Canada Energy Regulator | Régie de l'énergie du Canada

Draft revisions, GHG Emissions and Climate Change (Filing Manual Tables A-2 and A-4, Electricity Filing Manual Tables 6-2 and 7-1).

Table A-2 FM and Table 6-2 EFM:

GHG Emissions and Climate Change	
Filing Requirements	***Guidance***
1. **Direct emissions** – for project construction and for project operations (including maintenance): • describe the sources of GHG emissions; • provide a quantitative estimate of GHG emissions; • identify and explain which climate change laws, regulations and policies apply to the GHG emissions and to what extent; • provide the GHG emissions as a percentage of total sector-based emissions, and as a percentage of provincial and national reported GHG emissions; • describe the mitigation measures to be implemented for GHG emissions reduction and for continuous improvement of GHG emissions management; and ~~• for proponents of projects with a lifetime beyond 2050, project applications must include a credible plan to achieve net-zero emissions by 2050; and~~	The guidance below considers the principles and objectives of Environment and Climate Change Canada's (ECCC) *Strategic Assessment of Climate Change*. As noted in the Filing Manual section A.2.4 Level of Detail, the depth of analysis should be commensurate with the nature of the project and the potential for effects. A scalable approach, as provided in Figures 1~~-~~ to 4, can inform the level of information an Applicant may file[1]. The GHG emission assessment should, as appropriate: • include point and area sources, such as combustion (including flaring and incineration), venting (including planned depressurizations) and fugitive sources; • include all non-negligible sources, for example, emissions from changes in land use and burning of vegetation during land clearing; • include a description and justification of the methods (including~~,~~ emission factors used), and assumptions used in the estimation; and • clarify the approach to determining avoided domestic emissions and what ~~domestic avoidance,~~ project-specific

[1] *Note*: the thresholds will be established based on feedback received during engagement with other government departments, Indigenous peoples, industry and other relevant stakeholders.

GHG Emissions and Climate Change	
Filing Requirements	***Guidance***
• discuss how the project may hinder or contribute to Canada's efforts to reduce GHG emissions. 2. **Construction and o~~O~~perational emissions from third-party energy sources -** if there are electrical or other energy requirements for project construction and operations that are not considered in the direct emissions assessment: • describe those requirements and the expected sources of that energy; • provide a quantitative estimate of GHG emissions associated with the generation of those energy requirements; and • identify and explain which climate change laws, regulations and policies apply to those GHG emissions and to what extent. 3. **Net-Zero ~~P~~plan** - for projects with a lifetime beyond 2050, applications must include a credible plan to achieve net-zero emissions by 2050. ~~3.~~4. **Climate ~~Resilience~~ resilience** – See Filing Manual Table A-2 – Physical and Meteorological Environment~~,~~ for requirements and guidance.	mitigation and offset measures ~~mitigation and offset measures~~ have been taken into account in the quantitative estimate~~,~~ and describe the criteria used for this. In addition, quantitative estimates should, as appropriate: • be provided as quantities of individual gases and in terms of carbon dioxide equivalent; ~~and~~ • ~~•~~ for project operations, be provided on an absolute annual basis and in intensity terms; and~~.~~ • ~~•~~ describe engineering considerations for reducing or avoiding uncontrolled methane releases during operations and maintenance activities. • Applicants may consider using appropriate industry-wide estimates for their assessment of GHG emissions, insofar as these are currently up to date. If project operations depend on electrical or other energy requirements (e.g., to supply power for facility stations) that must be acquired from a third party or other corporate entity and that are not included in the project's direct emissions assessment, then an assessment of this should also be included. The discussion of laws, regulations and policies should cover those at relevant regional, provincial, federal and international levels. Examples might include targets, carbon pricing, mandatory

