Prepared and coordinated by

Phil Wilkinson, Chief Executive Officer
Australian Institute of Refrigeration Air Conditioning and Heating (AIRAH)
3/1 Elizabeth Street, Melbourne, VIC 3000
Tel: 03 8623 3010 | www.airah.org.au | email: phil@airah.org.au

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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.
Industry Endorsement

This communiqué has been developed in conjunction with and is endorsed by the following industry associations and bodies (Appendix B for full details):

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Overview

The introduction of the Australian Government’s Clean Energy Future legislative package on July 1, including the carbon-equivalent levy on refrigerant gases\(^1\), will present many challenges and opportunities to Australia’s heating, ventilation, air conditioning and refrigeration (HVAC&R) industry, and to the hundreds of thousands of people it employs. Our industry is estimated to be responsible for systems and equipment that contribute as much as seven per cent of Australia’s greenhouse gas emissions. The overwhelming majority of these emissions stem from energy use and only a very small proportion is due to refrigerant leakage. It has become apparent that the introduction of the carbon-equivalent levy on refrigerant gases will result in a number of overlooked and negative outcomes.

Since the introduction of the legislation late last year this has become a serious industry concern. On March 29 2012 the Australian Institute of Refrigeration, Air Conditioning and Heating (AIRAH) convened an industry Summit. This event brought together all industry groups. The Summit focused on formulating a best practice response to the Clean Energy Future legislative package and identified a range of potentially unacceptable effects from the introduction of the carbon-equivalent levy on refrigerant gases.

This communiqué outlines the serious concerns of the industry and proposes a number of urgent actions needed to address and avoid unwanted impacts from the introduction of this legislative package.

The introduction of the carbon-equivalent levy on refrigerant gases is expected to cause serious adjustment shock and transition pressures to the HVAC&R industry that will affect the many Australian businesses that it serves and supports. The HVAC&R industry needs assistance from the Australian Government in addressing this issue.

Additionally, The HVAC&R industry will contribute nearly $300 million\(^2\) in payments under the levy being introduced. Given the influence our industry has on Australia’s greenhouse emissions we believe that a portion of the revenue raised should be invested to assist in the transition to becoming a low-emissions industry. The HVAC&R industry calls for:

- The urgent formation of an Interdepartmental Committee (IDC) with representatives from government, industry and end-user associations.
- Provision of funds to industry bodies to develop materials and run forums to drive communication with industry. Develop an ongoing information campaign creating and providing government branded (or endorsed) materials to industry associations to distribute to their members.
- Seed funding to extend the current refrigerant handling licencing scheme to include all refrigerants and improve industry awareness about compliance and enforcement.
- A fair allocation of a proportion of the carbon-equivalent levy on refrigerant gases to be reinvested in the future of this essential industry.

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\(^2\) Refrigerants Australia estimate
The importance of the HVAC&R industry to the Australian economy

Refrigerant gases are at work in every home, business and building in the country, providing essential services, including refrigeration, deep-freeze storage, air conditioning and water chilling. In many circumstances, refrigeration and air conditioning are not options, but necessities.

Facts:

- The HVAC&R industry in Australia is estimated to directly employ at least 160,000 individuals, and in 2006 was estimated to be worth approximately $16 billion.\(^1\)
- The industry is essential for the daily production and preservation of hundreds of thousands of tonnes of fresh, hygienic food, the maintenance of comfort conditions in all major public and private buildings, and is a cross-cutting technology in every sector of the economy.
- Refrigerant gases comprise approximately 1 per cent of Australia’s annual direct greenhouse gas emissions.\(^4\)
- The HVAC&R industry is committed to improving the energy efficiency of equipment, with as much as 21.9 per cent of all distributed electricity in Australia used to power HVAC&R equipment. HVAC&R equipment was estimated in 2006 to have resulted in as much as 7 per cent of all greenhouse gas emission in Australia in that year.\(^5\)
- All synthetic refrigerant gas is imported into Australia, either in bulk cylinders, or in equipment charged with gas.

