

## **Concawe Comments on the Key Submissions Associated with 5<sup>th</sup> Stakeholder Expert Group of the Air Quality Policy Review held in Brussels, 3<sup>rd</sup> April 2013**

### **1. General Points:**

- a. Concawe welcomes this opportunity to provide written comments on the key submissions made to 5<sup>th</sup> Stakeholder Expert Group meeting and understands that these comments along with other stakeholder comments will be posted on CIRCA.
- b. Regarding the on-going review process, Concawe recognises that the period between SEG-4 and SEG-5 was a short and an intense period for IIASA to undertake the substantial body of further work including many further GAINS runs to support the policy review process and to prepare the extensive material submitted to and presented at SEG-5.

However, to date (17<sup>th</sup> April) the detailed policy scenario data underpinning the latest IIASA reports (e.g. Report #10) have not been uploaded on the GAINS website. The availability of these data is vital to enable stakeholders to fully assess the IIASA/DG Environment observations and conclusions regarding the final policy setting process. The need for these data to be available at an early stage of the two week commenting period was explicitly highlighted at SEG-5.

For example, in IIASA's report #10 there are references to some fourteen 'beyond baseline' policy or sensitivity scenarios (A1-A14). However, detailed country/sector data, vital to a meaningful stakeholder review process, is only provided for A5. While it is understandable that detailed tabulations for all scenarios within the report would be cumbersome, the timely uploading of such data on the GAINS website is surely not.

The detailed comments that follow must therefore be seen in the light of this and we would urge DG Environment to provide for a second period of further commenting once these data are uploaded. With the strong possibility that SEG-5 was the final stakeholder meeting prior to the finalisation of the formal Impact Assessment, the preparation of a draft DG Environment proposal and the Inter-services consultation process leading to the publication of a revised TSAP, this further round of commenting is vital to a robust and transparent process.

## **2. Comments on the presentation covering the Initial results of the online public consultation**

CONCAWE is disappointed that no analysis has been performed yet on the free text input to the consultation. We believe this input may give important information on the views of some key stakeholders, and may offer a different perspective to some of the conclusions that were drawn from the statistical analysis of the multiple choice questions.

This is particularly relevant as the form of the questionnaire did not allow respondents to answer every question online, compared to what was available on the paper copy. This resulted in the fact that, as an example, on question 1d concerning the NEC ambition level for 2020, only 8 out of 114 business respondents have actually answered the question. The “surprisingly green response” from business to this question is thus totally misleading. In this particular case we also note that our own response in the business category is not reflected in the analysis. In the online version of the questionnaire, question 1d was not available to any respondent who answered a specific way to earlier questions.

We noted a similar issue with the response on question 34a reported in the presentation on Combustion Plants under 50 MWth. The responses on question 34a include responses from only 21 out of 114 business representatives and these answers cannot be considered to properly represent the views of the business community with respect to this particular question.

## **3. Comments on IIASA Report #10:**

**3.1: Major concern over lack of step-wise approach to establishment of so called ‘central policy scenario A5’:** Given the general comments above concerning stakeholder access to the full range of scenarios examined by IIASA in preparation for SEG-5, Concawe believes it is premature for Report #10 to conclude that ‘TSAP-13 A5’ is an appropriate ‘central policy scenario’. As set out in more detail below, sensitivity analysis around alternative energy scenarios (deeply affecting both attainability and compliance costs); the relationship between binding ceilings and practical attainability if some sectors do not deliver their reductions (e.g. transport and NOx, Agriculture and Ammonia); the full accounting of the CO<sub>2</sub> implications of short lived climate forcers; and the inclusion of true sensitivity analysis based on alternative and more recent studies aimed at monetising impacts (rather than different statistics for the same study), all need to be in the frame to arrive at a robust ambition setting process. Concawe has demonstrated the ‘policy importance’ of all but the last element in its submission to SEG-4 on the importance of appropriately designed uncertainty scenarios for the development of robust policy<sup>1</sup>. The last element on the

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<sup>1</sup> **Uncertainties under the Microscope:** IAM Sensitivity Scenario Analysis Can Provide a Powerful Policy Lens, A Concawe contribution to the AQPR

importance of exploring appropriate sensitivities for benefit analysis will be presented in a separate contribution. On this basis Concawe does not believe the A5 scenario is technically justified or prudent as the basis for a revised TSAP.

