

Mining Association of Canada
Towards Sustainable Mining

**26th Meeting of the
Community of Interest Advisory Panel
POST-VERIFICATION REVIEW REPORT**

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Towards Sustainable Mining
Vers le développement minier durable



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1 Introduction

The purpose of this report is to present the summary of discussions of the MAC Community of Interest Advisory Panel (COI Panel) post-verification review (PVR) for Hudbay Minerals and Suncor Energy. Meeting presentations and briefing materials were provided to the COI Panel and are not duplicated in the body of this report.

For more information on the October 2016 Panel Meeting, please see the *October 2016 COI Panel Meeting Report* under separate cover.

This report is organized by the following sections:

- **Section 2:** Overview of Towards Sustainable Mining (TSM)
- **Section 3:** Overview of the TSM verification system and COI Panel post-verification review
- **Section 4:** Results and discussion of the 2016 post-verification review: Hudbay Minerals
- **Section 5:** Results and discussion of the 2016 post-verification review: Suncor Energy
- **Section 6:** Key reflections from the 2016 post-verification review
- **Section 7:** Panel feedback on the post-verification review process

2 About the Towards Sustainable Mining (TSM) Initiative

Established in 2004, Towards Sustainable Mining (TSM) is the Canadian mining industry's commitment to responsible mining. It is a set of tools and indicators to drive performance and ensure that key mining risks are managed responsibly at participating mining and metallurgical facilities. By adhering to the principles of TSM, mining companies demonstrate leadership by:

- Engaging with communities
- Implementing world-leading environmental practices
- Committing to the safety and health of employees and surrounding communities

Participation in TSM is a condition of membership in MAC. It requires that members subscribe to a set of guiding principles that are supported by specific performance indicators against which member companies must report their results. All MAC members must report against indicators in the following performance measurement protocols:

- Aboriginal and Community Outreach
- Energy and GHG Emissions Management
- Tailings Management
- Biodiversity Conservation Management
- Safety and Health
- Crisis Management

For more information on TSM, including company scores, governance, and oversight by the Community of Interest Advisory Panel, visit <http://mining.ca/towards-sustainable-mining>

2.1 TSM External Verification System

TSM includes a number of elements to ensure that reported results present an accurate picture of each facility's management systems and performance. Figure 1 identifies the different layers of assurance embedded in TSM.

This report is focused on the final layer: the COI Panel Review. Each year, the COI Panel chooses two or three companies who have undergone an external self-assessment for the PVR at the October COI Panel meeting.

More information on the TSM external verification system, including the [terms of reference](#) for verification service providers, can be found on MAC's website.

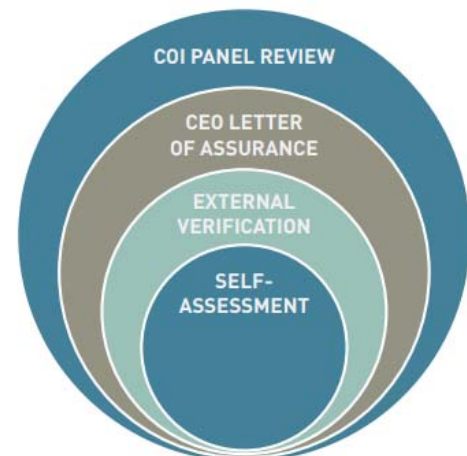


Figure 1: TSM assurance levels

3 COI Panel Post-Verification Review Process

The purpose of the post-verification review is to have the COI Panel lend public credibility to the TSM results by:

- ✓ Engaging in dialogue with the companies undertaking the PVR to identify best practices and challenges on environmental and social issues faced by mining companies and communities;
- ✓ Driving continued performance improvements by identifying both opportunities and impediments to reaching the highest level of TSM performance;
- ✓ Determining whether the member companies are finding the verification process useful;
- ✓ Bringing cohesiveness in the application of the self-assessment and verification processes; and
- ✓ Improving TSM (including the verification process).

