



Isle of Man
Government
Reiltys Ellan Vannin

GD 2019/0010

DEPARTMENT OF INFRASTRUCTURE

Moving Towards Low Emission Travel
A Policy for Surface Transport &
Electric Vehicles

March 2019

Minster's Foreword

I am pleased to be able to bring forward this policy on low-emission surface transport. It provides a policy framework and direction of travel for the support of electric vehicles on the Island but also sets some targets for how Government fleet can assist in ensuring that the majority of surface transport will be powered by ultra-low greenhouse gas emission technology by 2050.

The policies within this document are ambitious and will require close cooperative working across Government and I look forward to being able to report on progress made as part of the monitoring and review process.

Hon R K Harmer MHK
Minister for Infrastructure

Introduction

In May 2013, Tynwald agreed that Government would adopt a greenhouse gas emissions target for the Isle of Man of 80% reduction of 1990 levels by the year 2050 and that Government would implement policies and strategies to achieve that target. Tynwald later agreed in May 2015 that "to deliver the agreed scale of emissions reduction it will be necessary to ensure that all surface transport will be powered by ultra-low greenhouse gas emission technology by 2050, with the exception of machines of cultural importance such as those used on the heritage railways and for motor racing events¹." A recent report from the Intergovernmental Panel on Climate Change (IPCC) stated that "limiting global warming to 1.5°C would require "rapid and far-reaching" transitions in land, energy, industry, building, transport and cities. Global net human caused emissions of carbon dioxide would need to fall by about 45% from 2010 levels by 2030, reaching 'net zero' around 2050".

"Greater Efficiency, Cleaner Energy, Resilient Economy" (A Climate Change Mitigation Strategy for the Isle of Man 2016-2020) was approved by Tynwald in July 2016 and identifies that surface transport is one of the major contributing factors to the Island's emissions. As such, there is a commitment as part of this Climate Change Mitigation Strategy to consider future modes of transport.

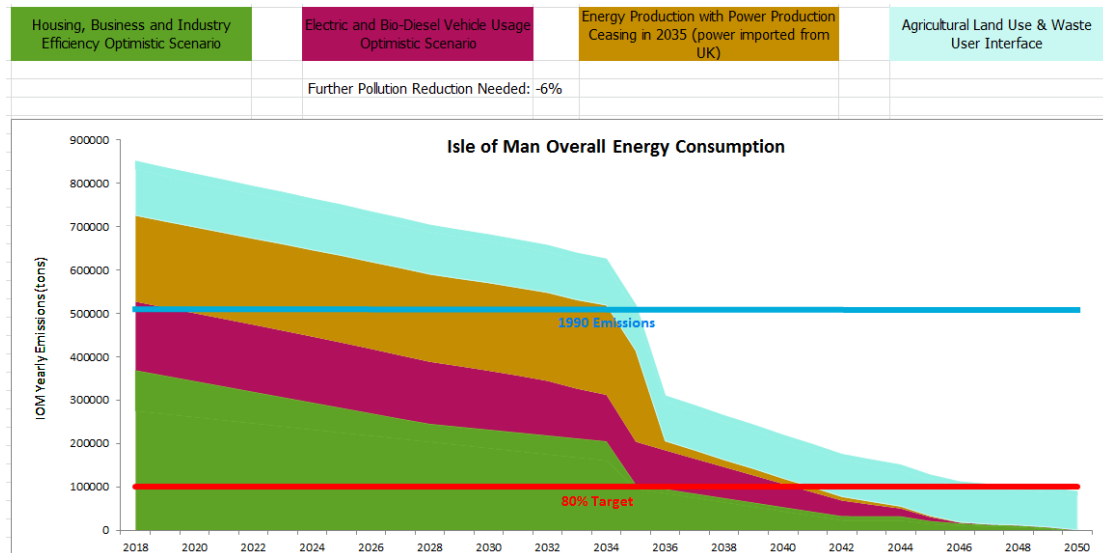
As part of the Climate Change Mitigation Strategy, the principles for reducing emissions sets out that "in line with international conventions, it is in our own interest to aim for the most cost effective means to reduce emissions. This necessitates firstly seeking to eliminate emissions from energy consumption by eliminating demand for energy itself where possible".

The Tynwald commitments have been included within the Programme for Government, under Enterprise and Opportunity Island, where the following policy statements have been agreed: "*support and promote healthy, safe and cost-effective travel and encourage the uptake of low carbon transport*" and "*Support the three goals of energy security, the 2050 Emissions Reduction target and affordability to ensure an effective, secure and appropriate long term energy plan*".

The emerging Climate Change Action Plan looks at the different sectors which need to evolve to reach an overall reduction in emissions. Vehicle usage is one of these sectors and the following diagram shows the extent of the change required in overall energy consumption in order to make the 2050 target level of emissions.

