
Public Consultation on the development of new Solid Fuel Regulations for Ireland

From Department of the Environment, Climate and Communications

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Open for submissions from 18 February 2021

The closing date for submissions is **5.30pm Friday 2 April 2021**

Our submission is sent via email to SolidFuels@decc.gov.ie.

Our submission is supported by petition signed by members of the public who oppose any change to the current policy. These petitions have been send via registered post to;

Public Consultation on Solid Fuels
Air Quality Division
Department of the Environment, Climate and Communications
Newtown Road
Wexford
Y35 AP90.

Background.

The Story of Peat in Ireland

Peat harvested from local bogs has been used for centuries for cooking and heating in Ireland. With the depletion of this country's natural woodland in the 1600s, peat became an important source of indigenous fuel for households. Throughout the 20th century, peat was prized as a source of rural employment and an alternative fuel for heating and electricity generation during disruptions to coal supply in World War I and II. Peat until recently was still used to generate electricity and as a fuel for home fires to this day.

The first industrial-scale harvesting of hand-won peat or turf took place in 1825 at Mona Bog beside the Shannon, where it continued until the end of the 19th century. In 1850, Colonel Kitchener in County Kerry discovered how to produce peat briquettes, which had a higher calorific value than traditional sods, while experimenting with peat charcoal in an attempt to manufacture gunpowder.

The modern Irish peat industry was established in the 1930s when the Turf Development Board was set up to manage peat development, encourage self-sufficiency and generate rural employment. With the onset of the Second World War in 1939, there was widespread rationing and shortages of imported fuel. By early 1942, government policy aimed to replace the shortages of coal in Dublin with turf.

Bord na Mona took over from the Turf Development Board at the end of the war and provided the fuel for the first sod peat fired power station in Portlington in 1950. Between 1950 and 1967, sod peat electricity generating

stations totalling 117 MW and milled peat stations with a combined generation capacity of 290 MW were built by the ESB. These peat fired plants included 5 MW plants in very rural locations such as Cahirciveen, Miltown Malbay, Screeb and Gweedore. Supplying hand won turf to these 5MW plants was a very important supplementary income for farmers across rural Ireland in the 1960's and 1970's. These 5MW plants were all closed in the 1980's and 1990's as Moneypoint Power Station a 915MW coal fired plant which was commissioned in 1985 /7.

Bord na Mona's investment in peat briquette production and peat harvesting for electricity generation had a large impact on rural development at that time, particularly in the West and the Midlands. The oil crises of 1956 (Suez) and of 1973 were to cement the rationale for the development of peat-powered plants to diversify the Irish electricity system and avoid the risk of blackouts and rationing.

The closure of the 5MW's plants have since been followed by the closure of – Bellacorick, Lanesborough, Portarlinton, Shannonbridge, Ferbane, Rhode and more recently by their replacements plants at: Lough Ree and West Offaly in 2020. These 2020 closures was due to the PSO expiring in 2019. The plant at Edenderry, has had a reprieve through the burning of biomass, but only until 2023.

Up to 2020, most extracted peat was used in electricity generation, but many households continue to burn peat, either as peat briquettes or privately harvested turf. Conservation programmes have restricted further exploitation of boglands for peat harvesting. In 2015, Bord na Mona announced its intention to phase out the harvesting of peat for energy by 2030 in favour of biomass, wind power and solar generation.

To date in the 21st century most extracted turf was used in electricity generation plants, but a significant amount is still used in domestic households. However, the use of turf and solid fuels in general lags behind gas and oil, which are the most common modes of home heating. Briquette production for fireplaces and solid fuel boilers or stoves has fallen from a peak of 500,000 tonnes in 1987 to around 200,000 tonnes in recent years. Private peat producers and those with bog rights continue to extract peat for local markets in the Midlands.

