

PROCESS FLOW DIAGRAM GUIDANCE

Section 11.3(2)(m) of the Greenhouse Gas Emission Reporting Regulation requires Single Facility Operations and Linear Facilities Operations to provide a Process Flow Diagram (PFD) during registration.¹ Section 11.3(1) outlines the requirements that must be included a PFD. This document provides guidance for operators of industrial operations to create or revise a PFD. It sets out a description of what could be considered reasonable when meeting the requirements of the Regulation.

This information is for your convenience and guidance only and does not replace or constitute legal advice. It is recommended that operators review the *Greenhouse Gas Industrial Reporting and Control Act* (GGIRCA), the Greenhouse Gas Emission Reporting Regulation (GGERR), and the Greenhouse Gas Emission Administrative Penalties and Appeals Regulation (GGEAPAR) and seek independent legal advice to understand their status and legal obligations. The GGIRCA and its Regulations can be found at: bclaws.gov.bc.ca

INTRODUCTION

A PFD provides a visual overview of facility operations. It shows the relationship between major components by depicting industrial processes, product flow, and key equipment utilized to conduct an activity or to produce a product. It sets out, in reasonable schematic detail, the processes that produce emissions at a single facility operation or at the facilities within a linear facilities operation. This document outlines some of the key features that could be viewed as ‘reasonable schematic detail’ for a PFD.

WHO NEEDS TO PROVIDE A PROCESS FLOW DIAGRAM?

All reporting operations and regulated operations must prepare and upload a PFD for registration under the GGERR. Electricity Import Operations (EIO's) are excluded from this requirement.

¹ OIC 70/2024 Updated the requirement to provide a PFD at registration. Previously, a PFD was submitted annually with an emission report.

WHEN DOES A PROCESS FLOW DIAGRAM NEED TO BE PROVIDED?

A PFD can be uploaded when registering an operation in BCIERS. Once uploaded, that PFD stays on file for all following reporting periods that it remains accurate and up to date. A PFD only needs to be re-submitted if there are changes to the operation that warrant updates to the PFD. In this case, an updated PFD must be uploaded to BCIERS on or before May 31 following the reporting year that the PFD pertains to.

WHY DO WE NEED A PROCESS FLOW DIAGRAM?

A PFD is important for government regulators to ensure compliance. The PFD supports third-party verification processes and provides important guidance to the Ministry in conducting oversight and compliance reviews.

WHAT TO INCLUDE IN A PROCESS FLOW DIAGRAM

When assessing if a PFD meets the criteria of 'reasonable schematic detail', the Director may consider if it:

- Depicts the **step-by-step process of the production of products**, demonstrating the order in which industrial activities within the operation occur. Examples of industrial activities include:
 - using equipment that combust fuels, such as engines, compressors, furnaces, boilers, generators, flares, and mobile equipment, and
 - industrial processes, such as chemical recovery, refinery oil-water separators, anode baking, and green coke calcination.
- Identifies **all key equipment** used for industrial activities. This must include:
 - An index of each emission source that produces or is likely to produce, over 100 tonnes of carbon dioxide equivalent (tCO₂e) in a reporting period, and
 - The source type (from column 3 of Tables 1 /2 of Schedule A) if the emissions cumulatively exceed, or are likely to cumulatively exceed, 250 tCO₂e in a reporting period.
- Label and demonstrate where each **reporting activity** (from GGERR Tables 1 or 2 of Schedule A) occurs in the process.
- Include the **primary gas types** (CO₂, N₂O, CH₄) that are produced by each reporting activity.
- Include **emission categories** from Schedule B of GGERR.
- Identify the name of the operation (and / or facilities) that the PFD pertains to and the date that the PFD was produced.

For a linear facilities operation, the PFD must include all facilities within the operation and depict how individual facilities function with each other in an integrated manner.

FILE TYPE

The Process Flow Diagram should be uploaded as a PDF (pdf) and must not exceed a maximum size of 5 MB. The next section provides an example of a PFD.

SAMPLE GENERIC PROCESS FLOW DIAGRAM

Below provides a sample generic process flow diagram. A PFD should include all processes, key equipment, reporting activities emission sources, and gas types, while identifying a clear direction of flow.

Facility Name: B.C. Sample Industry Inc.

Date: January 01, 2025