GHG Emissions and Climate Change	
Filing Requirements	***Guidance***
	reductions or offsets, and reporting programs. In assessing the extent of emissions, consider relevant sector-based totals as well as provincial and national reported emissions for comparison. Regional airshed-based studies may also be applicable. Discuss how the project's predicted GHG emissions ~~as a percentage~~compare to Canada's ~~of governmental~~ GHG reduction targets. Discussion of mitigation measures, including the use of best available technologies/best environmental practices, should include the alternative means considered to reduce GHG emissions and ~~how~~ justification for why the preferred option was chosen. Consider the appropriateness and potential of offsets, ~~s~~ for residual emissions, including the timing and implementation of any offsets ~~s~~ selected. Project design features or proposed mitigation measures ~~may~~ should limit or reduce the extent to which a project hinders Canada's ability to meet its commitments in respect of climate change. Further mitigation ~~discussion~~ can also be included in the credible plan to reduce emissions to net-zero by 2050. All projects will be assumed to have lifetimes beyond 2050, unless otherwise demonstrated. A credible net-zero plan should ~~include~~be based on the principles outlined in the SACC and related Technical Guides. The plan should include:

GHG Emissions and Climate Change	
Filing Requirements	***Guidance***
	• actions that will be taken to achieve net-zero emissions by 2050, including an implementation schedule ~~of~~ for the actions; • a description of the approach to ~~using~~ determining avoided emissions and using offset credits;~~.~~ • any additional project-specific mitigation and offset measures that will be implemented for the project to achieve net-zero emissions by 2050; • a description of the process that will be followed in order to make the decisions and investments needed; • supporting information and/or assumptions for each action or measure, including a discussion of factors such as associated costs, potential impacts on tolls, technical challenges, risks, infrastructure requirements and any other relevant considerations; and ~~—~~periodic project milestones that demonstrate GHG reductions towards net-zero. The periodic milestones should incorporate assumptions and also account for evolving regulatory measures and policies. • See section 5.3 of ECCC's *Strategic Assessment of Climate Change* for more details and related Technical Guides.~~Proponents must also describe how the Project meets Canada's commitment to reduce GHG emissions by 30 per cent below 2005 levels by 2030.~~

GHG Emissions and Climate Change	
Filing Requirements	***Guidance***
	~~If project operations depend on electrical or other energy requirements (e.g., to supply power for facility stations) that must be acquired from a third party or other corporate entity and that are not included in the project's direct emissions assessment, then an assessment of this should also be included.~~ The GHG emissions assessment should consider relevant estimating, reporting and other technical guidance, such as: • ~~Environment and Climate Change Canada~~ECCC's *Strategic Assessment of Climate Change* ~~-~~and related Technical Guides (as released and updated) ~~•~~ ~~Environment and Climate Change Canada~~ECCC's Reporting greenhouse gas emissions • • Regulations Respecting Reduction in the Release of Methane and Certain Volatile Organic Compounds (Upstream Oil and Gas Sector) (SOR/2018-66) ~~•~~ ~~Environment and Climate Change Canada~~ECCC's sector-specific tools to calculate emissions~~, including t:~~ • • T~~T~~he Natural Gas Combustion Emissions Calculator produced by Canadian Energy Partnership for Environmental Innovation (CEPEI) • Impact Assessment Agency of Canada's ~~guidance: -~~Policy Context: Considering Environmental Obligations and Commitments in Respect of Climate Change under the *Impact Assessment Act*

GHG Emissions and Climate Change	
Filing Requirements	***Guidance***
	~~Considering Environmental Obligations and Commitments in Respect of Climate Change under the Impact Assessment Act~~ • ~~Impact Assessment Agency of Canada's guidance: The Canadian Environmental Assessment Agency's Incorporating Climate Change Considerations in Environmental Assessment: General Guidance for Practitioners~~ • The GHG Protocol Corporate Accounting and Reporting Standard (World Resources Institute~~RI~~ and World Business Council for Sustainable Development)~~BCSD)~~ • International Standards Organization standards: ○ ~~International Standards Organization standard ISO-14064~~ISO-14064:1 ○ ISO-14064:2 Provincial estimating and reporting guidance could also be followed, such as: • Alberta Energy Regulator Manual 015: Estimating Methane Emissions (2020) • Update of Equipment Component and Fugitive Emission Factors for Alberta Upstream Oil and Gas (prepared by Clearstone) • ~~Clearstone Update of Equipment Component and Fugitive Emission Factors for Alberta Upstream Oil and Gas Study~~ • Greenpath 2016 Alberta Fugitive and Vented Emissions Inventory Study

GHG Emissions and Climate Change	
Filing Requirements	***Guidance***
3.	

