



CONFIDENTIAL AND PRIVILEGED

**CARBON CREDITS ASSESSMENT FOR THE REFRIGERATION
AND AIR CONDITIONING INDUSTRY**

REFRIGERANTS AUSTRALIA

11 MARCH 2022

CONTENTS

BACKGROUND AND INTRODUCTION.....	1
EXECUTIVE SUMMARY AND RECOMMENDATIONS.....	2
PART 1: CARBON CREDITS OVERVIEW	4
BASELINE AND CREDIT OFFSET SCHEMES.....	4
OVERVIEW OF CARBON CREDIT SCHEMES.....	5
Summary Comparison of Carbon Credit Schemes	5
Australian Regulatory Scheme – Carbon Farming Initiative.....	6
International Carbon Credit Schemes	7
Energy Efficiency Schemes.....	9
CARBON CREDIT SCHEME CRITERIA.....	10
Methodologies	10
Additionality	11
Other regulatory approvals	12
PART 2: DEVELOPMENT, ASSESSMENT AND APPROVAL OF PROJECTS IN AUSTRALIA.....	13
CARBON FARMING INITIATIVE	13
Project Approval	13
Carrying out a project and generating ACCUs	15
Methodologies relevant for the RAC industry	17
CARBON FARMING INITIATIVE – METHOD DEVELOPMENT.....	20
Method Development Priorities	20
Method Development	21
Method Variation	22
VERIFIED CARBON STANDARD.....	23
VCS project approval and method development overview.....	23
VCS methods relevant to the RAC industry	24
AMERICAN CARBON REGISTRY	25
Methods relevant to the RAC industry.....	25
ANALYSIS OF EXISTING SCHEMES – SUITABILITY FOR THE REFRIGERANT SECTOR.....	27

Existing CFI methods	27
PART 3: LITERATURE REVIEW OF REFRIGERANT AND ENERGY IMPROVEMENT PROJECTS.....	28
REFRIGERANT EMISSIONS REDUCTION AND AVOIDANCE PROJECTS	28
New Zealand Emissions Trading Scheme.....	28
Voluntary refrigerant replacement projects by end users	29
Voluntary Initiatives by Manufacturers.....	30
ENERGY EFFICIENCY PROJECTS – AUSTRALIA.....	31
Relevant ESS Methods and Projects	32
Relevant VEU methods	33
ENERGY EFFICIENCY PROJECTS – INTERNATIONAL	34
COOLING AS A SERVICE	34
ENVIRONMENTAL UPGRADE AGREEMENTS.....	35
PART 4: CURRENT AUSTRALIAN CONDITIONS	36
SUMMARY OF INTERVIEWS UNDERTAKEN	36
IDEAS AND ISSUES RAISED BY INTERVIEWEES.....	36
POSSIBLE TYPES OF EMISSION REDUCTIONS PROJECTS THAT THE RAC INDUSTRY COULD UNDERTAKE IN AUSTRALIA.....	40
Energy Efficiency Projects.....	40
End-of-Life Refrigerant Destruction	41
Still-in-Life Refrigerant Reclamation, Replacement and Destruction.....	41
Refrigerant reclamation and recycling	42
Project structure and possible financing facility	43
PART 5: RECOMMENDATIONS.....	44
RECOMMENDATION 1: BEGIN CONSULTATION WITH THE CLEAN ENERGY REGULATOR	44
RECOMMENDATION 2: NARROW PROJECT PRIORITIES AND BEGIN CONSIDERING SUBMISSIONS TO THE GOVERNMENT'S METHOD CONSULTATION	44
RECOMMENDATION 3: FURTHER CONSIDER PROJECT STRUCTURING ARRANGEMENTS	45



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CONTACTS

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BACKGROUND AND INTRODUCTION

1. Refrigerants Australia (**RA**) is interested in improving its understanding of the carbon credits market and how Refrigerant and Air Conditioning (**RAC**) industries could participate in Australia's voluntary and/or compliance markets.
2. Ashurst has been engaged to provide this report to provide an overview of the carbon market framework in Australia, undertake literature reviews, interviews with individuals in the RAC industry and provide recommendations for RA to participate in carbon markets to reduce greenhouse gas emissions associated with the RAC industry.
3. This report is divided into five parts, which correspond to the Terms of Reference - Carbon Credits Assessment for the Refrigeration and Air Conditioning Industry provide by RA:
 - a. Part 1 provides an overview of the carbon credits market in Australia;
 - b. Part 2 describes the project assessment and methodology development process in Australia, and highlights some key methodologies relevant to the RAC industry;
 - c. Part 3 provides a summary of our literature review into emission reduction projects for the RAC industry;
 - d. Part 4 summarises the results of interviews undertaken with individuals in the RAC industry and identifies, based on the literature review and interviews, types of projects which could be undertaken by RA;
 - e. Part 5 provides our recommendations and next steps.

Ref: 1000-122-692

EXECUTIVE SUMMARY AND RECOMMENDATIONS

4. Australian carbon markets currently provide limited support for emissions reductions projects in the RAC industry. Energy efficiency projects, either as part of the Commonwealths' Carbon Farming Initiative (CFI) or energy efficiency programs at state level, provide some ability for the RAC industry to implement projects that replace RAC equipment with more energy efficient equipment. These projects, however, are not catered to the RAC industry and do not directly incentivise the replacement of high Global Warming Potential (GWP) refrigerant with lower GWP alternatives.
5. Carbon markets in other jurisdiction, and the markets created by international voluntary programs, provide several methods for RAC industry projects which could be used as a basis to propose new project methodologies to the Clean Energy Regulator (CER), the regulatory responsible for administering the CFI. Noting the existing requirements under legislation to capture and destroy refrigerants from end-of-life RAC equipment, there may be some challenges in establishing that RAC projects under the CFI Act result in emissions reductions activities that are additional to what is already required by law. However, in our view there are compelling arguments that projects which, for example, capture, destroy and replace refrigerant from still-in-life equipment would result in additional emissions reductions. Interviews undertaken in preparation of this report indicate that compliance with existing legal requirements is low, so there are strong arguments that the government should explore other methods, such as using carbon markets, to drive emissions reductions in the RAC industry.
6. Ultimately, the CER is responsible for developing new methodologies as informed by a method development consultation process that typically occurs in the second half of the year. Engagement with the CER is therefore a critical step in developing any new methods which support emissions reductions activities in the RAC industry. We therefore recommend Refrigerants Australia:
 - a. begin consultation with the CER to determine the appetite for emissions reductions projects in the RAC industry, possibly with a view to raising the CER's awareness of current issues and make emissions reduction activities in the RAC industry a priority;
 - b. consider the project ideas outlined in this report, along with any other project ideas which may be viable, and begin to consider the development of submissions to the Department of Industry's method consultation process which will commence in the second half of the year. Submissions are required to address specific criteria, some of which may require significant input from industry, such as the potential take-up of the method and the level of abatement achieved;

- c. consider how to support the proposed projects in the event the CER develops appropriate methodologies. There are multiple funding and financing structures employed throughout the carbon project space, and Refrigerants Australia could opt to undertake projects itself as project proponent, and split the produced carbon credits between itself and a third party, or could provide a financing mechanism for a third party to carry out a project in exchange for a portion of the ACCUs produced.

PART 1: CARBON CREDITS OVERVIEW

BASELINE AND CREDIT OFFSET SCHEMES

7. Baseline and credit offset schemes provide incentives for emitters to reduce greenhouse gas emissions below a specified limit or "baseline". A baseline and credit offset scheme generally has three key features:
 - a. The establishment of a baseline emissions level.

The baseline acts as a benchmark to measure emissions reductions against and represents emissions that would have occurred but for the project or scheme that reduces emissions. The appropriate methodology to calculate a baseline will depend on the type of project or scheme and can also include baseline energy efficiency for efficiency projects.
 - b. The assessment of an entity's emissions against the baseline.

A participant's emissions are then compared against the baseline. If the participant has reduced its emissions below the baseline, the participant may receive carbon credits for the difference between the baseline and its actual emissions. If emissions exceed the baseline, the participant may be subject to shortfall penalties or be required to purchase extra credits from third-parties to offset the excess emissions.
 - c. the use of carbon credits and/or shortfall penalties where an entity's actual emissions are above the baseline.
8. Carbon credits are tradeable credits that are issued by the relevant scheme. Credits are commonly measured in "tonnes carbon dioxide equivalent" (**tCO₂e**). Each credit represents a specific amount of greenhouse gas emissions, equivalent to an emission of one tonne of carbon dioxide that was either avoided or removed from the atmosphere under the scheme.
9. Carbon credits may be surrendered or retired by a participant in order to meet its regulatory obligations or voluntary goals. Alternatively, a participant may decide to sell its credits to governments or third-parties on the secondary market, creating a financial incentive for participants to reduce emissions or carry out offsets projects in order to generate credits for sale.
10. A variety of projects can be accredited under baseline and credit offset schemes, typically falling into two categories:

Emission avoidance projects <i>(which avoid emissions that would otherwise have occurred – relevant to RAC industry)</i>	Carbon sequestration projects <i>(which sequester emissions from the atmosphere – less relevant to RAC industry)</i>
<p>Examples:</p> <p>Activities to increase energy efficiency, including projects to replace equipment and upgrade building efficiency</p> <p>Activities which replace industrial equipment with more energy efficient equipment</p>	<p>Examples:</p> <p>Soil sequestration</p> <p>Vegetation activities, including reforestation and avoiding clearing of vegetation</p>

OVERVIEW OF CARBON CREDIT SCHEMES

Summary Comparison of Carbon Credit Schemes

SCHEME	CARBON CREDIT	CREDITS USED FOR COMPLIANCE?	LOCATION	CURRENT PRICE PER UNIT ¹
Carbon Farming Initiative	ACCU	Yes	Australia	A\$30
Verified Carbon Standard	VCU	No	International	US\$1.62
Gold Standard	VER	No	International	US\$5.27
NZ Emissions Trading Scheme	NZU	Yes	New Zealand	A\$72.50

¹ Indicative/approximate prices sourced from publicly available information at renewable at <https://www.renewableenergyhub.com.au/market-prices/> and <https://carbonpricingdashboard.worldbank.org/>.

