



Empowering and Protecting Energy, Transport and Water Consumers

March 2021

Executive summary

This research was conducted by Cornwall Insight who were commissioned to produce a report to explore the energy strategies of five economies across the globe including, California; France; Germany; New Zealand; and Norway to understand which activities are taking place to meet energy, transport and water decarbonising targets.

This research will help The Consumer Council determine what is considered international best practise, in relation to meeting the decarbonisation agenda and consumer protection. The report concludes on how this can be applied to Northern Ireland's legislative and regulatory framework, in order to best protect, and empower, energy, transport and water consumers.

Background

The Department for the Economy (DfE) has begun the process of developing a new energy strategy to decarbonise the Northern Ireland energy sector by 2050 at least cost to the consumer. A new energy strategy will be published by the end of 2021¹.

To achieve “net-zero”, challenging decarbonisation targets must be put in place, but the impact of these targets on society and consumers, will be of fundamental importance. The ongoing public engagement will seek to assess the potential pathways to reach a net zero 2050 target for the energy sector in Northern Ireland, while meeting the energy needs of the population sustainably and cost-effectively. This is approached by defining the future role of consumers, energy efficiency, heat, power and transport.

Against this policy backdrop, Cornwall Insight has investigated case studies in five global economies that are party to Paris Agreement and have progressed with their energy, transport and or water policies beyond where Northern Ireland currently has committed.

Key Findings

- Significant programmes are in place worldwide and will be needed in Northern Ireland in energy efficiency, including deep retrofitting of homes, new heat sources and measures which will make it easier for consumers to participate more actively in their energy usage.
- Renewables will form the backbone of decarbonising the energy system and how this is levied on consumers is a key aspect to consider for the Consumer Council.
- Changes in consumer behaviour in the energy and transport sectors will be necessary as new technology alone will not achieve decarbonisation targets.
- Support for the most vulnerable in society will be necessary to ensure a transition to a net-zero carbon economy.

¹ <https://www.economy-ni.gov.uk/sites/default/files/consultations/economy/energy-call-for-evidence-summary-report.pdf>

- Water infrastructure will require upgrades to future proof it against the challenges that climate change will bring, so security of supply and functioning of wastewater treatment is maintained.

Optimal consumer protection model

For energy and transport, a consumer protection model which factors in the six pillars in Figure 1 (below), will realise the best outcomes for Northern Ireland. The decarbonisation observed across the world is multifaceted and includes a number of novel concepts, which will need to be carefully considered, bearing in mind the six pillars of Affordability; Simplicity; Protection; Inclusiveness; Reliability and Empowerment.

