

**ervia**



# Ervia's Response to the Clean Vehicles Directive Public Consultation

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Ervia Business Services

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## Introduction to Ervia

Ervia is a commercial semi-state company with responsibility for the delivery of gas and water infrastructure and services in Ireland, through Gas Networks Ireland and Irish Water. It also provides dark fibre broadband infrastructure through its business Aurora Telecom.

Gas Networks Ireland develops, operates and maintains the natural gas transmission and distribution networks in Ireland, consisting of 14,172km of gas pipelines. Gas Networks Ireland provides gas transportation services to all gas suppliers and shippers.

Irish Water is the national water utility responsible for providing safe, clean and affordable water and wastewater services to 1.7 million customers in the Republic of Ireland. Irish Water is responsible for the operation of all public water and wastewater services.

These national gas and water utilities underpin the social and economic development of Ireland and will play strategic roles in the transition of Ireland to a low carbon, climate resistant and sustainable economy by 2050.

## Overview / Executive Summary

Ervia welcomes the opportunity to respond to the consultation issued by the Climate Change Unit, Department of Transportation Ireland's Clean Vehicles Directive Public Consultation.

Our key points are summarised below:

- **Public Sector Vehicle Targets Vs. Manufacturers Targets**
  - Alignment of timelines and targets for Public Sector Bodies to achieve the requirements of the CVD (2021-2030) compared to manufacturer's delivery objectives/targets need to be understood in order to ensure cost competitiveness.
- **Supporting Critical Infrastructure**
  - Vehicles supporting critical utility infrastructure and management have unique requirements and the current CVD targets do not allow for any derogation or exemption(s).
- **Transition Support**
  - State aid support for public sector fleet to transition to Zero Emission and Low Emission vehicles shall be required
- **Infrastructure Readiness**
  - Maturity of infrastructure supporting the transition to Zero Emission and Low Emission Public Sector Fleets is limited and mostly favouring EVs
- **Availability of Suitable Vehicles**
  - Zero Emission and Low Emission vehicles availability in Right Hand Drive (RHD) shall be a significant challenge

## Questions - Financial Impacts

### ***Can you outline expected changes to procurement practices for your organisation?***

- Current procurement process currently catered for the CVD requirements in examining the potential for Total Cost of Ownership (TCO) including emissions as a % of the total award criteria.
- Changes within the procurement practices shall have to be altered in order to compensate for the ZLEV targets 2025 – 2030 and in particular the emissions targets.
- Scoring criteria shall also have to be updated to reflect the manufacturer's availability of ZLEVs to ensure competitiveness in the procurement process.
- Procurement frameworks for vehicles established prior to August 2021 will have to be significantly altered to meet the new targets and potentially collapsed and re-initiate new frameworks. This will lead to delays in procurement of ZLEVs and increase the burden on any Public Bodies who have established Frameworks (1-5 years) that don't include the August 2021 targets.

### ***Can your organisation achieve cost-effective implementation of the Directive?***

In comparison to the Internal Combustion Engine (ICE) vehicles, there is currently no financial business case to change ZLEVs, even with the current subsidies (e.g. VRT, ACA and SEAI grants) and even when including for shadow price of carbon over the expected life of the vehicle (*Public Spending Code Supplementary Guidance - Measuring & Valuing Changes in Greenhouse Gas Emissions in Economic Appraisals*).

Costs of ZLEVs need to reduce dramatically over the coming years or the price of ICE and associated fossil based fuels need to rise considerably to make it cost effective. A Total Cost of Ownership (TCO) calculation has been completed comparing diesel and BEV LCVs (Nissan eNV200 and NV200 selected). It was determined that the BEV is between €11,000 and €13,500 more expensive than the diesel version over the 6 year lifecycle of the vehicle. Costs are inclusive of infrastructure, grant funding and residual value. The fluctuation in costs is based on the method of charging.

