AMPC

AUSTRALIAN MEAT PROCESSOR CORPORATION

Emissions Reduction Fund Handbook

Contents

1.0 Executive Summary

The Emissions Reduction Fund (ERF) Handbook provides a comprehensive guide for participants in the meat processing industry who are interested in leveraging the ERF to reduce their carbon emissions and contribute to a more sustainable future. This handbook serves as a valuable resource, offering insights, guidelines, and practical information to navigate the complexities of the ERF and implement successful emission reduction projects.

The Handbook begins with an introduction, outlining the purpose and context of the ERF in relation to the meat processing industry. It provides an overview of the ERF, highlighting its objectives and benefits, and presents an understanding of the meat processing industry's role within the broader emissions reduction landscape.

To gain a deeper understanding of the ERF, the handbook explores key topics in Section 3. It explains the eligibility criteria for participation and delves into the various funding mechanisms available under the ERF. The section also provides an overview of different project types and guidelines, enabling readers to identify suitable pathways for their emission reduction initiatives.

Section 4 guides readers through the application process, offering step-by-step instructions and highlighting important considerations when preparing and submitting an application. It equips participants with the knowledge and tools necessary to navigate the application process effectively.

Effective monitoring, reporting, and verification (MRV) are essential components of successful ERF projects. Section 5 focuses on MRV requirements, providing guidance on establishing baselines, reporting obligations, and the auditing and verification processes involved. It empowers participants with the necessary knowledge to ensure compliance and accurately measure their emission reductions.

The Handbook recognises the challenges, risks, and barriers that participants may encounter when conducting and running ERF projects. Section 6 examines financial challenges, technical complexities, measurement and verification intricacies, regulatory and policy changes, market volatility and demand fluctuations, and the importance of stakeholder engagement and social acceptance. By acknowledging and addressing these factors, participants can mitigate risks and enhance the success of their projects.

In addition to comprehensive guidance, the Handbook offers a case study on the demonstration site Biomass Boiler project in Section 7. This real-world example showcases the practical implementation of an ERF project, providing valuable insights and lessons learned.

Concluding the Handbook, Section 8 presents key conclusions and recommendations based on the collective knowledge and experience shared throughout the document. These insights assist participants in optimising their ERF projects and achieving their emission reduction goals effectively.

Overall, the Emissions Reduction Fund Handbook equips participants in the meat processing industry with the necessary knowledge, guidance, and practical advice to navigate the ERF successfully. By leveraging this valuable resource, participants can contribute to the reduction of carbon emissions and enhance sustainability within their operations.

2.0 Introduction

2.1 Purpose of the Handbook

The purpose of this Handbook is to serve as a comprehensive guide and resource for the meat processing industry on understanding and utilising the Emission Reduction Fund (ERF) to achieve emission reduction goals. It aims to provide practical information, strategies, and case studies tailored specifically to the meat processing sector. By following the guidelines and recommendations outlined in this Handbook, meat processing businesses can navigate the complexities of the ERF and implement effective emission reduction projects.

2.2 The Emissions Reduction Fund (ERF)

The ERF is a key carbon credit scheme in Australia that aims to lower greenhouse gas emissions by encouraging the adoption of modern technologies, equipment, and practices across various industries, including the meat processing sector. The ERF builds upon the foundation of the Carbon Farming Initiative (CFI) and is enacted through the Carbon Credits (Carbon Farming Initiative) Act 2011, the Carbon Credits (Carbon Farming Initiative) Regulations 2011, and the Carbon Credits (Carbon Farming Initiative) Rule 2015 (Appendix A - Links and).

The primary objective of the ERF is to incentivise businesses, farmers, and landowners to undertake projects that avoid the release of greenhouse gas emissions or remove and sequester carbon from the atmosphere. Participants in the ERF can earn Australian carbon credit units (ACCUs) for each tonne of carbon dioxide equivalent (tCO2-e) emissions stored or avoided by their projects. ACCUs can be sold either to the Australian Government through a carbon abatement contract or to private buyers in the secondary market, such as companies.

2.3 Australia Carbon Credit Units

Australian Carbon Credit Units (ACCUs) (Appendix A - Links and) are a key component of the Emissions Reduction Fund (ERF) in Australia. ACCUs represent one metric tonne of carbon dioxide equivalent (CO2-e) emissions that have been reduced or removed from the atmosphere through eligible projects.

Currently, ACCUs are trading at an approximate price of AU$35 (19/6/2023) The price of ACCUs can vary over time due to various factors such as market demand, government policies, and the overall supply of ACCUs. The price is typically determined through market mechanisms, including auctions and private transactions, where buyers and sellers negotiate prices based on market conditions.

Looking towards the future, the price of ACCUs is subject to several considerations. One important factor is the continued commitment of the Australian government to the ERF and its targets for emissions reduction. Any changes in climate policies and regulations can impact the demand for ACCUs and subsequently influence their price.

Additionally, market forces and international developments in carbon pricing may also influence the future price of ACCUs. As global efforts to mitigate climate change intensify and carbon markets expand, there is a possibility of increased demand for ACCUs, which could drive the price higher. Conversely, changes in market dynamics or the availability of alternative emission reduction options may impact the demand and price of ACCUs.

It is important for stakeholders in the carbon market, including project developers, investors, and policymakers, to closely monitor these factors and anticipate potential shifts in the future price of ACCUs. Understanding market dynamics, policy changes, and international trends will help inform decisions and strategies related to the use and trading of ACCUs.

2.4 Overview of the Meat Processing Industry

The meat processing industry plays a significant role in the global food supply chain, providing various products derived from livestock such as beef, pork, poultry, and processed meats. However, it is important to recognise that the industry is associated with substantial energy consumption, waste generation, and carbon emissions. Understanding the environmental challenges faced by the meat processing sector provides valuable insights into the opportunities for improvement and emission reduction.

