Climate Mitigation and Awareness Division – LTS
Department of Communications, Climate Action and Environment
29-31 Adelaide Road
Dublin 2
D02 X285

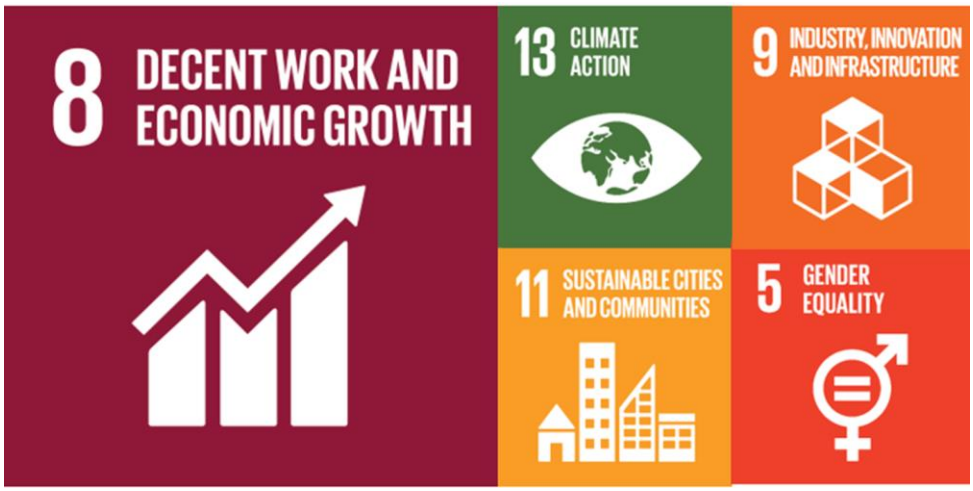
20 December 2019

Re: Submission on Long-Term Strategy on Greenhouse Gas Emissions Reduction

To Whom It Concerns,

Cork Chamber is the leading business organisation in Cork, proactively working to identify and progress developments that are facilitative of economic and sustainable growth. Representing an employer base of close to 1,200 businesses and over 100,000 employees across the region, Cork Chamber is the largest business representation organisation in the south of Ireland.

This submission has been guided by our commitment to delivery on the UN Sustainable Development Goals. Five specific goals have been identified by the Irish Chamber Network which we are actively advocating for throughout our work;



Firstly, we highlight the role and potential of the business community in driving this transition and strongly emphasise the proactive requirement on Government to support businesses throughout the transition period. We highlight the criticality of a Just Transition for workers

being facilitated to reskill, while also the Just Transition required for business owners to make the required changes in, for example business practices, materials use and production methods. At the utmost, business and investment require certainty to plan, and develop sustainably. From a national economic perspective, it is imperative that we maintain and develop strong communities as set out in Project Ireland 2040, to ensure this we need a strong, sustainable, supported business community. This requires support for innovation, research and development, facilitation and support for reskilling, retrofitting and product research.

Resilience and capacity building at business and broader community level is a central pillar to a successful transition. Herein, we answer the consultation questions most applicable to Cork Chamber as a business representative organisation:

5.1 Pathway to 2050

2. What advanced technologies, across all sectors, could support a move to net-zero or negative emissions by 2050?

Net zero

Energy: Government must support the development of a market structure to support anaerobic digestion, through regulatory and infrastructure support and subsidy support at the outset. There is significant potential for a market in biomethane to become self-sustainable over time offering a diversified revenue source within the agricultural sector while supporting a net zero carbon fuel. While the efforts of Gas Networks Ireland to increase the ratio of fully renewable biomethane in the national gas grid, and the efforts of Eirgird to decarbonise electricity sources through the development of the interconnector to mainland Europe must be supported in our national efforts to cut emissions.

There is already strong Government support for electric with this technology identified and currently being supported as a preferred option for transport. We highlight the need to accelerate the fully renewable generation of electricity to ensure the source is green and clean, and to this emphasise the urgent need to unlock grid connections and subsidies for the promotion of a thriving renewable energy sector across solar and wind. We caution against any singularity in focusing strictly on one technology and encourage the merits of a diversity of fuel sources/ technology to reinforce fuel security and resilience. Cork Chamber questions the ambition of adopting electric hybrid technology as an interim solution by the NTA for the transition of the national public bus fleet. While electric hybrids are dependable, this technology still runs on diesel. The net gains as regards GHG emissions reductions and air quality do not stack up especially when used in a busy urban environment which requires a high proportion of stop/ start driving behaviour. We believe there is a need to be more ambitious.

