



The Secretary
Ontario Securities Commission

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Sent via email to - comment@osc.gov.on.ca, consultation-en-cours@lautorite.qc.ca

Re: Climate-related Disclosure Update and CSA Notice and Request for Comment Proposed National Instrument 51-107 Disclosure of Climate-related Matters

As the voice of Canada's mineral exploration and development community, representing more than 4,400 corporate and individual members, the Prospectors & Developers Association of Canada (PDAC) has an active interest in regulatory and policy initiatives that shape the industry's landscape. The mineral industry represents the largest cohort of public issuers in Canada, accounting for nearly 60% of the companies listed on the TSXV, most of which are pre-revenue exploration companies.

The responses in our attached submission reflect diverse perspectives from issuers, investors and other professionals who make up PDAC committees. We recognize the growing importance of climate-related disclosures and see the Proposed Instruments as an opportunity to provide consistency for Canadian issuers in communicating with public markets. However, it is paramount that implementation of any new climate-related Instrument leads to increased recognition of Canadian issuers by prominent ESG rating agencies. Otherwise, the Proposed Instrument may simply represent added burdens with few issuer or investor benefits.

We have also identified suitability and cost of compliance issues with the Proposed Instrument for early-stage mineral exploration companies that are likely reflective of small businesses in other industries. Mineral exploration companies typically do not reach the 10,000 tonne/year CO₂e¹ legal threshold for reporting emissions. Strategies are based on the success of a given exploration program scoped in the short-to-medium term. As such, long-term activities are often out of scope, not contemplated or remain unclear. The Proposed Instrument, therefore, seems more applicable to large emitters and not directly relevant for mineral exploration companies or other small businesses, as it will be overly complicated and costly to implement.

We recommend CSA develop a disclosure scheme designated for venture issuers and small emitters to address this issue. PDAC recognizes the need for mineral exploration companies to have a simple scheme to disclose emissions, and has developed an Excel-based emission calculator to provide this basis for our members. We think that this calculator could be adapted for use in the Proposed Instrument, aimed at small emitters, and PDAC is open to collaboration with CSA members on the development of such framework². We also recommend that the alternative scheme will relax other disclosure obligations that may not be relevant for exploration companies (e.g. a long-term climate strategy).

We also highlight that the consultation and implementation period associated with the Proposed Instrument may become protracted, particularly if a simplified framework for small emitters is contemplated. With this in

¹ According to the Canadian Law, exceeding this threshold triggers various legal requirements for disclosure of GHG emissions.

² See relevant response to Q6 for more details on this recommendation, and Appendix B for a brief description of the PDAC GHG emission Calculator



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mind, we anticipate additional time will be required for CSA to provide such additional resources and for companies to put the proper infrastructure in place to capture the necessary data, prior to implementing the Proposed Instrument. As such, the targeted dates proposed by CSA may need to change in our opinion.

We support disclosure of Scope 1 emissions remaining voluntary and agree with CSA that scenario analysis, disclosure auditing and inclusion of these disclosures in long-form prospectuses is not necessary. Lastly, we would like to emphasize the importance of proactive guidance, with particular focus on venture issuers, when the Proposed Instrument is finalized.

We welcome continued engagement with CSA as this consultation progresses. Please contact Jeff Killeen, PDAC's Director, Policy & Programs (jkilleen@pdac.ca) if there are questions or clarifications required for the content in this letter.

Sincerely,

Lisa McDonald

Executive Director

Prospectors & Developers Association of Canada



APPENDIX A: DETAILED RESPONSE TO THE QUESTIONS

Experience with TCFD recommendations

1. For reporting issuers that have provided climate-related disclosures voluntarily in accordance with the TCFD recommendations, what has been the experience generally in providing those disclosures?

PDAC response: Mineral exploration companies have expressed difficulties in providing climate related disclosure in accordance with TCFD recommendations for various reasons. Key concerns centre on longer-term considerations and development of climate risk strategies.

Developing such strategy requires a company to estimate project activities over the long-term (+10 years). Mineral exploration companies are often constrained to short term planning (<18 months), with future endeavours defined by results of current exploration programs. Outlining a climate strategy for a company that has limited foresight of its next steps or eventual scope of activities calls into question the accuracy and validity of such strategies. Therefore, reporting such strategy may mislead investors.