2.4.1 Energy Consumption and Emissions

The meat processing industry is known for its significant energy requirements throughout the production process, including slaughter, processing, packaging, and storage. The energy consumption primarily stems from refrigeration, heating, ventilation, and the operation of machinery and equipment. In many cases, meat processors heavily rely on conventional energy sources such as coal and gas, which contribute to greenhouse gas emissions.

Additionally, the industry generates substantial waste, including animal by-products, packaging materials, and organic waste. Improper waste management practices can lead to environmental pollution and contribute to emissions of methane, a potent greenhouse gas. It is crucial for the industry to address these challenges by adopting sustainable waste management strategies.

2.4.2 Environmental Opportunities and Solutions

To mitigate the environmental impact of the meat processing industry, there are several opportunities and solutions to consider:

Waste-to-Energy Systems:

Implementing waste-to-energy systems, such as anaerobic digestion, offers a dual benefit of waste management and renewable energy generation. By converting organic waste into biogas, meat processors can simultaneously reduce waste disposal costs and produce renewable energy. This approach helps to minimise greenhouse gas emissions and decrease reliance on fossil fuels.

Renewable Energy Integration:

Transitioning to renewable energy sources, such as solar, wind, or biomass, presents an opportunity for the meat processing industry to decrease its carbon footprint. By installing on-site renewable energy systems, meat processors can generate clean energy, reduce emissions, and enhance energy security. Renewable energy initiatives also align with consumer expectations for environmentally friendly products and can provide a competitive advantage.

Waste Heat Recovery and Process Optimisation:

Improving energy efficiency within meat processing facilities is critical for reducing energy consumption and associated emissions. Implementing waste heat recovery systems and optimising processes help capture and repurpose waste heat, reducing the need for additional energy inputs. By upgrading equipment, implementing energy management systems, and conducting regular energy audits, meat processors can identify areas for improvement and enhance overall energy efficiency.

Consumer Perception and Business Opportunities:

Embracing sustainable practices in waste management and emission reduction presents an opportunity for meat processors to enhance their brand reputation and attract environmentally conscious consumers. By demonstrating a commitment to environmental stewardship, meat processors can tap into a growing market segment seeking

sustainable and ethically produced products. This focus on sustainability can lead to increased consumer loyalty, market share, and potential business growth.

3.0 Understanding the ERF

3.1 ERF Objectives and Benefits

3.1.1 The primary objectives of the ERF

Emission Reduction: The ERF aims to facilitate and promote the adoption of projects that result in the avoidance, reduction, or removal of greenhouse gas emissions. By supporting a diverse range of emission reduction activities, the ERF seeks to contribute to Australia's national emission reduction targets and its international climate change commitments.

Carbon Abatement and Sequestration: The ERF encourages projects that actively sequester carbon dioxide from the atmosphere, promoting the preservation and enhancement of natural carbon sinks. This includes activities such as reforestation, afforestation, soil carbon sequestration, energy efficiency upgrades and fuel switch projects which help to offset emissions and contribute to overall carbon balance.

Incentives for Participation: The ERF provides financial incentives to participants who undertake eligible emission reduction projects. Participants can earn Australian carbon credit units (ACCUs) for each tonne of carbon dioxide equivalent (tCO2-e) emissions avoided or stored by their projects. These ACCUs can be sold either to the Australian Government through a carbon abatement contract or to private buyers in the secondary market.

3.1.2 Benefits to the meat processing industry and other sectors

Financial Support: Through the ERF, meat processors can access financial support in the form of payments for carbon abatement. By participating in eligible emission reduction projects and earning ACCUs, businesses can generate additional income streams and offset project costs, making emission reduction more economically viable.

Risk Mitigation and Sustainability: The ERF provides an opportunity for meat processors to reduce their exposure to future risks associated with increasing carbon prices and the potential introduction of carbon-related regulations. By proactively engaging in emission reduction activities and earning ACCUs, businesses can enhance their competitiveness and resilience in a changing regulatory landscape. Additionally, switching to sustainable and renewable energy reduces risk exposure to volatile fossil fuel prices and decreases dependability on external fuel suppliers.

Environmental Leadership: Participation in the ERF allows meat processors to demonstrate their commitment to environmental sustainability. By reducing their greenhouse gas emissions, businesses can showcase their proactive approach to addressing climate change, appeal to environmentally conscious consumers, and enhance their brand reputation.

Access to Carbon Markets: The ERF provides meat processors with an opportunity to participate in Australia's carbon markets. ACCUs earned through eligible projects can be traded in the secondary market, allowing businesses to engage with buyers seeking to offset their own emissions or meet corporate sustainability goals.

3.2 Eligibility

3.2.1 Initial eligibility criteria

The CFI ACT, which stands for Carbon Farming Initiative Act (Appendix A - Links and), establishes guidelines and regulations for projects related to carbon dioxide removal and greenhouse gas emission reduction in Australia. This legislation aims to incentivise and support initiatives that contribute to environmental sustainability and combat climate change. To ensure eligibility for participation in the Carbon Farming Initiative, project proponents must meet certain initial eligibility criteria. These criteria include three key components: newness, regulatory additionality, and government program (See Figure 1 - CFI Act Eligibility Criteria).