Bord na Mona was the only producer of milled peat for electricity production in Ireland. Peat usage for electricity generation has declined since 1990 as the number of power stations burning peat has fallen from eight to three. The average annual output of milled peat has declined from around four million tonnes in the early 1990s to around 3.4 million tonnes in 2008. With the fall off in the usage of milled peat for electricity generation, another use was identified for this product. Milled peat has been found to be particularly suitable a bedding material for livestock and also as major component in the production of composts for the horticulture sector in Ireland. Even when these composts are spent they still benefit the soil, serving to lighten and improve the workability of heavier clay based soils.

While one might question the relevance of the History of Peat Burning, it does serve to highlight the role that peat has played in the domestic and industrial development in the Ireland of the 20th century. It is of course also important to reflect that when it comes to greenhouse gas emissions and the environmental impact, the amount of turf being harvested and burned in Ireland today is but a fraction of what was burned since the 1950's. Put another way, the closures of all ESB's peat fired power stations should represent a sufficient reduction to our greenhouse gas emissions, leaving the focus on the other culprits.

The Story of Coal in Ireland.

Coal was widely used in domestic households for heating and cooking at the beginning of the 20th Century.

Due to urban development and industrial expansion, the output of coal gas increased between 1904 and 1924. The price of gas was not uniform, however, partly reflecting differences in the cost of coal and its availability. Railways, with their coal-fired steam engines peaked at this time with around 3,500km of track across the country.

A coal fired power station at Pigeon House was commissioned in 1903 and later taken over by ESB in 1929.

A 1921 report estimated the total quantities of coal used in Ireland at that time as 4.7 million tonnes – but this was less than the amount of peat used. For comparison, at its peak Moneypoint burned around 2 million tonnes of imported coal annually.

The dominance of coal as fuel for Dublin industry from the late 19th Century was threatened by extra duties on coal in the 1930s and the wider availability of electrical power. Coal use declined with the outbreak of war which impacted on the importation of coal. Coal had mainly been used to manufacture gas, to power steam engines in a variety of manufacturing industries, and as a fuel in foundries.

Between 1914 and 1932 a total of 37 gas companies went out of business, partly due to the difficulties in acquiring imported coal, and partly because of the advance of electricity generation. Between 1934 and 1939 gas production increased again and with the onset of World War II, shortages of coal for domestic use led to an immediate upturn in the consumption of gas. The widespread rationing of coal led to a shortage of fuel for cooking and heating. Coal supplies fell and soon even gas was only available at reduced amounts for certain hours. Irish steam engines were forced to run on poor quality Irish coal, wood or unsuccessfully with peat.

The period between 1926 and 2011 saw a huge increase in household formation. The number of households increased almost threefold from 600,000 to 1,600,000. Over this period the fuels used for home heating moved from solid fuels (coal and peat) to oil; and natural gas fired central heating.

With the post war upsurge in energy demand other fuels were becoming more popular for home use and high coal prices in the 1950s meant that the surviving gas companies moved away from coal carbonisation to oil, since oil prices had fallen to a point where it became competitive with coal. Dublin Gas converted over to oil in 1968. Additional electricity generation plant mix in the form of indigenous coal and coal/oil units among others were built in tandem with growth in energy demand for heating, industrial development and higher living standards in the 1960s. A coal fired generating station was built at Arigna burning 55,000 tonnes per year of indigenous coal.

The oil crises during the 1970s and 1980s highlighted the need for diverse fuel sources. Fluctuations in the use of coal stemmed from a rise in central heating systems in houses and the development of the natural gas network.

With the landing of natural gas from the Kinsale Head field, and the development of the 160 km gas pipelines to Dublin, the Pigeon House generating plant was converted from coal to oil/gas during this time. Diversification was also seen in domestic energy use and in 1977 the government introduced a grant scheme for the installation of domestic solid fuel central heating. By 1987 78% of homes in Dublin used solid fuel (coal, peat, wood) as a principal source of heating.

The 1990s brought with it the continued reduction in the use of solid fuels, partly due to the switch from the use of solid fuels in open fires and back boilers to more efficient oil and natural gas central heating and the use of enclosed solid fuel stoves. With increasing awareness of environmental issues, people became more concerned about the health risks and air quality issues from winter smog which was caused by smoke and sulphur dioxide emissions from the burning of coal. The Department of the Environment introduced legislation to control the sale and supply of smoky coal. The Air Pollution Act came into effect in 1990 with a ban on the sale and supply of bituminous fuels in the Dublin Area. This was expanded to more areas as its effectiveness in reducing emissions became apparent.

