

NILGA response to the Energy Strategy – Call for Evidence

20th March 2020

The following response has been drafted in liaison with relevant local government officers. It has also been informed by communications from National Energy Action, Sustainable NI, Arc 21, the National Consumer Council, Department of Agriculture, Environment and Rural Affairs and the Department of Infrastructure. Any queries can be directed to Karen Smyth at the NILGA offices k.smyth@nilga.org.

Derek McCallan
Chief Executive

20th March 2020

1.0 Introduction

NILGA, the Northern Ireland Local Government Association, is the representative body for district councils in Northern Ireland. NILGA represents and promotes the interests of the 11 Northern Ireland district councils and is supported by all main political parties. The Association welcomes the opportunity to participate in the discussion around a future Energy Strategy for Northern Ireland and we trust that the views outlined below will be taken into account as policy is developed and finalised.

2.0 Initial Comments

NILGA welcomes this Call for Evidence as a precursor to the production of an Energy Strategy for Northern Ireland. Such a Strategy is needed, alongside relevant, properly resourced monitoring, regulation and enforcement and will have an impact for many years to come. NILGA also welcomes the New Decade, New Approach Deal which sets out commitment to an Energy Strategy with ambitious targets and actions for a fair and just transition to net zero carbon, as well as a commitment to a Climate Change Act to give environmental targets a strong legal underpinning.

We are at a crucial point in time for our environment and it is important that we get a future Energy Strategy right, that we involve everyone who needs to be involved; that it is given the priority required by all government departments and other partners.

In recent years, decarbonisation has grown in importance in government consideration, and it is now vital to make the changes across government to facilitate the improvements necessary. We need to enable Northern Ireland to decarbonise and to drive the necessary changes to behaviour and culture to ensure Northern Ireland is resilient to coming challenges, with communities empowered with regards to decarbonisation. It is acknowledged that the energy strategy will influence policy across a range of Departments and will require sustained central and local government and societal collaborative proactivity over a considerable period of time. NILGA and our member councils are ready, willing and able to work with government, business and the public to begin to meet these challenges, and we look forward to the publication of the Strategy to better inform and focus effort, some of which has already begun.

3.0 Specific Comments

NILGA has made specific comments within the response template (attached overleaf).

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1. Energy in Northern Ireland

- Q1. What lessons can we learn from elsewhere in addressing energy within an overarching climate action framework?
- Q2. What are the key considerations for decarbonising Northern Ireland’s energy sector given existing linkages to other jurisdictions?
- Q3. To what extent should Northern Ireland implement the key energy-related recommendations from the CCC ‘Reducing Emissions in Northern Ireland’ report?
- Q4. Do you agree with the 30-year timeframe? If not, please state your preferred approach and reasons.

Key Considerations

- It is evident from approaches already taken in England, Scotland and Wales, the Republic of Ireland and further afield that there is significant potential for progress to be made, and learning should be taken from this.
- NILGA believes that any future strategy must have statutory footing and binding targets that are clear, measurable, ambitious and in line with both the Programme for Government (NI) outcomes and the UN sustainable development goals (SDGs). Effective governance is needed and enforcement mechanisms put in place. There need to be clear lines of accountability. All government departments and public bodies should be included in the design not just of the strategy but the crucial actions that need to be clearly set out within it. Clear mechanisms of monitoring must also be built into this. It is essential that this is also matched by appropriate and significant additional and direct investment to reach the set decarbonisation targets. Without policing and without incentives, ‘goodwill’ policies are unlikely to reach their potential.

Committee for Climate Change recommendations

- NILGA supports the Committee for Climate Change recommendations for energy priorities. The deployment of electric vehicles needs further exploration and consideration, although there is consensus that the deployment of electric vehicles requires significant investment in supporting infrastructure it is only one of a number

of options that should be explored. Hydrogen is another fuel that is likely to feature heavily in future transport fleet – particularly for the public sector.

- Societal behavioural change in relation to transport is absolutely required. Again, careful consideration is needed to ensure required behavioural change is met with beneficial alternatives that work for consumers in practice. We need to enable consumers to do without private vehicles.

Time-frame for Decarbonisation

- NILGA supports the use of a long-term target to provide certainty to stakeholders about the transition of NI to a low carbon economy, having regard also to the global policy framework to achieve reductions. There is the capability for the 30-year timeframe to be taken forward, but there is also recognition that the transition will take some time to be implemented. A long-term time-frame is needed to enable robust targets to be set, but short-term interim targets are also required to ensure focus on the short, medium and long-term efforts required. Without shorter term targets there is a risk that all efforts would be left to the end. Short term targets would encourage the necessary investment.

2. The Energy Transition in Northern Ireland

- Q5. What are the unique characteristics of Northern Ireland that need to be considered in a net zero carbon energy transition?
- Q6. Is your organisation undertaking or planning to undertake projects to support the energy transition? If so, please provide further details.

Characteristics of Northern Ireland

- NILGA recognises that the energy transition in Northern Ireland must reflect the specific features, needs and interests of our energy market, the Northern Ireland economy and consumers (both domestic and businesses).
- The system of agricultural, power generation and industrial bases differ from other UK regions. A number of our council areas have a significant agricultural economy and community, which has a heavy reliance on fuel. Other Council areas have a heavy industrial base that have different needs in terms of energy. Whatever the economy, continuity of supply is important, as it is for consumers also.
- A future strategy must acknowledge that Northern Ireland is predominately a rural area. Whereas the geography does offer unique opportunities for the development of renewable technologies, the urban/rural split means that use of gas pipelines will not be an option for many. Many of our council areas have a large proportion of homes run on oil and access to gas is not affordable in these areas. Significant attention will need to be paid to develop options to decarbonise the rural community therefore, which will have to be considered differently to the urban areas.
- The consideration of an 'oil factor,' may be required. Government departments have a duty in the Rural Needs Act (NI) 2016 to have due regard to rural needs. Due to the oil dependency at present in the rural communities, a slower pace for its replacement in some areas may be needed. Alternatively, serious infrastructure investment will be required.
- It is acknowledged that Northern Ireland has an issue with energy security. Local supplies of gas are not readily available and therefore require other options to be explored including natural gas, use of existing renewables and exploration of other innovative technologies, to increase local supply, and diversity of suppliers.
- The future energy transition should reflect the strategic significance of existing power generation sites, such as Kilroot and Ballylumford. The diversification of Northern Ireland's power generation and movement to renewable and sustainable energy production should utilise the strategic importance of these sites

Embracing Change

- Taking forward a strategy will require important decisions to be made and politicians need to be brave in making them. Leadership is needed. Although some decisions may be unpopular in surrounding localities, they must be progressed for the greater good. If tough decisions are not made, the problems will worsen. We need to be open to change and embrace it. There is a need to acknowledge the issues of the past, such as ensuring we learn from the RHI inquiry, while remaining open to the introduction of other initiatives.

Encourage Investment

- NILGA is of the view that investment in Northern Ireland must be encouraged to take forward the necessary changes. We need to strive to ensure processes are not problematic and remove obstacles, projecting Northern Ireland as an ideal place to invest and creating the ‘impression that we are open for business.’ Homegrown businesses are an important part of the Northern Ireland economy but we can’t rely on this solely, with the global marketplace changing rapidly.
- At present our current processes can be seen as prohibitive to investment and we need to overcome these obstacles.