Australian Regulatory Scheme – Carbon Farming Initiative

Framework

21. Australia has an established legal framework which governs the generation of ACCUs, under a scheme known as the Carbon Farming Initiative (**CFI**), created by the *Carbon Credits (Carbon Farming Initiative) Act 2011* (Cth) (**CFI Act**). The CFI provides for the accreditation of carbon offset projects by the Clean Energy Regulator (**CER**).
22. Projects must be carried out in accordance with "methodologies" approved by the CER, and must meet the requirements prescribed by regulation. If projects are successfully undertaken, the CER then issues ACCUs to the project proponent in accordance with the ACCU crediting profile for the project.
23. Some sources of demand for ACCUs in the Australian market are summarised below.

The voluntary offset market

24. The voluntary offset market is made up of those parties wishing to purchase ACCUs to offset emissions associated with other activities they undertake. Voluntary demand for ACCUs is mainly driven by airlines and large corporate entities seeking offset their emissions.
25. With the recent push in line with global climate commitments for large corporations and emitters to achieve "net zero" emissions, demand for ACCUs in the voluntary market is likely to increase. Voluntary surrender of ACCUs is proposed to be recognised as reducing a corporation's net emissions position under the proposed Corporate Emissions Reduction Transparency (CERT) Framework, which is being developed by the CER to allow corporations to publicly disclose their own progress towards achieving their emissions targets.

The Emissions Reduction Fund (ERF)

26. Under the ERF, the Australian Government contracts with offsets project developers to purchase a fixed quantity of ACCUs at a set price, which are known as Carbon Abatement Contracts (**CACs**). The CER auctions the right to enter into Carbon Abatement Contracts. As at 19 October 2019, the Government had paid, or committed to pay, \$2.3 billion from the fund to purchase 192 million ACCUs². Over 90% of ACCUs produced each year are bought by the CER under CACs.
27. The CER auctions the right to enter into CACs.

² <http://www.cleanenergyregulator.gov.au/Infohub/Markets/buying-accus/australian-carbon-credit-unit-demand>

Safeguard Mechanism

28. Under the Safeguard Mechanism, facilities which emit above a prescribed emissions baseline must surrender ACCUs to reduce their net emissions or face penalties under the National Greenhouse and Energy Reporting Act 2007 (Cth) (**NGER Act**). This creates market demand for ACCUs by emitters which must acquire and surrender ACCUs to offset their emissions above their prescribed emissions baseline.

Climate Active

29. Climate Active (formerly the National Carbon Offset Standard – NCOS) is a voluntary scheme administered by the Australian Government that provides a framework by which organisations can have their carbon neutral claims certified, including by the use of offsets. Climate Active certification is available for:
- a. organisations (the operations of an organisation have resulted in net zero emissions);
 - b. products (a product being created, used and disposed has resulted in net zero emissions);
 - c. services (the provision of a service has resulted in net zero emissions);
 - d. events (the activities associated with running an event have resulted in net zero emissions);
 - e. buildings (the operations of a building have resulted in net zero emissions – see also the National Australian Built Environment Rating System or the Green Building Council of Australia); and
 - f. precincts (the operations of a precinct have resulted in net zero emissions).
30. For any of the above to be certified, it must meet the requirements of the Climate Active Carbon Neutral Standard. Broadly, this means that achieving certification requires the measuring of emissions, the reduction of emissions where possible, offsetting the remaining emissions by surrendering ACCUs or other eligible offset units, and publicly reporting on all relevant actions undertaken.

International Carbon Credit Schemes

Verified Carbon Standard

31. The Verified Carbon Standard (**VCS**) is an international, voluntary carbon certification for greenhouse gas emission reduction projects.

32. The VCS scheme is administered by US based non-profit Verra. Verra was founded in 2005 with the aim of providing greater quality assurance in voluntary carbon markets.
33. Verra develops and implements the VCS. The VCS was originally launched in 2007 and is currently in Version 4, which comprises of a number of documents that govern VCS projects, such as the VCS Standard and VCS Methodology requirements.³
34. As a privately owned, voluntary scheme, VCS is not supported by any legal framework. Verra covers VCS costs via a levy charged on issued Verified Carbon Units (**VCUs**), with one VCU representing a removal or reduction of 1 tCO₂e achieved by a VCS project.⁴
35. There are currently 1,674 VSC projects registered on the VCS registry. Over 500 million VCUs have been issued for these projects, with over half of those retired to offset emissions.

Gold Standard

36. The Gold Standard is an international, voluntary emissions trading scheme which issues carbon offsets for verified projects which reduce greenhouse gas emissions and also support the UN's Sustainable Development Goals (**SDGs**). The Gold Standard is administered by Gold Standard Foundation, a Swiss non-profit foundation which was established in 2003 by the World Wide Fund for Nature, SouthSouthNorth and Helio International.
37. All Gold Standard certified projects must contribute to at least three UN SDGs.
38. All Gold Standard projects and all issued credits, called Verified Emission Reduction Units (**VERs**), are listed on the Gold Standard Impact Registry.
39. The primary governing set of documents for the Gold Standard is the "Gold Standard for the Global Goals", which is a suite of documents that covers topics including covering eligibility requirements for project registration and certification, methodology approval process, and emission reduction calculation methods.⁵

Clean Development Mechanism

40. The Clean Development Mechanism (**CDM**) was established under Article 12 of the Kyoto Protocol and allows emission reduction projects implemented in

³ <https://verra.org/project/vcs-program/rules-and-requirements/>

⁴ <https://verra.org/project/vcs-program/registry-system/verified-carbon-units-vcus/>

⁵ <https://www.goldstandard.org/project-developers/standard-documents>

developing countries to generate Certified Emission Reduction Units (**CER Units**), which are international voluntary units.

41. CER Units can then be purchased by Annex 1 Parties to the UNFCCC and Kyoto Protocol and surrendered via those parties' respective registries, including the ANREU to meet their agreed commitments. CER Units can also be traded, sold and transferred between registries.
42. CERs can be traded and sold on the secondary market, and are flexible offset units in that they can be transferred to a number of Kyoto registries. However, the value of CER Units has declined considerably in recent years due to a surplus of units and lack of demand.

Energy Efficiency Schemes

43. While not strictly carbon offset schemes, energy efficiency schemes are relevant to the RAC industry for projects which replace RAC equipment with more efficient equipment, providing a funding source for equipment upgrades which increase energy efficiency.

Victorian Energy Upgrades program

44. The Victorian Energy Upgrades program (**VEU**) provides funding for new installations or projects that deliver energy savings. Accredited projects, which include the installation of RAC systems to residential and commercial properties, are eligible to receive Victorian Energy Efficiency Certificates (**VEEC**).⁶ Each VEEC certificate represents one tonne of greenhouse gas reductions.
45. Market demand for VEECs is driven by the requirement under the *Victorian Energy Efficiency Target Act 2007 (Vic)* for large energy retailers to surrender a certain number of certificates each calendar year.

Solar Victoria

46. The Victorian Solar Homes Program (**Solar Victoria**) provides rebates for a range of energy and electricity activities. While the primary function of Solar Victoria is to provide rebates on the installation of solar panels, Solar Victoria also supports a Home Heating and Cooling Upgrades program that offers rebates to upgrade gas, electric and wood heaters with energy efficient reverse cycle air conditions.⁷

Energy Savings Scheme

47. In NSW, the Energy Savings Scheme (**ESS**) provides financial incentives to install, improve or replace energy savings equipment and appliances under the

⁶ Essential Services Commission, *About the Victorian Energy Upgrades Program*, <https://www.esc.vic.gov.au/victorian-energy-upgrades/about-victorian-energy-upgrades-program>.

⁷ [Home Heating and Cooling Upgrades | Solar Victoria \(heatingupgrades.vic.gov.au\)](https://www.heatingupgrades.vic.gov.au)

Commented [AA1]: RA: should also reference Victorian Solar Homes Program - <https://www.solar.vic.gov.au>

Commented [AA2]: Is the above summary suitable? The heating and cooling upgrades program was the online part of the solar program I could find which was relevant to the RAC industry.

Electricity Supply Act 1995 (NSW). Under the scheme, households and businesses receive a discount on the cost of energy saving upgrades completed by accredited providers. In return, the purchaser transfers the right to create Energy Savings Certificates (**ESC**) to Accredited Certificate Providers.

48. Market demand for ESCs is created by requirements under the *Electricity Supply Act 1995* (NSW) and the Energy Savings Scheme Rule for scheme participants (typically electricity retailers) to acquire and surrender a certain number of ESCs or pay a financial penalty.

CARBON CREDIT SCHEME CRITERIA

49. Baseline and credit offset schemes require participants to adhere to certain criteria in order to participate in the scheme and be eligible for credits. Although each scheme is different, common criteria include:
- compliance with relevant methodologies;
 - compliance with additionality requirements;
 - ensuring appropriate land access arrangements; and
 - obtaining regulatory approvals.

Methodologies

50. Methodologies set out how a project is undertaken and how abatement is quantified and reported. Methodologies will apply throughout the lifecycle of a project. For example:
- the project must be covered by an approved methodology in order to be eligible under the scheme;
 - the project must then be implemented in accordance with the methodology; and
 - the resulting emissions reductions must be quantified and reported consistently with the methodology.
51. For some schemes, including the CFI, a project proponent **must** comply with an existing and approved methodology and a project proponent cannot to develop its own methodology catered to a specific project. For other schemes, such as the VCS, project proponents can propose methodologies which are bespoke for specific projects.

Additionality

52. Baseline and credit schemes are typically subject to an "additionality" requirement, which means that carbon credits are only awarded for emission reductions which are additional. Emissions reductions are additional when they would not have occurred but for the project or offset scheme being implemented.
53. Additionality may be assessed in various ways. Most schemes use a combination of the following factors:
 - a. whether the project would be financially viable without the scheme's incentives;
 - b. whether the project activity is already required by an existing law or regulation;
 - c. whether the project activity is already common practice in the same industry or in comparable businesses;
 - d. whether there are non-financial barriers that limit the use of the project activity, such as lack of investment, opportunity costs or operational risk; or
 - e. whether the project was implemented prior to the establishment of the scheme or prior to registration under the scheme and therefore did not require the scheme's incentives.
54. In Australia, additionality is legislated in section 27 of the CFI Act, which provides that a project cannot be registered unless it meets the following additionality requirements:
 - a. **Regulatory Additionality Requirement:** Credits can only be awarded for a project or part of a project that is not required to be carried out under an existing law, regulatory requirement or condition of an authorisation. Where emission reductions are already mandated under a law, credits can be awarded where the emission reductions go above and beyond what is required by law and results in additional abatement.⁸ In some circumstances the CER can substitute alternative requirements for specific project types.
 - b. **Newness Requirement:** A project cannot be registered under the CFI Act if it has begun to be implemented prior to registration of the project.
 - c. **Government Program Requirement:** Credits cannot be awarded for emission reductions that are funded by certain other government programs.

