

November
2015

AIRAH submission on Ozone Act Review – Options Paper | November 2015

Submitted to Department of the Environment by

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About AIRAH

AIRAH is the recognised voice of the Australian air conditioning, refrigeration and heating industry. We aim to minimise the environmental footprint of our vital sector through communication, education and encouraging best practice.

Introduction

AIRAH would like to thank the Department of the Environment for the opportunity to review and comment on the Ozone Protection and Synthetic Greenhouse Gas Management (OPSGGM) Program Options Paper.

The measures and options proposed are complex and the supporting documentation is extensive. Some of the following comments relate to issues that the Department may consider 'out-of-scope' for the review of the Ozone Act. AIRAH takes a holistic, whole-of-industry/whole-of-life, view of these proposals and issues and not the more limited view of a regulator or of a cost-benefit analyst.

AIRAH Preferred Options

In terms of the four packages of options as promulgated in the discussion paper AIRAH supports Option 4 with some modifications; replacing 7.4.4 (as proposed) with 7.4.1, 7.4.2, and 7.4.3.

AIRAH reiterate support for specific measure numbers and titles as follows:

AIRAH strongly support the following proposed actions: (qualified as noted below)

6.1 Measures: Further reduce emissions of SGGs

6.1.1 *Improve effectiveness and efficiency of current policies* – AIRAH supports improvements to the administration of the current and future policy.

6.1.2 *Phase-down of HFCs* – This is already an announced Australian Government policy. AIRAH support domestic HFC phase-down action in Australia ahead of a global agreement, but only in consultation with industry. Industry training and re-education costs have not been mentioned in the cost:benefit analysis. These are expected to be significant as the trade moves to use new and unfamiliar refrigerants and innovative technologies in the transition to low GWP refrigerants.

6.1.3 *HFC equipment ban* – AIRAH support bans that follow international trends, Australia should not become a dumping ground for high GWP refrigerant technologies.

6.1.4 *Maintenance and leak testing requirements of equipment* – This is strongly supported and is the only measure proposed, apart from HFC phase-down, that really appears to significantly improve emission reductions.

7.1 Measures: Regulation of additional substances

7.1.1 *Include ODS and SGGs covered by current international obligations and ODS and SGGs potentially to be included in future agreements* – the pace of international negotiations is glacial, AIRAH see no reason to delay.

7.1.3 *Include provisions to collect data on gases that are not controlled but where countries have been asked to monitor and report* – All refrigerant consumption and use should be monitored and logged.

7.2 Measures: Improvements to HCFC phase-out provisions

7.2.1 *HCFC banned except for equipment servicing post 2020* – AIRAH agree that this action is still needed to close out the successful HCFC phase-out.

7.5 Measures: Licensing – End use

7.5.1 *Minor amendments*

- Sub-option 1: Basic licence – AIRAH support a simplified single licence. AIRAH disagree that a single competency unit “*structured to inform the technician of how to minimise emissions during the course of their work*” could cover all of the skills and knowledge required to minimise emissions of ODS/SGG. Licensing should extend to the use of all refrigerants and cover competencies and training for reducing indirect emissions from RAC also.
- Sub-option 2: Membership card – Is a smart card approach possible? Smart E-card backed by an information management system. Technicians and contractors should ‘own’ their installations indicating or listing their card number with the installed/maintained system.
- Sub-option 3: Administration – AIRAH support simplifying the licensing structure.
- Sub-option 4: Renewal – AIRAH support automatic renewal rather than re-application, only if there are no changes in the applicants circumstances. AIRAH continue to advocate for the licensing system to include some form of skills maintenance.
- Sub-option 5: Licence period – AIRAH support a 3-year licence period.

7.5.2 *Improve effectiveness of emission reduction aspects for automotive*

7.5.3 *Restructure into one ODS/SGG licence* – AIRAH support the concept of a single simplified licence however AIRAH disagree that a single competency unit could cover all of the skills and knowledge required to minimise emissions of ODS/SGG.

