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Via email: emissions.trading@beis.gov.uk

Emissions Trading Scheme Team
Department for Business, Energy and Industrial Strategy
1 Victoria Street
London
SW1H 0ET

Response to BEIS Call for Evidence: UK ETS Free Allocation Review

Dear Sirs,

UKPIA represents the eight main oil refining and marketing companies operating in the UK. The UKPIA member companies – bp, Essar, Esso Petroleum, PetroIneos, 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 energy[1].

The refining and downstream oil sector currently lies at the centre of the Welsh and broader UK economy. It provides a secure supply of affordable energy for road and rail transport, aviation and marine applications, as well as for commercial and domestic heating. It also supplies feedstocks for the petrochemicals sector, along with specialised non-energy products such as lubricants, bitumen for use in road surfacing, and graphite for use in electric vehicle batteries and as electrodes in steel and aluminium manufacture.

The sector, therefore, has an opportunity to be at the heart of an orderly and just transition to a Net-Zero economy. By reinventing itself, using its extensive resources to decarbonise its activities and products, the sector has an important role also in future supply of new energy carriers and technologies such as hydrogen, energy storage and carbon capture, utilisation and storage.

UKPIA welcomes the opportunity to respond to the call for evidence on the UK ETS Free Allocation Review. Key points are as follows:

- UKPIA believe a broad range of policy measures will be required to mitigate against carbon leakage/competitiveness impacts arising from carbon pricing policies and to support the high levels of investment required in decarbonisation and transformation projects.
- Existing carbon leakage measures (free allocation and indirect costs compensation) mitigate carbon costs only partially, since they are based on strict performance benchmarks set at the level of the average best 10% installations.

[1] BEIS Digest of UK Energy Statistics (DUKES) 2019 Tables 3.2-3.4.

- Higher levels of ambition for decarbonisation will inevitably require strengthened protection for energy intensive industries exposed to carbon leakage, but policy measures introduced to mitigate against carbon leakage should also consider the potential for investment leakage.
- The ETS Free Allocation Review should be broader in scope. Complementary measures such as carbon border adjustment mechanisms (CBAMs) should be considered alongside the review of free allowance allocation, since nether mechanism by itself is likely to provide the level of protection required at higher carbon prices.
- UKPIA strongly supports linkage between the UK ETS and other emissions trading schemes and more specifically, early linkage between the UK ETS and the EU ETS. Linkage would allow UK operators to be part of a larger more liquid market, give better carbon price discovery, and allow UK operators to have a level playing field on carbon with their largest market and, for some sectors, greatest source of competition.
- With the limited number of UK refineries (6), their complexity and different configurations, there is little prospect for the development of an equitable UK refinery benchmark using an alternative methodology to that used in the EU ETS or indeed, a benchmark using the current methodology and UK refinery data only.
- UKPIA believe the arbitrary split between the distribution of allowances between the auction and free allowance shares should be removed to ensure sufficient allowances are available for full allocation at 100% of the benchmark value, ensuring to maintain carbon leakage protection via free allocation at the level intended.
- The refining sector is unable to pass additional costs through to consumers, as it operates in a highly competitive global market for crude oil and finished products. A level playing field must be provided to avoid unintended consequences where the GHG emissions associated with overseas manufacture and shipping of imported product are higher than if the domestic production had been maintained.

Detailed responses to the questions posed in the call for evidence are given in Attachment 1.