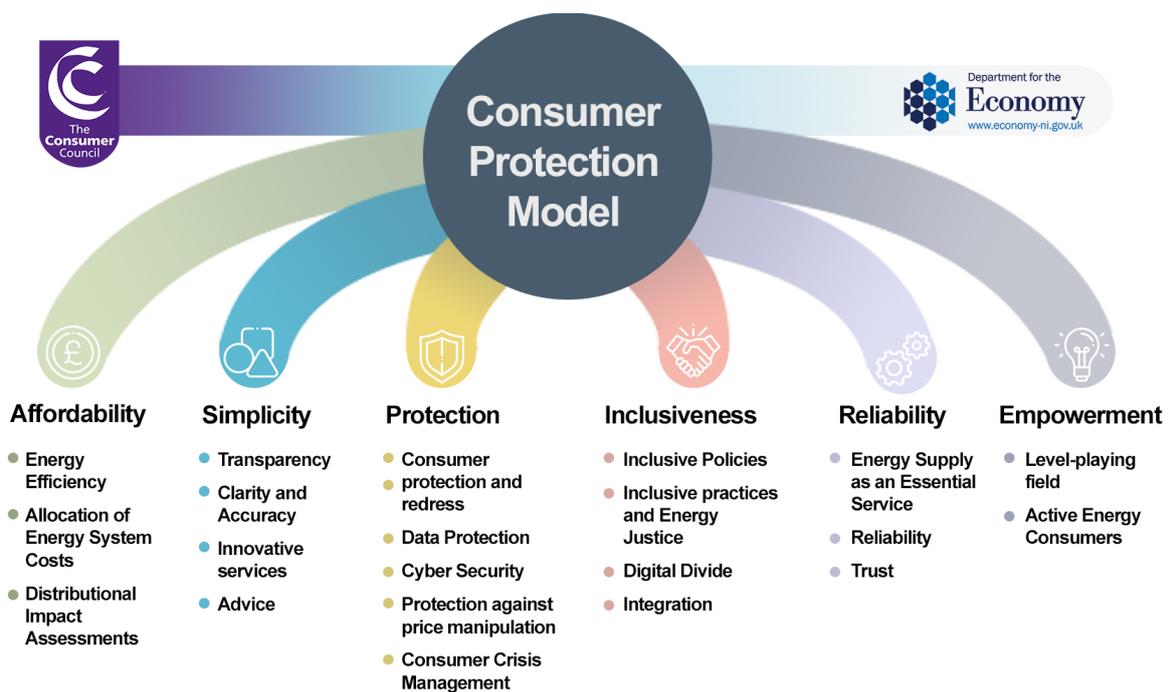


Figure 1: Optimum consumer protection model for Northern Ireland

Considerations for Northern Ireland / CCNI Energy

Particular attention should be paid to risks, which impact on low-income consumers and disadvantaged communities as the specifics of Northern Ireland are unique in this regard.

Aggressive buildout of renewables is being observed across the economies studied and will be observed in Northern Ireland also. How consumers are levied for this new generation and the associated system services and infrastructure upgrades should be taken into account when looking at the proposed consumer protection model.

The path to decarbonisation observed in the international studies was varied and heavily leveraged each countries' existing infrastructure and natural resources: solar is being extensively deployed in California, Norway and New Zealand have heavily decarbonised

energy systems through hydro electricity generation and geothermal technologies and France has a significant fleet of nuclear reactors to generate electricity.

Northern Ireland will need to leverage its existing generation capabilities and significant wind resource along with incorporating new technologies to reach net-zero.

Considerations for Northern Ireland / CCNI Transport

The economies studied showed varying levels of government support in the uptake of EV's. Subsidies towards the purchase of EVs and tax incentives were observed in some, but not all of the case studies.

Building of infrastructure for EV charging is a key component of decarbonisation strategies and will make the transition to net-zero easier for consumers.

Range anxiety is a key concern for EV users at present and improvements in technology, coupled with widespread deployment of charging infrastructure will reduce this concern.

Considerations for Northern Ireland / CCNI Water

Particular attention should be paid to the risk of security of supply for water consumers in Northern Ireland. The water industry will need to be robust and ensure that supply is maintained as climate change impacts supply.

Ensuring infrastructure is developed sustainably is key to protecting consumers. Ensuring that the water treatment is done using low carbon sources, such as hydrogen, which is on the horizon for NI water, will ensure that water supply is low-carbon and sustainable for consumers.

Recommendations for the Consumer Council

Energy – Consumer Protection Model

The model outlined in Figure 1 should be utilised to protect energy consumers in Northern Ireland. The transition to a net-zero energy system will require a range of new concepts and associated challenges, consumers need to be duly protected from the risks associated with this transition.

Transport – Consumer Protection Model

For transport the model outlined in Figure 1 which focuses on the six 6 key pillars, will allow The Consumer Council to effectively protect and empower transport consumers and make the transition to a decarbonised economy in a safe, reliable and sustainable manner.

Water – Consumer Protection Model

Water consumers interests should be protected by ensuring that infrastructure can stand up to the challenges that climate change will bring. For Northern Ireland, ensuring that extreme weather events such as excess rainfall or periods of drought do not affect consumer's water supply or wastewater treatment is paramount.



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