7.6 Measures: Compliance and Enforcement

7.6.1 *Increased communication/education* – “*Encourage industry cooperation in education and achieving compliance with relevant regulation*” This is a large and essential task that has been significantly understated and underestimated in the review. This task is not only informing industry participants of any changes and new compliance requirements, it is also helping industry adopt practices and new technologies that will help the Australian Government meet its objectives and international obligations. Government (all agencies) need to collaborate with and support industry to deliver retraining and skills updates.

7.6.2 *Strengthen Commonwealth powers* – The Act needs to be given some teeth so that the regulations are properly enforced. Regulations that are not enforced tend to be ignored. The Department should be more stringent with enforcement, including appropriate legal actions and make compliance breaches and prosecutions public so that people know the consequences of infringing or ignoring the regulations.

7.6.3 *Publication of compliance actions undertaken* – Naming and shaming poor practices and their impacts encourages more widespread sustainable behaviours.

7.6.4 *Streamlined information sharing between Commonwealth agencies* – Governments departments and agencies at all levels need to sit down together and develop a consistent position on the issues, including clear lines of responsibility for different agencies. Agencies should share information but they should also share policy positions and work

toward common goals and outcomes. Commonwealth, State and Local Government agencies cannot take a silo approach; they should all be cooperatively involved as they engage with industry.

AIRAH support the following proposed measures:

7.3 Measures: Licensing – Import, export & manufacture

7.3.1 *Minor amendments* – AIRAH support these amendments, no additional comment.

7.3.2 *Restructure into two streams: goods are regulated with or without a licence* – AIRAH support this.

7.4 Measures: Licensing - Approvals of Destruction Facilities

7.4.1 *Streamlining of approvals of Destruction Facilities* – AIRAH support this.

7.7 Measures: Cost Recovery- Licence fees and levies

7.7.1 *Adjust thresholds, levies and import licence application fees to achieve full cost recovery* – Fees should be realistic; government should also be responsible for some of the costs.

7.8 Measures: Cost Recovery - Management of National Halon Bank

7.8.2 *The National Halon Bank remains a Commonwealth managed facility* – AIRAH support this with the appropriate cost recovery (raising management fees and the price of halon supplies held by the National Halon Bank to ensure the facility is sustainable).

Note: AIRAH renumbered some of the measures above for clarity.

Other AIRAH comments on the proposed measures:

AIRAH disagree with measure 7.4.2 *Administration of the end use licensing system by industry on a voluntary basis*. AIRAH would agree that the expansion of licensing to cover natural and synthetic low GWP refrigerants could start as a voluntary addition to the existing system.

AIRAH disagree that a single competency unit could cover all of the skills and knowledge required to minimise emissions of ODS/SGG.

AIRAH agree that the following measures are infeasible:

8.1.1 - Make no regulatory change and undertake non-regulatory data collection.

8.2.1 - Abolish end use licensing system or transfer it to state and territory governments or industry.

8.3.1 - Increase powers of industry licensing bodies

AIRAH note that not all of industry suggestions and submissions have been included or identified in the paper as options that have been considered in the review. AIRAH would like to make the

following additional points in relation to the reduction of ODP and SGG emissions for the refrigeration and air conditioning (RAC) industry.

Education Costs

AIRAH feel that the education and retraining burden that will be placed on the industry has been significantly underestimated/not included in the review.

The following is the assumption that forms the basis of the cost-benefit analysis for many of the proposed measures:

“End use technicians may read education materials on the new regulations. It is assumed that this information is published in the CoolChange magazine produced by the Australian Refrigeration Council. As the technician would be reading this publication irrespective of this measure, it is assumed that the education costs are ZERO”

AIRAH strongly disagree with this assumption and characterisation of the industry. That the only retraining required of technicians as a result of these changes (and the HFC phase-down and equipment ban proposals in particular) is to read a story in an industry newsletter. This is one of the education and awareness raising methods available and this would need to be supported by a range of other techniques. Retraining will not have ZERO costs.

