

Project Charter
2013 Five-Year Review of the Emissions Management Framework
for the Alberta Electricity Sector



Prepared by the
Electricity Framework Review Working Group
for the
Clean Air Strategic Alliance
Board of Directors

March 4, 2013

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Project goal

To ensure the *Emissions Management Framework for Alberta's Electricity Sector* (the Framework) reflects current circumstances, the project team will conduct a Five-Year Review, as outlined in Recommendation 29 of the Framework. The team will also consider whether a review of the structure of the Framework itself is warranted and develop recommendations as appropriate.

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 collaborative 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*, was accepted by the Government of Alberta and implemented through regulations, standards and facility approvals (see Appendix I). The first emission standards were effective January 1, 2006.

To ensure continuous improvement and to keep the Framework timely and relevant, a formal review of the framework is to be undertaken every five years (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 so as 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_x) and Sulphur Dioxide (SO₂) 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_x emission standards for new gas-fired generation for both peaking and non-peaking units. At the June 2009 meeting, the Board directed the team to continue work to reach consensus. This work provided further clarification of the issues, but the participants could not reach consensus. 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 sub-group of the team continued to meet to develop a Particulate Matter (PM) System for existing units, as per Recommendation 22 of the Framework. In June 2010, the Federal Minister of Environment announced a proposed regulation for CO₂ emissions from coal-fired power plants. The specific details of the proposed federal coal regulation were not to be 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.

Electricity Working Group

At the same time, the CASA Board was alerted to the potential misalignments between the Framework, the proposed Base Level Industrial Requirements (BLIERs) for existing coal-fired electricity generation units (as part of the Air Quality Management System), and the proposed federal regulation for CO₂ emissions from coal-fired power plants (GHG Regulations). The Board emphasized the need for CASA to respond to these issues in a strategic manner and struck a Working Group to develop a report on the potential misalignments, including suggestions on addressing these issues in a collaborative way. In December 2011, the working group presented their final report to the Board and, upon the Board's approval, the Government of Alberta committed to presenting the report at the Canadian Council of Ministers of the Environment Champion's table.

On September 12, 2012, the federal GHG Regulations were published in the Canada Gazette, Part II: Official Regulations. As such, the working group updated their report in October 2012 and resubmitted it to the CASA Board and the Government of Alberta.

Project Objectives

The project charter serves as guidance for the scope and direction of the project. At the convening meeting of the project team, members should engage in a review of the project charter with a view to reach agreement on each of the components of the charter which together make up the foundation for their process. This agreement signals their buy-in and ownership for the process and their commitment to effective collaboration.

Initial Assessment

An initial assessment will assist the team in determining if a review of the structure of the Framework itself is warranted. A structural review would involve a renewal of the Framework to reflect current circumstances, as appropriate.

1. Identify potential implications and emissions management issues for the CASA Framework, created by the implementation of Canada's GHG Regulations.

Inputs may include:

- The Regulations are published in the Canada Gazette, Part II, Vol. 146, No. 19, September 12, 2012.

2. Update the emissions forecast for NO_x, SO₂, PM and Mercury and determine if the emissions are 15% higher for a five-year period than projected in the previous Five-Year Review.

3. Determine if the economic assumptions underlying the framework are significantly different, as to adversely affect the viability of the electricity sector.

Structural Review

Based on the results of the initial assessment, team members would determine if a full structural review of the Framework is warranted. A structural review may include the identification of possible issues and opportunities for Framework renewal and the development of general terms for the agreement based on emerging themes. The development of a suite of management options for Framework renewal and the evaluation of the various options using the economic and environmental base cases may also be part of this work.

Information Collection/Analysis

The team should carry out the tasks described in Recommendation 29 (Five-Year Review) and Recommendation 22 (PM Management System) in the Framework, and Recommendation 1 of the 2010 Five-Year Review Report (implementation status of emissions trading recommendations), including commissioning information gathering, as required. If a structural review is not deemed necessary, the team should develop recommendations to update the elements of the Framework described in Recommendation 29, based on this information. If a structural review is deemed necessary, the team may still need to develop recommendations to update the elements of the Framework described in Recommendation 29, subject to the nature and scope of any structural changes that may arise.