The Panel agreed that the PVR process is **not intended to be a “verification of the verification”** undertaken by the verification service providers for each company. Rather it should focus on building a strong dialogue with the companies selected to undergo the PVR process to gain a better understanding of the successes and challenges regarding the key environmental and social issues in mining; to challenge the companies on their performance; and determine whether verification is working as the Panel expected. The PVR process should also allow the Panel to gain understanding in how the TSM indicators translate into real action and build confidence in the verification process.

The scope of the PVR process includes the verification process (design, etc.), the verified results, and lessons learned and changes needed to improve performance identified by the company. The specific protocols of focus for each year's post-verification review are decided by the Panel. A subset of the protocols may be chosen by the Panel for deeper examination in the hope of exploring how companies are taking action to meet the protocol criteria.

The Panel selected Hudbay Minerals Inc. and Suncor Energy Inc. from the list of companies verifying their 2015 TSM results to undergo post-verification review in 2016.

As part of the process, companies undergoing the PVR are asked to prepare a Company Background Document and webinar presentations to help the Panel understand the company, its verified TSM results, and any relevant background information prior to the Fall COI Panel Meeting. Figure 2 outlines the PVR process.

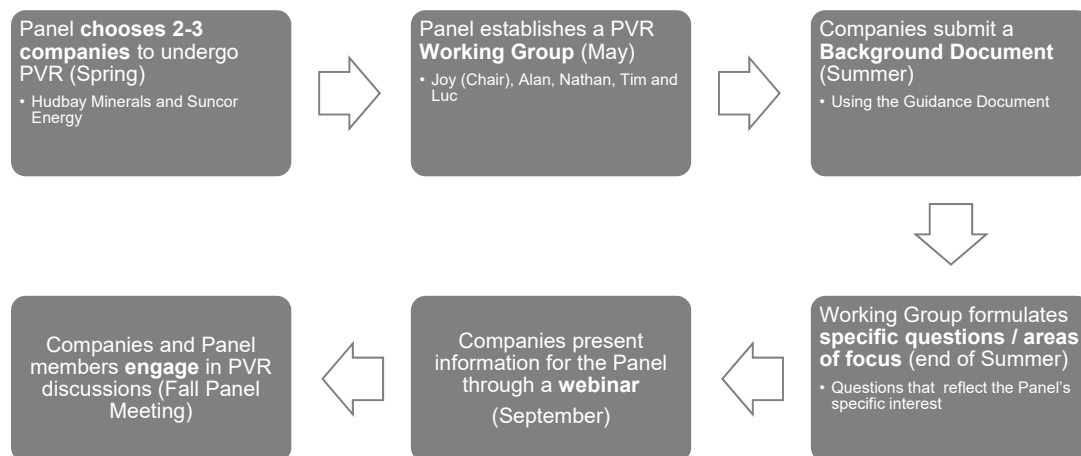


Figure 2: PVR Process 2016

The PVR Working Group reviews the company background documents and decides on the focus areas and approach for engaging with the companies. This year, the PVR Working Group was composed of the following Panel members: Joy Kennedy (Chair), Nathan Lemphers, Alan Penn, Tim Johnston, and Luc Zandvliet.

The PVR Working Group decided on the following themes for the webinar and face-to-face discussions with Hudbay Minerals and Suncor Energy. The companies answered specific questions during the webinar and provided additional information on the focus areas to prepare the Panel for the face-to-face meetings.



Topics of Interest:

- **Aboriginal and Community Engagement** (including: engagement considerations through the mining lifecycle; engagement with Manitoba Aboriginal communities; effectiveness of community engagement)
- **Environment** (including: tailings management, GHG and energy use reduction challenges)
- **Management Culture** (including: Flin Flon culture, management systems)
- **Application of TSM to international operations** (including: update on human rights issue in Guatemala)



Topics of Interest:

- **Aboriginal and Community Engagement** (including: evolution of approach, successes and challenges)
- **Environment** (including: climate change; energy & GHG protocol improvements; biodiversity)
- **Management Culture** (including: integrated approach to protocols; future growth)

This report summarizes the information provided by the companies in their post-verification reviews and summarizes the Panel discussion on the presented information.