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\(^4\) National Greenhouse Gas Inventory

The carbon-equivalent levy and its expected impacts

The levy being introduced from 1 July is causing considerable concern within the HVAC&R industry. The dramatic inflation in refrigerant gas prices that will be experienced following the introduction of the carbon-equivalent levy on refrigerant gases has the potential for significant unwanted outcomes. The industry is urgently seeking to address these with the Australian Government.

Damaging outcomes are already starting to occur in the supply chain for refrigerant gases, and for HVAC&R services and equipment in the lead up to the introduction of the levy.

The impact on the average household, where a few hundred grams of gas is used in a domestic refrigerator or in a vehicle air conditioner, is expected to be minimal. However, the impact on some business sectors, particularly small businesses – in agriculture, food, refrigerated transport, hospitality, speciality food retailing, small commercial buildings, and in the health and aged care sectors – is expected to be both dramatic and unexpected by the end users.

Economics of the levy

The carbon-equivalent levy on bulk imports and pre-charged equipment is estimated to raise $300 million pa (a significant multiple of existing refrigerant gas import industry turnover).

Facts:

- Some 5,700 tonnes of refrigerant gas were imported in bulk cylinders or in equipment in 2010. These gases have GWPs of between 1,300 and 3,900, depending on the type of gas.
- The price impact of the carbon-equivalent levy at the point of import will vary across the main refrigerant gases, ranging between 300 and 500 per cent. That increase at point of import will be passed down the supply chain as the additional costs of insurance, administration, finance, security, lost custom and numerous other business costs are inflated due to the levy’s impact.
- Representatives of the Australian Government have informed the HVAC&R industry that all funds raised by the levy are going to consolidated revenue, and there is no allocation for reinvestment in the industry in any form to aid the transition to a low carbon emission HVAC&R industry.

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6 From [http://www.environment.gov.au/atmosphere/ozone/sgg/equivalentcarbonprice/index.html](http://www.environment.gov.au/atmosphere/ozone/sgg/equivalentcarbonprice/index.html) - cost increase in cost of 22kg cylinder of common refrigerant types: 22kg R404a increase of $1,649.56, 22kgs R407C increase of $772.16, 22kg R134a increase of $657.80, 22kg R410a increase of $872.85
The HVAC&R industry and the Australian Government

• The HVAC&R industry has made various attempts to put its case to government on the impact that the carbon-equivalent levy will have. The industry has now consolidated in its serious concerns over this issue.
• Any industry that had to absorb an overnight price increase greater than 300 per cent to one of the essential business inputs would be severely strained.
• The HVAC&R industry is aware of the Jobs and Competitiveness and Clean Energy skills programs that the Australian Government will put in place. However, the HVAC&R industry requires targeted assistance to adjust and transition to become a low emission industry and to remain competitive.
• The HVAC&R industry will contribute in the vicinity of $300 million in new income to the Australian Government consolidated revenue next financial year, with the sum rising along with the carbon tax set price for the following two financial years after that. Support must be provided to the HVAC&R industry to assist with this transition period. The more exposed small business consumers who will be severely impacted by massive increases in prices for refrigerant gas also need consideration.

Consequences of no action

• The rapid inflation in refrigerant gas values, without any immediate change in supply or demand, will create strong incentives for avoiding the levy and encourage the formation of a refrigerant black market. This will cause increased compliance costs, reduced collection of the levy, unsafe practices and flouting of the law.
• At the same time the price shock caused by the levy will have the effect of accelerating migration to alternative technology, and to lower GWP gases. This transition is already a challenge to the industry. Without adequate awareness, education and training, the HVAC&R industry faces serious workplace health and safety issues.
• It will hurt small business and the economy in already difficult times.
Next steps

The HVAC&R industry believes that there are a number of essential initiatives that must be taken now to cushion the significant adjustment shock that the industry faces, and to be ready to assist those worst affected while the industry adjusts to the new economics affecting refrigerant gases.

