

**Emissions Management Framework for the Alberta Electricity  
Sector: 2018 Five-Year Review**

Project Charter

*Approved by the CASA Board*

September 2018

# Project Charter

## Contents

- Background ..... 3
  - First Five-Year Review ..... 3
  - Second Five-Year Review ..... 4
- Project Goal..... 4
- Project Scope ..... 4
- Key Task Areas ..... 6
  - Short-Term Tasks (Phase 1) ..... 6
  - Long-Term Tasks (Phase 2) ..... 7
- Project Deliverables ..... 8
- Project Structure and Schedule ..... 8
- Projected Resources and Costs..... 8
- Risk Analysis ..... 9
- Operating Terms of Reference..... 11
- Stakeholder Analysis and Engagement Plan..... 11

## Background

In January 2002, Alberta Environment asked the Clean Air Strategic Alliance (CASA) to develop a new way to manage air emissions from electricity generation in Alberta. Using a multi-stakeholder collaborate approach, CASA developed innovative solutions in the form of 71 recommendations comprising a management framework and presented it to the Government of Alberta in November 2003. The report, *An Emissions Management Framework for the Alberta Electricity Sector* (the Framework), was accepted by the Government of Alberta and implemented through regulations, standards, and facility approvals. The first emission standards were effective January 1, 2006.

To ensure continuous improvement and keep the Framework timely and relevant, a formal review of the Framework is to be undertaken every five years according to recommendation 29. This review should include a multi-stakeholder group consisting of industry, government, non-government organizations, and communities with an interest in electricity generation in Alberta. The intent of the Five-Year Review is to assess new emission control technologies, update emission standards for new generation units, determine if emission standards for new substances need to be developed, review implementation progress, and determine if the Framework is achieving its emission management objectives.

A full review of the structure of the Framework itself would be triggered by the environmental and health factors noted in recommendation 34 (emission forecast is 15% higher than projected in the previous Five-Year Review) and the economic factors noted in recommendation 35 (economic assumptions are significantly different to adversely affect the viability of the electricity sector). A full structural review would consider changes to the Framework to reflect current circumstances.

### First Five-Year Review

The first Five-Year Review started in 2008 and the Electricity Framework Review Team submitted their report and recommendations to the CASA Board in June 2009. The report contained ten consensus recommendations and one non-consensus item. The consensus items included revisions to the particulate matter (PM), nitrogen oxides (NO<sub>x</sub>), and sulphur dioxide (SO<sub>2</sub>) emission standards for new coal-fired units based on improvements in emission control technologies, effective January 1, 2011. The non-consensus item pertained to NO<sub>x</sub> emission standards for new gas-fired generation for both peaking and non-peaking units. A final report, including the interests and rationale with respect to the non-consensus recommendation, was forwarded to the Government of Alberta in May 2010 for decision.

A subgroup-continued to meet to develop a particulate matter system for existing units, as per recommendation 22 of the Framework. In June 2010, the Federal Minister of Environment announced a proposed regulation for CO<sub>2</sub> emissions from coal-fired power plants. The specific details of the proposed federal coal regulation were not available until it was published in the Canada Gazette, making it difficult for the sub-group to reach agreement on a PM management

system for existing coal units. As such, the Board put the sub-group into abeyance until the details of the proposed regulation were available.

## Second Five-Year Review

The second Five-Year Review started in 2013. The project team reviewed greenhouse gas (GHG) regulations to identify potential implications and emissions management issues of the Framework created by the implementation of federal GHG regulations in addition to environmental and economic triggers (recommendation 34 and 35).

The group was unable to reach consensus on the need to review or adjust the Framework, given divergent views of the members as to what was required to allow changes to the Framework. An interim report identifying the key issues and differing perspectives was submitted to the CASA Board. The CASA Board asked the Government of Alberta to weigh in on the matter and to describe the path forward as appropriate. In August 2014, CASA was notified that the department of Environment and Parks was working on a cross-ministry plan with the departments of Energy and Health that would review the interim report and determine the next steps for the Framework. In June 2015, Environment and Parks notified CASA that in the absence of a decision on the interim report and Framework, the Government of Alberta would continue to make regulatory decisions in accordance with the existing 2003 Framework.

In March 2015 the project team provided 13 recommendations to the CASA Board, one of which was non-consensus (recommendation 3, emissions standards for gas-fired generation).