4 Results of the Post-Verification Review: Hudbay Minerals

About Hudbay Minerals:



Hudbay Minerals operates in Manitoba, Canada (777, Lalor and Reed mines) and Peru (Constancia mine), and also has a mine in development in Arizona, USA (Rosemont mine).

Hudbay's Canadian mining operations are currently based near Flin Flon and Snow Lake, Manitoba:

- The **777 mine** produces zinc, copper, gold and silver. Commercial production began in 2004, and the mine is expected to continue until 2020.
- The **Lalor mine** produces zinc, copper, gold and silver and is located in the Chisel Basin of the Flin Flon Greenstone Belt (FFGB). Initial production began in August 2012 and the mine reached commercial production in the third quarter of 2014.
- The **Reed mine** is a high-grade copper deposit, also located in the FFGB, which commenced initial production in September 2013. The project achieved commercial production ahead of guidance and completed construction under budget in the first quarter of 2014.
- Our **processing facilities** in Flin Flon include the Flin Flon concentrator and a state-of-the-art zinc plant.
- In Snow Lake, our **concentrator** processes ore from the nearby Lalor mine. The refurbished Snow Lake concentrator was commissioned in the third quarter of 2014 and now has the capacity to treat 2,700 tonnes per day.

David Clarry, Vice President of CSR; and Shirley Neault, Manager of Environment and Systems, presented on behalf of Hudbay Minerals.

Additional information on Hudbay Minerals and its performance can be found in its PVR Background Document, PVR webinar slides and on its website:

<http://www.hudbayminerals.com/>

4.1 Aboriginal and Community Engagement

The post-verification review discussion with Hudbay began with the topic of Aboriginal and community engagement. In particular, the COI Panel was interested in discussing the quality of Hudbay's relationships with communities (including Métis), their response to challenged relationship (i.e. Mathias Colomb Cree Nation), the management or organizational culture at Hudbay as it relates to engagement, and the implications of UNDRIP.

Hudbay began by outlining Aboriginal and community engagement activities in Manitoba, which includes their participation in the Manitoba Mining Minister's Roundtable and the Northern Sector

Council in Manitoba. During Hudbay's updates, a COI Panel member noted that there is a history of disengagement and lack of recognition for Métis rights in Manitoba, partially due to ongoing court cases.

Key themes from the subsequent discussion with the COI Panel are summarized below.

- **Impact Benefit Agreements (IBAs)**
 - Hudbay does not have written agreements with any communities, as operations began in 1920, before this was the norm.
 - Previously IBAs were not viewed as helpful for mining operations with a long history/legacy, but this perspective has changed (now seeing older mining areas with IBAs) e.g. Vale has negotiated IBAs in Sudbury and has seen success in Voisey's Bay with renewed IBAs (80%+ contracts with Aboriginal businesses).
 - Modern IBAs are beyond economic benefits i.e. jobs; looking to work with Aboriginal communities and bring them to a level playing field.
- **Reconciliation (e.g. UNDRIP)**
 - Action 92 from the Truth and Reconciliation Commission's (TRC) Report recommends that companies adopt UNDRIP as a reconciliation framework and apply its principles, norms and standards to corporate policy.
 - One Panel member noted that education for management and staff on Aboriginal history is important:
 - Hudbay is providing this through actions such as presentations on inter-generational impacts of residential schools for employees and communities, sweat lodge ceremonies and cultural awareness training.
 - MAC's Aboriginal Affairs Committee plans to collect best practices surrounding the TRC's calls to action in 2017.
 - Canadian Council for Aboriginal Business (CCAB) recently promoted [strategies for economic reconciliation](#).
 - Some COI Panel members suggested that MAC consider endorsing/committing to Action 92.
- **Economic benefits**
 - Hudbay is moving towards a culture of targets e.g. developing 5-year workforce plan.
 - Hudbay has to balance Aboriginal workforce with non-Aboriginal local workforce, where communities were created because of mining operations (e.g. Flin Flon, Snow Lake).
 - There was some debate on whether Hudbay should work towards an Aboriginal workforce representative of the local population area or strive for a higher target.
 - Hudbay believes they could make better use of CCAB by connecting them to Aboriginal businesses to support capacity building.
- **Commodity cycles**
 - Hudbay has not discussed commodity cycles with communities, although financial-related questions have come up in Mining 101 presentations to communities.
 - A COI Panel member suggested that Hudbay engage with communities to understand both their skills and interests.
- **Challenged relationship, i.e. relationship with Mathias Colomb Cree Nation**
 - The Mathias Colomb Cree Nation initiated a roadblock at Lalor in 2013.
 - Hudbay has engaged with the community Chief using intermediaries and has continued to send information to the community via the Chief, while respecting the Chief's wishes that they not enter or engage with the community.

