

Submission to the Department of Enterprise, Trade  
and Investment

Draft Strategic Energy Framework for Northern Ireland 2009

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## Introduction

### The Institute of Public Health in Ireland

The Institute of Public Health in Ireland (IPH) aims to improve health on the island of Ireland by working to combat health inequalities and influence public policies in favour of health. The Institute promotes cooperation between Northern Ireland and the Republic of Ireland in public health research, training and policy advice.

IPH structure mirrors that of the Single Electricity Market and our perspective complements policy development across the island of Ireland which will impact energy consumers north and south. IPH acknowledges that health is influenced by a wide range of social determinants, including economic, environmental, social and biological factors. IPH considers that the health impacts of a sustainable energy system should be considered as part of the development of the new Framework.

IPH welcomes the opportunity to comment on the Department of Enterprise, Trade and Investment (DETI), Draft Strategic Energy Framework for Northern Ireland 2009.

### Key points

- **IPH welcomes the recognition and action towards addressing fuel poverty issues within the draft Framework.** Low-income householders are more likely to be reliant on carbon-intensive fuels and inefficient heating systems, in particular a dependence on electricity-based heating. Also, these households generally lack the substantial finances necessary to retrofit their houses with more sustainable energy solutions. From a health perspective there is a need to ensure there are adequate and consistent all-island measurements for fuel poverty.
- **IPH recommends that particular emphasis be placed on enhancing energy affordability for low-income and vulnerable households** and call for this issue to be structured as a cross-cutting priority within each of the four main goals of the framework
- **IPH recommends that commitments in relation to low-income and vulnerable households be more clearly stated in each area of the framework.** There is a need to put in place specific provisions to ensure that lower income households benefit first and benefit most from the introduction of cost-efficient and sustainable energy, and that this be monitored over time.
- **IPH welcomes the drive towards renewable energy in Northern Ireland to support the collective effort to address climate change.** Renewable energy can provide alternatives to traditional sources of energy which can contribute to reducing Northern Ireland's carbon footprint. Northern Ireland's current energy sources such as the burning of oil, coal and natural gas can result in a number of emissions (sulphur dioxide, nitrous oxides and other pollutants) which are deemed a risk to health (DEFRA, 2004). The Health Protection Agency has developed the

‘Health Effects of Climate Change in the UK in 2008’ which clearly outlines the number of health impacts associated with climate change (Health Protection Agency, 2008). These include floods, infectious and foodborne diseases and an increase in temperature change impacting on mortality levels. Any initiative to address climate change is to be welcomed.

- **IPH calls for a greater consideration of health and health equity as part of the Strategic Environmental Assessment.**

### **Fuel poverty and health**

IPH welcomes DETI’s recognition of fuel poverty issues within the draft framework. We consider that DETI, and this framework, has an important role to play in reducing the unacceptably high levels of fuel poverty in Northern Ireland. In this regard, DETI will be contributing to the realisation of the governmental priorities for tackling fuel poverty set out in the fuel poverty strategy and within Investing for Health (DHSSPS, 2001).

IPH is particularly concerned as fuel poverty has important direct and indirect effects on health and is an important contributor to health inequalities (IPH, 2007). Northern Ireland has the highest level of fuel poverty across these islands with many householders unable to afford to heat their homes to safe temperatures. It is therefore unsurprising that coronary mortality (deaths from heart disease) associated with cold temperatures are higher in Belfast than most other European cities (Barnett et al, 2005). Between 2001 and 2005, some 4,875 people in Northern Ireland are estimated to have died of cardiovascular and respiratory causes as a result of exposure to cold indoor temperatures (Morris, 2007).

In view of the extent of fuel poverty in Northern Ireland and its health and social consequences, we recommend that particular emphasis be placed on enhancing energy affordability for low-income and vulnerable households. We recommend that this issue be structured as a cross-cutting priority within each of the four main goals of the framework

- reducing energy costs
- building competitive energy markets
- protecting our future by enhancing the sustainability of our energy supply and consumption
- maintaining the reliability of energy supplies.