Yours faithfully,

Dr Andrew Roberts
Director – Downstream Policy

cc:

	Michael Duggan	BEIS
	Simon Stoddart	BEIS
	Mike Mackay	BEIS

Attachment 1

UKPIA Response to BEIS Call for Evidence: UK ETS Free Allocation Review

1. Executive Summary

- UKPIA believe a broad range of policy measures will be required to mitigate against carbon leakage/competitiveness impacts arising from carbon pricing policies and to support the high levels of investment required in decarbonisation and transformation projects.
- Existing carbon leakage measures (free allocation and indirect costs compensation) mitigate carbon costs only partially, since they are based on strict performance benchmarks set at the level of the average best 10% installations.
- Higher levels of ambition for decarbonisation will inevitably require strengthened protection for energy intensive industries exposed to carbon leakage, but policy measures introduced to mitigate against carbon leakage should also consider the potential for investment leakage.
- The ETS Free Allocation Review should be broader in scope. Complementary measures such as carbon border adjustment mechanisms (CBAMs) should be considered alongside the review of free allowance allocation, since nether mechanism by itself is likely to provide the level of protection required at higher carbon prices.
- UKPIA strongly supports linkage between the UK ETS and other emissions trading schemes and more specifically, early linkage between the UK ETS and the EU ETS. Linkage would allow UK operators to be part of a larger more liquid market, give better carbon price discovery, and allow UK operators to have a level playing field on carbon with their largest market and, for some sectors, greatest source of competition.
- With the limited number of UK refineries (6), their complexity and different configurations, there is little prospect for the development of an equitable UK refinery benchmark using an alternative methodology to that used in the EU ETS or indeed, a benchmark using the current methodology and UK refinery data only.
- UKPIA believe the arbitrary split between the distribution of allowances between the auction and free allowance shares should be removed to ensure sufficient allowances are available for full allocation at 100% of the benchmark value, ensuring to maintain carbon leakage protection via free allocation at the level intended.
- The refining sector is unable to pass additional costs through to consumers, as it operates in a highly competitive global market for crude oil and finished products. A level playing field must be provided to avoid unintended consequences where the GHG emissions associated with overseas manufacture and shipping of imported product are higher than if the domestic production had been maintained.

Key questions and issues that the Review should consider therefore include:

1. Whether the scope should be expanded to include consideration of a broader range of policy measures required to mitigate against carbon leakage/competitiveness impacts.

2. Whether linkage to other emissions trading schemes and more specifically, early linkage between the UK ETS and the EU ETS, is likely to compromise UK competitiveness at a time when the UK is seeking to decarbonise rapidly to meet the Net-Zero ambition.

3. The basis for revision or replacement of the existing benchmarking methodology.

4. The split between the distribution of allowances between the auction and free allowance shares.
5. Fair and objective assessment of carbon leakage risk.
6. Use of alternative methodologies as a basis for compensation against indirect costs.

2. Introduction

Following implementation of the UK Emissions Trading Scheme on 1st January 2021, UKPIA note the context for the Free Allocation Review – Call for Evidence as described in the call for evidence document, in particular, the desire to develop an emissions trading scheme (ETS) with a greater level of ambition. We understand the longer-term scope for reform of the UK ETS will potentially include the following:

- Further reductions in the cap to be consistent with Net-Zero emissions by 2050.
- Review of the long-term role of free allowances.
- Further consideration of a supply adjustment mechanism.
- Changes in the number of sectors covered by the ETS, with a view to increasing its coverage to two-thirds of UK GHG emissions.
- Consideration of a broad range of potential options for approaching carbon leakage.
- Linkage to other emissions trading schemes internationally.

UKPIA and its member companies have supported emissions trading as a market-based mechanism to achieve decarbonisation for many years, beginning with implementation of the voluntary UK Emissions Trading Scheme in 2002 and continuing with its replacement by the mandatory EU Emissions Trading System (EU ETS) in 2005.

Although the carbon price remained below levels generally considered necessary to curb emissions during EU ETS Phases I and II, emissions from sectors covered by the EU ETS have reduced significantly and there is strong evidence that the EU ETS has reduced CO_2 emissions beyond what can be explained by lowering of emissions during the 2007/2008 financial crisis alone[2].

