

CBI Northern Ireland response to the Department for the Economy: Energy Strategy for Northern Ireland, consultation on policy options

The Confederation of British Industry Northern Ireland (CBI NI) welcomes the opportunity to respond to the Department for the Economy (DfE) Energy Strategy for Northern Ireland (NI) consultation on policy options.

As the UK's leading business organisation, the CBI speaks for some 190,000 businesses that together employ around a third of the private sector workforce, covering the full spectrum of business interests both by sector and by size. The CBI NI represents more than 75% of the largest employers. This includes companies headquartered in NI, as well as those based in other parts of the UK that have operations and employ people in the region. The UK's goal of a net-zero carbon economy, and business' role achieving that goal, is supported by all.

Business has welcomed the DfE developing a new NI Energy Strategy to succeed the Strategic Energy Framework 2010-2020. This creates a timely opportunity to best position NI's green recovery and transition to a net-zero economy. However, the absence of an Executive from 2017-2020 means that NI should expedite its legislative and policy reforms without delay if it is to catch up with other devolved administrations and central government in achieving the statutory target of net-zero by 2050.

The CBI includes in its membership a wide range of businesses responsible for developing, financing, maintaining, and managing NI's energy system. They are keen to work constructively with the Executive to develop an ambitious, resilient and net-zero compliant energy system. Businesses will be at the heart of the energy transition, and with the correct policy support and incentives, are ready to play their role in the UK-wide effort towards achieving net-zero.

As such this response argues that the development of a Northern Ireland Energy Strategy should:

- **Be implemented with urgency to meet upcoming 2030 targets whilst also aligning with a Northern Ireland climate bill and wider UK ambitions to reach net-zero by 2050.**
- **Deliver a net-zero energy system but a Just Transition for the whole of Northern Ireland.**
- **Continue to deploy large-scale renewable energy through investments in the life extension and repowering of existing onshore capacity, establishing an offshore wind markets and the development of a Contract for Difference mechanism.**
- **Include clear incentives and policy frameworks for investing in energy efficiency solutions for both homes and business.**
- **Consider both on/off-gas grid heat solutions and policies to encourage ambitious innovation and cost-reduction over the next decade.**
- **Prioritise the publication of a Transport Decarbonisation Plan. This should establish a phase out date for petrol and diesel cars and vans, outline details of an electric vehicle delivery plan and a framework for the deployment of alternatively fuelled vehicles.**
- **Deliver a smart, flexible energy system by supporting both supply-side and demand-side measures and ensure delivery is at the lowest cost to consumers.**
- **Develop policy frameworks and pathways for key cross-sector enabling technologies, including biomethane and hydrogen.**
- **Be underpinned by regulatory and planning reform to bring Northern Ireland in line with Great Britain and Republic of Ireland counterparts to attract investment.**

Setting and achieving a net-zero target for the NI energy system

A Northern Ireland Energy Strategy should be implemented with urgency to meet upcoming 2030 targets whilst also aligning with a Northern Ireland climate bill and wider UK ambitions to reach net-zero by 2050.

Achieving net-zero is a global challenge, and the UK has world-leading ambition as the first major economy to set a net-zero target back in 2019¹. However, in order to reach net-zero by 2050, the UK should collaborate across all levels of government and devolved nations should play their part, including NI. Thus far in comparison, NI is lagging behind its devolved counterparts, with the Welsh Government legislating a 2050 net-zero target and the Scottish Government planning to integrate a 2045 net-zero target². Whilst NI has unique decarbonisation challenges that should be addressed, including a substantial agricultural sector that accounts for 30% of carbon emissions compared to 10% in the rest of the UK³, this is also an opportunity for NI to step-up and demonstrate its role in supporting UK global leadership ahead of COP26.

In order to this, it is paramount that the Northern Ireland Assembly legislates a Climate Change Bill before the next Assembly election in 2022. Legislating a Climate Change Bill will demonstrate the Executives commitment to decarbonisation and provide business with certainty of the direction of travel. Within this establishing a Northern Ireland Energy Strategy will also play a vital role in developing NI's net-zero agenda. As part of this there should be ambitious interim targets across the energy sector, supported by delivery strategies, such as the setting of a new 2030 renewable energy generation target as outlined in the consultation, to support the transition and bring both businesses and consumers on the journey. To that end, **CBI NI supports setting a net-zero target for the energy system no later than 2050, in combination with appropriately measured and reported interim targets set for each energy sector across time, to create a route that will quickly build momentum in achieving the NI energy transition.** To achieve this, **it is critical that a net-zero energy system is legislated before the next Assembly election in 2022**, this should include providing a signal towards the supporting policies and frameworks that are required to unlock business investment and innovation.

