Local Authority Fleet

Strategy to Decarbonisation

June 2023

Cumann Lucht Bainistíochta Contae agus Cathrach
County and City Management Association

LGMA
Local Government
Management Agency

CARO

Disclaimer

This strategy and accompanying annexes have been prepared in good faith based on the feedback from the local authority (LA) sector on their fleet status and projected ambitions. The document is not intended as a step-by-step guide for LAs to decarbonise their fleet, but should provide useful signposts, milestones, information sources and recommendations when considering appropriate approaches to the task of decarbonisation. Professional assistance should be employed when making decisions concerning the installation and connection of associated infrastructure or alternative fuels. The information was accurate and up to date at the time of issue.

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Executive summary

Transport accounts for 21% of local authority energy use and 26% of all emissions. While local authorities (LAs) have achieved 33% saving from their baseline, only 4% of energy efficiency/ carbon reduction projects reported to date are in transport.

The *Local Authority Fleet – Strategy to Decarbonisation (Fleet Strategy) report* has been developed by the Reimagining Transportation Working Group (RTWG) to assist LAs in achieving their climate action targets for their fleets.

The RTWG was established under the Climate Action, Transport and Networks Committee (CATN) of the County and City Management Association (CCMA), with the aim of examining ways that a sectoral approach could assist and guide individual counties to realise emission reduction and energy efficiency targets for their fleets.

The Fleet Strategy aims to build on the **Early Interventions** report published in June 2022, also developed by the RTWG, to further explore the broader requirements and recommendations for LAs to identify pathways and decarbonise their fleets by 2050[1]. The Early Interventions report offers a menu of actions to help LAs deliver short term decarbonisation results and will assist in the delivery of the ***Reduce your Use*** Mandate of -15% energy use by March 2023.

There are three elements to the report, namely:

1. **Strategy:** identifies the range of strategic considerations involved for fleet decarbonisation.
2. **Annex 1 Case Studies:** examples of some current decarbonisation practices in LAs.
3. **Annex 2 Resource Toolkit:** supporting information to assist in navigating the range of issues related to decarbonisation.

There have been a wide range of legally binding climate action measures introduced at EU and national level in recent years. They require LAs to cut greenhouse gas (GHG) emissions by 51% by 2030 and achieve net zero emissions by 2050. LAs are obliged to report their energy performance annually using the Monitoring and Reporting system.

The broader objectives of fleet decarbonisation in relation to tackling climate change have been given a greater impetus in recent times with the cost of fuel and energy supply crisis unfolding across Europe currently. This situation has further augmented the need for early and sustained action to decarbonise and reduce the strong reliance on fossil fuels, with fuel security playing out as a key consideration. It must be acknowledged that at the time of printing, Ireland has been impacted with severe increases in electricity costs.

The Fleet Strategy explores the business case for decarbonisation. In particular, that the costs associated with a do-nothing approach will only rise over time with increased fossil fuel prices based on the polluter pays principle, as well as potential non-compliance costs for failure to deliver on prescribed emission reduction targets. It also lists barriers identified by LAs (organisational culture/ structure; funding/ finance; capability of available vehicles; industrial relations/ people) and considers potential approaches that may assist in overcoming these barriers.

It is noted that local government has a leadership role in climate action and has committed to assisting government to meet its national decarbonisation targets – inaction is not an option.
Tactics to achieve fleet decarbonisation will involve both short and long term planning.

[1] City and County Managers Association (2022): Reimagining local authority fleet, Early Interventions available at: local-authority-reimagining-transport-early-interventions-june-2022.pdf (lgma.ie)

Short term planning: it is suggested that the measures detailed in the Early Interventions report should form the basis for short term plans.

Long term planning: it is recommended that an **Avoid | Shift | Improve fuel** (A-S-I) approach should be followed, whereby the need to travel should be reduced or avoided; shift to alternative modes of transport where possible; seek increased vehicle efficiency through improved vehicle and fuel technologies.

The key recommendation for LAs in the Fleet Strategy is that each should formulate a **fleet decarbonisation roadmap.** It is suggested that the roadmap should follow four distinct stages -

Identify: the targets, regulatory context and stakeholders to support the process.

Assess: the fleet inventory and usage, current management practices, initiatives undertaken to date and the barriers or challenges experienced.

Tools & Tactics: using the Gap to Target Tool (GtT), working with the Public Sector Mentor and deploying the Avoid-Shift-Improve Model to inform practical decarbonisation actions.

Do & Review: with a main focus on getting started, building from there and monitoring progress as it advances.

Case studies provided in annex 1 and supporting information provided in annex 2 will contribute to the development of this roadmap.

When devised, it is encouraged that actions from the fleet decarbonisation roadmap should be integrated into each individual local authority's climate action plan, which is under preparation from February 2023 for adoption by elected members within Q1 2024.

It is acknowledged that there will be further opportunities for support at sectoral level and it is recommended that local government as a sector considers:

- Further development of **methods and processes** to support fleet decarbonisation
- Identifying and resolving **key considerations to enable fleet decarbonisation**
- Building and supporting capacity **of human resources**
- **Assisting with** aligning capital investment **by optimising financial resources.**

1. Introduction

In this section, the framework of the strategy is outlined; an overview of the context in terms of policy is given; the business case for decarbonisation is delineated; the cost of doing nothing is presented; and the possible barriers and potential ways of how to overcome them are shown.

Nationally, achieving the legal requirement of being a climate neutral economy by the end of 2050 requires transformative measures across all sectors of society. For local authorities (LAs), the challenge is to sustain, if not increase business operations and services for our growing population, commensurate to delivering net zero greenhouse gas (GHG) emissions by 2050.

Decision making processes will need to re-balance the priorities between the need to reduce carbon emissions, achieve value for money and meet the needs of the business. In the case of the LA fleet, transport emissions need to get to net zero by 2050[2].

The Reimagining Transportation Working Group (RTWG) established under the Climate Action, Transport and Networks committee (CATN) of the County and City Management Association (CCMA) is working to support LAs to decarbonise their fleets. The RTWG has developed this strategy document to build on the Early Interventions report published in June 2022[3] to further explore the broader requirements and recommendations for LAs to identify pathways to decarbonise their fleets by 2050.

Elements of this Strategy

There are three elements to this document, which are distinct and complimentary to each other namely:

1. **Strategy:** this identifies the range of strategic considerations involved for fleet decarbonisation, with recommendations to advance the pathway to fleet decarbonisation
2. **Annex 1 Case Studies:** these are outlined to highlight current decarbonisation practices that LAs are applying, categorised using the *Avoid-Shift-Improve model,* which is advocated in the strategy as the key approach to decarbonisation.
3. **Annex 2 Resource Toolkit:** provides supporting information to assist in navigating the range of issues related to decarbonisation for example, alternative fuels, vehicle availability, conversion factors and more.

[2] Carbon neutrality or net-zero CO_2 emissions "Net zero emissions are achieved when anthropogenic emissions of greenhouse gases to the atmosphere are balanced by anthropogenic [human] removals over a specified period" Source: IPCC SR15 and summarised in SBTi / CDP document https://sciencebasedtargets.org/resources/legacy/2019/10/Towards-a-science-based-approach-to-climate-neutrality-in-the-corporate-sector-Draft-for-comments.pdf

[3] City and County Managers Association (2022): Reimagining local authority fleet, Early Interventions Available at: local-authority-reimagining-transport-early-interventions-june-2022.pdf (lgma.ie)

Broader policy context for decarbonisation

The policy landscape at European Union (EU) and national level in relation to climate action that drives the decarbonisation agenda, continues to evolve at pace to respond to ongoing economic circumstances, energy prices and fuel security concerns. Since work started on this second report in support of LA fleet decarbonisation, the war in Ukraine has impacted fuel costs and necessitated immediate action. These current circumstances prompt greater urgency on the need to reduce the use of fossil fuels and give priority to the use of other energy sources. Two recent policy measures of relevance to LAs and fleet decarbonisation processes include:

- **EU level – RePowerEU**: is a huge programme of measures designed to diversify energy sources away from Russian fossil fuels and accelerate clean energy transition; including the facilitation of renewables projects, such as anaerobic digestion for biogas for trucks, green hydrogen for fuel cell electric vehicles (EVs) and doubling production of biomethane by 2030. Ireland is committed to fully implement the EU regulation to accelerate renewables for electricity generation in particular. This represents a change away from reliance on fossil fuel sources in the electricity sector[4].
- **National level - Public Sector Reduce your use mandate**: in an effort to reduce reliance on Russian fossil fuels nationally, all public sector bodies and schools must lower consumption and costs by implementing measures to deliver 5-10% energy savings with up to 15% in buildings and in other areas to March 2023. Government Decision #S19483H refers.[5]

These measures sit in addition to the other policy frameworks that promote required decarbonisation efforts including:

- **Climate Action and Low Carbon Development (Amendment) Act 2021:** commits Ireland to reach a legally binding target of net-zero greenhouse gas (GHG) emissions no later than 2050, and a cut of 51% by 2030. The Act requires all public bodies to perform their functions in a manner consistent with Ireland's climate ambition. These targets are translated through the annual Climate Action Plans (CAP), which require all public bodies to perform their functions in a manner consistent with prescribed targets to deliver on Ireland's climate ambition of net zero by 2050[6].
- **Climate Action Plan 2023**: stemming from its previous iteration, the 2023 plan re-emphasises the emission reduction target of 51% by 2030. This plan reframes previous transport pathways to promote the **Avoid-Shift-Improve** framework for transport decarbonisation processes. A key element of public sector decarbonisation is to implement policies to decarbonise the public sector fleet, electrify public sector fleets in the performance of functions and *'help demonstrate their value to wider society, improve urban air quality and reduce noise pollution*[7]. A tactic to achieving this is to **procure only zero emission vehicles from 1st Jan 2023 in line with S.I. 381 of 2021.** More broadly across transport, it is acknowledged that fleet electrification and the use of biofuels will provide the greatest share of emission reductions to 2030 in this sector and policy is positioning to support this on the supply side. However, it is also acknowledged that there is a lack of alternatives to heavy duty vehicles,, which means there will be a

[4] Government of Ireland (2022): Climate Action Plan 2023 – *Changing Ireland for the Better,* section 12.3.1 Accelerate Renewable Electricity Generation, pg138. Available at: Climate Action Plan 2023 (www.gov.ie)

[5] gov.ie - 'Reduce Your Use': Government launches nationwide campaign to encourage energy efficiency and highlight supports available for households and businesses (www.gov.ie)

[6] Oireachtas 2021: Climate Action and Low Carbon Development (Amendment) Act 2021. Available at: Climate Action and Low Carbon Development (Amendment) Act 2021, Section 15 (irishstatutebook.ie)

[7] Government of Ireland (2022): Climate Action Plan 2023 – *Changing Ireland for the Better,* section 10.3.8., pg 113. Available at: Climate Action Plan 2023 (www.gov.ie)

continued reliance on diesel fuel. Demand management measures will include increasing fossil fuel prices on the polluter pays principle[8].

- **SI 381/2021 Clean Vehicles Directive: sets targets for the procurement of clean light and heavy-duty vehicles**, with the first target falling in 2025 and the second in 2030. The definition of clean vehicle changes to zero emission vehicles in 2025 [it is <50gCO_2/km to 2024].
- **SI 393/2021 Energy Performance of buildings**: requires installation of Building Automation and Control by 2025, for buildings with HVAC rated output over 290kW; also **installation of electric vehicle charging points in carparks for new or refurbished buildings with more than 10 car parking spaces.**
- **SI 646/2016:** requires that public bodies procure only energy using products and **vehicles that are on the Triple E register.**
- **SI 426/2014:** necessitates the public sector to demonstrate exemplary energy management and requires public bodies to undertake energy audits every four years (or be ISO 50001 certified).

Policy	Decarbonisation measure	When?
RePowerEU Public Sector Reduce your use mandate	• Diversify energy sources / accelerate renewables	Current
	• 5-10% energy savings • Up to 15% in buildings and in other areas	Mar '23 / every winter up to Mar '25
Climate Action and Low Carbon Development (Amendment) Act 2021	• Cut of 51% greenhouse gas (GHG) emissions • Target of net-zero greenhouse gas (GHG) emissions	2030 Latest by 2050
Climate Action Plan 2023	• Re-emphasises the emission reduction target of 51% • Procure only zero emission vehicles in line with S.I. 381 of 2021[9]	2030 from 1st Jan '23
SI 381/2021 Clean Vehicles Directive	• Targets for procurement of clean light & heavy-duty vehicles	2025/2030
SI 393/2021 Energy Performance of buildings	• Installation of EV charging points in carparks for new or refurbished buildings with more than 10 car parking spaces	Current
SI 646/2016	• Requires public bodies to procure only energy using products and vehicles that are on the Triple E register	Current
SI 426/2014	• Necessitates public sector to demonstrate exemplary energy management • Requires public bodies to undertake energy audits every four years (or be ISO 50001 certified)	Current Current

Table 1: summary of key relevant policies for decarbonisation of fleet

[8] Ibid, 2022

[9] See section 15.3.5 Improve - Special Focus: Haulage and Heavy Goods Road Freight Sector pg202-203 LA CAP 2023. Available at: Climate Action Plan 2023 (www.gov.ie)

Green Public Procurement (GPP): Circular 20/2019 supports the use of Environmental and Social Considerations in Public Procurement in response to Climate Action Plan 2019[10]. Building on the phased introduction of Green Public Procurement (GPP), CAP 2023 provides for a strong emphasis on GPP. To encourage the development of new technologies and the uptake of EVs, GPP is viewed as a driver for innovation and competitiveness.

To assist in the provision of green criteria that can be incorporated into public procurement in line with Circular 20/2019, the Environmental Protection Agency (EPA) published updated Green Public Procurement Guidance for the Public Sector in September 2021, accompanied by GPP criteria for ten sectors including road transport vehicles and services[11] .

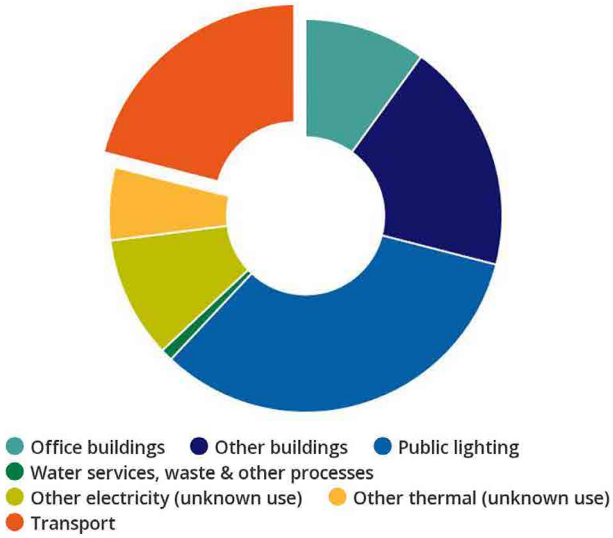
In 2022, the Office of Government Procurement led the development of GPP Criteria Search - an online search tool that allows the user to rapidly find, select, and download the Irish GPP criteria relevant to a specific procurement project[12]. Following the GPP guidance from the EPA, the search tool provides clauses on road transport vehicles and services and should be consulted by LAs in relation to fleet decarbonisation processes.

The business case for decarbonisation

All LAs must achieve a 51% reduction in energy-related GHG emissions and a 50% improvement in energy efficiency by 2030[13]. **It is up to each individual organisation to determine how the targets can be best achieved.**

In 2020, transport was 21% of LA energy use and 26% of emissions[14].

Energy Use End of 2020
% Energy Consumption



Energy Use End of 2020
% Breakdown

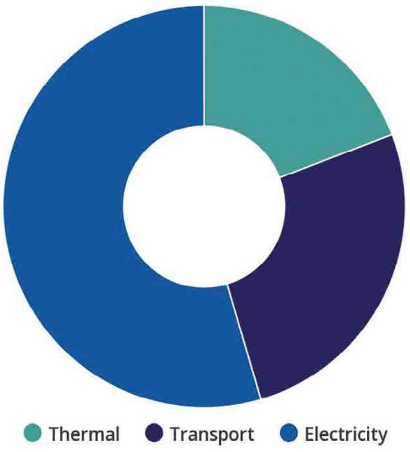


Figure 1: Pie charts depicting transport at 21% energy use and 26% of LA total CO_2 emissions (2020)

[10] gov.ie - Circular 20/2019 : Promoting the use of Environmental and Social Considerations in Public Procurement

[11] Resources | Environmental Protection Agency (epa.ie)

[12] GPPCriteriaSearch

[13] Note although the emphasis has changed from energy efficiency (L/100km) to carbon reduction (tonne CO_2) for measuring emission reductions, energy efficiency underpins carbon reduction; sustained reductions in carbon cannot be made without improving energy efficiency.

[14] Source: https://www.seai.ie/business-and-public-sector/public-sector/monitoring-and-reporting/public-sector-results/local-authorities-energy/

"By 2020, local authorities had saved 33%, or 706 GWh, since their baselines, exceeding the 2020 target by 86 GWh. The savings made are equivalent to 142,000 tonnes CO_2 or €46M." – SEAI

Savings	2020	Cumulative since baseline
GWh	706	4,270
%	33%	
tCO_2	142,000	1,041,000
€	€46 million	€273 million

Table 2 showing 142,000 t CO_2 avoided in 2020

However, **only 4% of the energy efficiency projects reported to date** were in transport. This demonstrates that either transport managers are not reporting their projects; LAs are not engaging with transport projects in proportion to the fossil use in transport (i.e. 26% of total emissions) or that the alternative options are not considered/ deemed viable for larger vehicles.