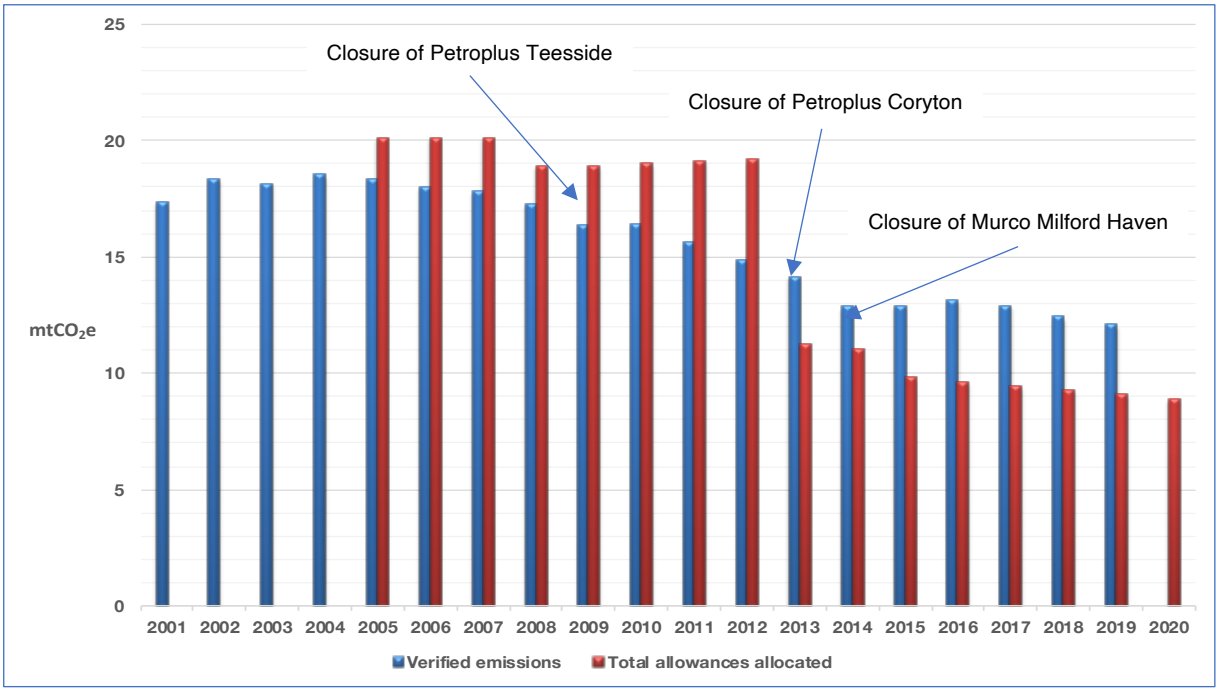
2.1. The EU ETS and UK Refining sector experience

The UK refining sector reduced its greenhouse gas emissions significantly during EU ETS Phases I and II (Diagram 1), achieving this in a number of different ways, including increased use of natural gas in furnaces, and the replacement of conventional oil-fired boilers by gas-fired combined heat and power plants.

Falling demand (in particular for road transport fuels), excess refining capacity in North West Europe and the collapse of Petroplus, also led to a number of refinery closures and reductions in capacity, with the UK becoming a net importer of petroleum products in 2013[1].

[2] P. Bayer and M. Aklin, *The European Union Emissions Trading System reduced CO_2 emissions despite low prices*, Proceedings of the National Academy of Sciences, Vol. 117, no 16, 8804-8812 (April 2020).

Diagram 1. Free allowance allocation and verified emissions for UK refineries - 2001 to 2020



Data source: UK NAPs, NIMs and EUTL

With the increasing gap between the level of free allowances and verified emissions during EU ETS Phase III, coupled with the increasing cost of allowances required for surrender against verified emissions, EU ETS costs have effectively become a tax burden on the UK refining sector. At current levels, these costs are unsustainable and give rise to serious risk of carbon and investment leakage, at a time when the sector is looking to invest heavily in decarbonisation and transformation projects such as charging infrastructure for electric vehicles, hydrogen production and supply, and carbon capture, utilisation and storage.