In addition, comprehensive climate-related metrics and targets for junior exploration projects would not be generally deemed material until advanced scoping stages are reached, such as at a feasibility study stage.

Disclosure of GHG Emissions and Scenario Analysis

2. For reporting issuers, do you currently disclose GHG emissions on a voluntary basis? If so, are the GHG emissions calculated in accordance with the GHG Protocol?

PDAC response: To the best of our knowledge, only a limited number of mineral exploration companies' disclosure GHG emissions, and the companies that do provide this disclosure use a simpler scheme that focuses on the relevant emissions for a typical exploration program. This is in contrast to the GHG Protocol, which is unnecessarily comprehensive for exploration companies as they are predominantly small emitters (CO₂eq emission below 10,000 tonne/year). PDAC recognized the need for a more simplified reporting framework and has developed a test-level tool for exploration companies to identify and account for their emissions. More details on this calculator could be found in Appendix B.

3. For reporting issuers, do you currently conduct climate scenario analysis (regardless of whether the analysis is disclosed)? If so, what are the benefits and challenges with preparing and/or disclosing the analysis?

PDAC response: As noted above, scenario analysis is often unnecessary for mineral exploration companies prior to feasibility studies, and most would have no relevant internal expertise to perform such analysis. Any scenario analysis that cannot be performed by an internal Professional Geologist or Engineer (P. Geo or P. Eng) and requires a third party can be highly expensive and inaccurate until a mineral deposit is well defined and detailed engineering has been done to assess the scope of future operations. We note that PDAC feedback reflects members of various background, including professional investors that noted how climate-related risk analysis of junior mineral companies is typically a part of internal due diligence processes.

4. Under the Proposed Instrument, scenario analysis would not be required. Is this approach appropriate? Should the Proposed Instrument require this disclosure? Should issuers have the option to not provide this disclosure and explain why they have not done so?



PDAC response: Ensuring scenario analysis is not required in the Proposed Instrument is appropriate in our view, primarily based on the reasons outlined in our response to Question 3 above. If the Proposed Instrument were to require a scenario analysis, issuers should have the option not to disclose, provided there is an explanation as to why they have not disclosed this information.

5. The TCFD recommendations contemplate disclosure of GHG emissions, where such information is material.
- The Proposed Instrument contemplates issuers having the option to disclose GHG emissions or explain why they have not done so. Is this approach appropriate?

PDAC response: Yes. This approach is appropriate in our view as it allows companies that do not produce significant emissions, because of their either relatively small size or nature of business, to focus resources appropriately.

- As an alternative, the CSA is consulting on requiring issuers to disclose Scope 1 GHG emissions. Is this approach appropriate? Should disclosure of Scope 1 GHG emissions only be required where such information is material?

PDAC response: Scope 1 emissions should only be required where such information is determined to be material at the corporate level. In the mineral sector, such disclosure would not typically be readily available until advanced scoping work such as a feasibility study is complete and a project enters a construction phase (i.e. building a new mine). Therefore, no requirement for mandatory disclosure of Scope 1 GHG emissions should exist for small emitters and venture-listed issuers, as it is too stringent in our view.

- Should disclosure of Scope 2 GHG emissions and Scope 3 GHG emissions be mandatory?

PDAC response: No. Scope 2 and 3 GHG emissions should not be mandatory, especially for venture-listed issuers whose Scope 2 and 3 emissions are often immaterial or would be captured through disclosure of other public issuers such as property management companies.

- For those issuers who are already required to report GHG emissions under existing federal or provincial legislation, would the requirement in the Proposed Instrument to include GHG emissions in the issuer's AIF or annual MD&A (if an issuer elects to disclose these emissions) present a timing challenge given the respective filing deadlines? If so, what is the best way to address this timing challenge?

PDAC response: There are likely to be timing challenges for issuers including GHG emissions in an AIF or MD&A, particularly during the initial year(s) of adopting the Proposed Instrument. The most recent federal guidance for reporting GHG emissions requires companies to provide requisite GHG emission data by June 1, 2022, and this mid-year timing has been consistent since the inception of the reporting program. As such, companies will face difficulties in producing alternate sets of emissions data with different measurement dates so that disclosure can be included in the public documents referenced. With this in mind, CSA should consider allowing issuers to include measurement data collected for the federal government program in their AIF or MD&A in the following year, or aligning the Proposed Instrument's reporting timeframe with the federal government program so that companies can collect and report one dataset.