As the energy efficiency gains in the LA sector to date (2009-2020) gradually address the highest emitting areas (buildings, public lighting, etc.), emissions from the fleet will become an increasingly larger proportion of LAs' overall emissions. There is therefore a strong business case for investing in better energy management in the fleet to reduce emissions, as illustrated below:

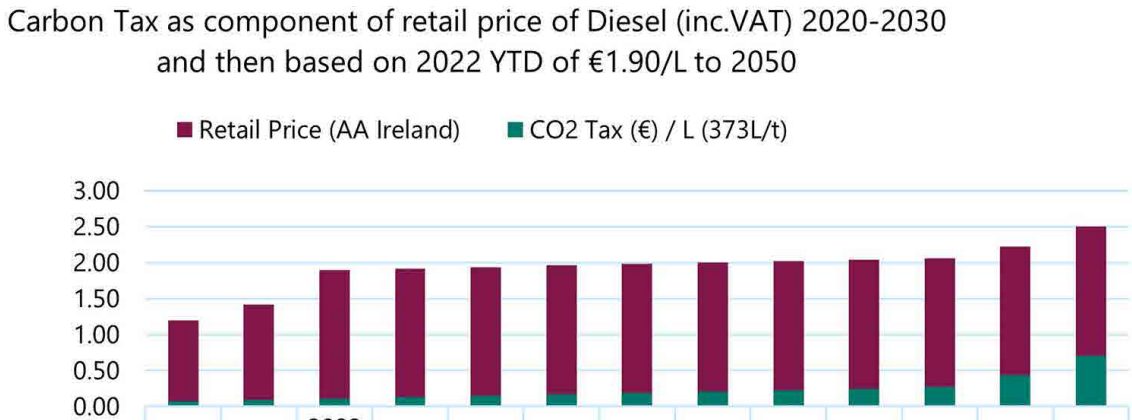
- Battery EVs are significantly more energy-efficient than petrol or diesel vehicles
- Fuel and operational cost reductions free up budget that can be allocated to core activities:
  - Prior to the 20c/L excise duty reduction in March 2022, diesel prices have increased significantly since the start of 2022, prices are unlikely to reduce in the medium term due to supply restrictions (agreed between Russia and OPEC aiming to keep crude oil above US$90/bbl.)
  - Continued weakness in the Euro due to the war in Ukraine means higher prices at the pump
- Although low or zero emission vehicles can currently cost more than petrol or diesel equivalents to buy or lease, they can still be highly cost-effective across their operational life for fleets, especially where travelling significant daily mileages and kept on fleet or leased for several years.
- A reduction in Carbon Dioxide (CO_2) emissions delivers environmental benefits, but also in terms of reduced air quality emissions of Nitrous Oxide (NO_x) and Particulate Matter ($PM_{2.5}$).
- Energy security is improved at both organisational and national levels when locally produced electricity from wind and solar or alternative fuel supplies, supplants imported fossil fuels (Ireland imports 72% of its energy needs and 99% of its transport fuels, including its biofuels).

Cost of doing nothing

An alternative perspective to the energy cost and CO_2 savings associated with decarbonisation might be the cost of doing nothing. The graph below highlights that the cost of diesel will increase from c.€1.90 to c.€2.50 per litre by 2050. It is acknowledged that uncertainty around alternatives may be a concern, in terms of price and availability. However, using alternatives is emphasised in CAP 23 and may address the issue of security of supply and lessen the vulnerability of the volatile geo-political and market driven economy, with indigenous production of alternative fuels.

Since the Covid pandemic, oil producers have reduced production and consequently elevated the price. This business strategy to produce less oil with higher margins works favourably and is likely to continue. Citing the circumstances relating to the Covid pandemic and Russia's invasion of Ukraine, CAP 23 reinforces messages around the importance for Ireland to *'eliminate dependency on fossil fuels'* [15], while also detailing demand management measures, which include increased fossil fuel prices based on the polluter pays principle[16].

In terms of failure to comply with CO2 targets and budgets, it is useful to note that all emission reductions will be subject to rigorous reporting, oversight and monitoring. Emissions reductions not delivered will be carried forward to the next budget cycle and if required ***corrective or additional measures will be applied to ensure targets remain on track to achieve net zero by 2050. Failure to reach sectoral targets may result in individual sectors and entities having to bear non-compliance costs.*** In the meantime, ***all transport users will pay a higher carbon tax year on year*** to 2050 (increasing by €7.50/tonne or c.2c/L per year.



	2020	2021	2022 YTD	2023	2024	2025	2026	2027	2028	2029	2030	2040	2050
Retail Price (AA Ireland)	1.20	1.42	1.899	1.92	1.94	1.96	1.98	2.00	2.02	2.04	2.06	2.23	2.50
CO2 Tax (€) / L (373L/t)	0.07	0.09	0.11	0.13	0.15	0.17	0.19	0.21	0.23	0.25	0.27	0.44	0.71

Figure 2 Increasing carbon tax - the cost of doing nothing [18]

[15] Section 12.1.1 Emissions Profile to date: Climate Action Plan 2023, pg 131.
Available at: Climate Action Plan 2023 (www.gov.ie)

[16] Section 15.2.2. Recalibration of the Decarbonisation Pathway for Transport, Climate Action Plan 2023, pg 190.

[17] Sections 6.5 and 6.6 compliance costs: Climate Action Plan 2023, pg 64.
Available at: Climate Action Plan 2023 (www.gov.ie)

[18] https://www.irishstatutebook.ie/eli/2020/act/26/section/28/enacted/en/html

Barriers to action

The survey of LA fleets undertaken by the RTWG in December 2021 identifies a number of barriers cited by respondents in relation to decarbonising their LA fleet namely:

Barriers Indexed		
O	Organisational culture / structure	17
F	Funding / finance	12
C	Capability of available vehicles	10
P	Industrial Relations / people	9
T	Organisational culture / structure	3

Organisation is cited as a key barrier, followed by funding and finance, and then the capability of the available vehicles (refer to full index in appendix at end of this strategy):

- **Organisational:** barriers related to current work practices, lack of ownership by departments, unclear management of fleet or fuel, or investment in maintenance.
- **Funding:** where there is no obvious funding source for the significant capital investment involved in transitioning the fleet to meet emissions targets.
- **Capability:** covers alternative vehicles' availability and capability e.g. battery electric heavy commercial vehicles (HCVs), charging infrastructure or alternative fuels.
- **People:** barriers related to industrial relations and drivers or operational practices such as excessive idling.
- **Topography:** barriers related to urban vs rural and geography of a county.

Overcoming barriers

LAs are already leading by example in overcoming many of the barriers identified in the survey, the lessons learnt to date should be applicable across all LAs albeit with local adaptions to suit culture, history and availability of resources, time and money.

Organisational Change

Four out of the 31 responses cited ISO50001:2018 certification as an innovative measure to deliver climate action. The United Nations Industrial Development Organisation (UNIDO) supports the view that ISO50001 is a tool for change in how organisations position themselves to deliver measurable results.

Whilst ISO50001 certification is not (yet) a legal requirement, many LAs will have implemented elements of ISO50001 by way of completing the Sustainable Energy Authority of Ireland (SEAI) EnergyMAP, complying with the Road Safety Authority (RSA) Commercial Vehicle Roadworthiness Testing (CVRT) regulations, Freight Transport Association of Ireland (FTAI) TruckSAFE or VanSAFE to Green Standard, and possibly ISO14001 (environmental), ISO450001 (health & safety) or ISO270001 (data protection).

Evidence: Donegal County Council case study in Annex 1.

Funding

Funding has been cited as a significant barrier and existing external funding sources are considered limited. The majority of funding is likely to be required from LAs own resources.

It is also acknowledged that decarbonising the LA fleet is unlikely to be self-financing. However, it must be considered in the context of the legally binding targets, which have been set for the sector. Planning the actions over the period or duration of 27 years to 2050 should form part of the business case that should be able to show significant operational savings to partially offset the initial capex costs over time. Potential longer term compliance costs must also be factored in as considerations in any business case relating to funding.

In Annex 1 of this strategy, examples are cited of LAs making measurable progress in electrification and alternative fuels and show a comparison based on Euro invested per tonne CO_2 avoided. This is a tentative start on the road to comparing the options open to each LA. Leasing is being considered by some LAs as a short term option and could potentially be used as a lower risk pilot in terms of funding and commitment. In Dublin City, a trial is currently being carried out where leased diesel vans are being replaced with battery electric ones; as expected, the preliminary analysis of data indicates that there is a higher overall cost, but in the breakdown there are identifiable savings for fuel cost, as well as notable CO_2 emissions avoided. The studies being undertaken across the sector indicate that where the transition has begun to alternative fuels, the gap between the capital expenditure cost and operational costs can be seen to be closing.

However, its best to engage the LA finance team early to enable a full financial appraisal, including the Carbon Prices in the Public Spending Code which, although it is being updated, includes prices for PM and NOx as well, which will reduce to zero at the tailpipe as fleets electrify. The Public Spending Code is an integral reference framework to support LAs in developing the business case for fleet decarbonisation[19].

It is also worth noting that in March 2022 Transport & Environment (T&E) published a report showing battery electric vans are now cheaper on a total cost of ownership basis over 4 years[20].

> "The **average electric van is already 25% cheaper per km to own and operate today than the average diesel van,** the study finds. It analyses six countries which account for 76% of new vans sold in Europe: France, Germany, Italy, Poland, Spain, and the UK."

Several LAs have purchased battery electric vans using lease finance.

