



**SUBMISSION IN RESPONSE TO THE
VEHICLE EMISSIONS DISCUSSION PAPER**

April 2016

Background – new technologies

- Refrigerants Australia notes that the only place HFCs are included in the discussion paper is in the glossary.
- Until recently, however, HFC 134a was the only refrigerant used by original equipment manufacturers in motor vehicle air conditioning and is still used by the vast majority of manufacturers
- HFC 134a has a global warming potential of 1,300 meaning that the average car contains the equivalent of about 700kg of carbon dioxide in its air conditioning system.
- This gas will be released to atmosphere as a result of accident, leak or at the end of equipment life if not recovered and sent for destruction.
- HFC 134a was introduced around 1994 and coupled with air conditioning systems that leak significantly less than their predecessors there was a dramatic improvement –an order of magnitude or more - in the greenhouse gas emissions from car air conditioning.
- New air conditioning systems which use refrigerants with far lower GWPs are being increasingly deployed: this includes R1234yf with a GWP of less than 1, and carbon dioxide with a GWP of 1. There is now a new opportunity to reduce emissions from car air conditioners significantly.

Issues – new technologies

- These new technologies deliver increased performance with lower environmental impact, however, they are costlier than HFC 134a, which is easily accessed.
- Companies need an incentive to accelerate the introduction of new technologies into Australia.
- In the United States, car companies with low GWP refrigerants gain an advantage in assessments of the fuel efficiency.

Recommendations

Refrigerants Australia recommends that:

- Consideration be given to emissions from car air conditioners in developing a policy response to vehicle emissions;
- An incentive be developed to encourage car manufacturers to introduce new refrigerant technologies early into Australia.

Further Contact

Further detail can be provided as needed. Please feel free to contact Greg Picker, Executive Director of Refrigerants Australia [REDACTED] if more information is needed.