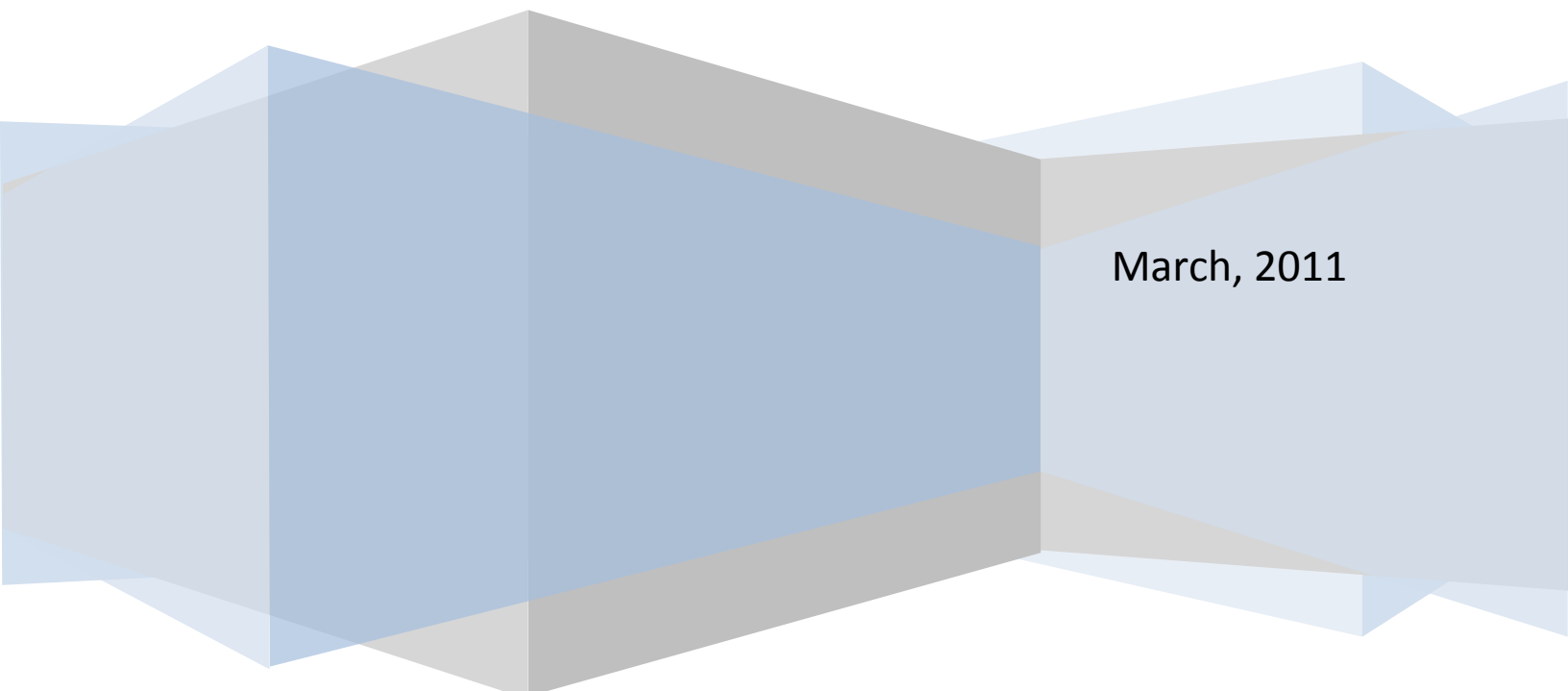


Parkland Airshed Management Zone

Provincial Regulations, Initiatives and BMPs Related to Ozone and Air Quality



March, 2011

Alberta - Provincial Initiatives

Alberta's 2008 Climate Change Strategy

To read the report, go to the Alberta Environment website: <http://www.environment.ca>

The strategy carries a commitment to reduce GHG emissions by 20 mega tonnes by 2010, 50 mega tonnes by 2020 and 200 mega tonnes by 2050, which is 14 % below 2005 levels.

It contains three major goals:

1. Conserving and Using Energy Efficiently
2. Implementing Carbon Capture and Storage
3. Greening Energy Production:

Alberta's Energy Efficiency Rebate Program

Website: <http://www.climatechangecentral.com>

Rolled out in April 2009 by the provincial government, it committed, through Alberta's Climate Change Strategy, to help Albertans be more energy efficient in their daily lives. The program provides consumer rebates for:

- Energy evaluations for homeowners to assess the current energy efficiency of their home and to measure its efficiency after improvements are made
- Efficient home heating systems, hot water heating systems, clothes washers and insulation upgrades and
- New homes achieving a high level of energy efficiency

The Government of Alberta invested \$36 million over three years to help Albertans reduce their greenhouse gas emissions. Many of the rebates are tied to the federal ecoENERGY Retrofit Program, enabling consumers to recoup costs from both programs. Eligibility purchases are retroactive to January, 2009. The program is administered by Climate Change Central.

