

**Central Service and Contingency Planning
Group**

Central Management Branch



Department of
**Agriculture, Environment
and Rural Affairs**

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Your reference:

Our reference:

Ms Michelle McIlveen MLA
Chairperson
Committee for Infrastructure
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26 April 2021

Dear Ms McIlveen,

COMMITTEE FOR INFRASTRUCTURE – DECARBONISING ROAD TRANSPORT IN NI

Thank you for your letter of 25 March 2021 regarding the Committee for Infrastructure inquiry into the ambition to decarbonise road transport in Northern Ireland. Apologies for the delay in our reply. Your request arrived in during a period when key members of staff were on leave.

As you have highlighted emissions from vehicles are a significant contributor to overall GHG emissions in Northern Ireland. The latest NI GHG Inventory, published in 2018, estimated that GHG emissions from the road transport sector accounted for 20% of all NI emissions with a 34.1% increase in GHG emissions from road transport since the baseline reporting year of 1990 despite improvements in efficiency of vehicles due to a growth in demand for road transport. It is key that all sectors do their bit to help reduce GHG emissions as we work towards achieving UK Net Zero by 2050,

With regard to the move to electric and/or hydrogen vehicles DAERA wish to make the following comments;

i) What are the main challenges to the uptake of ULEV?

There are a number of challenges to the uptake of ULEV. These include:

- ULEV vehicle purchase cost to ensure affordable options are available to all as part of a just transition to low emissions transport.
- Physical charging / refuelling infrastructure cost (outlay cost and physical works costs to bring a supply to the desired charging / refuelling point location).



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- Capacity of existing electrical systems to add charging points onto i.e. potential overloading / capacity issues of electrical systems.
- Vehicle distance range – though it should be noted that this has greatly improved in recent years.
- Range of models of vehicles available to meet all consumer needs (i.e. rugged off-road 4x4s and higher towing capacity vehicles),
- Most EVs are presently automatic which may present some initial user familiarity concerns for some not familiar with automatic vehicles.
- The biggest sources of Particulate Matter (PM) in Northern Ireland are domestic wood and coal burning, industrial combustion and road transport. Particles from brake wear, tyre wear and road surface wear currently constitute 60% and 73% (by mass), respectively, of particulate matter emissions from road transport, and will become more dominant in the future.
- Charging infrastructure provision and reliability to provide consumer confidence.
- Physical ability for overnight home charging in situations where the ULEV owner does not have access to do so.

ii) What are the main benefits to the uptake of ULEV?

There are several benefits to the uptake of ULEVs including:

- A reduction in greenhouse gas emissions from the transport sector which would assist with legislative targets to reduce GHG emissions under the UK Climate Change Act 2008.
- A reduction in emissions of those gases associated with vehicles with internal combustion engines, including nitrogen monoxide (NO), nitrogen dioxide (NO₂) and particulate matter. NO₂ can exacerbate symptoms of heart conditions, thereby reducing the quality of life for affected individuals. It can also adversely affect plant life and biodiversity in sensitive habitats. Whilst domestic and industrial combustion also produce NO_x (NO and NO₂), the NO_x emitted by road transport poses more of a problem for local air quality because it leads to increased concentrations of this pollutant at ground level, sometimes in busy streets.
- Particulate matter (PM) consists of fine particles that, once in the air are harmful to human health. Particulate matter can be classified as either particles with a diameter of less than 10 micrometers (PM₁₀) or even smaller, as PM_{2.5} (particles with a diameter of less than 2.5 micrometers). Smaller particles, such as PM_{2.5}, are more harmful, because as well as acting as a respiratory irritant, they can penetrate deeper into the lungs. The very smallest particles, ultrafine PM_{0.1} (the smallest fraction of PM_{2.5}), are nano-particles smaller than 0.1 microns and are thought, once inhaled, to be able to pass directly into the bloodstream. The available

evidence suggests that long-term exposure to PM2.5 can lead to premature mortality. Particles from brake wear, tyre wear and road surface wear currently constitute 60% and 73% (by mass), respectively, of particulate matter emissions from road transport. Thus, whilst a shift from internal combustion engines to electric vehicles can reduce levels of PM from tail pipe emissions, other sources of PM from road vehicles will remain. Increased uptake of electric vehicles will increase electricity demand and so the overall impact on air quality will depend on the electricity generation mix. The recently published consultation on Energy Strategy policy options for Northern Ireland is an important policy step in considering issues relating to renewable energy generation.

