

Further written evidence submitted by ReNew ELP (PW0063)

Enabling investment to meet Government policy outcomes

1. We welcome the implementation of the measure, the **Plastic Packaging Tax**. This has been a key enabler to our sector as the Chemical Industry has realised it needs to support the new technologies which provide access to recycled feedstock. The vast majority of investment into commercialisation of Chemical Recycling to date has come from the Chemical Industry.
2. UK Govt innovation investment into the sector is also hugely beneficial to drive further inward investment, and economic growth. As I mentioned, we were successful in our application for funding as part of the Innovate UK's Smart Sustainable Plastic Packaging Demonstrator competition, which was a key driver in my company being able to close out funding for our capital programme, and indeed support the independent Life Cycle Assessment of our recycling process.
3. Through the application process for these funds, as we were required to demonstrate clearly to Innovate UK that we were aligned with Govt. policies and strategies on plastics recycling, and therein the UK Plastics Pact targets for recyclability, recycling and recycled content. The importance of this should be underestimated and clear policy around the role of Chemical Recycling will only increase investor confidence.
4. In response to the question around 'is the packaging tax enough' I made reference to considering tax on the incineration of plastics, and wanted to expand further on this:
 - a. **Incineration - burning waste plastic vs coal:** Burning waste plastic has historically been seen as expedient to deal with this waste stream and 'recover' calorific value, or energy. But is inefficient as a fuel – burning plastic creates 38% more emissions than burning coal for the same amount of energy (Analysis: Sphera GABI LCA database data).

Using plastics for energy recovery is one of the worst things we can do from an environmental perspective, and of course prevents that material coming to processors for recycling back into circular hydrocarbons.

- b. **Accessing residual, post mechanical recycled, waste plastics:** Access to plastic feedstock has been one of the biggest issues we have faced for our UK project. The Mechanical Recycling Industry are content to extract recyclate of value and then blend residual streams into Refuse Derived Fuel (RDF) / Solid Recovered Fuel (SRF) for use in energy recovery. This remaining circa 50% of unrecycled plastics are in this material and represent our target feedstock, yet the Mechanical Recyclers are currently unwilling to separate plastics from this stream and make it available to Chemical Recyclers as it requires additional investment (sorting) meaning the most economic route is still EFW. Until this changes we will continue to struggle with sourcing our target feedstock of unrecyclable waste plastics. To put this into perspective, we have had to install our own Material Recovery Facility (MRF) on the front of our UK plant to sort the waste plastic feedstock further (remove grit, metals, paper etc) to make it suitable for processing.

For the reasons of supporting a Net Zero pathway for both the waste and chemical sectors, and conserve natural resources within a circular economy, the Committee

may consider measures that move plastics away from energy from waste recovery, and back into recycling. This would act as a spur to valorise this material, such that end markets can be developed to sort and process this material. The measure would resemble the application of the Landfill Tax, which sought to divert biodegradable waste out of landfill and into beneficial recycling processes.

- c. **Standards for waste plastics:** the Committee may not be aware that there are no 'standards' for residual waste plastics, meaning that there is no driver for the value of that to be maximised. Instead, all this material becomes simply only available for burning in incinerators. And, mechanical recyclers 'pay' a gate fee to the incinerators to disposed of this residual waste.

In the short term, standards relating to the composition of plastic waste residues from mechanical recyclers is an interim step which should be relatively easy to implement as this is commonplace in the EU. In that situation, waste plastic residues have specifications to which they must comply, meaning the standards are already in place and known to the industry. This would help improve the value of these materials, and from a life cycle standpoint, be most effectively processed at scale within the mechanical recycling sector.

From an economic standpoint, there is otherwise an increased risk that Chemical Recyclers will look at deploying technology in Europe rather than the UK because they can more readily secure supplies of waste plastic they need, at the right 'quality'.

- 5. My reference to legislative drivers being unclear relates to:

- a. **Extended Producer Responsibility:** we support the aims and objectives of the current EPR regulatory regime. Our UK site has just received Environment Agency accreditation as a reprocessor of plastic waste. This means that when we come on line later this year we will be eligible for Packing Recycling Notes (PRN), and related payments as we have achieved End of Waste. However when the current PRN system is replaced with the EPR, it is not clear where the tax income will be deployed across the plastics chain – if this goes to local authorities will it be focused on enhanced collection, DRS etc or will a percentage of this be allocated to the 'approved reprocessor' as per the current scheme? At this point in time we have no option but to discount the revenue from PRN's to zero in future financial predictions with no replacement in incentive from the EPR system.
- b. **Plastic Tax – 'secondary legislation':** As already mentioned, we strongly support the plastic packaging tax as a market measure, to valorise recyclates to be brought back into future packaging. Other than mechanically-recycled closed loop systems as mentioned by witnesses yesterday (for example, PET bottles, and HDPE milk cartons), chemical recycling presents a unique approach to create the circular plastic economy specifically for food-grade, highly-regulated, plastics. This 'sector' can recycle 'hard to recycle' multi-layered, flexible packaging (cling film, crisp packets) and pots tubs and trays commonplace in food packaging, back into hydrocarbon. This chemical industry feedstock can then be used directly into new food grade packaging, by virtue that the recycling process goes back to 'hydrocarbons' and not 'plastic to plastic'.

As mentioned yesterday and in the evidence in the Committee's hearing 1, without secondary legislation to support the accounting mechanism for this (e.g. mass balance accounting) then it is not clear how we account for the use of our recycled feedstock in the production of new plastics. The industry is already moving forward on this with compliance schemes (e.g. ISCC + accreditation) but we also need legislation to agree this is appropriate. We welcome the Committee's engagement with this as the Plastic packaging Tax comes into force from April 2022. Without this in place, the benefits of the measure to encourage recycled content into food applications, is likely to be reduced significantly. Instead, the recycle we produce will most likely be sold in to packaging retained in the EU.

- c. **Policy and regulatory outcomes:** Sitting between and across the waste and chemicals sectors, we are regulated and influenced by a number of (sometime conflicting) regimes: including:
- Site based regulation – we have an Environmental permit for our operations, which falls within existing chemical industry sector requirements
 - Market based regulation: Plastics Tax, Extended Producer Responsibility
 - Waste Management: waste processing, End of Waste (Waste Framework Directive)
 - Product based regulation: REACH and UK REACH

And of course, if we export our products, we must meet the requirements of the destination – such as the EU.

Navigating our way through these requirements as a new sector is a challenge. However, this can be helped significantly by clarity on the Government's overall policy towards Chemical Recycling, and the outcomes it would wish to see achieved for material circularity, Net Zero, and resource depletion – all of which relate to the current fossil oil-based system. As discussed in our session yesterday, the current measures make significant progress in waste and environmental management, but whether they make a coherent 'whole' will depend on the outcomes desired.

- d. **Overarching Policy towards Chemical Recycling:** working from 'c' above, the Chemical Recycling Industry is a new (disruptive) technology sector which is evolving rapidly and covers a wide variety of technologies and applications. This is making it very difficult to understand what role it should play in what is a very complex and wide-ranging problem relating to waste plastics and plastic recycling. As Professor Shaver said yesterday, it's important we align the right technology to the appropriate waste stream – and that applies across the family of Chemical Recycling technologies.

We would welcome the Committee's support to propose that the policy towards chemical recycling is developed as a cross department activity, incorporating:

- Defra (Resources and Waste; Chemical Regulation; Environmental Regulation) – as convenors/policy owners
 - BEIS – chemicals industry
 - DIT – export of technology and hydrocarbon feedstock
 - HMRC/HMT
- e. **Economic benefits:** We did not discuss the economic benefits of the sector. But in summary, the value proposition of chemical recycling can be taken as:

- Technology innovation, licence and consultancy sales internationally
- Process chemical engineering technical and management – high quality jobs
- Development in former industrial heartlands, including the North East
- Sales of hydrocarbon feedstock to chemical processors
- Reduced waste plastic, and export of waste materials

Like the chemical sector, the UK is at the forefront of the chemical recycling sector investment and development, but we are aware that this could readily switch to the EU. Adrian Whyte, Plastics Europe as a witness in the first evidence hearing, identifies €7Bn investment to come forward.

Critically, signalling on the policy towards chemical recycling by UK Government is keenly awaited by investors. The UK is extremely well-placed to become a global leader in this technology area, and generate the significant environmental and economic benefits for the UK. Conversely, disincentivising the UK market will drive the investment into the EU continent into jurisdictions where it is increasingly being incentivised in policy terms – viz recent announcement by the new German Government.

The Committee's role in this investment opportunity at this time cannot be underestimated.

In summary, in reality, all participants in the session represent solutions which need to play a part and we stand ready to work with others to understand what part this is and how they best fit together which is a hugely complex puzzle to solve!

We stand ready to support the Committee and the UK Government realise the economic and environmental benefits on this waste plastic recycling.

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Witness to the EFRA Committee (18 January 2022)