3. Carbon policies to mitigate carbon leakage and competitiveness impacts

UKPIA believe that a broad range of policy measures will be required to mitigate against carbon leakage/competitiveness impacts arising from carbon pricing policies and to support the high levels of investment required in decarbonisation and transformation projects. Although the allocation of free allowances has proved important in providing mitigation against carbon leakage during recent years with increasing carbon prices, this alone is no longer sufficient to provide an appropriate level of protection.

3.1. Protection against carbon leakage under higher levels of ambition

Higher levels of ambition for decarbonisation will inevitably require strengthened protection for energy intensive industries exposed to carbon leakage, but policy measures introduced to mitigate against carbon leakage should also consider the potential for investment leakage. In this regard, the impact assessment[3] accompanying the European Commission communication on the EU "2030 Climate Target Plan"[4] confirms the high exposure of energy-intensive industries to the carbon leakage risk due to unilateral climate ambition[5]. With this as background, we would like to highlight the following aspects of the complementarity and effectiveness of different carbon leakage measures:

[3] Available at https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52020SC0176.
[4] EC Commission Communication, *Stepping up Europe's 2030 climate ambition*, COM(2020) 562 final, 17 September 2020.
[5] Part 1, pages 79 and 86, tables 16 and 23; Part 2, pages 111 and 113, tables 47 and 49.

- Existing carbon leakage measures (free allocation and indirect costs compensation) mitigate carbon costs only partially, since they are based on strict performance benchmarks set at the level of the average best 10% installations.
- Under the EU ETS, free allocation is digressive and subject to the cross sectoral correction factor (CSCF) when there are insufficient allowances available under the EU ETS cap. Similar considerations would apply if the UK ETS cap were to be reduced to a level below that required for full allocation of free allowances.
- Existing carbon leakage measures have been defined in the recent revision of the EU ETS Directive and provide more legal certainty and visibility to EU producers compared to an untested and uncertain measures such as Carbon Border Adjustment Mechanisms (CBAMs), whose effectiveness relies also on the robustness and reliability of data provided by third countries.
- Removing existing carbon leakage measures would expose UK producers to the full carbon cost, reducing their ability to invest in low carbon technologies when such costs cannot be recovered from the market due to international competition.
- In the absence of a rebate for exports, a CBAM with full auctioning would jeopardise the competitiveness of UK producers in third markets even more.
- Maintaining the current carbon leakage measures with a complementary CBAM instead of full auctioning mitigates the impact on downstream sectors and final consumer pricing, since the carbon leakage measures limit the costs also for downstream sectors.
- Even with a complementary CBAM, installations still have an incentive to improve their performance and achieve (and where possible even over-achieve) the benchmarks, since they would save on their ETS compliance costs and have a better competitive position.
- Maintaining the current carbon leakage measures with a complementary CBAM (implemented as a border measure, consumption charge or excise duty) reduces the impact at the border, as the CBAM takes into account the free allocation granted to industry. Provided this is WTO compliant, this would mitigate the impact on trade flows and facilitate international trade compared to a CBAM without existing carbon leakage measures, which would apply the full carbon costs to traded products.