6. The Proposed Instrument contemplates that issuers that provide GHG disclosures would be required to use a GHG emissions reporting standard in measuring their GHG emissions, being the GHG Protocol or a



reporting standard comparable with the GHG Protocol (as described in the Proposed Policy). Further, where an issuer uses a reporting standard that is not the GHG Protocol, it would be required to disclose how the reporting standard used is comparable with the GHG Protocol.

- As issuers have the option of providing GHG disclosures, should a specific reporting standard, such as the GHG Protocol, be mandated when such disclosures are provided?

PDAC response: Our members definitely see the importance of unified disclosure, and in that context, we think the GHG Protocol will be appropriate for large emitters (i.e. >10,000 tonne CO₂eq per year). These issuers are required to report their emissions according to the federal [Greenhouse Gas Reporting Program](#) (GHGRP) and based on acceptable measures such as the GHG Protocol or comparable standards. As such, disclosing this information will not be a significant added burden for public issuers provided the Protocol remains aligned and does not require duplicative resources in adhering to the GHGRP. However, the GHG Protocol is not readily applicable to small companies and emitters or their regular activities.

- Is the GHG Protocol appropriate for all reporting issuers? Should issuers be given the flexibility to use alternative reporting standards that are comparable with the GHG Protocol?

PDAC response: The GHG Protocol is overly complicated and burdensome for small companies or venture-listed issuers with low emission profiles (i.e. <10,000 tonne/year CO₂eq per year) and the resources required to apply the GHG Protocol by such issuers would be substantive. The potential for inaccuracy in long-term assessments and for reporting redundancies, particularly for Scope 2 and Scope 3 emissions, suggests disclosure or investor protections would not improve by applying the GHG Protocol in such a way.

PDAC has identified the need for a simplified reporting scheme for small emitters, such as mineral exploration companies, and has developed an Excel-based GHG calculator to gauge its potential usefulness as a means to report both on and off-site emissions. We think this calculator or a similar framework would be adequate for voluntary reporting material emissions and recommend that CSA consider developing a similar alternative reporting standard for small emitters that is a simpler subset of the GHG Protocol. Please see Appendix B for more details on the PDAC GHG calculator.

- Are there other reporting standards that address the disclosure needs of users or the different circumstances of issuers across multiple industries and should they be specifically identified as suitable methodologies?

PDAC response: There are many other broadly accepted environmental, social and governance (ESG) standards, with the Global Reporting Initiative (GRI) and Sustainability Accounting Standards Board (SASB) being two of the most reputable, and there are number of areas where these overlap with TCFD. Most standards work to outline activities of large, seasoned companies with operating assets and they are not directly relevant for mineral exploration companies as they do not adequately capture the extent of environmental management or sustainable activities mining and exploration companies perform. In this context, the mineral industry continues to evolve sector-specific guidelines and standards such as [PDAC's e3Plus](#) Responsible Practices guidelines and the Mining Association of Canada's [Towards Sustainable Mining](#) (TSM), which aims to align ESG and climate disclosures in accordance with industry activities.

(Answer continues on the next page)



Accepted standards that currently exist are generally not suitable for disclosing GHG emissions by exploration companies given the relatively small scale and dynamic nature of activities typically undertaken by this cohort. As noted above, it is for this reason that PDAC initiated development of a GHG calculator for mineral exploration and development companies. The same logic can apply to most venture listed companies that are typically small and pre-revenue with immaterial Scope 1 emissions and/or limited ability to forecast future activities and their relevant climate risks.

7. The Proposed Instrument does not require the GHG emissions to be audited. Should there be a requirement for some form of assurance on GHG emissions reporting?

PDAC response: We anticipate venture-listed companies will be encouraged and more likely to voluntarily disclose information according to the proposed Instrument, provided the mechanism for reporting is relatively simple and does not add material costs. Audit means putting in place new procedures and reliance on third parties for documentation, whereas a simple framework could provide a reasonable assessment of a small company's GHG emissions. As such, auditing GHG reporting of small emitters (i.e. venture-listed issuers) is an unnecessary financial and human resource burden and should not be a requirement of GHG reporting. Furthermore, the audit scope that may be required by larger, non-venture listed companies in relation to the proposed Instrument should be defined through subsequent public consultation to ensure consistency in the activities and burdens issuers will experience in complying with the Instrument.

