Energy Strategy Call for Evidence

Response Template

How to Respond

This template replicates the questions asked in the Call for Evidence found at: https://www.economy-ni.gov.uk/energy-strategy-call-for-evidence

It is recommended that you should read the full consultation document before completing your response. Please note that the text boxes used throughout this template can be expanded to accommodate your response – there is no character limit.

For further information on how we handle your personal data please read our Privacy Notice

Early responses are encouraged but all responses should arrive no later than **5pm on 20 March 2020.**

Please send your response to:

energystrategy@economy-ni.gov.uk

Or alternatively by post to:

Energy Strategy
Department for the Economy
Netherleigh
Massey Avenue
Belfast
BT4 2JP

Quote the reference "**Energy Strategy Call for Evidence 2019**"

1. General Information

1. **Name (required)**

[redacted]

2. **Are you responding:**

   ☐ **as an individual (please complete 3 to 5 below)**

   ☐X **on behalf of an organisation / company (please complete 6 to 8 below)**

If you are responding as an individual:

3. **E-mail address**

[redacted]

4. **Address**

[redacted]

5. **If you are responding as an individual, please read the Privacy Notice and tick the statement below as applicable.**

   ☐ **All responses will be published on the Department for the Economy website following completion of the Call for Evidence process. Please tick if you are content for your name to be published alongside your response.**

If you are responding on behalf of an organisation / company:

6. **Organisation / Company**

Firebird Products

7. **Position within Company / Organisation**

[redacted]

8. **Contact details**

   a. **E-mail address**

[redacted]

   b. **Address**

[redacted]

2. 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.

Firebird supports our trade association Oftec's reply to this questionnaire and our submission largely mirrors theirs.

2. Given our link to the Republic of Ireland it might help if whatever policy measures are introduced in Northern Ireland complement any action in the ROI. Some joined up thinking on decarbonising the off grid sector would be sensible in terms of bio fuel blends at a common percentage to avoid any fiscal gain for fuel movement cross border. GB is also considering bio fuel blends.

3. The CCC 'Reducing Emissions in Northern Ireland' report highlights 6 mains areas for action. We would comment on two;

• *There is no policy support to incentivise consumers to install low-carbon heating, especially heat pumps, in homes off the gas grid. There is considerable potential to switch households off the gas grid from use of oil boilers to heat pumps.*

We would argue that the majority of home in Northern Ireland are NOT suitable for migration to heat pump technology without significant disruption and investment in upgrading insulation and glazing, providing new radiators and replacing supply pipework etc. 70% of bungalows, 44% of terraces, 50% of semi-detached and 53% of detached houses* are band D-G and the thermal properties of these dwellings will be so low that considerable investment will be required to make them heat pump ready. This is unlikely to be considered cost effective by homeowners who will in most cases be unable to afford either the renovation costs or the capital cost of the heat pump itself. The government is unlikely to be able to pay these costs for them, so it makes sense to consider lower cost solutions. We would suggest that in many cases it would be better to retain or modernise the existing heating system, upgrade insulation and decarbonise the fuel by introducing a low carbon liquid fuel to replace heating oil.

*Source - Table 7.21 Northern Ireland House Condition Survey 2016 : Dwelling Tenure - Energy Efficiency Rating Bands & Mean SAP (2012)

We are not against upgrading properties as any future energy policy must have energy efficiency at its core but value for money and consumers' appetite for change must be considered.

• *Policies to incentivise energy efficiency improvements in homes are largely targeted at low-income households. Northern Ireland should consider policy options to deliver an attractive package for able-to-pay householders aligned to trigger points (such as when a home is sold or renovated).*

We would agree and support this policy measure. Too often we hear of 'working class man' who is just above the threshold for the boiler replacement grant or some other grant that would provide an improvement in the households energy efficiency and reduce cost to the user.

4. Yes, a 30 year timeframe works for the liquid fuel sector. Our strategy is to roll out a biofuel blend up to 2025 and to deliver a fully renewable sustainable biofuel by 2035, well before the 2050 deadline

5. 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.

5. Northern Ireland's domestic fuel mix is unique. The majority of domestic homes are heated by a liquid fuel, have low thermal properties and are not suitable for migration to heat pump without significant investment and disruption to homeowners.

Income levels are lower in NI than the rest of the UK leaving households here less able to afford energy efficiency upgrades. Average weekly wage is £50 lower than the rest of the UK* and approximately a fifth of all jobs in NI were 'low-paid' (based on OECD measure of low pay). This is the lowest proportion in NI in 20 years but is the highest proportion of the 12 UK regions.

*(Source - Northern Ireland Annual Survey of Hours and Earnings Statistics; Department for the Economy October 2019).