The Department is already working to deliver short term modal shift for surface transport through its work on active travel which could help to reduce emissions by eliminating the demand and encouraging people to walk and cycle for their journeys with a purpose. The Active Travel Strategy was approved by Tynwald in July 2018, and work is currently underway to prepare the accompanying Action Plan.

¹ <http://www.tynwald.org.im/business/opqp/sittings/Tynwald%2020142016/2016-GD-0031.pdf>



In order to best achieve these commitments and both encourage and facilitate the long term modal shift for surface transport to lower emission vehicles, the Department of Infrastructure will work in close partnership with other key contributors. These will include Manx Utilities, the Department for Food, Environment and Agriculture (DEFA), and other identified stakeholders so that the Isle of Man moves to an Island with low emission surface transport.

Vision

The Isle of Man Government will show innovation, leadership and vision in encouraging the wide spread adoption of low emission vehicles, by leading in the development of appropriate policies, infrastructure and regulations, so that by 2050 all surface transport will be powered by ultra-low greenhouse gas emission technology with the exception of machines of cultural importance such as those used on the heritage railways and for motor racing events.

Ultra-low emission vehicles and technology

The technology for moving surface transport to ultra-low emissions is advancing globally. At present there are three main technological solutions which can be summarised as vehicles powered by electricity, hydrogen or by traditional engines which are engineered to significantly reduce emissions. Whilst each of these technologies can be applied to all types of vehicles, understanding of the way in which they are developing and taking into consideration the characteristics of the Island means that there is more certainty as to which technologies are likely to be more appropriate to certain classes of vehicles.

Small Vehicles (including cars, vans and motorcycles)

At present for cars all three of these technologies are technically feasible. However it is likely that as electric vehicles offer a positive opportunity for the Isle of Man that they will form an important part of the Island's future and are most likely to dominate the switch to low-emission technology. The Island's small geographical size gives it the opportunity to embrace the introduction of electric vehicles at rates above those in most European countries. Cars, vans and motorcycles on the Isle of Man undertake short journeys that are already well within the capability of fully electric cars. Range anxiety

that has been noted in other countries should, therefore, be less of a barrier to residents on the Island.

In order to achieve the vision in this document the Department of Environment, Food and Agriculture have advised that by 2030 to achieve this step change there will need to be 10,000 electric vehicles registered on the Isle of Man. Therefore the Key Performance Indicator in relation to take up of electric vehicles is:

**That by 2030 at least 10,000 electric vehicles
will be registered on the Isle of Man**

Encouraging the take up of electrically powered small vehicles

Government needs to action a number of areas to encourage the shift to electric vehicles including:

- Provision of information
- Supply of viable alternatives
- A reliable and accessible charging network
- An appropriate taxation regime

Providing information

In order to make an informed decision people need to be provided with relevant information relating to electric vehicles. This should not just focus on the global environmental benefits but also on the day to day advantages to the owner. Whilst much of this information is readily available consideration should be given to providing this in a bespoke Isle of Man context.

For example it is known that owing to better technology and efficiency measures, electric cars offer much lower running costs than comparable vehicles using internal combustion engines (ICEs): with current electricity and fuel taxation, a 100 km trip would cost about 20-25% of the cost of using a car powered by a conventional combustion engine. Identified barriers to greater levels for the adoption of electric cars over the past years include range limitations and vehicle costs, as well as access to recharging facilities, costs and other challenges associated with their installation, as well as the lack of awareness or confidence in the technology. Some of these barriers are being removed now with improved battery technology, improved ranges for the electric vehicles as well as reduction in purchase (and hire) costs. Benefits for local pollution reduction, energy diversification and climate change mitigation, as well as the encouraging signs observed in cost and performance developments in the recent past, are the main drivers of the deployment of a variety of policy support mechanisms supporting the market uptake of electric cars and attempting to overcome these barriers. These messages should be clearly communicated so that people can make informed decisions regarding future vehicle purchases.

Action

That a communication strategy for electric vehicles is developed by the Department of Environment, Food and Agriculture as part of the overall Climate Change Action Plan Communications Strategy.

Ensuring a supply of viable alternatives

Globally, car manufacturers are making numerous commitments to produce a growing number of electric models. This will provide consumers with a viable alternative to a traditionally fuelled vehicle.

Although costs of electric vehicles are dropping, they can still cost significantly more than a comparable conventional car, and with uncertainty as to the battery life, this could be seen to be prohibitive to some. The widespread availability of plug-in hybrids however could be seen as an affordable option in the interim.

