



Consultation on Carbon Budgets

**Submission to the Department of the Environment, Climate
& Communications**

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1.0 Introduction

Bus Éireann is Ireland's national bus company and operates more than 220 routes, with a fleet of 1,150 vehicles across Public Service Obligation and Expressway services, as well as providing 7,000 dedicated school transport routes. In 2019 (prior to Covid-19), Bus Éireann carried 89 million passengers. In 2021 our organisation launched its first Sustainability Strategy 'Driving Change 2021-2030'¹. The strategy outlines a roadmap, presenting key targets relating to Climate Action, Waste and Consumption, Equality and Education, Decent Safe Work, Cities and Communities and Modal Shift.

We align our strategy to the Climate Action Plan 2021 (CAP)² indicative range of reduction by sector (transport 42%-50% by 2030) and seek to reduce our emissions by 50% by 2030, mainly through transitioning our fleet from diesel to more sustainable fuels. Another key goal is to contribute significantly to modal shift from the private car and increase our passenger numbers by 30% against our 2019 baseline.

Transport accounted for 18% of Ireland's greenhouse gas emissions in 2020 (EPA, 2021)³. As a major public transport provider in Ireland, we understand that we can contribute significantly to the decarbonisation of Ireland's economy in the decade ahead. We welcome the passing of the Climate Action and Low Carbon Development (Amendment) Act 2021 into law. In October 2021, a Socio-Economic Assessment of Bus Éireann by KPMG⁴ found that 34 million car journeys were avoided each year through our PSO, Expressway and school bus services.



Figure 1 – Bus Éireann Sustainability strategy graphics

¹ <https://buseireann.ie/inner.php?id=709>

² Government of Ireland 2021. <https://www.gov.ie/en/press-release/16421-climate-action-plan-2021-securing-our-future/>

³ EPA 2021. <https://www.epa.ie/our-services/monitoring--assessment/climate-change/ghg/transport/>

⁴ https://buseireann.ie/bus_eireann_news.php?id=5230&month=Oct

2.0 Main Observations

The following are observations and comments from Bus Éireann on the Carbon Budgets Technical Report prepared by the Climate Change Advisory council (CCAC). Reference is also made to the Climate Action Plan 2021 'Securing Our Future'.

2.1 Phased Carbon Budgets

Firstly, Bus Éireann supports the approach taken by the CCAC in relation to a proposed three phase approach in 5-yearly carbon budget cycles, as summarised in page 5 of the Technical Report. The plan proposes an accelerating trajectory of emissions reduction, which aligns with planned fleet and infrastructure developments in our business, given the necessary funding support from Government and continued fleet investment by the Department of Transport (DOT) through the National Transport Authority (NTA). The level of sustained investment required nationally is considered in section 3 of the report and certainly applies in the public transport sector.

Achieving a 51% reduction in carbon emissions by 2030 and a climate neutral economy by 2050 will be challenging. It will require a fundamental transition in Bus Éireann's fleet, buildings and ways of working – a transition that we have already begun. It will require extensive training support for our employees and repurposing of our depots.

2.2 Lead by Example

Given the CAP's call to the public sector to lead by example, Bus Éireann have fully committed to applying industry best practice and acting as leaders in driving technology and innovation in order to achieve the agreed sectoral targets. Bus Éireann is the first operator in the country to transition a city bus service (Galway) to hybrid vehicles, and later this year will be the first to transition a town bus service (Athlone) to full battery electric operation. We have also deployed hybrid vehicles to Limerick, now making up half the fleet there. In 2021, we commenced operating three hydrogen fuel cell electric double decker buses on a Dublin regional route. The vehicles have zero tailpipe emissions and save approximately 3 tonnes of CO₂ equivalent per bus per month compared to normal diesel operation. The Government has signalled its intention to bring forward a hydrogen strategy this year. We look forward to contributing to further development of this strategy, given the extended range of many of the route profiles that we operate.

Although our sustainability strategy is nascent, we have seen a positive trajectory for CO₂ emissions and energy efficiency performance in recent years. In 2021 we delivered 300,000 emission free kilometres and improved our Energy Performance Indicator by 22% - from 2009 baseline levels.