- It is not clear to Hudbay what the Chief's concerns are (beyond Chief's claim that he is being sued, which is incorrect).
- Several COI Panel members advised continuing to attempt to engage with the Chief and community; relationships may change at any time due to context that the company may not be privy to or aware of.

A Panel member also made a general recommendation for participants to read the book Shaun Loney's "An Army of Problem Solvers", which postulates that a supportive ecosystem needs to be developed for community-based social enterprises (e.g. co-ops), social entrepreneurs (e.g. Elon Musk) and small farmers, who are best equipped to contribute to solutions-based economies (e.g. for biodiversity, health, etc.) in rural areas.

4.2 Social Closure

During the discussion on Aboriginal and community engagement, the COI Panel asked questions related to social closure. The COI Panel had identified interest in this subject earlier. Hudbay began by outlining their operational context as it relates to social closure.

Hudbay's 777 mine near Flin Flon will close and decommission in 5 years. The mill and tailings area will continue to be maintained under a care and maintenance program, which will use part of the existing workforce. Hudbay plans to use a project management approach (i.e. treat closure like any other project) and focus on supporting the transition of the existing workforce. Support includes working with rePlan (a consulting firm that supported economic diversification efforts in Thompson, Manitoba) to facilitate planning in the Flin Flon region. Overall, northern Manitoba is considered a strong prospective region for mining development in the future.

Key themes from the subsequent discussion with the COI Panel are summarized below.

- **What does success post-closure would look like?**
 - Hudbay is learning from the Vale Thompson process (Thompson Economic Diversification Working Group).
- **What can we learn about evolving relationships between Aboriginal and non-Aboriginal communities during closure discussions?**
 - This is challenging because non-Aboriginal communities feel threatened by IBAs and perceive it as "quota hiring".
 - Sometimes Aboriginal communities try to take over economic operations to prevent them from closing (e.g. Churchill railway).

4.3 Environment

The COI Panel was interested in discussing Hudbay's approach to tailings management, their GHG and energy use reduction challenges, and approaches to setting GHG emission targets.

Hudbay identified that key sources of emissions from their Manitoba operations are underground mine ventilation and heating, diesel equipment and transportation (excluding Scope 3 emissions). Electricity emissions are considered negligible due to Manitoba's heavy reliance on hydro power. Hudbay's operations in Peru, meanwhile, rely on diesel-generated power and Hudbay's total emissions have increased significantly as a result.

Key themes from the subsequent discussion with the COI Panel are summarized below.