The energy transition should not only deliver a net-zero energy system but a Just Transition for the whole of Northern Ireland.

The delivery of a successful energy transition should not only be measured in achieving net-zero targets but should also deliver a Just Transition across the economy. A just transition is one that aims to shift best practices in energy consumption and production, whilst keeping all stakeholders of the energy system at the core of dialogue and decision making⁴. A just transition should minimise the potential impacts of shifting to a low-carbon energy system, such as businesses and workers with stakes in high-emitting sectors, whilst maximising the opportunities for new sectors, jobs, and consumers – including securing a low-carbon energy system at the lowest possible cost to consumers⁵.

In the domestic setting, a just transition will not only deliver a low-carbon energy system at the lowest cost for all consumers but also deliver knowledge and empowerment to make decisions and invest in low-carbon solutions. To achieve this, there should be recognition of the bespoke requirements across groups of consumers and regions, a single approach will not be sufficient⁶. In particular, there

¹ CCC: Reducing UK emissions Progress Report to Parliament, June 2020

² CCC: Progress in reducing emissions 2021 Report to Parliament, June 2021

³ CCC: Reducing emissions in Northern Ireland, February 2019

⁴ International Institute for Sustainable Development: Real People, Real Change, Strategies for just energy transitions, December 2018

⁵ See Reference 4.

⁶ Nevin Economic Research Institute: Supporting People and Place: Planning for a Just Transition in Northern Ireland, December 2020

should be consideration of income, fuel vulnerability and elasticity to market trends and innovation. Clear principles are required to guide targeted support e.g., reduce levels of fuel poverty, as well as appropriate metrics to measure success, such as energy consumption by consumer type and carbon intensity of consumed energy. **CBI NI recommends that consideration is given to principles of fairness and inclusivity when developing the final Energy Strategy and supportive policy frameworks.**

For businesses, the delivery of a net-zero energy system will bring opportunities, but there are challenges to ensure that this transition is just. Firstly, the cost of energy is a crucial component of operation costs for many businesses, therefore ensuring that firms in NI can operate for the lowest cost possible will work to ensure NI goods and services remain price competitive in a globalised economy. Secondly, whilst business agree the energy transition has opportunities to reduce costs in the long-term, low-carbon solutions require upfront costs and investment. In the short-term business requires robust policy and support mechanisms to generate the right market signals to secure the required investment. Finally, the transition to a net-zero energy system will undoubtedly require some business models to adapt to become net-zero compatible, this will require collaboration between government and industries to drive innovation, reskill the workforce and bring support for supply chains. The North Sea Transition Deal⁷ is a key example of government and industry collaborating to shape a net-zero future for traditional sectors and their workers. CBI's recent submission to the Green Jobs Taskforce also identifies the key skills and training required to unlock a greener economy. **CBI NI recommends that the DfE should work with industry to consider where support will be required to ensure a just transition for the economy, this should include proposals such as an Energy Skills Forum.**

A net-zero energy system has the potential to bring economic opportunities to Northern Ireland, including the creation of skilled new green jobs and low carbon exports.

The coronavirus pandemic has been devastating for economies across the world, and NI's 2020 economic output is expected to fall by 11%⁸. CBI NI strongly welcomed the Economic Recovery Action Plan and supports the four key objectives identified⁹. Investing in NI's low-carbon energy system will not only support the essential mitigation of the catastrophic effects of climate change, but it will support building a greener economy as the nation recovers from the pandemic, whilst also providing significant economic opportunities and helping to reach wider objectives such as producing a more regionally balanced economy. CBI's recent publication, *Seize the Moment*¹⁰, outlined up to 240,000 net new direct green jobs in the UK by 2030 and if NI were to make the necessary investments in skills and retraining, the country could capture a share of these direct jobs, as well as significant new indirect and induced jobs¹¹.

CBI also identified significant low-carbon export potential for the UK that NI could also unlock. Firstly, NI has the resource potential to develop a thriving domestic hydrogen market (more details below), and if NI were to 'oversize' its production and utilise the suitability of Belfast Harbour¹², it could create a thriving export market too. Secondly, NI is the original home for the world's largest domestic electrical heating manufacturer that still operates a number of world class manufacturing facilities here and is also home to larger manufacturer servicing compressors for the European heat pump market. The opportunities to support innovation in energy efficiency in these businesses will not only benefit the NI domestic market but also offer a significant physical and intelligence export potential. Notably, NI's unique trading position in goods, with barrier free trade into the EU and unfettered access to the

⁷ BEIS & Oil and Gas UK: North Sea Transition Deal, March 2021

⁸ Department for the Economy: Economic Recovery Action Plan Rebuilding a Stronger Economy, February 2021

⁹ See Reference 8.

