

## Glossary and Acronyms

AE	Alberta Energy
AENV	Alberta Environment
AESO	Alberta Electric System Operator, responsible for the safe, reliable and economic operation and planning of Alberta's interconnected power system and the facilitation of Alberta's real-time wholesale market
AIES	Alberta Interconnected Electric System, often called the grid, consisting of transmission lines and substations moving power from power generation facilities to end users
Atmospheric emissions	<p>Pollutants emitted into the atmosphere –These are onsite air releases from sources at a facility including:</p> <ul style="list-style-type: none"> <li>◆ stack/point,</li> <li>◆ storage and handling,</li> <li>◆ fugitive,</li> <li>◆ spills, etc.</li> </ul>
'Baseline and credit'	A type of emission trading system. In a "baseline and credit" system, the regulatory authority sets a level of allowable emissions for each participant (source) in the trading system. Allowable emissions in this system can be based on an absolute limit (e.g., "X" tonnes or kilograms per year) or they can be based on intensity or rate (that is, "Y" tonnes or kilograms per unit of output). The source receives credits for reductions it makes below that baseline and credits may be traded with other participants or banked. Some sources are therefore credit buyers and others are credit 'generators' (sellers) – but the total emission overall must be below the baseline.
BATEA	Best Available Technology Economically Achievable (BATEA) refers to technology that can achieve superior emissions performance and that has been demonstrated to be economically feasible through successful commercial application across a range of regions and fuel types in the U.S. and other jurisdictions. BATEA is used to establish emission control expectations or limits. Generally it is the emission limit that is specified and not the specific BATEA. Facilities can opt for other technologies or emission strategies as long as the emission limit is met. For example, for NOx control, the BATEA is considered to be selective catalytic reduction (SCR), but the NOx emissions requirement is 0.69 kg/MWh, a level considered achievable based on SCR technology.
Bill 37	New Alberta government bill to address climate change and related emission management issues
'Cap and trade'	A type of emission trading system. In a "cap and trade" system, the regulatory authority sets a cap on total emissions from the participants (or sector) in the trading system. The regulator then creates and allocates allowances to each participant, the total of which is equal to the overall cap. The allowances held by each participant must balance with their emissions at the end of each compliance period; the allocation is typically done annually, and thus the compliance period is also one year. Allowances are based on an absolute amount of emissions produced (that is, tonnes or kilograms) per year. If a participant can reduce emissions below their allocated allowances, the surplus amounts can be traded or banked.
CASA	Clean Air Strategic Alliance
CCME	Canadian Council of Ministers of the Environment, composed of the federal and provincial environment ministers

CO2	Carbon dioxide, a greenhouse gas, produced in the burning of fossil fuels
Co-benefits	When a technology to reduce a specific emission also has the benefit of reducing other emissions
Co-generation	Cogeneration is the combined production of heat for use in manufacturing processes and the production of electricity as a by-product. Electricity not used within the plant may be offered to the competitive electricity market. (AE)
Cumulative impact	The impact of emissions over time – or from a number of facilities in a given region
CWS	Canada Wide Standards – initiative by CCME to develop national standards (usually non-binding targets or guidelines) for certain substances
DM	Deputy Minister
Emissions trading	The use of allowances and credits to motivate improved performance while allowing some flexibility for facilities to achieve emission controls in the least cost manner. The experience has been that emission trading encourages greater reductions earlier. This system was highly successful in reducing lead in gasoline, SO <sub>2</sub> and NO <sub>x</sub> in the US.
EPEA	Alberta's Environmental Protection and Enhancement Act
EPT	CASA'S Electricity Project Team
EUB	(Alberta) Energy and Utilities Board
Fossil fuels	Fuels such as coal and natural gas that are derived from the earth's fossilization process
GHG	Greenhouse gas(es) -- these gases enhance the earth's natural greenhouse effect and are major contributors to global climate change
Grandfathering	Exemptions from environmental requirements granted to specified facilities
Hg	Mercury, a toxin which bioaccumulates. It is present in coal and released to the environment when burned.
Intensity	<p>An approach to reporting or managing emissions that relates the amount of emissions to some other variable e.g. unit of input, unit of output, Gross Domestic Product (GDP) of a nation, province or state. Other standards by which emissions intensity can be measured include: per barrel of oil; per million cubic feet of natural gas; per tonne of coal, cement, etc. produced; or per megawatt-hour of electricity.</p> <p>For the electricity industry, intensity is a ratio that shows the mass of pollutants produced per unit of electric power produced. In general, the cleaner power production is, the lower the intensity. Critics point out that intensity measures do not necessarily relate to the absolute, or total, mass of pollutants emitted. For example, a power plant might emit 10 tonnes of pollution every day it operates at half capacity. If the plant implements an improvement and thereafter emits only eight tonnes of pollution per day at half capacity, then that is a 20 percent improvement in emissions intensity. However, if the same plant increases production up to full capacity, it would emit 16 tonnes of pollution per day. By the intensity measure, the plant is still operating at the improved intensity -- while absolute, or total, emissions would show that emissions doubled when the power produced doubled.</p> <p>Governments, Alberta included, tend to favour intensity measures because they are less likely to restrict expansion of power production. Others express concerns as the measurement over-represents the actual reduction of pollution.</p>
MW	Megawatt (1,000,000 watts or 1000 kilowatts), unit of capacity

MWh	Megawatt-hour – unit of usage of power generation, i.e., the amount of megawatts used in one hour or generated in one hour.
NGO	Non-governmental organizations – usually non-profit organizations representing a viewpoint or a community group
NOx	Nitrogen oxides, an emission produced in the burning of fossil fuels, arising largely from the oxidation of the nitrogen present in air which is used to support fuel combustion
Offsets	Setting an emission limit that allows emitters to create equal emission reductions from other sources, e.g., capturing and using methane emissions from landfill to offset CO2 emissions, paying for the conversion of diesel buses to natural gas, propane, or biodiesel power to offset CO2 emissions. These alternatives may achieve the same environmental goal at less cost and with additional benefits. Offsets are ideally suited for substances that don't have regional impacts, e.g., GHG
PM	Particulate matter, small particles produced in the burning of fossil fuels that are emitted into the atmosphere
PPA	Power Purchase Arrangements -- contracts between power generators and electricity wholesalers initiated under the Alberta program to deregulate power supply. Current contracts expire before or by 2020.
Reduction targets	A requirement under legislation or tied to facility approval for power generators to reduce the amount of their emissions to meet a specific target – targets can be province-wide, regional or local
Renewable energy	Energy sources that do not deplete the earth's resources
SO2	Sulphur dioxide, an emission produced in the burning of coal. All coals contain some level of sulphur.
Stack emissions	The amount of emissions directly measured at the stack of the facility
Transition units	A category of generating units agreed to be exempted from enhanced pollution controls until the date specified.
US Clear Skies	A multi-pollutant initiative being considered by the United States federal government.
UV	Ultraviolet (shorter and higher energy light waves)