Phasing down HFCs requires significant changes in industry practices. Particularly in regards to flammable refrigerants.

Industry practitioners will need new knowledge and this will require training. The cost:benefit analysis has costed the activity of informing industry of changes to industry practices at zero dollars, i.e. zero cost to government. In a Regulatory Impact Statement the additional cost to business of a regulation has to be considered and this would include the costs of training and retraining.

Currently there is no difference in the regulatory requirements for people to install R410a based systems and R32 based systems. The same license is required. AIRAH constantly get asked “do I have to do anything different”. We advise that R32 is flammable and practitioners need to follow the manufacturers and suppliers installation instructions.

Because people are not trained to use R32 they will tend to follow the tried and tested procedures for R410a or R134a. This could have significant safety impacts.

Perceived Constitutional Limitations

The Commonwealth’s ability to legislate is subject to constitutional limitations, including in respect of legislation pertaining to the refrigeration and air conditioning industry. While AIRAH recognise this fact we also recognise that this is also the case for many areas in the building sector including building regulations (National Construction Code), energy regulations (Greenhouse and Energy Minimum Standards) and Work Health and Safety (WHS) regulations. This constitutional question is not insurmountable and has not stopped Commonwealth

/State/Territory harmonisation in the past in a range of sectors. AIRAH strongly supports Commonwealth approaches and harmonised State/Territory approaches in preference to individual, uncoordinated and disharmonised state based approaches in respect of the licensing and regulation of the the refrigeration and air conditioning industry.

AIRAH acknowledge that State and Territory governments independently regulate work health and safety (WHS) . However WHS laws are largely harmonised in most jurisdictions through the Model WHS system. There is no reason that COAG or other cross-government entity cannot meet and overcome the constitutional limitations in respect to the regulation of the refrigeration and air conditioning industry.

There appears to be no will, across government, to drive harmonised or national regulations for refrigeration and air conditioning, beyond the environmental limits that were originally established in 1989. Deregulation is the preference and AIRAH believe that this policy setting has adversely influenced and limited the scope and terms of reference of the Ozone Act review.

Safety

The Australian Government takes the position that any WHS issues that arise from the review are actually the responsibility of state and territory WHS/OHS agencies

“Note: In administering the OPSGGM Programme the Australian Government seeks to avoid exposing technicians to any additional WHS risks. However, it is critical to note that the power and responsibility to regulate occupational matters – including WHS – rests with state and territory agencies. “

The Model WHS legislation and regulations are joint Commonwealth/State initiatives. The legislation applies to Australian Government activities as it does to any entity with duties under the laws. The Australian Government has “duties” under the WHS legislation in all jurisdictions where it applies. This would include ensuring that any safety impacts on the RAC supply chain arising out of changes to legislation or regulation are minimised, mitigated or managed to the extent reasonably practicable.

AIRAH recognise and agree that it is not the Department of Environment’s responsibility to regulate occupational matters. However, the Department does have duties under the legislation in relation to any safety impacts on the RAC supply chain brought about by the Department’s regulatory decisions or advice. These important duties need to be acknowledged and addressed in the review.

If changes to the OPSGGM program, or the proposed phase-out of HFCs, mean increased safety risks for installers, maintainers, operators or fire fighters. How will the Department work with industry, and across other government departments, to mitigate these risk profile changes?

Tensions in Regulations and Conflicting Messages

AIRAH deal with a range of government authorities and agencies in relation to the transition to low emission refrigerants. We frequently receive conflicting messages from different agencies

and different levels of government. Environmental regulators, electrical safety regulators, gas safety regulators, building regulators, energy regulators, WHS regulators, fire and emergency services, local government planners, essential services maintenance, health departments, government property managers.