¹⁰ CBI: *Seize the Moment*, May 2021

¹¹ Accenture: System Value Analysis for Northern Ireland's 2030 Climate Targets, June 2021

¹² NUI Galway: Hydrogen: Exploring opportunities in the Northern Ireland Energy Transition, March 2021

rest of the UK, creates enhanced and unrivalled export opportunities for green manufacturing, relative to other parts of the UK and Europe. Finally, interconnectors present a vital opportunity for NI to export its renewable generation to Republic of Ireland (ROI), through the SEM, and Great Britain (GB), via the Moyle Interconnector. The existing North/South interconnector capacity limit is a barrier to NI realising its full electricity export potential; thus, CBI NI welcomes the approval of a second North/South interconnector with NI, and this should be a priority infrastructure project to facilitate integration of further RES¹³ without delay.

Research, development, and innovation will all be fundamental to delivering a smart and world-leading net-zero energy system and economy. Locally, the Queen's University R&D competence centre (NIACE) is engaged in leading-edge research into hydrogen generation processes whilst the University of Ulster's School of Architecture and the Built Environment has leading expertise on domestic heat pumps. Although many low-carbon technologies and solutions are known and proven, there is still progress and innovation needed to develop economically viable solutions across all components of the energy system, including low-carbon gas. **CBI NI supports the proposed pilot Green Innovation Challenge Fund, this should be open to all low-carbon innovation projects including at-scale projects.**

Growing a Green Economy

A Northern Ireland net-zero power system requires large-scale renewable energy deployment, this should include developments in both onshore and offshore wind markets underpinned by a revenue support mechanism, such as Contracts for Difference.

Low-carbon power generation is critical for decarbonising the energy system and for unlocking economy-wide net-zero targets. As previously outlined, CBI NI fully supports setting a renewable energy generation target for 2030. CBI NI recommends that 70% renewable generation by 2030 should be a minimum target but given that NI achieved its 40% by 2020 target early¹⁴, business is confident that with the correct policy and regulatory frameworks, up to 80% renewable generation by 2030 is achievable. Achieving at least 70% renewable generation by 2030 and future targets will require restarting the deployment of onshore wind, establishing an offshore wind market, and developing a long-term revenue support mechanism to unlock investment.

Business anticipates onshore wind to continue to be the dominant form of low-carbon generation up to 2030, with commercial scale offshore wind deployment from the start of the next decade. In addition to large-scale onshore projects, NI also has a thriving small-scale wind sector that generated 11% of total wind generation in the year up to March 2020¹⁵, this generation plays a vital role in decentralised power. In order to meet a 2030 generation target, not only should new onshore generation capacity be deployed, but existing onshore infrastructure should be maintained to achieve a net increase in overall generation. **CBI NI recommends that the Energy Strategy takes into consideration the role of life extension and repowering for existing onshore capacity and establishes long-term policy to maintain capacity out to 2050 in support of net-zero.**

NI also has significant resource and capabilities to establish a leading offshore wind market, however key barriers and the lack of policy has meant the market is still nascent. Belfast Harbour is the island of Irelands largest deep-water quay, is the UK's first offshore wind terminal and has a 50-acre site capable of the installation and pre-constructure of offshore turbines¹⁶. Harnessing this potential could stimulate skilled local jobs, a quality local supply chain and unlock the export of goods and services to

¹³ NUI Galway: Hydrogen: Exploring opportunities in the Northern Ireland Energy Transition, March 2021

¹⁴ DfE: Electricity consumption and renewable generation in Northern Ireland: year ending December 2019, March 2020

¹⁵ KPMG on behalf of RenewableNI: An economic review of small-scale wind in Northern Ireland, January 2021

¹⁶ Belfast Harbour: UK's No.1 Port for Offshore Wind - Belfast Harbour

the rest of GB and Europe¹⁷. Despite these opportunities, industry experts note a 10-year lead time from tender of seabed rights to power coming on stream. Consideration should be given to ringfencing any money raised at the auctioning of seabed rights by the Crown Estate for NI offshore wind to help fund the financial interventions necessary to manage the energy transition. Furthermore, options to reduce other barriers, such as planning, to the development of critical offshore grid infrastructure should also be considered. Given the infancy of an offshore market in NI, **CBI NI recommends that the DfE remains agnostic to fixed platform and floating platform offshore wind at this stage and develops a policy and regulatory framework which can enable the development of both technologies.**