By 2004 solid fuels accounted for only 15% of residential energy use. Despite short increases due to a rise in industrial coal use and during a time of high gas, low coal and low ETS prices, the overall trend of coal use has been one of decline, particularly in the residential sector. New legislation was introduced as late as 2011 including a provision to limit the maximum sulphur content of bituminous coal and increasing the penalties for breaching the regulations.

Smokeless coal continues to be supplied in Dublin and other cities covered by the ban on smoky coal. Solid fuels complying with the smoky coal legislation are supplied by Arigna Fuels, Bórd Na Mona, Stafford's and others. Smokeless fuels are manufactured in Arigna, site of the original Arigna coal mines but the products are now produced from imported materials with some production being exported.

The rise in sales of solid fuel stoves with higher efficiency compared to open fires has ensured a continued market for smokeless fuel in Ireland, however, overall coal sales have declined in comparison to previous years when coal use in open fires was common.

By the census of 2011 about 43.7% of households reported oil as the primary source of home heating while 33.8% of households used natural gas.

Ireland's remaining coal fired power plant running in 2015 was completed at Moneypoint in 1987 as part of a fuel diversity strategy. Following the oil crises at a time when Ireland was highly dependent on imported oil and with growing demand for electricity the decision was made to build Moneypoint and to link its output to the East Coast via transmission lines which now form a key component of the electricity generation and transmission system. Rated at 915MW, it is one of Ireland's largest power stations. At full output the station consumes approximately 7,000 tonnes of coal per day.

In April 2016 Moneypoint reportedly provided 21.5% of Ireland's electricity demand.

A decade ago, Moneypoint power station was retrofitted to comply with EU environmental regulations and standards, reducing its nox and sox emissions. In 2008 the ESB completed a major environmental equipment upgrade (costing €300 million) to make sure the plant complies with the strictest environmental requirements. In 2013 it emitted over 3.4 million tonnes of CO₂ into the atmosphere, but levels have stayed lower than the permitted amount under the EU-ETS. It is considered to have a useful life until at least 2025 and burns around 2 million tonnes of imported coal annually.

Coal has been mined and used in Ireland for four centuries. Because of the availability of more convenient fuels such as electricity, oil and natural gas its use is in decline as a fuel in domestic households. Imported coal is still, however, an important source of fuel for electricity generation because of its low cost as of 2016. This low cost relative to other fuels may be due, in part, to the rise in the availability of shale gas which is displacing coal for power generation in the USA. The market for coal is also affected by the shutting down of older coal fired generation plants across Europe. Some closures are caused by plant owners who could not afford the significant investments needed to meet the EU emission requirements. The ESB completed environmental upgrading of Moneypoint in 2008 at a cost of €385 million and this combined with any other upgrading measures assures the technical life of the station until ~2025.

Again one could make the case that with the switch to smokeless coal in our largest urban centres and the fall off in demand for Moneypoint's capacity, which will be closed by 2025 or perhaps before, Ireland will be burning some 2 million tonnes less coal in a decade.

The Story of Wood in Ireland.

Wood fuel is a fuel such as firewood, charcoal, chips, sheets, pellets, and sawdust. The particular form used depends upon factors such as source, quantity, quality and application. In many areas, wood is the most easily available form of fuel, requiring no tools in the case of picking up dead wood, or few tools, although as in any industry, specialized tools, such as skidders and hydraulic wood splitters, have been developed to mechanize production. Sawmill waste and construction industry by-products also include various forms of lumber tailings. The discovery of how to make fire for the purpose of burning wood is regarded as one of humanity's most important advances. The use of wood as a fuel source for heating is much older than civilization and is assumed to have been used by Neanderthals. Today, burning of wood is the largest use of energy derived from a solid fuel biomass. Wood fuel can be used for cooking and heating, and occasionally for fueling steam engines and steam turbines that generate electricity. Wood may be used indoors in a furnace, stove, or fireplace, or outdoors in furnace, campfire, or bonfire.