8. The Proposed Instrument permits an issuer to incorporate GHG disclosure by reference to another document. Is this appropriate? Should this be expanded to include other disclosure requirements of the Proposed Instrument?

PDAC response: Yes. In general, in any case where incorporating disclosures by reference into other documents does not impact investor protection, it should be permitted to streamline the process and reduce costs for issuers.

Usefulness and benefits of disclosures contemplated by the Proposed Instrument

9. What climate-related information is most important for investors' investment and voting decisions? How is this information incorporated into these decisions? Is there additional information that investors require?

PDAC response: Investors in the mineral exploration and development industry are fortunate to have NI 43-101 to source all relevant and necessary information such as location, climate and biodiversity to use in assessing climate-related risks associated with mineral exploration companies. NI 43-101 feasibility studies can outline key estimates such as potential climate impacts on critical infrastructure (i.e. tailings, road, waterways etc.), on-site emissions, sensitivities to carbon taxes and various critical supply chains as companies reach the development stage.

Traditionally, the most important aspect for investors in mineral exploration is the prospect for value creation through a company finding and advancing an economically viable deposit towards production. Investors are increasingly working to better understand the scale of on-site emissions of exploration projects despite their relatively small-scale in comparison to established mines or other industrial activities, and a driver behind PDAC's development of the GHG calculator noted in question 6.



10. What are the anticipated benefits associated with providing the disclosures contemplated by the Proposed Instrument? How would the Proposed Instrument enhance the current level of climate-related disclosures provided by reporting issuers in Canada?

PDAC response: Regardless of the materiality of GHG emissions and climate risk reporting to any one issuer, the proposed instrument has some significant merits. Such reporting can demonstrate that Canadian issuers recognize the importance of climate-related risks and could lead to exclusive investment opportunities in the future. However, there is a wide array of climate-related disclosure standards that are being recognized by investors and various ESG ratings agencies around the world and such ESG ratings are increasingly being used as a determinant for many investors. With this in mind, it is paramount CSA's implementation of the proposed Instrument will lead to an eventual increase in the number of public issuers in Canada being rated by such agencies (i.e. [Sustainalytics](#), [MSCI ESG Ratings](#), [Principles for Responsible Investment](#), etc.).

Costs and challenges of disclosures contemplated by the Proposed Instrument

11. What are the anticipated costs and challenges associated with providing the disclosures contemplated by the Proposed Instrument?

PDAC response: The key costs and challenges associated with climate related disclosures include the training of personnel, the purchase and installation of metering systems and locate them frequently in remote areas which requires costly transport of men and equipment by air; ongoing manpower to collect data and maintain the systems.

Also, due to the scarce resources of exploration companies, they do not have risk management training or internal resources competent to complete climate risk assessment. Generally small projects do not have a risk assessment program and frequently do not have the governance (policies and procedures, board level expertise etc.) that are recommended in this instrument. Costs associated with developing and implementing these can be material to a small exploration company.

12. Do the costs and challenges vary among the four core TCFD recommendations related to governance, strategy, risk management, and metrics and targets? For example, are some of the disclosures more (or less) challenging to prepare?

PDAC response: It is difficult to assess the balance of costs associated with the four core TCFD recommendations, in particular for venture-listed issuers and small mineral exploration companies that typically have limited internal resources. Governance, strategy and risk management activities could present greater up-front costs to these types of companies as there may be reliance on external parties to comply with the Instrument. However, as exploration projects advance and potentially are developed into a mine, emission intensity is likely to grow and the costs associated with establishing GHG metrics and targets is likely to grow commensurately.

13. The costs of obtaining and presenting new disclosures may be proportionally greater for venture issuers that may have scarce resources. Would more accommodations for venture issuers be needed? If so, what accommodations would address these concerns while still balancing the reasonable information needs of investors? Alternatively, should venture issuers be exempted from some or all of the requirements of the Proposed Instrument?



