



Response to the Consultation on the Development of a new Solid Fuel Regulation for Ireland

Submitted to
Department of Environment, Climate and Communications

www.westerndevelopment.ie

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Western Development Commission Response on the Development of a new Solid Fuel regulation for Ireland

Introduction

The Western Development Commission (WDC) is a statutory body operating under the aegis of the Department of Rural and Community Development, promoting economic and social development in the Western Region of Ireland (the counties Donegal, Sligo, Leitrim, Roscommon, Mayo, Galway and Clare). The WDC¹ is involved in policy analysis, the promotion of regional initiatives and the operation of the Western Investment Fund and continues to work on the development of renewable energy in the Western Region.

Since 2004 the WDC has been working in the area of renewable energy and supporting communities and enterprises to become involved in generation, fuel supply and energy services². We have also recently published a report on the key issues for Rural Dwellers in 'Making the Transition to a Low Carbon Society in the Western Region'³. Given the WDC understanding of the energy needs of our region we are pleased to respond to the consultation the Development of a new Solid Fuel Regulation for Ireland.

The WDC has a particular focus on the needs of, and opportunities for, more rural and peripheral areas. As the Western Region is largely rural and takes in some of the most remote parts of the state. Using the CSO definition 64.7% in of the population live outside of towns of 1,500 or more. Using the definition in Ireland 2040 the National Planning Framework⁴ 80% of people in Western Region live outside of towns of 10,000. The five most rural counties in Ireland are in the Western Region (Leitrim (89.6% of the population live in rural areas), Galway county (77.4%), Roscommon (74%), Donegal (72.5%) and Mayo (71%)). The Western Region also has a higher share of the population living in smaller towns.

Based on our experience we first highlight some more general issues in relation to the use of solid fuel for heating in our region and then address some of the questions outlined in the consultation document. If you would like more information or to discuss any of the issues raised in our response please get in touch.

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¹ See www.westerndevelopment.ie for more information

² See www.westerndevelopment.ie for information on our other projects and for publications on renewable energy www.wdc.ie/publications/renewable-energy-reports/.

³ <https://westerndevelopment.ie/policy/publications/making-the-transition-to-a-low-carbon-society-in-the-western-region-key-issues-for-rural-dwellers-august-2020-full-report/>

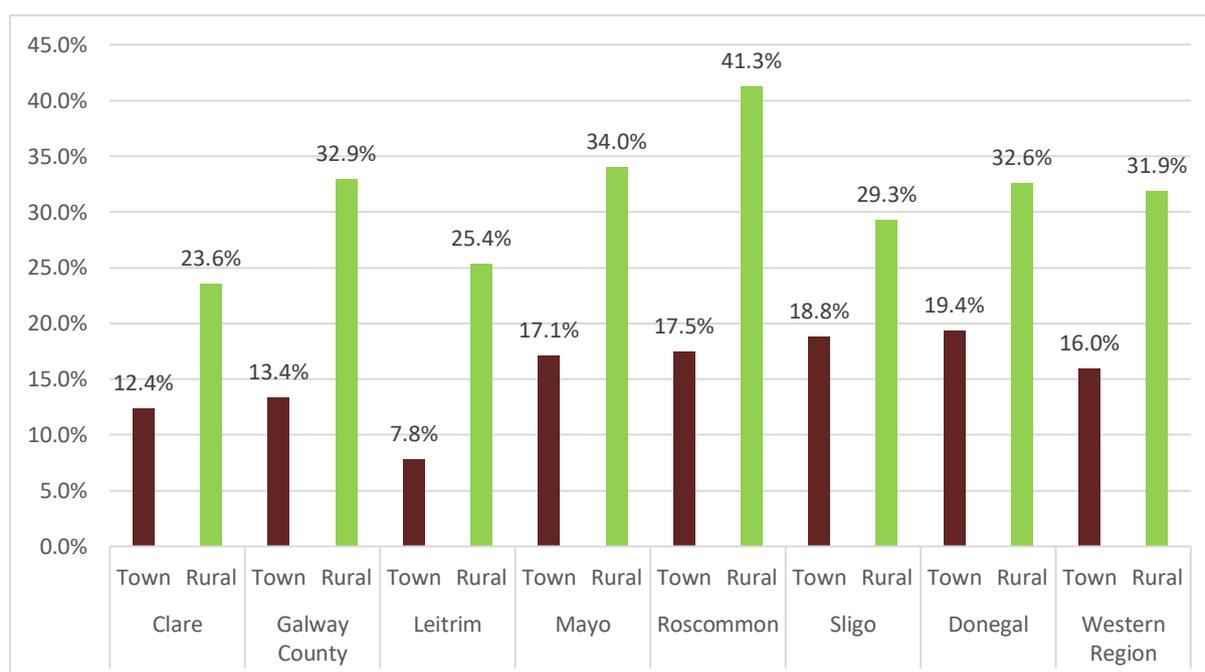
⁴ <http://npf.ie/project-ireland-2040-national-planning-framework/>