⁸ <http://www.cleanenergyregulator.gov.au/ERF/Want-to-participate-in-the-Emissions-Reduction-Fund/Planning-a-project/regulatory-additionality-and-government-programs>

Relevantly, energy efficiency projects that are issued with State-based energy efficiency certificates (VEECs and ESCs) cannot be registered.

Other regulatory approvals

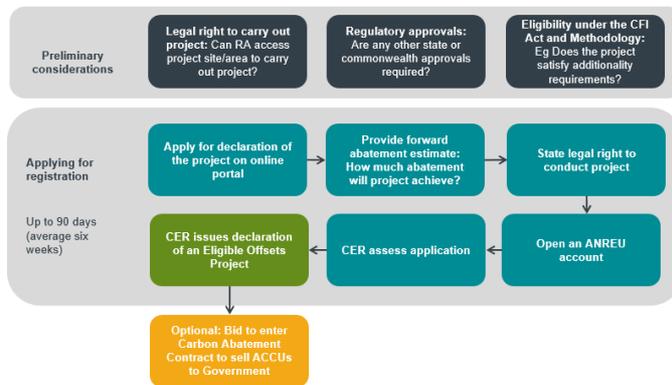
55. Baseline and credit schemes require participants to lawfully access and occupy the project land to carry out a project. This usually requires a participant to either own the land, or be able to occupy the land under a lease or licence.
56. A participant must also obtain any Commonwealth, state or territory approvals that are necessary to carry out the project. Regulatory approvals required in Australia could include:
 - a. Approvals under state or territory planning and environmental laws;
 - b. Approvals under the *Environment Protection and Biodiversity Conservation Act 1999* (Cth);
 - c. Approvals under the *Native Title Act 1993* (Cth); and
 - d. Land management approvals, such as water and irrigation rights.

PART 2: DEVELOPMENT, ASSESSMENT AND APPROVAL OF PROJECTS IN AUSTRALIA

CARBON FARMING INITIATIVE

Project Approval

57. The diagram below sets out a broad overview of the steps involved in obtaining approval of a project under the CFI Act. Approval is in the form of a declaration issued by the CER that a project is an "Eligible Offsets Project".



Preliminary considerations

58. The diagram above references three preliminary considerations which a proponent would need to consider before undertaking a project. We expand on these considerations in the table below.

Proponents must consider:	
Legal right	<p>The "legal right" to undertake the project generally means the right to:</p> <ul style="list-style-type: none"> access and occupy the land(s) on which the project will be carried out; and carry out the project on that land. <p>For RAC industry projects at commercial premises, this may mean negotiating the required access agreements to carry out equipment upgrades and monitory performance.</p> <p>The exact nature of the legal right required to undertake a project will depend on the project being undertaken.</p>

Regulatory approvals	The statutory approvals required to undertake the Project. This could include any planning approvals required under a state planning scheme to undertake the works.
Eligibility under the CFI Act	The eligibility requirements under the CFI Act which include (amongst other things) that: <ul style="list-style-type: none"> • the project meets the <u>additionality requirements</u>; and • the project is covered by an existing <u>methodology</u>.

Applying for a declaration of an eligible offsets project

59. ACCUs are generated by offsets projects registered under the CFI Act.
60. To generate ACCUs, an offsets project must be declared an "eligible offsets project" by the CER (**Declaration**) under Part 3, Division 2 of the CFI Act.
61. Applications for a Declaration are applied for and completed through the CER's Client Portal.⁹ The application requires the proponent to provide information relevant to the project including:¹⁰
- a. the applicable methodology determination for the project; and
 - b. a forward abatement estimate.¹¹
62. A forward abatement estimate provides an estimate of the offsets of the project in tonnes of carbon dioxide equivalent (**tCO₂-e**), which indicates the number of ACCUs the project is anticipated to produce. The forward abatement estimate must cover the entire "crediting period" of the project, which is the time ACCUs can be applied for and claimed under the project. Emissions avoidance projects, such as energy efficiency projects, typically have a crediting period of 7 years.

Criteria from making the Declaration

63. The CER cannot declare a project an eligible offsets project unless it meets the "criteria for declaration" under section 27(4) of the CFI Act. This criteria is set out in the table below.
64. This criteria applies irrespective of whether a project is being registered for the purposes of generating ACCUs to sell (either privately or under a CAC) or generating ACCUs to surrender.

⁹ <http://www.cleanenergyregulator.gov.au/ERF/Forms-and-resources/apply-to-participate>

¹⁰ *Carbon Credits (Carbon Farming Initiative) Act 2011* (Cth) s 27(3).

¹¹ *Carbon Credits (Carbon Farming Initiative) Rule 2015* (Cth) (CFI Rule), r 13.

Criteria for eligible offsets project declaration
The project is to be carried on in Australia
The project is covered by, and meets the requirements of, a methodology determination
The projects meets the additionality requirements (discussed below)
The applicant is the project proponent
The applicant passes the "fit and proper person" test
The project area for sequestration projects is either Torrens system or Crown land
The project meets eligibility requirements specified in the CFI Rule ¹²
The project is not an excluded offsets project under the CFI Regulations

Carrying out a project and generating ACCUs

Methodology determinations

65. CFI projects must be carried out in accordance with methodologies approved by the CER. Methodology determinations are legislative instruments created under the CFI Act.
66. The methodology determination will specify how carbon abatement is calculated in relation to a specific project. For example, under the *Carbon Credits (Carbon Farming Initiative – High Efficiency Commercial Appliances) Methodology Determination 2015*, carbon abatement due to the installation of new, high-efficiency RAC equipment is calculated by comparing the efficiency of the newly installed equipment to a baseline efficiency using the average of similar units in the GEMS register.
67. ACCUs are issued correspondent to the tCO₂-e abatement calculated under the methodology determination. An offsets project can only be covered by one methodology determination. If the nature of the project changes after commencement and the original methodology determination no longer suits the project, the project proponent can apply to the CER to have the method changed to a different method.¹³

¹² Eligibility requirements in the CFI Rule include: Consent from a person with operational control a facility when the project is a facility with greater than 100,000 tCO₂e emissions in a year; that any part of the project area is not used to meet a biodiversity offset obligation; and that plantation forest projects do not meet the criteria in rule 20B.

¹³ *Carbon Credits (Carbon Farming Initiative) Act 2011* (Cth) s 128.

Crediting and reporting periods

68. An eligible offsets project can generate ACCUs during the crediting period. The project proponent nominates a reporting period, which sets the frequency a proponent must provide a project report. The duration of the crediting period and reporting period depends on the type of project, as set out in the table below.
69. The carbon abatement indicated in the offsets report will determine the ACCUs issued for that project for a reporting period.

Project type	Crediting period	Reporting period
Sequestration projects	25 years	between 6 months and 5 years
Emissions avoidance projects	7 years	between 6 months and 2 years

70. The below diagram from the CER represents the timeline for a typical emissions avoidance project, such as energy efficiency projects, with a crediting period of 7 years, reporting period of 1-2 years:¹⁴



Note: The "Delivery Period" above is only applicable when a proponent has a carbon abatement contract to provide ACCUs to the Commonwealth Government as part of the ERF.

Applying for ACCUs

71. In order to apply for ACCUs, a proponent will submit an ERF Project Report and Crediting Application in the CER Client Portal. ACCUs will be issued into an

¹⁴ Clean Energy Regulator, *Make Sure Your Timing is Right*
<http://www.cleanenergyregulator.gov.au/DocumentAssets/Pages/Make-sure-your-timing-is-right-information-sheet.aspx>

Australian National Registry of Emissions Units (**ANREU**) account corresponding to the amount of carbon abatement in the offset report. ACCUs are created, held, transferred and surrendered via the ANREU.

Proprietary nature of ACCUs

72. Under Part 11 of the CFI Act, an ACCU is personal property and is transmissible by assignment or will.¹⁵ The registered holder of an ACCU is considered the legal owner of the ACCU¹⁶. ACCUs have no expiry date and can be held indefinitely to sell or surrender to offset future emissions.

Methodologies relevant for the RAC industry

73. Current approved methodologies under the CFI appear limited to energy efficiency methodologies, in particular:
- a. the *Carbon Credits (Carbon Farming Initiative – High Efficiency Commercial Appliances) Methodology Determination 2015 (High Efficiency Appliances Method)*; and
 - b. the *Carbon Credits (Carbon Farming Initiative – Commercial Buildings) Methodology Determination 2015 (Commercial Buildings Method)*

(collectively, the **CFI Efficiency Methods**).

High Efficiency Appliances Method

74. The High Efficiency Appliances Method awards ACCUs for improving the efficiency of air conditioners, close control air conditioners, refrigerated display cabinets and liquid-chilling packages in commercial or industrial buildings or common areas in residential buildings. It can be used when replacing or supplementing existing equipment or installing new equipment. The abatement is credited by calculating the difference between the newly installed high efficiency appliance and a comparable average appliance.
75. This method applies to the installation of equipment which is:
- a. new;
 - b. a model of air conditioner, close control air conditioner, refrigerated display cabinet or liquid-chilling package that is registered on the GEMS Register;

¹⁵ *Carbon Credits (Carbon Farming Initiative) Act 2011* (Cth) s 150.

¹⁶ *Carbon Credits (Carbon Farming Initiative) Act 2011* (Cth) s 150A.