GHG Emissions and Climate Change – Assessment of Upstream GHG Emissions	
Filing Requirements	**Guidance**
1. **Upstream emissions** – • Applicants should indicate if the upstream emissions associated with the project are likely to be above or below the applicable threshold presented in Section 3.2 of ~~the~~ ECCC's *Strategic Assessment of Climate Change.* • If above the identified threshold, provide an assessment of upstream GHG emissions based on currently available ~~Environment and Climate Change Canada (~~ECCC~~)~~ guidance.	In accordance with ECCC guidance, the assessment of upstream GHG's should consist of two parts: • Part A should provide a quantitative estimate based on the project's maximum throughput (or additional throughput for expansion or replacement projects). • Part B should provide a qualitative discussion on the extent to which those upstream emissions may (or may not) be incremental as a result of the project. This assessment should describe the methodology, data and assumptions used, as well as ~~.~~ explain how the assessment is consistent with the supply forecast and analysis of the need for the project. ~~*Note:*~~ The plan to achieve net-zero emissions does not apply to upstream GHG emissions, even if an upstream GHG emissions assessment is conducted. Further g~~G~~uidance and practice for upstream GHG emissions estimation can be found in ~~includes:~~ ECCC's *Strategic Assessment of Climate Change* and related Technical Guides (as released and updated). ~~ECCC's proposed methodology for estimating the upstream GHG emissions associated with major oil and gas projects~~

	~~undergoing federal environmental assessments (Canada Gazette, Part 1, March 19, 2016).~~ ~~Previous ECCC assessments of upstream GHG emissions for past pipeline projects may provide examples.~~ ~~Explain how the assessment is consistent with the supply forecast and analysis of the need for the project.~~

Table A-4 FM and Table 7-1 EFM:

Economics and Financing	
Filing Requirements	**Guidance**
Provide an explanation of how current climate change laws, regulations and policies, and financial risks or other uncertainties around commitments and future changes have been incorporated in the economic analysis of the project.	As noted in the *Filing Manual* section A.2.4 Level of Detail, the depth of analysis should be commensurate with the nature of the project and the potential for effects. For all projects, the applicant should, at a minimum, describe how current climate change laws, regulations and policies have been considered in assessing the expected utilization of the project, and discuss if and how the economic feasibility of the project may be impacted by financial risks and other uncertainties around changes to such climate change laws, regulations and policies. For a larger project, the applicant should also describe how existing climate change laws, regulations and policies have been included in relevant analysis and assumptions. Also include those laws and~~,~~ regulations that are reasonably expected to come into force, and policies reasonably expected to come into place, ~~and policies~~ which have been drafted and tabled at a provincial or federal level and ~~but which although not yet in force, may reasonably become so and~~ are not purely

	speculative. Discuss implications of these laws, regulations, and policies for supply and markets in any scenario analysis or risk assessment of these factors (e.g., applicant may consider doing a sensitivity analysis of supply and markets based on carbon pricing levels). Applicants should also describe the extent to which climate change commitments have been considered. ECCC's ~~nvironment and Climate Change Canada's~~ *Strategic Assessment of Climate Change* should be consulted for its project requirements and the potential implications for the project's economic analysis. Applicants should describe how the credible plan to achieve net-zero emissions by 2050 may impact the economic feasibility of the project.