Wood is the most sustainable fuel source of the three solid fuels burnt in Irish homes. Many of the naturally species of trees in the Irish countryside have the ability to reshoot and regenerate themselves after being cut,

including; common ash, willow, sally, hawthorn etc. This ultimately means that of all of the fuels we could burn in our domestic fires, wood can replenish itself in the shortest timeframe i.e. less than 20 years.

The caloric value of native Irish wood is conditional on the type of tree, the density of the wood and the time afforded for the wood to dry prior to burning. The calorific range could be from freshly harvested spruce to naturally seasoned oak which has been air dried in a shed for a number of years.

Beyond the sustainable attributes of wood, much of what is burn across Ireland is not felled, rather landowners tend to only cut up the trees that are brought down by adverse weather events, and waste wood such as broken pallets, boxes, packaging etc. Well dried wood is used by many to start their fires, with kindling being readily available in must corner shops and retail outlets.

The environmental impact of using wood as a fuel depends on how it is burnt. Higher temperatures result in more complete combustion and less noxious gases as a result of pyrolysis. Some may regard the burning of wood from a sustainable source as carbon-neutral. A tree, over the course of its lifetime, absorbs as much carbon (or carbon dioxide) as it releases when burnt.

Government policy over recent decades has facilitated the afforestation of vast areas of rural Ireland, under the tutelage of Coillte. The most popular tree grown on these plantation is Sitka Spruce. Given the growing conditions and the nature of Sitka spruce, it is very unlikely to be suitable for use as a building material. We in Independent Farmers believe that while the afforestation policy was ill judged, the outcome must be that some use must be found for some or all of this commodity, some of which will end up as firewood.

Public Opinion.

Independent Farmers Organisation of Ireland were asked by members of rural communities to get involved in coordinating the completion of a petition in opposition to the proposed ban on the burning of solid fuel in homes across rural Ireland. While we were happy to facilitate, our efforts to co-ordinate a national campaign of scale were severely hampered by the Level 5 Covid -19 restrictions. It would have been irresponsible to ignore the public health advice to;

1. Convene public meeting in every community centre across rural Ireland, and
2. To go door to door across rural Ireland to get the petitions signed.

It is our view in Independent Farmers that the decision to launch a public consultation process in the middle of level 5 restrictions was a strategic decision by a department and a green minister, to minimise the potential for communities to coalesce in opposition to the proposed ban. Independent Farmers take an extremely poor view of such an underhanded approach by the department and the minister.

The Government Plan on Smoky fuels was a three-step plan, based on the principle of divide and conquer;

1. The first step was to close Bord Na Mona and in the process, remove the supply of a vast amount turf and 100% of Irish peat briquettes. This is now achieved. In the process the short-sighted minister has done significant damage to a number of sectors including the horticulture and the agri-food sector, both of whom rely on the milled peat as the principal component of Moss Peat and Compost and a very valuable bedding material for farm animals. Within days of the closure, and the loss of over one thousand direct and indirect jobs, here we are having to impost Compost and the biosecurity risk that that poses and also importing briquettes from abroad.
2. The second step in the plan was to make it illegal for any fuel merchants and local shopkeepers to sell turf, timber or coal. Again, this was an effort by government to build on the Bord Na Mona closure but not draw the wrath of the entire public.
3. The final step, as we understand it, was going to be the most unpopular of all three, to make it illegal to burn solid fuel in all our homes. The hope and expectation of government was that by closing Bord

Na Mona and removing furl for sale from fuel merchants and local shops, that the third step would be made easy by reducing dramatically the supply. The approach was to then isolate the cohort who cut and save their own turf and timber.