Climate Change Central

Website: <http://www.climatechangecentral.com>

Climate Change Central is a non profit provincial organization that empowers Albertans to take action on climate change through rebate programs, demonstration programs and educational outreach. It administrates the provincial government funded Energy Efficiency Rebate Program, the federally funded "Retire Your Ride" (formerly Car Heaven) program and has done several demonstration programs, some being:

- Alberta Solar Showcase: a project which involved installing 20 grids connected solar PVs in municipal buildings around Alberta to demonstrate to municipal leaders the viability of this alternative energy and to build capacity and experience in the solar industry
- Alberta Renewable Diesel Demonstration: demonstrated on road use of low level renewable diesel fuel blends for Alberta's cold climate
- Hail a Hybrid: a project that demonstrated the economic and environmental viability of hybrid vehicles for Alberta's taxi industry

Trucks of Tomorrow is an example of a current project whereby the Alberta government is teaming up with Climate Change Central to help commercial vehicle operators adopt aerodynamic and fuel-efficient technologies that will cut costs and curb emissions.

Clean Air Strategic Alliance (CASA)

Website: <http://www.casahome.org/>

The Clean Air Strategic Alliance is a non-profit association composed of diverse stakeholders from three sectors: government, industry and non-government organizations such as health and environmental groups. All Clean Air Strategic Alliance groups and teams, including the boards of directors, make decisions and recommendations by consensus. It is a stakeholder partnership given shared responsibility by its members, including the Government of Alberta, for strategic planning, organizing and coordinating, and evaluation of air quality in Alberta. The key projects currently ongoing at the Clean Air Strategic Alliance are:

- Human and Animal Health
- Confined Feeding Operation
- Vehicle Emissions
- Flaring and Venting
- Electricity Efficiency and Conservation
- Renewable and Alternative Energy
- Indoor Air Quality
- Particulate Matter and Ozone
- Ambient Air Quality Monitoring
- Science Symposium on Nitrogen Oxides

Although CASA does not have legislative authority, agencies such as Alberta Environment and the EUB receive CASA recommendations and implement subsequent regulations and guidelines, as appropriate. The CASA process is viewed as being constructive and inclusive, and through consensus helps to forge a strong commitment to implement resulting recommendations. The petroleum industry and the ERCB first initiated CASA teams in 1998 to make consensus recommendations on gas flaring and venting management. To date CASA has endorsed the following airsheds in Alberta.

1. [Calgary Region Airshed Zone \(CRAZ\)](#) – Calgary region
2. [Lakeland Industry and Community Association \(LICA\)](#) – Bonnyville, Cold Lake, St. Paul and region
3. [Fort Air Partnership \(FAP\)](#) – Fort Saskatchewan and region
4. [Palliser Airshed Society \(PAS\)](#) – Medicine Hat and Redcliffe
5. [Parkland Airshed Management Zone \(PAMZ\)](#) – Red Deer, Rocky Mountain House, Sundre, Banff and surrounding region
6. [Peace Airshed Zone Associations \(PASZA\)](#) – Grande Prairie and region
7. [West Central Airshed Society \(WCAS\)](#) – Jasper, Hinton, Edson, Lake Wabamun, Drayton Valley, Pigeon Lake and surrounding regions
8. [Wood Buffalo Environmental Association \(WBEA\)](#) – Fort McMurray and the Wood Buffalo region
9. [Alberta Capital Airsheds Council \(ACAA\)](#) – Edmonton region

Alberta - Acts, Regulations, Code of Practices, Guidelines

Alberta Environmental Protection and Enhancement Act (AEPEA) and Environmental Codes of Practice, Guidelines and Standards

Website: <http://www.environment.ca>

The purpose of AEPEA is to support and promote the protection, enhancement and wise use of the environment. The act's individual regulations cover a wide range of activities, from beverage container recycling and pesticide sales and handling, substance release, waste control to wastewater and storm drainage. See website. Also found at the Alberta Environment website are codes of practice, guidelines and standards relating to numerous activities having environmental impact and includes specific guidelines and standards on air quality, air quality modeling and monitoring.

About Alberta Environment: Alberta Environment is organized into four main business divisions: Environmental Stewardship, Environmental Assurance, Environmental Management and Oil Sands Environmental Management

Examples of Relevant Regulations under the authority of the AEPEA Act:

The Substance Release Regulation

This regulates the release of gaseous emissions from vinyl chloride and polyvinyl chloride industrial facilities, particulate release from major industrial facilities and visible emission release from sources in Alberta.

The Release Reporting Regulation

This regulation deals with the release of substances into the environment and sets out requirements for the reporting of such releases to Alberta Environment.

The Emissions Trading Regulation

This establishes a registry for nitrogen oxides and sulphur dioxide emission credits. It requires certain electricity generators to provide emission intensity baselines for those substances and to report information, and explains how emission credits can be created.

Alberta's Climate Change and Emissions Management Amendment Act (2008)

Website: <http://qp.alberta.ca> or <http://www.assembly.ab.ca/.bills/2008/pdf/bill-008.pdf.2>

The Climate Change and Emissions Management Act legislates an intensity-based target of reducing emissions vis-a-vis GDP to 50 % of 1990 levels by 2020. The act requires facilities with greenhouse gas emissions above certain thresholds to report their emissions. The act also grants Alberta's cabinet the authority to regulate emissions and offsets.