Liquid fuelled homes make up some 67.5% of the total NI housing stock. (NIHE Home Condition Survey – 2016). To incentivise these households to invest in the current climate will be difficult and challenging and the potential for another RHI type investment by Government in the current economic climate remains low. We would suggest a 'quick win' would be to support industry's strategy to introduce bio blends to the off grid home heat network via a biofuel obligation that could see a B30 blend (30% FAME and 70% kerosene) on the market by 2025. Based on SAP 10.1, if all 505,900 oil using homes in NI were to move to B30K (UCOME) there would be a 28.2% reduction of emissions from these homes which equates to c.0.56 MtCO2e or approx. 21% of total emissions from home heating). This figure could be increased as the bio element is increased over an agreed time frame.

6. Yes, the industry has started trials and demonstrator projects in regional training centres in NI burning a B30K mix and will make these sites available to interested parties to view.

7. 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?

7. It is important that heating remains affordable especially for those on low incomes. Heating oil has been a very affordable heating source for Northern Ireland over the past 30 years. A 30% bio blended liquid heating fuel would greatly reduce carbon emissions while also retaining the benefit of low cost energy. The 100% sustainable liquid fuel envisaged for 2035 is predicted to be significantly cheaper per KW of heat than all other sources, other than fossil fuel kerosene.

   Energy cost will depend on different factors including the availability and international price of the fuel being used, the energy efficiency of the property and the income level of the family residing in the domestic property and, in some cases, their ability to bulk buy. Government can intervene at different levels but the most obvious is in terms of regulating prices. This appears to work for the regulated gas and electricity sectors and the liquid fuel sector would be open to regulation (contrary to general opinion) as non-regulation has meant profitability of this sector has continued to decline in recent years with returns below 1% on turnover.

Continued regulation and potential regulation of the liquid fuel sector should be continued.

Fuel poverty is a very complex and difficult subject. We have numerous organisation who work in this field with many providing very worthwhile solutions and assistance. A rationalisation and clear identity for the key organisation would be a start as many consumers do not know who the 'key' or lead organisation is. To eradicate fuel poverty is a very complex social dilemma and one that requires input from a range of organisations including social services – it cannot be solved by the energy sector on its own. A mixture of new building regulations for social and private housing will address new build but, for existing homes (private and rented) a new method of financing/grants must be developed if those on lower incomes are to be encouraged to improve the thermal capacity of their dwelling.

10. Consumers will need independent advice independent from vested interest as the options available to consumers from competing technologies multiply. Credible information on the real likely cost of equipment and installation, running costs, expected life and carbon savings of the varying technologies would be useful. We believe that Oftec, which runs training and registration schemes for heating engineers, has expertise that could assist developing an information source for Northern Ireland.
    They need to know Advice and information should be made available at all levels. It would seem that climate change is well up many consumers conversation list but how many are prepared to change their lifestyle and invest serious amounts of money to make a difference? Advice and guidance on how consumers can make a difference should be on delivery dockets/invoices from distributors/communications from all energy suppliers and regular updates from Government via websites/NIHE/HECA and other organisations. Installers are often identified as trusted providers of information. They can be empowered further through training allowing them to recommend and tap into funding support.
13. We have referred already to the challenge of decarbonising off grid homes due to their low thermal performance but we feel that the high dependency on liquid fuels also presents an opportunity. A mass move to biofuel blends offers the most economically efficient mechanism for removing carbon from the off-gas heating network with indicative prices of £205/tonne for a B30 blend compared to £428/tonne for an air source heat pump in the UK at 2020 prices*.
    In GB the homeowner experience of heatpumps that have replaced gas or oil boilers has often been poor in terms of both cost and comfort.

*(Source – inperpetuum – OFTEC pricing model – discussion paper for CCC & BEIS, January 2020).

14. 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?

14. Targets should be carbon emission reduction targets and agreed by sector. A suggested target for the liquid fuel sector would be to mandate a 30% reduction in carbon by 2025 meaning the introduction of a B30 blend with a view to increasing the blend volume in consultation with Oftec and the fuel supply chain over the period to 2050.
15. The upgrade of standard efficiency oil boilers to modern low NOx condensing fuel efficient boilers should be encouraged by government. The modern liquid fuel heating boilers now on sale in Northern Ireland are suitable for B30K.
16. Support for fabric improvements to reduce overall heat demand is the essential first step to reducing carbon emissions from heating. Regulation and obligation will drive a transition to low carbon solutions, but greater success will be achieved if more rigorous enforcement of building regulations was in place. A competent persons' scheme in Northern Ireland which has shown great success in GB would be welcome. We would like to see any new funding approach linked to a competent persons' scheme with notification of works to Building Control and the use of qualified heating technicians.

    (a) – Building regulations – this method will mean more thermally efficient new properties.

    (b) Carbon emission reduction targets with supportive finance and regulation. Introduction of a biofuel obligation for the HEAT sector.

17. Amalgamation/rejig of existing multi-user interface – one Government funded (not private sector) organisation with key roles and responsibilities overarching domestic and commercial sector. Support of an upgrade of old standard efficiency boilers to condensing boilers thar are low NOx and also B30K ready.

15. 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?