In order to deploy onshore and offshore wind at the lowest cost to consumers, a revenue support scheme is required. In NI, the absence of a support scheme since 2017 resulted in no new large-scale renewable generation being deployed in 2019¹⁸, therefore in order to achieve a 2030 target, it is time-critical that a support scheme is established. The importance and success of support schemes are evidenced in GB with significant cost reductions and increased deployment of low-carbon generation capacity since the Contract for Difference (CfD) mechanism commenced¹⁹. Businesses support the DfE exploring how the CfD scheme can be extended to NI, and it is critical that the differences between the GB and NI markets are considered as these will determine how the scheme is extended. **The CBI NI fully supports the CfD revenue support mechanism to be established and see it as a credible way of bringing forward various types of renewable power generation for Northern Ireland.**

When compared to the GB market, NI projects spend significantly longer in the planning system (see section below), grid connection costs and constraints/ curtailment rates are higher, and the maturity of technologies are vastly different, with offshore still a nascent market. **The CBI NI recommends that the extension of the CfD mechanism should ‘ringfence’ NI projects, this could be achieved through creating a fourth, NI only, pot in the existing CfD framework, or replication of the GB scheme with a parallel NI auction mechanism.** In addition, owing to the differing maturity of technologies in NI, **CBI NI recommends supporting less-established technologies either through ‘ringfenced’ capacity or capacity targets.**

Improving energy efficiency is essential for achieving carbon-neutrality across domestic and commercial building stock. There should be clear incentives and policy frameworks for investing in energy efficiency solutions for both homes and business.

The CBI NI welcomes the DfE's recognition of the importance of improving energy efficiency across both domestic and non-domestic buildings in achieving net-zero. Whilst many of the solutions for energy efficiency are known, such as heat pumps, CBI NI recommends that the DfE is bold by remaining open to further technological innovation that could bring even greater improvements for energy efficiency.

Realising energy efficiency opportunities will not only provide near-term gains for NI carbon reduction but will also unleash a wealth of economic and social benefits. CBI's recent publication, 'Seize the Moment', outlined up to 160,000 new direct green jobs in energy efficiency and retrofitting across the UK up to 2030, and high employment is expected to be maintained out to 2050²⁰. If the DfE sets clear ambition and incentives to stimulate the required investment, NI could capture a proportion of these opportunities, with research estimating the renovation sector could provide between 84-112 thousand direct, indirect, and induced jobs by 2030²¹.

¹⁷ See Reference 14

¹⁸ RenewableNI: The Power of Renewables: A Route To 80 By 30

¹⁹ BEIS: Contracts for Difference and Capacity Market scheme update 2020, December 2020

²⁰ See Reference 10

²¹ Accenture: System Value Analysis for Northern Ireland's 2030 Climate Targets, June 2021

However, to unlock both the decarbonisation and economic opportunities associated with improving energy efficiency, business requires clarity over the direction of the market for both domestic and non-domestic retrofitting and new-build standards. Without clarity, business will not be able to unlock the investment required in both innovation and technological development of materials and techniques, nor the scale of training and reskilling of their existing workforce to become net-zero compatible. **The CBI NI therefore supports setting energy efficiency related ambitions and standards, including an energy savings target and minimum efficiency standards, these will send the right signals to businesses and consumers but should be backed by appropriate financial support schemes.**

Domestic energy efficiency

In setting energy efficiency ambition and standards, consideration should be taken for the cost and impact that improvements will have on domestic consumers. The extensive switching from oil to gas across NI has proven that the logistical capabilities and willingness exist. However, retrofitting existing stock will be a much more invasive exercise and as outlined in the consultation document, involves significant cost. This is a particular concern for low-income and vulnerable energy consumers, who do not have the means to invest in energy efficiency solutions. Other consumers may also require financial incentives and access to green, low-cost finance to enable investment. CBI NI recognises that whilst changing the rates system to incentivise home improvements is a credible tool and signal for those with financial capabilities to invest, there should be recognition that this cannot be a ‘one size fits all’ solution.

As part of this, the NI Executive should start engaging with financial institutions in NI and the UK Government to ensure low-cost finance routes are available for both domestic and commercial consumers. This can be used to supplement grants for private homeowners. **CBI NI welcomes a new domestic retrofit scheme that can be tailored for households of all incomes** and urges the DfE to bring forward further details at the earliest possible time, particularly plans to support fuel poor or vulnerable consumers. Furthermore, **CBI NI welcomes the suggestion of a ‘one stop shop’ provider to take ownership of a new domestic retrofit scheme** and ensure delivery of energy efficiency targets.