Considerations

- Northern Ireland is an unequal society and we need to ensure that we share the costs. Electrification of heat will continue to be important with a potential increase in this with decarbonisation. It is important that tariffs are modernised to reflect this, and that there is a ‘just transition’.
- A future strategy must acknowledge that the way forward must be a combination of different measures. A variety of systems will be required to remove the reliance on the national grid and ensure microgrids are progressed and developed
- It is recognised that the electricity system operator has a role to play in informing Northern Ireland to a low carbon economy. It is important that this role must support the needs of the Northern Ireland consumers, both domestic and business.

Local Government projects to support the energy transition

- Across councils and partner organisations there are good practice examples of work already being done. The way forward has to be a combination of different measures with no ‘silver bullet’. There will be a need for the national grid and microgrids to meet the demand needs. Gas from landfill as an energy source has been tried and tested by Belfast City Council and has potential moving forward, as does future energy from waste infrastructure, which is likely to form a vital part of the circular economy. Anaerobic Digestion will also form part of the overall picture (provided there is consistency of input, which is essential for consistency of output). A number of council facilities have solar panels installed and wind turbines generating electricity. Energy recovery systems are operating in leisure centres, which are helping to cut energy consumption, and the groundbreaking work being done in Derry City and Strabane District Council on green and blue infrastructure, climate adaptation and the value of their natural capital, should be explored as an action coming out of this call for evidence.
- Tree planting in open spaces and parks across Councils assists in cutting atmospheric carbon, and NILGA welcomes the DAERA Minister’s recent announcement about regional tree planting initiatives.
- The recent partnership between Wrightbus and Translink to pioneer hydrogen-fuelled buses in Belfast is a very positive example of how Northern Ireland’s innovation and world-leading technology should be utilised in the net zero carbon transition. Derry City and Strabane DC is exploring with Translink as to the possibility for ensuring that the 212 service is hydrogen fuelled, and conversations are emerging in councils on shared procurements of council fleet e.g. bin lorries, the diesel version of which have a massive carbon footprint.
- The windfarm and solar panels development located near Loughguille Community Association, Saint Anne’s Support Group and Cloughmills Community Action Team is a good practice example of a community renewable energy project. The wind turbine located at the site powers their building and business complex. Ground mounted solar panels also work well. Assistance from the local Council was helpful in facilitating the application process with the supplier and managing the process initially. Council led community and local development planning will become key mechanisms for delivering change locally.
- A Council wind turbine in Ards and North Down (commissioned in 2008) and located in an industrial estate, supports the workings of the Council waste transfer station, in

addition to some support from the national grid. Initial problems with interference on 'line of sight' affecting neighbouring properties and 'shadow flicker', affecting near-by factories were resolved. The Council continues to explore other means of using the energy they generate. An added benefit of working in partnership with local schools has helped raise awareness of energy saving behaviour.

- Each council has an energy officer, already making significant impact in raising awareness of energy-saving behaviours across the local government workforce (12000+ employees) and into their communities.
- Councils also have a significant role through the work of energy efficiency officers and the facilitation of grant funded schemes such as the affordable warmth scheme.
- There are many examples of steps already having already been taken to make progress on decarbonisation, ahead of targets being set. This Civic Leadership/'leading by example' behaviour has the potential to help bring others along too. Action plans should be developed to take forward this important work.

Considerations

- Whereas NILGA acknowledges the need for an energy strategy, we also recognise that careful consideration is needed in the process to ensure that the long-term effects of actions have been properly thought out. Research, investment and investigation is needed to ensure there is broader awareness of the consequences of measures put in place. The best use of land is a consideration with biomass production as is the sustainability of the output. Renewable energies, for example, should not present future problems for waste disposal. Energy efficiency remedial measures such as cavity wall insulation can result in condensation if provision of adequate ventilation is not considered. Through the energy transition, we need to fully understand our needs for the future by carrying out analysis and assessment to help make decisions. Although NILGA acknowledges that mistakes will undoubtedly be made as technology develops, and we need to allow for this, we should avoid unintended consequences as much as possible.
- Competing demands for central funding on adaptation and mitigation of climate change will be an obstacle that will have to be overcome. For example, wastewater infrastructure and adequate sustainable drainage is a major issue for many of our council areas and significant investment is required to enable required development. In the hierarchy of priorities for investment, wastewater infrastructure is particularly significant, but decarbonisation activity and provision of appropriate soft sustainable drainage systems will lessen the need for increasingly substantive future adaptation measures. Decarbonisation requirements must therefore also be considered a priority

and investment allocated in order to take this forward.

Holistic approach required

- It is acknowledged that there are a number of significant strategies that should be interlinked. The energy strategy has significant links and cross over with the environmental strategy and innovation strategy, for example. All these strategies should be nested in each other and not disconnected, to ensure an integrated Government response. Waste management, renewable energy, alternative energy and energy efficiency are all linked. It is noted that other jurisdictions such as the Republic of Ireland, have developed an umbrella Climate Change Strategy as a mechanism for reducing their vulnerability to the negative effects of climate change.

3. Consumers

- Q7. How should we ensure that energy remains affordable for domestic consumers? What approach should be taken to eradicate fuel poverty?
- Q8. What steps could be taken to improve the relative cost competitiveness of larger non-domestic consumers?
- Q9. Is a strategic position of “enable and protect” the correct policy stance?
a) What policies or schemes are needed to enable active consumers?
b) What policies or schemes are needed to protect vulnerable consumers?
- Q10. What types of advice and information are required by all consumers and what are the best mechanisms for facilitating this?
- Q11. Are there examples of successful citizen energy projects in Northern Ireland and elsewhere that have delivered improved energy efficiency and/or clean energy to local communities?
- Q12. What opportunities are there in both urban and rural areas for citizen energy communities in Northern Ireland? What role could government have in facilitating these?
- Q13. What evidence can you provide that identifies the challenges and opportunities for NI energy consumers in decarbonising energy?

Protecting consumers

- NILGA strongly believes that the future energy strategy must be for the benefit of consumers, as well as meeting the decarbonisation standards.
- Like many consumer and regulatory organisations, the Consumer Council for Northern Ireland have abiding principles to help assess where the consumer interest lies. NILGA supports these eight principles which are also adopted in the United Nations Guidelines for Consumer Protection. The eight consumer rights set out below should be used as a framework for the Utility Regulator, the energy industry and all others offering services throughout this transition in order to safeguard the interest of Northern Ireland Consumers. The principles should be used in decisions around the best outcome for consumers
- Access – Can people get the goods and services they need or want?
- Choice – Is there any?
- Safety – are the goods and services dangerous to health or welfare?
- Information – Is it available, accurate and useful?
- Fairness – are some or all consumers unfairly discriminated against?
- Representation – do consumers have a say in how goods or services are provided?
- Redress – if things go wrong, of there a system for putting them right?
- Education – are consumers aware of their rights and responsibilities?

Protecting the most vulnerable

- Research carried out by the Consumer Council in 2019 provided evidence that incomes in Northern Ireland are stretched, especially for the most vulnerable, and energy costs remain the biggest concern for consumers. More than half of consumers (**56%**) struggle all of the time or some of the time to pay household bills, including energy. **32%** of consumers struggle at times to pay their electricity and **19%** could not power their home in the last 12 months because they could not afford to top up. With this in mind, the transition to a zero-carbon economy must be managed in the most cost efficient way as possible. Consumers, especially the most vulnerable in our society must not be left behind. The energy industry must place a central focus on building trust. Costs must be transparent and affordable, with government and the energy industry ensuring a 'just transition'.
- NILGA supports the concern raised by the consumer council that there must be universal access in the transition to a zero-carbon economy. The most vulnerable

consumers cannot be adversely impacted. As delivered in a speech by the Ofgem Chairman, Martin Cave; ‘the costs of decarbonisation cannot be added on to energy bills today to protect consumers of tomorrow.’ The vulnerable consumer base will require protection. Louise Warde Hunter, Deputy Secretary for the Department of Communities expressed the view that partnership and collaboration between central and local government is needed to address poverty, inequality and those most disadvantaged, and NILGA concurs with this view.