In summary the industry calls for:

- Urgent formation of an Interdepartmental Committee (IDC) with representatives from government and industry.
- Provision of funds to industry bodies to develop materials and run forums to drive communication with industry. Develop an ongoing information campaign creating and providing government branded (or endorsed) materials to industry associations to distribute to their members.
- Seed funding to extend the current refrigerant handling licencing scheme to include all refrigerants and improve industry awareness about compliance and enforcement.
- A fair allocation of a proportion of the carbon-equivalent levy on refrigerant gases to be reinvested in the future of this essential industry.

We are seeking urgent meetings with senior members of the Australian Government to discuss and prioritise available options for assistance during the transition phase in order to become a lower emissions industry.

At the very least, we recommend the establishment of a forum with the Australian Government and the development of a framework through which all parties can collaborate effectively to address the issues and consequences that the industry faces through the introduction of the carbon-equivalent levy on refrigerant gases.

We will be in contact within the next two weeks and seek a meeting to discuss this communiqué on behalf of the Australian HVAC Industry.

Attached to this communiqué is a list of priority items identified by industry. These are what we perceive as four urgent problems and how these might best be addressed.

These problems are:

- a lack of government and industry understanding, co-ordination and communication;
- a lack of available trusted information;
- the lack of an effective licensing scheme covering all refrigerants, compliance and enforcement; and
- long-term industry development challenges.
Should you require further information please do not hesitate to contact me on 0415 296 918 or phil@airah.org.au

Yours sincerely,

Phil Wilkinson M.AIRAH

AIRAH Chief Executive Office
Appendix 1 – Priority action items
URGENT PROBLEM 1: Lack of government and industry understanding, co-ordination and communication

The present situation has arisen partly because of the fragmentation within the Australian HVAC&R industry and partly because of the Australian Government’s poor understanding of the industry and lack of communication. This has resulted in the risk of significant economic stress to the HVAC&R industry.

There are very few senior policy makers, in any of the Australian Government agencies that are charged with an industry, energy, environment or climate change focus, who have a familiarity with or any profile within the HVAC&R industry. Of these, there are even fewer Australian Government bureaucrats who are well known to HVAC&R industry stakeholders because of their work on Synthetic Greenhouse Gases (SGGs) or on energy efficiency. The disconnect between DCCEE and DSEWPaC is a significant concern to the industry because it creates confusion around the implementation of the regulation.

The HVAC&R industry has several industry associations that form discrete stakeholder groups in different sectors of the industry. The principal associations are:

**Australian Institute of Refrigeration, Air Conditioning and Heating (AIRAH):** Representative of professional engineers, scientists and technicians, boasting more than 2,500 professional paid up members and an extensive reach into the broader industry by virtue of AIRAH’s role as an industry publisher and training provider.

**Australian Mechanical Contractors Association (AMCA):** The employer representative of the Air Conditioning and mechanical services companies. Member organisations undertake 80 per cent of all commercial air conditioning and mechanical services work in Australia.

**Refrigerants Australia (RA):** Refrigerant importers and end user associations.

**Australian Refrigeration Equipment Manufacturers Association (AREMA):** Australian manufacturers and equipment importers.

**Refrigeration Air Conditioning and Contractors Association (RACCA):** Represents individuals and small refrigeration companies that manufacture, service or install refrigeration and air conditioning equipment.

**Chartered Institute of Building Services Engineers (CIBSE ANZ):** CIBSE ANZ is the Australian and New Zealand chapter of an international professional body for the building services profession.

**Australian Refrigeration Association (ARA):** Newly formed body representing business and professionals in the industry focussed on refrigeration technology and safe, efficient sustainable HVAC&R operations.

There is no one organisation that has comprehensive coverage of the industry supply chains and participants. However, there is a real need for an industry-government roundtable to co-ordinate
action to assist in the adjustment to the introduction of the carbon-equivalent levy on refrigerant gases.