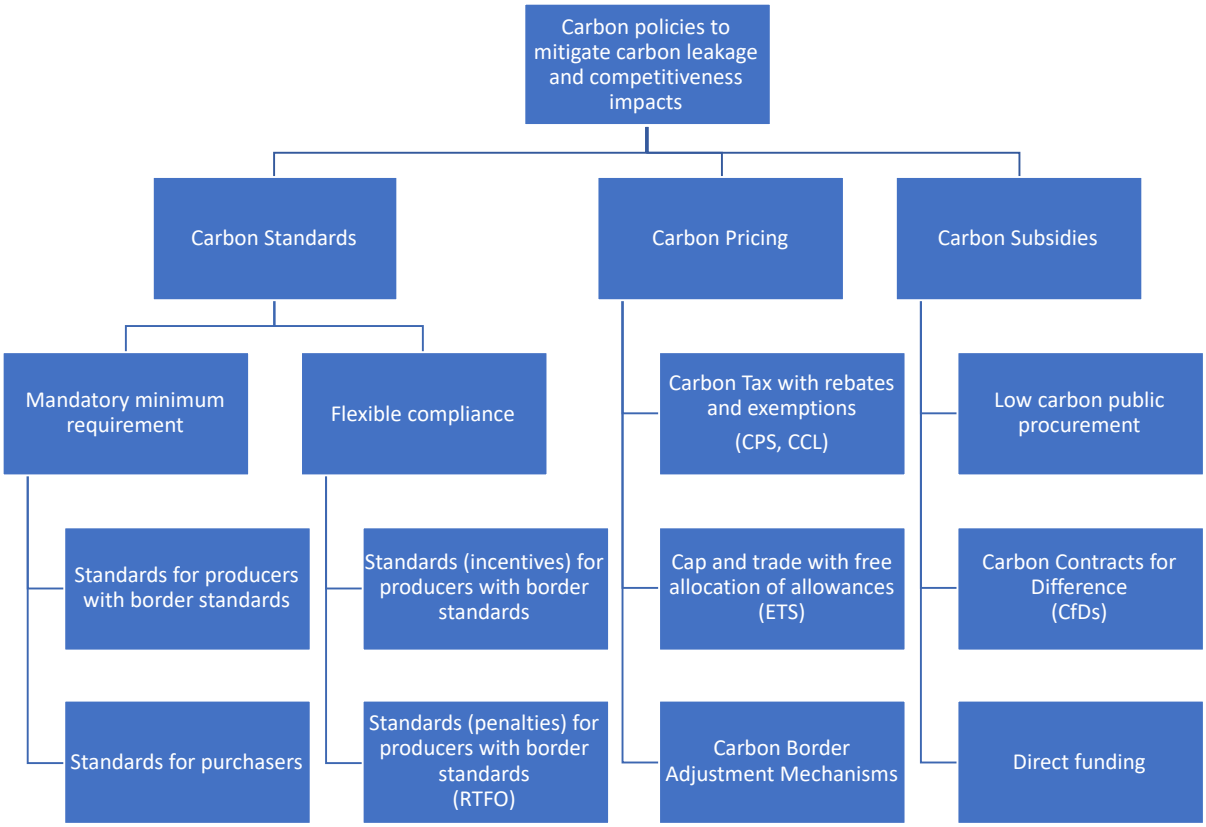
3.2. Policy options

The Climate Change Committee recently co-funded a study[6] by Energy Systems Catapult to provide input to the Sixth Carbon Budget, HM Treasury Net-Zero Review and to inform their positioning in preparation for COP 26. The report considers a number of policy mechanisms that can be used to mitigate carbon leakage and competitiveness impacts (Diagram 2).

Examples of current UK Government policies are given in brackets, but additional policy measures such as low carbon standards, low carbon public procurement and additional CfD schemes (for example to support CCUS and hydrogen production and use) have also been identified by BEIS under the Industrial Decarbonisation Strategy.

[6] Energy Systems Catapult "Industrial Decarbonisation: Net Zero Carbon Policies to Mitigate Carbon Leakage and Competitiveness Impacts" (2020).

Diagram 2. Carbon policies used to mitigate carbon leakage and competitiveness impacts



Source: Energy Systems Catapult

The BEIS Industrial Decarbonisation Strategy published on 17th March announced that the HMT Net Zero Review final report will consider a broad range of potential options for approaching carbon leakage. Whilst a CBAM could be a possible route to ensure improved carbon leakage protection, design and implementation of a WTO-compatible CBAM will be very complex and difficult to negotiate. However, UKPIA believe this option should be considered alongside the review of free allowance allocation, since nether mechanism by itself is likely to provide the level of protection required at higher carbon prices.