Fuel Strategy	TCO	CVD Uplift	Running Costs	Capital Costs
Depot Charging eNV200	€ 41,466.30	36%	€ 10,946.30	€ 30,520.00
Home Charging eNV200	€ 41,949.25	38%	€ 15,077.25	€ 26,872.00
Public Charging eNV200	€ 43,908.00	44%	€ 18,536.00	€ 25,372.00
Diesel Version NV200	€ 30,427.00	0%	€ 17,219.00	€ 13,208.00

A second comparison was completed on a larger LCV between BEV, CNG and diesel (Iveco Daily CNG, BEV and diesel selected). The disparity of costs between diesel and BEV increases further as the vehicle size increases. Table 1 and Table 2 below show the full cost comparison for both TCO calculations.

Strategy	TCO	CVD Uplift	Running Costs	Capital Costs
Depot Charging	€ 115,363.60	125%	€ 15,465.60	€ 99,898.00
Public Charging	€ 128,197.60	150%	€ 33,447.60	€ 94,750.00
Diesel Version	€ 51,207.51	0%	€ 24,572.51	€ 26,635.00
CNG Version	€ 63,082.18	23%	€ 26,690.18	€ 36,392.00

In all analysis completed on LDVs across varying sizes and fueling sources of ZLEVs, ICE vehicles still outperform the currently available alternative ZLEVs in TCO, carrying capacity and importantly range.

If these issues are to be overcome – comparable ZLEVs need to become readily available in a relatively short period of time to meet the 2025 – 2030 targets. Where this is not forthcoming then ways-of-working for many public bodies may need to change in order to cater for these limitations in vehicles. This challenge shall have to be led from government and engagement from the Senior Management of the Public Bodies impacted.

***Can ‘price premiums’ for low- and zero-emission vehicles be accommodated within your existing budget lines?***

Gas Networks Ireland and Irish Water are regulated by the Commission for Regulation for Utilities (CRU). Further engagement and consultation is required with all stakeholders to determine the impact of Zero Emission and Low Emission vehicles and how they may be included in upcoming Price Controls.

***Please indicate any changes expected to resourcing requirements?***

Additional resource requirements ‘may’ be required to support the installation of home charging and office/depot based charging for Electric Vehicles (if applicable) and to ensure that all that infrastructure is adequate, installed in a safe manner and commensurate to future support of the ZLEVs.

Further resource requirements may be required in ‘back office’ type roles to support, billing, and payments and cross charging of billing supporting multiple fueling systems.

Currently DCI cards are utilized for purchasing fossil fuels in ICE vehicles and now this may be added to with electric charging, CNG, and potentially hydrogen fueling in the future. Operating multiple billing systems shall add to the complexity of fueling of fleet vehicles. There will also be increased administration required for tracking electricity usage and reimbursing staff for home charging. As home charging adoption increases, administration resources may be required to complete the increased reporting workload. Mandatory reporting and management of vehicles in accordance with the CVD to the nominated body on progression to the CVD targets (2025 and 2030) will also be required.

Procurement support may also be required if current vehicle frameworks (PS or OGP) cannot be utilized in order to meet the CVD requirements.

***Please outline any other factors which may challenge your organisation in terms of financial costs e.g. supplier shortage; costs for supporting infrastructure installation; availability of public recharging/refueling infrastructure, changes required to the fleet composition?***

Maturity of infrastructure supporting the transition to Zero Emission and Low Emission Public Sector Fleets is limited and mostly favouring EVs. EU Directive on Alternative Fuels Infrastructure (DAFI) – is it in line with the demands being placed on vehicle manufacturer’s for EV growth in 2021-2025 and specifically is Ireland in line with the anticipated growth?

Currently 80% of all electric vehicle charging is completed at home and this is envisaged to continue into the future (*ref. ESB Networks | Electrification of Heat and Transport Strategy*). At present, Ervia are developing a strategy to provide charging infrastructure at home in line with this proposed usage pattern. From a practical viewpoint, Ervia cannot be reliant on the public charging network exclusively. This is based on the projected increase in EV users and a reduction in productivity when waiting for vans to charge.