Transport: There is an opportunity to adopt technologies within our transport fleet to greatly enhance and safeguard air quality. In the case of Cork, with over 20% of the Cork Metropolitan area yet to be developed by 2040, now is the opportunity to have a step change in public transport technology and fuel. The future will require a mixture of technologies and fuel types. Cork Chamber firmly believes that immediate and ambitious action must be taken to meaningfully cut emissions now. In a recent study carried out by Cork City Council and the Centre for Research into Atmospheric Chemistry at UCC, air quality in Cork city is currently

one of the worst in Europe recorded by real-time air quality monitoring website PurpleAir, with sensors measuring the level of particulate matter in the air. The Environmental Protection Agency confirmed that data from one of its air quality monitoring stations in the city rated the air quality as “poor” at approximately the same date and time, further verifying the PurpleAir findings.

Cork Chamber advocates for the immediate adoption of a biomethane public bus fleet for Cork. Biomethane is a low-carbon, methane-based transport fuel produced from anaerobic digestion giving effect to national waste policy, driving towards an efficient circular economy in converting waste to energy, while increasing domestic energy security, diversity and resilience. Biomethane as a fuel is particularly suitable to heavy vehicles such as buses and HGVs. Reducing greenhouse gas emissions by up to 85% while having particulate matter-free combustion, dramatically reduced NOx (nitrogen oxides) emissions and few ozone promoters than Euro V diesel vehicles, biomethane represents a significant opportunity for utilisation as a transport fuel. Across Europe and further afield, this technology is commonplace. In Nottingham alone, the double-decker bus fleet is powered entirely by biomethane. Nottingham City’s transport fleet of 53 bio-gas double deck buses has doubled in size in 2019 with the addition of a further 67 buses. Significantly, the capital cost differential between diesel and biomethane bus vehicles is minimal, with hybrid electric costing 50% more than a diesel bus.

In 2018/2019 the Department of Transport, Tourism and Sport conducted trials of low-emission bus technologies in Cork and Dublin. Within the summary[1] results from these trials it was concluded that hybrid-electric buses run on biodiesel and gas buses run on bio-CNG offer the greatest potential contribution towards Ireland’s renewable energy transport targets to 2030. Cork Chamber continue to actively support the Energy Cork proposal for Ireland’s Greenest Bus Fleet[2] which advocates for the conversion of the Cork public bus fleet to biomethane (biogas). This proposal is widely supported and identifies the opportunity for Cork as a location of scale, with a fleet size of 120 buses and with one central refuelling station for the public bus fleet in Cork City at Capwell (which has already undergone significant groundworks for CNG/biogas refuelling capability) to transition to low emission technology. There is an opportunity now to transition to low emission fuel and technology cutting our GHG emissions while utilising a low emission public bus fleet as an exemplar for broader behavioural change.

Zero carbon: Without a doubt, the future holds great opportunity also for Hydrogen which should be a game changing technology in the future. While we are not there yet, Government must increase the support of research, development and innovation in the advancement of hydrogen-based technology across a spectrum of uses for example transport and heating.

3.What financial instruments could complement a decarbonised economy by 2050? Our national energy grids are largely decarbonised with Gas Networks Ireland and Eirgrid supported to achieve a higher percentage of clean energy into the national grid, this will greatly enhance the opportunity to decarbonise the economy and to make clean energy more accessible and affordable. Cork Chamber believes a subsidy to support biomethane

[1] https://assets.gov.ie/34685/0eadd0e2d4704fddb32c42e7d939c7ef.pdf
[2] http://www.energycork.ie/index.php/portfolio/irelands-greenest-bus-fleet/

production is a feasible option in national efforts to decarbonise the national grid. There is already commonplace in Europe and a staple of economic activity in Northern Ireland. Indeed, many Irish producers transport biomethane produced in ROI to Northern Ireland to avail of the market model and price point. Developing a subsidy structure in Ireland would be hugely beneficial to aid efforts to decarbonise our economy.

In addition, a domestic feed-in tariff would encourage domestic prosumers and encourage microgeneration and must form part of a suite of measures in decarbonising our economy.

5.2 Electricity

6. What should our fuel mix look like by 2050?

Cork Chamber encourages the adoption of a diverse fuel mix encouraging diversity, security and resilience of our fuel mix to 2050 and beyond. While not in a position to prescribe a specific mix, we are adamant that the most prudent approach is via the encouraging of support for a diversity of technologies and fuels to effectively pave the way for a successful transition to 2030, to 2050 and beyond. In the immediate term, we need to embrace our national potential to generate energy with net-zero carbon emissions.