Control Technologies and Reduction Strategies

4. Determine emission standards and corresponding deemed credit threshold for new thermal generation units, including gas-fired new peaking units, based on the Best Available Technology Economically Achievable (BATEA).

Inputs may include:

- A technical review of current emission control technology.
- Potential implications and emissions management issues for the Framework, created by the implementation of Canada's GHG Regulations.
- Review of Natural Gas definitions.

5. Determine emission standards for new reciprocating engines and diesel engines for electrical generation, based on the Best Available Technology Economically Achievable (BATEA), with consideration for any related work of the reciprocating engine BLIERs group.
6. If available, review the proposed BLIERs for the electricity sector and consider if/how they will impact the Framework (i.e. new reciprocating engines, new gas turbines, new non-utility heaters and boilers, and new coal-fired units).

7. Review the electricity sector Continuous Improvement Report relative to the previous continuous improvement goal statements and propose, where appropriate, recommendations for modifications to the framework that result in improved opportunities for supporting continuous improvement efforts.

Inputs may include:

- Industry to provide an update to the 2009 Continuous Improvement Report.

Substance Review

8. Review air emission substances emitted by electricity generation that are subject to formal control, including existing List 2 substances and possible new substances. Identify if further action is required.

Key Tasks may include:

- Review new/emerging information related to:
 - Air emission substances subject to standards, limits or formal management in Alberta, including List 2 substances.
 - Possible new air emission substances not yet regulated in Alberta.

9. Form a multi-stakeholder group with appropriate representation to oversee a review to identify any new and relevant studies or research findings regarding potential environmental or health effects from air emissions from electricity generation, including an independent peer review on the results.¹

Inputs may include:

- United States Environmental Protection Agency National Air Toxics Assessments.
- United States Environmental Protection Agency Mercury and Air Toxics Standards for Power Plants.

PM Management System

10. Develop a PM Management system for existing units.²

Inputs may include:

- *Evaluation of Existing Particulate Matter Management in Alberta*. September 2010. Prepared by Eastern Research Group for CASA.
- Minutes of CASA PM Management System Task Group, July 2010 to February 2011, including discussions on a straw-dog PM Management Plan.

¹ Recommendation 5. *Report on the First Five Year Review of the Emissions Management Framework for the Alberta Electricity Sector*. May 2010.

² Recommendation 22. *Emissions Management Framework for the Alberta Electricity Sector*. November 2003.

Emissions Trading System

11. Complete an assessment of the implementation of Recommendation 8, regarding the NO_x and SO₂ emissions management approach³.

This work may include reviewing whether the Emissions Trading 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.

12. Complete an assessment of the implementation of Recommendation 9, regarding the implementation of the Management Approach for NO_x and SO₂⁴.

Review of Implementation of Recommendations

13. Review the 2010 report on the implementation of recommendations from the 2003 Framework and make updates as appropriate.

14. Review the implementation of recommendations in the 2010 report.

Public Consultation

The consensus-based process at CASA incorporates consultation in many forms. Public consultation for this project would be determined by the scope of work being undertaken (e.g. a structural review may require more extensive public engagement). Public consultation should, at the least, increase awareness of the Electricity Framework.

15. Develop and implement a strategy and action plan for communicating and engaging with stakeholders and the public. Consider timing for public consultation.

Potential Future Work

If revisions are made to the Framework, the project team should update the October 2012 report from the Electricity Working Group. The team should re-evaluate the projected outcomes of the mid-life BLIERs for existing coal units and the Framework, including the environmental and economic gains and losses if the proposed mid-life BLIERs were to be applied in Alberta.

Inputs may include:

- Electricity Working Group Report, prepared for the CASA Board of Directors, October 5, 2012.
- Information/documentation on the most recent Environment Canada proposal for BLIERs for existing coal units.

³ Recommendation 1. *Report on the First Five Year Review of the Emissions Management Framework for the Alberta Electricity Sector.*

⁴ Recommendation 1. *Report on the First Five Year Review of the Emissions Management Framework for the Alberta Electricity Sector.*

Project Scope

To ensure the Framework reflects current circumstances, a formal review of the framework is to be undertaken every five years (Recommendation 29).