- NILGA supports the view of the consumer council that tariffs for domestic and small business consumers need to be reviewed. There is a need to amend tariff structures to make the most out of the technology. Consumers cannot be penalised with high energy bills. There will potentially be opportunities in the future to empower consumers to take greater control of both the cost and nature of their energy supply. It appears that there is a disparity between domestic payments and non-domestic payments, with an approach very different to that in other industrialised countries.
- Consideration should also be given on charging of councils and government bodies, since they are working on behalf of their residents and not running a commercial business
- NILGA supports the views of the consumer council that there are important social policy issues to be considered, such as the allocation of electricity network costs across consumers who will have different and changing requirements from the network. The Utility Regulator and the NIE Networks must not make these decisions alone. Smart integral solutions are needed to reduce and deliver network costs through a more dynamic approach to operating the network. There is a need for transparency, with ongoing engagement with stakeholders. By doing this, risks can be identified and considered by all affected parties.
- NILGA supports the concept of co-production and co-design and would highlight the benefits of consumer input in the design of future services and products and the energy transition.

Incentivisation

- There are concerns around the costs of alternatives and new technologies. Costs will have to come down to drive the market.
- Incentives for renewable/clean energy solutions are needed. This will include e.g. low interest loans and accessible grants. An increase in means-tested grants and fuel-poor energy tariffs are a way forward. For vehicles, scrappage schemes for old diesel and petrol vehicles are a consideration.

- Properly thought out incentives on energy conservation measures and renewal of heat and energy systems are required. Consideration should be given to the work that had previously been progressed by the Energywise scheme. This scheme had been consulted on in 2016 by the Department of Economy. The proposed scheme primarily proposed assistance in the form of grants and/or funding for the benefit of eligible electricity consumers to enable those consumers to install certain energy efficiency measures. This proposed energy efficiency model should be reviewed and potentially have had a role in reducing consumer bills and improving affordability. Energy efficiency would also have assisted with security of supply, by reducing the amount of energy needed and assisting with decarbonisation.

Promotion and Raising awareness

- NILGA acknowledges that some active energy consumers have already embraced the opportunities that new technology presents. The vast majority of domestic and small business electricity consumers remain passive, however, with regard to their energy supply. They take energy supply in the form and at the price that it is traditionally been presented to them. Active energy consumers should be encouraged in their endeavours and passive energy consumers encouraged to be more active as the energy sector transitions to a carbon free future.
- There are also others who could make a move to progress with decarbonization. How do we drive this forward and give people the nudge required? What we need is a shift in mindset and carefully designed promotion, communication and also education will help with this
- NILGA supports the view of the National Energy Action that a mass media campaign is needed to inform all consumers (especially the most vulnerable) of the need to decarbonise and what is expected ahead. A staged approach is needed to this with a little information at a time. The programme for Government goals need to be paramount

Education

- Changing the attitude of society is crucial to the success of an energy strategy moving forward. Schools can be seen as drivers of sustainability at the heart of their local communities, providing a culture of 'learning together.' This needs to be further developed into encouraging skilled jobs and apprenticeships which can help take forward the energy strategy with development in the technologies and infrastructure required in the future. Our schools and colleges need to be encouraging the

apprenticeship route as well as third level qualification pathways.

- The 'Energy Detectives' Primary School Programme developed and managed by Mid and East Antrim Borough Council and Causeway Coast and Glens District Council recognises that energy efficiency needs to start at an early stage. Educating children who then bring the information into the home is one of the best ways to future proof and change consumer behaviour and increase knowledge awareness. The project's key underlying objective is to find a way to communicate effectively with families in a way that is engaging, accessible and practical and which encouraged behavioral change. Schemes such as this can be built upon moving forward
- There is a role for local government with their interface with local communities and the remit for leading on community plans, to raise awareness amongst communities. There could also be a coordination role in the organisation of energy fairs and exhibitions to help educate communities or other similar promotional initiatives.

Citizen Energy Projects

- Opportunities for citizen energy projects are limited due to poor connectivity and the rural distribution of the population. Any development needs to be properly funded and supported and could build upon a strong community development sector in NI. Examples such as the Loughguile wind turbine could be replicated elsewhere, with local council support, and the principle behind 'oil buying' clubs could perhaps be trialled in relation to other communal energy buying activity.
- Community energy projects in evidence in the Highlands and Island of Scotland (for example on the island of Eigg) could perhaps be replicated in Northern Ireland given the necessary planning permissions and community capacity.

4. Energy Efficiency

- Q14. What, if any, energy efficiency target or targets should be set for Northern Ireland?
- Q15. How should we define, measure and monitor energy efficiency to optimise its potential in our homes, business, economy and environment?
- Q16. What are the most important policy levers for government to ensure zero carbon in:
- a) New domestic and commercial buildings by 2050?;
 - b) Existing domestic and commercial buildings by 2050?
- Q17. What should the future of energy efficiency support look like and who should be the key delivery bodies?

The Importance of energy efficiency measures

- Evidence from the National Energy Action indicate that energy efficiency is a highly effective way to reduce energy bills. A 93% majority of MLAs surveyed in 2015 believed that energy efficiency should be an infrastructure priority in the programme for government. Installing energy efficiency measures are within reach for fuel poor households and potentially are easier to achieve than increasing income or reducing energy prices.
- A review is required of the targeting and funding of energy efficiency schemes to ensure they meet the needs of all fuel poor and energy inefficient households

Energy Efficiency targets for Northern Ireland

- NILGA acknowledges that at individual project level, current Building Regulations in Northern Ireland have made provision for ensuring new buildings are provided with nearly zero-energy requirements as follows: This provision will be in place for new buildings occupied and owned by public authorities from 1st January 2019 and for all new buildings (including dwellings) from 31st December 2020.

See extract below from Building Regulations (NI) 2012;

Nearly zero-energy requirements for new buildings

43B.—(1) Where a building is erected, it must be a nearly zero-energy building.

(2) For the purposes of paragraph (1)—

- (a) in respect of new buildings occupied and owned by public authorities, this regulation shall apply from 1st January 2019; and
- (b) in respect of all new buildings, this regulation shall apply from 31st December 2020.

- ‘Nearly zero energy’ is not clearly defined and there has been much debate across EU on this, however it generally means a building that has a very high energy performance, as determined in accordance with the National calculation methodology, where the nearly zero or very low amount of energy required should be covered to a very significant extent by energy from renewable sources, including energy from renewable sources produced on site or nearby.
- Current advice suggests meeting existing Building Regulations guidance and relevant Government procurement policies would be an adequate way to demonstrate compliance with the nearly zero-energy buildings requirement.
- Practically this means the minimum level of energy performance necessary for

compliance may be achieved by meeting the Target Emission Rate required using the appropriate National calculation methodology (SAP or SBEM)

- As part of this process those carrying out work are required to undertake an analysis of the technical, environmental and economic feasibility of using high efficiency alternative systems, which include decentralised energy supply systems based on energy from renewable sources, and take this into account. However, in effect this can on occasions be simply paying lip service to the options available as in all but the exceptional cases these are not financially viable.
- Where an assessment has been undertaken using BREEAM (sustainability assessment method) or an equivalent methodology, a demonstration that energy credits have been achieved can be used as further evidence that the minimum requirements of Building Regulations have been achieved.