We recommend that commitments in relation to low-income and vulnerable households be more clearly stated in each area of the framework. Ideally this would be accompanied by defined processes and targets. Such an approach would allow for a clearer presentation of the contribution of the framework to tackling fuel poverty and would facilitate this contribution to be monitored over time. This might be developed in the context of DETI’s representation on the Ministerial Group on Fuel Poverty and in liaison with the Northern Ireland Fuel Poverty Advisory Group.

IPH welcomes the commitment to deploy sustainable energy practices and technologies. We recommend that specific provisions are put in place to ensure that lower income households benefit first and benefit most from the introduction of cost-efficient and

sustainable energy, and that this be monitored over time. As Northern Ireland moves from overdependence on fossil fuels towards renewable energy sources, the needs of fuel-poor households should be prioritised. A variety of policy instruments may be used in this change process and we would encourage DETI to carefully consider the impact of these instruments on fuel-poor householders. For example, research in the Republic of Ireland has shown that the introduction of carbon tax can penalise poor households as they tend to have more 'dirty' heating systems and use more energy as they reside in poorly insulated homes which they cannot afford to upgrade (Scott & Eakins, 2004).

IPH strongly agrees that energy efficiency should be the linchpin of DETI's strategic direction in the next 10 years and that this provides the best route to affordable energy over the medium and long-term. We also note that DETI's remit is quite limited in this regard, with a range of other agencies contributing to the energy efficiency agenda. We strongly support development of DETI's legislative remit in the promotion of energy efficiency in the community and voluntary sector. Links between DETI and groups/organisations working to tackle fuel poverty and working in disadvantaged areas would be beneficial in shaping the implementation of the framework. Linkage with groups allied to the Investing for Health partnerships would also be relevant.

IPH welcomes the commitment to develop a policy to deliver better metering and billing including smart/advanced metering. An evaluation of the pilot National Smart Metering Plan initiated in 21,000 homes in the Republic of Ireland should be available in 2010 and would be informative to this process.

### **Climate change and health**

Climate change has been identified as one of the biggest public concerns of the 21<sup>st</sup> Century and IPH welcomes DETI's ongoing commitment to creating sustainable energy systems. We agree that planning for a sustainable, low-carbon energy future is essential in order to mitigate the effects of climate change.

IPH is particularly concerned with how climate change is likely to affect the health of the population in Northern Ireland and highlight these concerns as further support for the Department's vision to move away from a dependence on fossil fuels towards renewable energy sources.

Work conducted by the Health Protection Agency and Department of Health in England suggests that climate change may affect health in the following ways:

- Increased risk of flooding: While floods are associated with few direct deaths, the full effect on health due to infectious disease, mental health and injuries should be recognised.
- Vector borne disease: A range of insect-related health problems may change with the predicted climate changes in the UK including increased risk of malaria and Lyme disease
- Food borne disease: New scientific evidence confirms the effect of temperature on salmonellosis while the role of temperature in *Campylobacter* transmission remains uncertain. The effect of warmer summers on foodborne disease incidence will depend

on future food hygiene behaviour and the relative contribution of different pathogens as well as changes in temperature.

- Water and disease: Climate change is likely to impact on raw water quality, which in turn could affect treatment efficiency and the stability of drinking water in distribution. Changes in the distribution of rainfall may cause local increases in drought.
- Direct effects of rising temperatures on mortality: Improved tolerance to heat in the future will reduce the impact of hotter summers, but increased frequency and intensity of heatwaves are a major concern. Extrapolation of current data showed the risk of a 9-day heatwave (averaging 27C in South-East England, with over 3,000 immediate heat-related deaths and 6,350 heat related deaths throughout that summer in Britain), as 1 in 40 each year by 2012, or 25% at some time during the 10 years centred on that year.
- Air pollution: Future ambient concentrations of air pollutants which are hazardous to health will depend both on trends in emissions of primary and precursor pollutants and on trends in meteorological factors which affect dispersal of pollutants and secondary chemical atmospheric processes.
- Ground level ultraviolet radiation: UVR exposure is a factor in skin cancers and may be a cause of some types of cataracts.

