DEPARTMENT OF COMMUNICATIONS, CLIMATE ACTION, AND ENVIRONMENT

SSE RESPONSE TO

BIOFUEL OBLIGATION SCHEME: CONSULTATION ON FUTURE INCREASES IN THE BIOFUELS OBLIGATION RATE

JANUARY 2018

Introduction

SSE wishes to make the enclosed submission for consideration by the Department in the context of the *Biofuels Obligation Scheme: Consultation on Future Increases in the Biofuels Obligation Rate.*

SSE understands the important role of the Biofuels Obligation Scheme in meeting Ireland's 2020 target of 10% renewable energy in transport. SEAI estimates that 320 million litres of biofuel will be required in order to meet this target.[1] It will therefore, be necessary for the Department to consider the cost of and ability to secure the supply of sustainable liquid biofuels needed to meet this requirement.

In this context and given the extensive challenges which lie ahead in meeting both Ireland's renewable and non-ETS targets SSE emphasises below the importance of the electrification of heat and transport in addition to the Biofuels Obligation Scheme. The electricity sector is one of the most successful at decarbonising (emissions have approximately halved since 1990) and is poised to assist others, including heat and transport. SSE has made an important contribution of the decarbonisation of the sector. SSE is Ireland's largest provider of wind power and we currently own and operate 768MW of renewable energy at our 28 onshore windfarms.

Policy Backdrop

Ireland has a challenging outlook to achieve its ambition as outlined in the Government White Paper on Energy entitled "Ireland's Transition to a Low Carbon Energy Future – 2015-2030" where it stated:

> *'Our vision of a low carbon energy system means that greenhouse gas (GHG) emissions from the energy sector will be reduced by between 80% and 95%, compared to 1990 levels, by 2050, and will fall to zero or below by 2100.'*

Furthermore, the 2020 EU Energy and Climate Framework outlines a 20% reduction in GHG emissions by 2020 and a 16% renewable target for Ireland, which Ireland is seeking to meet through 40% renewable electricity, 12% renewable heat and 10% renewable transport. The proposed revised Renewable Energy Directive,[2] which was released as part of the European Commission's Clean Energy Package, indicates that Member States will not be allowed to reduce the renewable share of energy use below the 2020 target in the period 2020-2030 (i.e. Ireland will have a target of at least 16% - made up of 40% RES-E, 12% RES-H, and 10% RES-T).

In October 2014, the EU Energy and Climate Framework was agreed which includes a 40% reduction in GHGs by 2030 and was the EU submission to the COP 21 discussions and subsequent global agreement. This is all set against an EU leaders' commitment to a reduction in the EU's GHG emissions of 80-95% by 2050 compared to their 1990 levels. This position is continuing to develop through the recently reached provisional agreement[3] on the Draft Effort Sharing Regulation, which is being progressed towards a definitive target for Ireland for 2030.

The decarbonisation challenge is particularly acute in the area of the non-emissions trading scheme (ETS), where most of Ireland's emissions lie (approximately 70%). A strong contributor to this is that Ireland has proportionately the largest agricultural sector in the EU.

[1] https://www.seai.ie/resources/publications/Irelands_Energy_Projections.pdf
[2] http://eur-lex.europa.eu/resource.html?uri=cellar:3eb9ae57-faa6-11e6-8a35-01aa75ed71a1.0007.02/DOC_1&format=PDF
[3] http://europa.eu/rapid/press-release_STATEMENT-17-5382_en.htm

This effectively means that efforts to decarbonise heat and transport in Ireland must move more quickly than in other EU Member States. A recent EPA report[4] noted that Ireland will likely achieve a 4-6% reduction on its 2005 emissions rather than its 20% target. As such, the electrification of the heat and transport sectors will be vital in achieving Ireland's decarbonisation goals. In doing so, it would absorb the non-ETS emissions into the ETS and help reduce the cost of abatement. The electrification of the heat and transport sectors therefore contributes to both the achievement of Ireland's renewable and non-ETS targets.

Transport

The Consultation Document states "the deployment of biofuels through the Biofuels Obligation Scheme will be the primary mechanism to ensure that Ireland's renewable energy target of 10% for transport is met" – in SSE's view diversification and electrification will be also be central to reaching Ireland's targets, both renewable and non-ETS. [5]

In 2015, transport sector emissions amounted to the second largest contributor to overall emissions at 19.8%, an increase of 130% since 1990. In order to meet climate change targets and to avoid a lock in of fossil fuels, the transport sector must transition away from the use of fossil fuels, moving predominately to electricity for passenger cars, commuter rail, taxis, and (urban) buses by 2030. Transport is closely aligned with economic activity, creating a very challenging outlook for both air quality and carbon emissions associated with the sector.