See Cork City Council case study in Annex 1.

External Funding Opportunities

Alternatively-Fuelled Heavy Duty Vehicle Purchase Grant Scheme: alternatively-fuelled heavy duty vehicles (AFHDV) are more expensive to procure than diesel fuelled vehicles. To promote the decarbonisation of the freight sector the Department of Transport (DoT) has appointed Transport Infrastructure Ireland (TII) to administer the Alternatively-Fuelled Heavy Duty Vehicle Purchase Grant Scheme[21].

[19] Public Spending Code: More Information available at: The Public Spending Code (www.gov.ie)

[20] Transport & Environment (2022) E-vans: Cheaper, greener, and in demand. Why it's time for the EU to ramp up supply. Available at: 2022_03_van_TCO_report-1.pdf (transportenvironment.org)

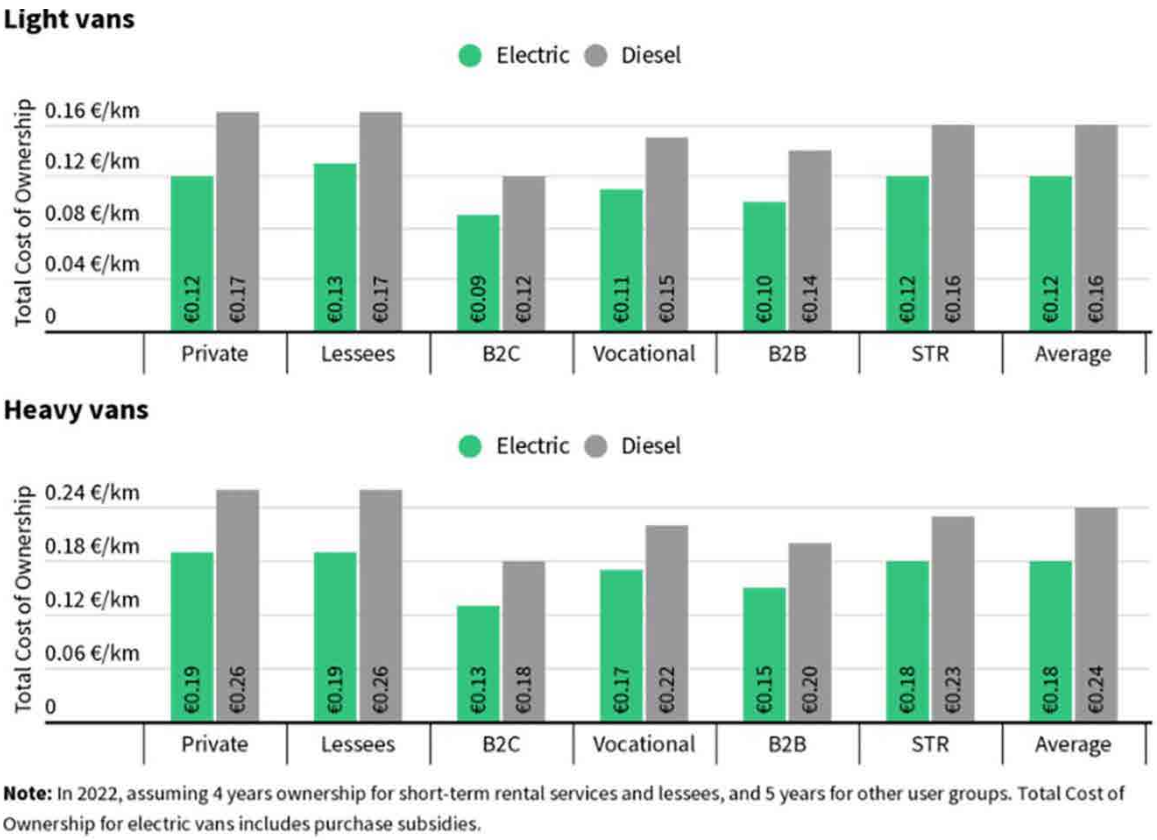
[21] More information available at: Alternatively Fuelled HDV Purchase Grant Scheme - (tii.ie)

(e) Worked example 5: BEV and the Applicant is a 'medium' enterprise

Application	
Applicant submits:	• a grant application to support the purchase of **7.5t battery electric (BE) truck** • an invoice showing that the purchase cost of the BE truck is €126,500 ex VAT; and • supporting documentation to show that the Applicant is a 'medium' enterprise. **Note**: the Applicant and/or its Affiliates have already received Grants for 10 vehicles under the Scheme, with a total value of €480,000 awarded to date, therefore under the Scheme, the Applicant can avail of Grant support of up to a maximum total value of €20,000 to support the purchase of the BE truck.
Calculation of Grant level:	
Baseline price for diesel truck in c. 5.5t to 8.5t category	= €56,000
Invoice price (eligible costs only)	= €126,500
Maximum possible Price Differential	= Invoice price – baseline price = €126,500– €56,000 **= €70,500**
Maximum possible Grant level for 'medium' enterprise	= 50% of cost differential = 50% of €70,500 = **€35,250**
Value of Grant to be awarded	
As the Applicant and/or its Affiliates have already received €480,000 in Grant funding of a possible maximum €500,000 under the Scheme, the maximum Grant payable to the applicant is:	**= €20,000**.
Potential remaining funding available to the Applicant under the Scheme	
Following the award of the Grant to the Applicant to support the purchase of the BE truck, the Applicant and its Affiliates will have been awarded the maximum possible total Grant funding under the Scheme. Therefore, although the Applicant and/or its Affiliates will have received support for the purchase of 11 of a possible maximum total of 20 vehicles under the Scheme, the Applicant and its Affiliates have already reached the maximum possible total funding threshold. The Applicant and its Affiliates will not be eligible to receive any further funding under the Scheme and any further vehicle purchase Grant applications submitted by the Applicant and/or its Affiliates to the Scheme will be refused.	

Figure 3 TII table showing price differentials

Unfortunately, the AFHDV grant is only open to commercial operators i.e. those who charge for their services. However, if a LA can show a vehicle will operate (even occasionally) on a chargeable basis then it is worth applying for this heavy-duty vehicle grant of 40-50% of the price differential.



Note: In 2022, assuming 4 years ownership for short-term rental services and lessees, and 5 years for other user groups. Total Cost of Ownership for electric vans includes purchase subsidies.

Figure 4 T&E TCO comparison from March 2022:

SEAI Pathfinder Programme: Where chargers[22] are being considered as part of building upgrades, the SEAI led and Department funded Pathfinder programme is an option for funding[23].

Zero Emissions Ireland Vehicles (ZEVI): this department led initiative recently released its *Electric Vehicle Charging Infrastructure Strategy 2022-25,* which refers to assisting LAs with up to 75% funding for residential chargers[24], including LA facilities; as well as considering business model innovation. Currently there is a pilot for chargers which are utilised by both the LA and a mobility hub, so it is advised to keep up to date with their progress.

Suitability (of vehicles)

Alternatively fuelled vehicle capabilities are constantly changing and forward planning should be done to consider the services being provided; urban or rural locations, driving style, weather conditions, weight of vehicle and contents etc.

The advances in the storage capability of batteries in EVs runs in parallel with the distance they can travel with a single charge – many vehicles can now achieve up to 400km without having to recharge[25]. It is also worth considering that growing demand of EVs and other alternatively fuelled vehicles is likely to result in rising competition in industry to find greater improvements and efficiency, as seen with other technological devices which were once only used by a few and now used by the majority – laptops, tablets, mobile phones etc.

[22] https://www.gov.ie/en/press-release/f398a-minister-obrien-signs-new-regulations-for-the-installation-of-electric-vehicle-recharging-infrastructure/

[23] SEAI Pathfinder Programme: Information available at: Pathfinder Programme | Non-Domestic Public Sector Building Retrofit | SEAI

[24] Electric Vehicle Charging Infrastructure Strategy 2022-25 p51 https://www.gov.ie/pdf/?file=https://assets.gov.ie/245072/25e5d45b-fca1-48b6-ae94-bd9ff8595759.pdf#page=null

[25] https://www.seai.ie/publications/EVs-for-Business.pdf

Current restrictions on key components such as microchips (Taiwan) and wiring looms (Ukraine) mean local dealers currently cannot offer meaningful forward prices or specifications and supplies are limited. However, price parity in terms of total cost of ownership is likely between battery electric and Internal Combustion Engines (ICE) vans in the next few years, albeit somewhat delayed by the aforementioned shortages, which in turn should result in improvements in the manufacture and supply chain.

In relation to heavy duty vehicles (HDVs) it is acknowledged that there is greater uncertainty as to the technological pathway for decarbonising these vehicle types. The nature of the work of LAs provides that almost 22% of the LA fleet comprises HDVs[26]. CAP 23 notes that major manufacturers have made public commitments to increase the availability and supply of e-trucks to the market by mid-decade. These commitments are stimulated by legislative mandates that compel manufacturers to increase the supply of zero or low-emission vehicles to the market, with a full phase-out of the production of new fossil-fuelled HDVs at a European level by 2040[27]. Devoid of a viable alternative in the short term, the use of fossil fuel vehicles can be justified for heavier vehicles.