Requirements

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, then the Five-Year Review should develop a primary particulate matter management system for existing units.

Recommendation 1 (2010)

This recommendation states that the 2013 Five-Year Review team should complete an assessment of the implementation of Recommendations 8 and 9 of the 2003 Framework, regarding the Emissions Trading System.

Further, the project team must identify the implications of the implementation of Canada's GHG Regulations. It is anticipated by the Government of Alberta that federal-provincial discussions regarding the implementation of the GHG Regulations will conclude at the end of 2013. To provide effective input to these discussions, the project team would have to provide recommendations before that date.

It should also be noted that the 2003 Framework was a set of consensus recommendations, negotiated by the team and agreed to as a package. All elements were considered to be equally important.

Assumptions

Due to some uncertainty regarding federal/national initiatives, the project team should proceed with their work based on the following assumptions:

- The GHG Regulation will be implemented, as published in Canada Gazette, Part II: Official Regulations and any inconsistencies with the CASA Framework will need to be identified, considered, and addressed; and

- Mid-life BLIERS for existing units will not be implemented in Alberta and need not be considered at this time.

Project Deliverables

A final report and recommendations for updating and/or revising the Framework.

Project Structure and Schedule

- See road map.
- The project team should develop a thorough project schedule (e.g. Gantt Chart) when they convene.

Project Risk Analysis

Identifying, analyzing and mitigating project risks is a key component to executing a successful project. Incorporating proactive risk management into the project that includes strategies to manage risks will assist in minimizing potential impacts to the project’s scope, schedule and costs.

Risks	Possible Mitigation Strategies
The team’s work schedule does not align with that of the mid-life BLIERS and GHG Regulations discussions. (It is anticipated by the Government of Alberta that these discussions will conclude at the end of 2013.)	<ul style="list-style-type: none"> • Focus on existing coal units first. (The GHG Regulation and mid-life BLIERS both apply only to existing coal units). • Compress the anticipated work schedule.
Mid-life BLIERS for existing coal units is required to be implemented in Alberta.	<ul style="list-style-type: none"> • Remain up-to-date on developments for mid-life BLIERS. • Update the Electricity Working Group report (comparing the outcomes of the Framework and mid-life BLIERS). • Develop a contingency plan.
Funding is not sufficient or not timely.	<ul style="list-style-type: none"> • Be clear about funding requirements. • Be aware of how funding delays will impact timelines and plan accordingly.
The work can not be completed in the required timeframe.	<ul style="list-style-type: none"> • Seek clarity from key stakeholders about their anticipated timeframes. • Be prepared to prioritize objectives and tasks. • Explore the possibility of updating previous reports rather than starting over. • Be aware that timely completion of the project is heavily reliant on some preliminary information gathering. This work should be started as soon as possible.

Risks	Possible Mitigation Strategies
The schedule of Board of Directors meetings causes delays.	<ul style="list-style-type: none"> • Seek Executive Committee input when appropriate.
CASA Secretariat and/or CASA stakeholders do not have the capacity (i.e. human resources) to participate effectively.	<ul style="list-style-type: none"> • Be prepared to prioritize objectives and tasks. • Consider that key tasks may happen sequentially, rather than in parallel.
Consultant contracts take longer than anticipated and/or reaching agreement on consultant reports is difficult.	<ul style="list-style-type: none"> • Ensure that Terms of Reference for consultants provide clarity and have a high level of endorsement from team members. • Consider consultant reports as one input into the final decision.
Key stakeholders are not engaged until late in the process.	<ul style="list-style-type: none"> • Identify all interested parties, including those that have a vital interest in electricity generation. • Ensure all interested parties understand the options available to be engaged, including active participation if they have a vital interest in electricity generation.
Information gathered does not contribute to reaching a final agreement.	<ul style="list-style-type: none"> • Consider how the information gathered will be used. • Ensure that Terms of Reference for consultants are clear.
Updates to the Framework misalign with initiatives on water and/or the Land Use Framework and regional plans.	<ul style="list-style-type: none"> • Remain up-to-date on developments in related initiatives.
Framework updates/revisions do not offer equivalent or better environmental outcomes than mid-life BLIERS.	<ul style="list-style-type: none"> • Provide justification for the overall Framework approach representing a more justifiable and practical approach to emissions management.