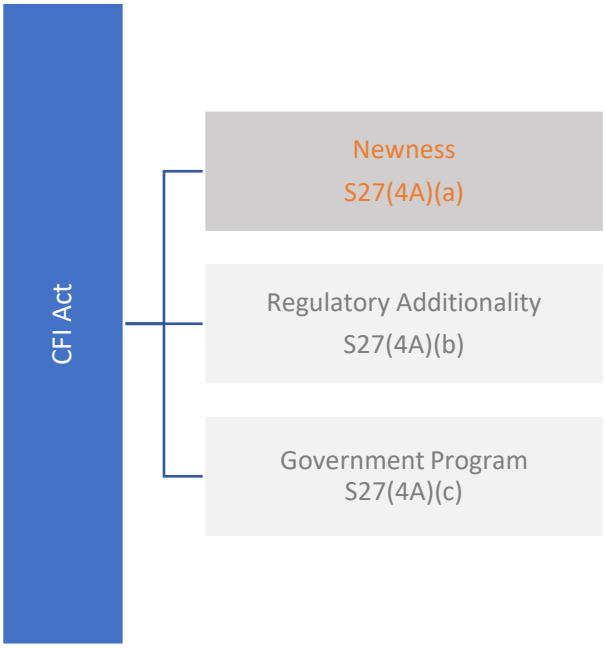


Figure 1 - CFI Act Eligibility Criteria

Newness refers to the requirement that the project must involve activities that are new or not already required by law. It encourages innovative approaches and initiatives that go beyond standard practices to achieve carbon abatement or emission reduction. By focusing on new activities, the CFI aims to promote advancements in environmental conservation and encourage participants to adopt novel strategies and technologies.

Regulatory additionality is another essential criterion for CFI eligibility. It stipulates that the project must result in additional abatement or emission reduction beyond what is required by law or existing regulations. This criterion ensures that participating projects contribute to environmental outcomes that would not have been achieved otherwise. By incentivising additional efforts, the CFI encourages participants to exceed minimum requirements and make a more significant positive impact on greenhouse gas emissions.

The third key criterion for CFI eligibility is government program participation. This criterion necessitates that the project has been unlikely to be carried out under another Commonwealth, State or Territory government program or scheme in the absence of a declaration of the project as an eligible offsets program.

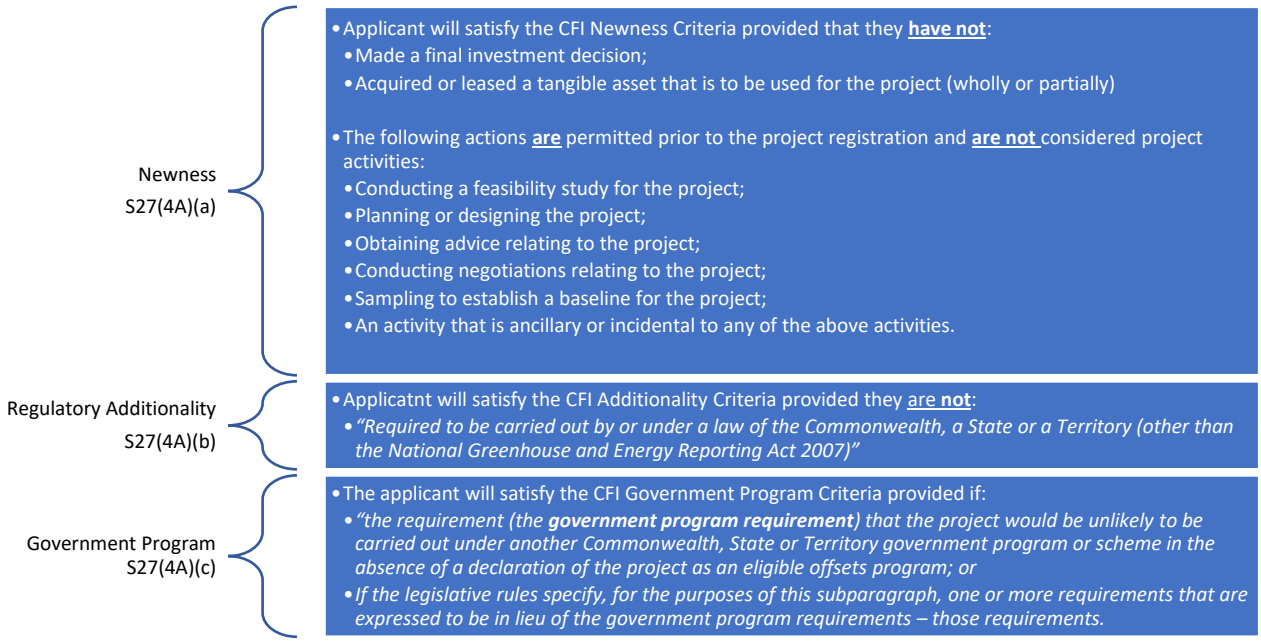


Figure 2 - Eligibility Criteria in Detail

3.3 ERF Funding Mechanisms

Crediting in an Emission Reduction Fund (ERF) project (Appendix A - Links and) involves the issue of carbon credits or Australian carbon credit units (ACCUs) to project proponents based on their verified greenhouse gas (GHG) emission reductions or carbon abatement efforts. The crediting process enables project participants to generate and trade carbon credits, thereby incentivising and monetising their emission reduction activities. Additionally, commercialising the project involves engaging in various mechanisms such as long-term fixed price, fixed volume contracts with the Clean Energy Regulator (CER) under the ERF, voluntary surrender, and participation in the secondary market for carbon credits.

3.2.1 Long-Term (7-Year) Fixed Price, Fixed Volume Contract with the CER:

One method of commercialising an ERF project is by entering into a long-term (7-year) fixed price, fixed volume contract with the CER. This contract provides project proponents with certainty in terms of the price and volume of carbon credits they will receive over the contract duration. It establishes a contractual arrangement between the project participant and the CER, ensuring that the emission reductions achieved by the project are accurately quantified and rewarded with ACCUs. Keep in mind, a carbon abatement contract with the CER requires the proponent to produce the volume of ACCU's contracted. If the proponent can't produce the contracted volume they may be liable to pay the difference.