3.3. Linkage with other emissions trading schemes

UKPIA strongly supports linkage between the UK ETS and other emissions trading schemes and more specifically, early linkage between the UK ETS and the EU ETS. The 2020 EU-UK Trade and Cooperation Agreement includes a clear ambition to link the UK ETS to the EU ETS under Article 7.3 (6), requiring both parties to give ”serious consideration” to this linkage, which has the following advantages:

- Linking the two systems would allow UK installations and aviation operators to be part of a larger more liquid market, give better carbon price discovery, and allow UK operators to have a level playing field on carbon with their largest market and, for some sectors, greatest source of competition.
- Linking the two systems would also reduce cross-channel electricity market carbon price distortions that increase costs and contract duration optionality including the severe limitation of future electricity contracts for UK electricity customers.
- Negotiations to link the UK and EU ETS systems as soon as possible would assist with the market formation of the UK ETS. At present UK installations are experiencing uncertainty with implementation of the UK ETS. Although an auction reserve price has

been set close to the EUA 2-year average price (£22), current EUA price levels are over €40 and a ceiling price has not been set, with only discretionary application of cost containment measures available under the Cost Containment Mechanism.

Linkage of the two systems would also limit the need for near future UK ETS market intervention as there would be a strong market expectation of price synchronisation between both systems.

4. Allocation of free allowances

4.1. Carbon leakage risk

Under the situation where the UK ETS is linked to the EU ETS, it is perhaps likely that the linkage agreement would require the UK to use the EU ETS Phase IV Carbon Leakage List to determine any entitlement to free allowances and that the EU ETS benchmark methodologies are also used. This would avoid any competitive distortion between the allocation of free allowances between UK and EU installations. There may, however, be some freedom to introduce a different methodology for compensation against indirect costs, which UKPIA would strongly support.

This situation under a standalone UK ETS is different. Use of the same methodology for assessment of carbon leakage as described under Article 10b of the EU ETS Directive, gives different results for the trade and emissions intensities for UK EU sectors compared to EU-wide assessment. This would result in a different carbon leakage list with both "winners" and "losers". Based on data available from the BEIS Digest of UK Energy Statistics and the ONS Annual Business Surveys, the trade intensity of the UK refining sector is likely to be significantly higher than the EU average.

4.2. Refinery benchmark

With the limited number of UK refineries (6), their complexity and different configurations, there is little prospect for the development of an equitable UK refinery benchmark using an alternative methodology to that used in the EU ETS or indeed, a benchmark using the current methodology and UK refinery data only (which is not currently included in the EU ETS Phase IV benchmark calculation). Although the free allocation rules have been revised for EU ETS Phase IV (as described in Commission Delegated Regulation (EU) 2019/331), the methodology behind the refinery benchmark is unchanged.

The current EU ETS refinery benchmark methodology was developed by Concawe, the European technical body for the refining sector, in conjunction with the European Commission under an agreement with Solomon Associates, a US consultancy firm[7]. It is based on a proprietary benchmarking methodology used by Solomon Associates for international benchmarking of refineries for over 30 years.

As BEIS are aware, the terms of the contract between Solomon Associates and Concawe restrict use of the methodology to EU and EEA countries only and further arrangements will be required if the EU ETS refinery benchmark methodology is used as the basis for allocation of free allowances under the UK ETS. The cost implications and possible risk of infringement of intellectual property held by Solomon Associates covering the methodology used for the refining sector benchmark, are likely to prohibit UK development of an alternative methodology. However, continued use of this methodology is essential to maintain competitiveness of UK refineries against their European counterparts and to

[7] See Concawe Report No. 9/12 "Developing a methodology for an EU refining industry CO_2 emissions benchmark" available at https://www.concawe.eu/wp-content/uploads/2017/01/rpt_12-9-2012-05440-01-e.pdf)

facilitate future linkage of the UK ETS with the EU ETS as supported by the EU/UK Trade and Cooperation Agreement.