Non-domestic energy efficiency

Business widely accepts that improving energy efficiencies across commercial building stocks will have longer-term energy bill savings for firms across the economy. However, due to the current business rates system, if improvements in energy efficiency lead to the overall value of a building increasing, businesses incur higher rates. Therefore, encouraging green investments that decarbonise buildings will require addressing barriers to investment, including that of business rates.²² **CBI NI recommends that the DfE should consider how business rates reform can play a role as part of wider policy thinking on energy efficiency.**

Like domestic buildings, improving energy efficiencies across non-domestic properties also faces significant challenges with inequalities in capacity to afford high-cost investments. Improving non-domestic property stocks will require business of all sizes and value to invest, therefore ensuring the correct support is in place for those with less capacity to make investments with high upfront costs is essential. **The CBI NI welcomes the proposed new non-domestic energy efficiency scheme and urge the DfE to bring forward further details at the earliest possible time to allow business to take the necessary steps to secure investment.** To further support business investment, **CBI NI recommends that financial incentives and low-cost green financial options should also be developed to boost investment.** In addition, **CBI NI supports the suggestion of a ‘one stop shop’ provider to take ownership of a new non-domestic retrofit scheme.**

²² Green light for investment: How the business rates system can encourage businesses to invest, CBI and Avison Young, November 2020

There should be consideration for both on/off-gas grid heat solutions and policies should be implemented to encourage ambitious innovation and cost-reduction over the next decade.

In NI, the decarbonisation of heat remains a significant challenge owing to the continued reliance on fossil fuels, namely the 67% of homes reliant on oil²³. Whilst the NI gas network is still under development, it is expected that c.550,000 properties will have access to the gas network by the end of 2022. Out of a building stock of c.800,000, NI still lags significantly behind the rest of the UK, where 87% of homes use gas for heating. The conversion from oil to natural gas has been highly popular in NI and results in an instant 48% carbon savings²⁴. **The CBI NI fully supports the DfE ambition to remove all fossil fuel heating sources in NI by 2050** but notes that given the poor history of incentives, this target should be backed by a coherent, use-friendly, and sustainable financial support scheme. **In the interim businesses recommend that up to 2030, the DfE supports greater uptake of natural gas in already connected areas in order to support short term carbon emissions reductions.**

In the long term, all low-carbon heating solutions should be considered for deployment in NI. For homes on the gas grid, the extensive investment of £1 billion in deploying a gas network²⁵ has created a modern plastic pipeline capable of transporting low-carbon gases like hydrogen and biomethane, enabling gas blending in the short-term and hydrogen-compatible boilers in the longer-term. For homes not connected to the gas grid, alternative low-carbon heating solutions, such as heat pumps, hybrid boilers and biomass, will be required. These solutions will require substantial public and private investment to provide further innovation and cost reductions to make them accessible for all consumers.

To enable investment decisions, trials to prove the technical and economic viability of the solutions in NI should be undertaken. There have already been extensive trials of low-carbon heat in GB homes, including Future Grid²⁶ and H21²⁷. Where a technology is proven, the focus should be on moving straight to a pilot grant scheme. In the case of heat pumps, the evidence base and technical standards exist in other jurisdictions which can be readily applied in Northern Ireland. Trials should be focussed on less advanced technologies. In addition, business requires confidence in demand in these solutions. Therefore, **CBI NI recommends that the DfE supports NI-specific trials to prove the technical and economic viability of these technologies in an NI setting.** In conjunction with this, **businesses welcome the proposed pilot grant scheme to support low-carbon heat solutions, but this should be supported by plans for a longer-term financial support scheme.**

A Transport Decarbonisation Plan should be brought forward as soon as possible, this should include details of an electric vehicle delivery plan and a framework for the deployment of alternatively fuelled vehicles.

As the consultation identifies, transport continues to be the highest emitter of all sectors. At minimum to drive emissions reduction not only requires the delivery of significant public and private investments in infrastructure and technology, but also a shift in business and public behaviours to match. Furthermore, as the country recovers from the pandemic, there is a key opportunity for transport patterns to be recast bringing with it the chance for new behaviours and working practices to be adopted whilst also delivering emissions reduction²⁸. **Therefore, business agrees that a Northern Ireland Strategy for transport decarbonisation will be critical to developing clear pathways to enable all modes of transport to decarbonise.**

²³ CBI NI: A Balanced Transition, May 2019

²⁴ Firmus: All council areas in Northern Ireland, August 2020

²⁵ Firmus: All council areas in Northern Ireland, August 2020

²⁶ National Grid: Hydrogen: the future fuel to achieve net zero? February 2021

²⁷ Northern Gas Network: H21 Report, July 2016

²⁸ Greener Miles: Delivering on a net-zero vision for commuting, CBI/ KPMG, April 2021