So, who are the people who stand to lose most from the proposed ban on burning solid fuel? It is the view of Independent Farmers that the government policy will have the greatest impact on rural families and the elderly living in their own homes in our communities. It has been suggested to us in Independent Farmers that if the government were to succeed in their ambition to prevent Irish citizens from burning what are mostly indigenous fuel, turf and timber, that for many of the elderly this would likely tip the balance between living in their own homes in fuel poverty and moving into the nearest nursing home. This decision for many elderly people would be a last straw and would serve to further deplete the strength of our rural communities.

In light of all this, we in Independent Farmers took a decision that we would seek to run a very small campaign, focusing on one county, county Clare, but respectful of the public health advice, as follows;

1. We would encourage those who were cocooning and had access to the internet to sign the on-line petition created by Jackie Healy Rae Jnr.
2. And for those, who didn't have access to the internet, but could travel to their local shop, we would leave a petition at a number of local shops around the county. Patrons could opt to sign or not.

Despite the Level 5 restrictions and accepting that those most vulnerable members of our communities were cocooning, the petitions opposing the government plan to ban the use of solid fuels were very well supported across the county, with more than a thousand signatures gathered in the few short weeks of the public consultation window. These signed petitions are now made available to the Department in support to our opposition to the proposed ban.

The Grounds for Opposition by Independent Farmers.

Ireland's 2020 population is estimated at 4,937,786 people at midyear according to UN data. Ireland population is equivalent to 0.06% of the total world population.

Ireland's emissions of Green House Gases is calculated at 0.01% of the emissions globally.

While we in Independent Farmers believe that all countries must play their part in tackling climate change, the Irish contribution will be insignificant in addressing the global challenge.

SEAI suggest that between the years 1990 and 2018, the burning of peat across Ireland has reduced to 49% of the 1990 level. This is before the closure of;

1. Lough Ree Power, in Lanesborough, Co. Longford in 2020
2. West Offaly Power, in Shannonbridge, Co. Offaly in 2020

The combined effect of these two closures was to reduce Irelands carbon emissions by 1.25 millions tonnes per annum.

Edenderry Power in Co. Offaly which has a licence to operate until 2023, when closed it will again significantly reduce Irelands carbon emissions.

SEAI suggest that Irelands coal consumption in 2018 is at 34% of the 1990 level. Moneypoint Power Station, is scheduled to close in 2025, further reducing our carbon emissions.

The combined effect of all of these measures, will reduce dramatically the carbon emissions from the burning of coal, turf and timber, accordingly there is no need to ban the burning of coal, turf and timber for us in our homes.

The justification brought forward by the Green Party for the proposed ban is based on the European Environment Agency Report Air Quality in Europe 2019, indicates that in 2016 there were 1,180 premature

mortalities arising from air pollution in Ireland. The vast majority of these, 1,100, are attributable to fine particulate matter (PM2.5), which in Ireland is primarily associated with domestic solid fuel burning.

We in Independent Farmers have never heard of any person's cause of death as "air pollution" or "particulate matter from domestic fires" Furthermore, we have never seen or heard of anyone completing a survey of air quality in Irish homes, save the radon gas detection monitors which some of us installed in the last decade.

On the SEAI website, it suggests that the consumption of peat and coal have been in decline since the turn of the century. It also suggests that oil and gas consumption are on the increase across Ireland over the same period. This suggests to us in Independent Farmers that perhaps the focus of government policy is yet again wide of the mark.

In conclusion, it is the view of Independent Farmers that the government proposed policy on the burning of solid fuels, is ill informed and should therefore not be changed. Irish people across rural Ireland must work hard to secure the necessary fuel to heat their own homes annually. The elderly in our communities are the most vulnerable, and most deserving of our protection, and it is our view that any change to current policy could plunge many of them into fuel poverty and worst still force them into nursing homes. It is our firm view that this policy change would not be contemplated if a large multinational was making a margin out of the turf and timber that we cut and harvest on our own property each year.

Accordingly, we in the Executive Team of Independent Farmers urge the Minister to reconsider his approach.



Director and Executive Member
Independent Farmers Organisation of Ireland

Independent Farmers Organisation of Ireland

t/a Independent Farmers.