Further thoughts

- Current base standards are currently set too low compared to England, Wales and particularly Scotland;
- Building Regulations are currently applied in relation to the date of submission of an application. Developers and funders will be aware that proposed amendments to regulations will inevitably increase building costs which in turn has potential to decrease profit for particularly the house building sector. This means that (as was the case in Nov, 2006) any change in Regulations will result in an influx of applications which will be 'live' for 3 years, so delaying the implementation of improved standards on site and if commenced simply by pouring foundations and commencing blockwork will be 'live' indefinitely as there is currently no time limit on completing a property once commenced.
- The Energy Performance of Buildings (Certificates and Inspections) Regulations (Northern Ireland) provides a good benchmark for individual buildings. However, infrastructure and resources must be provided to ensure a more pro-active approach is taken to enforcement rather than simply administration of this legislation.
- A strategy of introducing improved EPC band ratings in increments over the coming years will bring us to the desired target on time for new builds and rentals. However, this could perhaps be better received if the consumers were financially encouraged to do so by way of grants/ funding/ rebates etc.
- There is support for the Scottish proposal for an EPC rating of Band C by 2030, minimum EPC rating as set out Scotland and Ireland's Climate Action Plan, and building regulations coming into line with England's Primary Energy and CO₂ metrics for future homes and buildings

Monitoring of energy efficiency in homes, business, economy and environment?

- NILGA agrees that, as is currently being considered with “fire precautions”, some form of continuing control with regard to energy efficiency measures throughout the life of a building is required. Currently the Building Regulations have no continuing control after completion of the work. There is potential for this to be ‘built in’ with the energy transition by some form of metering particularly in community heating/renewable systems.
- It is accepted that overall, energy consumption is the only real measurement that will truly reflect impact. Having a highly rated domestic property does not always translate to reduced energy consumption, as usage patterns and habits may negate the potential benefits of installed measures especially in the case of retrofit measures.

Policy levers to ensure zero carbon in New domestic and commercial buildings

- Policing and enforcement of legislation/policy is generally considered the only way of ensuring that targets set are actually delivered. Resourcing & funding of this proactive enforcement is essential.
- The autonomy enjoyed by Building Control and Planning sitting in Local Government is ideally placed to contribute to the administration of a scheme similar to “Smart Finance for Smart Buildings” in Northern Ireland.

https://ec.europa.eu/info/news/smart-finance-smart-buildings-investing-energy-efficiency-buildings-2018-feb-07_en

- This could incorporate the following key stages: Public funding needs to be made available to kick start interest (this could be by grant or by low interest or zero interest loans), followed by provision of assistance to developers in terms of professional advice and guidance specific to their development through consultation at planning or ideally pre-planning stage. The ideal site specific and appropriate clean and energy efficient systems could be integrated into new developments.
- Investment could be offered on assumptions of energy saved but with follow up and adjustment on actual values. This could be based on pounds spent with different models based on domestic /residential and non-residential development.
- This system can be bolstered by the amendment of existing outdated and inadequate Building Regulations. There is a need to improve Regulations and perhaps go beyond the regulations in England and Wales.
- It is acknowledged that the grant aid for renewables was helpful for progression and the

ROC scheme deemed beneficial. There is also recognition that in some Boroughs/Districts, the EU emissions legislation will affect industry. Kit >1MW needs to be registered and by 2050 removed

There needs to be Increased roll out of renewable energy solutions in both domestic and commercial properties, driven by change in building regulations and financial incentives.

Policy levers to ensure zero-carbon in existing domestic and commercial buildings

- It is acknowledged that more effective use of public funding is required. Energy renovation projects need to be cost effective by reducing financial risk and cost through long term loans with low interest rates;
- There needs to be aggregation and assistance for project developments as well as encouragement and the facilitation of large-scale renovation projects to reduce costs. There needs to be the aggregation of smaller projects to address owner occupiers/single family homes which are administratively burdensome.
- De-risking will reduce the perceived risk of energy renovation projects by investors through standardised information. In effect this will mean educating the public and industry on how to get the best results from innovative technology.)
- Effective policies are needed to address current market barriers. Multiple, cost-effective technologies, for high-efficiency lighting to low-cost building envelopes, can unleash major energy savings while also improving comfort and energy services in buildings. Building efficiency and 'demand side' response also reduces the impact of rising electricity demand on the power sector.
- Comprehensive policy packages are needed to group solutions under one umbrella. Pairing of traditional policy tools such as mandatory performance standards with more ambitious regulatory and financial incentives to engage the private sector can help bring multiple technical and market-based solutions for buildings together in arrangements such as one-stop shops and energy service companies. This would create a comprehensive framework to deliver cost-effective action tailored to specific building needs, using the most effective technology opportunities.

The future of energy efficiency

- Local government has been at the forefront of energy efficiency support through Energy Efficiency Advisors, Building Control, Environmental Health, Planning and Community Planning. This allows a whole system 'joined-up' approach to delivery. A number of examples are set out below.
- Recalibration is required, however. Starting at the beginning by requiring compulsory

competency levels in those involved in the processes. Better education of designers, the public and developers is critical along with culture change. Relevant service providers must provide suitable infrastructure to provide for low energy buildings;

- Government needs to set clear, ambitious commitments to ensure long-term market signals. Such commitments should put forward specific policy measures, such as building energy codes and mandatory performance standards for equipment to enable and encourage uptake of key energy technology solutions for buildings and to hasten the transition to clean energy and reduce the costs involved.

Setting long-term commitments

- Policies need to support energy efficiency measures to make them affordable. Government support for product improvements and technological innovation can create economy-of-scale advantages and raise industry learning rates to deliver cost-effective efficiency mechanisms. These are best delivered by both research facilities such as universities and the manufacturing sector. Paired with market signals, including energy performance requirements, efficiency gains can be achieved with little increase to manufacturing costs or consumer prices.

Support energy efficiency measures

- Financing and market mechanisms, as well as innovative business models, are required to accelerate the clean energy transition. This can be encouraged by central and local government and delivered by the private sector.
- Local and central government departments can stimulate action through policy interventions that shape market rules to improve access to financing, de-risk clean energy investment through zero or low interest long term loans and broaden the availability of market-based instruments that reduce barriers to the transition.

Stimulate financing and market mechanisms

- Local and central government departments need to collaborate with private sector investors to make sustainable buildings a reality. Institutional capacity and global co-operation need to be expanded to enable the clean energy transition.
- Local and central government departments can co-operate with leading research institutions and other governments to share knowledge, best practices and solutions through multiple initiatives such as the IEA Technology Collaboration Programmes and the IEA Global Exchange for Energy Efficiency.

Enhance collaboration

- Significant promotion and education is required along with other incentives such as funding for all those willing to implement to achieve levels above the minimum requirements. Good practice should be rewarded, and this will help deter bad practice. A joined-up approach is required. For example, steel, aluminium and plastics are incorporated within a number of industries. There is no point in fragmenting this from any policies relating to construction. Energy use should be curbed in all buildings and across all fuels, whether they are de-carbonised fuels or not.
- There is a need to give consideration to low carbon circular construction involving Design, Materials Production, Waste, Sale, Use, Secondary Materials and Secondary Use. Combine material and energy efficiency, Design in functional flexibility, modularity, design for durability and/or disassembly. There should be a shift of taxes from labour to environmental levies/natural resource use
- Financial incentives for using a circular economy package should be introduced:
 - Ecodesign
 - Extender producer responsibility
 - Green public procurement
 - Responsible consumption
 - Economic measures
 - Provide strategic guidance to industry and support front runner approaches
- There is a need for promotion of high value loops: reuse, remanufacturing, refurbishment material recycling. This could be embedded within existing regulation and building codes. There is a need to promote retrofit of existing building stock, and consumption-based carbon accounting should be developed.