The electrification of transport can bring a number of additional benefits including –

- Energy Efficiency: EVs are more energy efficient. In addition to reducing Ireland's carbon emissions EVs will also help to deliver against Ireland's energy efficiency target.
- Improved Air Quality[6] and reduced noise: no point of use emissions and reduced noise is particularly important in cities.
- Security of Supply: This is strengthened through diversification and also introducing an element of battery storage and potential grid support.
- Demand Response: It will offer the opportunity for customers to influence consumption and provide electricity system services.

Ireland's private car fleet makes the biggest contribution to C02 emissions, and along with the decarbonisation of public transport, should be tackled as a priority.

Given Ireland's dispersed settlement pattern and high reliance on commuter vehicles, government policies will need to support the deployment of the infrastructure required to transition to a low carbon economy e.g. appropriate placement of EV charging points throughout the country – for both private vehicles and public transport – including its integration into existing infrastructure as technology develops, such as inductive charging points. SSE is a strong advocate of the benefits competition can bring to consumers and notes that any infrastructure developed, such as charging points, should have open access for suppliers and consumers.

[4] http://www.epa.ie/pubs/reports/air/airemissions/ghgprojections/EPA_2017_GHG_Emission_Projections_Summary_Report.pdf

[5] SSE notes the Department's view that Ireland aims to meet the 10% renewable energy target in the transport sector through the increased use of sustainable biofuels, with electric vehicles also making a contribution.

[6] The National Clean Air Strategy Consultation notes some of the associated health impacts from black carbon. Black carbon is a very fine constituent of particulate matter (PM), and as such it can penetrate into the respiratory system with associated health impacts. It is formed by the incomplete combustion of fossil fuels, biomass and biofuels and is directly emitted into the air (p.60) - https://www.dccae.gov.ie/documents/Clean%20Air%20Strategy%20Public%20Consultation.pdf

The Department should consider the Irish Government's recently published National Policy Framework on Alternative Fuels Infrastructure for Transport in Ireland and the proposals outlined in the EU Clean Energy Package[7] in relation to the electro-mobility under the Energy Performance of Buildings Directive (EPBD).

The National Policy Framework on Alternative Fuels Infrastructure for Transport in Ireland – 2017 to 2030 forecasts the use of 250,000 passenger EVs by 2025 and 800,000 by 2030 - it will be necessary to ensure that the roll-out EV charging infrastructure is proportionate to the uptake of EVs. Parallel to this the Commission's EPBD proposal introduces new requirements as regards infrastructure for electro-mobility – new non-residential buildings with more than ten parking spaces, and non-residential buildings with more than ten parking spaces undergoing major renovation will have to equip one parking space per ten for electro mobility. This will apply to all non-residential buildings with more than ten parking spaces as of 2025. The proposal also outlines, that new residential buildings with over ten parking spaces, and those undergoing major renovation, will have to put in place the pre-cabling for electric recharging. These stipulations are indicative of the new types of infrastructure that will be required to support the transition to a low carbon transport sector.

The Low Emissions Vehicles Task Force is working in a cross-departmental capacity to consider ways we can move towards our transport targets more quickly. Given the additional requirements that will be required in relation to electro-mobility, SSE would recommend taking a pro-active approach

Heat

SSE notes the Department's consideration of the possibility of introducing an obligation scheme (similar to the Biofuels Obligation Scheme) in the heating sector. In SSE's view the electrification of heat has a greater role to play in terms of realising Ireland's decarbonisation potential and reducing air pollution and this should be the key focus for the Department.

The on-going decarbonisation of electricity supply and recent innovations in relation to electricity based renewable technologies including air source pumps, makes electricity an attractive option as the clean, low carbon energy choice for heating. Given the difficulties with reducing carbon emissions in Ireland's non-ETS sector and the impact some forms of renewable heat have on air quality, SSE argues that the electrification of heat has a lot to recommend it in terms of realising Ireland's decarbonisation potential. Electric heating technologies also bring significant energy efficiency e.g. pumps and have the potential to assist with renewables integration through demand side management and system services.

SSE alongside energy market participants such as Glen Dimplex, EirGrid and ESB Networks are involved in a Horizon 2020 project titled 'Real Value'. The project commenced in June 2015 and involves installing thousands of Smart Electric Thermal Storage Systems (SETS) into 1,250 homes across Ireland, Germany and Latvia. This technology has been developed to meet householders' space and water heating needs in a low cost and energy efficient manner while also providing additional energy storage capacity. This is the type of technology we see becoming common place i.e. where a consumer's carbon footprint and energy costs are reduced, with little impact on their daily routine. This is expertise in the Irish market that could provide workable solutions in retrofitting existing housing stock to best suit the flexibility and living requirements of occupants.