18. For the off grid liquid fuel sector the introduction of a biofuel obligation for a 30% bio blend by 2025 and a pathway to a fully renewable sustainable biofuel heating fuel by 2035. Assist the industry with final trialling, training and regulating heating oil for 2025 to transition from 100% fossil fuel to a bio blend. Working with Oftec and the fuel distribution association UKIFDA on regulations on the new fuel will help endure that liquid fuel heating remains reliable and safe.

20. Assist in the deployment of bio-liquids for the off grid home heat sector. A mandatory obligation would be easily introduced and managed at source.

22. Limited opportunities exist with local housing association new builds and existing properties. In our experience, liquid fuel was used for district heating by the NI Housing Executive in the 1970s and was not a great success. Another example using biomass was the Woodbrook Development in Lisburn which failed and all the units were replaced with natural gas heating.

16. 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?

17. 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?

18. 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?

36. Energy security is important. Every oil tank is a store of heating energy available at the dwelling. It is there in times when there is a huge draw on electricity and gas such as the winters of 2009 and 2010. The oil tank is there to heat homes when rural electricity networks suffer from wind damage. It would be unwise to electrify all energy as all our eggs would be in one basket. The store can be used in future to store a blend of biofuel and kerosene with a much lower carbon content. For the liquid fuel sector, security of supply means adequate supply and storage for the liquid fuel product. It is our understanding that the Department for Economy is in regular contact with the oil terminals and has a day to day view on stock and fuel shipments – that can continue. With regard to the move to bio fuel blends we are content that there is enough biomass in the UK market to supply all the heating needs at a B30 blend level. According to our independent research there is an average of 120 MT/yr of biomass available in the UK.
Source – Biomass Availability – Jan 2020 by inperpetuum

37. Liquid Fuel storage volumes can be measured at the bulk storage terminals and calculated for oil tanks in dwellings. Once a 30% bio blend is mandated for heating oil and kerosene is discontinued then 30% of the total energy stored will be carbon neutral.

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?

38. Liquid fuel energy is easy to calculate on an annual basis, as there are records of fuel deliveries. Real time consumption would require meters, although the benefit of metering every dwelling may not outweigh the cost. No knowledge of metering in the regulated sector. Oil usage data is widely available (Harbour imports and distributor volumes through RDCO scheme administered by Revenue & Customs) and can be provided to interested parties to facilitate innovation in the energy sector and do demonstrate a reduction in energy demand through improved energy efficiency measures.

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?

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?

43. Northern Ireland and the Republic of Ireland both have many large liquid fuel boiler and tank manufacturers. Virtually all boilers and tanks installed in Ireland were produced in Ireland. This cannot be said of any other category of household appliance. In addition to those working in these factories, many more are employed supplying them goods and services. Many more hundreds are employed in fuel distribution and boiler service and installation. Ireland, north and south, is a world leader in liquid fuel heating. This local industry has proven its ability to innovate and transform as it has led the world in fuel efficiency and more lately in bringing low emission (NOx) boilers to market. As with any innovation and transformation, opportunities will present themselves in the fields of renewable advice and installation. Our industry is now working as one in bringing to governments the opportunity to remove 30% of the carbon dioxide content of all heating oil within a few short years. All the innovation and progress to date has been done with no government support. With q little government help with trials, and creating specifications for B30K this can quickly be made real and emissions reduced. The great advantage of our solution is the tiny capital and operating costs needed in each home compared to alternative solutions.

44. Oftec will create training programs to upskill oil boiler technicians in upgrading sites to a biofuel ready state. These can be delivered through the existing Oftec affiliated training centres. In addition we see installers of existing oil and gas systems retraining to add new technologies to their portfolios. This will provide training centres and apprenticeship schemes with new clientele. Any training and certification of renewable installers must be robust and membership of a registration scheme should be mandated for all building services work, which would remove this burden from building control and place it with experts in the various technology fields, which would manage business and operatives to a common set of rules. OFTEC is very well placed to administer and register any installer through our competent persons scheme.

45. In the liquid fuel sector we see the demand decreasing as homes become more thermally efficient and boiler size is reduced.

    If an old boiler is upgraded from standard efficiency to a modern high efficiency unit then a 25% reduction in heating oil consumption can be expected. Another 20% saving can be achieved through reasonably costed insulation improvements. In 2025 the carbon content of the fuel, if our plans are accepted will be reduced 30%.

    The nett effect is a 40% reduction in energy consumption and a colossal 58% reduction in carbon dioxide emissions compared with today.

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?

47. By leading by example. All local authority properties should take the lead and set out a road map to net zero. All liquid fuelled properties owned by local government should adopt a bio blend and lead for domestic and commercial users to show that it can be done. Once the B30K is delivered work should immediately begin on working towards the B100 for 2035.

48. The introduction of carbon emission targets will require local Government to legislate and due to our vastly different market share compared to GB, we may have to differ in a policy approach to the off-grid sector. The introduction of a mandate or bio obligation can be done for the liquid fuel sector at a local level and can be replicated in GB as required.

19. Additional information

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