Local Government energy efficiency support examples

- Council Community Health and Wellbeing Teams, including Energy Efficiency Advisors, have built up a wealth of experience, knowledge and skills essential in providing energy efficiency advice and support as well as facilitating access for the consumer to the range of schemes and support available. (*Council case study on energy efficiency to follow*). This can be difficult particularly for the more vulnerable residents. Councils have facilitated the development of strong linkages and relationships in local communities and connections to a wide range of agencies. This has also ensured the additional underlying components of fuel poverty can be addressed for vulnerable clients. The 'Energy Detectives' primary school programme has already been mentioned as a way to

communicate effectively with families in a way that is engaging, accessible and practical and which encourages behavioural change.



"I don't think there has been anything come into school with such good resources including those taken home"
Teacher



"I REALLY enjoyed being an energy detective. The fact that mammy and daddy were involved was fun!"
Pupil



"As a family we discovered we used too much electricity out of laziness by forgetting to turn off lights etc"
Parent

- **Affordable Warmth Scheme** – Council Advisors provide the referral base for this scheme, identifying suitable applicants and supporting them through the process of referral to the NIHE. Clients who do not meet the criteria for this scheme are supported through referral processes for other schemes i.e. NISEP and are also included in the energy efficiency checks and programmes mentioned above. Council Building Control Officers provide the final checks and certifications following completion of works.
- **Awareness raising** – Councils have a wide range of networks and clusters of community groups and connections through social media etc. These provide an excellent path through which to communicate messages around energy efficiency.
- A joined-up and adequately resourced approach to delivery through Councils and Community Planning Partnerships would be the best and most effective way forward for Energy Efficiency Support to ensure spread and reach to all consumers.

5. Heat

- Q18. What is the appropriate pathway and timeline for the decarbonisation of heat between now and 2030, and subsequently to 2050?
- Q19. What are the appropriate ways to measure the progress of decarbonising heat?
- Q20. What are the most cost-effective and sustainable steps that government might take to accelerate the reduction of the carbon intensity of heating fuels?
- Q21. Is decarbonisation of the gas grid a viable option and what evidence can be provided on both the speed and affordability of decarbonising the gas grid?
- Q22. What evidence can you provide on the opportunities for district heating schemes in Northern Ireland and where should responsibility lie for facilitating these?
- Q23. Can you provide any evidence or information on the opportunities for geothermal heat supply?

Appropriate pathways and timeline for the decarbonisation of heat

- Demand reduction from users of high carbon heating, and the supply shift to lower carbon emitting energy sources seem to be the most obvious broad pathways moving forward. Both Demand and Supply can be influenced in a sustainable (low carbon) manner through taking advantage of the sort of spatial opportunities mentioned in the Call for Evidence document. These potentially include examples of using district heating in high density urban areas and utilising renewable energy in low density / rural areas where the resources exist (e.g. wind energy / geothermal heat sources).
- Given the rural nature of much of NI there may be limited potential for a future extension of the gas network with natural gas as an interim alternative to oil. It is noted, as referenced in the Call for Evidence document that there is potential for a further 200,000 homes and businesses to be connected to the gas network. A North/South interconnector would enable us to have access to renewable resources in Western Europe. There are different views on how this should be developed, but agreement on taking this forward should be priority for the Executive.
- The future could go back to the concept of 'town gas'. Instead of extracting gas from coal, as was done previously in Northern Ireland, it would be extracting gas (e.g. hydrogen) from alternative and renewable energies
- As previously referenced in this response, it must be acknowledged that oil has unique

properties and source. It is easily transportable and produces a lot of energy. Alternative energies need to recognise the existing dependence on our oil supplies. Options to decarbonise the rural community, initially therefore have to be considered differently to the urban areas and the consideration of an 'oil factor'.

Measuring the progress of decarbonising heat

- In Scotland, councils are obliged by the Scottish Government's Local Heating & Energy Efficiency Strategy (LHEES) to produce a heat strategy comprised of two parts: (1) the development of heat network zones, and (2) a regulated approach to the socio-economic assessment of each heat network project. With regard to assessment, councils are already the custodians of much of the relevant data - e.g. relating to their remits for planning, economic development and environmental health. However, sufficient dedicated funding will be required to follow this through properly and robustly.

Government steps to accelerate the reduction of the carbon intensity of heating fuels?

- It is acknowledged that a significant quantity of agricultural waste (c. 2000 tonnes) and residual municipal waste (as RDF) is exported instead of using it here. Development of the potential for local use within renewable and cleaner energies is required. Integration of a future energy strategy, the DAERA waste management strategy, the circular economy strategy and council waste plans is critically important to achieving collaborative gain on this area of work.

Decarbonisation of the gas grid

- While the contribution of gas to central heating in NI has grown steadily since 2001, it still only accounts for around 25%. Also, given the rural nature of much of NI, there may be limited potential for future extension of the gas network.
- The use of alternative gases such as hydrogen and biomethane should continue to be explored so to produce gas that does not contribute to climate change. Biomethane from gas already supplies some gas to the network and this should continue to be increased. There is also potential for hydrogen but this is reliant on cost reductions, uptake of CCUS and investment in the technology and infrastructure.

Opportunities for district heating schemes in Northern Ireland

- There are potential opportunities for district heating schemes (DHS) in urban areas where there is high density housing and the clustering of economic development offers the necessary economies of scale to ensure commercial viability through the guarantee of a long-

term demand, and the minimisation of capital costs. Whether there is enough to ensure commercial viability cannot be answered due to the lack of specialised knowledge and understanding of the scheme. The settlement structure in some areas will not lend itself to district heating.

- There is a potential role for the planning system, particularly through the Local Development Plan (LDP) which could theoretically zone suitable sites taking account of factors such as population distribution and density, affordable housing provision, spatial patterns of deprivation including fuel poverty, and potential for locating housing in proximity to sources of waste heat such as certain types of industrial development. The latter would of course be subject to other checks and balances such as amenity considerations.
- Before progression, local housing providers who have delivered some of these types of schemes should be consulted with as perhaps they are best placed to provide feedback as to how successful or other-wise they were. Community disputes/issues may also be a possibility with such a scheme. Again, we should take the learning from those who have already progressed this technology in this country or further afield. The learning from NI Housing Executive work in rural areas, including their Solar Photovoltaic (PV) programme and particularly the HANDIHEAT project in Lisnaskea, should be explored as part of the policy development work on the Energy Strategy.
- Longer term, the potential for usage of future public sector energy generation assets (i.e. energy from waste plants owned by councils or NI Water, for example) as the energy source for district heating schemes should form part of the Departments deliberations.

Opportunities for geothermal heat supply

- It is recognised that the move towards electrification of our heat systems has implications for an increased demand for electricity and this still has to be resolved.
- We understand that the geology needed to facilitate geothermal heating is geographically localised and that some areas across Northern Ireland e.g. in South Down and Mid and East Antrim have some potential. The Geological Survey for NI (GSNI) ought to be able to offer evidence on this.
- We need to explore and fine tune the technologies for heat pumps and air pumps and recognise that they work best with particular types of home
- Targeted incentives for decarbonisation of heat will be required.