It is critical that government agencies and departments collaborate/work together (and with industry) and discuss the cross-agency issues. Perhaps an inter-government/industry summit on the topic would be helpful. Open and transparent dialogue could help regulators and administrators form a consistent position on the issues surrounding low emission HVAC&R. There is a significant opportunity for governments to harmonise and rationalise regulations in the sector, reduce duplication of effort and prevent agencies from working at cross purposes, and provide opportunities for overall industry deregulation which appears to be on every government's agenda. The deregulation viewpoint of this review considers the ozone act as a standalone piece of legislation, which AIRAH believe is missing an opportunity for optimising legislation in the RAC sector.

The recent report (August 2015) published by the DoE *Analysis of Work Health and Safety Data for the Use of Synthetic Greenhouse Gases and Substitutes in the Refrigeration and Air Conditioning Industry* includes a range of recommendations for a joint industry/cross governmental approach to address WHS issues in the RAC sector and AIRAH strongly support this.

Tensions between Ozone and WHS regulations

There continues to be tensions and lack of clarity between the Ozone and WHS sets of regulations, and also building regulations in some respects.

Better information on WHS responsibilities

Industry, particularly the SME contractors and technicians, needs clear information on the WHS requirements and the duties that apply to technical service providers involved in the design, installation and handling of refrigerants. Information should cover all refrigerants.

Demarcation between regulations

Clearer lines of demarcation between Building regulations and WHS regulations would be useful. Currently there is overlap in some areas where two or more agencies have a role. For example the Australian Building Codes Board (ABCB) does not agree to reference AS/NZS 1677 in the National Construction Code because it is seen as being a WHS issue. Similarly the Direct Action ERF auction system will not recognise investments that reduce direct emissions of refrigerants because this is seen as being covered by environmental regulations. Environmental regulators don't want to address occupational safety issues that may arise from environmental regulations, as this is seen as WHS regulator responsibility.

The disharmonisation of regulations that affect the RAC industry is increasing rather than decreasing.

Logging Refrigerant Use

It is clear that Australia needs a better picture of where refrigerant is being used and consumed. This is acknowledged by all stakeholders in the industry including government and the Authors of Cold Hard Facts 1 and 2.

Refrigerant use should be logged throughout its lifecycle. Who imports it? Who purchases it? Who installs it into systems? Who sends it for destruction?

The mandatory reporting and logging of refrigerant consumption at the wholesale and contractor level would provide greater clarity to the existing refrigerant consumption data that has been developed for the Department.

Providing this level of information on refrigerant flow through the economy will help Government and industry target refrigerant leakage and environmental losses in all sectors. At the moment we are basing policy decisions on the results of estimated cost-benefit ratios that themselves are based on estimates of refrigerant consumption and environmental loss that are themselves based on estimates of the size, scope, and taxonomy of the industry that are (finally) based on hard data such as sales and import statistics.

A refrigerant logging system would provide the hard data on where refrigerant goes and how it is used. Information of this granularity could be used to inform and improve policy and practice in the area. You cannot effectively manage something that you have not adequately measured. Refrigerant logging could be the first step in really effectively managing refrigerant use and consumption in Australia.

Occupational Licensing

AIRAH agree that transitioning to an industry led or state based occupational licensing scheme would not be beneficial to industry or government at this stage. AIRAH continue to advocate that the existing licensing scheme should be expanded (with COAG agreement to overcome the constitutional barriers) to include all refrigerants that are in use in Australia.

AIRAH strongly support the ARctick licensing model and its continued administration by ARC however, as the industry moves to low GWP non-ODP refrigerants, the relevance of this system will deteriorate as the refrigerants that are not covered by the scheme become more prevalent. This scheme must be expanded to cover all refrigerants or risk becoming irrelevant in the next 5 to 10 years.

Licence Fees

AIRAH are opposed to increasing end use/occupational ARctick licence fees unless value is added to the licensing system by expanding it to include all refrigerants as suggested above.

Expecting technical service providers to economically underpin Australian commitment to international agreements is unfair and inequitable. The cost of meeting these international

obligations should be funded by all Australian tax payers, not solely refrigerant handling licence holders.

