.1.4 Similarly, use of electric vehicles by car clubs constitutes a combination of sustainable initiatives, since membership of car clubs has been shown in itself to reduce car journeys.

6.1.5 Another effective target market will be vehicles whose journeys will take place anyway, including commercial vehicles such as delivery vans. For example, IKEA already has hybrid vehicles in its delivery fleet and is trialling all-electric vehicles[27]. There is also scope for electrification of fleets of heavy vehicles including buses, although the only electric buses among the 2014/15 orders placed by Stagecoach (the dominant operator in the area) are hybrid vehicles for operation in London.

6.2 Fleet review and replacement

6.2.1 Several member organisations of the Low Carbon Task Force are undergoing fleet reviews. A fleet of vehicles is an expensive asset, so it is unlikely that organisations are operating larger fleets than necessary, although this should form part of any review. Similarly, fleet operators should frequently review the mileage travelled by their vehicles and work to reduce mileage as far as possible.

6.2.2 Subject to the above points, replacement of petrol or diesel vehicles with electric vehicles will have benefits, particularly in terms of local air quality, so organisations should be encouraged to review their fleets. It is accepted that they are not likely to replace vehicles where it is not economic to do so, but the benefit of a review is that it will demonstrate whether available grant aid and favourable running costs outweigh the capital cost. Leasing options may have advantages given the rapidly changing technology, and concerns over the eventual cost of replacing batteries.

[27] See http://www.edie.net/news/6/IKEA-to-include-EV-chargers-at-all-UK-stores-/

6.2.3 It is recommended that all member organisations of the Low Carbon Task Force and EHOD Growth Board take up the opportunity of fleet reviews by the Energy Saving Trust[28], and promote takeup among other organisations. Use by staff of electric fleet vehicles could dispel some of the anxieties around such vehicles, and may encourage them to consider an electric option when changing their own car.

6.3 Infrastructure

6.3.1 Potential roles for the public sector are:-

- as a provider of charging infrastructure;
- in securing provision by others, either through encouragement or compulsion.

6.3.2 Local authorities and other public sector organisations such as hospitals are significant providers of parking places where charging points could conveniently be provided. It is also appropriate for them to be publicly associated with a form of transport that benefits public health through reducing harmful emissions. It is considered appropriate, therefore, for these organisations to cater for those of their customers who drive electric vehicles, and to take advantage of funding opportunities to provide such facilities.[29]

6.3.3 The same applies to private sector providers. Organisations with a plug-in fleet are likely to need facilities for charging their own vehicles, and will often be able to make these available to customers.

6.3.4 It is recommended that the member organisations of the Low Carbon Task Force take a lead in providing charging points on their own property. What is currently unclear is to what extent it will be necessary for the provision of charging points by others to be compelled, principally through the planning system (see section 6.7). Following the example of IKEA, it is easy to foresee that one of the major supermarkets might provide charging points across its stores to emphasise its green credentials and gain a competitive advantage; in that case, others would be likely to follow.

6.3.5 It is perhaps less likely that businesses without extensive parking for customers will voluntarily provide charging facilities for staff, unless compelled or incentivised to do so. The role of the planning system is discussed more in section 6.7.

6.3.6 As mentioned above, environmental gains will be greater when provision of charging points is integrated with other sustainable transport initiatives. For example, workplace charging facilities could be combined with preferential parking arrangements for car sharers, to avoid encouraging an increase in car use at the expense of walking, cycling and public transport.

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[28] http://www.energysavingtrust.org.uk/Organisations/Transport/Products-and-services/Fleet-advice

[29] As Exeter City Council is currently doing.

6.4 Financial and other privileges

6.4.1 The most obvious examples of privileges are free use of charging points, and free or discounted parking for electric vehicles. Another example is free or, discounted entry to a restricted area, such as the congestion charge zone in London.

6.4.2 Despite the conclusion in paragraph 6.1.1 of this strategy that ownership and use of electric vehicles should be promoted, all privileges should be treated with caution for two reasons.

