



The Mining Association of Canada | L'association minière du Canada

BACKGROUND:

Mining Industry Action on Climate Change

The Mining Association of Canada (MAC) and its members are committed to supporting an orderly transition toward a lower carbon future, and to being a constructive partner in the fight against climate change.

Two Decades of Engagement

In response to the Kyoto Protocol, and in support of a credible response to climate change, MAC released its first [climate change statement](#) in March 2000. In the years that followed, MAC undertook several measures to improve its membership's performance in energy and greenhouse gas (GHG) emissions management.

In 2004, MAC and its members launched the *Towards Sustainable Mining*[®] (TSM[®]) initiative, which requires facilities to report their energy use and GHG emissions management performance and to set targets. In 2009, MAC also adopted the International Council on Mining and Metals' Climate Change Policy. These industry-wide actions have been complemented by a host of individual member company actions to improve energy and fuel efficiency, reduce GHG emissions, and improve environmental performance. They also underscore the mining industry's long-held recognition that we need to be part of the solution.

In 2016, MAC and its members released [Principles for Climate Change Policy Design](#), notable for its inclusion of support for a broad-based price on carbon. The *Principles* were developed to inform the federal government as it drafted the pan-Canadian climate change framework. The document outlines elements of a successful carbon price regime: one that leads to meaningful emissions reductions while simultaneously protecting emissions-intensive and trade-exposed sectors, like the mining industry, and being sensitive to the unique circumstances faced by Canada's remote and northern regions.

Mining's Share of GHG Emissions

According to the Canadian Industrial End Use Data Analysis Centre, total GHG emissions from Canada's operating metal and non-metal mines (excluding coal and oil sands mining¹) accounted for 1.16 percent of the country's direct and indirect GHG emissions in 2015 – of which 0.82 percent were direct emissions. Non-ferrous metal

¹ MAC has sought to include coal and oil sands mining data into the above calculations to provide a more representative, mining sector-wide statistic; however, CIEEDAC does not have access to oil sands mining or coal mining energy and emissions data to augment the non-metal mining data set. The data in the chart below is in petajoules (PJ).

smelting and refining (excluding aluminum) accounted for 0.29 percent of the country’s direct and indirect GHG emissions in the same year – of which 0.15 percent were direct.

MINING INDUSTRY ENERGY AND GHG EMISSIONS DATA	1990	2015
Canadian economy		
Canadian energy use (PJ)	9,608	11,924
Energy used by broader industry (PJ)	2,400	3,656
Canadian GHG emissions (mt)	613	741
Direct GHG emissions by all industries (mt)	104.1	149.6
Metal and non-metal mining		
Total energy use (PJ)	143	150
Share of Canadian energy use (%)	1.48	1.126
Total GHG emissions (Mt CO ₂ e)	8.57	8.59
Share of Canadian GHG emissions (%)	1.4	1.16
Source: Canadian Industrial Energy End-Use Data Analysis Centre (CIEEDAC) Report, 2017.		

Despite the reductions in GHG emissions over the past 25 years, the Canadian mining industry is committed to continuous progress to further reduce emissions by managing energy consumption, and investing in energy efficient and low carbon technologies.

Additionally, approximately 75 percent of Canadian metal and non-metal mines are operating in a region where there currently is an established price on carbon, or a commitment to implement one. This is expected to lead to further reductions in emissions in the future.

TSM: An Industry-wide Approach to Continuous Improvement

MAC’s *TSM* initiative is an award-winning international performance system that helps mining companies evaluate and manage their environmental and social responsibilities. *TSM* is the only mining program in the world that requires public reporting of site-level performance against program indicators, the results of which are independently verified by a third-party. *TSM* has been growing internationally. Recently, the national mining associations of Finland, Argentina and Botswana have formally adopted *TSM*, and other countries have expressed interest.

The *TSM Energy Use and GHG Emissions Management Protocol* demonstrates industry’s commitment to energy management and GHG emissions mitigation. To achieve *TSM*’s good practice standard (Level A, which is aligned with ISO 50001 certification), each facility must show its management system includes assigned accountability from senior management, and that it has a process in place to ensure energy data are reviewed regularly and are well integrated into operator actions. Facilities are also expected to provide energy awareness training, and have systems in place to track and report energy use and GHG emissions data for both internal and external reporting. Finally, in *TSM*’s spirit of continuous improvement, this protocol seeks to confirm that facilities establish and meet targets for their energy use and GHG emissions performance.

Recent revisions to MAC's *Guide to the Management of Tailings Facilities* and *TSM Tailings Management Protocol* have added climate change-related aspects. For example, the Guide directs new facilities to consider impacts of climate change, including extreme precipitation events and potential impacts on permafrost in northern areas during the risk assessment process.

TSM also includes leading practices in community engagement. To achieve Level AAA, companies must demonstrate their support for community projects in this area. One example is Suncor's investments in organizations that work to promote energy literacy and advance thinking around a low carbon energy future. Suncor has partnered with QUEST, a collaborative network of stakeholders who are working to make Canada a leader in the design, development and implementation of Integrated Community Energy Solutions. Another example is De Beers' Victor Mine, which linked power to the Attawapiskat First Nation, enabling them to be grid connected and, thus, displacing diesel. More climate change-related initiatives are included in the *Climate Change Initiatives and Innovations in the Mining Industry* backgrounder.