- c. a high efficiency unit with an efficiency rating that is better than the thresholds set in a government-published "efficiency factor document";¹⁷ and
 - d. installed in a commercial or industrial building or in the common area in a residential building.
76. Relevant documents for this method are:
- a. *Carbon Credits (Carbon Farming Initiative – High Efficiency Commercial Appliances) Methodology Determination 2015*;
 - b. Explanatory Statement to the *Carbon Credits (Carbon Farming Initiative – High Efficiency Commercial Appliances) Methodology Determination 2015*; and
 - c. CER Guidance "High Efficiency Commercial Appliances – project application guidance."¹⁸
77. Key limitations of the High Efficiency Appliances Method for Refrigerants Australia's purposes include:
- a. the method only applies to the installation of new equipment (whether by replacement, supplement, or installation in a new facility) and **not** maintenance of existing equipment to make it more energy efficiency. Replacement of a high GWP refrigerant with a low GWP refrigerant in existing equipment would not be an eligible offsets project under this method, regardless of whether energy efficiency is increased;
 - b. no ACCUs have ever been issued under this methodology, suggesting it may not be a commercially viable method (see further discussion below).

Commercial Buildings Method

78. The Commercial Buildings Method awards ACCUs for improving the energy performance of buildings that are rateable under the National Australian Built Environment Rating System (**NABERS**) by at least one star. Eligible building types are limited to offices, shopping centres and hotels.
79. The method does not prescribe specific activities that must be undertaken, but instead includes the following broad categories:

¹⁷ <https://www.industry.gov.au/sites/default/files/2020-07/efficiency-factor-document.pdf>

¹⁸ <http://www.cleanenergyregulator.gov.au/DocumentAssets/Pages/Application-form-guidance---commercial-appliances.aspx>

- a. modifying, installing, removing or replacing energy-consuming or electricity-generating equipment;
 - b. changing how energy-consuming equipment is controlled or operated;
 - c. changing the energy sources used by equipment;
 - d. promoting energy-conserving behaviours to building occupants.
80. Relevantly for Refrigerants Australia, the CER provides an example for the first category of "replacing heating, ventilation and air-conditioning systems with more efficient technologies and designs."¹⁹ Unlike the High Efficiency Appliances method, there is no specific requirement that equipment be new or freshly installed, meaning there is potential for replacement of refrigerants with high-efficiency, low GWP refrigerants to be eligible as long as the NABERS rating of the building is increased by at least one star.
81. Abatement is calculated using NABERS energy ratings and tools. An accredited NABERS assessor must first calculate an baseline NABERS rating prior to the commencement of the project. Theoretical emissions associated with the baseline are calculated using the NABERS energy rating reverse calculator, which is then compared to post-activity emissions calculated with the same tool.
82. Relevant documents for this method are:
- a. *Carbon Credits (Carbon Farming Initiative – Commercial Buildings) Methodology Determination 2015*;
 - b. Explanatory Statement to the *Carbon Credits (Carbon Farming Initiative – Commercial Buildings) Methodology Determination 2015*;
 - c. CER Guidance "A guide to the commercial buildings method 2015."²⁰
83. Key limitations of the Commercial Buildings Method for Refrigerants Australia's purposes include:
- a. Projects are implemented at a building level, which could create difficulty for Refrigerants Australia in calculating offsets at a building level and securing the "legal right" to undertake the project, because this would likely require reaching agreement with building owners, lessees, service providers and any other occupiers or interest holders in the relevant commercial office building;

¹⁹ <http://www.cleanenergyregulator.gov.au/ERF/Choosing-a-project-type/Opportunities-for-industry/energy-efficiency-methods/Commercial-buildings>.

²⁰ <http://www.cleanenergyregulator.gov.au/DocumentAssets/Pages/A-guide-to-the-commercial-building-method.aspx>

- b. no ACCUs have ever been issued under this methodology, suggesting it may not be a commercially viable method (see further discussion below).

CARBON FARMING INITIATIVE – METHOD DEVELOPMENT

84. When the CFI Act first commenced, a process existed which allowed an industry proponent to develop a methodology and obtain approval by the Domestic Offsets Integrity Committee (**DOIC**). In 2014, amendments to the CFI Act to introduce the ERF placed method development obligations solely on the CER. This means that responsibility for initiating, developing and obtaining Ministerial approval for new CFI methodologies sits solely with the CER.
85. However, the CER develops methods through a "co-design process" in consultation with industry, potential end-users, scientists, technical experts and the Emissions Reduction Assurance Committee (**ERAC**).²¹

Method Development Priorities

86. The Minister for Energy and Emissions Reductions sets the CER's method development priorities each year. The CER's method development priorities for 2021 were:
 - a. Soil carbon;
 - b. Carbon capture and storage;
 - c. Biomethane;
 - d. Plantation Forestry; and
 - e. Blue carbon.
87. Of these, soil carbon and carbon capture and storage received Minister-approved methodology determinations in 2021, while Biomethane, Plantation Forestry and Blue Carbon are currently in the refinement and draft finalisation stage.
88. The Minister has already set the method development priorities for 2022, which are:
 - a. transport, which will award ACCUs for creating electric vehicle and hydrogen refuelling infrastructure;
 - b. hydrogen, which will award ACCUs for the use of hydrogen in electricity generation;

²¹ <http://www.cleanenergyregulator.gov.au/ERF/Pages/Method-development.aspx>

- c. integrated farm method, which allows separate land-based activities to be stacked onto land already used for CFI projects;
 - d. carbon capture use and storage, which involves capturing carbon and using it in the production of industrial and building materials; and
 - e. savanna fire management; which builds on existing methods with updated carbon accounting.
89. With the CER's priorities already set for 2022, there is no possibility of developing new methods for the RAC industry in 2022.
90. The Department of Industry, Science, Energy and Resources has a yearly consultation period in which it accepts submissions on activities which could be developed into new CFI methodologies. The submission period for the 2022 priorities was open from 26 July 2021 to 2 September 2021.²²
91. The key criteria which submissions are required to address, and the criteria under which the Minister will set the following year's method priorities, are:
- a. the potential take-up of the method and level of abatement achieved;
 - b. whether the emissions reductions can be estimated;
 - c. whether the activity could have potential adverse social, environmental or economic impacts;
 - d. whether the activity is better supported by other government measures;
 - e. alignment with broader government priorities, which are typically communicated with the year's request for submissions.
92. Engagement with the CER and the Minister for Energy and Emissions Reduction will be critical to developing new RAC methods in 2023. We anticipate that submissions on method development priorities for 2023 will be open mid-2022. While there are no current refrigerant methods in the CFI, the list of priorities over the past two years indicates government and the CER's willingness to consider novel methods which have not previously been part of the CFI.

Method Development

93. Once a method development priority has been set by the Minister, methods are developed throughout the year by the CER in a seven stage co-design process:

²² <https://consult.industry.gov.au/erf-method-development-priorities-for-2022>

STAGE	DESCRIPTION	STAKEHOLDER INPUT
1: Explore	<ul style="list-style-type: none"> CER gathers pre-existing data CER canvasses stakeholders 	CER, existing and new CFI/ERF participants, Method Advisory Panel (MAP)
2: Intent	<ul style="list-style-type: none"> CER engages with identified stakeholders to define an understanding for the co-design process 	CER, ERAC, Government/Minister
3: Activate	<ul style="list-style-type: none"> Industry experts commit to development of method 	CER, CFI/ERF participants, technical experts, MAP, ERAC
4: Planning	<ul style="list-style-type: none"> CER creates list of elements that will make up the method 	CER
5: Design stages	<ul style="list-style-type: none"> CER design team creates and consolidates method 	CER, CFI/ERF participants, technical experts, MAP, ERAC, government
6: Public consultation	<ul style="list-style-type: none"> Draft method released for public consultation Method finalised by incorporating feedback 	CER, CFI/ERF participants, technical experts, ERAC, government
7: Release	<ul style="list-style-type: none"> ERAC considers final method and gives recommendation to Minister Method released if approved by Minister 	ERAC, government/Minister

Method Variation

94. In addition to development new methods, section 114 of the CFI Act allows Minister to vary existing methodologies by legislative instrument. The CER Guidance document "*Method variation information pack*"²³ provides that existing methods can be varied for a "range of reasons", including:
- to ensure methods continue to operate as originally intended;
 - to allow additional activities to be undertaken under a method; or
 - to account for technological advances that enable new measurement approaches.

²³ <http://www.cleanenergyregulator.gov.au/DocumentAssets/Pages/Method-variation-information-pack.aspx>

95. The CFI Act itself does not place any particular limitations on the scope of the ability of vary an existing methodology, other than the Minister must seek advice from ERAC, and have regard to that advice, before varying a method.
96. While the powers under section 114 of the CFI Act appear broad, the CER tends to approach substantial method variations as though they were new methodologies. For example, last year the CER developed and released a new methodology, estimating soil organic carbon sequestration using measurement and models method, was developed as an entirely new method even though it was similar to a previous method, measurement of Soil Carbon Sequestration in Agricultural Systems, which had only been released in 2018. The CER opted put the new method through the full development process discussed above, even though the new soil carbon methodology covered many of the same activities and was effectively an update of the previous method.
97. In any event, there is no formal process for a project proponent to propose a methodology amendment, and any amendments would need to occur in consultation with the CER.

VERIFIED CARBON STANDARD

VCS project approval and method development overview

98. This advice does not provide a detailed analysis of the approval process for the VCS and how associated Verified Carbon Units (**VCUs**) are issued. The focus of this section of the advice is on the VCS methodologies which may be relevant to the RAC industry, which could influence future negotiations with CER.
99. We note that it is possible to apply for and register VCS projects in Australia, however this is unusual in circumstances where the market price of a VCU is considerably less than an ACCU and would provide considerably less project funding. This is reflected by the fact that there are only four total VCS projects registered in Australia.
100. The process of registering, undertaking and being issued credits for a project is similar to that under the CFI, save for the following main differences:
 - a. Applicants can choose to develop their own methodology in addition to using an existing methodology;
 - b. Existing methodologies include not only those specifically developed for the VCS, but also includes methodologies approved under the CDM;

- c. Projects are not supported by any legislated framework, and VCUs can generally not be used for regulatory purposes, which is a factor in their reduced value;
 - d. Project approval incorporates an additional validation stage by an independent "Validation and Verification Body".
101. The ability to develop a new methodology for a project is a key difference between the VCS and the CFI, and this may be worth exploring further if the CER is unwilling to consider development of new CFI methodologies relevant to the RAC industry.