Automaker Group	Electric Models
Nissan – Renault- Mitsubishi	• 12 electric models by 2022
Volkswagen Group	• 80 electric models by 2025 • 300 electric models by 2030
Toyota	• All vehicles hybrid, battery or fuel cell electric by 2025
Tesla	• 3-4 electric models (S,X,3,Y)
Mercedes	• 10 electric models by 2025 • 50 electrified models by 2025
BMW	• 12 electric models by 2022 • 13 plug-in hybrid models by 2025
Ford	• 16 electric models by 2022 • 24 plug-in hybrid models by 2022
Jaguar	• All models hybrid or electric by 2020

Table taken from the International Council on Clean Transportation 2018 White Paper "Power Play: How Governments are spurring the electric vehicle industry"

Action

Each year the Isle of Man Government will monitor the proportion of electric vehicles sold annually on the Island and will review the need for proof of purchase incentives.

Providing a network of Smart Charge Points

Not everyone who wants to run an electric vehicle will live in a property that allows a car to be parked at a private charging point. In order to facilitate the uptake of electric vehicles by the public an accessible network of smart charge points need to be

developed to support charging, off-street, near to the home in large residential areas, to support the visitor economy and in parking facilities provided by companies to their employees. Work will be done to consider the requirements for charging points in parking areas for both residential and commercial developments which will then be incorporated into the Manual for Manx Roads. It is expected that in the first instance, these requirements will be applied to all new residential developments where there is off-street parking or communal parking areas provided. It is also expected that any new commercial developments (including Government projects) which provides parking will be required to accommodate the requirements of electric vehicles.

Manx Utilities will work in collaboration with DEFA and DOI to define these requirements and appropriate policies will be formulated and implemented by the relevant Department's. Manx Utilities will also be involved in the preparatory phases of work in order for them to consider the technology available. Manx Utilities will be required to ensure that the charging network is capable of managing current and future demands for electricity as numbers of electric vehicles increases (without impacting on service provision). It must also have the ability to manage the need to future proof electricity infrastructure to support developments in vehicle battery power and the expectation of fast charging in appropriate locations which requires greater capacities across the network. It is estimated that with the growth in electric vehicles, there will be a significant increase in demand for electricity. Although that demand could most likely be accommodated with the current generation capabilities of Manx Utilities given that excess electricity is exported, significant investment in the electricity distribution network (including demand/supply management functionality) will be required in advance of expected load centre increases.

Actions

- **Manx Utilities will prepare a funding model setting out how the provision of a charging network will be delivered across the Island.**
- **The DOI will support Manx Utilities in delivering an all-Island tender framework for the purchase and management of electric vehicle charge points that facilitates seamless use for customers no matter who the installer and owner of the charge point.**
- **Where practical, Government properties will be progressively retrofitted with appropriate charging facilities to ensure that the ability to charge does not inhibit the use of electric vehicles. Where practical these will be made available to the public in support of home charging.**
- **Facilities for home charging will be encouraged in areas with off-street parking. In substantial residential areas, where off-street parking is not available, evening and public charging points will be made available where practical at appropriate sites such as public car parks and school car parks. Local authorities will be encouraged to offer similar opportunities at their facilities.**
- **The visitor economy will be supported in appropriate locations by the provision of both on-street and off-street charging opportunities and fast charging will be made available at some strategic locations. For example, provisions for charging points have been included in the Douglas Promenade refurbishment.**

Encouraging through an appropriate taxation regime

Currently there is an additional cost to be borne by the consumer who decides to purchase an electric vehicle rather than a conventional vehicle. Alongside all the initiatives listed above there is also merit in developing some level of financial incentive to encourage take up whilst this difference in costs is still apparent. The overall costs should reduce in time as the battery costs in electric vehicles also declines. There is a direct link between the level of incentive and take up and therefore there is scope to significantly influence take up through increasing the level of incentives.

As an initial incentive the Department of Infrastructure will continue to offer free or substantially discounted rates of vehicle duty tax for electric vehicles until such a point as the cost differential between electric and non-electric vehicles is significantly reduced and/or the proportion of electric vehicles registered on the Island means that the overall reduction in revenue results in an inability to fund highways maintenance programmes.

It is likely as 2030 approaches there may be a requirement to review the taxation regime to effectively dissuade the purchase and use of those vehicles which are not classified as low emission vehicles. This may include the importance of a surcharge on the highest emission vehicles.

Action

The Department of Infrastructure will continue to offer reduced rates of vehicle duty whilst the cost differential justifies it and highway funding requirements allow it.

Additional considerations in relation to the uptake of Electric Vehicles

There are some challenges which need to be considered further which are linked to the overall sustainability of electric vehicles. Consideration is required to be given to the electric vehicle life cycle which will include an analysis of the processes needed to produce the batteries to fuel the vehicles, the emissions generated from the generation of electricity used as well as an understanding of how the batteries will be disposed of (and where). This latter point is particularly relevant on the Isle of Man as there will need to be a safe and acceptable disposal route identified.