Projected Resources

The working group foresees the following potential external costs over the life of the project team, consistent with the objectives outlined in this document. The accompanying figures are estimates and as the work of the project team progresses a clear idea of the required resources will emerge.

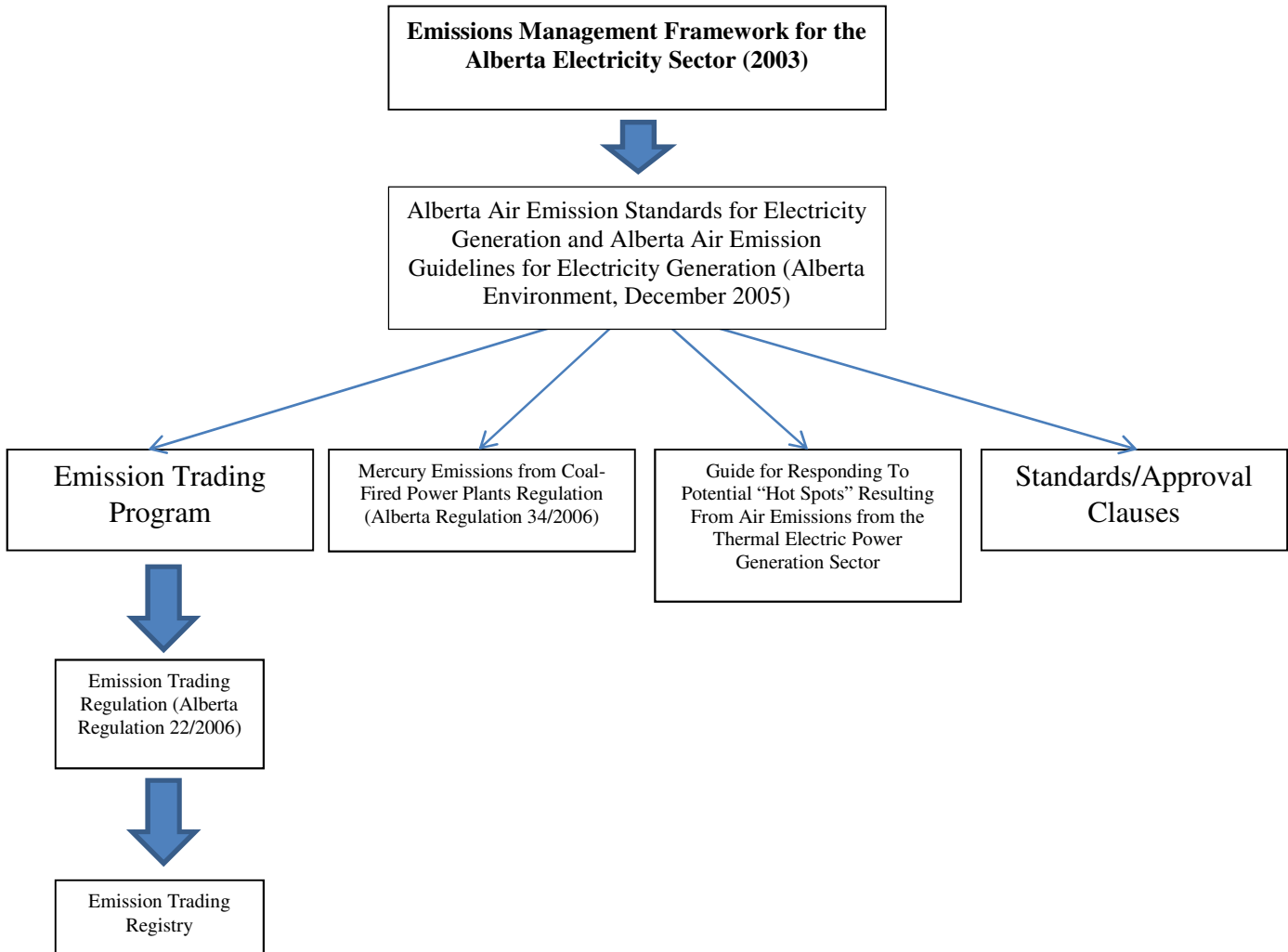
Key Task	2008 Budget	2013 Budget
Economic Analysis (Recommendation 35)		\$80,000
Emissions Growth (Recommendation 34)	\$24,000 \$10,000 (2009 update, based on new recommendations)	\$35,000