It is estimated that an LCV (eNV200) will take 45 minutes to charge (from 10% to 80%) using DC charging, which shouldn’t be added to staff work schedules. Access to the public charging network will be required for emergency call outs. The Ervia strategy is to install infrastructure in staff homes as well as within depots, offices and treatment plants.

Limited availability of ZLEV vehicles that can cater for the current requirements relating to range, carrying capacity, vehicle capability (e.g. AWD or 4x4), and also able to operate auxiliary equipment from the vans, supporting network maintenance.

In some cases, LCVs may have to fully charged each day in case of an emergency call out. Access to the public charging network will be required for charging vehicles after completing emergency call outs. It is expected that this method of charging will be infrequent and act as a last resort. Home charging is proposed as the solution due to a number of factors

- Cost of charging is cheaper €0.20/kWh vs €0.33/kWh fast charge
- Reduced productivity due to time spent waiting for cars to charge
- Potential delays due to a charger being in use or unavailable
- Reduced range anxiety for staff as the van will be fully charged each morning before work starts.

There are some complications with installing infrastructure in staff homes

- Smart chargers are required to monitor usage to allow staff reclaim the cost of electricity of the vehicle.
- Additional administration resources are required to track usage & reimburse staff.
- SEAI grant funding is not available for companies installing chargers at home on behalf of staff utilising company vehicles, as part of their roles.
- Potential GDPR issues for hosting the usage data of staff electric charger usage at their homes and long term maintenance support.
- Recovery of the install costs of the charger not possible.
- Potential dilapidation issues or cost recuperation, if the staff member leaves the company.
- Limited number of companies provided turn-key solutions for home charging, particularly solutions that utilise smart charging.
- Dynamic load management is required in properties with large electrical loads, (*e.g. electric shower*). This can increase the cost of install and slow the charging rate.

Charging infrastructure must also be installed in offices, depots and treatment plants as not every property is suitable for home charging. In our experience, having completed some pilot trials, the complexity of installing this infrastructure is often underestimated.

Complications can include the following,

- Projects often have more than one contractor which then requires PSDP and PSCS appointments, increasing complexity and costs.
- Larger projects often require infrastructure upgrades, such as; new distribution boards.
- Where infrastructure is modified and civil works are in the works scope, a design consultant is often required to carry out the design as well as PSDP duties.
- No grant funding available for the install of these chargers.



- Sites can often be limited by the available MIC capacity, particularly where 3 phase chargers are required. Without dynamic load management MIC penalties are possible where new infrastructure is installed.
- The cost of applying for a higher MIC to account for the chargers needs to be factored into the project cost.
- Costs are an estimated €8,500 per charge point based on the average of all pilot trials completed to date.

For BEV HGVs, the infrastructure is not adequate currently. There is also more difficulty charging vehicles overnight as HGVs have far larger batteries which increases the charging time. HGVs would likely need DC fast chargers and at the very least 3 phase AC chargers. In order to install this type of infrastructure there would be a large capital cost up front as well as increased operational costs due to MIC increases.

Continued investment in the CNG refuelling network is essential to the success of CNG vehicles in our organisation. In Ireland, the rollout of a network of CNG refuelling facilities has commenced with 14 fast fill CNG stations being installed across the Core TEN-T road network via a project called the Causeway Study that is supported by the European Commission through the CEF Transport Fund and by the Commission for Regulation of Utilities (CRU) which GNI is implementing. There are currently two stations already in operation, including one at Dublin Port. This project helps support the 'National Policy Framework: Alternative Fuels Infrastructure for Transport in Ireland (2017 to 2030)', which sets out a target network of 70 CNG refuelling stations by 2025. This document also forecasts Alternative Fuelled Vehicles for 2025 and 2030 i.e. 4,050 CNG commercial vehicles in Ireland by 2025, growing to 6,050 CNG commercial vehicles by 2030. Under the Causeway Study, GNI also offered a publicly available fund to support the purchase of CNG vehicles by commercial operators which has been fully subscribed.