Figure 2 - Hybrid vehicle - Galway



Figure 3 - Hydrogen fuel cell powered vehicles - Dublin

2.3 National Policy and Governance

At Bus Éireann, we welcome the inclusion in the CAP of reference to the Climate Action Framework for Commercial Semi-state Bodies (page 73 of CAP). This is an important document to co-ordinate governance and delivery structures associated with the CAP. In our Sustainability Strategy 2021 to 2030, we have aligned our strategic objectives to the target's outlined in the CAP and have developed relevant KPIs and established a Board Sustainability sub-committee to oversee strategy implementation. As a public body, we report our emissions through the SEAI's PSMR site and we would suggest that consideration be given to private sector enterprises doing similar to track delivery against sectoral budget targets. We welcome the proposed Corporate Sustainability Reporting (CSR) Directive's transposition into EU Law later this year, which will enable reliable and comparable sustainability reporting and will adopt its provisions into our sustainability reporting methods.

We also acknowledge the ‘Waste Action Plan for a Circular Economy’⁵, published in 2020, which states that climate action efforts focusing on a transition away from fossil fuels towards renewables and supplemented by energy efficiency measures can only address 55% of emissions and that ‘the remaining 45% is generated from making things’. As part of our strategy, we have developed core KPI’s related to waste emissions, waste reduction, materials management and green procurement contracts.

2.4 Growth and Modal Shift

Bus Éireann are in full agreement with the CCAC with regard to the required transport modal shift from private car to public transport, as outlined in page 33 of the Technical Report and also referenced extensively in the CAP. Public transport will need consistent and long-term investment and development in order to enable continued modal shift, which will lead to an overall net economy-wide emissions reduction. We also welcome strategic transport service initiatives that will help deliver on these outcomes, such as the NTA’s BusConnects programme in our regional cities and Connecting Ireland in non-urban areas. Linking towns and communities to cities and large urban areas is our key strength and we look forward to playing an active role in these initiatives. For school transport, we are participating with the Department of Education in the current Review of the School Transport Scheme, with a key focus on delivering climate action targets and agreeing a roadmap to decarbonisation for the school bus contractor fleet.

As our country opens up again in 2022 after Covid-19, the transport arteries into the cities and large towns are likely to see an increase in traffic congestion. Buses need bus lanes and other priority measures to guarantee journey times and punctuality, in order to provide an attractive alternative to the private car. We would urge that the development of bus corridors in regional cities and to and from Dublin are given high priority to support the objectives of the CAP.

⁵ Government of Ireland 2020. <https://www.gov.ie/en/publication/4221c-waste-action-plan-for-a-circular-economy/>

2.5 Increased Capacity and Integrated Travel

In support of the CCAC's proposed public transport and active mode developments, Bus Éireann notes the CAP's proposal to increasing transport capacity in the decade ahead, including providing 1,500 electric buses and 500,000 additional daily sustainable travel journeys by 2030. We would advocate for investment in public transport hubs, with full facilities for compatible travel modes, such as bike/e-bike parking and easy pedestrian access, which will be a key action enabling passengers to make door to door journeys in the most sustainable way.



Figure 4 – Bicycle parking adjacent to Bus Éireann transport hub at Capwell in Cork

2.6 Transition to Emission Free Fleet

The NTA have committed to having a zero emission PSO city bus fleet by 2035 in Dublin, Cork, Waterford, Limerick and Galway. Support and continued funding to the NTA is required to make that vision a reality. In Galway, where the city fleet is now fully hybrid, we are seeing positive trends in fuel consumption - with a 25% reduction since implementation. The EU Clean Vehicles Directive⁶, now passed into Irish law, has been a significant step forward in requiring the transition to sustainable vehicles

⁶ https://transport.ec.europa.eu/transport-themes/clean-transport-urban-transport/clean-and-energy-efficient-vehicles/clean-vehicles-directive_en

for public procurement authorities. It currently excludes coaches, which we are confident will form part of future updates.