4.3. Distribution of allowances and New Entrants Reserve

The current implementation of the UK ETS under The Greenhouse Gas Emissions Trading Scheme Order 2020, UKSI 2020 No. 1265, provides for a 5% reduction in the UK emissions cap that would have been have expected as the UK notional share of the Phase IV EU ETS cap to be year on year. UKPIA understand this reduction in the overall cap is to be taken from the auction share, with free allowances being broadly the same as they would be if the UK continued participation in Phase IV of the EU ETS.

However, the UK power generation sector, which receives no free allowances and purchases allowances from the auction share or traded allowances, is decarbonising rapidly. In this situation, UKPIA believe the arbitrary split between the distribution of allowances between the auction and free allowance shares should be removed to ensure sufficient allowances are available for full allocation at 100% of the benchmark value, such that carbon leakage protection via free allocation can be maintained at the level intended.

5. Assessment of carbon leakage risk

The refining sector is unable to pass additional costs through to consumers, as it operates in a highly competitive global market for crude oil and finished products. It is important that a level playing field is provided for imports and domestic production to avoid incentives for continuation of the trend towards increased product imports, largely of non-EU origin and greater UK reliance on overseas sources to meet domestic demand. This has a negative impact on the contribution from the downstream oil sector to the UK economy, adversely affects UK energy resilience and could lead to unintended consequences where the GHG emissions associated with overseas manufacture and shipping of imported product are higher than if the domestic production had been maintained.

UKPIA has long held concerns regarding assessment of carbon leakage risk and the methodologies used to determine the level of cost pass-through. For example, the Impact Assessment[8] accompanying the Commission proposal for amending Directive 2003/87/EC published in 2015 referenced five studies identifying estimated cost pass-through rates for the refining sector[9, 10, 11, 12, 13]. UKPIA was directly involved in two of these studies, the Oberndorfer study carried out for the UK Department for Business, Enterprise and Regulatory Reform in 2008/2009 and the VividEconomics/Ecofys study carried out for the UK Department of Energy and Climate Change in 2013/2014. This involvement has

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[8] Commission Staff Working Document SWD(2015) 135 final, 15 July 2015. This is available at https://ec.europa.eu/clima/sites/default/files/ets/revision/docs/impact_assessment_en.pdf.

[9] McKinsey and Company/Ecofys, *EU ETS Review: report on International Competitiveness*, 2006. This is available at http://ec.europa.eu/clima/policies/ets/docs/report_int_competitiveness_20061222_en.pdf.

[10] CE Delft, *Does the energy intensive industry obtain windfall profits through the EU ETS? An econometric analysis for products from the refineries, iron and steel and chemical sectors*, 2010. Report commissioned by the European Climate Foundation available at http://www.ce.nl/publicatie/does_the_energy_intensive_industry_obtain_windfall_profits_through_the_eu_ets/1038.

[11] ZEW Discussion Paper No. 10-044, *Understanding the Competitiveness Implications of Future Phases of EU ETS on the Industrial Sectors*, Ulrich Oberndorfer, Victoria Alexeeva-Talebi, and Andreas Löschel, 2010. Report on study commissioned from ZEW by the UK Department for Business, Enterprise and Regulatory Reform in 2008/2009 (now Department of Business, Innovation and Skills). Available at http://ftp.zew.de/pub/zew-docs/dp/dp10044.pdf.