Standards and Codes

Safety Standards

As the industry moves toward low GWP refrigerants, in large part due to environmental regulation (global and domestic), safety risks for technical service providers and operators will change, and may in some cases rise. In order to counter any new risks posed to the industry, or the public, AIRAH recommend that the refrigeration system safety standard AS/NZS1677 or its successor AS/NZS/ISO 5149 should be made mandatory, perhaps with a performance-based hierarchy to allow alternative solutions to be used.

At the minimum there should be a clear message from Government to industry that this standard is considered by government to be a minimum requirement for all refrigeration applications covered by the scope of the standard. This should be followed up with an awareness campaign to inform industry of the new standards and their new status.

Standards should be made mandatory through the National Construction Code (Volumes One and two). The WHS/OHS compliance duties for designers, installers, maintainers, operators and owners should be highlighted in the model WHS regulations and associated guidance documents.

Currently, industry practitioners may not understand all of their obligations in relation to existing WHS regulations.

Refrigerant Handling Codes

The existing Code of Practice for SGG refrigerants (2007) needs revising and strengthening to address system leakage and incorporate the new refrigerant classification system and standards. New Codes of Practice are needed by industry for natural refrigerants including the use of Ammonia, Hydrocarbons and CO₂ as refrigerants.

Retraining and Technical Guidelines

As the industry moves towards a higher use of flammable and/or toxic low GWP refrigerants, in response to International and domestic action on climate change, technical service providers will need to be supported in terms of, documented safe work methods, retraining opportunities, and technical information on compliance and duties.

These retraining needs are a direct result of government market interventions. AIRAH strongly advocate that government continue to partner with industry in the development and delivery of this technical retraining.

The question is not whether the industry needs to be retrained to safely handle flammable, toxic, or hazardous refrigerants. The question that needs to be answered is: **How is this training going**

to be delivered to industry, quickly, cheaply and effectively? The conversation on the re-training needs of the industry is an important one for both government and industry.

Energy Efficiency

In terms of real CO₂e/greenhouse gas emissions, across the life of an air conditioning or refrigeration system, it is the indirect emissions, the emissions that result from the generation of the electricity that is consumed by the system, that dominate.

Government could act to improve the operating efficiency of existing systems by:

- Incentivising technology upgrades for equipment greater than 10 years old; buy back schemes for old HCFC and high GWP HFC machines and dispose of them correctly.
- Incentivising the procurement of maintenance for the purposes of reducing energy consumption (and refrigerant leakage), owners and operators need to understand the opportunities, savings and co-benefits of system maintenance.
- Continuing to work on reducing refrigerant leakage and environmental losses, by improving and updating the minimum standards for system construction and refrigerant handling.

Government could act to improve the operating efficiency of new systems by:

- Increasing MEPS, GEMS, and highlighting and rewarding market leaders (such as providing tax breaks for super high efficiency products).
- Increasing minimum National Construction Code energy standards for new residential and non-residential buildings, in collaboration with industry.
- Leading by example and adopting Total Equivalent Warming Impact (TEWI) or Life Cycle Cost Analysis (LCCA) into government procurement procedures/decisions for HVAC&R.

Environmental Impact Assessment should be BAU

Whole-of-life environmental assessment standards such as LCCA and TEWI already exist but are largely ignored by industry. These system life cycle attributes are not specified or assessed by clients and purchasers of HVAC&R services. Government has a role to play here and could lead by example and adopt a whole-of-life performance approach to HVAC&R procurement, incorporating a TEWI or LCCA analysis when considering its own accommodation needs.

This would not result in a cost to government but rather a long-term saving as analysis has shown that minimising life cycle costs reduces ongoing operation and maintenance costs for operators and owners.