People

9 of 31 (29%) LAs cited industrial relations or operational practices as barriers to decarbonisation.

As discussed above, people and culture can be engaged via an ISO50001 or similar type programme.

68% of respondents (21 out of 31) of the LA fleet survey report that they have reached agreement with employee unions to use telematics data for road safety and in some cases in fuel efficiency. Eco-driving training has also been implemented at some level by 12 respondents.

The connection between driver training and telematics use is important and the feedback aspect is crucial as part of this also. Therefore, it is incumbent on the organisation and fleet management personnel to make effective and positive use of the technology first and then engage with drivers.

National engagement with LA sector unions could be helpful to address this in a consistent manner. It is acknowledged that staff engagement is a matter for each LA and lies outside of the remit of the RTWG.

[26] Source: LA fleet inventory and survey 2021.

[27] Section 15.3.5 Improve, Renewable Transport Fuels, Climate Action Plan 2023, pg 202: Available at: gov.ie - Climate Action Plan 2023 (www.gov.ie)

Approach to fleet decarbonisation

This section covers short and long term tactics to decarbonise the fleet; considering how to prioritise the commitments; understanding issues potentially prohibiting action; as well as governance and reporting.

It is worthwhile to note that many barriers have already been overcome by local government in their forward-facing approach to decarbonisation, which is set within the strong foundations of work previously undertaken on energy efficiency, commencing in 2009 in achieving the prescribed targets as set under the National Energy Efficiency Action Plan to 2020 (i.e. 33% energy efficiency from 2009 as baseline year)[28]. Figure 6 below shows the basis from which LAs have emerged and moving forward, the milestones to be delivered up to 2050.

Given that work has already advanced in relation to energy efficiency it can be considered that readily accessible actions have already been pursued. Now alternative approaches are needed to meet the GHG reduction goals to decarbonise LA operations. The pathway to net zero by 2050 for the LA fleet requires a range of cumulative actions, sustained over time. It is helpful to plan actions that are effective in the short term, as well as those that will deliver over the longer term to meet the net zero goal by 2050.

Figure 5 Gates / milestones to net zero by 2050 (timeline)

[28] SEAI (2022): Annual Report 2021 on Public Sector Energy Efficiency Performance. Available at: Public-Sector-Annual-Report-2021.pdf (seai.ie)

Tactics for short term results

As transport can contribute significantly to the achievement of the reduction of both energy and emissions, the Early Interventions document published in June 2022 can provide a solid basis for immediate action, as well as sustainable actions going into winters up to 2025. The summary of early interventions outlined below can help LAs deliver short term decarbonisation results and is particularly timely as it may also assist in plotting the delivery of the ***Reduce your Use Mandate*** of -15% energy use by March 2023 (as outlined above):

- **Fleet management:** understanding the strategic responsibility, maximising governance and management protocols to enable and facilitate transition and decarbonisation processes. This includes optimising the governance arrangements to support the conditions for decarbonisation, as well as monitoring and managing logistics and efficiencies.
- **Behaviour adjustments:** modifying attitudes and familiarity with new technologies and maximising the efficiency of fuel use. This can be catered for through the provision of and participation with specific training for drivers and fleet managers in support of their roles.
- **Technological solutions:** including advances in transport technology for greater efficiency, new or alternative fuel types and necessary supporting infrastructure required. This includes harnessing the potential of new technologies including electrification, increased biofuel blending, vehicle technology improvements as an when they become available and suitable.

The infographic in figure 6 highlights the key early intervention areas as expanded upon in the Early Interventions document.

Figure 6 Early intervention categories

Tactics for longer term results

It is proposed that the model of **Avoid | Shift | Improve** $_{fuel}$ (A-S-I) is adopted by LAs to reduce CO_2 emissions in transport in the longer term. This model focuses on the mobility needs of the business, instead of the vehicle infrastructure, and serves to achieve significant reduction in both GHG emission and energy consumption. It changes the thinking on how to approach transport decarbonisation and works to optimise all elements of fleet management. A-S-I provides a comprehensive and coherent approach, which is required for a suitable framework to a successful fleet decarbonisation strategy. LAs are encouraged to consider using this model in their approach to fleet decarbonisation.

- **'Avoid'** strategies are directed towards avoiding or reducing the number of trips or trip length journeys by changing the design and delivery of public services, avoiding or reducing unnecessary journeys and optimising routes.
- **'Shift'** strategies aim for a shift towards alternative or lower emission modes of transport.
- **'Improve'** strategies focus on improving vehicle and fuel technologies with consideration of the low emission factor. **'Fuel'** as part of the improve strategy is considered as a decarbonisation option as opportunities arise with evolving capable technology for alternative fuels, such as Hydrotreated Vegetable Oil or electrification. These should be the last decarbonisation option but are often considered first, ahead of exploiting other options under the avoid or shift strategies.

Both the **Avoid** and **Shift** strategies maximise, but also reflect the effectiveness of the fleet management process being followed.

Examples of fleet decarbonisation strategies under the A-S-I approach carried out across LAs are explored in Annex 1 (case studies) accompanying this strategy. This annex identifies a range of interventions and highlights the key considerations along with cost and emissions savings to the LA when implementing the approach.

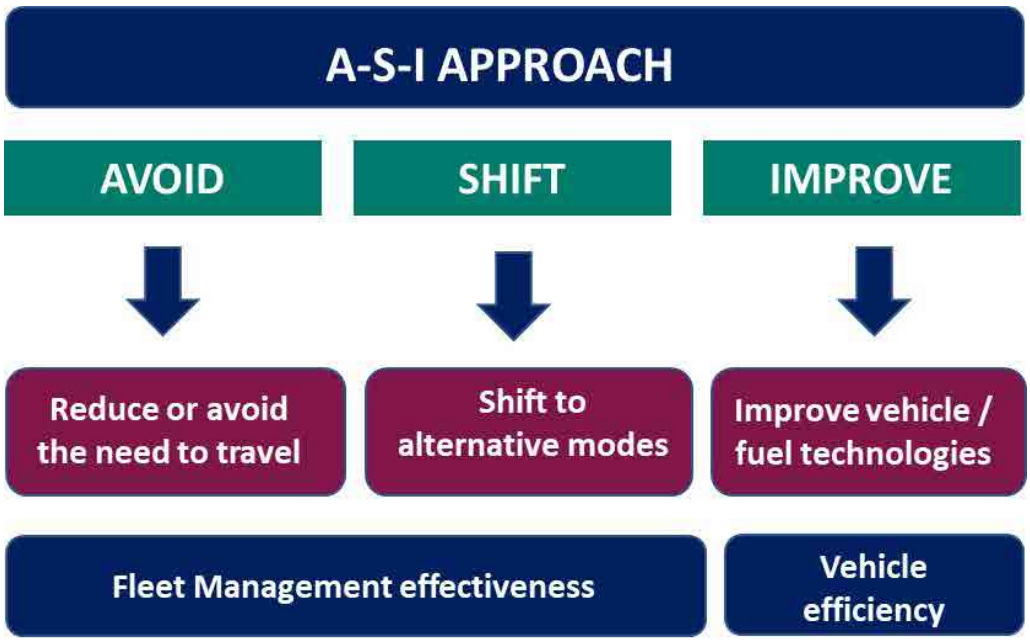


Figure 7 A-S-I strategy

Navigating the obligations

The fleet decarbonisation process in LAs involves a significant number of considerations relating to meeting the prescribed obligations and targets, costs benefits, value for money and timeframes for delivery. It is well understood that LAs have many wider climate action obligations across all services and functions. A key role is also the activation of local communities, being a leader in demonstrating what and how climate action can be effected.

In the context of achieving climate goals for fleet, where conflict, resourcing restrictions or other considerations arise between one target or obligation and another, **the action that reduces the most (GHG) in CO_2 is recommended over those other considerations.**

In transport operations the biggest emitter of GHG is CO_2 from the burning of fossil fuels. Thus, LA fleet managers should focus their efforts on reducing the burning of diesel and petrol fuels as a priority.

The action that reduces the most (GHG) in CO_2 is recommended over other considerations.

Focus efforts on reducing the burning of diesel and petrol fuels as a priority.

This concept can be hard be visualise, the SEAI graphic in figure 8 shows how the grid contribution is recognised in the Monitoring and Report (M&R) system i.e. measure your progress in kWh for grid electricity ✅ . Whereas with the fossil fuels focus on reducing your use by 51% ✅, reducing electricity to make space for fossil fuels in your carbon budget is not permitted ❌.