**3.2: Continued serious concerns over the focus on a single energy scenario for the main policy scenario analysis:** Concawe has raised this concern from the outset of the Air Quality Review process. As indicated above, Concawe recently submitted a comprehensive paper to SEG-4. This included a quantified demonstration of why an appropriate range of future energy worlds is vital for the current review. Quoting directly from the summary of this analysis given in the submission: *“Given the uncertainties in defining the ‘future world’ this sensitivity analysis highlights the need for policy to be tested for a range of energy scenarios. This is vital to ensure that ambition levels (expressed as revised national emission ceilings) based on one energy scenario do not result in significant escalation in compliance costs or non-achievability in a different actual future energy world. The current difficulties in some Member States in meeting 2010 NO<sub>x</sub> ceilings illustrates the vital need to include such energy uncertainties in policy development.”*

As highlighted in this submission, the problem of a narrow energy focus is most serious at higher policy ambition levels. This is already indicated in IIASA’s report #10 in Tables 6.16 and 6.17, on Page 50. Table 6.16 indicates that the SO<sub>2</sub> ceiling corresponding to A5 (referred to as the ‘Central Scenario’) would be beyond MTR in some eight Member States (only six are shaded in the report) under the earlier PRIMES 2010 energy scenario (designated ‘TSAP-12’). This table also clearly shows that in a further ten Member States the A5 SO<sub>2</sub> ceilings are at or very close to MTR under the earlier PRIMES 2010. A similar picture emerges for Ammonia and to a lesser extent for NO<sub>x</sub>. Even with the relatively small changes from PRIMES 2010 to PRIMES 2012, these tables serve to highlight the huge potential for non-attainability of binding emission ceilings at the A5 ambition level.

Given the significance of the above, Concawe has started to explore the implications for attainability of the A5 ceilings under the alternative but recent European energy scenarios used for policy (e.g. the National Scenarios submitted by a limited number of Member States for the work of the Gothenburg Protocol). The initial indications are that the situation would be significantly worse than indicated in tables 6.16 and 6.17. We will revert when this work is completed.

**3.3 Increases in compliance costs arising from alternative energy scenarios or sensitivity scenarios is another key consideration for the ambition setting process:** What is also missing in the IIASA sensitivity analysis of PRIMES 2012 v PRIMES 2010 are the implications for individual Member State compliance costs for meeting the A5 ceilings (or indeed any of the other ambition level scenario ceilings) under the alternative PRIMES 2010 case. Such considerations are currently absent in section 5 and only partially addressed in section 6.2 of Report #10.

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The significance of this increase in compliance costs is already apparent in IIASA Report #10. For example, Table 5.2 (p31) shows that beyond the 50% gap closure scenario for PM impacts, costs quadruple by the 75% gap closure and increase forty fold in the case of MTFR. Recalling that IIASA's own sensitivity analysis indicates a significant number of MS would be driven to or beyond MTFR, this serves to illustrate the economic implications of attaining ceilings set in a PRIMES 2012 world in an alternative (e.g. PRIMES 2010) world. This said such implications need to be fully explored at an individual Member State level. As indicated above, such a perspective is a vital prerequisite for a robust ambition level setting process.

**3.4: Major concerns over the application of Marginal Cost versus Marginal Benefits in the Target Setting Process (Reference Section 5.1 of Report #10):** The approach taken in this section of the report, as highlighted by a number of Stakeholders at the SEG-5 meeting (including Member State representatives), is new. This because it directly compares the marginal cost ('real €/y' from GAINS) to the marginal monetised benefits ('virtual €/y' largely based on a single willingness to pay survey). Unlike CAFE, where benefit analysis provided an ex-post perspective on costs associated with the delivery of the policy ambition levels, what is significantly different here is that the monetised benefits (essentially virtual money) are compared in a 'return on investment' type process. This significant shift in the role of benefit analysis in the ambition setting process places enormous reliance on the robustness of the monetised benefits and largely overlooks other more central policy considerations. A number of these have already been elaborated above. This shift from using CBA to inform the policy setting process, to using it to 'define' the central policy scenario is in Concawe's view extremely unwise given the approach to and associated uncertainties of the monetisation of benefits.

Before concluding on this matter, it is worth noting that the total and marginal cost curves shown in Figure 5.1 of Report #10 are given for the EU as a whole. The 100% gap closure point on both these curves corresponds to the point where the last Member State reaches MTFR with the last available and most expensive control measure. However, well before the 100% gap closure point, some individual Member States will already have been driven to the MTFR point on some or all pollutants (clear already from Tables 6.1 through 6.4). Thus different marginal cost curves exist for every Member State. As a consequence the marginal cost v marginal benefit crossover point (gap closure point) would vary substantially between Member States. If this 'new approach' to policy target setting is to be further pursued, then such country specific marginal cost versus marginal benefit comparison would need to be fully explored and the implication for target setting accounted for.