6. Power

- Q24. What is the appropriate pathway for the decarbonisation of power from now to 2030, and subsequently to 2050?
- Q25. What target for electricity consumption generated from renewable sources by 2030 is ambitious, achievable and affordable?
- Q26. How can the new infrastructure necessary to meet a new renewable electricity target be delivered in a timely, affordable and acceptable way for consumers and society?
- Q27. What innovations and solutions could contribute to meeting a new renewable electricity target?
- Q28. What market incentives and support are necessary for investors to deliver the investment in renewable generation assets at a scale that will achieve a new renewable electricity target?
- Q29. What steps need to be taken by Government to facilitate investment in offshore and marine renewables for NI?

Pathway for Decarbonisation

- The future energy transition should reflect the strategic significance of existing power generation sites, such as Kilroot and Ballylumford. Diversification of Northern Ireland power generation and movement to renewable and sustainable energy production is vital and should utilise the strategic importance of such sites
- The continued growth of renewable and sustainable energy and reduction in coal and gas fired generation is the most appropriate pathway to 2030.
- Subject to technological advances, beyond 2030, coal and potentially natural gas should be completely phased out with complete reliance on renewable energy as the years progress.
- Whereas the need for investment in renewable technologies is needed, it must be recognised that renewables themselves can act as 'bad neighbours.' They may have environmental impact; both in terms of natural resources, ecology, community and many forms of energy production. The current policy, for example on wind turbines needs further appraisal. Many parts of Northern Ireland are reaching saturation point, with separation distances from neighbouring premises not being achieved; Areas of Natural Beauty must also be

protected. Other measures and other alternatives must therefore be considered. A landscape approval, carried out by the Department of Economy (ideally in partnership with the Department for Infrastructure Planning Policy Unit, council Planners and relevant officials in DAERA) could help assess the capacity of the landscapes to absorb this whole agenda.

- We would also need to see an equality impact assessment being done as it appears that the premises for providing renewables are becoming concentrated in the West.
- **Balanced decision making on these matters is needed through the Local Development Plan.**
- Demands on power in Northern Ireland are likely to increase with the increased use of renewable technologies. The decarbonisation of transport and the decarbonisation of heat is likely to have an impact on the existing network potential; we therefore need to increase the connection capacity. This in itself can bring problems, which have to be overcome such as intermittence and other technical issues. Development of battery storage technology should assist in ameliorating current known difficulties, and further research on infrastructure that can be provided through public-private joint projects (such as that in Warrington with Gridserve) should be explored to provide potential solutions).
- There are already existing problems with the grid capacity, that are compromising investment. Areas of developing industry have reported the need to use diesel generators due to the limits in the capacity of the national grid, for example. Also, a more diverse and widespread set of energy providers must be enabled to connect to the grid and to supply energy in a useful way, with appropriate storage mechanisms in place.
- A future strategy must acknowledge that the way forward must be a combination of different measures. A variety of systems will be required to remove the reliance on the national grid and ensure microgrids are progressed and developed
- It is recognised that the electricity system operator has a role to play in informing Northern Ireland to a low carbon economy. It is important that this role must support the needs of the Northern Ireland consumers, both domestic and business.

Target for electricity consumption

- A target of 70% by 2030 seems appropriate for electricity consumption from renewable sources (as in England and Wales). However, 70% may be challenging

in the absence of government subsidy as evidenced by the decline in planning applications for renewables since the closure of the ROCs scheme.

- There is concern that it may not be possible to meet a new renewable electricity target in a manner that is timely, affordable and in an acceptable manner for consumers and society. E.g. wind turbines in favourable upland locations pose concerns for visual impact, wildlife and residential amenity. Balanced decision making is needed through the Local Development Plan.

Innovation and technological solutions needed

- There is a need to develop storage solutions so generated power is not wasted.
- Significant funding has been used, for example, for the development of wind technologies in recent years. Due to the inability to store this energy, at present they are switched off at certain times. This needs to be resolved. Our geography does lend itself to wind turbines so we need to explore and invest in the storage issue so to come up with innovative solutions.
- The feasibility of offshore areas for large scale renewables needs to be teased out. We need to work in partnership with government and the industry in the South of Ireland. Wind, wave and tidal energy should be explored, although it is noted that ocean levels between NI and Scotland tend to be erratic, whereas the ocean depth between England and the Republic of Ireland tends to be much shallower and therefore more usable.
- There is need to continue to explore and develop other projects and make them easier and more effective. Examples include; converting coal power stations – use of wood burning and maybe an opportunity to derive power from burning waste. The use of biofuels, e.g. green diesel derived from algae and other plant sources and biogas e.g. methane derived from animal manure and other digested organic material. Anaerobic digestion prevents the release of methane into the atmosphere and utilises it to create valuable renewable products i.e. renewable electricity, and sustainable vehicle fuel, by the production of biomethane. Sites can power the vast majority of their plant with the renewable energy they create.
- The position on solar panels appears to be changing, which is to be welcomed, with panels capable of generating electricity appearing to have dropped in price. There may be merit in requiring panels via building control or planning regulations, particularly for large roofs, e.g. on commercial properties such as super stores and on business parks.
- A project from the Rotterdam port authority has seen the use of innovative technology to transform their waste water to produce renewable energy. This

has helped with their waste water problem.

- The arc21 Waste Management Group, comprised of 6 of the 11 councils, has articulated the benefits of their planned municipal waste facility, which consists of a mechanical biological treatment building, an 'energy from waste' plant and a visit/education centre. The proposed facility (currently in the approval process) will contribute to a circular economy by treating it as a valuable resource, thereby removing the need for landfill and the export of residual waste that is unsuitable for recycling. The project has the potential to generate electricity from renewable resources. It has combined heat and power potential. Their project has also examined potential for the energy from waste to be used for the development of large battery packs for storage of energy. The battery packs i.e. 40ft container size, with effective insulation properties can be brought to a source e.g. hospital/school site and used to heat radiators, generate heat etc. In the longer term, a similar plant forms part of the 25 year plan for NI Water, and should be similarly utilised for production of heat and power.
- The Islandmagee peninsula is the site of Northern Ireland's main gas-powered power station at Ballylumford, which provides half of the province's power, and is also the terminating point of the existing Scotland-Northern Ireland gas pipeline, making it a good location for the proposed storage facility project. Once completed, the Islandmagee storage facility would consist of 7 underground caverns, capable of storing up to a total of 500 million cubic metres of gas in Permian salt beds, an established technique that the developers believe represents the most environmentally-friendly, safe and efficient method of storing large volumes of natural gas. Although use of natural gas is not ideal, it is a lower carbon alternative for coal and oil, which could give NI space to further develop a better more secure fuel supply alternatives.
- Combined heat and power is already in use and needs to be developed further to ensure efficiency. Generation needs to be close to source.
- Targeted incentives for renewable and diversification energy development and storage are required.

7. Transport

Q30. What would be an appropriate pathway to decarbonised energy for transport to 2050?

Q31. What role should active travel have in the decarbonisation of the transport sector and what should government do to support this?

- Q32. What energy infrastructure is needed to facilitate the uptake of electric vehicles in line with UK Government's 'Road to Zero' targets?
- Q33. How will transport integrate with other energy uses (e.g. homes with solar generation, battery storage, EV charging) and what can government do to optimise the opportunities represented by this integration?
- Q34. To what extent can alternative low carbon transport fuels contribute to decarbonisation of the transport sector?
- Q35. Do you have any data/research to help inform and reduce the carbon intensity of our transport energy in order to achieve net zero carbon by 2050?