Background

The way buildings are heated has important rural dimensions. Homes in rural areas are more likely to use oil boilers, or rely on solid fuel (including peat which is a significant source of heat energy in some counties). Homes in the Western Region are particularly reliant on solid fuel, being a rural region, with little access to the natural gas grid and often using very traditional forms of central heating. According to the most recent Census of Population (2016), a quarter (24.5%) of all homes in the Western Region use solid fuel as their main central heating fuel this compares to a tenth (9.8%) of homes in the rest of the state (Census 2016 only asked about the main central heating fuel used). In addition, many (if not most households) are likely to use solid fuel as a secondary fuel source (the next Census in 2022 will collect more information on this). Thus regulation of solid fuel will have important consequences for home heating in the Western Region.

Figure 1 below shows the percentage use of solid fuels (coal, peat and wood) used for central heating in urban and rural homes in the Western Region (from Census 2016). The very significant difference in use in all counties between urban and rural homes should be noted. In the Western Region as a whole almost a third of rural homes use solid fuel as their main central heating fuel source, while 16% of urban homes do.

Figure 1: Percentage using Solid Fuel (Coal, Peat and Wood) for Central Heating*



Source: CSO, Census of Population 2016, Table E1055. *Excludes not stated and those homes with no central heating. Excludes Galway City as this has no rural area

In Roscommon 41% of rural homes use solid fuel for heating (34% of this is peat), while rural homes in Mayo (34%), Donegal (33%) and Galway county (33%) all have very significant solid fuel use. Galway city has the lowest use of these fuels in the region (8%).

The regulation should not seek to ban the burning of solid fuel. In addition to the regulation of fuels on sale, to improve air quality there should also be a focus on encouraging the consumer to switch

to cleaner burning fuels and to use cleaner appliances and to understand how to operate their appliance more efficiently and so reduce particulate emissions.

Response to Questions

Please note, we do not respond to all questions, especially where they are of a more technical nature.

1. Are you in favour of a national regulation on solid fuels, and if so, why?

Yes, we are in favour of solid fuel regulation as air quality is an important issue. We believe that regulation should lead to higher quality fuel being sold, which will benefit the consumer. It can be difficult of consumers to know the quality of fuel being purchased.

Regulation will also help to ensure that those suppliers who are producing good quality solid fuel are able to compete rather than experiencing unfair competition from poor quality fuel which may be on sale.

2. What solid fuels should be subject to regulation and why?

Coal, wet wood and peat products that are for sale should be subject to regulation.

5. How can a transition to less polluting fuels and more efficient heating systems be supported? (Building upon the measures already set out in the Climate Action Plan)

While much of the discussion on home heat (e.g. in the [Climate Action Plan](#)) has focussed on heat pump installation, it may be that for homes heated using coal and peat a switch to other renewable solid biomass such as wood energy (pellets or logs) might be more appropriate. This is especially in older homes which will need very significant retrofitting and may have particular ventilation requirements.

The needs of households reliant on solid fuels for heating must be considered in the development of this regulation and there needs to be a broader emphasis on the variety of ways that particulate emissions from solid fuel use can be reduced.