Within this, immediate prioritisation should be given to establishing a pathway for vehicle electrification by setting a clear target for the phase out of petrol and diesel cars and vans, in line with the increased ambition already increased from the UK to phase out these vehicles by 2030.²⁹ This will not only give investors and infrastructure providers confidence to make investments in the charging infrastructure network but signal the direction of travel to consumers and businesses about their next vehicle purchases. The availability and reliability of charging infrastructure and the compatibility of chargepoints combined with pricing and payment challenges, remain common themes causing consumer hesitancy about making the transition to electric vehicles³⁰. **To that end a strategy for transport decarbonisation should prioritise establishing a phase out date for petrol and diesel cars and vans, supported by a clear delivery strategy that; sets out a framework for how chargepoint rollout will be achieved for home, on-street charging as well as for commercial purposes as well as provide a timeline of key delivery milestones against which progress, and regulatory development can be scrutinised.**

However, whilst electrification may provide the solution for car and light goods vehicles this will not be the case for larger vehicles such as Heavy Good Vehicles (HGVs). Again, given the long-term aspiration to have hydrogen in the gas network, NI has an opportunity, unique in the UK, to build a future strategy around the existing gas network, starting with LNG HGVs charging from a gas network (with lower emissions) with a final step that would involve changing the gas network over to hydrogen concurrently with HGV fleets. Establishing a clear policy and direction on this at an early stage would however be needed to help stimulate a market adequately for these technologies and supporting vehicles to be deployed.

Demonstrator projects for alternative fuel vehicles are already taking place in Northern Ireland and through establishing a clear policy work can help stimulate a market for these technologies and supporting vehicles to be deployed. For example, bio CNG would offer a means to accelerate the decarbonisation of emissions from the transport sector, providing NI hauliers access a renewable fuel source to meet a growing demand from large customers for ‘green’ credentials, while alternatives such as hydrogen are further developed and commercialised in NI. **To that end, alongside electric it is crucial that alternative fuel technologies, such as hydrogen and biomethane, and supporting infrastructure are also considered within any strategy**

A smart, flexible energy system will be critical to deliver a net-zero energy system, government should support both supply-side and demand-side measures and ensure delivery is at the lowest cost to consumers.

The transition to a net-zero energy system will see increased volumes of intermittent renewable energy connecting to the grid and more aspects of society dependent on low-cost electricity at the point of demand. Digitalising the energy system supports all stakeholders, for network owners it allows for more efficient management of the system and for consumers it enables informed choices to be made. All technologies should enable a smarter, greener system therefore it is crucial that there is a whole-system strategic view for flexibility, to ensure joined up approaches across the supply and demand side can be delivered at the lowest cost for consumers. **CBI NI supports the Electricity Network and System Operators providing a pathway to creating a flexible and integrated energy system.**

Smart meters will play a fundamental role in balancing the supply and demand peaks that can be anticipated in a high-renewable system by incentivising off-peak electricity use. However, unless there is smart functionality behind all technology, smart meters will not work. Not only will smart meters unlock consumer power to make informed decisions about their energy consumption, but there are potential

²⁹ Government takes historic step towards net-zero with end of sale of new petrol and diesel cars by 2030, Department for Transport, 18th November 2020

³⁰ Transport and Technology: Public Attitudes Tracker, Department for Transport, November 2020.

cost savings for the network: BEIS estimates that £40 billion could be saved between now and 2050 by installing smart meters across GB³¹. Despite these opportunities, NI lags significantly behind the rest of Europe with smart meters unavailable for domestic customers. **CBI NI notes the recommendations of an Ulster University report³² and recommends that the DfE implements a large-scale pilot roll-out of intelligent smart metering 2021. In addition, to support the roll-out of smart meters, CBI NI recommends that the Cost Benefit Analysis (CBA) for smart meters in NI is also repeated.** The CBA should capture direct and indirect costs and benefits, including diverted network investment, the savings of GHG emissions through reduced peak demand and the projected reductions in a household expenditure on electricity demand.

Battery storage will also be a key enabling technology to increase the flexibility of the power system to regulate supply and demand and successfully integrate increasing volumes of intermittent renewable generation. Battery storage has the flexibility to operate as a standalone or as co-located asset with renewable generation, however since the Chief Planners Update 7 (CUP7)³³, investment in battery storage projects has ceased. Given the potential capacity currently in the pipeline, almost 600MW³⁴, significant investment is at risk as business have lost the certainty to invest. **CBI NI recommends that the DfE works with industry to determine the role battery storage will play in the future net-zero energy system.**

In addition to battery storage, other balancing services will be required to ensure security of supply for both electricity and gas. Firstly, interconnection will be a key balancing asset for both wind and gas supply in the future energy system. In addition to NI's current electricity interconnections with ROI and GB, the planned Celtic connector could unlock access to European power markets. Secondly, provided there is appropriate market design, there are opportunities for businesses and the public sector who invest in self-generation (e.g., CHP) or standby generation to play a more active role by investing in generation assets to meet not just their own needs, but also participate in network balancing services available under ISEMs DS3 services. **CBI NI recommends that the DfE explores all balancing services options available to NI and implements policy frameworks that will stimulate investment and further innovation in these options.**

An integrated energy system will require key cross-sector enabling technologies, including biomethane and hydrogen.