Residential Air Conditioning

There is a new standard currently under development by Standards Australia regarding best practices for energy efficiency for residential air conditioning. To date this has been largely industry driven. There should be much more pro-active involvement from Australian Governments in this project which could be used to support minimum energy standards, energy rating schemes and voluntary incentive schemes for the retirement and upgrade of the millions of old and inefficient air conditioners in our existing buildings.

This new standard could be one of the tools used to enable/support/incentivise a broad updating of the existing residential air conditioning stock which could significantly increase energy productivity for small business and residential consumers and also help enhance broader environmental and emission objectives with regard to SGG. Such a scheme would act to reduce direct emissions of ODP and SGG at end-of-life for this market segment. Old residential air conditioners represent possibly the biggest remaining bank of R22 in Australia. This is also the sector most likely to result in environmental damage through direct emissions. Upgrading these old air conditioning systems will also help to reduce direct and indirect emissions for many years into the future.

New Refrigerants/New Technologies

There are significant regulatory and attitudinal barriers to the uptake of new technologies in the RAC sector including natural refrigerants (e.g. sub critical CO₂) and new cooling technologies (e.g. solar cooling). More research needs to be undertaken, and more training needs to be developed and delivered to assist the RAC industry reduce Australian emissions in commercial, industrial and residential applications.

The construction industry on the whole does not like change. There is a preference to deliver tried and tested solutions and a general tendency to “do it the same way as we did it for the last project”. This is largely due to economic and time related budget pressures as well as a general tendency for the industry to be risk averse and time poor. Change needs to be proven and incentivised, and the Australian Government has a role to play in this.

Information, incentives and education should all be a focus. If technical service providers are not going to be asked to formally re-train to achieve the required competencies then they must be provided with the information they need in multiple formats.

Empowering Small Consumers and SMEs

AIRAH want to empower HVAC&R businesses, which are typically the sole trader or SME contractor, to have an energy efficiency and leak reduction strategy conversation with their clients. These technical service providers are very well placed to initiate emission reduction interventions, particularly if they are provided with the tools to follow through, and if end users are provided with the right incentives.



Industry organisations, manufacturers and suppliers, commercial entities can all be used to train technical service providers in low-emission RAC practices and technologies. Educated technical service providers can be used to then educate owners and operators. This could create a knowledge chain around best practices for HVAC&R, energy and emissions. The current proposed measures show no inclination to leverage this opportunity.

Questions/Comments on the Cost-Benefit Analyses

Industry practices for maintenance and leak testing

Information around the current industry practices for maintenance and leak testing for this review and analysis were limited. This is admitted by the consultant who has recommended further investigation should be undertaken.

“Typical levels of maintenance and leak testing activity were ascertained from a small industry survey of RAC companies. Five companies responded to the survey, however not all questions were answered by all respondents. There was also a wide variation in responses, which could significantly impact on the accuracy of the results of the maintenance and leak testing scenarios. As a result, the limited nature of the survey required some consideration around how well the survey could be considered to reflect the entire RAC market, and a more conservative assumption was made that existing levels of maintenance for the entire market were around 50% of proposed EU requirements. Due to the timeframe, a more comprehensive survey of industry practice was not possible, however this is recommended.”

AIRAH do not believe that policy decisions of this importance should be based on insufficient data and such obviously wide assumptions. How difficult is a survey? Cheaper than a cost-benefit analysis?

AIRAH recommend that a comprehensive survey of industry practice in relation to current levels of maintenance and leak testing activity be undertaken. AIRAH believe that the actual levels of maintenance applied for these purposes are significantly lower than those estimated in the analysis. Again, and as noted by the consultant, making policy decisions on these kinds of unsupported estimates or guesstimates is not considered good practice.

Refrigerant costs

The HFC phase down economic analysis is based on the assumption that *“refrigerant prices will not rise”* due to limitations in HFC supplies. The analysis assumes that gas prices will not change, because the nature of the phase down is such that it allows the market to choose where the phase down can most efficiently be undertaken.” Experience with the phase out of CFC and HCFC have shown this not be the case.

End of submission