## Project Goal

To ensure the *Emissions Management Framework for Alberta's Electricity Sector* reflects current circumstances, the project team will conduct the third Five-Year Review, as outlined in recommendation 29 of the Framework.

## Project Scope

The requirements of the five-year review are reflected in the following recommendations:

### **Recommendation 29 (2003)**

This recommendation outlines the following elements of the Framework that must be reviewed by the project team:

1. A technology review to identify the Best Available Technology Economically Achievable (BATEA) emission standards,
2. The air emission substances subject to limits or formal management,
3. Co-benefits for priority substances and List 2 substances,
4. A review of economic and environmental triggers as set out in the framework in recommendations 34 and 35,
5. Additional information that illustrates potential health effects associated with emissions from the electricity sector; and

6. A report from the electricity sector on continuous improvement.

**Recommendation 22 (2003)**

This recommendation states that if mercury control does not provide the anticipated co-reduction of primary particulate matter, the five-year review should develop a primary particulate matter management system for existing units.

**Recommendation 9 (2010)**

This was a non-consensus recommendation for source standards for new gas-fired non-peaking thermal generation units. The 2015 Five-Year Review was asked to revisit this issue.

**Recommendation 3 (2015)**

This was a non-consensus recommendation for emissions standards for gas-fired generation. The current Five-Year Review will revisit this issue.

**Recommendation 4 (2015)**

This recommendation states that the 2018 Five-Year Review should include review of the need to include biomass sources of electricity generation in the Framework.

**Recommendation 8 (2015)**

This recommendation states that the 2018 Five-Year Review should ensure that each substance listed in Category 2 (i.e. management actions need to be considered) of the Air Emissions Substance Review are evaluated, considering:

- The state of the science on the substance,
- Substance reduction potential including management and cost,
- Co-benefits to be managed, and
- Requirements for monitoring.

**Recommendation 9 (2015)**

This recommendation states that the group undertaking the health and ecological assessment in the 2018 five-year review should explicitly include substances listed in Category 3 (i.e. ongoing surveillance is recommended) in the search terms for the health and ecological literature reviews.

**Recommendation 10 (2015)**

This recommendation states the Health and Environmental Assessment Task (HEAT) Group should be convened as soon as possible in the 2018 Five-Year Review and should be provided with the terms of reference from the 2013 HEAT Group, to adjust as the new Group deems necessary.

**Recommendation 11 (2015)**

This recommendation states the implementation of the Emissions Trading System should be assessed as part of the 2018 Five-Year Review of the Framework.

### **Recommendation 13 (2015)**

This recommendation states the 2018 Five-Year Review should consider the role of public consultation and develop a plan at the beginning of its process.

## Key Task Areas

This project will be completed in two phases, with initial high-priority tasks to be completed on a shorter timeline (“short-term” or Phase 1) and delivered to the CASA Board no later than December 2018. The remaining tasks (“long-term” or Phase 2) will be completed by mid-2019.

It is likely the environmental and economic triggers (recommendation 34 and 35 of the Framework) have not been triggered.

### Short-Term Tasks (Phase 1)

1. A technology review to identify the Best Available Technology Economically Achievable (BATEA) to update NO<sub>x</sub> air emission standards for new gas-fired generation units, including:
  - Continuous (non-peaking) and intermittent (peaking) natural gas-fired turbine units,
  - Industrial co-generation plants using gas-fired turbines,
  - Gas-fired reciprocating engines used for both industrial cogeneration and electricity generation when multiple units are banked,
  - Gas turbines fired by biogas, and
  - Design life considerations for gas-fired units.
2. Updates to consultant reports from the first and second five-year reviews to determine Best Available Technology Economically Achievable (BATEA)-based emission standards for gas-fired generation, if deemed appropriate.
3. Review lessons learned from industry using Selective Catalytic Reductions (SCR) in their operations.
4. As per recommendation 11 of the 2013 Five-Year review, complete an assessment of the implementation of the Emissions Trading System, with a focus on NO<sub>x</sub> emission credits. This assessment will include what the system is achieving and will continue to achieve, the intended objectives of providing incentives and rewards for better than required or expected performance, encouraging early shutdown of older units, and encouraging implementation of new emissions controls at existing units.
5. As per recommendation 13 of the 2013 Five-Year Review, develop and implement a strategy and action plan for communicating and engaging with stakeholders and the

public with a goal of informing and increasing the public's awareness and understanding of:

- The 2003 Framework and how it works to improve performance and reduce emissions,
- The 2013 Five-Year Review process and outcomes,
- The implications of the implementation of recommendations resulting from the 2013 Five-Year Review, and
- The 2018 Five-Year Review process.