Simply put, **reducing fossil diesel use by 51% to 2030 against the baseline year** (average of 2016-18) and ensuring electricity use in Kilowattage per hour (kWh) stays static (through energy efficiency measures) as the fleet transitions to electrification, **will achieve the key CO_2 target.**

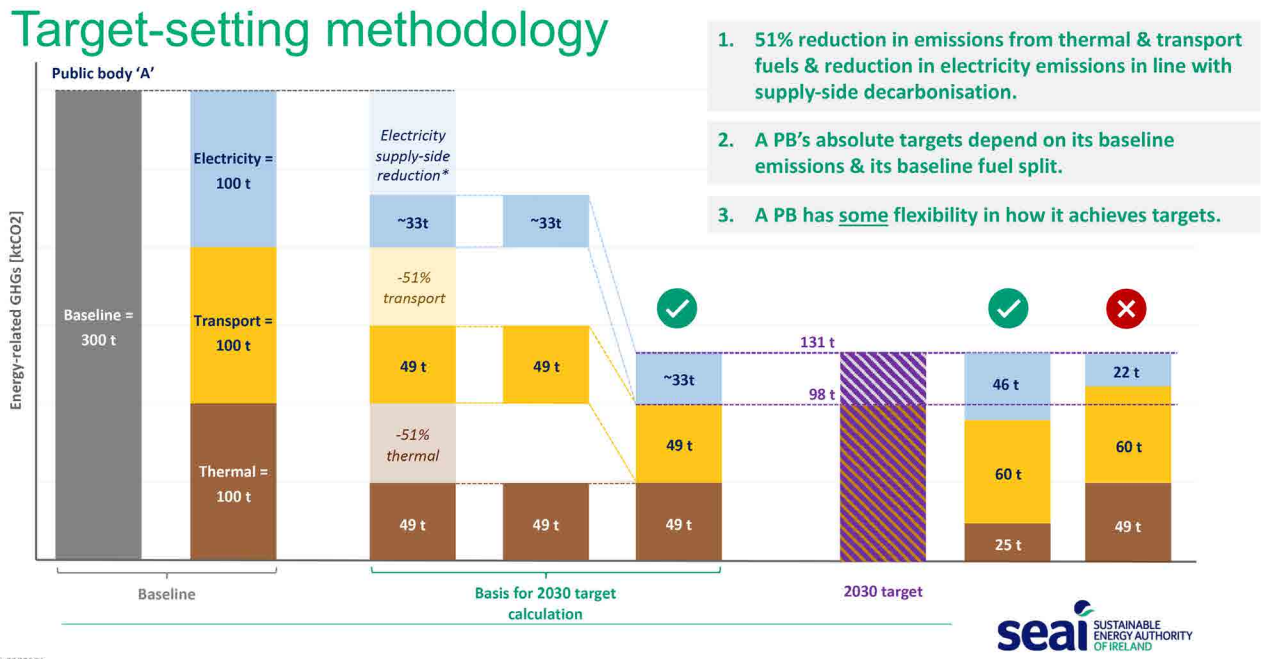


Figure 8 GHG emissions targets graphic from SEAI for Public Bodies (PB)

Governance

Since 2009, each Public Body is responsible for its own reporting and actions on energy efficiency and performance. Since 2014 an Energy Performance Officer (EPO) of at least Director of Service level in the LA is a legally required role.

All LAs report on their progress on energy efficiency through the M&R system of the SEAI, who oversee this on behalf of government. This will continue and be expanded to account for all emissions from the business operations of the LA in the context of the national climate targets to be achieved across all sectors.

2023 and 2024 will see the development and early implementation of the Local Authority Climate Action Plans. These plans will provide for the inclusion of mitigation and adaptation measures in the context of both an inward focus on LA operations and assets and an outward focus for support to communities. In this regard, it is highly anticipated that actions to deliver on the LA's own emission reductions will need to be included in this plan, providing initially for the delivery of the 51% emission reduction target to 2030.

Reporting will be required under the National Climate Action Plan on actions delivered through the Local Authority Climate Action Plan. It is understood there will be rigorous oversight given to progress reporting by the Department of Environment, Climate and Communications (DECC) as well as the Climate Change Advisory Council (CCAC) as part of the national carbon budget framework.

	Level	Actor	Advised by	Metric (s)	Target		Tool(s)	Tempo	
	Dail Eireann	**CAC Climate Action Committee**	**CCAC**	**National Carbon Budget**				**Annual**	
	Minister	**Dept**		**Sectoral Carbon Budget (5 yearly)**				**Annual**	
	Local Government CCMA	Local Authorities	CARO				Climate Action Charter	Quarterly	
		Board					Climate Roadmap	Annual	
		CEO	SEAI (CO2)	CO_2	-51% (2016-18 to 2030)		PSMR	Annual	
		EPO		Energy Efficiency	+50% (1990-2030)		GTT	Annual	
		Energy Team (Or Green, Or climate)	SEAI / Energy Agency / Commercial providers				Climate Roadmap Progress	Quarterly?	
		Other sectoral GHG & AQ e.g. CH4 NOx	EPA (GHG)	CO_{2e}	-51% (2016-18 to 2030)				
	"All of government shall conduct its business in line with net zero by 2050" - Climate Act								
	CCAC	CLIMATE CHANGE ADVISORY COUNCIL	https://www.climatecouncil.ie/						
	CAC	Climate Action Committee							

Figure 9 Governance lines for climate action and reporting requirements

Common defences and issues

At every stage through the decarbonisation process there are defences and issues put forward that impact the conviction of the LA in the decarbonisation approach being taken. It is important to understand these as much as possible, in order to build them into decision making processes as risks and plan to mitigate these early:

Electric Vehicle(s) (EV) is the only real decarbonisation option

There are many options available. Fixing on EVs as the only option means other options are being missed, such as fleet optimisation.

Assuming limited capabilities of EVs

Discounting options because they are not 'like for like' means that targets are not being pursued and decarbonisation opportunities are being missed.

Awaiting absolute certainty in approach, technology, business cases, financial support etc. before planning for or committing to decarbonisation actions.

Uncertainty is the only certainty. This needs to be accepted early. Work with the data and opportunities that are relevant and available, providing for progression at all times and continuous monitoring and review.

Other issues also serve to hinder progress:

- Not considering how the various levels within the LA are required to be involved in the decarbonisation process - senior management, finance officers, human resources, fleet drivers, climate action coordinators etc. Lack of, or ineffective collaboration can halt progress.
- Overlooking hidden costs or failing to include or review costs frequently may incur unnecessary cost at later stages, which undermines progress.
- Not utilising monitoring solutions such as telematics, to track and report the impact of new decarbonisation initiatives on GHG emission changes. Data and information are critical to understand progress.

Steps to fleet decarbonisation - local authorities

This section sets out the possible steps each LA can make when devising their fleet decarbonisation roadmap. It outlines the methodology behind the 4 key stages, suggesting who should be involved and gives an overview of existing tools and supports. It outlines how engagement of internal and external stakeholders is key; that evidence bases are essential to justify this work and its associated costings; and the timeframes to consider for these decarbonising actions.

The work undertaken to date in the Early Interventions report, in addition to the support of the Public Sector Mentors (PSM) and the Gap to Target (GtT) tool[29], provides support to LAs for fleet decarbonisation. Moving forward, the itemisation of actions to deliver on emission reduction targets by each LA will also be set out in the LA Climate Action Plan. In this regard, it is recommended that each LA identifies who will formulate a **fleet decarbonisation roadmap** and who then needs to support them to achieve this.

Taking a complete view of the decarbonisation journey (including both short, medium and long-term initiatives), will make the overall transition more cost-effective. Please also refer to Annex 2 accompanying this strategy, which sets out an array of relevant supporting information that will help LAs to understand various considerations that are applicable when developing a fleet decarbonisation roadmap.

Supported by the GtT tool, a fleet decarbonisation roadmap provides a mechanism by which uncertainties can be best navigated to provide answers on:

1. The type of evidence required to help justify or prioritise decarbonisation actions.
2. Which actions are relevant for the LA fleet in the long-term and which actions are optimal in the short-term to initiate or advance decarbonisation.
3. The cost of these actions against the cost of not acting.
4. What timeframe will particular actions be relevant to consider.
5. Capital expenditure required to support decarbonisation actions.

As discussed above, a common approach to reducing emissions in transport is to adopt the of **Avoid | Shift | Improve** $_{\text{fuel}}$ (A-S-I) model and each LA can adapt the terms used to its own circumstances.

Actions arising from the fleet decarbonisation roadmap should be incorporated into the **local authority climate action plan** in order to illustrate how LA targets to 2030 initially will be achieved over the lifetime of the 5 year plan. The local authority climate action plan is under preparation from February 2023 for adoption by the elected members of each LA in Q1 2024.

[29] User guide to the GtT available at: Gap-to-Target-Model-User-Guide-v3.04.pdf (seai.ie)

Figure 10 A-S-I Strategy applied in a local authority context

For the purposes of bringing together short-term actions into the longer-term A-S-I informed approach, the section below provides the broad theme of what the LA decarbonisation plan should account for.

Local authority fleet decarbonisation roadmap

It is recommended that each LA should prepare a fleet decarbonisation roadmap that will broadly cover the four key stages, shown in Figure 12 below and expanded on in the following paragraphs.

Figure 11 Four stages to building a Fleet Decarbonisation Roadmap

1 Identify

This early-stage tasks the LA with identifying and understanding the following:

- Responsibility to lead out on decarbonisation process of fleet
- Main aim of fleet decarbonisation
- Regulatory context for fleet decarbonisation
- Stakeholders to engage with to support the process.