Pathway for Decarbonisation

- It is acknowledged that there is a heavy dependence on cars in NI, with there being a high level of car ownership. We need to incentivise consumers to make sustainable transport choices and couple this with penalties for unsustainable choices. Recent press articles have been noted, on the UK's proposed plan to bring forward a ban on the sale of new petrol, diesel and hybrid cars (from 2040 to 2035) in order to meet zero emission targets. It remains to be seen how this policy will be delivered.
- To make decarbonised energy from transport work, the approach requires adequate government investment in sustainable transport infrastructure e.g. regular, convenient and affordable public transport, park and ride facilities, provision and promotion of active travel infrastructure and its benefits. Connectivity is a significant issue at present that needs to be overcome. There also needs to be a comprehensive network of charging points for electric vehicles. The benefits of the Glider service in Belfast, which is a diesel and electric hybrid technology is acknowledged. Legislation on eBikes would also be helpful and easy to achieve in the short term.
- How we travel can have a significant impact on our social and mental well-being; walking and cycling infrastructure therefore needs to be developed alongside a substantive 'green' public transport system – including appropriate provision in rural areas. We need to reduce reliance on private vehicles and deliver and sustain cultural change. Infrastructure is an enabler to connect our people and our communities
- There is also a role for Planning in ensuring major housing and economic development is close to public transport hubs. Good place-making can positively change lives.
- The feasibility of extending and re-developing the railway systems in Northern Ireland

as a means of public transport to more rural towns is also worth exploring in addition to use of some of the railway lines use as greenways. NILGA is aware of some scoping work supported by the local council on the potential for railway provision in the Armagh/Portadown area. The lack of a railway to the international airport is recognised as a barrier that needs to be addressed.

Energy infrastructure for electric vehicles

- Hydrogen and compressed natural gas can be used for transport but there is limited current NI infrastructure. This has the potential to develop with time and the work undertaken by Wrightbus on hydrogen buses is encouraged as a good example for the use of hydrogen in public transport. There is also a model in Finland for electric buses that have a supporting charging station that could be reviewed for future consideration.
- The Future of energy efficiency is likely to involve the improvement of public transport and replacement of existing stock with hydrogen/electric vehicles and associated infrastructure. This must be led by Government but provided by private sector manufacturing, ideally local companies. There needs to be significant investment in the infrastructure to put in place charging points at home and in public places and this will require government investment.
- Electric cars will put an additional strain on the electricity system so we need to have enough renewables to cope with this extra demand and the supporting infrastructure. This also supports the earlier point to invest in the technologies to store energy from renewables.
- It should also be acknowledged that the cost of electric vehicles currently is prohibitive and must be thought about if they are to be part of the future transport needs.
- **Local Government:** The Introduction of (expensive) electric vehicles and supporting infrastructure in/by councils will require significant funding and long term planning. NILGA is aware of some innovative projects underway in England on solar power and electric forecourts (e.g. from Gridserve) with a variety of finance mechanisms available.

Other considerations

- Lithium batteries are an effective means of storage but there is concern about the raw materials (such as cobalt) for these batteries being sourced in third world countries where significantly instability exists, and working conditions are often atrocious. The

utilisation of these countries for this resource is also a consideration, and as energy from waste technology develops, there is potential for recovery of rare earth metals locally.

- The carbon embedded in the manufacture of cars is an additional consideration within this energy strategy.
- A hierarchy of transport (similar to the waste hierarchy) would help local Government and other bodies with some guiding principles of taking forward decarbonisation in terms of transport.

Targeted incentives will be required. An example would be scrappage schemes for old diesel and petrol vehicles.

8. Other Issues:

a. Security of Supply

Q36. What specific risks to security of energy supply are likely to emerge as a result of our changing energy mix, and what actions can be taken to mitigate these?

Q37. What measures or indicators could be adopted or developed to monitor energy security of supply?

Risks to security of supply

- Security of supply will be guaranteed by interconnection with other jurisdictions, back-up fossil fuel generation and commercial scale storage.
- Electricity demand is expected to rise sharply after the late 2020s partly due to the electrification of heat and transport.
- Retaining the natural gas network medium to long term will need to be future proofed including supply via GB and suitability of hybrid systems.
- We need to develop the technologies to look at how we can utilise storage from our own natural resources. As previously referenced in our response to this Call for Evidence, we need to look at how we can store heat from water and explore with technology how we can store energy from wind generation and from other renewables. Storage technology needs to be thought about and developed

Monitoring energy security of supply

- Smart meters are a potential way forward, as smart control of energy assets is required. We will then be able to monitor practice. This will require education, public awareness and a change in mindset to be more proactive with energy efficiency behaviour.
- How this will look in practice is unclear, could vary, and will develop over time. It could be a meter at home or an app on the phone that will enable consumer to look at their energy usage and change tariffs if needed.

b. The Role of Data

Q38. What is the most cost-effective method of capturing consumer energy usage data in electricity and natural gas (where meters are in place)? In heating oil (where there is no metering obligation)?

Q39. What concerns need to be addressed regarding data privacy, security and/or ownership?

Q40. What are your views on applying the key recommendations of the Energy Data Taskforce for NI?

Q41. What organisations or businesses do you see as having a key role in optimising the value of data? How will they do this?

- It is recognised that our current data is not good. There is significant need for data to add value to the decarbonisation efforts in the future. There is a need to refine the carbon emissions for the region. This needs to be collected in a holistic way
- An obstacle to data collection and sharing is the ongoing reluctance and constraints on data sharing. The General Data Protection Regulation has increased caution, and as a result government and commercial bodies are reluctant to share in an effective way. This matter needs to be overcome, and better understanding is required of how to work within the law in order to ensure we have the data we need in the future.
- Digitisation of the energy system is key to achieving targets. Smart control of energy assets will be required. We will then be able to monitor practice. This will require education, public awareness and a change in mind set to be more proactive with energy efficiency behaviour.

c. Carbon Capture and Storage

Q42. What steps, if any, should NI policy-makers consider with regard to the development or implementation of CCUS in NI?

- NILGA recognises that more research is needed into the Carbon Capture Utilisation and Storage (CCUS) concept and that we are still at exploratory stages with this. At present the barriers to cost effective deployment need to be reduced. Through partnership working with the private and public sectors and investment in technologies and innovation, CCUS could be a future technology to gather CO₂ emissions and transport for storage therefore preventing release into the atmosphere; we believe the Universities and FHE Colleges have a key research and development function in this regard. Pilots with the use of CCUS need to be supported to nurture the development of this technology.
- Carbon capture and storage has the potential to play a significant role in the future in relation to micro generation and wind generation. We need to develop this technology. Currently we pay a lot of money to ship our waste out of Northern Ireland as refuse derived fuel and recycle, whereas we could be building circular economy businesses locally.
- Many of our Councils are planting large numbers of trees, which is relatively straightforward and does help in capturing carbon, although some caution is required in relation to biosecurity and biodiversity. There is potential for much more and we welcome the DAERA Minister's recent announcements. Additionally, council Biodiversity Officers, e.g. the Newry Mourne and Down CANN Project, are developing innovative approaches to protecting and repairing damaged boglands, which act as vital carbon sinks across Northern Ireland.

d. Energy and the Economy

Q43. What specific economic opportunities will arise from the decarbonisation of energy?

Q44. What skills are needed to realise the potential economic benefits of energy in the future?

Q45. What are your views on the future of overall energy demand in NI and how can we ensure that any potential demand growth aligns with our net zero carbon target?