Voluntary Surrender:

Voluntary surrender refers to the voluntary retirement or cancellation of carbon credits by individuals, organisations, or companies to offset their own emissions or demonstrate environmental responsibility. Through voluntary surrender, entities can voluntarily retire carbon credits to achieve their emission reduction targets or demonstrate their commitment to reducing their carbon footprint. This mechanism provides flexibility for businesses and individuals to voluntarily support emission reduction projects and take action against climate change beyond regulatory requirements.

Secondary Market Sales:

The secondary market for carbon credits allows project participants to sell or trade their ACCUs to other entities seeking to offset their emissions. In the secondary market, carbon credits are bought and sold between participants, creating a market-based mechanism for carbon abatement. Project proponents can sell their ACCUs to other organisations, which enables the transfer of emission reduction outcomes and provides financial incentives for project viability and scalability. If a proponent chooses to sell credits on the secondary market they will not be able to claim the reduction in their own carbon footprint.

Figure 3 outlines some of the positives and negatives of choosing each method for commercialisation.

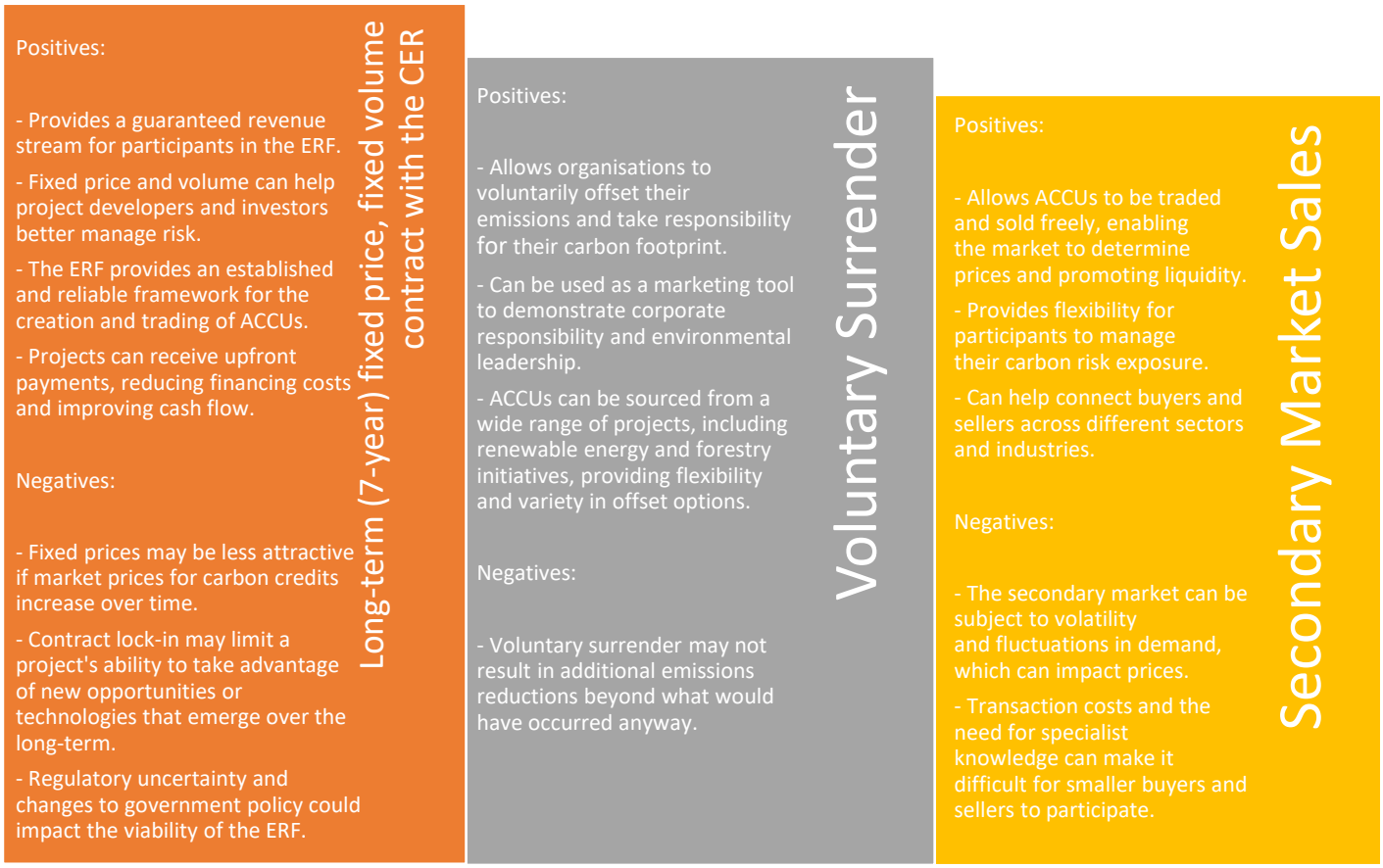


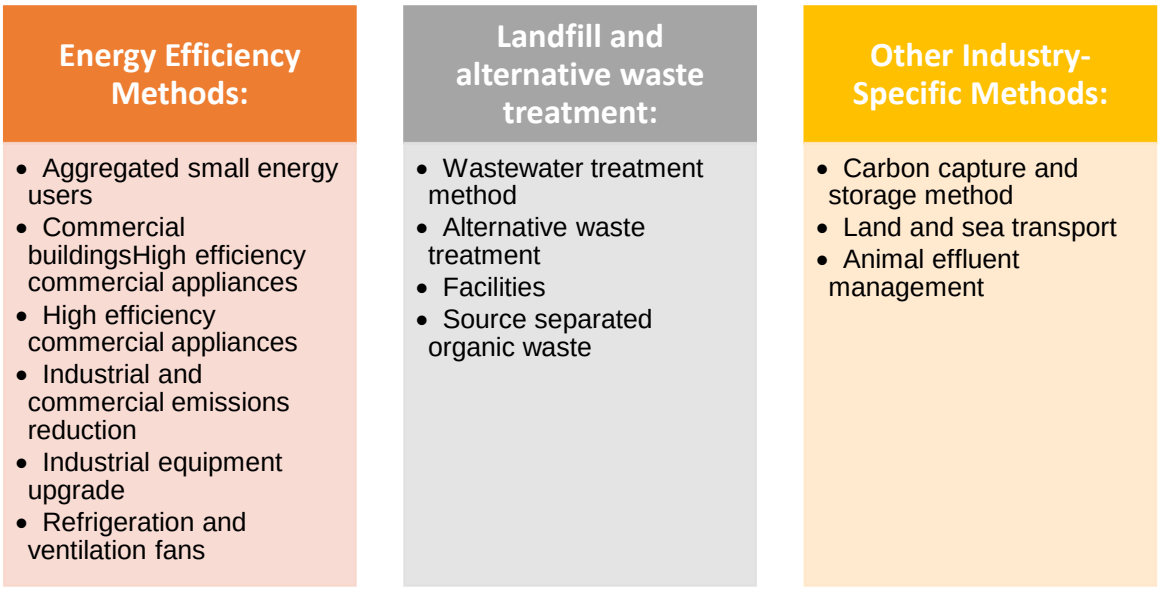
Figure 3 - Positives and negatives of commercialisation methods

3.4 ERF Project Types and Guidelines

To ensure effective implementation and accountability, the ERF utilises different methodology determinations, commonly known as methods (Appendix A - Links and). These methods define the rules and eligible activities for running an ERF project and vary based on the type of project. In this section, we will explore the diversity of ERF methods.

ERF Methods:

The ERF provides a range of methods to accommodate various project types, allowing participants to choose the most suitable approach for their emission reduction goals. Some of the available ERF methods for industry include:



Eligibility Requirements:

Each ERF method has its own set of eligibility requirements that participants must fulfill to register their projects and earn Australian Carbon Credit Units (ACCUs). The Clean Energy Regulator outlines these requirements for each method, ensuring that projects comply with the necessary standards and achieve credible emissions reductions.

For example, the Industrial and Commercial Emission Reduction (ICER) method is suitable for businesses aiming to reduce emissions from energy consumption or industrial processes at their industrial or commercial sites. To determine eligibility for the ICER method, businesses need to assess whether they want to reduce emissions in these areas and possess the necessary understanding of the statistical analysis, measurement techniques, and verification procedures required by the method.

Other methods may have specific requirements related to project scale, technology adoption, land management practices, or sector-specific emissions reduction strategies. It is crucial for project participants to carefully review the eligibility criteria and guidelines provided for each method to ensure alignment with their project objectives.