The decarbonisation of the energy system requires several efficient and cost-effective cross-sector technologies, namely biomethane and gas. Decarbonising the gas network will unlock emission reductions across sectors, including housing and transport, and support the delivery of a 2050 net-zero energy target. **CBI NI therefore supports the development of a pathway setting out the steps to decarbonise NI's gas supplies by the NI Gas Network Operators.**

Biomethane presents significant opportunities for NI to decarbonise its gas supplies. NI has a substantial agricultural sector that contributes 30% of NI's carbon emissions³⁵, these emissions could be utilised to assist the supply of low-carbon gas. If agricultural waste is used to produce biomethane and injected to the gas grid, the efficiency remains at c.90% compared to using biogas to generate electricity which reduces efficiency to between 65-70%³⁶. Furthermore, with the same characteristics as natural gas, biomethane can be injected immediately into the existing gas network and will be a key enabler for decarbonisation in the short-term while hydrogen technologies are further developed and commercialised. In the domestic setting, biomethane can be used immediately for use in existing

³¹ NIE Networks: Green Recovery: Opportunities to accelerate a green recovery in the context of a developing energy strategy for Northern Ireland, October 2020

³² Ulster University: Smart Meters and Flexible Demand in Northern Ireland

³³ Department for Economy: Chief Planner's Update (CPU) December 2020 (No.7), December 2020

³⁴ RenewableNI: RenewableNI Pipeline Survey, April 2021

³⁵ CCC: Reducing emissions in Northern Ireland, February 2019

³⁶ Phoenix Natural Gas: Natural Gas Delivering a low carbon future, August 2019

gas boilers, therefore while the technology for hydrogen boilers develops and reduce in cost, domestic gas can begin to decarbonise. In the transport sector, biomethane offers solutions where electrification is not possible. For HGV's and haulage, bio-CNG vehicles are suitable for mid-long-range freight and have a range of up to 800km^{10 37}. It is clear that biomethane has significant potential in NI, but the lack of a regulatory framework and route to market means businesses cannot invest. **The CBI NI therefore supports increased production of biomethane in NI and its injection into the gas network to help reduce the carbon intensity of NI gas supply, which should be supported by regulation and a clear route to market.**

NI has significant potential for wind generation and SONI has made good progress in ensuring the electricity grid can handle increased volumes of intermittent power. However, wind curtailment rates in NI remain high, 14.8% in 2020³⁸, the volume of intermittent wind generation will need to increase to meet the proposed 2030 target, and therefore curtailment rates are expected to remain high. Low-carbon hydrogen offers an opportunity for NI to utilise its intermittent wind resource, provide flexibility assets to delivery security of supply even during seasonal demand spikes and also provide a solution for decarbonising transport. Owing to the modern NI gas network, with hydrogen-ready plastic pipes, hydrogen can begin to be blended with natural gas, up to 20%, immediately. The proportion of hydrogen can increase to 100% when hydrogen ready boilers and appliances are rolled out nationwide. **CBI NI therefore welcomes the recognition of the significant economic opportunities associated with a hydrogen-based economy in NI and recommends that the DfE works closely with industry to develop a framework for its timely delivery.**

NI should take the critical next steps to unlock a hydrogen-based economy. Firstly, the role of hydrogen in NI should be outlined in the Energy Strategy as GB and ROI counterparts both envisage hydrogen injection to the gas networks in the 2030's. Secondly, a strong demand base for hydrogen use should be developed to provide the business certainty for investment. **CBI NI recommends setting a mandate for all new boilers and gas appliances to be hydrogen-ready once commercially viable, this will enable industry to progress the conversion process and provide strong market signals to investors of a strong hydrogen economy in NI.**

An effective net-zero energy system needs to be underpinned by regulatory and planning reform to bring Northern Ireland in line with GB and ROI counterparts to attract investment.

Achieving net-zero will require huge volumes of infrastructure to be built across all sectors including energy, transport, and the built environment. The regulation and planning system should be fit for purpose, and therefore to achieve a net-zero energy system by 2050, a host of barriers should be addressed as part of the Energy Strategy to deliver a joined-up, net-zero system.