- **Using the 1.5 or 2 degrees stress test**
 - It was suggested that there are models that companies can apply to understand what their fair share of GHG emissions are to keep within 1.5 or 2 degrees of global warming (e.g. [2 Degrees Investing Initiative](#)).
- **Engaging with utility companies**
 - In some cases mining power demands may increase power bills for community members.
 - One suggestion was for Hudbay to engage with the power company on socio-economic impacts.
- **Local power generation**
 - Mining companies could work with local businesses to develop renewable power options, which could also be sustainable post-closure.
 - Mining companies could also consider offsetting existing emissions by building renewable power options themselves.
 - For example, Avalon Rare Minerals is providing financial resources to help set up an Aboriginal development corporation, power generation company and mine site greenhouse.
- **Linkages between TSM and other GHG/energy use reporting standards**
 - TSM requires disclosure, while CDP is evidence of disclosure.
 - Cap and trade also recognizes those that invest in energy use reduction.
- **Tailings**
 - Hudbay was advised to learn from past attempts at revegetating in a Canadian Shield environment as part of mine closure.

MAC noted that it recognizes the importance of promoting clean technology and sees a major opportunity for the industry to be electrification of haul truck fleets. Leveraging this opportunity as an industry allows MAC members to collectively pressure suppliers to offer more clean technology options.

4.4 International Operations & Other Topics

The COI Panel was interested in discussing Hudbay's international operations, in particular whether/how they are applying TSM to Constancia mine in Peru and Rosemont mine in Arizona, as well as receiving an update on the human rights issues that have been raised related to Hudbay's previous asset in Guatemala.

Hudbay's position on the Guatemala human rights issue is that it acknowledges that violence occurred, including evictions, while also supporting the accused's right to a fair trial in Guatemala.

The COI Panel also intended to discuss management culture (changes over time at Flin Flon, corporate values and implementation), but did not have the time to do so. Additional questions that were raised unrelated to the above topics are summarized below.

One COI Panel member asked why Hudbay was incorporated in British Virgin Islands: Hudbay's PVR submission indicated that it was incorporated for the sole purpose of entering into and fulfilling their obligations under the precious metals stream agreement for the Constancia mine.

One COI Panel member appreciated the materiality and stakeholder descriptions provided in Hudbay's sustainability report, which is especially valuable for the investment community.

4.5 Hudbay's TSM assessment results

See the 2016 TSM Progress Report for Hudbay's full TSM scores.

<http://mining.ca/sites/default/files/documents/Hudbay-Minerals-TSM-Results-2016.pdf>

5 Results of the Post-Verification Review: Suncor Energy

About Suncor Energy:



Suncor Energy is a publically traded integrated energy company headquartered in Calgary, Alberta. In 1967, Suncor pioneered commercial development of Canada's oil sands, one of the largest petroleum resource basins in the world. Since then, Suncor has grown to become a globally competitive integrated energy company with a balanced portfolio of high-quality assets, a strong balance sheet and significant growth prospects. Across its operations, Suncor intends to achieve production of one million barrels of oil equivalent per day.

Suncor's mining operations are located in the Lower Athabasca region near Fort McMurray, Alta, where they extract and upgrade oil sands into high-quality, refinery-ready crude oil products and diesel fuel.

Anne Marie Toutant, Vice President of Fort Hills Operations, Upstream; Fiona Jones, General Manager of Sustainability; and Rebecca Sullivan, General Manager of Stakeholder and Aboriginal Relations, presented on behalf of Suncor Energy.

5.1 Aboriginal and Community Engagement

The post-verification review discussion with Suncor began with the topic of Aboriginal and community engagement. In particular, the COI Panel was interested in discussing:

- the evolution of Suncor's approach to Aboriginal and community engagement;
- successes and challenges related to the effectiveness of community engagement;
- sustainability goals and their impact on the community;
- community benefits;
- impacts of a shift to a low-carbon economy on the community (i.e. just transition for workers); and
- implications and implementation of UNDRIP and FPIC1.

¹ Discussion on implications and implementation of UNDRIP are summarized in section 5.2

Suncor began by sharing a cultural moment, which is a practice they use at Suncor to share information, a story or a practice that improves understanding and knowledge of Aboriginal peoples. Rebecca Sullivan shared information on Treaty 7 in Alberta.

Suncor then provided an overview of their Aboriginal and community engagement approach and activities.