Following the completion of planned CNG stations under the Causeway Study, a further 21 public CNG refuelling stations will be built under a project called Green Connect. This project will also include CNG mobile refuelling units for backup, additional renewable gas injection facilities and a CNG vehicle grant scheme to encourage fleet operators to switch to CNG vehicles. In 2018, GNI received approval for €11.6m of EU funding under the CEF Transport Fund for the Green Connect project. Continued support in this infrastructure is vital to the future of CNG in Ireland. Both of these projects that GNI is implementing focus on the core TEN-T road network but there needs to be further investment in CNG stations along the comprehensive road network.

***If higher clean procurement targets were to be implemented, in line with the policy ambitions set out in the Programme for Government – Our Shared Future (2020), would your organization be in a position to comply?***

Further understanding of the potential impacts of the current proposed CVD recast targets are required and then a more detailed analysis of our current and future requirements can be completed.

As mentioned throughout this document a number of issues need to be clarified:

1. Stakeholder Engagement
2. Operational readiness of vehicles to meet utility and customer support needs
3. Finance availability
4. Fueling / Charging infrastructure
5. State subsidies supporting the transition to ZLEV
6. Availability of cost competitive vehicles meeting the ZLEVs targets (and in RHD)

***What challenges (if any) would exceeding the minimum targets present to your organization?***

Alignment of timelines and targets for Public Sector Bodies to achieve the requirements of the CVD targets (2021-2030) compared to manufacturer's delivery requirements needs to be understood to ensure cost competitiveness.

While there has been a surge in the numbers of EVs being purchased in Europe over the last 3 years, they still form a relatively small share of the car market and the LCV and HGV market is still very much in its infancy.

The UK Society of Motor Manufacturers and Traders (SMMT) survey confirms keen interest from consumers in EV technology with drivers most attracted to the lower running costs (41%) and chance to improve the environment (29%). However, while these cars now account for one in six models on sale (17%), they make up just one in 13 purchases (8%).

The survey found the biggest factors holding buyers back are higher purchase prices (52%), lack of local charging points (44%) and fear of being caught short on longer journeys (38%). While, encouragingly, a third (37%) are optimistic about buying a full EV by 2025, 44% don't think they'll be ready by 2035, with 24% saying that they can't ever see themselves owning one.

Private consumers of EVs now have a wide range of models to choose from to meet their needs. Unfortunately the same cannot be said for the light commercial van purchaser. The range of models available decreases as the size of the vehicle increases. Light commercial vehicle (LCV) purchasers have exactly the same reservations about EVs as their car purchasing counterparts – higher purchasing costs, lack of charging points, range anxiety and with payload constraints added. Some of these can be overcome with government intervention. If government wish

organisations of the state with public procurement rules to meet the requirements of the CVD, then it must be financial supports in place for the higher costs of the early adoption. Financial incentives must be provided to offset the higher capital cost of EVs or other ZLEVs and to ensure that there will be sufficient charging/fuelling infrastructure with an agreed standard in place to support the anticipated increase in ZLEVs.

## Questions - Options 2a vs 2b

***It is the aim of the State to ensure that changes to procurement practices are not excessively onerous for public sector bodies. From the perspective of your organisation, indicate if the application of minimum targets to all relevant procurements is preferable to the application of targets over the aggregate. When answering, please consider the administrative and regulatory changes required to monitor progress if the minimum targets are to be achieved over the aggregate of procurements between 2021 and end-2025.***

Aggregated targets would be preferable across the Public Sector, as there may be some PBs who can adopt ZLEVs earlier than others, due to technology compatibility with their current services (e.g. An Post).

Where other PB services are more specialized and require new ZLEV technology to be developed or become more readily available, these PBs may have to backload their targets closer to 2025.

***Would your organisation benefit from flexibility to meet the minimum targets in the aggregate of your procurements?***

Yes, this shall be a significant challenge for certain categories of our fleet vehicles that provide essential front line customer support and asset care of utility networks and associated essential services.

Flexibility should be allowed for vehicles with certain specific functions (e.g. water services vacuum trucks), vehicles completing emergency call outs (e.g. AWD or 4x4) on the water and gas networks and vehicles requiring a large payload to carry essential equipment and materials.