PDAC response: Given the concerns expressed earlier in this response regarding the suitability of the GHG Protocol for the emission profile of small issuers such as mineral exploration companies, CSA should exempt venture issuers with emissions below the 10,000 tonne/year threshold from the requirements of the proposed Instrument. Instead, we recommend CSA to develop an alternative disclosure scheme, better fit for venture issuers. See more details on this proposal in our response to Question 6 above.

Guidance on disclosure requirements

14. We have provided guidance in the Proposed Policy on the disclosure required by the Proposed Instrument. Are there any other tools, guidance or data sources that would be helpful in preparing these disclosures that the Proposed Policy should refer to?

PDAC response: We recommend that CSA be proactive in guiding the issuers about Proposed Instruments. This is true especially for venture-listed issuers, whose resources are often scarce. For example, we encourage CSA to conduct workshops to further guide issuers on implementing the Proposed Instrument prior to its inception. Being accommodative for questions by allocating resources for human response is another recommendation. Lastly, we recommend CSA to implement more guidance and “soft enforcement” in the first year, especially towards ventures that need further guidance, as noted above.

15. Does the guidance set out in the Proposed Policy sufficiently explain the interaction of the risk disclosure requirement in the Proposed Instrument with the existing risk disclosure requirements in NI 51-102?

PDAC response: The Proposed Instrument does not give sufficient flexibility for elimination of all disclosure for low climate risk/low GHG emitters such as mineral exploration companies. Thus, there seems to be a breakdown between material risk reporting in other protocols and the Proposed Instrument as it may require non-material climate risk reporting for small non-venture listed companies.

Prospectus Disclosure

16. Form 41-101F1 *Information Required in a Prospectus* does not contain the climate-related disclosure requirements contemplated by the Proposed Instrument. Should an issuer be required to include the disclosure required by the Proposed Instrument in a long form prospectus? If so, at what point during the phased-in implementation of the Proposed Instrument should these disclosure requirements apply in the context of a long form prospectus?

PDAC response: No. An issuer should not have to include the disclosure required by the Proposed Instrument in a long form prospectus. This would be burdensome, result in duplicative costs and likely be immaterial for the vast majority of venture-listed issuers, such as junior exploration companies.

Phased-in implementation

17. The Proposed Instrument contemplates a phased-in transition of the disclosure requirements, with non-venture issuers subject to a one-year transition phase and venture issuers subject to a three-year transition phase. Assuming the Proposed Instrument comes into force December 31, 2022 and the issuer has a December 31 year-end, these disclosures would be included in annual filings due in 2024 and 2026 for non-venture issuers and venture issuers, respectively.

- Would the transition provisions in the Proposed Instrument provide reporting issuers with sufficient time to review the Proposed Instrument and prepare and file the required disclosures?



PDAC response: The suggested timeline may present challenges for both non-venture and venture issuers. If reporting by non-venture issuers starts for year-end 2023 as proposed, it means that companies will need to have infrastructure and processes in place to collect/monitor the requisite data by January 1, 2023. Issuers should have a clear understanding of how the new Instrument will be administered at least 1 year in advance of its implementation to allow issuers adequate time to ensure compliance. Therefore, CSA should plan to readjust the timing of when new disclosures will be required based on when issuers are provided the final version of the Proposed Instrument and any related guidance materials. We think implementation timing for venture-listed issuers will need additional consideration; please see response to next question.

- Does the phased-in implementation based on non-venture or venture status address the concerns, if any, regarding the challenges and costs associated with providing the disclosures contemplated by the Proposed Instrument, particularly for venture issuers? If not, how could these concerns be addressed?

PDAC response: As mentioned in previous responses, some of the items included in the Proposed Instrument may be overly complicated and not align venture-listed issuer activities. PDAC recommends CSA develop a simplified disclosure regime for venture-listed issuers (See response to questions 6 and 13). With this in mind, in addition to readjusting timelines as suggested in the answer above, CSA should defer implementation of the Proposed Instrument for venture issuers until a focused disclosure framework is developed.

Future ESG considerations

18. In its comment letter to the IFRS Foundation's consultation paper published in September 2020, the CSA stated that developing a global set of sustainability reporting standards for climate-related information is an appropriate starting point, with broader environmental factors and other sustainability topics to be considered in the future. What broader sustainability or ESG topics should be prioritized for the future?