VCS methods relevant to the RAC industry

102. Current approved methodologies under the VCS include:
- a. the following CDM methodologies, which have been used under the VCS and are similar to the CFI energy efficiency projects:
 - i. AMS-II.C. – Demand-side energy efficiency activities for specific technologies; and
 - ii. AMS-II.E. – Energy efficiency and fuel switching measures for buildings; and
 - b. the following methodologies developed for the VCS which focus more on refrigerant destruction and avoidance of refrigerant emissions:
 - i. VM0016 – Recovery and Destruction of ODS from Products; and
 - ii. VM0001 – Infrared Automatic Refrigerant Leak Detection.

CDM Methodologies

103. AMS-II.C. (Demand-side energy efficiency activities for specific technologies) applies to projects that improve energy efficiency or displace more GHG-intensive service by use of more efficient technology. Typical projects include the installation of energy-efficient equipment (e.g. refrigerators, air conditioners and chillers) at one or more project sites as retrofit or new construction projects.
104. AMS-II.E. (Energy efficiency and fuel switching measures for buildings) energy efficiency and fuel switching measures for buildings. Typical projects implement energy efficiency measures in new or existing residential, commercial or institutional building units, e.g. use of efficient appliances and optimal arrangement or equipment. Changes in energy consumption due to the project

must be clearly distinguishable from changes in energy use due to other variables.

105. Generally we do not consider that these methods offer any particular advantages over the energy efficiency methods under the CFI Act or Australian energy certificate schemes.

VM0016 – Recovery and Destruction of ODS from Products

106. VM0016 covers activities that that recover and destroy Ozone-Depleting substances (**ODS**), such as CFCs or HCFCs. Abatement is calculated against a baseline scenario where ODS are partially or totally released into the atmosphere.
107. This methodology does not apply to more recent refrigerants which are not ODSs, such as HFCs, but demonstrates a method of quantifying the emissions reductions achieved by the destruction of refrigerants. This could be relevant for developing a methodology which quantifies emission reductions and issues ACCUs for refrigerants destroyed by Refrigerant Reclaim Australia.

VM0001 – Infrared Automatic Refrigerant Leak Detection

108. VM0001 covers emissions reductions achieved by the installation in commercial refrigeration systems of infrared detection systems which seek to reduce leak rates of HFC refrigerants through real time leak detection systems. Emissions are reduced by allowing for quick leak detection which allows maintenance to be quickly completed in response. This methodology was developed by US grocery store chain Giant Eagle Inc for use in its stores located in Pennsylvania and Ohio. Giant Eagle's project is the only registered project under this methodology. The project generated approximately 150,000 VCUs between 2009 and 2014.

AMERICAN CARBON REGISTRY

Methods relevant to the RAC industry

109. The American Carbon Registry (**ACR**) has approved two methodologies which cover refrigerant reclamation, and the replacement of high-GWP refrigerants with low-GWP alternatives:
 - a. Methodology for the Quantification, Monitoring, Reporting and Verification of Greenhouse Gas Emissions Reductions and Removals from Certified Reclaimed HFC Refrigerants;
 - b. Methodology for the Quantification, Monitoring, Reporting and Verification of Greenhouse Gas Emissions Reductions and Removals from the Transition to Advanced Refrigeration Systems.

Certified Reclaimed HFC Refrigerants

110. The Certified Reclaimed HFC Refrigerants methodology awards carbon credits for the emission reductions achieved by the use of reclaimed HFC refrigerants in newly manufactured systems or to service existing equipment. Eligible sectors include both commercial and domestic refrigeration and air conditioning systems.
111. In order to be eligible under the methodology, the refrigerant must be reclaimed and recycled by a certified refrigerant reclaimer and subsequently provided to a distributor, wholesaler or the end-user for installation. The recycled refrigerant must also meet the quality standards mandated by the ACR.
112. The emission reductions achieved by a specific project are quantified by reference to the baseline emissions that would have been emitted if virgin refrigerant were instead installed in the system. Any project-related emissions from the subsequent use of the reclaimed refrigerant are considered to be "negligible" under the methodology and are not considered when calculating emission reductions.

Transition to Advanced Refrigeration Systems

113. The Transition to Advanced Refrigeration Systems methodology awards carbon credits for the emission reductions resulting from the transition to refrigeration systems that use refrigerants with a GWP of less than 15 and which are approved by the United States Environment Protection Authority.
114. Carbon credits can be awarded for the replacement of existing CFC, HCFC or HFC-based equipment with new low-GWP equipment or the installation of new low-GWP equipment. Any recovered CFC, HCFC and HFC refrigerants must be destroyed and cannot be recycled. The methodology is currently limited to large or stand-alone commercial refrigeration systems and remote condensing units within the United States, Canada or Mexico.
115. Emission reductions achieved by a specific project are assessed by comparing the emissions caused by refrigerant leaks in the low-GWP system over the 10-year crediting period against the baseline emissions that would have been caused by refrigerant leaks from the high-GWP system over the same time frame. The difference between the baseline and project emissions is eligible for credits.

ANALYSIS OF EXISTING SCHEMES – SUITABILITY FOR THE REFRIGERANT SECTOR

Existing CFI methods

116. As discussed above, current CFI methodologies are limited to energy efficiency projects, and there are no CFI methodologies related to abatement of direct refrigerant emissions.
117. Our analysis of projects registered under the CFI Efficiency Methods based on the information in the CER's ERF Project Register reveals the following:
 - a. there have been a two projects registered under the High Efficiency Appliances Method, and one of those was voluntarily revoked at the request of the proponent before any ACCUs were issued;
 - b. there have been four projects registered under the Commercial Buildings method, all of which were revoked prior to ACCUs being issued for these projects. Three of these were revoked voluntarily at the request of the project proponent, and one was revoked by the CER for an undisclosed reason.
118. For the single project which remains registered under the High Efficiency Appliances Method, this project has been registered since May 2016 and has also not resulted in any ACCUs being issued. The project is therefore in its fifth year of its seven year period and has not produced any results.
119. The information on the ERF Project Register therefore indicates that the CFI Efficiency Methods may not be commercial viable or have practical implementation difficulties. Our discussions with Refrigerants Australia have also highlighted that there are difficulties in setting baselines on a building by building basis, as opposed to a fleet-based assessment. Implementing such sectoral baselines, which sets a baseline for an entire sector or industry, may make projects under these methods easier to implement. The CER does implement sectoral baselines as part of the safeguard mechanism, particularly in the electricity generation sector,²⁴ but has not implemented sectoral baselines for CFI Act projects. Alternative funding methods, such as under the VEU or ESS, may provide more effective and reliable funding methods for energy efficiency projects.

²⁴ <http://www.cleanenergyregulator.gov.au/NGER/The-safeguard-mechanism/Baselines/Sectoral-baseline>

PART 3: LITERATURE REVIEW OF REFRIGERANT AND ENERGY IMPROVEMENT PROJECTS

REFRIGERANT EMISSIONS REDUCTION AND AVOIDANCE PROJECTS

New Zealand Emissions Trading Scheme

120. The New Zealand Emissions Trading Scheme (**NZ ETS**) is administered under the *Climate Change Response Act 2002* (NZ). Unlike the CFI, which is a baseline and credit scheme, the NZ ETS is a cap and trade scheme which means it requires certain emitters to acquire and surrender New Zealand Units (**NZUs**) for all greenhouse gas emissions. NZUs can be generated by "eligible removal activities", which include exporting or destroying bulk Synthetic Greenhouse Gases such as such as HFCs and PFCs.
121. Part 2 of the *Climate Change (Other Removal Activities) Regulations 2009* (NZ) details a method to quantify and calculate the amount of synthetic greenhouse gas destroyed in tCO₂e.
122. Regulation 20 provides that removals by a person in a year are calculated under the following formula:

$$R = ((\Sigma (A \times B)) \times C) - D) \times \frac{GWP}{1\,000}$$

Where:

- R is removals in tCO₂e;
 - A is the number of kilograms of chemicals in a batch of greenhouse gases;
 - B is the percentage by mass of the class of greenhouse gas in the relevant batch of chemicals;
 - C is the destruction efficiency factor at the destruction facility;
 - D is the estimate of any handling losses; and
 - GWP is the global warming potential of a gas, as per the table in schedule 1 of the regulations.
123. The New Zealand Trust for the Destruction of Synthetic Refrigerants, also known as "Recovery", operates a refrigerant destruction and recovery scheme supported by the RAC industry and accredited by the New Zealand Ministry for the Environment. Recovery has been issued NZUs for its refrigerant destruction

activities since 1 January 2013. In its annual report for the year ending 31 March 2021, Recovery had received NZUs to the value of NZ\$652,000.²⁵

124. Recovery's operations were previously funded by a voluntary levy paid by bulk refrigerant importers. However, Recovery announced in December 2021 that it would stop charging the levy as its operations could now be fully funded through the NZU it receives.²⁶
125. The NZ ETS scheme provides a method which can be drawn on to quantify carbon abatement because of refrigerant destruction and the activities of Recovery demonstrate its successful application. However, the nature of the NZ ETS means it is more of a regulatory and compliance obligation and establishing additionality would remain a key issue in applying this method in Australia. The formula in the *Climate Change (Other Removal Activities) Regulations 2009* (NZ) could be applied to other methods (eg destruction of refrigerant which has been removed and replaced in still-in-life equipment).

Voluntary refrigerant replacement projects by end users

126. A significant number of commercial users of RAC equipment have voluntarily introduced projects and targets to reduce emissions beyond regulatory requirements. As of 2018, these include large supermarkets and food processors, such as Carrefour, SABMiller, Coca-Cola, PepsiCo, Unilever and Nestle. These targets commonly include the replacement of high-GWP refrigerants with natural alternatives.²⁷
127. A 2019 case study of the refrigeration commitments and achievements of Consumer Goods Forum members describes the efforts of CGF members to phase out the use of HFC refrigerants.²⁸ Key examples of projects outlined in this case study include:
 - a. Lawson Group

In Japan, the Lawson Group has installed CO₂ refrigeration systems in more than 2000 convenience stores as of 2017. The Group also now installs CO₂ systems as standard in all new stores.