At present, the available range and charging infrastructure for electric vehicles makes them unsuitable as emergency call out vehicles. While electric vehicles will be suitable for completing regular tasks, vehicles may be re-routed to an emergency call out on the network. In this case we can't afford delays at a fast

charge station to add range to attend the emergency call out.

Flexibility will also be required for vehicles that require 4 wheel drive. 4 wheel drive vans are required at some sites and there are currently no BEV 4 wheel drive vans available. Or other alternative fueled vehicles that meet the ZLEVs tail pipe emissions of 0-50g/km CO<sub>2</sub> emission.

***From your procurement experience to date, can current market supply facilitate a proportion of clean vehicles in all new procurements?***

From market engagement through our Fleet Management Team, there is limited availability of vehicles that can match current ICE vehicles performance.

From discussions with manufacturers there is a progressive evolution to ZLEVs in order to meet manufacturer's targets, but dates and volumes of vehicles available in Ireland and Right Hand Drive (RHD) are unknown.

***There is a risk of procurement happening in the last stages of the Directive's reference periods. This backloading of procurement could result in targets being missed due to supply constraints. In order to avoid backloading targets, would your organisation be able to meet certain minimum percentages, say 50%, of the procurement targets per year by end 2023?***

As stated previously, the cost effective transition to ZLEVs in the current market is not economical. Until such time that the market makes available ZLEVs which are cost effective and comparable in performance to current ICE vehicle's - back loading for majority of the target will have to be completed.

## Questions - Options 2c vs 2d

***Please advise any sector-specific/function-specific considerations which may compel the distribution of lower targets to your organisation. When answering, please consider appropriate alternative approaches to ensure that Ireland can meet the minimum targets in the aggregate.***

Zero Emission and Low Emission vehicles availability in Right Hand Drive (RHD) shall provide a significant challenge in the foreseeable future. Ireland is only one of three countries (*Ireland, UK and Cyprus*) within the European Union (EU) that favour RHD vehicles.

Ireland is largely dependent on the United Kingdom to drive demand in RHD Zero Emission and Low Emission vehicles, due to the number of vehicles it would need to meet the future ZLEV targets.

While the announcement on the 15<sup>th</sup> of November 2020 from the UK Government is significant in outlining their continued commitment, there are a number of caveats and risks.

*'The government consulted on this back in 2018 and again in the summer, but hadn't laid the necessary legislation in parliament,' explains Greg Archer, UK director at T&E.*

*'The legislation has finally been cleared and as a result we shouldn't see the shortage of electric cars arriving in the UK next year had that legislation not been prioritised.'*

*While the government says that the legislation is equivalent to that enforced by the EU, it isn't quite as strict.*

*As a result, we won't see as many low-emission vehicles arriving in Britain in 2021 as we might have done had we not agreed a divorce, says Archer.*

This update is both promising and concerning for the potential available for ZLEVs in RHD, as if there is not a significant demand for RHD vehicles, it shall prove difficult to meet the targets set out in the recast CVD with limited vehicle availability.

**Example:** Currently the UK do not foresee the prospect of CNG (fossil or renewable bio methane sources) as a significant influence for LDV emission reduction. This has resulted in a number of manufacturers no longer supporting the delivery of RHD CNG LDVs in Europe, as the demand is not there. Currently there is only 1 manufacturer with two vehicle variants available in RHD that is fuelled by CNG available in Ireland. Compared to mainland EU where LHD CNG LDVs can be found in a number of variants from many differing manufacturers.

Therefore, should the UK not fully align their own internal policies and targets closely to that of the recast CVD post Brexit transition, then there may be a shortfall in demand and therefore compromise the availability of ZLEVs LDV in RHD (EV, CNG or Hydrogen fuelled) in Ireland.