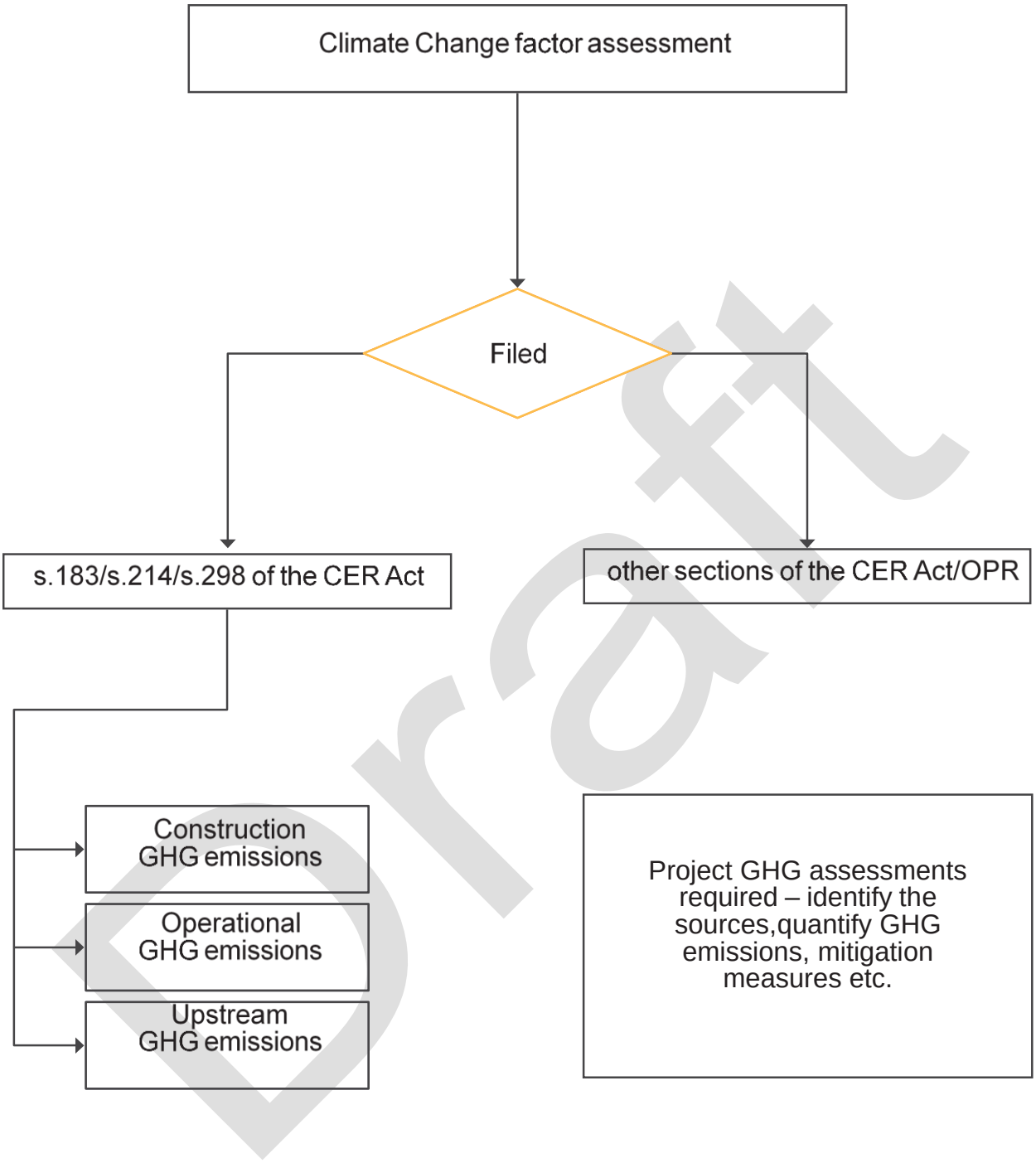