The clean air and health improvements of transitioning to cleaner fuels are acknowledged in section 3.2 of the Technical Report, recognising that any economic analysis of investments must take account of savings from co-benefits. In many states in the USA, this has been a key driver of investment in electrification of the school bus fleet as referenced below. Lower noise levels are also a quantifiable benefit to users and urban residents.

2.7 Fleet Challenges and Opportunities

While our PSO bus fleet is on a clear trajectory to transition fully to emission free city services, the majority of our fleet, which is comprised of 70% coaches, will meet challenges in reaching similar targets. This includes our inter-urban Expressway coach services and longer distance commuter and rural PSO coach services. These vehicles operate extended ranges, often up to 1,000 km per day, which presents particular challenges for battery electric solutions. In this respect, we feel that coach and truck vehicles need support in transitioning to emission free vehicles in the decade ahead. For this to happen, there will need to be an adequate market supply of affordable EV coaches with the required range. In the interim, converting older stock to the cleaner Euro VI engine and transitioning to higher blend biofuels and hydro-treated vegetable oil (HVO) should be examined. We have been engaging with An Post who have recently carried out a HVO trial on their heavy fleet. Given our involvement in the first public hydrogen bus trial, we would also advocate for greater consideration for the potential use of green hydrogen from renewable sources.

Our school transport services are in high demand and form an integral part of our business. School bus services in Bus Éireann contribute significantly to the reduction of urban and regional traffic congestion.

It is important that we include our school services on our sustainability journey and would welcome incentives for school bus and commercial bus fleet transition, as we subcontract 90% of school routes nationally. In Bus Éireann, we currently have only 6% of our school bus fleet at Euro VI emission standard, and we need investment to improve that and move towards decarbonisation.

The USA have taken a leadership role in sustainable school transport and have developed a Clean School Bus Programme⁷ which allows the American EPA to offer rebates in addition to grants to reduce harmful emissions from older diesel vehicles. The innovative Cleaner Trucks Initiative⁸ has also been adopted by a number of states in the US, which will assist the transition for trucks and larger buses and coaches by encouraging manufacturers to produce suitable vehicles.

The current level of grants available in the existing Alternative-fuelled Government Grant schemes in Ireland could be reviewed to encourage transition and make the scheme more attractive to larger bus operators. Consideration may also need to be given to the fuelling infrastructure that bus and coach operators will utilise, either on their own premises or at common access sites at intermediate points on longer journeys.

Currently our business is undertaking surveys of our bus transport contractors from a green procurement perspective and assessing our suppliers readiness to comply with Green Public Procurement (GPP) guidelines. The survey also assesses their awareness of the obligations associated with the Clean Vehicles Directive and their ability to record data in relation to fuel consumption and eco driving techniques.

Calculating transparent and accurate scope 3 emissions is a challenge which all businesses will face. Consideration should be given to developing national guidelines on scope 3 calculation including ‘cradle to gate’ emission factors associated with contracted services and product supply. We are currently engaging with the SEAI in relation to additional emissions and energy reporting requirements in relation to business and travel and building energy use.

2.8 Carbon Emission Credits

As referenced above, public transport will need to grow and improve in order to enable modal shift through initiatives such as Bus Connects and Connecting Ireland. We welcome the emission credit proposals in the CAP (page 69) and would like to engage further with Government and the CCAC in relation to the details of the proposals as they may impact on medium-term carbon budgets and sectoral targets.

⁷ <https://www.epa.gov/cleanschoolbus>

⁸ <https://www.epa.gov/regulations-emissions-vehicles-and-engines/cleaner-trucks-initiative>

It should be noted that proposed Government free fare or reduced fare initiatives, while welcome in encouraging public transport use, will require additional capacity which will have to be provided, in the main, by diesel-fuelled fleet until EVs become available.

The inclusion of road transport in the Emissions Trading Scheme (ETS), as envisaged in the EU's recent 'Fit for 55' proposals, offers potential to increase and incentivise renewable fuel use in public transport. The Department of Transport's recent policy paper on Renewable Fuels for Transport⁹ contains some key proposals on increased use of biofuels in transport and on the greater use of 'development renewable fuels' such as HVO, green hydrogen and biomethane. In our view, these all offer potential to facilitate Bus Éireann increasing our use of more sustainable fuels.