[7] http://ec.europa.eu/energy/en/news/commission-proposes-new-rules-consumer-centred-clean-energy-transition

In SSE's view the Department should take steps to support the conversion of homes using higher carbon fuel sources such as oil for heat, to an appropriate electric heating solution. Given Ireland's dispersed settlement pattern, the electricity network provides an appropriate solution to the issue of geographic dispersion, as properties already have an electricity supply.

One of the barriers to electrification at present is the current calculation of energy efficiency savings by reference to an outdated Primary Energy Factor (PEF).[8] The PEF, generally, is a static and backward facing measure and does not take into account the decarbonisation trajectory that electricity is on. We believe that this not only hinders the decarbonisation agenda, but also has the ability to prolong Ireland's energy import dependence on fossil fuels. We recommend that given the focus of climate and energy policy on the reduction of GHG emissions that it would be more productive to measure savings by reference to carbon rather than by energy, and in doing so to recognise the advances made in decarbonising the electricity supply. By failing to recognise these advances, policy incentivises the lock in of fossil fuel technologies for another investment cycle reduces Ireland's ability to tackle climate change. In this regard, we advocate for the application a factor 0 to RES-E sources in the overall PEF calculation methodology at both EU and national level (where Ireland has the ability to apply its own calculation under the EU Clean Energy Package) in order to ensure prevent the lock in of carbon intensive technologies.

Conclusion

SSE is available to discuss any aspect of this submission further and would like to thank the Department of Communications, Climate Action, and Environment for the opportunity to respond to this consultation.

About SSE

SSE is Ireland's second largest energy utility and the country's leading developer and investor in cleaner energy infrastructure. It is part of SSE plc, a UK-listed, FTSE 100 company and the broadest-based energy utility on the London Stock Exchange. Since 2008, we have invested over €2 billion in the development of Ireland's sustainable energy infrastructure, helping to green our economy and secure our energy future.

In Ireland, SSE owns and operates 2,061MW of generation capacity, of which 768MW is from its portfolio of 28 onshore wind farms, making SSE the largest generator and provider of renewable energy in the all-island Single Electricity Market.

SSE's retail arm, SSE Airtricity, is proud to be Ireland's largest provider of 100% renewable energy to all its home and business customers and the second largest energy provider on the island of Ireland, supplying greener electricity, natural gas and essential services to around 800,000 homes and businesses. In addition to the renewable energy offtake from SSE plc's fleet of wind farms, SSE Airtricity also has long term Power Purchase Agreements in place

[8] *The PEF indicates how much primary energy is used to generate a unit of electricity and plays a key role in determining the efficiency of electricity-using devices. The current PEF methodology misrepresents the efficiency of electricity using products and gives an advantage to fossil fuel technology. This encourages the use of more fossil fuels, despite the overall intention to incentivise a reduction in fossil fuel use by using efficient products and systems. With a lower PEF, heat pumps as the most efficient heating technology would lead over fossil fuel alternatives, and other electricity using products would become more competitive.*

with third party renewable energy generators for over 300MW of wind and solar sourced power on the island, including energy from the largest solar farm on the island of Ireland, Bann Road at Rasharkin in Co. Antrim. Its street lighting division SSE Airtricity Utility Solutions is Ireland's largest public lighting contractor responsible for the maintenance of over 250,000 street lights across the country.

Since 2010, SSE has contributed over €5bn to Irish Gross Domestic Product (GDP), demonstrating the scale of economic activity that SSE's operations support across Ireland. In the last year, SSE's Irish operations have contributed almost €800m to GDP, equivalent to 0.4% of the country's entire GDP and supporting over 4,700 jobs regionally and nationally. In direct capital expenditure, SSE has invested over €2bn since 2008 in the developing new and cleaner energy infrastructure for Ireland.

SSE is Ireland's largest single contributor of funding to rural communities from wind energy. Since 2008, SSE's Community Funds have provided voluntary funding totalling over €5million to over 2,100 groups near SSE wind farms in regional Ireland supporting community-led energy efficiency and sustainability projects. **To view the report in full, click on the link here:** Energising Communities in Rural Ireland - Community Funds Annual Review 2016/17[9]

[9] http://ireland.sse.com/media/21125/Energising%20Communities%20in%20Rural%20Ireland.pdf