**3.5: Concern over claiming the benefits of so-called 'low hanging fruits' as a basis for the additional costs of moving from a Single Driver (PM Impacts gap closure) to Multiple Driver (PM+Eutrophication+Ozone gap closure):** The joint optimisation process in GAINS is designed to meet multiple targets in the most cost-effective way. In order for CBA to

properly play its role in informing the ambition setting process for such joint optimisation (and provide transparency in the final impact assessment) it needs to be in a position to correctly attribute the incremental benefits and associated incremental costs for meeting each individual target. This is vital to ensure that benefits derived from achieving one target (e.g. PM health impact reduction) are not used to 'subsidise' the limited monetised benefits or lack of monetised benefits for meeting the additional target(s) (e.g. Ozone health impact reduction). This need was highlighted by Concawe in our follow-up comments to SEG-4. However, in Report #10, the additional cost versus impact reductions in the step out scenarios from A3 (a high ambition PM only gap closure scenario) to A4-A6 does not develop such data but just asserts that the cost involved enables the capture of additional 'low hanging fruit'. Concawe is currently examining the additional marginal cost versus additional benefits of these step-out scenarios using the CAFE approach for ozone health impacts and an 'ecosystem services' approach to eutrophication and acidification. The early results from this work indicate that for all three end points, the marginal costs exceed the marginal benefits above gap closures of 30% and that these gap closures are achieved as a 'come along' consequence of PM only optimisation well below the A3 scenario. Concawe therefore urges the Commission to undertake a deeper analysis to demonstrate the justification for each proposed gap closure target.

**3.6: Concerns over Shipping Scenarios and Potential Integration into the Policy Package:** In Section 6.3 of IASA Report #10 the question of whether further marine emission controls would be a cost effective alternative to further land based controls is explored drawing on the recent work of VITO. Such comparisons will of course give different outcomes depending on the policy ambition level (gap closure) for the reference land scenario. At high ambition levels, the slope of the land based cost curve will be high (high marginal cost) therefore savings for even small reductions in land based emission reductions will be high (see Figure 5.1 in Report #10); however at moderate ambition levels, cost reductions in land based controls for the same emission reduction through marine measures will be significantly lower. Noting that in both cases the expenditures on marine controls would be exactly the same. Such differences are not visible in Report #10 since scenarios A10 and A11 are based on and compared to the single A5 scenario which is a high ambition scenario. Yet even here, with the lowest cost 'shipping controls' option of 100% sulphur scrubbers in new SECAs, the costs of ship measures are higher than the savings in land based controls. No comparison scenarios are given for the A2 (50% Gap closure) but Concawe's own analysis suggests that at this ambition level the costs of further ship controls would significantly exceed the savings in land based controls, which supports the view that under the A5 scenario setting new SECAs in the 200 nm zones of the EU Member States does not appear to be a cost-effective alternative to meeting ambition levels. Furthermore, the assumption that 100% of ships could be equipped with sulphur scrubbers is, in Concawe's view, far too optimistic.

Given the above Concawe urges the Commission to extend the ship scenario analysis to other ambition levels such as the A2 (50% gap closure on PM impacts) and, based on discussions with the shipping sector establish a more realistic split between sulphur scrubbers and low sulphur fuels in achieving the equivalent of a 0.10% sulphur SECA.

**3.7: Does the TSAP-13 Baseline deliver the Current TSAP Health Base Objectives?:** There have been significant changes to the GAINS model since the finalisation of the 2005 TSAP. When the Health based objectives of the TSAP were established they were consistent with a certain 'impacts calculation approach'. Recent enhancements to the GAINS model to provide additional capabilities (compliance with AQLV for PM10 and NO2) have resulted in a shift away from the original approach. To ensure an 'apples with apples' comparison, Concawe have taken the 2020 Baseline Emissions for the TSAP-13 scenario and maintained a consistent "City Delta" urban increment and constant population above 30 years (in other words the original TSAP approach) to assess whether the 47% improvement target for PM and the 10% improvement target for Ozone is met.

On this basis, analysis confirms that the 47% target for EU-27 is achieved and that ozone target is more than met.

The fact that the changes in GAINS indicated that with the resulting 'revised modelling approach' the numeric target of 47% is not achieved suggests it would be appropriate for some scenarios in the current work to be run with the Gothenburg version of GAINS to provide some tie-points between old and new modelling approaches. We had understood that IIASA was in the process of providing a Report #8 covering these aspects. Such a report would assist in providing additional stakeholder confidence in the move from the peer reviewed previous version (used up to and including Gothenburg) to the 'not yet peer reviewed' new version of GAINS.