5.3 Enterprise

7. How can emissions from large industry e.g. cement and alumina, be reduced, including options beyond fuel substitution?

There are opportunities associated with the Circular Economy in this instance through for example the development of a national platform sharing production/ material by-products for commercial repurposing. A progressive digital platform whereby businesses are encouraged through a market structure could be instrumental to incentive the reuse and repurposing of materials, decreasing GHG emissions through incentivising collaboration while also encouraging natural clusters of complementary businesses across all sectors and sizes.

While there are certainly GHG emissions reductions to be made via advancements in technologies, it is crucial that Government supports industry in the transition with support for research, development and innovation, and reskilling/ training programmes. Sectoral emissions reductions can be achieved, with many sectors already leading the way in developing onsite power generation for example Janssen in Ringaskiddy, Co. Cork.

There are opportunities from a carbon offsetting perspective where emission reductions cannot be easily identified or adopted in the short to medium term. To this end, regional projects to expand on existing, and develop new carbon sinks should be identified and be accessible for involvement/ participation from large industry.

8. Should enterprise lead the way in the transformation in the GHG impact of power, transport, buildings, waste and the circular economy? If so, how?

Yes, enterprise can lead the way and there are excellent examples of enterprise already leading the way in GHG emission reductions however the changes required are beyond any one sector or cohort of society. This is an all of society challenge. The successful and just transition is pivoted on an ‘all of society’ approach from Government through advancing a favourable regulatory and public policy support framework, through appropriate subsidy provision and the support for new market structures, through aligned regional policies that support reskilling and structures that support a just transition. All cohorts of society need to

lead on this and work collaboratively, supported by enabling Government policy, measures and supports.

5.4 Build Environment

9. How can Ireland retrofit almost all buildings by 2050, including options for heating fuels and what buildings will be most challenging to decarbonise?

The importance of climate finance to Ireland's transition to a low carbon economy is crucial, with an overall national target to reach net zero carbon emissions by 2050, the growth of sustainable investment opportunities and portfolios is key to achieving our transition. Climate finance through responsible investment is pivotal to Ireland meeting commitments under the Paris Climate Accord, and to achieving our responsibilities to meet the global Sustainable Development Goals. We need accelerated market engagement with Climate Finance. There is significant opportunity for Ireland to diversify and strengthen investment and asset portfolios. Government support to accelerate a shift in private financing investment options to sustainable investment portfolios, and the national banking sector to increase their overall percentage and availability of green funds to private homeowners and businesses would be welcome. The recent green loans announcement by AIB is very positive and at a scale that can meaningfully influence the affordability of deep retrofitting currently estimated at between €50-70k for homeowners.

Government needs to enhance the affordability and accessibility of the current grants towards the cost of energy efficiency improvements in the homes though the Better Energy Homes scheme and the SEAI Better Energy Warmer Homes scheme. We highlight the work completed through Energy Cork[3] with the development of the Energy Master Plan[4] (EMP). The EMP is an ambitious plan designed to encourage sustainable energy use and stimulate enterprise and job creation in Cork City and Cork County. Cork's Energy Master Plan was prepared by the cluster with support from the SEAI's Sustainable Energy Communities initiative provides a unique overview of how Cork uses energy and a newly prepared roadmap for energy sustainability in the region. The main aim of the Cork Energy Master Plan is to reduce the amount of energy used in Cork by more than a third (34.6%) and increase the renewable energy contribution by more than a half (53.5%) by 2030, through introducing a series of proposals including the medium energy retrofit of 75% of all homes in Cork, and the energy retrofit of commercial and non-residential premises to deliver 40% energy demand reduction. All avenues must be considered in the journey to decarbonise and retrofit and we strongly believe the EMP can lead the way in guiding the opportunity and pathway to decarbonise the Cork region, while also providing a format and template that can be replicated widely.

Finally, Cork Chamber highlights the opportunity for the national introduction of a green mortgage model for business and homeowners. A special type of loan designed to make energy efficiency upgrades more affordable to homeowners and which have longer payback timeframes and favourable interest rates as is available in the US.