6. What do you think is an appropriate timeframe for the implementation of a national regulation of solid fuel?

Interim standards should be brought in with in the next two years, with a timeline for improving standards over the next 5-10 years.

There needs to be consideration as to the areas over which the regulation would apply and whether it is expected to apply in rural areas (outside of towns and villages) where the air quality issue is less significant.

7. What timeframe should be applied to the inclusion of new solid fuels into legislation to allow for the necessary transition, including the phase out of existing stocks?

Two winter seasons should allow for the full phase out of all existing stock. A target (e.g. 70%) after the first winter season could be put in place.

8. Should suppliers and retailers be given a transition period to use up existing stocks of solid fuels not meeting emission standards and, if so, how long?

Yes, see above

9. Are there particular challenges in terms of the enforcement of regulations applying to solid fuel burning, and how might these be best addressed?

Measurement and testing of fuels to ensure that they meet the standards. will need to be widespread.

10. Do you have any further proposals to reduce air pollution from residential heating?

A broad approach needs to be taken. As the International Energy Agency (IEA) has noted (and we quote directly⁵)

Air pollutant emissions from residential biomass-based heating vary considerably depending on the type of heating system, how the system is operated, and the characteristics of the fuel used.

The type and level of emissions from biomass heating is linked to whether complete or incomplete combustion occurs in the heating system, as reflected in the wide range of typical PM emissions for some biomass heating devices. Complete combustion minimises harmful air pollutants from PIC, but an ideal mixture of combustible gases and combustion air, air-fuel ratio, residence time in the combustion chamber and flame temperature are required to achieve complete combustion.

How the heating system is operated strongly influences air pollutant emissions, especially for manually operated boilers and stoves. For manual systems, the manner of fuel ignition, quantity of fuel introduced to the combustion chamber and level of combustion air supplied must be carefully administered according to best practices to minimise pollutant emissions. Managing these conditions manually to ensure near-complete combustion is complicated, so actual emissions can significantly exceed those achieved for a given system under test conditions. This highlights the importance of considering real-world operational conditions when developing emissions standards.

Although solid biomass-based heating offers a renewable, lower-carbon alternative to fossil fuel-based systems, to ensure there is no trade-off between decarbonisation and air quality, policy support may increasingly require that biomass heating systems limit air pollutant emissions to acceptable levels.

Minimising air pollution emissions through sophisticated technologies, appropriate fuel selection and best-practice operation is likely to be key to future market prospects for residential biomass heating. This is already evident, as subsidy eligibility for biomass boilers in Germany and the Netherlands is linked to minimum emissions criteria. Such criteria also apply to wider bioenergy applications, for example in France, where biomass co-generation tenders include air quality in the selection criteria.

It is clear that the regulation of solid fuels on sale is only one of the actions needed to improve air quality. A full suite of options should be put in place, with education on the best way to use fuel, and the most appropriate appliances as key elements.

11. What performance standards, certification methods or quality schemes should/could be used to reduce air pollution caused by burning solid fuels?

Using cleaner fuels in a cleaner appliance installed by a competent person, knowing how to operate it efficiently, and ensuring that chimneys are regularly swept by a professional all make a big difference to the level of particulate emissions⁶. Addressing all of these and not just regulating fuels for sale would significantly reduce air pollution.

⁵ <https://www.iea.org/articles/does-household-use-of-solid-biomass-based-heating-affect-air-quality>

⁶ <https://consult.defra.gov.uk/airquality/domestic-solid-fuel-regulations/>

14. Is it appropriate to use moisture content as a standard for the application of regulations to wood and, if so, at what limit should the moisture content be set?

A moisture content of 20% would seem appropriate.

15. What limit should be set as a cut-off point for the sale of wet wood?

Wet wood should not be available for sale.

The very significant reliance on solid fuel for central heating in the Western Region has been outlined above. Any regulation of the sector will impact on people living in our region more than elsewhere. While we are in favour of better regulation of the solid fuel that is for sale, we also emphasise that it is important to address the other issues which affect the level of particulate emissions including appliances and how people use them. An education campaign to help people understand the importance of full combustion and the importance of quality fuel and appliances is important.

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