4.0 Application Process

Pre-registration

- Before you consider registering your project, find out if you are eligible to participate in the Emissions Reduction Fund using the interactive questionnaire. The questionnaire allows you to determine if your project meets the scheme's eligibility requirements.
- Select a suitable project method.
- Ensure you understand the reporting and auditing requirements for your specific project method.
- Do you meet the following eligibility criteria for:
  - New project
  - Legal right
  - Fit and proper person
  - Regulatory additionality
  - Eligible interest holder consent
  - Method specific eligibility

Plan your project

- Plan your project by doing the following:
  - Conduct cost and benefit analysis
  - Meet capability and skill requirement
  - Understand monitoring and record keeping systems
  - Conduct a risk analysis
  - Determine project structure (for example, single project or aggregated project)

Register project

- Apply to register your project by setting up a client portal account, completing the registration application and providing:
  - Australian Federal Police police check
  - Forward abatement estimate
  - Complete eligible interest holder consent form (if required).
- Open your Australian national registry of emissions units (ANREU) account with bank details.
- Following registration assessment the project details will be published on the ERF register and a declaration of registration will be provided to you along with an audit schedule.

Run project, report and audit

- Run your project as per the project method, including adherence to the specific instructions for the calculation of abatement and other information required to be reported.
- Report on your project. Reports must meet method requirements and include calculation of actual abatement achieved in the reporting period. You may report as frequently as the method allows but a minimum of once every two years for emissions avoidance and once every five years for sequestration.
- Reports must include audit reports where scheduled. An initial audit report is required with the first project report. Additional audits can be triggered.

5.0 Monitoring, Reporting, and Verification (MRV) Requirements

Effective monitoring, reporting, and verification (MRV) processes are essential for ensuring the integrity and transparency of projects under the ERF (Appendix A - Links and). MRV requirements enable accurate measurement and reporting of emission reductions, providing confidence in the credibility of the achieved outcomes. This section outlines the key components of MRV within the ERF framework.

Verification is a crucial step in the ERF process to confirm the accuracy of the reported emission reductions. The Clean Energy Regulator may engage independent verifiers to assess the project's adherence to the chosen method and the validity of the claimed emission reductions. Verifiers will review the monitoring data, calculations, and supporting documentation to ensure compliance with the method requirements. Successful verification provides assurance that the reported emission reductions are accurate and reliable.