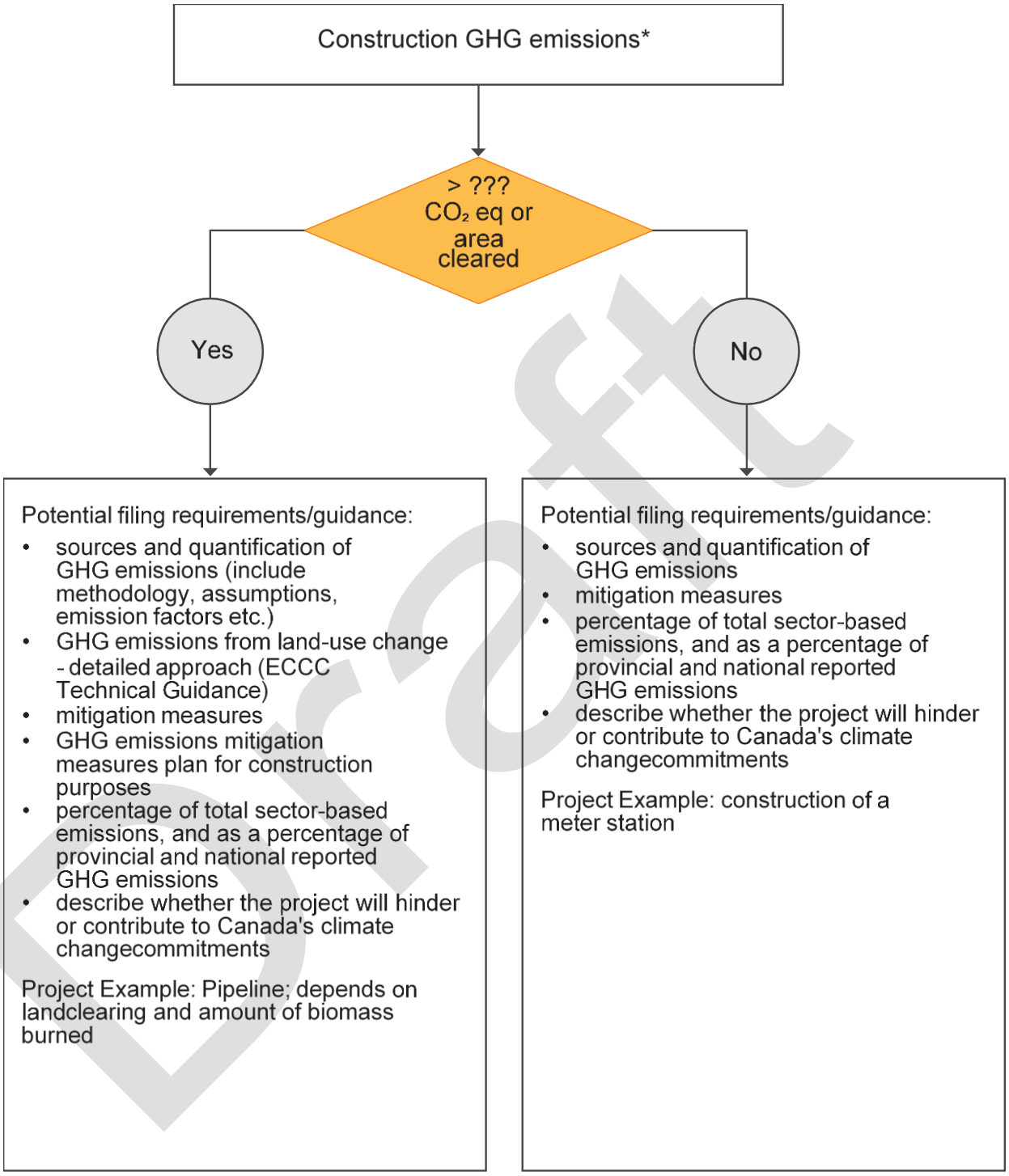