Van purchasers are more logical in their approach to buying compared to car buyers. A van must meet specific functional criteria e.g. load space, payload capacity and total cost of ownership. Buying a car is more of an emotional purchase than a logical one with the purchaser often buying into a perceived 'lifestyle'. Therefore a ZLEV van must meet certain basic criteria before being even considered worthy of purchase. Some of the shortcomings with ZLEV vans on the market currently are:

- Lower capacity and payload (due to battery size and weight)
- Reduced range – an issue where the vehicle is used in response type work e.g. fault repair
- Reduced comfort – the driver, who might spend 75% of the working day in the vehicle, has to choose between switching on the heat and vehicle range
- Model range – there are a few options in the small and medium van range and even less in the large size
- 4 x 4 – there are no 4 x 4 ZLEV LCVs available
- High price premiums compared to ICE equivalents

Until manufacturers overcome these problems then the view of the logical van purchaser will tend to be that ZLEV LCVs are inferior products to ICE LCVs. When you add the price premium for a ZLEV LCV on top of that then the logic as to why one would purchase such a vehicle is further diminished

## Questions – Options 2e vs 2f

***From your procurement experience to date, is it feasible to expect that the market will be sufficiently advanced to apply the Directive to non-typical vehicle types i.e. national exemptions?***

Currently, as previously stated the ZLEV availability for LDV and HGV, in Ireland, in RHD is unknown. The current market does not cater for ZLEVs that can match all the requirements or the CVD percentage requirements for the Ervia fleets.

***Are there certain categories of vehicles you feel shouldn't be exempt?***

From the consultation proposal, the current list of exempted vehicles seems appropriate. However, the exemption rationale should apply more widely to the Public Sector vehicles also (*e.g. where ZLEV vehicles are not available on the market that are comparable or comparable to current ICE vehicles then a derogation to the PB targets can be applied*)

## Questions - Option 2g vs 2f

***Is the proposed reporting mechanism suitable for the purposes of providing fleet and procurement data, or can you indicate a more appropriate alternative approach?***

Reporting information via the Sustainable Authority of Ireland (SEAI) - Public Sector Monitoring Reporting (PSMR) portal is the most suitable and scalable solution. SEAI are currently preparing a tender for the updated PSMR system so it would be logical to utilize this system and can factor in the requirements of the CVD reporting for each Public Sector Body

The PSMR system should account for electricity used for fueling electric vehicles. For example where fleet vehicles are charged in offices or depots, this electricity should not be double reported in the PSMR system as both transport and property energy usage. With metered charging stations, the energy used to charge vehicles can be reported separately. We expect a large uplift in electricity usage from fueling fleet vehicles and shouldn't be penalized in the PSMR system for doing so.

***Please advise estimated additional administrative or compliance burden associated with the provision of fleet and procurement data.***

It is difficult to estimate a time for additional administration and burden associated with the provision of fleet and procurement data without seeing the exact detail required to be maintained as part of the reporting requirements.

Training shall be required, and if this is similar to the SEAI PSMR training this could be up to 1 day per annum. Uploading of management of vehicle procurement information may be required in the region of 2-3 working days per annum.

As well as the administration associated with the provision of procurement data there is an increase in the administration burden of managing electricity usage for electric vehicles. Home electric chargers are installed behind the meter so charger usage must be recorded and staff reimbursed each month. There will also be an administration burden tracking public charging usage as it is inevitable staff will need to use the public network as well as charging at home and in offices/depots.



## Links & References

- <https://www.worldstandards.eu/cars/list-of-left-driving-countries/>
- [https://ec.europa.eu/clima/policies/transport/vehicles/vans\\_en](https://ec.europa.eu/clima/policies/transport/vehicles/vans_en)
- [https://ec.europa.eu/clima/policies/transport/vehicles/regulation\\_en](https://ec.europa.eu/clima/policies/transport/vehicles/regulation_en)
- <https://www.gov.uk/government/consultations/regulating-co2-emission-standards-for-new-cars-and-vans-after-transition/co2-emission-performance-standards-for-new-passenger-cars-and-light-commercial-vehicles>
- *(Public Spending Code Supplementary Guidance - Measuring & Valuing Changes in Greenhouse Gas Emissions in Economic Appraisals*  
<https://www.gov.ie/en/publication/public-spending-code/>

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