On November 4, 2008, Alberta's Climate Change and Emissions Management Amendment Act, 2008 (the "Amendment") received Royal Assent, thereby amending the Climate Change and Emissions Management Act (the "Act"). The amendment delegates the administration of the Climate Change and Emissions Management Fund (the "Fund") to a third party, with a view to establish a group to oversee the climate change and emissions management fund.

While the Minister of the Environment will continue to collect payments into the fund, the amendment delegates the investment of the fund to an arm's length not-for-profit organization. The act specifies that the fund be used only "for purposes related to reducing emissions of specified gases or improving Alberta's ability to adapt to climate change" and provides a non-exhaustive list of potential purposes.

Alberta Ambient Air Quality Objectives and Guidelines

Website: <http://environment.gov.ab.ca>

Issued in June 2009 by Alberta Environment, the objectives and guidelines are developed to protect Alberta's air quality.

The guidelines can be used for:

- airshed planning and management
- general performance indicators
- assessing local concerns

Alberta - Oil and Gas Conservation Act and Regulations

Website: <http://www.ercb.ca>

The purpose of the act and regulation, relevant to the environment, is to:

- ensure the conservation of and prevent waste of oil and gas resources in Alberta
- ensure safe and efficient practices from "cradle to grave" in oil and gas production
- control pollution above and below the surface in the drilling of wells and the operations and production of oil and gas.

Energy Resources Conservation Board (ERCB) Directives 39 and 60

Website: <http://www.ercb.ca>

Directive 39 - Revised Program to Reduce Benzene Emissions from Glycol Dehydrators

Revised in July 2008 to reduce benzene emissions from glycol dehydrators

Directive 60 - Upstream Petroleum Industry, Flaring Incinerating and Venting

Revised in 2006, it became effective January 31, 2007 and supersedes the previous Guide 60 (1999). The Directive provides regulatory requirements and guidelines for flaring incinerating and venting.

Proposed Anti-idling Act (Bill 230)

Private member's Bill 230 was introduced by MLA Dave Taylor and received first reading on November 30, 2010. This legislation would limit motorists idling their vehicles for no longer than three (3) minutes within a one-hour period or they would face a \$100 fine. Exemptions in this legislation would cover Emergency Vehicles (police, fire and ambulance), public transit vehicles and any vehicle that would idle in ambient temperatures of -23 degrees Celsius. If this legislation survives in the Alberta legislature, it calls for implementation on January 1, 2012.

Best Management Practices, Guidelines and Principles

Canadian Association of Petroleum Producers (CAPP) Website for all below: <http://www.capp.ca>

Best Management Practices (BMP) for Natural Gas from Coal/Coal Bed Methane

Published in May 2006 by CAPP, these BMPs offer techniques and recommendations about the most effective and practical means to develop the natural gas from coal (NGC) resource while minimizing adverse environmental and other negative effects. Recommendations included range from well spacing, well siting, groundwater protection and noise management to emissions management.

Best Management Practices (BMPs) for Facility Flare Reduction

Published in December 2006 by CAPP, it provides a recommended approach to identifying flare sources and quantities and assessing opportunities for reduction of flare volumes and frequency. It also includes guides that can be applied to venting. Facilities it focuses on include oil and bitumen batteries, gas batteries, oil processing plants, compressor stations and gas plants.

Recommended Practices for Sour Gas Development Planning and Proliferation Assessment

Published in May 2004 by CAPP, the objectives of the practices are to minimize the extent to which the public is impacted by unnecessary proliferation of gas related facilities and to provide a broader range of information to stakeholders, the ERCB and other oil and gas companies on company plans, both current and longer term for wells and gas facilities.

Air Emissions in Canada's Oil Sands

Report produced by CAPP in September 2009 outlining the state of air quality in the oil sands region of Alberta and what oil and gas is doing to reduce the amount of greenhouse gas emissions in the area.

Guiding Principles for Oil Sands Development

Published in September 2009 by CAPP, this paper provides nine guiding principles to which the major operating companies in the oil sands region have signed their commitment. The principles fall into four categories; People, Air, Water and Land. Under Air the principles read:

- We will design and operate our facilities to ensure that regional air quality continues to exceed provincial air quality objectives
- We will continue to reduce greenhouse gas emissions per barrel of production by improving our energy efficiency and by developing new technologies

CAPP Stewardship Benchmarking Guide 2009

Published by CAPP Stewardship in June 2009, it provides the vehicle for data collection to gauge industry performance trends over time. In an effort toward continuous improvement in the oil and gas industry, it provides benchmark measures from data collected from companies on their activities related to reduction of GHG emissions, benzene emissions, nitrogen oxides, sulphur dioxide, flaring and vent, water use as well as how they are doing in areas such a reclamation, social, and health and safety . It can be used to measure success, identify new opportunities for improvement or to revise plans, policies or practices accordingly.

Best Management Practices (BMPs) – Control of Benzene Emissions from Glycol Dehydrators

Published in June 2006 by CAPP, these practices are aimed at minimizing health risks by recommending ways to further reduce benzene emissions from glycol dehydrator operations.