It is important for project proponents to maintain comprehensive records and documentation throughout the monitoring, reporting, and verification processes. These records serve as evidence of project compliance and support the accuracy of reported emission reductions. By adhering to the MRV requirements, project proponents contribute to the transparency and credibility of the ERF, strengthening the overall effectiveness of Australia's emission reduction efforts. Below outlines the main requirements in MRV:

5.1 Establishing a baseline

To accurately assess the effectiveness of emission reduction projects, it is crucial to establish a baseline against which the project's performance can be measured. The baseline represents the projected emissions that would have occurred in the absence of the project. Project proponents must follow the guidelines provided by the Clean Energy Regulator to determine the appropriate baseline methodology for their specific project type. By establishing a baseline, project performance can be quantified, and the emission reductions achieved can be accurately determined.

5.2 Reporting and documentation

Accurate and timely reporting is a fundamental requirement for ERF projects. Project proponents are responsible for submitting regular reports to the Clean Energy Regulator, documenting the progress and results of their projects. These reports should include detailed information on the project's activities, emissions data, and any other relevant documentation as specified by the chosen method. The reporting frequency and requirements may vary depending on the specific project method, with minimum reporting intervals specified in the guidelines.

5.3 Auditing and verification processes

To ensure the credibility of reported emission reductions, the ERF incorporates auditing and verification processes. Independent auditors appointed by the Clean Energy Regulator will assess the accuracy and compliance of the reported data and documentation. Audits may be conducted periodically or randomly, depending on the project size and the level of risk associated with the emissions abatement activities. During the auditing process, auditors will review project records, conduct site visits if necessary, and verify the reported emission reductions against the established baseline.

Note: This section provides a general overview of the MRV requirements within the ERF framework. Project proponents should refer to the specific guidelines and methodologies relevant to their chosen project type for detailed instructions on monitoring, reporting, and verification processes.

6.0 Challenges, Risks, and Barriers to Entry

While participating in an Emission Reduction Fund (ERF) project offers numerous benefits, it is important to be aware of the potential challenges, risks, and barriers that project proponents may encounter. This section highlights some of the key considerations to navigate when conducting and running an ERF project.

6.1 Financial Challenges

One of the primary challenges faced by project proponents is securing the necessary financial resources to initiate and sustain an ERF project. Implementing emission reduction activities often requires upfront investments in technology, equipment, and operational costs. Depending on the scale and complexity of the project, financial constraints may pose a significant barrier to entry. Proponents should carefully assess the project's financial viability, explore funding options, and consider seeking partnerships or accessing government grants and incentives to mitigate these challenges.

6.2 Technical Complexity

ERF projects encompass a wide range of activities across various sectors, each with its own technical complexities. Implementing emission reduction measures effectively requires specialised knowledge, expertise, and access to appropriate technology. Depending on the project type, proponents may encounter challenges related to the selection, installation, and operation of emission reduction equipment or implementing complex methodologies. To address these challenges, it is important to engage qualified professionals, consultants, or technical experts who can provide guidance and support throughout the project lifecycle.

6.3 Measurement and Verification

Accurate measurement and verification (M&V) of emission reductions is crucial for the credibility and success of an ERF project. M&V processes can be intricate, requiring meticulous data collection, monitoring, and analysis. Proponents must ensure they have appropriate systems and procedures in place to track and quantify emissions accurately, adhering to the specified project methodologies. Inadequate M&V practices can undermine the project's credibility and eligibility for carbon credits. Engaging experienced M&V specialists or consultants can help mitigate risks associated with M&V complexities.

6.4 Regulatory and Policy Changes

The landscape of emissions reduction policies and regulations can evolve over time, introducing uncertainties and risks for ERF projects. Changes in government policies, emission reduction targets, or eligibility criteria may impact project viability or alter the market dynamics for carbon credits. Proponents should stay informed about regulatory developments, engage with industry associations, and maintain flexibility in project planning to adapt to potential regulatory or policy changes.

6.5 Market Volatility and Demand

The market for carbon credits can be subject to price volatility and fluctuating demand. The value of carbon credits may vary based on factors such as market conditions, international agreements, and policy decisions. Proponents should carefully consider market risks, including the potential for oversupply or undersupply of carbon credits, when

evaluating the financial viability and long-term sustainability of their projects. Diversifying revenue streams and exploring alternative markets or carbon offsetting mechanisms can help mitigate these risks.

6.6 Stakeholder Engagement and Social Acceptance

Engaging with stakeholders and building community support is essential for the successful implementation of an ERF project. Proponents may encounter challenges related to community acceptance, land access, or conflicts of interest. Establishing effective communication channels, conducting stakeholder consultations, and addressing concerns proactively can help minimise potential barriers and foster positive relationships with project-affected communities.

7.0 Case Study - Demonstration Site Biomass Boiler

The demonstration site, an Australian meat processor, is embarking on an emission reduction fund project aimed at replacing their coal-fired boiler with a biomass boiler. This section will delve into the preliminary phases of the project, encompassing the initial assessment of ERF eligibility, registrations, and early-stage due diligence. It will provide an exploration of each step of the process, shedding light on the challenges and obstacles that the demonstration site encountered and successfully overcame.

7.1 Stage 1 - Initial ERF Eligibility Assessment and Registration of Project

During Stage 1 of the emission reduction fund project at the demonstration site, close attention was paid to the requirements outlined in the Carbon Farming Act to ensure compliance and project eligibility.

Under the guidance of the AMPC helpline, a thorough review was conducted to assess the project's financial considerations, ensuring that no financial decision had been made that would render the project ineligible. This analysis adhered to the specific requirements set forth in the Carbon Farming Act, providing confidence in the project's compliance with the prescribed guidelines.

Additionally, a comprehensive evaluation was carried out to determine the most suitable ERF Methodology for the project. After careful assessment, it was determined that the Industrial Energy Efficiency (IEFE) Method would best align with the demonstration site’s project objectives. The IEFE Method includes provisions for fuel switching, making it well-suited for the biomass boiler implementation at the demonstration site.