Suncor has new consultation framework agreements with Nations in Wood Buffalo where they agree to work together on long-term rolling plans for business; skills, education & training; and consultation and environment. Suncor also has MOUs with three Métis communities in this region. Suncor has also recently completed the sale of 34.3% equity interest (representing \$350 million) in Suncor's East Tank Farm Development to Fort McKay First Nation, demonstrating the evolution of Suncor's relationship with Fort McKay First Nation into a significant partnership.

Suncor made the following additional comments on their approach to Aboriginal and community engagement:

- Suncor's approach to engagement is changing from a project-by-project-based approach to a community-based or regional approach.
- The Stakeholder and Aboriginal Relations team is integrating their goals and approach with other departments' goals and approaches, including operations.
- Suncor's Aboriginal Relations team is intentional about trying to avoid power imbalances by not bringing too many people to a community, having the right perspectives and supporting community capacity.
- Suncor will work with communities before submitting their report outlining payments made to governments as required by the *Extractive Sector Transparency Measures Act*.
- Suncor Foundation also acts as a catalyst for community capacity building.

Key themes from the subsequent discussion with the COI Panel are summarized below.

- **Measuring Suncor social goals** "We will have mutual respect with First Nation communities"
 - Suncor noted this goal was established in consultation with many stakeholders (Aboriginal communities, elders, universities, think tanks, CCAB, etc.)
 - Suncor is measuring this goal through the following actions and metrics:
 - Increase staff awareness and understanding e.g. cultural moments/experiences, training.
 - Aboriginal recruitment, hiring targets, advancement and retention.
 - Increasing the number of marketing arrangements e.g. gas stations on reserves.
 - Procurement of goods and services from Aboriginal businesses and contractors.
 - Survey employees on their awareness and understanding of Aboriginal peoples and compare results to national surveys.
 - Survey communities to understand their perception of our performance.
 - Capture stories e.g. reconciliation dialogue with senior leaders.
- **Suncor's role in CAPP and MAC**
 - Suncor is supportive of aligning CAPP and MAC interests e.g. invited CAPP to participate in ESTMA consultation.
- **Recording lessons learned / key factors to success**
 - Suncor has completed a timeline of external and internal influences to learn from past success and failures, while recognizing that each community context can be different.

- **Lessons from Fort McMurray fire**
 - Suncor coordinated with other companies, e.g. one company responsible for one community to avoid duplication of effort.
 - Fort McMurray has a strong health and safety culture i.e. the community is accustomed to drills and response which enabled a safe evacuation of the region.
 - Fort McMurray has strong trust relationships built within the community and with industry (e.g. worked around bureaucratic challenges that got in the way).
- **Equitable engagement of communities**
 - Suncor has a rigorous stakeholder prioritization methodology based on clearly defined criteria.
- **Planning for closure**
 - Suncor is proactively identifying businesses that can grow/evolve in ways that diversifies the economy in the long-term (e.g. can be used in reclamation or other industries).
 - Suncor is starting to identify skill sets that need to be developed so that younger students could have the opportunity to work in the reclamation business (e.g. biology, water monitoring).
- **Downturn of oil price**
 - There are frequent booms and busts in the oil industry.
 - Consulting companies were first to be let go by Suncor.
 - More people let go from headquarters in Calgary.
 - Less people let go from Wood Buffalo.

The COI Panel concluded that one of the most significant challenges for the oil sands in Aboriginal and community engagement is achieving and/or maintaining social license, particularly in the context of a shift towards a lower carbon economy.

5.2 UNDRIP

Suncor asked the COI Panel on their recommendations to MAC on how member companies could best implement UNDRIP. Although the COI Panel has not had formal conversations on how to adopt and implement UNDRIP, MAC noted that their Aboriginal Affairs committee is beginning to examine this topic and has invited the COI Panel to contribute. Members of the COI Panel made the following comments:

- There are intersections and synergies between TSM and UNDRIP.
- Industry's approach to reconciliation cannot only address the TRC's Call to Action 92 or UNDRIP's free prior and informed consent (FPIC); an understanding of how the industry's role integrates with society and government roles is also needed i.e. broader understanding of UNDRIP and TRC calls to action.
- Aboriginal communities' perspectives on reconciliation and their associated goals are going to change over time (e.g. may start with water access, then language preservation, then creating job opportunities, etc.); reconciliation will require an ongoing conversation.