### Long-Term Tasks (Phase 2)

1. As per recommendation 4 in the 2013 five-year review, review the need to develop emission standards for biomass-fired electricity generation sources.
2. Review the draft federal stationary diesel engines regulations for electricity generation, for engines used both in continuous and standby service and consider implications for and alignment with the Framework.
3. As per recommendation 22 of the Framework, review primary PM management and develop a primary PM Management System for existing coal-fired units if deemed appropriate.
4. As per recommendation 8 of the 2013 Five-Year Review, review air emission substances emitted by electricity generation that are subject to formal control, including existing Category 2 substances and emergent substances and their impacts. This task should consider:
  - The state of the science on the substance,
  - The substance reduction potential including management and cost,
  - Co-benefits to be managed, and
  - Requirements for monitoring.
5. As per recommendation 10 of the 2013 Five-Year Review, convene a HEAT Group to oversee a review to identify any new and relevant studies or research findings regarding potential environmental or health effects from air emissions substances from electricity generation, including an independent peer review on results.

As per recommendation 9 of the 2013 Five-Year Review, this task should explicitly include air emissions substances listed in Category 3 (i.e. on-going surveillance is recommended) in the search terms for the health and ecological assessment literature review.

6. Modernize the Framework document itself by consolidating the recommendations from the first and second Five-Year Reviews into the main Framework document, including adding information on implementation status of recommendations where applicable,

and reviewing the recommendations for relevancy in light of the changes to the electricity sector since the document was created.

7. As per recommendation 13 of the 2013 Five-Year Review, develop and implement a strategy and action plan for communicating and engaging with stakeholders and the public with a goal of informing and increasing the public's awareness and understanding of:
  - The 2003 Framework and how it works to improve performance and reduce emissions,
  - The 2013 Five-Year Review process and outcomes,
  - The implications of the implementation of recommendations resulting from the 2013 Five-year review, and
  - The 2018 five-year review process.
8. Review a report from the electricity sector on continuous improvement.
9. Make recommendations for future Five-Year Reviews.

## Project Deliverables

The following deliverables will be developed by the project team and provided to the CASA Board:

- Interim report on short-term tasks to be provided no later than December 2018
- Final report including both the short and long-term tasks to be provided by mid-2019
- Communications plan

It should be noted that *CASA's Performance Measures Strategy: A "how-to" guide to performance measurement at CASA* indicates that each project team is required to generate one specific metric that will allow the success of the team to be evaluated 5 years in the future. More guidance on how this can be achieved can be found in the strategy.

## Project Structure and Schedule

Project work should begin in June 2018. The entire project will take approximately 12 months, with a completion date of no later than December 2018 for the short-term tasks and mid-2019 for the long-term tasks.

## Projected Resources and Costs

Table 1 outlines the potential external costs over the life of the project as anticipated by the project team. These figures are estimates only. As the work of the project team progresses, detailed work plans and associated budgets will need to be created.



**Table 1: Estimated costs associated with the Five-Year Review of the Electricity Management Framework**

Key Task	Estimated Budget
Environmental effects literature review (Phase 2, task 5)	\$20,000
Health effects literature review (Phase 2, task 5)	\$20,000
PM management system consideration (Phase 2, task 3)	\$20,000
Communication/Consultation (Phase 1, task 5 and Phase 2, task 7)	\$15,000
<b>Total</b>	<b>\$75,000</b>

## Risk Analysis

Identifying, analyzing and mitigating project risks is a key component of executing a successful project. The project team should incorporate proactive risk management into the project to mitigate risks that could undermine its success.

Table 2 lists the risks as well as possible mitigation strategies that the project team should consider as they undertake their work.

