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Via email: AQconsultations@defra.gov.uk

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UKPIA Response to Defra Consultation - Air Quality: Consultation on the draft National Air Pollution Control Programme

Dear Sirs,

UKPIA represents the eight main oil refining and marketing companies operating in the UK. The UKPIA member companies – bp, Essar, Esso Petroleum, Petrolneos, Phillips 66, Prax Refining, Shell and Valero – are together responsible for the sourcing and supply of product meeting over 85% of UK inland demand, accounting for a third of total primary UK energy¹.

UKPIA welcomes the opportunity to respond to the consultation on the draft National Air Pollution Control Programme.

Our detailed responses to the questions posed in the consultation document are given in Attachment 1.

Yours faithfully,



Dr Andrew Roberts
Director – Downstream Policy

cc: Michael Duggan BEIS
Simon Stoddart BEIS
Mike Mackay BEIS

¹ [BEIS Digest of UK Energy Statistics \(DUKES\) 2021 Tables 3.2-3.4.](#)

Attachment 1

UKPIA Response to Defra Consultation “Air Quality: Consultation on the draft National Air Pollution Control Programme

Q1. Would you like your response to be confidential

The response is not considered confidential.

Q2. What is your name?

Andrew Roberts

Q3. What is your e-mail address?

andy.roberts@ukpia.com

Q4. What is your location?

UKPIA represents the eight main oil refining and marketing companies operating in the UK. The six major refineries are located in England (4), Scotland (1) and Wales (1).

Q5. What type of organisation are you responding on behalf of?

- Industry body

Policy related questions

Q6. Do you agree or disagree with the balance of measures across the 7 NAPCP packages as set out in section 2.6.1 of the NAPCP document, for the abatement of fine Particulate Matter (PM_{2.5})?

Neither agree or disagree. The way in which the estimates of the abatement associated with the individual PaMs have been obtained is not transparent.

Within the refining sector, PM_{2.5} emissions from point sources are derived from estimates of PM₁₀ emissions based on monitoring (continuous or periodic) of dust emissions using factors. This introduces significant uncertainty in PM_{2.5} emissions levels reported for the sector. UKPIA is continuing to work with the environmental regulators to improve the estimation methodologies.

Q7. Do you agree or disagree with the balance of measures across the 7 NAPCP packages as set out in section 2.6.1 of the NAPCP document, for the abatement of Ammonia (NH₃)?

Neither agree or disagree. The way in which the estimates of the abatement associated with the individual PaMs have been obtained is not transparent.

Q8. Do you agree or disagree with the balance of measures across the 7 NAPCP packages as set out in section 2.6.1 of the NAPCP document, for the abatement of Nitrogen Oxides (NO_x)?

Neither agree or disagree. The way in which the estimates of the abatement associated with the individual PaMs have been obtained is not transparent.

Q9. Do you agree or disagree with the balance of measures across the 7 NAPCP packages as set out in section 2.6.1 of the NAPCP document, for the abatement of Non-Methane Volatile Organic Compounds NMVOCs?

Neither agree or disagree. The way in which the estimates of the abatement associated with the individual PaMs have been obtained is not transparent.

Within the refining sector, NMVOC emissions are estimated using recognised industry methodologies. UKPIA is continuing to work with the environmental regulators to standardise use of more robust estimation methodologies; this and reductions in some of the parameters used in the estimation methodologies (e.g. throughput) has led to a reduction in reported emissions in recent years.

Q10. Do you agree or disagree with the balance of measures across the 7 NAPCP packages as set out in section 2.6.1 of the NAPCP document, for the abatement of Sulphur Dioxide (SO₂)?

Neither agree or disagree. The way in which the estimates of the abatement associated with the individual PaMs have been obtained is not transparent.

Q11. After the publication of this NAPCP, UK government and devolved administrations will continue to develop our policy measures and approaches. Please inform us of any further measures you think we should consider to help achieve the UK ERCs most effectively.

Proposals should be evidence based. Please select a country from the list below to which your measure(s) relate to and use the text box and file upload button to describe the proposed measure and supporting evidence.

UK wide

UKPIA has no response to this Question.

Technical related questions

Q12. Do you agree or disagree with the scale of the potential emission reductions for each of the 7 packages of PaMs as set out in table 2.6.1 of the draft NAPCP?

Don't know

If you answer disagree (you feel the scale is either too low or high) please provide views and information to support your view.

UKPIA note the high level of uncertainty present in the projections due to COVID impacts and economic uncertainty. For the refining sector, there is also uncertainty regarding implementation of hydrogen-firing and carbon capture projects before 2030. These have the potential to drive significant reductions in PM_{2.5} and SO_x emissions levels.]

Q13. We have outlined the uncertainty of projections in the 'UK NAPCP additional factors' above. Please provide any additional information on potential changes over the next 8 years which may impact emission projections. Please also select the category that your information relates to.

Technical/Scientific

The level of uncertainty in the projections from use of hydrogen as a fuel source has been noted in the Consultation Document. A number of hydrogen-firing projects are planned within the refining sector and are due to be implemented before 2030. Examples include:

- The [Hynet](#) project located in the North West, with associated hydrogen firing projects at the Essar Stanlow refinery².
- The [Gigastack](#) project, where green hydrogen produced via electrolysis will be used by the Phillips 66 Humber refinery, replacing refinery fuel gas and natural gas.

Many other hydrogen projects are targeted at industrial use, replacing fossil fuels with associated PM_{2.5} and PM₁₀ emissions³.

There are also a number of industrial carbon capture, utilisation and storage projects planned for commissioning before 2030⁴. Where these involve CO₂ capture from stack emissions from combustion plant or refinery fluid catalytic cracking units (FCCs), CO₂ capture is likely to be accompanied by significant reductions in PM_{2.5}, PM₁₀, NO_x and SO₂ emissions.

Q14. In revising the NAPCP the UK has followed the format set out in EU implementing decision 2018/1522. Do agree or disagree that the format of the NAPCP could be improved?

Neither agree or disagree.

If you answer agree and think the format could be improved, please provide views on how the NAPCP can be improved. This can be either presentational (the format or content required), or effectiveness/usefulness of the document. If you disagree and don't think the format of the NAPCP could be improved, please provide your views on the content and/or effectiveness/usefulness of the current format.

UKPIA does not hold a strong opinion on the format of the NAPCP. However, use of the format set out in EU implementing decision 2018/1522 is likely to allow straightforward comparison with the NAPCPs developed by EU Member States, both in terms of the PaMs considered and projected policy impacts by sector.

² These include a hydrogen-fired crude unit furnace, which is due to replace three existing furnaces (see <https://www.essar.com/essar-to-build-uks-first-refinery-based-hydrogen-furnace-in-45-million-investment/>) and a hydrogen fired CHP plant (see <http://www.essaroil.co.uk/news/world-first-low-carbon-hydrogen-projects-in-the-north-west-win-13m-government-backing/>).

³ [BEIS Hydrogen sector development action plan](#) and associated project map.

⁴ [BEIS Cluster sequencing Phase-2: shortlisted projects \(power CCUS, hydrogen and ICC\)](#), August 2022