Innovation and development

- The UK and Northern Ireland are already leading players internationally on zero-carbon technology and could emerge as a global hub for innovation as part of a 'new industrial revolution' given investment in Research and Development. There is a long tradition of NI being at the front of innovation and engineering.
- There will be economic opportunities in research and development as innovative technologies arise and as need increases with technologies that already exist. The increased efforts needed to increase retrofit energy efficiency work will require the necessary workforce to be available to enable this.
- With this in mind there needs to be a central government drive to invest in the research and development required.
- Changing the attitude of society will be crucial to the success of the forthcoming energy strategy. Schools can be seen as drivers of sustainability at the heart of their local communities, providing a culture of 'learning together.' This needs to be further developed into encouraging skilled jobs and apprenticeships which can help take forward the energy strategy with development in the technologies and infrastructure required in the future. Our schools and colleges need to be encouraging the apprenticeship route as well as third level qualification pathways. Our Universities and further education colleges need to be equipped and resourced to develop the engineering, planning and other workforces.

Skills Required

- A skilled workforce (in energy, environmental and low carbon industries) is necessary to realise opportunities. The need for skilled workers from other jurisdictions and countries is also recognised.
- Traditional manufacturing businesses must plan processes and skills for operating in a more resource-efficient way, minimising carbon emissions and preparing for climate change. Harland and Wolff is a great example of a traditional heavy industry that has redeployed its skilled workforce to work on renewables.
- Financial skills and supports will play a pivotal role in realising the low carbon economy.

Encourage investment

- At present our current processes can be seen as prohibitive to investment and we need to overcome these obstacles.
- We must encourage investment in Northern Ireland to take this forward. We need to

strive to ensure processes are not problematic and remove obstacles. We need to project that Northern Ireland is an ideal place to invest and create the impression that 'we are open for business.'

- It is recognised that energy is one of the most significant costs for businesses and is a challenge for many. The infrastructure is needed to enable these costs to be reduced and our businesses to thrive. We need to acknowledge the voice of all businesses (large and small) including rural businesses to ensure business interests are protected in the insurance to meet growing energy requirements.
- Consideration should be given to supporting sectors with high energy use through the energy transition. Assistance in transforming their sectors is needed.

e. Delivery Framework for an Energy Strategy

- Q46. Do the existing division of responsibilities and powers across government enable the most effective approach to the overall aim of decarbonising energy? If not, what are your suggestions for improvement?
- Q47. What are the opportunities for local government to contribute to the delivery of the net zero carbon target?
- Q48. What are your views on how statutory duties and accompanying legislation and regulatory frameworks would need to change to facilitate the transition to net zero carbon by 2050?
- Q49. Is there a need for a dedicated organisation to champion, lead and deliver sustainable energy interventions? If so, what should this look like?

Opportunities for Local Government

- NILGA strongly believes that there are significant opportunities for local government to contribute to a net zero carbon target and that councils need to be a major player in the next stage of decarbonisation. There is a collective responsibility on regional and local government to make sustainable change happen on behalf of our citizens. With this in mind, Northern Ireland needs a Climate Change Act and appropriately resourced associated strategies. Although councils are already working collaboratively (as civic leaders) on climate adaptation and mitigation as an urgent matter of objective need, local government must be appropriately resourced to work as a partner in government, with agreed central and local commitments and reporting mechanisms on carbon reduction and adaptation progress. Councils have different (from government) powers and financial tools at their disposal, and can act in ways that complement departmental activities. Collaboration is likely to be at the core of the next programme for government and it is important that the government and public bodies work together to lead by example on the transition to a low-carbon economy.
- Councils are convenors at local level, bringing together departments, agencies, statutory and non-statutory partners with the community to deliver agreed priorities locally through the community plans, each of which have commitments related to energy and decarbonisation. These plans and their implementation need proper and consistent buy-in from partners and departments, but are in themselves an opportunity to effect change, right across the 11 council areas.
- Many of our Councils have already declared a 'climate emergency' and all 11 are developing action plans for their areas, which will be focussed on internal systems and processes to start with but which will soon begin to look towards working locally with their businesses and householders.
- It is recognised that the adaptation and civil contingency work of local authorities has the potential to have significant impact on a significant number of people. The mechanisms for reporting in relation to adaptation and mitigation must be thought about using a co-design approach.
- Local councils are place shapers. We can see our 'homeplace' and the opportunities that are needed. We need to capitalise on these opportunities with innovation and new ways of working. Through community and development planning, collaborative regeneration, building regulation and standards, we are key strategic influencers for communities. We can act as exemplars and bring

people where they need to be.

- We need to ensure that the work we do within our communities reaches all and protects the most vulnerable through a just approach to climate transition; this will include the work councils do on fuel and food poverty and security, employment and skills development, procurement and embedding social value, rural proofing.
- We have a massive opportunity through our work on resource management and the circular economy, to be heat and power suppliers to the grid, raw materials suppliers to industry and to make step changes towards decarbonisation through choices on council owned infrastructure, fleet, capital projects and waste plans.

Regulation, targets and powers

- It is NILGA's view that the Energy Strategy will require proper resourcing as well as monitoring, regulation and enforcement and will have an impact for many years to come.
- Consideration will be needed on additional powers that will be required by local government to allow the necessary changes and future work to happen.
- Change will be required to planning policy and guidance (DfI), building regulations (DoF), climate legislation and policy (DAERA), circular economy and industrial strategy (Economy) in particular, and we are aware that a review of the PfG is anticipated to herald an outcome in relation to climate action. Strong cross-departmental working will be necessary, with Executive ministers and their officials working closely together to effect the step-change required.

Financial implications and Resources

- Significant resources will be required for local councils to be a major player in the decarbonisation targets. Resources must come from Government to enable this. There needs to be dedicated staff resource and exploration of funding streams that could be tapped into also, for example access to Peace Plus funding for relevant council-led projects

Getting our own house in order

- Decarbonisation needs to be a corporate objective across all departments within each council and local government as a whole. A joined up, holistic approach across all remits is needed, and is in development.

Working with the community

- Councils through their corporate plans and through the community planning process need to have decarbonisation high up their agenda. Councils have the direction and linkages with community groups to help stimulate what is needed. They have potential to coordinate, stimulate and educate through grants, promotional activity and training. Under the Northern Ireland Community Energy scheme, there were potential development opportunities (identified earlier in this response). These could potentially be taken to fruition with the facilitating role of councils to promote community energy and empower communities to take it forward
- Council led programmes have the potential to amplify messages and promote uptake of assistance and other activity. Programmes such as the energy efficiency advice schemes, affordable warmth schemes and other projects have already been mentioned and should be developed and enhanced in the future. There is scope for retrofit and insulation schemes to be developed in the future with availability of project funding. Funding in other parts of the UK has come from the energy companies to support this, with councils as the 'shop front'. People have a trust in the council and would prefer validated schemes rather than potential for rogue traders; councils are a 'trusted brand'.

Working with businesses

- Northern Ireland needs to help create economic growth. Councils, through their liaison with the business sector will appreciate that energy cost is a significant challenge and it will be necessary to work with business through the energy transition to help them reduce costs and contribute to carbon reduction.

9. Additional information

Q50. Is there anything else you would like to add in response to this Call for Evidence?

NILGA operates as part of a wider local government network internationally, nationally and locally. We can draw on sister associations across the UK, ROI and further afield to access good practice case studies, relevant examples of innovation on energy policy and practice and advice from local governments that are ahead of NI, particularly on the decarbonisation agenda, which could be offered to the Department if that would be helpful as this work progresses.

As the Department begins to develop the strategy further, we trust that we and our 11 member councils will continue to be involved in the co-design process, and we wish the department well as it collates the information gathered as a result of this call for evidence.