Key Task	2008 Budget	2013 Budget
BATEA Review	\$160,000	\$60,000
Environmental Effects Literature Review	\$10,000	\$20,000
Health Effects Literature Review	\$10,000	\$20,000
PM Management System consideration		\$20,000
Other consultant work, as required		\$20,000
Public Consultation	\$35,000	\$60,000
TOTAL	\$249,000	\$315,000
NOx/Co-Gen Review * The CASA Board directed the team to undertake this work in an attempt to reach consensus. These were extenuating circumstances and this additional cost is not anticipated for the 2013 Five-Year Review.	\$192,000	
TOTAL	\$441,000	

Stakeholder Analysis and Engagement Plan

Following due process, the CASA Board of Directors would be asked to propose interested parties to be engaged in the project team. Please see Appendix II for a list of previous participants, for both the 2003 Electricity Project Team and the 2008 Electricity Framework Review team.

Appendix I – Managing Air Emissions in the Electricity Sector



Appendix II – Electricity Framework Review Working Group Members

Name	Organization
David James	Alberta Energy
David Spink	Prairie Acid Rain Coalition
Don Wharton	TransAlta
Jim Hackett	ATCO
Krista Brindle	Alberta Energy
Randy Dobko	Alberta Environment and Sustainable Resource Development
Tom Marr-Laing	Pembina Institute
Robyn-Leigh Jacobsen	Clean Air Strategic Alliance
Celeste Dempster	Clean Air Strategic Alliance

Appendix III – Past Participants on the 2003 Electricity Project Team and the 2008 Electricity Framework Review Team

Government		
Federal	Environment Canada	Project Team
Provincial	Alberta Energy	Project Team
	AB Environment & Sustainable Resource Development	Project Team
	Alberta Health	Project Team
	Alberta Energy and Resource Conservation Board	
	Alberta Utilities Commission	Project Team
Local	AB Association of Municipal Districts & Counties	Project Team
	Alberta Urban Municipalities Association	Project Team
Aboriginal	First Nations Energy Task Force	
	Metis	

Industry		
Agriculture	Wild Rose Agricultural Producers	Project Team
Alternate Energy	Vision Quest Wind Electric	Project Team
	Howell-Mayhew Engineering	Sub-Group
	ENMAX	Project Team
Chemical Manufacturers	Chemistry Industry Association of Canada (formerly CCPA)	Project Team
Forestry	Calpine Canada	Project Team
	Alberta Forest Products Association	
Mining	Coal Association of Canada	Project Team
	Luscar	
Oil and gas (large producers)	CAPP	Project Team
Oil and gas (small producers)		
Petroleum Products	Canadian Fuels (formerly Canadian Petroleum Products Institute)	Project Team
Utilities	TransAlta Corporation	Project Team
	ATCO Power Canada Ltd	
	Capital Power	
	TransCanada	
Other	Power Purchase Arrangement Buyers	Project Team

Non-Government Organizations

Health Issues	Canadian Public Health Association	Project Team
Pollution Issues	Pembina Institute Mewassin Community Council Lake Wabamun Enhancement Protection Association Toxics Watch	Project Team
Wilderness Issues	Prairie Acid Rain Coalition Western Canadian Wilderness Committee	Project Team Sub-Group
Consumer/Transportation	Climate Change Central	Project Team
Members of Affected Communities (MACs)	There were two MACs on the 2008 Electricity Framework Review team	Project Team
Other	Environmental Law Center	Project Team
	Sierra Club	Project Team
	Residents for Accountability in Power Industry Development	Sub-Group