

## Introduction

We have compiled a selection of common questions we have received since the meter station overpressure protection program first started. We hope you find it helpful.

## Table of Contents

<b>General</b> .....	2
<b>What initiated this program?</b> .....	2
<b>Why does TC Energy require this information?</b> .....	2
<b>What kind of information is required?</b> .....	3
<b>What if the facility is shut in or decommissioned?</b> .....	3
<b>Forms</b> .....	4
<b>Which forms do I need to complete?</b> .....	4
<b>Where can I find these forms?</b> .....	4
<b>How often will these forms need to be completed?</b> .....	4
<b>What is the deadline for sending the forms in?</b> .....	4
<b>Do I need the calibration technician to sign the form?</b> .....	4
<b>PC and OPP</b> .....	5
<b>What do PC and OPP involve?</b> .....	5
<b>Which devices are acceptable by TC Energy for PC/OPP?</b> .....	5
<b>Is the accuracy of the devices a concern?</b> .....	5

## General

### What initiated this program?

As stipulated in [Canadian Energy Regulator Onshore Pipeline Regulations \(OPR\) section 47](#) and its [Guidance Notes](#), a company shall develop, implement and maintain a safety management program that anticipates, prevents, manages and mitigates potentially dangerous conditions and exposure to those conditions during all activities relating to construction, operation, maintenance, abandonment and emergency situations. This includes processes to identify hazards and potential hazards, manage risks, train and manage workers, communicate, manage records and documentation, monitor and evaluate progress and continually improve performance. The Canada Energy Regulator (CER) requires TC Energy to proactively demonstrate safety and maintain protection from overpressure incidents at receipt points by initiating an overpressure protection verification program.

TC Energy has reviewed its practices regarding management of pressure control (PC) and overpressure protection (OPP) systems that protect receipt points on the NGTL, Canadian Mainline, Foothills Pipeline, and the Trans Quebec & Maritimes (TQM) system. Pipelines in Canada, both federally and provincially regulated, are designed and operated in accordance with the Canadian Standard CSA Z662 Oil and Gas Pipeline Systems which requires PC and OPP systems to be installed, inspected, assessed, and tested at least once per calendar year.

As part of TC Energy's requisite Corrective Action Plan submitted to the CER, TC Energy has undertaken a program to verify that the PC and OPP systems provided by its upstream facility and pipeline operators are in place and operating as required by the provisions of the applicable Tariff, the OPR, and CSA Z662.

### Why does TC Energy require this information?

As part of this program, TC Energy is requesting information from your company about your PC and OPP systems to confirm TC Energy pipeline systems are effectively protected against overpressure. TC Energy is accountable for verifying that the Customer's Pressure Control (PC) and Overpressure Protection (OPP) Systems meet the requirements of Canadian Standards Association CSA Z662.

- Clause 4.18.1.1 – *Pressure Control Systems shall be installed where supply from any source makes it possible to pressurize the piping above its maximum operating pressure. Such pressure-control systems shall be set to operate at or below the maximum operating pressure*
- Clause 4.18.1.2 – *Where failure of the pressure-control system, or other causes, can result in the maximum operating pressure of the piping being exceeded, overpressure protection shall be installed to ensure that the maximum operating pressure is not exceeded by more than 10% or by 35 kPa, whichever is greater*

As well as the General Terms and Conditions of

❖ **The NGTL System Tariff:**

- Clause 7.2 – *Customer shall provide or cause to be provided suitable pressure relief devices, or pressure limiting devices, to protect the Facilities as may be necessary to ensure that the pressure of gas delivered by Customer to Company at any Receipt Point will not exceed one hundred ten (110%) percent of the Maximum Receipt Pressure.*

❖ **The Canadian Mainline Tariff:**

- Section XII - *For any receipt point downstream of Empress, Customer shall do or cause others to do all that is required to allow Customer's Authorized Quantity to be delivered to TCPL at a pressure no less than that prevailing in TCPL's pipeline at such receipt point at the time of delivery and no greater than the maximum allowable operating pressure of TCPL's pipeline at such point.*

TC Energy works collaboratively with Customers to ensure that the installed PC and OPP systems meet the requirements of CSA Z662.

### What kind of information is required?

TC Energy requires the cooperation of all Customers to provide the following baseline information as presented on the TEF-ME-OPPN-G Customer Overpressure Protection System for New and Modifications to Existing Receipt Meter Station also called the Baseline Form:

- Basic information about the Customer's facility, such as:
  - Meter Station Name or Node Number
  - Customer facility name and location
  - Connecting pipe grade, diameter, wall thickness, MOP and construction standards
  - Types of PC and OPP systems/devices installed and their set points and capacities
- Process & Instrument Diagram (P&ID) or as-built drawings indicating placement of PC and OPP devices and their settings
- Operational philosophy, a short description regarding how the PC and OPP devices function in the event of overpressure
- Planned maintenance program for the PC and OPP devices and system
- The most recent PC and OPP device calibration or maintenance records

Once the baseline information has been received, only the calibration records and the basic information are required on an annual basis via the TEF-ME-OPPM-G Customer Overpressure Protection System for Receipt Meter Station Annual Maintenance Review Form.