2.9 Readiness to Transform

As we move into a critical decade for the climate, readiness for the transformation of our services away from fossil fuel dependency is crucial. It is also likely that we will need to deliver more services to enable the transport sector modal shift envisaged in the Technical Report.

Below are key points for consideration from a Bus Éireann perspective.

- **Infrastructure and investment** - According to the IPCC Assessment Report AR5¹⁰ on Climate Change and Implications for Transport, 'barriers to modal shift include social norms, existing urban form and the need for new infrastructure with high upfront costs, for example to build electric vehicle charging infrastructure'. Bus Éireann has 17 main depots across the country. Over the next decade, almost all of our depots will need to go through significant upgrades in order to deliver an emission free bus fleet to our roads – starting in Athlone and Limerick. In terms of infrastructure and depot readiness, we need continued investment in bus depot infrastructure to support the transition to electric vehicles (EV), whether that be battery electric or fuel cell electric. It is also important to renovate and retrofit existing buildings and garages in order to reduce carbon, improve our energy performance ratings consistently year on year and seek opportunities to harness renewable energy sources to power our

⁹ <https://www.gov.ie/en/policy-information/168c6-renewable-fuels-for-transport-policy-statement/>

¹⁰ <https://www.ipcc.ch/report/ar5/wg3/transport/>

buildings. We are aware that the level of grant availability for such buildings work is currently being reviewed by Government.

- **Electrical capacity** – Securing adequate energy supply is another important factor for consideration in the immediate future. The support of ESB Networks is critical in relation to enabling the transition to EV and we would be hopeful that supply of electricity to operate public transport services would be seen as a priority. A large increase in depot Maximum Import Capacity (MIC) will be required at locations that are being made ready for electric vehicles. Applications for two locations (Athlone and Limerick) have already been made and two more will follow next month (Cork and Galway). Consideration of timelines for securing supply is important to ensure we meet EV delivery schedules. The percentage of electrical power generated from renewable sources is also critical to progress i.e. achieving the proposed 70% by 2030 in line with the CAP.
- **Partnerships** – We understand that knowledge sharing and benchmarking bring about many benefits for businesses that are going through change, adaptation and transformation. As we make our transition, we ensure that we reach out to our counterparts in the industry both nationally with Dublin Bus, Translink and Iarnród Éireann and internationally through bodies such as the UITP and the EU Clean Bus Platform. We also benefit greatly from engagement with other commercial state companies, such as An Post and ESB, as well as from our partnerships with our suppliers such as Bord Na Móna/AES. Long-term funding partnerships with bodies such as the NTA, CIÉ and the SEAI are perhaps the most critical of all.



Figure 5 – Clean Bus Platform logo

- **Cultural shift and behavioural change** - Form an important part of delivering on national emissions targets. In Bus Éireann, we are driving change not only through fleet transformation but through circular economy initiatives such as reuse and redistribution of parts and fleet assets, focused training on waste behaviour, waste auditing and segregation practices, embedding green procurement criteria into our contracts and ensuring our depots conform to ISO requirements. Biodiversity projects on our premises are also helping to build awareness of climate issues.

3.0 Conclusion

The implications of actions on the carbon budgets are well summarised in section 3 of the Technical Report. We recognise that difficult choices have to be made to achieve the binding CAP targets. But there are opportunities also - for the public transport sector and for the wider economy. The phased budget proposals and sectoral approach appear appropriate to Bus Éireann, given the greenhouse gas emission trajectory in the economy.

Sustained investment is required in public transport and active travel modes to deliver the sustainable travel growth envisaged in the Technical Report and the CAP. Transport demand patterns are changing and will change in the future; change which the bus mode is well-placed to meet. The structures governing this investment and guiding implementation are obviously important and need to involve all stakeholders.

We concur that land use planning must always be in sympathy with public transport infrastructure and submit that the locational flexibility, speed of implementation and comparatively low capital cost that the bus mode offers is of particular importance in Ireland, with our low density population and generally small urban areas.

Finally, we would like to wish the Department and the CCAC well in taking the next steps to finalising the budgets and sectoral splits.