6.4.3 The first is that if this strategy and that of the Government succeed, electric vehicles will gradually take over until they become the norm. Privileges will potentially result in the strategy becoming a victim of its own success. So if electric vehicles are allowed free parking, this will eventually neutralise parking charges as a form of demand management, and reduce to nothing the income available for maintaining and improving the facilities. Likewise, allowing electric vehicles unrestricted entry to a controlled area will eventually remove the benefits of having the control in place.

6.4.4 This has already been exemplified in central London, where hybrid vehicles that are not ULEVs are no longer automatically exempt from the congestion charge.

6.4.5 Removing a privilege once it has been granted is always unpopular; more so if the existence of the privilege has influenced a major purchase like a car. For this reason:-

- Privileges should only be granted after careful consideration –
    - of the impact on other policies, such as those relating to sustainable transport and air quality;
    - of the consequences if take-up of electric vehicles continues to increase.
- All privileges should be clearly expressed as subject to periodic review, and liable to be reduced or withdrawn. Alternatively, or in addition, a privilege (evidenced by a permit) could be granted to a finite number of ULEVs to encourage early adoption.

6.4.6 Free use of charging points is essentially a privilege; while the cost of a single charge is low, the capital cost of the equipment runs to thousands of pounds. Whereas numerous organisations are currently allowing free use, as a simple way of promoting electric vehicles as well as encouraging visitors to a particular location, publicity should be designed so as to present this as a privilege (“Free charging available”) rather than allowing an assumption to develop that this is the norm, and guaranteed indefinitely.

6.5 Dissemination of information

6.5.1 This is a way in which organisations in both the public and private sector can help to promote ownership and use of electric vehicles.

6.5.2 Information which is important but not immediately accessible ranges from the types and models of vehicles on the market, the financial assistance available, and the location of charging points.

6.5.3 Particularly in relation to charging points, local authorities could have a role to play in publicising (for example on their website) points within and close to their area. Organisations publicising their own charging points could provide details of a wider network. However, organisations should avoid "reinventing the wheel" where this information is readily available elsewhere, and in doing so creating for themselves an obligation to keep information up to date in a rapidly changing marketplace. The best strategy for an organisation setting up a web page is to link to another authoritative source. For example, the most comprehensive maps of charging points appear to be http://www.nextgreencar.com/electric-cars/charging-points.php and http://www.openchargemap.org/site/.

6.6 An enabling role

6.6.1 Some funding opportunities are aimed at particular categories of applicant; for example Exeter City Council's successful bid was to a fund supporting provision of charging points on public sector estate. Local authorities have opportunities to promote electric vehicles through their relationships with transport organisations, such as bus and taxi operators and car clubs, and should be aware of funding opportunities to promote the acquisition and use of electric vehicles.

6.6.2 It has to be recognised that grants usually require the applicant to provide match funding, and therefore do not constitute totally free money; also that matching any grant funding will be challenging in the current economic climate. Nevertheless, member organisations of the Low Carbon Task Force and Growth Board should be willing to submit applications in appropriate circumstances.

6.7 The planning process

6.7.1 The Element Energy report referred to above[30] recommends that planning authorities use conditions to require all parking spaces in new development to be "EV-ready". However, until the detailed outcome of the Housing Standards Review[31] is known, the role of the planning system in prescribing details such as charging facilities in new housing development remains uncertain.

6.7.2 Subject to this, local planning authorities should:-

- Develop policies requiring the provision of charging points as part of new development, or at least the provision of ducting and easy connection to an electricity supply.
- Use conditions to secure compliance with the policies. Where there is no specific condition on an existing planning permission, there may be scope for persuading a developer to provide charging points as part of an approved travel plan.
- Where developers are required to support car clubs through section 106 contributions and/or provision of parking spaces, charging points

[30] http://www.element-energy.co.uk/wordpress/wp-content/uploads/2014/01/CCC-EV-pathways_FINAL-REPORT_17-12-13-Final.pdf, page xii.

