By e-mail
Draft NECP 2021-2030 Consultation
Strategic Energy Policy Division
Department of Communications
Climate Action & Environment
29-31 Adelaide Road
Dublin 2
DO2 X285

19th. February 2019

Reference: Response to Ireland’s Draft National Energy and Climate Plan 2021-2030 Consultation

Dear Sir / Madam

Carbery Plastics Limited is a Clonakilty, West Cork manufacturer of rotationally moulded storage containers. Established in 1977, our primary focus is the manufacture of tanks for the storage of specialty chemicals, transport fuels, waste oils, lubricants and heating oil. We supply a diverse and demanding customer base nationally, and export to the UK, together with a growing number of continental European markets.

I am writing in response to proposals contained within ‘Ireland’s Draft National Energy and Climate Plan 2021-2030’. As a key supplier of products to the heating industry, our customers and installers, will be at the sharp end of efforts to reduce our collective dependency upon fossil fuels.

Our Position

At the outset and as an environmentally responsible business, we support fully the ambition that Ireland become a carbon-neutral economy and a world-leader in the development and implementation of zero-carbon technologies. Such ambitions have the potential not just to benefit the environment, but the economy too. We also have a number of concerns as to some of the proposals contained within the consultation document.

In summary, from our perspective:

- Greater attention should be given to early interventions and easy wins;
- From a technological perspective, the emphasis should be upon reducing emissions. We don’t believe it is the role of government to champion or favour any specific technology;
- To maximise efficiency there is a clear case for mandatory technician registration across all technologies e.g. an extension of the existing RGII registration scheme;
• We recognise the importance of improving the fabric of buildings and give qualified support to updating and enhancing Part L of the Building Regulations;
• We are unconvinced it is feasible to install 170,000 heat pumps within the timescale suggested in the consultation;
• We have reservations over the viability of heat pump installations at many older and less well insulated, rural dwellings;
• A sudden move away from oil could exacerbate levels of fuel poverty in rural areas;
• The heating sector should be included within any future Biofuel proposals or strategy;
• Care must be taken so as not to compromise the competitiveness or performance of Irish oil equipment manufacturers in export markets;
• Any policy should not disincentivise the development of game-changing technologies, especially within the Biofuels sector;
• Modelling is required to understand the impact of the proposals and any future policies which may be brought forward;
• The proposals fail to take sufficient account of human factors.

Early Interventions and Easy Wins

There are a number of interventions which can be made at existing liquid-fuelled heating installations, to facilitate easy wins. These have the potential to significantly reduce demand and therefore lower emissions, quickly and relatively painlessly, with minimum cost and disruption. These include:

• The increased use of intelligent controls;
• The roll out of high-efficiency, condensing boilers at installations where a standard-efficiency boiler is currently installed.

I am surprised these measures do not receive greater attention and emphasis in the consultation

The Oil Firing Technical Association (OFTEC) has previously commissioned research into the costs of carbon reduction. This revealed a cost of €62.70 / tonne 20-year carbon reduction cost, when a legacy oil boiler was upgraded to a modern, high efficiency condensing boiler. By contrast, the cost, when the system was replaced by an Air Source Heat Pump was €156.00 / tonne upon the same basis.

Subject to political will, the adoption of technologies to facilitate easy wins can be stimulated quickly through regulatory change (e.g. Building Regulations) and / or consumer incentive schemes (e.g. Boiler Scrappage Scheme).

Technological Agnosticism

Within the consultation, a strong emphasis is placed upon heat pumps as a potential replacement for liquid fuelled heating systems. The merits (or otherwise) of heat pumps as a replacement for liquid fuelled boilers at legacy installations are discussed elsewhere in this correspondence.

However, demonstrating a preference for a specific technology risks stifling innovation and limiting opportunity. Rather than specifying a particular technology, it is suggested that setting
performance requirements and remaining technologically agnostic, has the potential to stimulate greater technological progress and competition.

It may well be at some installations heat pumps are indeed the most appropriate technology to meet those performance requirements. At others, alternative technologies may prove more suitable. However, by remaining technologically agnostic, then government policy can continue to stimulate innovation, competition and wealth creation.

Furthermore, when looking up to 11 years ahead – it is plausible and very possible, that the answer to Ireland’s decarbonisation requirements has yet to be invented. Care must be taken to ensure that unnecessarily prescriptive and detailed regulation does not cause any such technology to be stillborn.