10. What is the future of the national gas grid in a net-zero emissions pathway?

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[3] http://www.energycork.ie/index.php/portfolio/corks-energy-master-plan/

[4] http://www.energycork.ie/wp-content/uploads/2019/09/CORK-ENERGY-CHAMPION-EMP-FINAL-REPORT.pdf

The gas grid can likely be utilised for Hydrogen transmission, currently being examined by Gas Networks Ireland. In theory this could form the backbone of a zero-emission fuel transmission grid infrastructure beyond 2050. There are also the parallel opportunities when the carbon emissions from the gas network (whether compressed natural gas or biomethane) is offset with the application of Carbon Capture and Storage technology. A successful transition will require a diversity of fuel mixes and we cannot afford to be solely dependent on electric. It is imperative that our national transmission systems are not in a situation where demand outweighs capacity, leading to stress on transmission systems and subsequent transmission failures. Therefore, while electricity is a key energy source for the future, it is critical that we ensure diversity and resilience of energy supply.

11. How do we ensure that building and infrastructure development supports compact urban development, which is regionally balanced and sustainably designed to reduce GHG and enhance sustainable quality of life?

Effective spatial planning based on mixed used developments and the connectivity via public or sustainable transport modes of residential, amenity and employment locations has a major role to play in reducing traffic congestion and avoiding sprawl. Under the National Spatial Strategy, it is intended that 50% of all future urban population growth will take place in existing brownfield locations. While Cork Chamber fully supports compact-led growth and the delivery of more brownfield accommodation, a lack of viability of apartment construction is currently holding back private sector development across Irish cities, thus posing a risk to our future economic and population growth. Until this viability gap is bridged, Ireland will not deliver on the planning objectives of Ireland 2040, as we will continue to witness suburban sprawl and a widening of the commuter zone. Spatial and economic planning plays a significant role in the creation of movement and investment patterns and their associated energy, carbon, environmental and social impacts. It is essential that at every juncture compact dense development is supported by high quality sustainable, and public transport corridors and services.

A recent[5] report commissioned by Cork Chamber and the Construction Industry Federation (CIF) found that the cost of construction of new apartments is significantly beyond viability and is threatening future economic growth in Ireland's cities. The Government's Ireland 2040 project predicts Cork Metropolitan Area's workforce will grow by 65,000 by 2031, but both Cork Chamber and CIF are warning that the ability to accommodate these new workers in a compact city will be challenging until the viability issue is addressed. An estimated 97% of all apartments built in Cork were built before 2010.

Investment in public and sustainable infrastructure and networks remain a critical issue, and a growing barrier for achieving sustainable commuting and modal shift from private car.

5.5 Transport

12. Do you think modal shift will play a key role in decarbonisation by 2050? If so, what is needed to drive substantial modal shift?

[5] https://www.corkchamber.ie/wp-content/uploads/2019/09/Viability-and-Affordability-of-Apartment-Building-in-Cork-City.pdf

Public and sustainable transport networks and infrastructure are fundamental building blocks to successfully decarbonise by 2050. Currently Ireland is drastically lagging our European counterparts in terms of availability of public transport options and sustainable (cycle) network options for commuters. In Cork City alone, census 2016 highlighted a startling rate of car dependency in Cork City with 70% of commuters choosing private car transport. This contrasts dramatically with what can be achieved when a dependable public transport option is brought online, as has happened with the introduction of high-frequency (every 15 minutes at peak times) of the Ballincollig to Cork City Bus Eireann service which has seen an increase of 70% in passenger numbers since its introduction in 2019, resoundingly proving the appetite amongst commuters to opt for public and sustainable options. Our transport networks and infrastructure are not fit for purpose having been chronically underinvested in recent decades. This requires urgent investment. We are at a pivotal point in Cork alone with development at a larger scale than ever seen before. Now is the opportunity to be laying the foundations for a public and sustainable transport network that works for commuters, and that encourages commuter behaviour and patterns that do not detrimentally add to GHG emissions. Bus Connects must get underway immediately to deliver bus corridors and park and rides for Cork. We are now two years into a 10-year National Development Plan without a kilometre of additional bus lane nor a planning application for a single park and ride. In Cork, we have not added cycle infrastructure of note since the depths of the last economic cycle.

Investment in public and sustainable transport infrastructure, technology and network is crucial and cannot be emphasised enough. Investment should be proactive and should be facilitative linking development with appropriate infrastructure and services for example Little Island and Ringaskiddy in Cork are major employment zones in the South of Ireland but have minimal, to no public or sustainable transport investment and funding allocated. This is in no way conducive to a shift in commuting behaviours, and the reduction of harmful emissions, and presents quick wins for policy and investment. Focusing on delivery of infrastructure and services to the key employment hubs across Metropolitan Cork has significant potential to result in a step change in public and sustainable transport usage for a large proportion of our commuting population. Other major employment areas such as Cork City centre and Blackpool provide ideal opportunities for quick wins.