One COI Panel member noted that the City of Thompson has passed a declaration supporting UNDRIP and circulated a pamphlet summarizing the City of Thompson's position.

5.3 Environment

The COI Panel was interested in discussing the impact of climate change on Suncor's sustainability approach and operations (e.g. intensity vs. absolute emissions, renewable energy production), considering pro-active leadership criteria or other improvements to the energy and GHG protocol, and biodiversity.

Key questions and themes from the discussion with the COI Panel are summarized below.

- **Carbon Pricing:** *How is Suncor positioning itself for a lower carbon economy?*
 - Suncor tests the robustness of their strategy against multiple scenarios: volatile oil prices, increasing oil prices, low oil prices
 - Shadow carbon prices (higher than current Alberta price) are included in scenarios
 - One Panel member advised that seeking exemptions or competitiveness adjustments to carbon prices will reduce goodwill built with NGOs by supporting carbon pricing
 - However, Suncor noted that all global carbon pricing regimes make a provision or accommodation for their trade exposed industries. A competitiveness adjustment may take various forms, depending on the type of regulation. The oil and gas industry is critical to Canadian prosperity and to finance the energy transition
- **Transition to Alternative Energy Generation:** *How is Suncor positioning itself for a lower carbon economy?*
 - Stakeholders have advocated for oil and gas companies to transition towards becoming energy companies, more broadly.
 - Suncor has been actively discussing this as part of their strategy.
 - Suncor has found it challenging to engage communities on the future of the oil and gas industry.
 - Diversification into low carbon forms of energy reduces potential carbon prices risk, but may introduce other business, market or operational risk that is not justifiable to shareholders at expected investment returns.
 - Suncor is piloting EV charging at 6 gas stations. To date, consumer uptake is minimal and the business model of reselling electricity is not clear.
 - Leadership for a lower carbon future needs to come from all stakeholders.
 - One COI Panel member commented they have not seen leadership from the oil sands industry, i.e. there is continued investment in oil and gas rather than diversification.
- **Conservation directive** *from the Alberta government is a "lose-lose" scenario:*
 - A provincial Conservation Directive requires that companies must mine to a certain depth and must produce a minimum amount of the resource. This requires that less optimal areas of the reservoir be produced and that production cannot be halted as the reservoir starts to deplete. This adds incremental energy consumption and GHG emissions for marginal production benefit.
 - This directive was put in place during a time of oil resource scarcity to prevent wasting valuable resources. However, this Directive is in conflict with GHG emission reduction aspirations and Suncor has advocated to amend the Directive.
- **Measuring GHG emissions:** *Why did Suncor choose to set stretch targets that are intensity based rather than absolute?*
 - Absolute emissions reflect overall production increases or decreases. While global demand for oil is increasing, Suncor's strategy is to grow production to meet that demand.

- Emission intensity reduction more accurately reflects efforts to reduce GHGs.
- Life cycle emission estimates also vary from company to company.
- **Industry collaboration: How is Suncor working with peers to reduce emissions?**
 - Canadian Oil Sands Innovation Alliance (COSIA) is used to pool resources to address issues of the commons (e.g. environmental and social issues).
 - COSIA allows companies to share intellectual property and accelerate technology innovation and implementation.

5.4 Suncor Energy TSM assessment results

See the 2016 TSM Progress Report for Suncor Energy's full TSM scores.