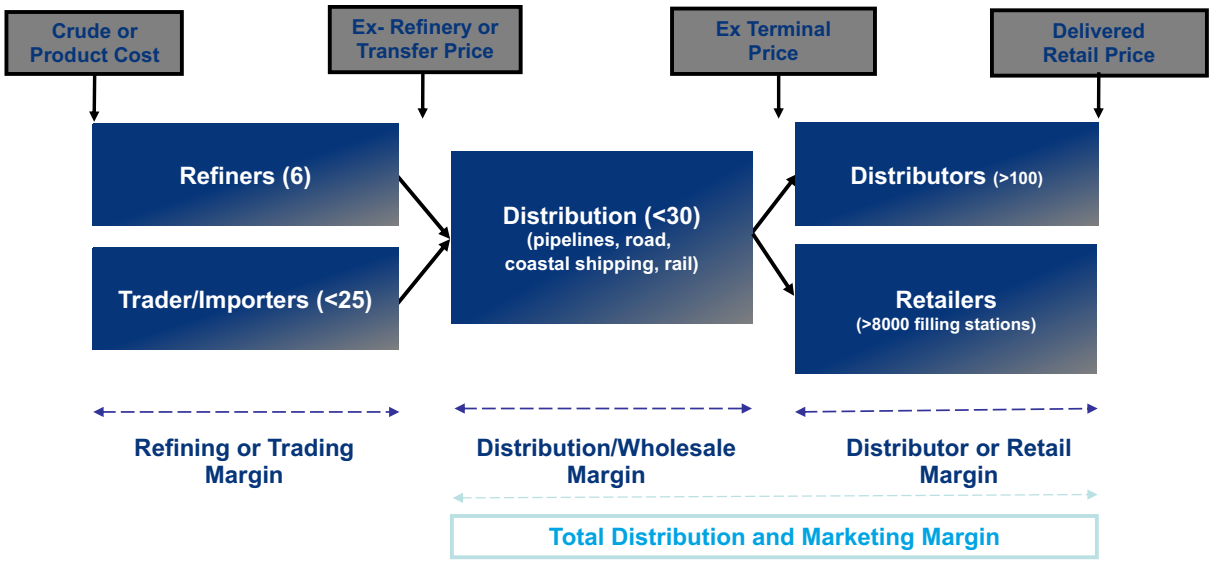
[12] ZEW Discussion Paper No. 10-086, *Cost Pass-Through of the EU Emissions Allowances: Examining the European Petroleum Markets*, Victoria Alexeeva-Talebi, 2010. Available at ftp://ftp.zew.de/pub/zew-docs/dp/dp10086.pdf.

[13] VividEconomics/Ecofys, *Carbon leakage prospects under Phase III of the EU ETS and beyond*, (2014). This report was prepared for the UK Department of Energy and Climate Change and is available at https://www.gov.uk/government/publications/carbon-leakage-prospects-under-phase-iii-of-the-eu-ets-and-beyond.

provided useful insights into the methodologies used, although in both cases the authors largely failed to take into account key inputs and critical review provided.

A key issue concerns the market structure for petroleum products, which is not modelled correctly in these studies. The petroleum products market has a complex structure, with many different factors influencing the final cost and pricing to end consumers. The market structure includes the supply chain from crude oil production through to refining, supply and distribution and sale of finished petroleum products and is often misunderstood and subject to over-simplification. Essentially, there are three separate, but interconnected markets – the crude oil market, the traded finished product market and the retail and commercial markets, where products are sold to end consumers (Diagram 3).

Diagram 3. Market structure for refining and downstream oil sector



Many of the studies referenced treat this as a single market, seeking to establish cost pass-through for EU ETS costs using a single crude reference price to average retail prices. Issues with cost pass-through assessment were reviewed in a report commissioned by the UK Office of Fair Trading from RBB Economics in 2014[14]; this report provides a critical overview of the main approaches adopted for assessment of cost pass-through.

[14] RBB Economics, *Cost pass-through: theory, measurement and potential policy implications*, (2014), Annex A pp173-188. This report is available at https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/320912/Cost_Pass-Through_Report.pdf.