It is important to note the improvement in car technology and fuels in recent years, through innovation in biofuels, renewable fuels and the growth in reliability of electric car technology and range. The innovations across the automotive industry will continue to advance, with technology improvements positively affecting upon air quality and national efforts to achieve reductions in harmful GHG emissions. However, cars take up space, and lead to congestion. We believe the immediate opportunity for Cork lies within public and sustainable transport.

The delivery of transport infrastructure is a core priority of Cork Chamber members. In many respects, alongside the provision of accommodation, public and sustainable transport will be the defining enabler of the future prosperity and quality of life for the people of Cork. In equal measure, failure to deliver will be an acute inhibitor of progress.

13. What should transport in our cities and rural areas look like by 2050?

Transport should be accessible and affordable to all. The most appropriate transport network will be determined by the land use planning, geography and density of a location, varying on whether urban and rural and on the scale of the location. We take this opportunity to

emphasise the principal requirement for the provision of a smart, integrated, accessible, affordable and clean technology public bus service network and infrastructure at local, regional, and national level.

For an **urban environment**, it is crucial that a connected and integrated transport network is supported and invested in. The network must incorporate a variety of transport modes to include bus, commuter rail, light rail (where appropriate), cycle infrastructure, water transport, and pedestrian friendly pavements and associated infrastructure i.e. pelican crossings.

For a **rural environment**, we commend the NTA support for LocalLink and encourage that support continues to be enhanced for this service. In a rural setting, it is far more limited as regards the availability and access to public transport services. However, it is essential that rural routes and the continued provision of access to public transport is not solely focused on profitability. Dependent on geography, bus is the most likely and appropriate form of transport for rural areas. Supporting car share scheme e.g. GoCar in rural areas and making these more affordable to take account of longer travel distances and times could be beneficial. Finally, greenway cycle routes connecting rural towns have a strong potential to encourage active travel for commuters as well as for leisure. Along with GHG reductions, the continued support for cycle networks routes in rural and urban locations are a gamechanger in facilitating active and safe travel.

In conclusion, Ireland needs a public transport network that is cohesive, with consistent and uniform ticketing and payment structures across services and service providers, and with easily accessible and understandable transport network information. It is essential that the service is affordable and reliable. We need greater integration of smart technologies with the opportunity of real time information panels to drive greater usage. We need immediate investment in cleaner public bus fleet technologies and fuels to meet our local and national environment commitments, emission reduction targets and due diligence. We need greater and more rapid investment in critical network infrastructure such as bus corridors, bus shelter infrastructure, interchange facilities, and mobile information apps. For example, where we do have real time information panels in Cork City, the information displayed is not reliable and represents an enormous opportunity lost for the service and customer. It is essential that national investment is focused on developing the public bus service infrastructure in a way that engenders confidence in the service and increases the reliability on the service. These are the essentials in driving a modal shift for commuters. The commuters and the employing businesses require this level of confidence and service reliability.

14. What are the most cost-effective solutions for reducing emissions from heavy duty and long-distance vehicles?

A key component of developing a thriving and sustainable City is the provision of green spaces, planting, and the safeguarding of the environment and air quality for citizens. Here we have an opportunity to adopt technologies within our transport fleet that will greatly enhance and safeguard air quality as the city grows and develops. Nationally we need to be far more ambitious in the adoption of green technology. We must electrify our rail. We must have biomethane/electric/ or hydrogen for our buses and HGVs(or a combination of these). It is unacceptable to drift over the coming years using traditional or mild hybrid technologies. The future is a blend of generative sources. We must have urgency in the adoption of

progressive green technologies, and this must be reflected in all national and local authority tendering.

Specifically, for heavy duty and long-distance vehicles, a transition to compressed natural gas to biomethane should be accelerated to ensure we are on track to cut GHG emissions with other technologies being explored as they become more dependable for transport vehicles in this category.

15. How can Ireland, as a small island economy, reduce emissions from aviation and navigation, including demand reduction and stimulating supply of sustainable fuels?
The EU Emissions Trading System is a motivator for change, research development and innovation. There are calls to bring commercial sea freight and leisure cruise liners within the sectors covered by the EU ETS. It is important to support these sectors in this transition. Options such as compressed natural gas, to biomethane fuel types should be considered as a viable option to reducing carbon footprint.