- Opportunities for creation of green jobs in associated sectors.

iii) What support to assist a move to ULEV would you like to see from the NI Executive?

DAERA would welcome:

- The establishment of a scheme with private industry for the provision of public charging / refuelling points. The provision of free electric at public charging points, as has been previously the case, is not a sustainable option.
- To help inform customer options consideration of provision of no obligation pre-purchase electrical surveys/ advice to determine electrical system compatibility / options for customers.
- Consideration of an uplift of charging point grants above the current OLEV grants level to encourage uptake. As a comparative example, an additional £250 grant is made available through the Energy Savings Trust Scotland for installations in Scotland.
- Consideration to a scrappage scheme to incentivise the switch over of vehicles to ULEVs.
- Development of guidance / regulation on the use of e-car charging points to prevent inconsiderate overcharging and for EV drivers to recharge their cars more reliably. It is essential that EV drivers feel confident using the public charge point network. EV drivers need to know they can rely on the public charging network for any journey they take. This would reduce range anxiety and would give NI the opportunity to be a world leader in deploying advanced EV charging infrastructure.
- Further investment in hydrogen storage and technology to further develop and expand on that opportunity. As was stated in the recently published DfE Energy Strategy consultation hydrogen not only is viewed as a key route to decarbonisation but also as a significant driver of the green economy. DAERA recognises that for larger transport types, including farm machinery, hydrogen

presents an opportunity for which ring fenced funding for research and pilot projects in this area would be welcomed.

- iv) Do you believe there should be official targets for your sector and have you any views on the potential timescale this could take?

DAERA believes that the Public Sector needs to lead by example. It should be a target that as vehicles reach their current end of life cycle and are due for replacement in the run up to 2030 that consideration to move to an ULEV vehicle must first be considered as a first choice. That switchover in the interim period will however will be dependent on the availability of suitable vehicles to meet all user needs i.e. suitable more rugged off-road 4x4 vehicles with suitable towing capacities in addition to the availability of finance for associated charging infrastructure works which may be required.

- v) Have you begun to plan for decarbonising your fleet and if so could you provide some detail on this?

In March 2020, the Northern Ireland Environment Agency purchased two fully electric vehicles. Those vehicles were procured for use by staff travelling between Country Park sites across Northern Ireland.

Prior to the acquisition of these vehicles in c2013/14 four Public charging points were installed at Crawfordsburn Country Park, Ness Country Park, Roe Valley Country and Peatlands Park under the wider public charging points scheme rolled out at that time. Those charging points however became defective in recent times and have been replaced in the past month with new charging point infrastructure.

Additionally wall mounted charging points have been installed in works yard locations at four country park sites for use by Department vehicles.

- vi) Have you estimated the cost of decarbonising your fleet?

DAERA does not yet have a cost for decarbonising its fleet. Any such cost would need to be inclusive of vehicle acquisition costs, potential depreciation in value of existing fossil fuel stock on disposal, cost of suitable vehicle models available at the time of purchase, the cost of physical works to install electric charging points and any costs associated with upgrades which may be required to site electric systems. From our previous experience there was a considerable initial outlay cost associated with bringing an electric supply to the desired charging point location where it was not in close proximity to an existing suitable electric supply.

We would anticipate that there would also be additional ongoing maintenance costs of charging point infrastructure and routine upgrades required to meet new technology advancements to charging infrastructure.

I hope this information is helpful.

Yours sincerely,

A handwritten signature in black ink that reads "Michael Oliver". The signature is fluid and cursive, with the first name and last name clearly distinguishable.

Michael Oliver
Departmental Assembly Liaison Officer



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