**Technician Registration**

As a leading supplier of heating oil tanks nationally, we are fortunate in working with many skilled and highly competent heating technicians. However, in an industry characterised by only limited barriers to entry, there are a smaller number of technicians whose standard of workmanship leaves much to be desired.

Proper installation and maintenance, completed by suitably qualified persons, is central to realising the carbon reduction potential of modern heating technologies.

The extension of RGII type requirements to all fuel types would be a positive move in this regard. Furthermore, a government backed / managed scheme may assist in providing consumers with the necessary confidence to make the required investment in new and sometimes unproven, heating technologies. Such an initiative could be accompanied by the introduction of mandatory servicing requirements, to ensure installed technologies remain more efficient, for longer.

**Regulation**

We support enhancements to the fabric of buildings proposed through changes to Part L. However, we are very concerned by proposals to restrict the use of fossil fuel heating at new properties.

Whilst we would not argue with the intent i.e. to reduce total emissions, such an approach risks hindering the wider development of the technology and infrastructure required to support and sustain next generation liquid biofuels and e-fuels.

We would instead suggest alternative approaches are considered e.g.

- The introduction of emissions limits which reduce over time towards zero e.g. limits for a system installed in 2025, would be lower than for a system installed in 2021, but not as low as a system installed in 2030;
- A biofuels obligation at liquid fuelled heating systems, with the bio element of fuel increasing over time. This is similar in concept to the obligations placed upon the transport industry.

It is also important to ensure that any restriction upon the use of liquid fuels is sufficiently rural-proofed. Whilst urban properties usually have access to the mains gas network and therefore a
competitively priced alternative to other heating technologies, many rural properties do not and will not.

**Transition Challenges**

There are almost 700,000 properties nationally, who choose liquid fuels for space and water heating. Most have chosen oil over alternatives, because of its affordability, convenience and flexibility. Irrespective of future ambitions, it simply would not be possible for 700,000 homes to switch from liquid fuel to an alternative in the near term. Even in the event a lesser, yet still significant proportion of current liquid fuel users, switch to an alternative in even the medium term, this could cause issues for those who continue to depend upon it.

As the installed liquid fuel base declines, it’s likely fuel suppliers will exit the market. For those who remain dependent upon liquid fuel, this could result in increased prices, as competition reduces. Furthermore, availability may become an issue, with suppliers having to travel further to deliver – an activity which itself is likely to further increase cost pressures.

The impact of such a scenario would be most acutely felt in rural areas, where more homes depend upon oil heating than all other forms of heating combined. Rural homes are typically below BER C1 - many are D, and some are E - and have a correspondingly greater energy requirement than comparable urban homes. This situation is compounded by the fact that disposable rural incomes are frequently lower in than in urban areas.

We have no wish whatsoever to challenge or question the threat posed by climate change. However, great care needs to be taken to avoid exchanging a climate problem for a fuel poverty crisis, in the event the cost of liquid fuels rises exponentially.

**Heat Pumps and Rural Dwellings**

We accept Heat Pumps may have a useful role to play in decarbonising the nation’s heating. At some installations, Heat Pumps are an ideal technology – especially when the house has a high energy rating, is of modern construction, is compliant with current Building Regulations and has been designed to use low temperature heating systems from the outset.

However, we are concerned by the focus upon heat pumps within the consultation, to the apparent exclusion of other technologies – especially when replacing existing liquid fuelled heating systems at legacy installations. To operate effectively, a Heat Pump must be installed in a property with excellent heat retention properties and which almost certainly incorporates a MVHR system, or similar. This is only a very small proportion of rural housing.

Installing a Heat Pump at most existing rural properties will likely increase heating costs markedly and risks exacerbating the unacceptable level of fuel poverty which undeniably exists in many rural areas. Admittedly, homes can be upgraded. However, such an upgrade is likely to be cost-prohibitive for many consumers – costing up to €50,000, according to SEAI for a ‘deep retro-fit upgrade’. And whilst grant assistance is available, draw down rates are limited. This suggests little demand from end-users. This is hardly surprising, given the long pay back periods applicable in many instances.
This underscores the fact that no national policy or framework, can hope to cover every eventuality. So rather than adopting a ‘one size fits all’ approach, an alternative would be to introduce performance requirements and limits, with which any replacement system must be compliant. Additionally, such an approach allows heating technicians to apply their considerable expertise and knowledge on a case by case basis.

**Heat Pumps and Installation Infrastructure**

The suggestion to replace 170,000 existing liquid fuelled heating systems with 170,000 heat pumps is a large ask. Even when concerns over the technology at many installations are set to one side, we have concerns over whether this is achievable.