In relation to aviation, research development and innovation must be supported to investigate and develop technologies to decarbonise the aviation sector.

5.6 Agriculture, Forestry and Land Use
16. How do we secure viable family farms across our regions in an environment profoundly changed by the focus of climate change?
Family farms are part of the fabric of Irish society and should be supported to remain viable through supports for both farmers and cooperatives to transition. A cooperative model to support biomethane to biogas production would be strategic to support farmers and a welcome and diversified new income stream for family farms.

5.7 Waste and the Circular Economy
21. What circular and bio-economy initiatives could support emissions reductions out to 2050?
22. How should Ireland target reduction in food waste? All retailers should be encouraged to sell at lower prices, food that is past the 'best before' dates, but before the 'use by' dates. Retailers should be supported to ensure that 100% of own-brand, fresh produce and in-store packaging is recyclable, reusable or compostable as is the example set by Musgraves. Supporting social enterprises such as Foodcloud[6] which use data driven platforms to engage retailers to reduce food loss encouraging potential food surplus/ or waste to be redirected to meet a social need should be a priority. We encourage Government to investigate the opportunities to encourage and incentivise all retailers and producers to donate food surpluses etc to charities, and which is broadly incentivised amongst our European counterparts.

5.8 Just Transition
24. What are the most important issues for the Government to consider in developing a long-term strategy to 2050 in order to ensure a just transition?
It is imperative to all activity, including economic activities and future growth, that behaviours and policies are changed. We need supportive policies and opportunities for businesses to

[6] https://food.cloud/

make this transition nationwide. In representing the voice of business, we highlight the criticality of 'certainty' for business to facilitate future planning decisions and investment. In a time of increasing geopolitical change and associated trade uncertainty especially in the context of Brexit, more than ever business needs certainty.

In our recent submission to the Carbon Tax consultation, Cork Chamber added support, with this support premised on a fair and equitable approach for business and communities to make this transition, and which negates fuel poverty and social inequity. Future carbon tax increases must not take place in isolation, alternatives must exist for businesses and consumers to mitigate a negative impact of an increase with for example those in a rural environment being disproportionately affected in comparison to those in an urban setting with transport alternatives and transport infrastructure e.g. relative low permeability of electric car chargers in rural Ireland. Taxes from the ring-fencing must be clearly directed to support policy interventions and to increase the affordability of alternatives to our current carbon intensive lifestyles. Cork Chamber supports the allocation of the carbon tax to the following:

- To increase the fuel allowance to compensate those households likely to suffer from fuel poverty,
- We propose the tax support large scale community energy efficiency initiatives such as district heating schemes, and support for homeowners to become net prosumers of energy.
- We propose the tax act as a buffer against increasing cost of doing business for businesses with no realistic short to medium term alternative to continued fossil fuel use and for whom fossil fuels constitute a large amount of overall business expenditures,
- Government must facilitate a just transition for all. This requires retraining and supports for thousands of businesses, employees and sole traders with product or service offerings based on the production, installation or deployment of traditional fossil fuel focused energy systems. Cork Chamber supports an allocation of funding towards reskilling,
- Government must support innovation in for example production methods, packaging.

25. What should the primary focus of adaptation policy be for 2050? The primary focus should be on resilience building and capacity building across all services, infrastructure, energy, networks and communities.

26. Are there any other comments or observations that you wish to make?
Cork Chamber highlights the innovative nature and the strong entrepreneurial composition of Ireland's business community. Support for innovation and new thinking will be key to accelerating a GHG emission reductions. The encouragement of innovation will be essential in adopting a flexible, agile and proactive response and to pre-empt economic and to negate any potentially negative societal impacts. From a purely economic perspective, the cost of inaction is far off balance with the benefits of action considering the financial penalties payable of up to €150 million per annum. Ireland is clearly missing out on opportunities to shift to a clean energy and tech society and the benefits that this could bring to our wider economy, society and environment.

The focus on implementation, monitoring and evaluation is an essential element of this and needs to reflect the urgency and responsiveness required. As this will be the framework for implementing and driving forward actions, the establishment of key performance indicators are essential, as is the commitment to ongoing review and updating as conditions change.

Finally, Cork Chamber emphasises the value of public consultations and welcome future opportunities to engage on this and associated topics.

Yours Sincerely,

Michelle O'Sullivan
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Cork Chamber