²⁵ <https://www.refrigerantrecovery.co.nz/wp-content/uploads/2021/12/Recovery-Product-Stewardship-Scheme-Reporting-to-Minister-2021.pdf>

²⁶ <https://www.refrigerantrecovery.co.nz/2021/12/16/recovery-announces-cessation-of-voluntary-levies/>

²⁷ GIZ, *Non-state action towards climate-friendly and energy-efficient cooling* (2018) https://www.green-cooling-initiative.org/fileadmin/Publications/2018_Green_Cooling_Initiative_Non-state-action.pdf 14-15.

²⁸ <https://www.theconsumergoodsforum.com/wp-content/uploads/2018/04/Environmental-Sustainability-Refrigeration-Case-Study-Booklet-2019.pdf>

The case study mentions that the Group has received funding/support under the equipment subsidy program run by the Japanese Ministry of the Environment and the technology verification program operated by the Japanese Ministry of Economy, Trade and Industry. The Lawson Group is the only initiative mentioned in the CGF case study which appears to have received any government funding.

b. Coca-Cola

Coca-Cola has pledged to phase out the use of HFC refrigerants in cold drink equipment globally. Coca-Cola's 2020 Sustainability Report states that the company introduced 571,753 pieces of HFC-free equipment in 2020, which constituted 83% of all coolers introduced that year.²⁹

In contrast, only 61% (623,160) of coolers introduced in 2016 were HFC-free. As of 2015, Coca-Cola had replaced a total amount of 1.7 million units of HFC-equipment globally.

c. PepsiCo

PepsiCo set a target in 2014 for all point-of-sale equipment, such as coolers, vending machines and fountain dispensers, purchased in the US to be HFC-free by 2020.

PepsiCo's 2020 Sustainability Report states that, as of 2020, all company-owned refrigerant units in Europe and North America are HFC-free.³⁰

d. Nestle

As of 2018, Nestle pledged to phase-out the use of high-GWP refrigerants with natural refrigerants. Page 50 of Nestle's 2020 Sustainability Report notes that the company had achieved its goal of 'expanding' the use of natural refrigerants, but does not provide specific figures.³¹

128. With the exception of the Lawson group in Japan, most end-user refrigerant replacement projects appear to have been undertaken without support from government programs or funding.

Voluntary Initiatives by Manufacturers

129. Some manufacturers in the RAC industry have also voluntarily engaged in initiatives to reduce both direct and indirect emissions. For example, the Daikin

²⁹ <https://www.coca-colacompany.com/content/dam/journey/us/en/reports/coca-cola-business-environmental-social-governance-report-2020.pdf> p 42

³⁰ <https://www.pepsico.com/sustainability-report/downloads>

³¹ <https://www.nestle.com/sites/default/files/2021-03/creating-shared-value-report-2020-en.pdf>

LOOP is a voluntary refrigerant recycling project developed by Daikin's European subsidiary. Under the LOOP project, refrigerant (R410a) is recovered by Daikin from faulty or end-of-life units. The refrigerant is then returned to specification to charge new Daikin products. Currently, the LOOP project only operates in relation to units produced and sold in Europe.³² Daikin LOOP does not appear to receive any particular government funding for this project.

130. Daikin Europe also currently leads the "Natural HVACR 4 Life" research project in Europe which is co-funded by the EU's LIFE programs and aims to examine the potential of lowering the climate impact of refrigeration, air conditioning and heating in convenience stores. The project aims to develop a prototype that integrates refrigeration, heating and cooling using CO₂ as a natural refrigerant.³³
131. Other than Daikin's activities, publicly available information about manufacturers voluntarily acting to reduce emissions in the RAC industry appears to be limited. For example, an analysis by the Carbon Trust and Kigali Cooling Efficiency Program in March 2021 found that most major cooling and refrigerant suppliers have started to focus on reducing Scope 1 and Scope 2 emissions. However, the report notes that the majority of suppliers have either made no positive commitment to reduce emissions or have provided little detail on how emissions targets will be achieved.³⁴
132. In some places, such as California, this approach means that the reused refrigerant is defined to have a GWP of zero, as the GWP was originally accounted for in other products. In other places the GWP remains unchanged, as the reused refrigerant remains a potential source of emissions.

ENERGY EFFICIENCY PROJECTS – AUSTRALIA

133. As discussed above, the VEU and ESS provide energy efficiency certificates as an incentive for consumers and businesses to install energy-efficient equipment or products.
134. Under the VEU, Accredited projects, which include the installation of RAC systems to residential and commercial properties, are eligible to receive Victorian Energy Efficiency Certificates (**VEEC**).³⁵ Each VEEC certificate represents one tonne of greenhouse gas reductions. The certificates can then be sold to third

³² Daikin, *Towards a Circular Economy of Refrigerants* https://www.daikin.eu/content/dam/internet-deniv/catalogues_brochures/commercial/223%20-%20LOOP%20by%20Daikin.pdf.

³³ <https://www.naturalhvacr4life.eu/about.html>

³⁴ Carbon Trust and Kigali Cooling Efficiency Program, *Cooling suppliers: Who's winning the Race to Zero?* (March 2021) 6.

³⁵ Essential Services Commission, *About the Victorian Energy Upgrades Program*, <https://www.esc.vic.gov.au/victorian-energy-upgrades/about-victorian-energy-upgrades-program>.

parties (commonly large energy retailers) who can surrender the certificates to meet their liabilities under the *Victorian Energy Efficiency Target Act 2007* (Vic).

135. Under the ESS, households and businesses receive a discount on the cost of energy saving upgrades. In return, the purchaser transfers the right to create Energy Savings Certificates (ESC) to Accredited Certificate Providers. The ESCs can then be purchased by third-parties to meet their emissions reduction obligations under NSW's annual energy savings target.³⁶

Relevant ESS Methods and Projects

136. Two methods under the ESS are potentially relevant for RAC industry energy efficiency projects:
- a. Installation of High Efficiency Appliances for Business method,³⁷ which awards ESCs as a result of energy savings due to the installation of:
 - i. High efficiency refrigerated cabinets;
 - ii. High efficiency liquid chilling packages;
 - iii. High efficiency close control air conditioners;
 - iv. High efficiency air conditioners; and
 - v. Electronically commutated (brushless DC) motor to power a fan in a refrigerated cabinet, freezer or cool room.
 - b. NABERS Baseline method,³⁸ which awards ESCs as a result of energy savings for the improvers in the NABERS rating of a commercial building.³⁹
137. Our desktop review of RAC industry projects located information about energy efficiency projects undertaken by property manager Dexus using the NABERS Baseline method.⁴⁰ Between 2012 and September 2022, 154,000 ESCs have been created associated with Dexus' NABERS projects, resulting in 145,000 MWh of energy avoided and more than 2.43 million in value derived through ESC trading. Dexus is registered with the NSW Independent Pricing and Regulatory Tribunal

³⁶ Independent Pricing and Regulatory Tribunal, *Overview of the ESS*, <https://www.ess.nsw.gov.au/Home/About-ESS/Overview-of-the-ESS>.

³⁷ <https://www.ess.nsw.gov.au/Home/About-ESS/Energy-savings-calculation-methods/Installation-of-High-Efficiency-Appliances-for-Business>

³⁸ <https://www.ess.nsw.gov.au/Home/About-ESS/Energy-savings-calculation-methods/NABERS-Baseline>

³⁹ <https://www.ess.nsw.gov.au/Home/About-ESS/Energy-savings-calculation-methods/NABERS-Baseline>

⁴⁰

as an Accredited Certificate Provider and can therefore monetise the ESCs that are generated by the projects.

138. While not all of Dexus' activities under this method involve RAC projects, at least part of the upgrades involved RAC equipment. For example, Dexus upgraded the air conditioning plant and controls, including new chillers, at 44 Market Street in Sydney. As a result of the upgrade, the building's energy consumption was reduced by more than 50% and its NABERS rating increased from 2.5 to 5 stars. It is not clear from publicly available information what portion of the ESCs issued to Dexus under the NABERS Baseline method are for RAC projects.

Relevant VEU methods

139. The VEU program has two types of eligible activities:
- activities deemed to be eligible under the *Victorian Energy Efficiency Target Regulations 2018 (Vic) (deemed activities)*; and
 - project-based activities which are assessed under the *Victorian Energy Efficiency Target (Project-Based Activities) Regulations 2017 (Vic) (project activities)*.
140. The Regulations prescribe the number of VEECs that each type of deemed activity will receive. In contrast, project-based activities are assessed on a case-by-case basis according to either the "measurement and verification" method or the "benchmark rating" method.
141. The following "deemed activities" are relevant to the RAC industry:
- installation of high-efficiency refrigerators and freezers;
 - installation of high-efficiency refrigerated display cabinets;
 - installation of refrigeration fan motors into refrigerated cabinet or cold room motors;
 - installation of electronic expansion valves, refrigeration systems or other products that meet the program requirements in cold rooms.
142. A relevant project-based activity is the Benchmark Rating Method, which awards VEECs correspondence to the difference in an energy performance rating before and after energy improvement projects.⁴¹ NABERS ratings are used to calculate energy performance in eligible buildings.

⁴¹ <https://www.esc.vic.gov.au/victorian-energy-upgrades-program/activities-offered-under-veu-program/project-based-activities/benchmark-rating-method>

143. Our desktop review was not able to identify any publicly available information on successfully implemented projects in under the VEU program which have involved refrigeration or HVAC systems. However, the limited information published in the VEU registry does indicate that VEECs have been issued for the deemed activities listed above.

ENERGY EFFICIENCY PROJECTS – INTERNATIONAL

144. Programs designed to incentivise the installation of new energy-efficient equipment or building renovations have been introduced in a number of overseas jurisdictions. For example, the German Government has introduced the "BAFA" scheme, which provides subsidies for companies who install or refurbish their refrigeration and air-conditioning equipment. In order to be eligible under the scheme, the new equipment must use non-halogenated refrigerants and meet certain energy efficiency criteria. For example, the equipment must have capacity and defrosting controls, LED lighting and be made of components that adhere to the EU's Eco-Design Directive.⁴²
145. In the United States, there are over 800 state-run incentive schemes that offer a rebate or other kind of financial incentive for consumers to install energy-efficient air conditioning units. Similar incentives have also been introduced by some European countries, including Malta, Italy and Greece.⁴³

COOLING AS A SERVICE

146. Cooling as a Service (**CaaS**) allows building owners to pay for cooling from a service provider rather than paying for the capital expense of installing new RAC systems. Under a CaaS arrangement, the RAC system is installed and owned by a third-party contractor. The contractor remains responsible for the operation and maintenance of the system, including all operational costs. The building owner pays a fixed monthly service fee to the contractor for the cooling system, but is not responsible for any installation, operational or maintenance costs. As a result, the contractor has an incentive to install the most energy-efficient equipment possible and to maintain the system to a high level of efficiency.⁴⁴

⁴²GIZ Proklima, *How to incentivize the HFC Phase-Down?* (October 2021) https://www.green-cooling-initiative.org/fileadmin/user_upload/MOP33_GIZ_Proklima_Side_event_How_to_Incentivize_HFC_Phase-Down_28-10-21.pdf, 17.

