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Caltex comments on the Review of the National Environment Protection (Ambient Air Quality) Measure 2010

Dear Kerry,

Thank you for the opportunity to comment on the NEPM AAQ Review. Caltex supports the objectives of the NEPM and would be pleased to provide an oil industry perspective on the review. Over the last 10 years Caltex has supported the objectives of the NEPM through reduction in emissions at our manufacturing facilities as well through capital investment in the production of cleaner fuels which have significantly reduced vehicular air emissions. Caltex has implemented strategies to reduce particulate, NO_x, SO_2, and VOC emissions and is therefore well placed to comment on the practical outcomes of NEPM policy implementation.

1. **Is there sufficient evidence to support a recommendation to NEPC to revise the current standards in a variation to the NEPM? If so, for which pollutants?**

Caltex is unable to comment on the technical validity of the research presented however given the documented interpretation that most if not all of these pollutants have "no threshold for health effects" we would question whether numerical exposure standards are appropriate for control of these substances and may under some circumstances give false comfort of a "safe" level. An example may be where a jurisdiction has air quality that on average has pollutants at a high level but below the standard compared to another jurisdiction that has occasional spikes above the standard but on average a lower concentration. The first jurisdiction may not implement control measures as it is meeting "targets" yet the second may implement costly controls yet the overall health risk is lower. The technical information seems to imply that the relationship between pollutant concentration and health effects is close to linear so the average concentration (and the population density) would appear to be more important than the number of times an arbitrary concentration limit was exceeded. One alternate approach that should be considered is the use of improvement targets such as a percentage reduction in airshed concentrations rather than numeric concentration levels that may mislead.

2. **Does the current approach meet the requirement for "adequate protection" or are there alternative methods that could provide more consistency in the level of health protection associated with complying with the NEPM standards?**

The use of the number of exceedances as a measure of success of the NEPM is not robust and does not give a guide to the achievements of the jurisdiction or the health effects of the pollutants in the jurisdiction. Given the linear relationship between concentration and health impacts and the absence of a threshold concentration for health effects it is actually the average exposure that dictates the level of protection rather than momentary spikes above a nominal concentration level.

In terms of application of the NEPM the notion of "number of exceedances" leads to some jurisdictions that do not record any exceedances not undertaking any air quality improvement activities while those with exceedances may be overzealous in addressing sources they can control. This behaviour is not consistent with the objective to adequately protect the whole population. In practical terms this has lead to a breach of one of the general provisions of the NEPC Act (quoted in section 1.2 of the discussion paper) – "that decisions by businesses are not distorted and markets not fragmented by variations between jurisdictions in relation to the adoption or implementation of major environment protection measures". The fact that NEPM goals are handed down to the jurisdictions, and then the environmental agencies in each state, has lead to actions to reduce the number of exceedances being focussed on particular sources and sections of the economy over which they have control (such as industry), not necessarily those where the reduction may be most cost effective. As an example, motor vehicles are one of the largest sources of the NEPM pollutants yet the jurisdictions have little control over vehicle emission standards. Similarly, major transport infrastructure to reduce motor vehicle use will often require federal support.

In order for the NEPM to be most effective and efficient it is critical that outcomes are owned at both the federal and state levels. A good example of this is in NSW where the oil refining industry has been asked to consider reducing the vapour pressure of petrol in NSW to reduce VOC emissions (Ozone precursors). This has been costed at around $4000/tonne. There are other alternatives to reduce VOC emissions such as surface and metal coating $200/tonne, printing $500/tonne, boats and lawnmowers $2000/tonne and other commercial/domestic sources that have not been costed yet these are not currently being implemented as they will require federal or bipartisan state support. NSW has more ozone exceedances than other states yet the NEPC discussion paper indicates that ozone may not have a threshold for effect and thus all states should be supporting reduction activities – not only those jurisdictions that exceed a nominal concentration some of the time.

One concept for consideration could be national objectives that reduce pollutant exposure by a set percentage over a period of time rather than to a nominal level and that all controls should be considered for implementation based on lowest cost of abatement rather than those that are more easily controlled by a particular jurisdiction. The exposure reduction approach used by the EU (well described on pages 123-124) is a good example of this policy. The existing "allowable number of exceedances" approach or proposed "not to be exceeded" limits are not effective in improving health outcomes for all Australians and cause economic distortions between the states. The pace of improvement should be determined based on cost of mitigation (for all feasible controls) versus the health costs avoided. Evaluation of the effectiveness of the NEPM can then be based on improvement in outcomes rather than a more arbitrary number of exceedances.

The proposal to ignore "natural causes" or natural sources of these pollutants including events such as dust storms or bushfires is disingenuous and would reduce the credibility of the NEPM and reporting against it. It implies that "natural" exposures to pollutants are in some way less of a health risk than "man-made" pollutants. Certainly there are controls such as land clearing policy for dust storms and fire prevention and treatment strategies that should be evaluated economically along with other controls that can be effective against these "natural" events. The large health impacts of these particular events cannot honestly be ignored as uncontrollable.

3. **Are there changes that could be made to the reporting protocols that would lead to a greater transparency and better understanding of the causes of exceedances in jurisdictions and management approaches being undertaken to address these exceedances and potential risk to population health.**

Caltex believe that clear and concise reporting that focuses on the contribution of all sources to pollution levels is critical to the NEPM and that data should not be obfuscated by ignoring or separating biogenic emissions from anthropogenic sources. “Natural” events should not be ignored or discounted and better information should be provided on what the background levels of these pollutants are and how it was determined. Where management activities have been undertaken by the jurisdictions these should be described and the actual cost or mitigation recorded. Given the general lack of threshold level for health impacts the concept of compliance or number of exceedances could feasibly be replaced with one of meeting improvement objectives.

In conclusion, Caltex supports the objectives of the NEPM but would like to see a different approach taken to the management of air quality which takes into account the latest research, coordinates actions between jurisdictions, and results in cost effective air quality improvements.

Yours sincerely,

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