**Table 2: Electricity Management Framework Review Risk Analysis including Possible Mitigation Strategies**

Risks	Possible Mitigation Strategies
<b>Process</b>	
Timely funding not available for long-term (phase 2) tasks	<ul style="list-style-type: none"> <li>Identify who the “customers” of this work are. Who will find this valuable – seek funding there</li> <li>Develop a strong value-proposition that includes: examples of sectors that may be involved or affected</li> <li>Project Team members discuss the work and associated need for funding with their constituents early in the process</li> </ul>
Recommended management actions are too broad or not specific to the project goal.	<ul style="list-style-type: none"> <li>Seek a balance between regional needs and provincial applicability in management actions chosen</li> <li>Consider prioritizing cross-cutting actions that provide regional benefit and have the potential to be broadly applicable</li> <li>Consider ways to align this work with existing management frameworks and plans</li> </ul>
Can’t reach agreement, e.g., management actions, or communications	<ul style="list-style-type: none"> <li>Determine in advance which pieces of work do and do not require consensus</li> </ul>

	<ul style="list-style-type: none"> <li>• Outline a clear decision-making process that includes what happens if the team can't agree – who will make the decision?</li> <li>• Have an explicit discussion around Interest-Based Negotiation, and get all the interests of the team members on the table</li> </ul>
Project Team doesn't understand or follow the Project Charter	<ul style="list-style-type: none"> <li>• Working group to create a project charter that is clear, especially with respect to the intent for sequencing of objectives</li> <li>• Board receives regular updates to ensure progress is monitored</li> </ul>
CASA Board doesn't agree with management actions identified in Objective 4	<ul style="list-style-type: none"> <li>• Project Team members liaise with their constituents and Board members on an ongoing basis</li> <li>• Project Team provides regular status reports for Board meetings</li> </ul>
Recommendations of the project team are not implemented.	<ul style="list-style-type: none"> <li>• This risk is outside the scope of the project team to mitigate; however, this risk will be reduced if i) the parties potentially involved in implementation are engaged, and ii) reference to implementation (who and how) is included in the report's recommendations</li> </ul>
<b>Information Collection</b>	
Consultant is not available during the project timeline	<ul style="list-style-type: none"> <li>• Engage the consultant as far in advance as possible to ensure availability</li> </ul>
Lack of / limited information (accessibility)	<ul style="list-style-type: none"> <li>• Ensure Project Team membership enables the team access to information</li> <li>• Use judgement where information is unavailable</li> </ul>
<b>Stakeholder Engagement</b>	
During stakeholder engagement, "interested parties" don't agree with the list of management actions	<ul style="list-style-type: none"> <li>• Try to develop the potential management actions collaboratively</li> <li>• If stakeholders disagree, seek to understand stakeholder reasons for disagreement</li> <li>• Identify non-consensus recommendations where appropriate</li> </ul>
Lack of engagement/ownership on Project Team	<ul style="list-style-type: none"> <li>• Identify and communicate with potential stakeholders early in the process</li> <li>• Create a clear value proposition</li> <li>• Be clear about what is being asked of stakeholders</li> </ul>
Obtaining stakeholder feedback and refining management actions with interested parties takes longer than expected or causes scope creep.	<ul style="list-style-type: none"> <li>• Set specific parameters for this piece of work: <ul style="list-style-type: none"> <li>○ Purpose of soliciting feedback</li> <li>○ Scope of influence outcomes will have on overall process</li> </ul> </li> <li>• Time available</li> </ul>

## Operating Terms of Reference

An Operating Terms of Reference describes how the project team agrees to work together. The project team should discuss and reach consensus on the following items:

- Requirements for quorum
- Governance
- Meeting protocols
- Roles and expectations of project team members
- How decisions will be made
- Ground Rules
- Frequency of project team meetings
- Frequency of updates and reports to the CASA Board
- Protocols for handling media requests
- Protocols for providing updates to interested parties
- Any other considerations for working together

## Stakeholder Analysis and Engagement Plan

The project team would benefit from engaging different stakeholders for different purposes. Different stakeholders could be engaged in a variety of capacities and at different times throughout the project.

The working group identified the following categories of stakeholders that may be involved:

- Project Team: Stakeholders who are required at the table to reach consensus agreement.
- Corresponding members: Stakeholders who receive all correspondence but are not required at the table to reach consensus agreement.
- Task Groups or Technical Experts: Stakeholders who have a specific interest or expertise and can be engaged in a more focused way.
- Other:
  - Stakeholders from whom feedback on management actions is sought, which may include potential implementers or those potentially impacted
  - Members of the public who may be engaged