**SOLUTION:** Urgent formation of an Interdepartmental Committee (IDC) with representatives from:

- Department of Climate Change and Energy Efficiency
- Department of Resources, Energy and Tourism
- Department of Industry, Innovation, Science, Research and Tertiary Education
- Department of Sustainability, Environment, Water, Population and Communities
- Department of Education, Employment and Workplace Relations

A full-time secretariat of at least one person would be used to convene an urgent roundtable of all industry groups for regular coordinated meetings to expand the pool of knowledge in Canberra on the range of issues and arising problems associated with the levy.

**COST:** Funding and resourcing for HVAC&R Industry Roundtable Secretariat and human resource commitments by all parties.

**ACTION ITEM:** Senior level commitment in one of the major departments to provide secretariat and manage IDC process to ensure effective representation of all relevant Government stakeholders.
URGENT PROBLEM 2: Lack of trusted information available, high levels of uncertainty and ignorance of the impending carbon-equivalent levy on refrigerant gases and the economic impact of the levy

There is a great deal of uncertainty in the market regarding the implementation of the levy, how potential prices will be impacted and what is required in the way of record keeping and information to be passed down to the customer.

The Department of Sustainability, Environment, Water, Population and Communities (DSEWPaC) has produced three two page information sheets that set out a base case for the financial impact of the levy on the price of gases subject to the levy at point of import and an online calculator. However, businesses still require guidance to ensure they don’t contravene Australian Competition and Consumer Commission (ACCC) compliance and enforcement provisions.

Very few of the tens of thousands of refrigeration and air conditioning contractors in the industry will spend time searching for and downloading information from a Government website. This is evident from previous regulation changes such as the energy efficiency measures in the National Construction Code. Furthermore, the base case model of price rises does not demonstrate an understanding of the way business costs are compounded when new costs are imposed. It is unrealistic to propose that the only cost rise will be the levy value itself when that cost increase on such a basic business input will have impacts all along the value supply chain, including increases in financing, insurance and security costs.

SOLUTION: Provision of funds to industry bodies to develop materials and run forums to drive communication with industry. Develop an ongoing information campaign creating and providing government branded (or endorsed) materials to industry associations to distribute to their members.

COST: ~ $600,000 to $850,000 over the next 18 to 24 months.

ACTION ITEM: Projects already under way would greatly benefit from more funding to extend the reach of the message and media being developed include a weekly electronic newsletters, monthly professional magazines, a series of seminars on the levy around the country and plans for internet and mobile materials suitable for contractors and small business owners.

AIRAH will coordinate all activities with the principle HVAC&R industry associations.
HIGH PRIORITY PROBLEM 3: Lack of an effective licensing scheme covering all refrigerants, compliance and enforcement

Generally the Australian Refrigeration Council (ARC) has been able to gain co-operative compliance without the need for enforcement action for ozone-depleting substances (ODS) and synthetic greenhouse gas (SGG) refrigerants. Last year the ARC conducted over 7,000 audits, with over 88 per cent compliant – a figure that has been on the increase year on year. In addition, non-compliant businesses cannot renew their licence and therefore cannot buy refrigerant – effectively putting them out of business.

When this approach has not achieved compliance cases have been referred to the Government, and all but a small number have been resolved co-operatively under the threat of legal action. Enforcement or the threat of enforcement has seen those few move on from the industry.

Although there is effective compliance through the ARC, enforcement of the regulations is not widely publicised in the HVAC&R industry. The perception is the enforcement is not happening and is ineffective.

The introduction of the carbon-equivalent levy – which introduces a price differential into the market based on refrigerants’ GWP, makes hydrofluorocarbon refrigerant significantly more expensive. In some cases, where alternatives exist, he price differential may drive the use of alternate refrigerant use; however, in many cases there are no standards or licencing regarding their use, despite various risks.

It is already illegal to emit prescribed ODS and SGG refrigerant gases into the atmosphere. Yet the lack of a licence scheme covering other refrigerants and the technical competencies needed to handle them is likely to result in deficient product installation and servicing. This could lead in leaking refrigerant requiring higher electricity needs and increased pressure on “peak load”. This negates the positive impact of the MEPS program. There are also secondary risks such as safety, which would be picked up by default under the licence scheme.

