BHF NI response to Energy Strategy Call for Evidence

British Heart Foundation Northern Ireland

Summary

British Heart Foundation Northern Ireland (BHF NI) welcomes the opportunity to contribute to this Department for the Economy Call for Evidence for the development of a new Energy Strategy for Northern Ireland.

BHF NI welcomes the recognition in this Call for Evidence document that the environmental issues we face requires joined-up delivery across government departments. As acknowledged in the document, transition to lower carbon energy represents an opportunity to educate the public on some of the adverse human health implications of energy usage and most importantly take the required action to protect public health.

Public engagement on the development of an energy strategy that will enable new and challenging decarbonisation targets is timely, particularly against the backdrop of the Northern Ireland Assembly, UK and Irish Governments, together with a number of local councils in Northern Ireland, declaring climate emergencies. It is given greater urgency by the UK's exiting from the EU, where governance of many environmental issues has been led over the last number of decades.

In addition, it remains unclear what arrangements will replace EU environmental regulation, particularly in relation to the UK Government's Environment Bill. There is uncertainty around whether the Office for Environmental Protection will apply to Northern Ireland, whether Northern Ireland will have its own Independent Environmental Protection Agency, or a combination of both, and if these bodies comply with the Ireland/Northern Ireland Protocol.

The commitment by parties to improving environmental outcomes and tackling the climate emergency in the *New Decade, New Approach* agreement is particularly welcomed.

In line with the spirit of co-design and co-production promoted within the draft Programme for Government, BHF NI are keen to engage with Government to collectively develop ambitious policy which acknowledges the role that organisations like ours can play in finding solutions to the environmental challenges we face.

About us

We raise money to fund research into heart and circulatory diseases and their risk factors.

We have been funding research to keep hearts beating and blood flowing for over 50 years. In that time, the annual number of deaths from heart and circulatory diseases in the UK has fallen by half. But 1 in 4 people in Northern Ireland still die from heart and circulatory diseases.

The British Heart Foundation (BHF) is the largest independent funder of cardiovascular research in the UK. We aim to fund £100 million of research each year into heart diseases, stroke, vascular dementia and diabetes.

We are the biggest independent funder of heart and circulatory research in Northern Ireland, having invested to date £4million in Queen's University, Belfast.

We continue to work towards a world free from the fear of heart and circulatory diseases. By 2030, we want to see advances across the spectrum of heart and circulatory diseases, helping to prevent these conditions from developing and for those with existing conditions to have better and longer lives.

In Northern Ireland, around 225,000 local people are living with the daily burden of a heart or circulatory disease, and we're dedicated to putting the interests of local people first.

Each year in the UK, it is estimated that up to 11,000 deaths from heart and circulatory diseases can be attributed to air pollution. In Northern Ireland, 310 heart and circulatory disease deaths are attributed to the most dangerous kind of air pollution, particulate matter. Over the next decade heart and circulatory disease deaths in Northern Ireland attributed to particulate matter air pollution could exceed 4,500.

Fine particulate matter pollution (PM2.5) is made up of tiny toxic particles, invisible to the naked eye, which come from sources such as diesel exhaust and the burning of solid fuels.

Air pollution: A silent killer

Air pollution is the presence of extremely small particles and gases in the air which can cause harm if you breathe them in. The gases and small particles include nitrogen dioxide (NO2), ozone (O3), sulphur dioxide (SO2) and carbon monoxide (CO). Particulate matter (PM), made up of particles such as soot and dust. It's these tiny toxic particles which are of particular concern to our health.

Polluted air can come from a number of sources, including domestic wood and coal burning (which accounts for almost 40% of background PM2.5 levels in the UK), road transport (12%) and industrial combustion and processes (29%).[1]

BHF-funded research has shown how harmful pollutants like PM can enter the bloodstream and cause damage to people's heart and circulatory systems, increasing the risk of potentially deadly heart attacks and stroke.

Section 6: Heat

We welcome that Section 6 of the Call for Evidence recognises that there are air quality problems associated with household heating in NI. As the document points out, there is a relatively high use of use of solid fuels as secondary heating sources, in particular coal, peat and wood in Northern Ireland.

Wood and coal burning accounts for 40 per cent of harmful levels of background PM2.5 in the UK

In February 2020 the Department of Environment, Food and Rural Affairs announced that sales of wet wood and coal are to be phased out in England from 2021 to help reduce air pollution levels.

Section 8: Transport

Section 8 of the Call for Evidence details that road transport generates substantial amounts of air pollutants and the Air Quality Directive annual limit value for nitrogen dioxide has been exceeded, with road traffic and diesel engines being particularly to blame.

Our pioneering research includes some of the first to identify the impact of diesel exhaust on heart health. BHF-funded research led by Professor David Newby at the University of Edinburgh began by looking at the

[1] Department for Environment, Food and Rural Affairs, Clean Air Strategy 2019. Published January 2019.

effects of diesel exhaust on the heart and circulatory system. These studies found that inhaling dilute diesel exhaust reduced blood vessels' ability to relax – a crucial function in controlling blood pressure. The team then showed that dilute diesel exhaust can also promote blood clotting[2] and put the heart under additional stress[3], both of which could make a patient with heart and circulatory disease more likely to suffer from a heart attack or stroke.

BHF-funded research has also found a link between poor short-term air quality and increased hospitalisation rates and deaths due to heart failure.[4]

What we want to see in a new Energy Strategy for Northern Ireland

The health evidence on the impact of air pollution presents a clear case for robust and urgent action being taken to tackle air pollution as a public health emergency. A new Energy Strategy for Northern Ireland must seize the opportunity for joined-up delivery across government departments to tackle the sources of air pollution – particularly domestic burning and road transport – and ensure that everyone's health is protected from these dangerous toxic particles.

We want to see a new Energy Strategy for Northern Ireland include:

- A clear roadmap towards WHO guideline limits for PM2.5, including time-bound commitments and interim milestones.

- Increased public awareness of the health impacts of air pollution, air pollution levels in their area and action that people, especially those with heart and circulatory disease, can take to protect their health.

- Include a commitment to increased public awareness of the impact of domestic wood burning on air quality and regulation and support for individuals and local government to reduce emissions from this source.

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[2] Lucking et al. (2008). "Diesel exhaust inhalation increases thrombus formation in man" in European Heart Journal 29: 3043–30514.
[3] Mills et al. (2007). "Ischemic and thrombotic effects of dilute diesel-exhaust inhalation in men with coronary heart disease" in New England Journal of Medicine 357:1075–1082.
[4] Mills et al. (2013) 'Global association of air pollution and heart failure: a systematic review and meta-analysis.' Lancet 382: 1039-1048.

- Better monitoring of health-harmful pollutants, in order to understand and reduce population level exposure and accurately measure progress towards legally-binding targets.
- Acceleration of plans to invest in cycling and walking infrastructure.
- Adequate funding and guidance for local government to implement health-focused air pollution interventions.

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