### **Power and Renewable Energy**

IPH welcomes the approach DETI is taking towards reducing reliance on fossil fuels and moving to a more sustainable energy system. The central health problem from reliance on the burning of oil, coal and natural gas for energy results from the pollution produced. The burning of fossil fuels results in emissions of sulphur dioxide, nitrous oxides and other pollutants. In addition, domestic sources such as cooking and burning coal for heating are the UK's single largest source of dioxins (18%), while electricity generation produces about 4% of the UK total. The developing reproductive system of male offspring seems to be particularly sensitive to exposure to dioxins before birth. Dioxins are associated with other developmental and reproductive effects, and the immune system is also potentially sensitive. UK expert committees regard dioxins as a probable human carcinogen (DEFRA, 2004).

Moves towards renewable energy have the potential to reduce pollution entering the environment. Reductions in carbon dioxide emissions will reduce the extent of the greenhouse effect promoting a healthier world in the long term. More locally the benefits of improved air quality include 'a reduced incidence of severe lung diseases (chronic bronchitis or emphysema) and heart conditions and, probably, reduced levels of asthma among children' (Barton & Tsourou, 2000).

The health impacts of specific renewable energy sources such as bioenergy and offshore wind and marine renewables, should be considered particularly in relation to location. Encouraging renewable energy (while balancing this with environmental and conservation concerns) will benefit health locally, and on a global scale.

## **SEA and health**

IPH welcomes the commitment DETI has made towards undertaking Strategic Environmental Assessments (SEA) where appropriate on policies emanating from the framework. In Northern Ireland there has been a tendency to minimize health considerations in SEA. This may be partly attributed to the fact that those undertaking the assessment are from an environmental background with a limited understanding of health and its determinants.

SEA presents a major opportunity to prevent ill health and tackle health inequalities and we therefore recommend DETI ensures a wider determinants of health approach is undertaken in any SEA conducted relating to the Energy Framework. This can be implemented by:

1. Conducting a Health Impact Assessment (HIA). This process considers the potential positive and negative health impacts of the proposal and develops evidence-based recommendations to strengthen the proposal in favour of health. This process can be integrated into SEA to ensure a greater emphasis is placed on health.
2. Undertaking a SEA which adopts a broad understanding of health and ensures input from a public health perspective e.g. Public Health Agency.

IPH has considerable experience in HIA and would be willing to support DETI to ensure adequate consideration is given to health through the SEA process.

IPH recommends the Energy Framework sets targets for renewable generation in Northern Ireland which will contribute to addressing climate change. This needs to have milestones, performance indicators and targets based on an inclusive approach and alignment between all government departments, especially, planning and DETI.

## **References**

- Barnett et al. (2005) Cold periods and coronary events: an analysis of populations worldwide. *Journal Epidemiology and Community Health*; 59:551-557.
- Barton, H. and Tsourou, C. (2000) *Healthy Urban Planning* Spon Press: London p20.
- DEFRA (2004) *Review of Environmental and Health Effects of Waste Management* DEFRA: London p16.
- Department of Health, Social Services and Public Safety. (2002) *Investing for Health*. Belfast: DHSSPS.
- Health Protection Agency (2008) *Health Effects of Climate Change in the UK 2008*, Department of Health.
- Institute of Public Health in Ireland (2007) *All-Ireland Policy Paper on Fuel Poverty and Health*. Public Health Policy Centre.
- Morris, C. (2007) *Fuel Poverty, Climate and Mortality in Northern Ireland 1908-2006*. NISRA Occasional Paper: 25. Belfast: Department for Social Development.
- Scott, S. & Eakins, J. (2004) *Carbon taxes: Which households gain or lose? Final Report prepared for the Environmental Protection Agency*. Wexford.

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