Assign responsibility: identify who is going to lead on the fleet decarbonisation roadmap and who needs to support them - action has to come from across the LA, not just restricted to e.g. the Fleet Manager. Senior management, finance, HR and climate action coordinators all have to be involved so there is awareness of what needs to be done and all skills and knowledge can be applied to avoid any potentially unforeseen difficulties e.g. financial demands of meeting these legislative targets or the potential fines due to inaction, possible IR issues etc.

Main aim of fleet decarbonisation: it is important to clarify what the LA needs to achieve in respect of fleet decarbonisation. In this regard, the main aim should reflect up-to-date emission reduction targets as prescribed from national climate policy for the public sector to which LAs are part. Currently, this prescribes a focus on achieving emission reductions targets of 51% by 2030 against a baseline year of 2018 and net zero to 2050.

Regulatory context for fleet decarbonisation: understanding the regulatory framework that fleet decarbonisation is set within is key. There are milestones to meet, regulations that set the parameters/ support the process and need to be a feature of decision making, for example:

- prescribed emission reduction targets set nationally to which annual reporting is required
- commitment to 'clean' vehicles in procurement by 2025 and 2030 as per the Clean Vehicle Directive or net zero objective by 2050.

Stakeholders to engage with to support the process: decarbonisation is not just a fleet manager responsibility. Given its complexity, the need to collaborate will be very important and takes different forms, both internal and external to the LA.

- *Internal to the LA:* it is important to identify other sections that have vested interests and a need to contribute to the process including - senior management (buy-in support, endorsement for actions, oversight and reporting); fleet drivers (to encourage EV adoption, use of new technology, support for the transition process); finance (funding options and budgeting); human resources (developing incentives for EV adoption across employees); operations (procurement and associated infrastructure required to support decarbonisation); climate action (reporting on progress through LA CAP, drive change through the LA) and many others.
- *External to the LA:* stakeholders should be identified who will contribute to the careful decision making process on fleet decarbonisation within the LA. Fleet decarbonisation gives rise to a range of questions and issues not typically associated with internal combustion engines: what type of EVs to procure? How to fund them? Charging models to adopt and charging infrastructure to deploy? How to manage associated power consumption challenges? How to promote an organisational culture where transition practices and processes are steadfastly adopted by employees?

External stakeholders can range from those associated with vehicle procurement, funding agencies/sources, transportation companies, other public sector entities or other LAs for shared learnings on approaches they are taking, and valuable lessons learned.

It is encouraged that LAs map the relevant stakeholders, identify the role that they play and how to best to interact to ensure meaningful engagement. This may take the form of support for a business case or equally to communicate what is happening.

LAs may also need to understand what proportion the LA fleet is in the context of its overall significant energy users.

2 Assess

Having established an understanding of what the fleet targets are, the next step is to gather all information necessary to support decision making.

The timeframes for the delivery of prescribed emission reduction targets mean that fleet decarbonisation is rising on the agenda for each LA. It is important to respond appropriately and not give way to common misconceptions, but understand the actual requirement, achieve value for money and continue to meet the needs of the business. Data and information are therefore critical for timely and informed decision-making.

The following gives the range of data and information that needs to be assessed and analysed by each LA as a baseline to work from:

- Full audit/inventory of vehicles and plant, age and their current/expected usage
- Data from any telematics systems already in use
- Current driving patterns, routes, frequency and duration
- Fleet replacement/ upgrade timeframes and likely/optimal timeframe for change. A forward view of lease-cycles of the current fleet should be considered to understand deployment considerations relating to vehicle suitability

- Energy efficiency or decarbonisation initiatives undertaken to date; what has worked and learnings to evolve from, savings obtained etc.
- Potential opportunities to decarbonise in the short term through deployment of early interventions and any associated infrastructure required
- Barriers, challenges, misconceptions and issues to decarbonisation, to facilitate de-risk, mitigate potential challenges and work towards options more readily available or feasible.

It should be noted that regardless of the challenges to decarbonisation, there is a need to support all actions with robust evidence to justify decisions and this stage provides the opportunity for gathering a range of relevant information.

3 Tools And Tactics

Having identified the aim, the regulatory environment and assessed the fleet stock, driving patterns, barriers and potential options available, this next stage is to develop viable tactics to meet decarbonisation targets.

This section of the roadmap should plot out the proposed intervention options for each phase of implementation i.e:

- ***Short term*** - (can be based on the Early Interventions Report) to include the examination of vehicle usage, optimisation and fleet management and accounting, training for drivers and fleet managers to increase vehicle efficiency as well as planning for and integration of readily available technological interventions such as EVs.
- ***Medium term*** - (identified interventions depending on when funding options mature). This could include switching to lower carbon fuels (biofuels like biodiesel or HVO) to reduce the intensity of the fleet. Infrastructure associated with switching needs to be planned also. Pilots are encouraged to explore suitability of the alternatives in the context of the wider maintenance or improvement of services delivery.
- ***Long term*** - for fleet vehicles should take full account of the ultimate target for the fleet to be net zero by 2050 and the regulatory frameworks in place, emerging policy or technologies to facilitate this.

Developing proposed intervention options in this manner from the short to the longer term provides the opportunity to set out what the expected outcomes are and what their contribution will be to the individual LA fleet targets. In addition, it allows for early consideration of processes or decisions required to address any barriers, challenges etc. identified at stage 2 above.

During the course of developing tactics from the short to longer term, the business case must be informed by a funding model that supports the delivery of options. The finance officers of the LA are intrinsic to this and should be engaged with. For this stage, the LAs' GtT tool and ISO 50001 efficiency standard are central to assist in devising viable tactics as informed by the A-S-I model.

GtT: the GtT is a spreadsheet model developed and updated by SEAI for use by public bodies to evaluate their energy efficiency performance and energy-related greenhouse gas emissions over time. It allows for scenario-based outputs and incorporates the necessary data to accommodate advances in technology, alternative fuel options, regulatory requirements and potential uncertainties in the market. It provides for the inclusion of actual/estimated costs associated with potential projects.

ISO50001: where this has been implemented, it should be an ongoing process with templates, review dates and a formal structure. Where no formal energy performance management system exists, the case can be built on the costs and savings.

The main output from these systems is fleet decarbonisation recommendations, with a detailed breakdown of potential cost and carbon savings. These recommendations form the basis of decarbonisation actions to be progressed.

Avoid-Shift-Improve: LAs should work to apply the A-S-I model alongside the GtT to help formulate potential decarbonisation projects. In the main, 'Avoid' and 'Shift' tactics should be utilised ahead of the 'Improve' tactics. This will maximise efficiencies and emission reductions with existing fleet practices, which should be exhausted over the immediate adoption of new vehicles, fuels and associated infrastructure.

With an initial focus on Avoid and Shift over Improve, this approach offers an opportunity for LAs to explore, plan and provide the necessary infrastructures associated with the longer term move to EVs or alternative fuels/technology.

As part of the longer-term tactic, servicing requirements, the provision of charging infrastructure and charging models may dictate the volume of EVs or alternatively fuelled vehicles that can be accommodated. For example, a depot-based charging model may guarantee flexibility and scale to charge multiple EVs. However, a home-based charging model for drivers may not be guaranteed due to various constraints. Addressing such issues, including the adoption of organisational policies to support these changes, may take time and so it is useful to work on such issues while Avoid and Shift tactics are deployed, or indeed while stock availability increases to meet expected requirements.

4 Do & Review

Arising from the *Tools and Tactics* stage, LAs should have a suite of actions that are evidenced based and justified for delivery. Such actions should be incorporated into the local authority climate action plan in order to illustrate how LA targets to 2030 will be delivered through fleet decarbonisation. Monitoring and oversight are part of the delivery of the local authority climate action plan.

Do: in this stage, planned actions are put into practice. Working with the evidence base collated, the tools and tactics to be deployed and the key stakeholders required to make decisions and assist in funding the decarbonisation actions, the main focus is to get started and build from there.

Review: fleet decarbonisation is an iterative process, meaning that as it advances, fleet managers will continuously need to consider and review experiences and learnings, evolving regulatory contexts, estimates and costings, infrastructural requirements, new and emerging technologies etc. to scale up decarbonisation initiatives. It is very much encouraged that LAs continue to work closely with their PSM for this process.

Summary of recommendations for local authorities

- **WHO:** identify who is going to lead and support on the fleet decarbonisation roadmap.
- **WHAT:** the fleet decarbonisation process in LAs involves a significant number of considerations relating to meeting the prescribed obligations and targets, costs benefits, value for money and timeframes for delivery. Some key recommendations are:
  - ascertain current situation: vehicle stock, management practices, relevant projects already achieved or ongoing, potential issues and concerns etc.
  - support all actions with robust evidence to justify decisions
  - track and report the impact of new decarbonisation initiatives on GHG emission changes. Data and information is critical to understand progress.
  - the action that reduces the most (GHG) in CO_2 is recommended over those other considerations.
  - focus efforts on reducing the burning of diesel and petrol fuels as a priority.
  - perform reviews – every LA EPO has full accountability for delivering on LA decarbonisation targets. The operational governance supporting fleet decarbonisation should be in place to support the EPO's role.
- **WHY?** LAs have climate action obligations and are critical to central government achieving their national targets. They have also committed to leading by example. Understanding of the current mandates is essential. Furthermore:
  - commencing on actions in the Early Interventions can also meet the reporting needs of the -15% Reduce your Use target.
  - the fleet decarbonisation roadmap should inform LA own emission reduction actions of the LA CAP
  - M&R reporting

Summary of supports:

- ISO50001
- M&R SEAI system
- Template of actions in Early Intervention doc
- PSM
- ASI model
- GtT
- ZEVI
- CAROs
- Head of Finance
- OGP

Steps to fleet decarbonisation - local government

This section considers the opportunities for local government, as a whole, to support and influence the decarbonisation process of individual LA fleets.