By satisfying the eligibility requirements and identifying the most appropriate ERF Methodology, the demonstration site successfully registered their project with the Clean Energy Regulator. This diligent approach and adherence to regulatory obligations laid a solid foundation for the subsequent stages of the project, instilling confidence in the project's eligibility and alignment with the emission reduction fund framework.

7.2 Stage 2 - Early Stage Detailed Due-Diligence

7.2.1 IEFE vs Industrial and Commercial Emissions Reduction (ICER)

In Stage 2, an initial challenge arose that necessitated seeking external expertise. Following the project registration as an Industrial Energy Efficiency (IEFE) project, a new method called the Industrial and Commercial Emissions Reduction (ICER) method was introduced during the period leading up to project commencement which will replace the IEFE method. The demonstration site faced the decision of determining which method would best align with their project objectives and whether to move their project from to the new method or not.

To make an informed decision, a thorough analysis was conducted to assess the risks and benefits associated with each method. This evaluation aimed to ascertain the method that would optimise project outcomes while considering potential challenges and advantages. The key takeaways are listed below:

- The ICER method grants additional flexibility in choosing the baseline period which has to be a representative year for the site's operation. ICER allows choosing 12 months out of 36 months while IEFE allows choosing 12 months out of 24 months.
- In the absence of clear statistical relationships, engineering fundamentals can be used to develop a baseline emissions model when opting for ICER method.

- Under ICER, interactive effects will not lead to the loss of ACCUs that may occur in IEFE. Positive interactive effects can contribute up to 10 per cent additional abatement.
- Marginally higher abatement amounts are achieved with ICER method since yearly decay is not part of the equation.

Based on the facts presented the proponent chose to move the project to the ICER method.

7.2.2 Feedstock

The demonstration site's biomass project necessitates the acquisition of a reliable and consistent supply of feedstock, which must consist of eligible materials or a combination thereof. Additionally, several crucial factors must be considered when selecting suitable feedstock, including its proximity to the project site, availability, and contract duration. These aspects significantly influence pricing, energy output, and the risk of feedstock scarcity.

To determine the initial eligibility of the feedstock, an analysis was conducted using the definitions outlined in the Carbon Farming Act. This assessment confirmed that hay, paunch, and woodchips met the criteria for eligible materials. However, it is imperative to thoroughly examine the definition of a renewable energy source as specified in the Renewable Energy Regulation (2001).

Here is a summary of the relevant sections and their assessments:

Part 2, Section 6:

Paunch: The regulator considers paunch as a renewable energy source if it meets the definition of waste from the processing of agricultural products. The Australian Meat Processor Corporation (AMPC) would need to provide auditable evidence of the source of this agricultural waste, which can be obtained from existing plant operations.

Hay: The regulator considers hay as a renewable energy source if it meets the definition of agricultural waste. AMPC would need auditable evidence to justify how the hay qualifies as agricultural waste, demonstrating that it has been primarily used for another purpose and would otherwise naturally degrade or be sent to landfill.

Part 2, Section 8:

Wood Chips: The regulator considers wood chips as a renewable energy source if they meet the definition of wood waste. AMPC would need to provide auditable evidence to demonstrate any of the following:

- The wood chips are from non-native environmental weed species, harvested for control or eradication approved by a Commonwealth, State, or Territory.
- The wood chips are by-products of manufacturing processes such as packing cases, pallets, recycled timber, or engineered wood products.
- The wood chips are waste products from construction, furniture, timber off-cuts, or demolished buildings.
- The wood chips are sourced from sawmill residue.

Part 2, Section 9:

Wood Chips: The regulator considers wood chips as a renewable energy source if they meet the definition of an energy crop. AMPC would need to provide auditable evidence that demonstrates:

- The wood chips come from a harvesting operation approved by the relevant government body (Commonwealth, State, or Territory).

- The wood chips are from a plantation managed in accordance with approved codes of practice or standards.
- The wood chips are sourced from land that was not cleared of native vegetation after December 31, 1989, to establish the plantation.
- The wood chips are not from a native forest.
- It is critical for AMPC to demonstrate that wood chips meet the requirements for renewable energy sources as they are the primary fuel source for the project.

7.2.3 Baseline model

An emissions baseline model is required to estimate emissions that would have been created in absence of the abatement activity. The baseline model must comply with the requirements of the relevant method (i.e. ICER, Facilities etc). The legislative requirements are detailed in the relevant Method Determination.

When developing a baseline emissions model it is important to have a clear understanding of any process parameters that influence the site emissions. A boundary is typically defined around the relevant process operation of which the abatement activity will take place. Consistent with the ICER and IEFE Method the abatement activity is typically called an implementation.

Without an eligible baseline model the project will be unable to generate ACCU's and participate in the emissions reduction fund. A successful baseline model requires a measurement period that represents a typical range of operating conditions for the equipment. It cannot start earlier than 36 months before date of implementation and must end before the date of implementation commencing. Thus, it must be a representative period less than or equal to three years and must contain the typical operation conditions typically requires consistent site data for a period of at least two to three years prior to the installation date of the abatement activity. Infrequent and insufficient volume and granularity of data does not allow for a baseline model that satisfies the requirements of the relevant ERF Method. Characteristics of data which typically allow for a successful baseline model is listed as follows:

- Numerous forms of data related to the abatement activity (fuel consumption, outputs, inputs, kill count).
- Frequent measurement period - minimum of daily is preferred.
- A maximum measurement period of at least three years.

The baseline model requires a strong understanding of any process operations that may be influenced by the abatement activity. Should the abatement activity result in an increase in emissions from other emission sources on site, these need to be accounted for and considered when developing the baseline model. These may be considered interactive effects or partly unaffected emissions producing equipment. Any relationships between these emission sources must be clearly understood and accounted for when developing the baseline model.