The increased cost from the equivalent carbon price will result in a great incentive for technicians to reclaim refrigerant gas and not return it for destruction or professional reclaim. Currently there are no safeguards in place to ensure the gas has contaminants removed, is stored appropriately, or maintained properly. There is a strong likelihood these locally claimed gases will be mixed in cylinders, causing safety and equipment warranty issues.

**SOLUTION:**

1. Extend the current ARC licence scheme to include all refrigerants and introduce supporting qualifications and codes of practice.
2. Provide information to industry on compliance and enforcement outcomes.
3. Broaden the ARC audit powers to provide for testing of refrigerant and checking for appropriate equipment (i.e., audit the technicians).

**COST:** Seed funding of $400K. Ongoing funding from ARC licence scheme revenue.

**ACTION ITEM:** The Departments of Sustainability, Environment, Water, Population and Communities and Climate Change and Energy Efficiency to facilitate regulatory change to extend the ARC licence scheme and ARC audit powers to audit refrigerant and equipment and report on compliance and enforcement actions.
PROBLEM 4: Long-term industry development challenges and issues

The HVAC&R industry in Australia suffers from a number of chronic, structural issues that must be addressed to allow the industry to continue to deliver essential services, to embrace changing technology and reliably meet future social and economic needs.

The major structural obstacles can be characterised as:

1. **Lack of recognition** – As a result of the historical and technological circumstances of the industry’s development in Australia, the industry is almost completely hidden, despite being essential to the economy, because the economic activity it generates is reported as part of the end user activity (i.e. agriculture, transport, retail, construction and building). This has resulted in the value and size of the industry being obscure from key policy makers and policy developments, which in turn has hampered industry development in a number of important areas.

2. **Lack of dedicated educational, financial, planning and intellectual resources** – This arises out of the first obstacle and is the result of a chronic and serious lack of training and education for this complex, highly technical, electro-mechanical engineering industry. While being possibly 1.7% of the GDP of Australia’s economy, not a single university offers an undergraduate degree specialising in refrigeration and air conditioning systems. Vocational Education and Training (VET) is also poorly resourced.

3. **Very low new entrant rates and inadequate growth of the skilled workforce to maintain services** – Due to the two obstacles listed above, the industry has been falling behind for the past two decades in attracting sufficient new entrants to be able to ensure availability of enough highly trained and experienced technicians and engineers to adequately service the ever growing stock of HVAC&R equipment in the economy.

These three, broad but interlinked problems will be exacerbated by the carbon-equivalent levy on refrigerant gases, the increased demand for alternative refrigerants, and the resulting new technological options that will inevitably be developed following such a significant economic restructuring.

This will result in a long-term chronic failure to effectively service the existing stock of equipment, and properly adopt and deploy new technology. The negative outcomes of this situation could result in:

- energy inefficiencies in poorly maintained equipment,
- more direct emissions of refrigerant gases to air,
- economic inefficiency as capital goods fail to achieve their economic life,
- outsourcing of jobs as manufacturers of HVAC&R equipment here fail to compete with cheaper imports to replace equipment that fails before its time, and
- the compounding losses in the client industries that rely on HVAC&R services but can no longer secure reliable delivery of those services.
| SOLUTION: | A fair allocation of a proportion of the carbon-equivalent levy on refrigerant gases to be reinvested in the future of this essential industry. |
| COST: | $50 to $60 million per year – less than 20 per cent of revenue extracted from the industry |
| ACTION ITEM: | Ministerial action required |
Appendix B – Endorsements

The following organisations endorse this communiqué

Australian Institute of Refrigeration Air Conditioning and Heating  AIRAH
Air Conditioning and Mechanical Contractors Association  AMCA
Air Conditioning and Refrigeration Manufacturers Association  AREMA
Refrigerated Warehouse and Transport Association  RWTA
Refrigeration and Air Conditioning Contractors Association  RACCA
Refrigerants Australia  RA
Consumer Electronics Suppliers Association  CESA