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The Move to Sustainable, Non-Fossil Carbon Feedstocks

One key industry in push to tackle the climate emergency is the petrochemical industry, amounting to 11% of our carbon dioxide emissions. This evening, organised in partnership with the Society of Chemical Industry, we heard from four expert speakers about how this industry is changing and what needs to be done to further progress. Andreea Sapunaru, Clean Future Marketing Director for Unilever Fabric Cleaning, spoke to us about consumer considerations when moving to more sustainable options and how Unilever is trying to make sustainability more accessible. Thomas Birk, Vice President and Managing Director at BASF UK & Ireland, spoke to us about the industry producing the necessary chemical for many everyday products and how we can look for more sustainable production. Nick Challoner, Group Chief Scientific Officer at Croda International PLC, spoke to us about how Croda specifically is moving to more sustainable production and how these methods could be used by the wider industry. Lastly, Dr Jem Woods, Reader in Sustainable Development at Imperial College's Centre for Environmental Policy, explained the scale of the challenge we face and what key considerations need to be made when implanting policies. The Q&A section focused largely on how government can help the petrochemical industry meet the necessary targets for environmental impact reduction.

Consumers want to be more sustainable, and Ms Sapunaru explained how over recent years awareness of the environmental impact of products has been rising; at the height of the pandemic 71% of Unilever's costumers believed that tackling climate change was just as important as tackling COVID-19. However, customers still require products to be effective and affordable, and so Unilever is working to reduce their products environmental impact whilst still keeping costs down and quality high. However, Unilever can only

go so far, as it's a downstream consumer of materials produced from petrochemicals.

The key challenge for this industry is in the production of these chemicals. Mr Birk explained how the processing plants run by BASF are large and highly efficient, and we'll need a method of reducing carbon output whilst keeping this efficiency. That is possible, with one options being the use of palm oil as a source of fatty acids to produce the chemicals required. However, this isn't without its challenges, and considerations of land use need to be taken seriously. Mr Challoner outlined how Croda aims to be climate positive, land positive, and people positive by 2030. A key way to achieve these is to use biomaterials to produce the necessary chemicals for their cliental. It's also necessary to consider how carbon is used over the whole supply chain. For a lot of companies are large portion of the environmental impacts comes from 'indirect' emissions, such as through customer processing or end of life treatment of materials. All of these need to be taken into account to limit environmental impact.

Croda is well-positioned to make these changes, but all of the guest speakers outlined the need for a wider industry and governmental strategy to meet the necessary targets. Dr Woods explained the scale of the challenged faced here. The industry is a complex interconnection of entities and all of these need to work in a coordinated manner to achieve the necessary changes. Dr Woods also outlined how as a society we need to be able to feed more people, produce more energy and materials for people, whilst reducing emissions. This simply isn't possible without a coordinated strategy.

Alfie Hoar

*P&SC Discussion Meeting, 'The Move to Sustainable, Non-Fossil Carbon Feedstocks'
28th March 2022*