⁴³ Super-Efficient Equipment and Appliance Deployment Initiative, *Lessons learned from incentive programs for efficient air conditioners: A review* (May 2015) <https://storage.googleapis.com/sead-siteassets/Lessons-Learned-from-Incentive-Programs-for-Efficient-Air-Conditioners.pdf> 33-34

⁴⁴ CaaS Initiative, *How it works*, <https://www.caas-initiative.org/how-it-works>.

147. To date, CaaS projects have primarily been trialled in developing countries.⁴⁵ However, CaaS arrangements have been proposed in Australia by providers of RAC systems. For example, Grosvenor Engineering Group released a concept note outlining the benefits of CaaS in conjunction with the Airconditioning and Refrigeration Equipment Manufacturers Association of Australia.⁴⁶

ENVIRONMENTAL UPGRADE AGREEMENTS

148. Environment Upgrade Agreements (**EUA**) are designed to address the barriers that may prevent building owners from upgrading to newer, more efficient RAC systems. Under a EUA, a long-term loan is provided by a local council to fund the installation of new energy-efficient equipment. The loan is linked to the property and is repaid over time through the payment of council rates.⁴⁷
149. EUAs have been implemented by local councils in Victoria and NSW. For example, the Victorian "Environmental Upgrade Finance" Program provides funding for both businesses and homeowners to upgrade properties in a way that improves energy efficiency or adapts to the changing climate.⁴⁸ A similar program operates in NSW under the Building Upgrade Finance scheme.⁴⁹ EUAs have also been implemented in the United States in the commercial and residential markets.

⁴⁵ CaaS Initiative, *Successful examples of Cooling as a Service* <https://www.caas-initiative.org/case-studies>.

⁴⁶ Grosvenor Engineering Group and AREMA, *Concept Note: Supporting High Efficiency HVAC Upgrades*, 1.

⁴⁷ Department of Industry (Cth), *HVAC Facilitation Strategy*, https://www.airah.org.au/Content_Files/Industryresearch/26-11-14-HVAC-facilitation-strategy.pdf, 11.

⁴⁸ Department of Environment, Land, Water and Planning, <https://www.energy.vic.gov.au/energy-efficiency/environmental-upgrade-agreements>.

⁴⁹ Department of Planning, Industry and Environment (NSW), <https://www.environment.nsw.gov.au/business/upgrade-agreements.htm>

PART 4: CURRENT AUSTRALIAN CONDITIONS

SUMMARY OF INTERVIEWS UNDERTAKEN

150. Interviews were undertaken by Ashurst in the week of 31 January to 4 February 2022. Some interviewees did not want their name and role published in their report, so the issues identified below will not be attributed to specific individuals or organisations. File notes of the interviews we can disclose will be provided separately to Refrigerants Australia.
151. A number of interviewees had roles in Refrigerant Reclaim Australia, while other interviewees held industry and government roles. The main focus of the interviews was the role carbon markets play in reducing emissions in the RAC industry, although interviewees were also given the opportunity to raise ideas and concerns more broadly. Four questions were sent to interviewees in the week prior to the interviews to guide (but not restrict) discussion:
- a. How do you see the carbon market playing a role in accelerating or increasing the levels of emissions reductions in the refrigerant sector?
 - b. How viable do you think the carbon market is in terms of providing sufficient revenue to underpin emission reduction activities in the refrigerant industry?
 - c. Are there any specific ideas, programs or models you have in mind to harness the carbon market (for example a new methodology as part of the carbon farming initiative)?
 - d. Looking beyond carbon markets, what other policies, programs or funding do you think could be relevant to reducing emissions in the refrigerant and air conditioning industry?

IDEAS AND ISSUES RAISED BY INTERVIEWEES

152. Key ideas and obstacles which were raised during the course of the interviews include:
- a. **Additionality**

A key concern with the viability of carbon markets was a view that emission reduction activities which occur via refrigerant reclamation or replacement would not be eligible for carbon credits because, in the context, legal requirements to recover and destroy end of life refrigerant, would make it not possible to participate in carbon markets.

In multiple interviews we discussed the nature of the legal requirements, and in particular established in Australia it is mandated the end-of-life refrigerant is disposed of in line with the *Ozone Protection and Synthetic Greenhouse Gas Management Act 1989* (Cth) and associated acts and regulations. There is no requirement to replace and dispose of refrigerant in still-in-life equipment, and multiple interviewees put forward the idea of carbon markets incentivising the transition to low GWP refrigerants before end of life.

- b. Compliance with existing legal requirements around refrigerant disposal is low

It was noted by multiple interviewees that lack of funding is not an issue for RRA in terms of destroying the end of life refrigerant that is returned to it. The bigger issue as that compliance has been low. Interviewees indicated compliance ranging from 7% to 12% refrigerant recovery by RRA against imports, and 14-15% recover when measured against equipment at end of life.

A lack of enforcement of existing legal requirements was noted, with a view that it was easier to reuse refrigerant (which although perfectly legal will ultimately lead to further emissions) or just vent refrigerant without consequences (which is not permitted under current laws, but enforcement has been low). Certain activities were highlighted where compliance has been particularly low, such as recovery of refrigerant from end of life vehicles and split system air conditioners. Incentivising and offsetting some of the cost of recycling e-waste was put forward as a way to drive recovery from split system air conditioners. It was noted that currently 600,000 split system air conditioners replaced each year in Australia with each having a few kilos of gas which is entirely vented.

- c. Levy issues / carbon pricing

Issues around the way the current import levy on refrigerants operates were highlighted. Currently the import levy is based solely on the kilograms of refrigerant imported. The GWP of the refrigerant does factor into current import levies, meaning there are no incentives to increase import of low GWP refrigerants and phase out imports of high GWP refrigerants.

During some interviews, an idea was discussed which involved placing something similar to a carbon price on refrigerant sales at a wholesale level, where high GWP refrigerants have a higher price which would assist in mandating the phase down of the importation and sale of high GWP refrigerants. This type of carbon price may drive down importation of high GWP refrigerants and will likely lead to an increase in recycling and

Commented [AA3]: RA: this does not make sense - not sure what you mean

Commented [AA4]: Typo – the First equipment should have been refrigerant

reuse. It is unlikely to drive an increase in end-of-life destruction of high GWP refrigerants.

d. Viability of carbon projects – size and scale of abatement

Multiple interviewees noted the replacement of high GWP R404A, with a GWP of nearly 4000, used in supermarket refrigeration systems as a sector where the amount of refrigerant recovered and the amount of ACCUs issued for its destruction could cover all or most of the cost associated with refrigerant removal, replacement and destruction. It was also noted that cold rooms with R404A could easily be retrofitted with lower GWP refrigerants with a GWP of 1400 or 400. Refrigeration systems that use refrigerant R410A were more common, but it was noted that there was no replacement lower GWP refrigerant that met safety requirements.

Other viable sectors where the amount of refrigerant recovered and destroyed could result in viable projects include industrial buildings, demolition sites, automotive wrecking yards and maybe metal recyclers.

Limitations were noted with the viability of refrigerant replacement projects in the automotive industry. Some interviewees discussed the idea of replacing refrigerants in cars (eg replacing R134A with R449A, which has half the GWP), however the small amount of refrigerant that could be recovered from each car would be less than 1 tCO₂e. If implemented on a large scale (eg at service centres), carbon markets could play a role in subsidising costs but may not be able to entirely cover costs.

e. Structure of projects

The possible structure of carbon projects was discussed with some interviewees. Ideas include RRA or RA acting as a project proponent for cold store refrigerant replacement. For example, RRA are contracted to take out high GWP refrigerant and retrofit a replacement and use the associated credits to provide a discount for the work. The customer would also then possess a higher energy refrigerant system that results in additional savings. RRA would be using carbon credits to fund an accelerated transition to low GWP refrigerants.

Smaller supermarkets (eg IGAs) or businesses with cool rooms such as butchers could also be targeted in projects run and coordinate by RRA.

f. Refrigerant recycling projects

Efforts in the RAC industry are being made to reclaim and recycle refrigerants. In the USA, methodologies which provide credits in the American Carbon Registry have been successfully used to partially fund

refrigerant recycling initiatives. The California Air Services Board cap and trade program also incentivises refrigerant recycling. Companies are interesting in buying reclaimed gas with the view that it lowers their carbon footprint. In Europe, manufacturers are not allowed to sell virgin R404A gas, which has driven more recycling activities.

Incentivising recycling can prevent imports of virgin gas. However, issues were noted with this approach because no refrigerant system is entirely leak proof and recycled gas will eventually be emitted despite the best intentions. Different opinions were put forward, which varied from a position that even high GWP refrigerants such as R404A should be recycled, to some moderate GWP HFCs such as 134A (with a GWP of 1430) should be recycled, to a further position that all HFCs should be phased out of the refrigerant bank and destroyed. There were arguments by interviewees that the sooner high GWP refrigerants are out of the market, the less likely they are to leak.

It was noted during interviews with RRA that there are already four companies in Australia undertaking refrigerant recycling projects, and that RRA does not consider that it needs to invest in this space.

g. Policies banning the use of certain gases

Opinions advocating for a ban of high GWP refrigerants such as R404A were put forward. However, it was noted that a ban on using 404A will be met with opposition from large supermarket chains so incentivising reclamation could be the first step.

Something similar to the ban on F-gas (HFCs) in Europe could be implemented, where HFCs are banned in new equipment where less harmful alternatives are available.

h. No one size fits all approach to refrigerant replacement

One interviewee noted that there is no one size fits all approach to refrigerant replacement and this can depend particularly on climate. For example, some low-GWP refrigerants may not work efficiently in a Queensland climate because the equipment will need to draw too much energy to function correctly, countering any benefits from the switch to low GWP refrigerants.