The Department of Infrastructure will also explore other methods of encouraging the take up of electric vehicles for instance the use of distinct registration numbers for electric vehicles.

Large Vehicles including Buses

For large vehicles, including buses, the technology is still evolving with no one type being dominant at this point in time. For buses there are numerous trials taking place within the UK and globally which are looking at vehicles powered electrically, by hydrogen and also by alternative fuels. All of these may offer a possible alternative to the current Isle of Man bus fleet. At present a number of the current fleet are at Euro5 or Euro6 standards which means the engines are actively taking reducing emissions. Emerging technology is always reviewed ahead of determining specifications for replacing the fleet. The Island will need to trial these emerging technologies to ensure that they are capable of meeting the requirements of the Isle of Man bus service and that the necessary infrastructure can be accommodated here.

Action

That the Department of Infrastructure remains technology neutral in terms of powering the bus service of the future but commits to undertake a series of trials to ascertain which of the new technologies is best suited to the requirements of the Island's bus service.

With regards to the Island's heavy goods vehicles there is also a need to remain technology neutral until the sector globally has determined the most efficient way to power vehicles of this type. It is likely that for longer distances electrically powered HGVs will not be suitable and therefore specifications may move towards hydrogen powered vehicles. Such technology may not be appropriate in an Isle of Man context so alternative solutions may have to be considered.

Action

That in relation to the Heavy Goods Vehicles the Island remains technology neutral but continues to work with the sector to determine how best to power vehicles such as these in the future.

Government leading by example

The Department of Infrastructure (in conjunction with other Departments and Statutory Boards who use the fleet) will start to convert the Government car and small van fleet to electric vehicles as and when appropriate to do so. The DOI will undertake an audit of the total Government fleet and will progress the replacement of vehicles to electric against a set of clearly defined criteria. Such criteria could include but would not be limited to the use of the vehicle, where the vehicle is to be based, the accessibility to charging points (both at start and end locations if different), the age of the vehicle, the availability of a suitable electric (or ultra-low emission) substitute, the reliability and maturity level of the technology along with cost. This will be carried out in accordance with the Financial Regulations on cost appraisal. This work would form part of a forthcoming Fleet Policy which will be prepared by the DOI at the request of Treasury. Government will also use its influence as a purchaser and client to ensure that its contractors operate vehicles that meet appropriate emission standards and support the aims of this policy.

Action

The Department of Infrastructure will develop and publish the Fleet Policy. This will move the Isle of Man fleet to low emission technology and will include actions to ensure that its suppliers and contractors do likewise.

Legislative requirements

The DOI will consider whether any amendments to Highways legislation are required in relation to the regulation of public parking at electric vehicle charge points. This could include the types of cars which are permitted to use those spaces as well as the way in which cars must be parked within it. Local Authorities also have power to prescribe parking orders for car parks under their ownership or control.

There may also be a requirement to consider amendments to Highways legislation to regulate the installation of roadside charge points to ensure there is not a proliferation of charging points which could encroach onto the highway. This will be done in consultation with the Manx Utilities as the Island's statutory electricity provider.

Action

The Department of Infrastructure to consider what changes (if any) are required to the legislation to facilitate achieving the overall vision.

Showing Progress towards achieving the Key Performance Measure

The key performance measure is that by **2030 at least 10,000 electric vehicles are registered on the Isle of Man**. At present there are a total of 241 electric vehicles registered on the Island. This represents 0.4% of the total number of cars registered. In terms of the Government fleet 3.2% of the fleet is currently electric with plans in place to increase this figure.

In order to demonstrate that the Government is achieving a positive outcome from this policy and strategy and moving towards the stated target the following metrics will be used and reported on annually over the next 5 years.

- The number of publicly accessible electric vehicle charge point locations
- The number of smart car charging meters installed in the home.
- The number of electric vehicle registrations on the Isle of Man
- Relative fuel costs for operating Government's vehicle fleet.
- The number of electric vehicles in Government's vehicle fleet.

Deliverables

- A public network of smart charge points increasing by 30 charging public points per annum
- A funding model to show how the charging network will be provided.
- Electric vehicles to become the default choice for replacement vehicles in the Government's fleet so that the numbers of electric vehicles are increased from under 50 to over 300 by 2030 including an expansion into public transport.
- Introduced requirements for charging points in new parking areas and developments into the Manual for Manx Roads.
- Highways legislation to regulate public parking at electric vehicle charge points.
- Highways legislation to control the installation of roadside charge points.
- Introduction of Building Control and Planning requirements that support the development of a built environment where electric vehicles are the predominant form of powered vehicle.

Monitoring and Review

The Department is committed to keeping this policy under review and will prepare monitoring statements which will set out any proposed changes required to the policy document.



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