PDAC response: Engagement with indigenous and local communities, establishing a social license to operate and a proactive approach to water management and biodiversity conservation are common in ESG frameworks and likely to remain prominent issues into the future. As noted previously, we emphasize the need to ensure that any expansion of the Proposed Instrument in the future is expressly to improve alignment with other key global standards and increase the likelihood of a Canadian issuer being rated by a recognized agency.

APPENDIX B: THE PDAC GHG EMISSIONS CALCULATOR

This appendix briefly presents the PDAC GHG Emissions Calculator (“Calculator”), its objectives, functionality, and potential benefits for GHG emissions reporting by mineral exploration companies.

Objectives: PDAC recognized the need for a simple mechanism to internally track and potentially report emissions produced by mineral exploration companies listed in Canada. The vast majority of these companies are small emitters according to Federal Government’s [Greenhouse Gas Reporting Program](#) (i.e. << 10,000 tonne/year CO₂eq emissions) and are not subject to direct carbon taxation. Rather, carbon taxes are included in the cost of items like energy, transportation and commercial air travel. PDAC has developed a Calculator to provide a simple reporting scheme applicable to exploration companies to allow companies to track costs associated with carbon emissions and a way to disclose this information to investors and stakeholders.

Process: The Calculator requires the user to input information on a company’s direct and indirect use of fossil fuels. It then applies CO₂eq coefficient tables sourced from Federal and Provincial governments to convert consumed fossil fuels of various types to produce an estimate for CO₂eq tonnes emitted in a given year, as well as the associated costs for the company. Figure 1 below illustrates this process.

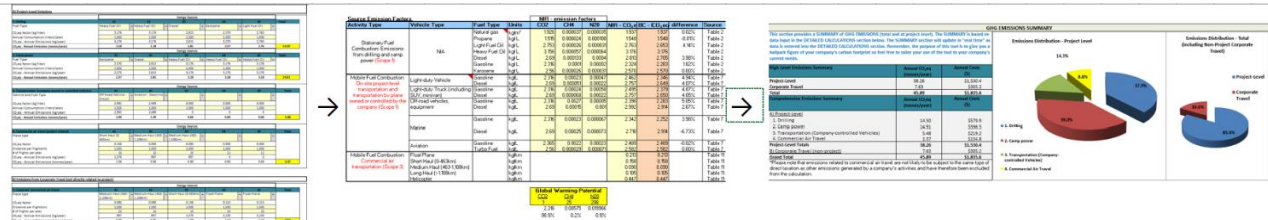


Figure 1: General Overview of Calculator

Inputs: The calculator receives inputs regarding key emitting activities of a typical exploration project:

- 1) Drilling
- 2) Camp power
- 3) Transportation by company-controlled vehicles
- 4) Project level transportation by a plane not owned or controlled by the company

In addition, the calculator measures corporate-level travel, which has traditionally been a primary source of GHG-emissions for mineral exploration companies.

- 5) Corporate level related emissions in a plane not owned or controlled by the company

For each activity, the user only needs to insert key data – either fuel type(s) used for the activity and annual consumption in liters (Cases 1-3 above), or distance per flight and number of flights per year (Cases 4-5 above). Figures 2 and 3 below provides examples of how to insert activity-related inputs into to the Calculator.

1. Drilling	Energy Sources	
	#1	#2
Fuel Type	Heavy Fuel Oil	Heavy Fuel Oil
CO ₂ eq factor (kg/liter)		3.176
Annual Consumption (liters/year)		1,000
CO ₂ eq - Annual Emissions (kg/year)		3,176
CO₂eq - Annual Emissions (tonnes/year)		3.18

Figure 2: Input Selection for Drilling Activity

4. Commercial air travel (project-related)	#1	#2
Plane type	Short Haul (0-463km)	Medium Haul (463-1,108km)
CO ₂ eq factor		0.090
Distance per flight(km)	Float Plane	1,000
# of flights per year	Short Haul (0-463km)	10
CO ₂ eq - Annual Emissions (kg/year)	Medium Haul (463-1,108km)	897
CO ₂ eq - Annual Emissions (tonnes/year)	Long Haul (> 1,108km)	0.90
	Helicopter	
	1.58	

Figure 3: Input Selection for Travel by Plane Not Owned or Controlled by the Company

The user also defines the type of scheme to use (i.e. Federal or B.C.), which affects the CO₂eq coefficients of some fuels, and can select the relevant carbon price (\$/tonne CO₂eq emitted) in order to estimate costs, as illustrated in Figure 4 below.