POSSIBLE TYPES OF EMISSION REDUCTIONS PROJECTS THAT THE RAC INDUSTRY COULD UNDERTAKE IN AUSTRALIA

Energy Efficiency Projects

153. Energy efficiency projects replace low-efficiency RAC equipment with more efficient RAC equipment, and reduce emissions by using less electricity. The Australian carbon market is currently able to accommodate these projects, particularly the two CFI methods that focus on:
 - a. replacing RAC equipment with higher efficiency equipment (High Efficiency Appliances Method); and
 - b. improving the NABERs ratings of buildings (Commercial Buildings Method).
154. Energy efficiency schemes in Victoria and NSW also award certificates for these activities. As discussed in above, the CFI energy efficiency methods have not resulted in any ACCUs been issued for these projects, suggesting projects under Victoria's VEU program and NSW's ESS may be more commercially viable. However, in recent months the price of ACCUs has increased significantly (currently \$30 per ACCU compared to \$17 at the start of 2021), which may increase the commercial viability of the CFI methods.
155. These methods under the CFI Act and energy efficiency schemes award credits and certificates **only** for emission reductions associated with energy usage reductions. The extent that the projects involve refrigerant replacement with lower GWP alternatives, refrigerant destruction or refrigerant recycling, these activities will not result in the award of additional credits or certificates. Despite these limitations, energy efficiency projects is the only type of RAC industry emissions reduction project that the Australian carbon market can accommodate and incentivise without the development of new methodologies.
156. As discussed above, the Minister has power under the CFI Act to amend existing methods via legislative instrument. It would be within that power to amend the existing energy efficiency methods to include additional activities and award ACCUs for emissions reductions associated with replacement of high-GWP refrigerants with low-GWP refrigerant. However, the CER tends to introduce substantial amendments to methodologies by introducing entirely new methodologies. It may therefore be necessary to propose an entirely new method for replacement of still-in-life refrigerant (see below).

End-of-Life Refrigerant Destruction

157. Refrigerant Reclaim Australia currently captures and destroys refrigerants to meet industry obligations under the *Ozone Protection and Synthetic Greenhouse Gas Management Act 1989* (Cth).
158. There are no Australian CFI methodologies for these activities. We note there are methodologies in other schemes, both in voluntary international schemes and compliance schemes in other jurisdiction. A noteworthy example discussed above is the destruction of synthetic greenhouse gases as an eligible removal activity under the NZ ETS, which provides a method to quantify emission reduction activities from refrigerant destruction which has been implemented by Recovery, the New Zealand Equivalent of RRA. The New Zealand methodology could be used as a basis for any proposal put forward to the CER.
159. However, regulatory additionality remains a key, and likely insurmountable, obstacle to having an equivalent methodology developed by the CER under the CFI. On a strict view of the additionality requirements under the CFI Act, all end-of-life destruction activities are mandated under the *Ozone Protection and Synthetic Greenhouse Gas Management Act 1989* (Cth) and any projects involving end-of-life destruction is not additional to these legal requirements.
160. The CER does have the ability to put a requirement in-lieu of additionality in specific methods. Considering the reportedly low levels of compliance with existing disposal and destruction requirements, there is some scope to explore with the CER that CFI projects for end-of-life destruction could incentivise refrigerant destruction and result in additional emission reductions compared to the previous baseline level. However, this idea is untested within the Australian CFI, and overall we consider the prospects of the CFI approving an end-of-life refrigerant destruction methodology to be low.

Still-in-Life Refrigerant Reclamation, Replacement and Destruction

161. Replacing high GWP refrigerants with low GWP refrigerants, which could reduce emissions through:
 - a. increasing energy efficiency of equipment using higher efficiency refrigerants; and
 - b. reducing the carbon dioxide equivalent of any refrigerant leaks / assumed venting;
 - c. destroying reclaimed high GWP refrigerant before it is vented to atmosphere as a result of leaks which could occur if it remained in service.

162. There are currently no Australian methodologies which issue credits for refrigerant replacement. However, the ACR methods provide an example of how emission reductions achieved by replacing high GWP refrigerants can be quantified.
163. During the interviews undertaken for this report, the supermarket industry, and particularly refrigerant R404A, was cited as a sector which could become viable if incentivised by carbon markets. Other industries, such as the automotive industry, may be more cost-prohibitive, but this would not necessarily exclude such projects from a potential methodology.
164. Additionality is a potential issue with any proposed project under these lines in light of the requirements under *Ozone Protection and Synthetic Greenhouse Gas Management Act 1989* (Cth). However, on the basis that these legal requirements relate to refrigerant disposal for **end-of-life** equipment, there are strong arguments that refrigerant reclamation, replacement and destruction from **still-in-life** equipment represents abatement which is above and beyond the legal requirements and is therefore additional. There is still the possibility that the CER may take an opposing view on this issue, in particular that legal requirements to recover and dispose of refrigerants do not only arise at end-of-life and further engagement with the CER is key.
165. ACCUs as a result of these projects could be calculated in three parts:
- emission reductions due to the destruction of the removed high GWP refrigerant calculated using the method under the NZ ETS;
 - emission reductions due to the replacement of refrigerant [calculated using the ACR method];
 - emission reductions due to higher efficiency equipment and refrigerants, calculated similar to current energy efficiency methods.

Refrigerant reclamation and recycling

166. Refrigerant reclamation and recycling projects recover refrigerant from end-of-life equipment and reuse it in new equipment. There are currently no Australian methodologies which issue credits for refrigerant recycling, however the ACR has methodologies which quantify emissions reductions from refrigerant recycling, and we understand the California Air Services Board quantifies similar emission reductions as part of its cap and trade system.
167. There are currently no laws regarding refrigerant recycling activities in Australia so additionality is unlikely to be an issue for these projects.

168. We note the opinion that refrigerants which are recycled are inevitably vented to atmosphere through leaks. If it is proposed to proceed with RA proposing a refrigerant recycling methodology, it may need to be the subject of further discussion between RA and RRA which, if any, refrigerants should be covered by a methodology.

Project structure and possible financing facility

169. Subject to coordination with the CER to establish suitable methodologies, Refrigerants Australia may be able to participate in the CFI by establishing a low-interest financing facility (e.g. with the Clean Energy Finance Corporation) to provide funding to owners of commercial RAC equipment to upgrade equipment and/or replace refrigerants (eg HVAC or commercial refrigeration system upgrades). In return, the financier and Refrigerants Australia would receive (split to be negotiated) all or a portion of the ACCUs produced by the upgrade projects which could be monetised under the ERF or sold into the voluntary market.

Note: ACCUs are financial products under Australian law, and RA would need an Australian Financial Services Licence to advise on or deal in ACCUs.

PART 5: RECOMMENDATIONS

RECOMMENDATION 1: BEGIN CONSULTATION WITH THE CLEAN ENERGY REGULATOR

170. Developing any new methodologies, or amending existing methodologies, are discretionary processes initiated by the CER. Early engagement with the CER is therefore critical. It is currently not known how aware the CER is of emissions issues within the RAC Industry, and the reasons for its lack of initiative in this space could be a lack of awareness.
171. Submissions for new method development priorities will likely open in the second half of 2022. While there is no limit to the type of submissions that can be made, provided the key criteria are addressed, the request for submissions will likely identify method proposals the government will be particularly interested in receiving.⁵⁰ Alignment with broader government priorities is also a criteria any submissions for new methods are required to address. Engaging the CER in advance of the request for submissions, with the aim shape the government's priorities to include methods for emission reductions in the RAC industry in the request for submissions, could increase the likelihood new RAC industry methods will be developed by the CER.
172. Engaging with the CER will also enable RA to gauge the CER's appetite for amending existing methods which have historically been underutilised, particularly the High Efficiency Appliances Method and Commercial Building Methods. While most substantial amendments to existing methods occur via the development of new methods, it is arguable that the CER may be more receptive to amendments for methods which have been underutilised. An amendment to bolster the existing energy efficiency methods to also award credits due to the replacement of high-GWP refrigerants with low-GWP refrigerants may be possible.

RECOMMENDATION 2: NARROW PROJECT PRIORITIES AND BEGIN CONSIDERING SUBMISSIONS TO THE GOVERNMENT'S METHOD CONSULTATION

173. We recommend RA consider the project possibilities we have outlined above, along with any other project ideas RA might have, select the most likely projects to result in achievable and quantifiable emissions reductions, and begin to consider the form of submissions to the government's method consultation.

⁵⁰ For example, last year the Government was particularly interested in low emissions transport infrastructure, and this has now become a priority for method development in 2022.

174. In our view, the project proposed above for still-in-life refrigerant reclamation, replace and destruction has potential to meet requirements the requirements for a CFI Act methodology, subject to the risk that the CER does not consider these reductions additional. RA would then need to develop an outline of a method, and consider what submission could be made in response to the consultation's criteria, which are:
- a. the potential take-up of the method and level of abatement achieved;
 - b. whether the emissions reductions can be estimated;
 - c. whether the activity could have potential adverse social, environmental or economic impacts;
 - d. whether the activity is better supported by other government measures; and
 - e. alignment with broader government priorities.
175. Much of this is a matter for the RAC industry and it is difficult for us to advise on, for example, the potential take up-up of a method. If required, Ashurst can advise on other points, such as whether an activity is better supporter by other government measures. This will likely involve consideration of whether requirements *Ozone Protection and Synthetic Greenhouse Gas Management Act 1989* (Cth) can better support the activity. In our view, based on the historically low compliance with that act, strong arguments could be made that emission reduction activities in the RAC industry are better supported by projects under the CFI Act.

RECOMMENDATION 3: FURTHER CONSIDER PROJECT STRUCTURING ARRANGEMENTS

176. While this recommendation may be contingent on the CER being amenable to developing new RAC industry methodologies, Refrigerants Australia can begin to consider whether it is able to provide funding mechanisms for third parties to undertake projects. This could either be with Refrigerants Australia as a project proponent, undertaking the project and keeping a portion of the ACCUs produced, or providing financing to a corporation to undertake projects in exchange for ACCUs.