As decarbonisation progresses against the backdrop of increased service delivery (population growth), the strength of enabling LAs to act locally in adaptability and action (innovation) should be preserved.

Additional to the work of individual LAs, there are strategic opportunities for local government to act in concert and support LAs to deliver on their decarbonisation objective for the fleet.

Notwithstanding that each LA must report and account for its progress individually, collectively, at c.6,500 vehicles, local government owns and operates the largest road fleet in Ireland. 22% of the vehicles are currently leased with another 15% on short-term or long-term hire, meaning that 63% of vehicles are owned[30].

Having the largest vehicle fleet in Ireland, local government should consider bringing this buying power to bear to either reduce the purchase price or increase the capability on offer.

Actions and key areas of support by local government

1. **Methods and processes:** should be considered to further develop the support for LAs with fleet decarbonisation techniques and procedures as they continue to evolve.

2. **Identify and resolve:** key considerations in the translation of national climate obligations and regulatory requirements to LA level. With the Government's stated policy to buy only electric vehicles from 2023 onwards, the potential exists for leasing to accelerate the replacement cycle of diesel vehicles with battery electric vehicles in all categories.

Fleet decarbonisation can give rise to changes in work practices, which may need to be acknowledged and addressed at national level.

In markets where volume and buying power matters, namely fuels and vehicles, local government should not forgo the opportunity to strategically leverage its buying power and influence to enable LAs to maintain the required level of service provision, whilst pursuing the goal of decarbonisation.

[30] Highlights from local authority fleet survey 2021.

3. **Building and supporting capacity:** through enabling the facilitation and provision of technical and behavioural training; bespoke support events to build capacity and exchange of experiences and case studies; networking opportunities for fleet management personnel to share experiences and best practice; avoiding duplication and maximising scaling of efforts and linking in with other key entities as necessary in support of this aim.

4. **Align capital investment:** for decarbonisation through engagement of LA financial officers, developing guidance on appropriate strategies for the allocation of funds, investment planning, suitable financing models, as well as sourcing viable funding streams.

Driven by CCMA, with support by CAROs and LGMA, it is envisaged that ongoing reviews of the fleet decarbonisation process through the Climate Action, Transport, Circular Economy and Networks committee will be necessary.

Conclusion

Whilst it is up to each LA to consider how to address its energy efficiency gains and GHG reduction, in 2020 transport was 21% of LAs' energy use and 26% of their emissions. This offers the opportunity of a significant potential impact, with local government owning and operating the largest road fleet in Ireland. Not only does the sector have a role to influence and lead in the area of climate action, it is also required through various government mandates and regulatory requirements to utilise clean energy and cut emissions where possible in their fleets.

This strategy and its accompanying annexes aim to outline the obligations on the sector for climate action targets and assist local government with the possibilities of how to address decarbonisation of their vehicles. There is no simple solution or one path to follow, so it is up to each LA to consider what is the best approach to suit its needs, but it is strongly advised to embark on this now by devising bespoke ***fleet decarbonisation*** roadmaps, with both early interventions and plans for the future.

Developing this suite of actions, which are evidenced based and justified for delivery, can also contribute to the local authority climate action plan, by illustrating how LA targets to 2030 will be delivered through fleet decarbonisation.

Key recommendations for local authorities

- Each LA is to develop a fleet decarbonising roadmap
- The roadmap is recommended to follow 4 broad headings:
  - **Identify** – responsibility; aims; regulatory context and key stakeholders
  - **Assess** – data and information to form evidence base
  - **Tools & tactics** – short, medium and long term strategies and expected outcomes
  - **Do & review** – implement and revise as required

Key recommendations for local government

It is recommended that local government as a sector considers:

- Further development of **methods and processes** to support fleet decarbonisation
- **Identifying and resolving** key considerations to enable fleet decarbonisation
- **Building and supporting capacity** of human resources
- **Aligning capital investment** by optimising financial resources.

The pathway to net zero by 2050 for the LA fleet requires a range of cumulative actions, sustained over time. Local government has been and continues to be proactive in reducing energy use and emissions. There are obstacles, but there are also solutions and the sector is well positioned to lead and advance the decarbonisation of its fleet.

Appendix Index of barriers cited in 2021 survey

What actions in your opinion would be required to maintain these service levels?	What, in your opinion, are the top three barriers to achieving improved fuel efficiencies in your local authorities' fleet? (If you would like to be credited with this suggestions please provide...	Barriers indexed
Allocation of vehicle to roles, rotation of vehicles, shift patterns for Municipal activities	**Driver training, Performance management & old plant**	P C F
Streamlining of operations on a county wide basis with reduced variance of methodology of service delivery and increased budget to facilitate higher level of service provision (e.g. bitmac road rather than surface dressing thus reducing plant use and reducing pothole repair operations)	Lack of availability of alternative fuel sources at service stations or other across the county, driver behaviour, operations planning	C P
Allocation of resources	Lack of ownership of fuel budget, Lack of Training of Drivers, Failure to renew fleet with new fuel efficient vehicles	O O F
More efficient and intensive utilisation of existing vehicles		F
Maintain existing fleet	Same answer as previous question	O
N/A	See above	
Better programming and sharing of Fleet vehicles between the sections.	Misuse of vehicles has to be detected at the smallest management level, and it is probably not the case.	O
	Same as above.	
	Availability of electric alternatives, change in driver behaviour	C P
Not applicable	Same as above	
Unknown		
Introduce alternative modes of transport, study vehicle behaviour, idle time and is it fit for purpose, buy in from departments on the change of transport mode and use.	as per no. 46	O C

What actions in your opinion would be required to maintain these service levels?	What, in your opinion, are the top three barriers to achieving improved fuel efficiencies in your local authorities' fleet? (If you would like to be credited with this suggestions please provide...	Barriers indexed
Replacement of existing fleet as required to appropriate level with alternative powered engines to meet the required reduction in C)2 emissions	11. Implementation of adequate fuel purchasing systems that allow all fuel purchases to be allocated on a vehicle basis. 2 Finance - it would be easy to gain fuel efficiencies if older vehicles could be replaced. 3. Driver behaviour and work practices.	O F P
Removal of vehicles from fleet due to covid restrictions of numbers in vehicles, other reductions not available in remaining fleet	Full adoption of telematics management system, availability of incentives for more fuel efficient use of plant by operators	O P
Unknown	Driver attitude. Age of vehicles, therefore engine efficiency. Alternative fuelled vehicle purchase cost.	P F C
Fleet Replenishment / Replacement Programme - interim strategy for HGVs until alternative fuel options available & strategy developed for transitioning LGVs to EV (where possible)	As per the above	F C
Higher investment in upgrading Fleet	Investment, Distance travelled , there are two districts in county and the last split in county has vehicles from Athlone travelling to within 5 miles of Mullingar	F T O
Adequate budgeting	Lack of staffing for monitoring, analysing and recommending improvements	F O
	Availability of HCV options that are electrified or alternate fuel vehicles, availability of convenient refuelling locations for these vehicles, cost of installing and running EV charging points	C C F
Getter inter-departmental co-ordination to identify lower utilised vehicles which could be used communally. Greater use of GPS software technology to allow live booking of communal vehicles by staff	As above	O O

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Dedicated wholetime staff, fleet management software, upgrade of Fuel FX system. Review of sections fleet needs reviewed by section line management and heads in coordination with FMU.	Lack of attention from Senior Management, lack of comparative monitoring/tracking and publication of results and best practice models.	O O O O
	Not really possible in a rural county	T
More efficient , newer vehicles.	Lack of alternative option for Diesel powered HGVs, Lack of charging points, Lack of electrical powered LCVs.	C
N/A	Vehicle Availability, Cost and County Topography	C F T
People would travel together again in crew cab vehicles	As efficiency isn't monitored that could be a starting point. use of fuel cards to see what fuel is being used	O P
Change elements to contract	Ability to leave trucks on site and transport drivers to/from site securely, turning engines off when not required& lack of alternative vehicles and fuel depots	O P
Modernise our present fleet	Finance to purchase more efficient vehicles, Vehicle Fuel storage /charging points being available	F C
To maintain current service levels, we need to maintain current fleet numbers	Technology- proven alternative to HGVs are not readily available, industrial relations - drivers bringing vehicles home, capital cost	C P O F
Barriers Indexed		
O	Organisational	17
F	Funding /finance	12
C	Capability pf available vehicles	10
P	Industrial Relations / people	9
T	Topography / geography	3

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