Figure 1: Scalable approach



*Construction emissions released before 2050 are not required to be captured by the Project-specific net-zero plan (could refer to a corporate plan)

Figure 2: Scalable approach – Construction GHG emissions

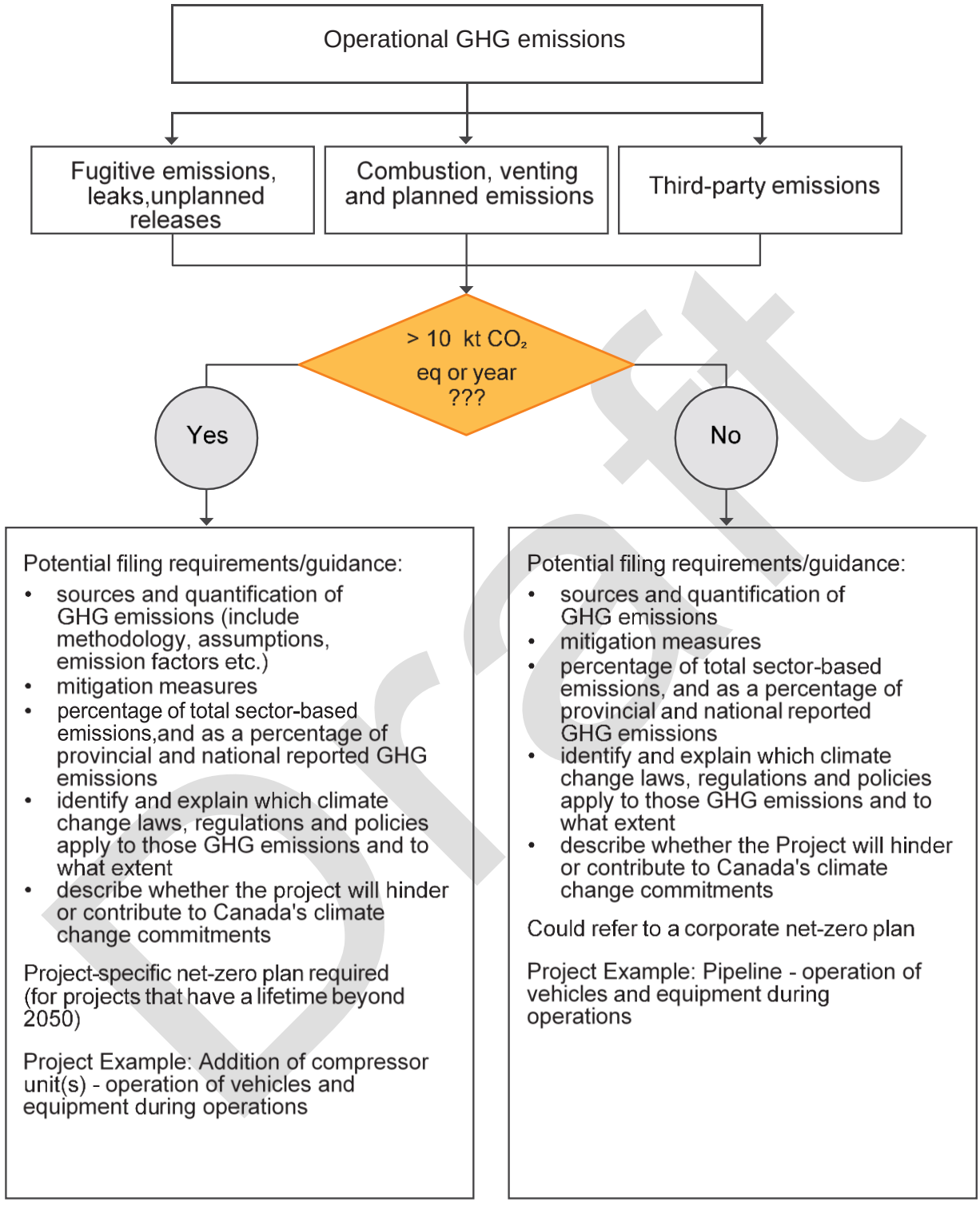
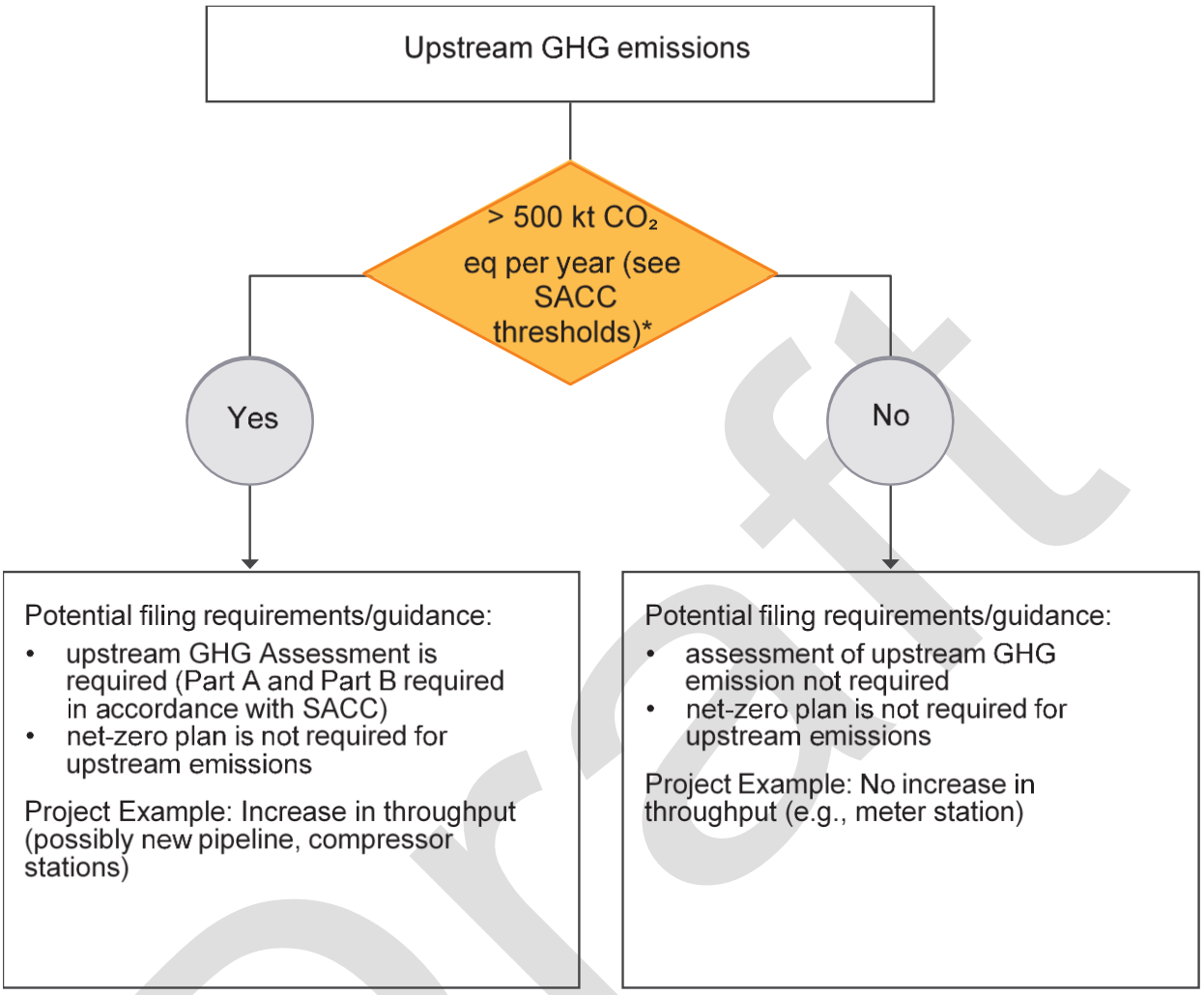


Figure 3: Scalable approach – Operational GHG emissions



*thresholds decline over time, as set out in the SACC

Figure 4: Scalable approach – Upstream GHG emissions