Regulation and charging

The Utility Regulator (UR) plays a crucial role in ensuring that a low-carbon energy system is delivered at the least possible cost to consumers. To deliver net-zero, the UR should make several significant changes to how it operates.

Firstly, the principal objective of the UR is the protection of consumers but does not currently dictate consideration of climate or environmental issues. Consumer protection and climate consideration are not mutually exclusive, and delivery of net-zero can only be achieved if consumers are fully supported, and the energy system is decarbonised at the lowest cost to consumers. This is beginning to be realised, for example in GB, Ofgem published their new strategy and Decarbonisation Action Plan which recognises that decarbonisation of the energy system can exist concurrently with the protection of consumers whilst enabling competition and innovation³⁹. **CBI NI recommends that the**

³⁷ Accenture: System Value Analysis for Northern Ireland's 2030 Climate Targets, June 2021

³⁸ EirGrid: Annual Renewable Energy Constraint and Curtailment Report 2020, May 2021

³⁹ Ofgem: Decarbonisation Action Plan, February 2020

mandate of the UR is expanded to include net-zero as a strategic priority, in addition to consumer protection. Broadening the mandate of the UR in NI is an opportunity to build a regulatory framework that is innovative and strategic, as well as net-zero compliant.

Secondly, at present, the regulator operates on a 'just in time approach', this is hindering business investment. Business certainty to invest is based on the ability to 'plug in' to the network, which requires sufficient capital to be in place. Moving to an anticipatory investment approach would allow the UR to anticipate legislation and invest in infrastructure ahead of time, this will not only minimise regulatory barriers, but this is also an economic stimulus to kickstart a green economic recovery from the pandemic and prepare NI for its net-zero future. **CBI NI recommends that the UR shifts to an anticipatory investment approach and uses regulation to facilitate a green economic recovery and drive green innovation across the system.**

Thirdly, under the current electricity connection regime in NI, the connector pays the full cost of connecting to the grid, this is a substantial cost that is significantly higher than that in GB or ROI due to the policy differences. Whilst this methodology does keep cost increases for the consumer relatively low, it is a serious implication in attractiveness to invest in NI. In GB and ROI, the connector pays a percentage of the connection costs, and the remainder is socialised across the body of consumers, making GB and ROI more attractive locations for investors who can limit the cost of connections. In order to attract investment in NI and connect required volumes of generation for 2030 and 2050 targets to the NI grid, it is vital that there is parity between the charging regimes with NI's closest competitors. **CBI NI recommends an urgent review of the NI charging regime to bring it in line with GB and ROI.**

Planning

The NI planning system is currently a major barrier for investment in major infrastructure projects. most significantly is the length of time it takes to achieve planning in comparison to counterparts in GB and ROI. The average planning time for a major infrastructure application in NI is 53 weeks, when compared to an average of 13 weeks for comparable projects in England⁴⁰. The consequences of this are substantial as these significant time lags are impacting the business case for investing in the NI market. On top of this, the wider regional investments that major infrastructure projects bring to an area are at risk, for example, a private capital project with £5 million investment can unlock up to £60 million in wider regional investment and economic activities. When multiplied across the country and larger projects, NI is at risk of losing out on significant economic investment opportunities. Without a reform of the planning regime, NI risks losing out on significant investment and this ultimately risks failing to achieve a net-zero energy system.

CBI NI has engaged with both the Department of Infrastructure's (DfI) Call for Evidence (as part of the statutory review into the Planning Act 2011), and with the Northern Ireland Assembly Committee for Infrastructure on the urgent need for planning reform⁴¹. Regrettably, the statutory review process will not conclude until the end of 2022. Given the challenges an inefficient planning system poses to net zero targets and the economic recovery, **CBI NI is calling on both the DfE and DfI to work together to introduce an action plan to tackle delays in processing of major applications.**

CBI NI further acknowledges the announcement from Infrastructure Minister Nichola Mallon of a review of the strategic planning policy on renewable and low carbon energy in NI. Delivering the renewable energy projects required to meet the 2030 target is an ambitious target and businesses have some concerns about the impact a new planning policy being published in 2023 will have on this target. **Therefore, the strategic planning review needs to be expedited and should involve**

⁴⁰ NIE Networks: Supporting a Green Recovery, October 2020

⁴¹ Northern Ireland Assembly: Review of the Planning Act (Northern Ireland), 2011, May 2021

meaningful engagement with industry and the DfE from the outset to avoid a situation where the new policy makes it more difficult to deliver renewable projects.

CBI Northern Ireland, July 2021