[31] https://www.gov.uk/government/consultations/housing-standards-review-consultation

should be included. Developers should be required to set up management arrangements that do not involve passing maintenance liability to a local authority.

6.8 Marketing strategies

6.8.1 There are opportunities for marketing electric vehicles to the public and businesses as part of a "green package", for example:-

- An electric car can act as a storage system to complement solar PV.
- Products can be related through a green theme, such as the arrangement between Volkswagen and Ecotricity referred to in paragraph 3.2.2.
- Looser arrangements can be made through a loyalty points system with an environmental theme, such as the Ice scheme[32].

6.8.2 It is considered that commercial (rather than public sector) organisations are best placed to promote schemes of this kind.

7 Conclusions

7.1 General principles

7.1.1 The ownership and use of electric vehicles is to be encouraged. This is especially the case where they can be used to complement initiatives involving sustainable travel and/or renewable energy.

7.2 Fleet review and replacement

7.2.1 All member organisations of the Low Carbon Task Force and EHOD Growth Board should take up the opportunity of fleet reviews by the Energy Saving Trust[33], and promote take-up among other organisations. Reviews should examine the size of fleet and mileage travelled, as well as the potential for replacing petrol/diesel with electric vehicles.

7.3 Infrastructure

7.3.1 Organisations which provide parking places are encouraged to use these to expand the network of charging points.

7.4 Financial and other privileges

7.4.1 Privileges (such as free or discounted parking) should only be granted after careful consideration –

- of the impact on other policies, such as those relating to sustainable transport and air quality;

[32] http://www.myice.com/

[33] http://www.energysavingtrust.org.uk/Organisations/Transport/Products-and-services/Fleet-advice

- of the consequences if take-up of electric vehicles continues to increase.

7.4.2 All privileges, including free use of charging points, should be clearly expressed as subject to periodic review, liable to be reduced or withdrawn, and/or limited to a finite number of early adopters.

7.5 Dissemination of information

7.5.1 Organisations should assist in the provision of information, such as location of charging points, ideally by referring users to another authoritative source, to avoid a proliferation of information which may not be kept up to date.

7.6 An enabling role

7.6.1 Public authorities should use their relationships with transport organisations to promote ownership and use of electric vehicles.

7.6.2 All organisations should take appropriate opportunities to apply for funding that helps promote electric vehicles.

7.7 The planning process

7.7.1 Subject to the detailed outcome of the Housing Standards Review[34], local planning authorities should promote electric vehicles and particularly the provision of charging points through planning policies and conditions, including those requiring a travel plan.

7.8 Marketing strategies

7.8.1 Commercial organisations should exploit marketing opportunities that link electric vehicles with other green products and services.

Appendix 1: Glossary

BIS	Department for Business, Innovation and Skills
DECC	Department of Energy and Climate Change
DfT	Department for Transport
EHOD	Exeter and Heart of Devon, ie. the Growth Board of this name.
EPAC	Electric pedal assisted cycle – so defined by the Government in Electric Bikes – the rules
LEV	Low emission vehicle, ie. with CO2 emissions less than 100g/km at tailpipe
NPPF	National Planning Policy Framework

[34] https://www.gov.uk/government/consultations/housing-standards-review-consultation

PV	Photo volatic, as in “solar PV panels” which generate electricity from sunlight
SPD	Supplementary Planning Document – elaborating on policies in a Development Plan Document
ULEV	Ultra low emission vehicle, ie. pure electric, plug-in hybrid, or vehicle with CO_2 emissions less than 75 g/km at tailpipe

Appendix 2: Low Carbon Task Force members

Devon County Council

East Devon District Council

Energy Saving Trust

E.ON

Exeter Chamber of Commerce

Exeter City Council

Met Office

Royal Devon & Exeter NHS Trust

Teignbridge District Council

University of Exeter