<http://mining.ca/sites/default/files/documents/Suncor-TSM-Results-2016.pdf>

6 Key Takeaways of 2016 Post-Verification Review

A number of themes emerged during both post-verification reviews. Key takeaways include:

Aboriginal and community engagement

- **IBAs in the context of historical operations**
 - Previously IBAs were not viewed as helpful for mining operations with a long history, but this perspective has changed i.e. now seeing older mining areas with IBAs.
- **Continued engagement, even in “challenged” relationship**
 - Many COI Panel members advised continuing to attempt to engage where there may be “challenged relationship”; relationships may change at any time due to context that industry may not be privy to or aware of.

Reconciliation

- **Adopting Action 92 of the TRC**
 - TRC's Action 92 recommends that companies adopt UNDRIP as a reconciliation framework and apply its principles, norms and standards to corporate policy.
 - COI Panel noted that education for staff on Aboriginal history is important.
 - COI Panel suggested that MAC consider endorsing/committing to Action 92.
- **Reconciliation will be a continuously evolving process**
 - Aboriginal perspectives on reconciliation and their associated goals are going to change over time; reconciliation will require an ongoing conversation.
 - Industry's approach to reconciliation cannot only address the TRC's Action 92 or UNDRIP's FPIC; an understanding of how the industry's role integrates with society and government roles is also needed.

Social Closure

- **Understand communities' skills and interests**
 - COI Panel suggested engaging with communities to understand their skills and interests.

Energy and Climate Change

- **Using a 1.5 or 2 degree “stress test”**
 - There are models that companies can apply to understand what their fair share of GHG emissions are to keep within 1.5 or 2 degrees of global warming (e.g. [2 Degrees Investing Initiative](#)).
- **Consider utility company's socio-economic impacts**
 - Mining power demand may increase power bills for community members.

- One suggestion was to engage with power companies and communities on socio-economic impacts.
- **Supporting local power generation**
 - Mining companies could work with local businesses to develop renewable power options, which could also be sustainable post-closure.
 - Mining companies could also consider offsetting existing emissions by building renewable power options themselves.

Tailings

- **Consider existing guidance**
 - Consider learning from past attempts at revegetating in a Canadian shield environment for mine closure.

7 Panel Feedback on the Post-Verification Review Process

COI Panel members considered the PVR sessions successful, and indicated that this was made possible by the considerable preparation done in advance by both the Panel (most notably, the PVR working group) and Hudbay and Suncor. Both companies were commended on the openness in which they engaged with the Panel.

Several Panel members asked whether it would be helpful for companies to identify priority areas they would want to discuss with the Panel. It was acknowledged that companies may not be willing to discuss their most challenging topics where there isn't a pre-established relationship of trust. MAC also noted that the Panel plays an important challenge function as part of the PVR.

The Panel reflected on what number of PVRs should be conducted on an annual basis. They considered conducting one PVR in the spring and one in the fall, as well as 2 PVRs over 1 day (where it's helpful for companies to listen to each other's sessions) versus 2 PVRs over 2 days. Overall, it was agreed that conducting 2 PVRs each year was beneficial, to allow the Panel to compare and contrast the member submissions on how they implement TSM.

The Panel also suggested that it would be helpful to share the PVR results with other member companies to allow for collective learning.

Annex 1: List of Companies That Verified Their TSM Results

Past companies:

2007: Albion & HudBay
2008: Barrick & Xstrata Nickel and Xstrata Zinc
2009: BHP Diamonds - EKATI & IAMGOLD
2010: Breakwater & Teck
2011: De Beers & IOC
2012: Cameco & Inmet
2013: Teck & Vale
2014: ArcelorMittal & Barrick
2015: Taseko and Agnico Eagle

2016 Company Selection for PVR:

The following companies were verifying their 2015 TSM results and were therefore in the pool to be selected to undergo the COI Panel's post-verification review. As a rule, the Panel seeks to select companies that have not been subject to a recent post verification review and takes into account commodity type, and location.

1. Hudbay Minerals
2. New Gold Inc.
3. Shell Canada Energy Inc.
4. Suncor Energy Inc.
5. Teck Resources Limited (Highland Valley Copper, Elkview Operations and Fording River Operations)
6. Vale