The formulation of a baseline model is unique to each site, and the demonstration site encountered certain complexities during its development. Primarily, the demonstration site faced the challenge of identifying a suitable timeframe during which comprehensive data was available for establishing correlations. This task proved difficult initially due to the site's dynamic operational changes, resulting in intermittent and missing data. Consequently, diverse combinations of data within tracked timeframes needed testing to construct a baseline model that met both statistical prerequisites and legislative criteria. To ensure the successful creation of a baseline model for ACCU generation, it is advised to engage specialised expertise, given the intricate nature of fulfilling these requirements.

3.2.1 Conclusion

The case study presented a few challenges and risks for the demonstration site, marked by decisions and methodological nuances. The transition from the Industrial Energy Efficiency (IEFE) method to the newly introduced Industrial and Commercial Emissions Reduction (ICER) method in Stage 2 demonstrates the complexity in running an ERF project. The decision to switch methodologies was underpinned by an analysis that illuminated distinct benefits

and trade-offs. Despite the challenges posed by the transition, the demonstration site chose the ICER method which proved the best option. The ICER method's flexibility in selecting the baseline period, the potential to leverage engineering fundamentals for baseline emissions modelling, and the mitigation of potential made it the right choice. This decision demonstrated the value of thorough evaluation, which enabled the site to align its project objectives with the most suitable emissions reduction methodology, maximising the potential for success.

Furthermore, the critical aspect of feedstock selection emerged as a pivotal factor in the project's viability. The site's biomass project depended on meeting stringent definitions, requiring auditable evidence and clear justifications to ensure compliance. This phase highlighted the significance of understanding regulatory nuances.

Lastly, the development of the emissions baseline model which was a fundamental requirement for generating Australian Carbon Credit Units (ACCUs). This process showed the importance of data granularity, process understanding, and regulatory compliance. The model's success hinged on capturing intricate relationships and accounting for potential emissions shifts influenced by the abatement activity. The culmination of these efforts illustrated the importance of domain expertise, high quality data monitoring, and adherence to legislative prerequisites.

All these steps showed that the ERF is a complex journey, and by making informed choices, understanding rules, and working with experts, the demonstration site managed to take the first steps in developing a successful project.

4.0 Conclusions / Recommendations

In conclusion, the Emission Reduction Fund (ERF) Handbook serves as a valuable resource for participants in the meat processing industry, providing comprehensive guidance on leveraging the ERF to achieve emission reduction goals. Through this Handbook, participants can gain a deeper understanding of the ERF objectives, eligibility criteria, funding mechanisms, and project types, enabling them to navigate the complexities of the ERF effectively.

The Handbook highlights the importance of initial eligibility assessments and project registrations, emphasising the need for careful consideration of financial decisions to maintain project eligibility. It also recognises the significance of selecting the appropriate ERF Methodology, as demonstrated by the demonstration site biomass boiler case study, where the Industrial and Commercial Emissions Reduction method (ICER) Method proved to be the most suitable approach.

Throughout the Handbook, challenges, risks, and barriers to entry for conducting and running ERF projects are addressed. Financial challenges, technical complexities, measurement and verification intricacies, regulatory and policy changes, market volatility and demand fluctuations, as well as stakeholder engagement and social acceptance, are all considered. By acknowledging these factors and implementing strategies to overcome them, participants can enhance the success of their projects.

The monitoring, reporting, and verification (MRV) requirements outlined in the handbook emphasise the importance of accurate and transparent reporting, establishing baselines, and engaging in auditing and verification processes. Adhering to these requirements ensures the credibility and integrity of ERF projects.

Looking ahead, it is recommended that participants closely monitor the evolving landscape of carbon pricing, policy changes, and international developments in carbon markets. By staying informed and adaptable, participants can make informed decisions regarding the future price of Australian Carbon Credit Units (ACCUs) and effectively navigate the carbon market.

To optimise their ERF projects, participants are encouraged to engage with industry associations, leverage financial support programs, explore partnership opportunities, and continuously evaluate the technical and financial viability of their projects.

In conclusion, by leveraging the information and insights provided in the ERF Handbook, participants in the meat processing industry can play a pivotal role in reducing carbon emissions while gaining access to the carbon market. The Handbook serves as a comprehensive tool to support participants' efforts in achieving their emission reduction goals and maximising the benefits of the ERF framework.

5.0 Bibliography

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6.0 Appendices

The author should any supporting documentation which has been referenced in the report. Each Appendix must be named and numbered.

6.2 Appendix A - Links and Resources

1. **Clean Energy Regulator**: The main site to get started. It offers comprehensive information about the Emissions Reduction Fund (ERF) and how to earn ACCUs.
    - Clean Energy Regulator's official website
2. **How does it work**: This link provides the basics to understand the ERF and how to participate.
    - How does it work with the ERF
3. **Methods**: This link provides specific methodologies for various projects.
    - List of approved methods
4. **Planning a project**: Here the steps to the planning phase of an ERF project.
    - Planning a project
5. **Registering your project**: Step-by-step information on how to register an ERF project and create ACCUs.
    - Steps to register your project

6. **ACCUs**: A specific page detailing how ACCUs work, how they can be used, and their current market value.
    - About ACCUs
7. **Toolkits and Calculators**: These tools can help you estimate emissions and reductions.
    - ERF Toolkits and Calculators
8. **Auditing**: Auditors play a crucial role in the ERF. This link will guide you through the process.
    - About ERF audits
9. **Frequently Asked Questions**: A helpful section to understand more about the ERF and ACCUs.
    - ERF FAQ