JURISDICTION		For companies operating in B.C., select BC Guidelines ; companies operating in all other Canadian jurisdictions, select Federal Guidelines .*
Select jurisdictional guidelines ==>	Federal guidelines	
CARBON PRICE (optional)		The default price per tonne of CO ₂ eq is based on the Government of Canada's mandate for taxation of carbon at \$20 a tonne as of April 2019 for provinces and territories that do not have their own provincial or territorial carbon pricing mechanism in place by that time.
Set carbon price (\$/t)* = ==>	10	

*BC has its own set of comprehensive GHG emission factors, outlined in the B.C. Best Practices Methodology for Quantifying Greenhouse Gas Emissions (2016/2017); Federal guidelines refer to Canada's National Inventory Report 1990-2015, which documents Canada's federal emission factors.

Figure 4: Jurisdiction and Carbon Price Selection

Output: The Calculator outputs the annual aggregate emissions for a company, disaggregated between corporate and project-level emissions, as well as segmentation between project activities, and associated costs for each emission source. As illustrated in Figure 5, the Calculator presents summary information to the user in both a table and chart form.

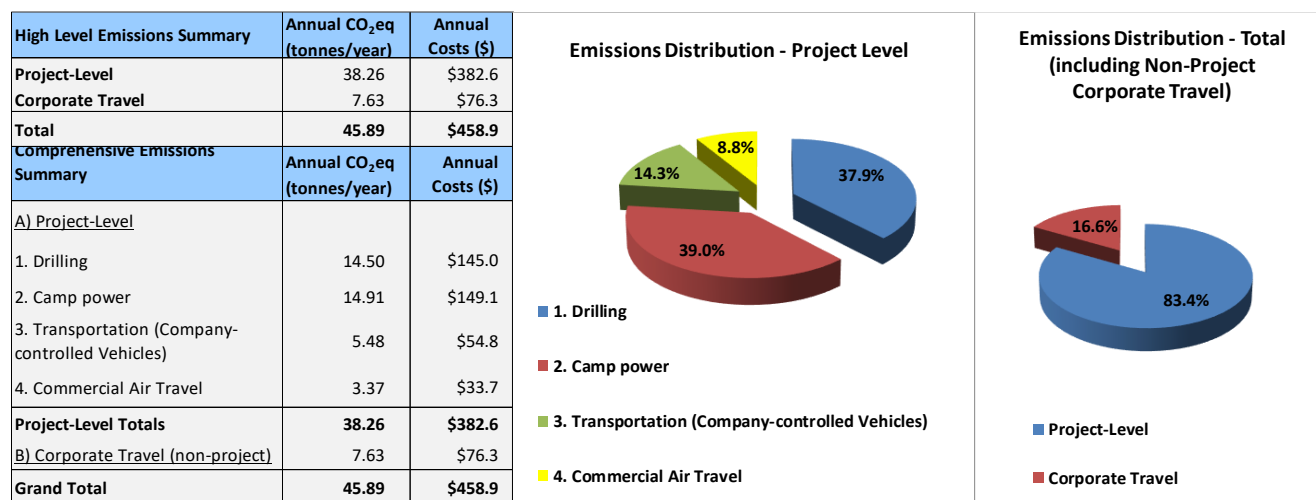


Figure 5: Output Screen

Benefits: The calculator focuses on the most emission intensive activities of mineral exploration companies and we estimate that it covers ~90% of actual emissions according to initial validation by PDAC members. It provides a very simple, cost-effective mechanism for small emitters that does not require expert advice or monitoring to produce an accurate measurement of company's GHG emissions at a level that should be sufficient for the majority of investors.



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Transferability to other sectors: Due to its simplicity, we think the Calculator can be easily modified to reflect general characteristics of small emitters in other sectors. Therefore, CSA should consider how the scope of this solution could go beyond the mineral sector.

PDAC is keen to engage CSA to provide further background on our recommendations and investigate how a streamlined reporting framework for small GHG emitters could potentially evolve from the Calculator.