In particular, we would question:

- Does the training infrastructure yet exist to deliver the required training to facilitate this number of installations?
- Are there – or will there be – a sufficient number of suitably trained, competent installers to deliver and maintain this volume of systems, at a time of recognised skills shortages within the heating industry?
- When new build construction is increasing and housebuilders are reporting a shortage of suitably qualified technicians, are allied trades available to complete the required work to ensure homes are of a sufficient standard whereby a heat pump is an appropriate and effective technology?
- What (if any) schemes have been put in place to educate consumers and the supply chain of the requirements associated with the usage and installation of heat pumps?
- Noting that peak winter heat demand frequently coincides with peak winter electricity demand and low levels of renewable generation, is there sufficient generation capacity to cope with this additional demand upon the power grid?

From what we have read, both in the consultation document and elsewhere, we are unconvinced that the necessary infrastructure is in place, or will be in place, to facilitate 170,000 conversions within the envisaged timeline.

There is also a very real risk that a poorly designed approach to the role out of heat pumps may adversely impact upon future uptake rates. In Britain where the technology is arguably more visible, there has been a number of well-publicised instances where the introduction of heat pumps has led to a dramatic spike in heating costs for consumers. If the same were to occur in Ireland, this risks undermining the technology, before it becomes established as a mainstream heating choice.

**Biofuels**

Whilst the consultation recognises the role of Biofuels in meeting future transport energy requirements, the heating sector is omitted. We believe this omission should be reconsidered:

- Along with Japan and the UK, Ireland is almost uniquely dependent upon Kerosene for space and water liquid fuel heating. Much of the Kerosene supplied in Ireland shares distribution with aviation fuel (Jet A1) and is distributed alongside road transport and marine fuels;
• Shared distribution infrastructure presents an opportunity for future liquid biofuels and e-fuels to act as a ‘drop-in’ replacement for Kerosene;
• Demand for liquid biofuels and e-fuels from within the heating sector has the potential to provide economies of scale and bulk purchasing power that can be leveraged by the road, air and marine transport sectors, as the biofuels / e-fuel sector develops in the future.

The impact of carbon upon climate is identical, irrespective of whether it originates from the transport, electricity generation or heating sectors. We believe a holistic approach, which encourages technology and innovation transfer between each sector, will deliver a superior result than examining each sector in isolation.

Whilst progress in the delivery of responsibly sourced and sustainable biofuels has not proceeded as quickly as was once expected, work does continue in this area. In light of potential, future breakthroughs, we believe it important their development should not be unwittingly disincentivised through unnecessarily prescriptive policies or needlessly burdensome regulation.

International Perspective

There are close linkages between the oil distribution sectors in Ireland and in the UK:

• A significant proportion of Ireland’s oil reserves is stored in Northern Ireland and Scotland;
• Linkages exist further downstream too. As an example, the UK’s largest distributor of heating fuels is Irish owned;
• Within the oil equipment manufacturing sector, the UK is a major export destination;
• Many oil boilers and most oil tanks supplied in Britain today are manufactured on the island of Ireland;
• Many liquid fuel users in the southern Border Counties are supplied from terminals in Belfast and Derry.

Care must be taken that policies adopted for the local market do not compromise the competitiveness of southern Irish manufacturers in the UK and other overseas markets.

Economic Modelling

We are fully supportive of economic modelling being completed and published prior to the implementation of any proposals contained within this report. This is essential if the impact of the proposals are to be fully understood.

Human Considerations

We are of the opinion the proposals contained within the consultation do not take adequate account of human factors e.g.

• Most heating systems are replaced when they reach the end of their operational life. They are frequently distress purchases. Will consumers really wait weeks or even months, to replace a legacy oil-fired system with an alternative technology?
• Will consumers who have been used to rapid warm up times from legacy systems, really switch to low temperature systems designed for continual operation?

• How realistic is it to expect consumers to invest in heating systems which cost more to run than a current system and even with grant assistance, are characterised by significant up-front investment costs?

• Even with grant assistance, some (perhaps, many) consumers will not be able to afford switching to a new technology for space and water heating. What is the Plan B?

Follow Up

I trust our thoughts are of interest and benefit. If you should have any queries or require clarification on any point contained herein, you’re very welcome to contact me. You can call me on 023 883 3531 or e-mail

Yours faithfully

Michael McCarthy
Managing Director