### What if the facility is shut in or decommissioned?

If a facility is shut in TC Energy requires a TEF-ME-OPPI-G *Verification of Customer Facility Isolation for Receipt Meter Station – Request for Information Form* to be completed and supporting proof of isolation attached such as a photo of the isolation or a stamped P&ID.

If a facility will be decommissioned or abandoned TC Energy asked the customer to submit an Application for Disconnection of Service (AFDS) form to kick off the process of disconnecting your lateral from the TC Energy Meter Station just outside the TC Energy yard. Please note the OPP team may also ask for a submission of TEF-ME-OPPI-G as described above to ensure our system is protected while the AFDS is processed.

- Clause 10.15.1.1 – *Operating companies deactivating piping shall isolate the piping, using blind flanges, weld caps, or blanking plates suitable for the pressure from which the deactivation is being isolated.*

## Forms

### Which forms do I need to complete?

TC Energy has attempted to make this process as easy and simple as possible while gathering all the required information. Thus, we have produced three documents, each with different purposes:

- TEF-ME-OPPN-G Customer Overpressure Protection System for New and Modifications to Existing Receipt Meter Station (Baseline Form) – To be completed at the time of initial connection to the NGTL system as an assessment of a Customer’s PC and OPP system, when the type of PC and/or OPP devices have been changed or if a change to the Customer PC and/or OPP system has been made resulting in a change to the way the system is operated.
- TEF-ME-OPPM-G Customer Overpressure Protection System for Receipt Meter Station Annual Maintenance Review Form (Annual Maintenance Review Form)– To be completed annually as part of the CER requirement or as requested from TC Energy.
- TEF-ME-OPPI-G Verification of Customer Facility Isolation for Receipt Meter Station – Request for Information Form (Isolation Form)– To be completed after the Application for Disconnection of Service for isolated, decommissioned or deactivated facilities once proof of isolation can be provided.

### Where can I find these forms?

The forms can be found on the TC Energy website at:

<http://www.tccustomerexpress.com/overpressure-protection.html>

The Application for Disconnection of Service (AFDS) form can be found at:

[http://www.tccustomerexpress.com/docs/ab\\_contracts/ngtl-application-for-disconnection-of-service-afds-form.pdf](http://www.tccustomerexpress.com/docs/ab_contracts/ngtl-application-for-disconnection-of-service-afds-form.pdf)

Or you can request a form via email: [opp\\_submissions@tcenergy.com](mailto:opp_submissions@tcenergy.com)

### How often will these forms need to be completed?

The CER requires an annual evaluation as part of the program. Pressure control and pressure limiting devices are required to be inspected and assessed within each calendar year, and within 18 months, so this allows for enough time to make necessary changes, and provide TC Energy with the updated information.

### What is the deadline for sending the forms in?

TC Energy has many facilities to evaluate each year, so the sooner we can evaluate yours, the better. But we have set a deadline for **September 30<sup>th</sup>** of each year to allow enough time for turnarounds to be completed and any new changes to be captured.

### Do I need the calibration technician to sign the form?

Calibration reports usually contain the signature of the technician who calibrated or inspected the device. Attaching the calibration report in that case is sufficient and you do not need the technician to sign the form as well.

## PC and OPP

### What do PC and OPP involve?

This creates some confusion as OPP includes **two** layers of protection, namely Pressure Control (PC) devices and Overpressure Protection (OPP) devices. PC and OPP devices work independently from each other to ensure overpressure events do not occur.

The **two** layers of protection, both of which needs to be verified are:

- First layer of protection – Pressure Control
  - Functions independently from the Overpressure Protection
  - Set up to 100% of the Maximum Contract Pressure (MCP)
  - Consideration for accuracy must be taken
  
- Second, final layer of protection – Overpressure Protection
  - Functions independently from the Pressure Control
  - Set up to 110% of the Maximum Contract Pressure (MCP), not less than the PC
  - Fails in a condition as to protect downstream facilities
  - Consideration for accuracy must be taken

### Which devices are acceptable by TC Energy for PC/OPP?

Here are some of the possible PC and OPP devices, a combination of which may be acceptable:

- Pressure Control (PC)
  - Compressor High Pressure Shutdown
  - Compressor Speed Control
  - Compressor Recycle Valve
  - Pressure Control Valve
  - Flow Control Valve
  - Emergency Shutdown Valve
- Overpressure Protection (OPP)
  - Compressor High Pressure Shutdown
  - Pressure Control Valve
  - Pressure Safety/Relief Valve
  - Emergency Shutdown Valve
  - Pressure Control Valve to Flare
  - Blowdown Valve

**Note:** The same device cannot be used for both PC and OPP; it must be separate devices delivering two layers of protection, each operating independently from the other.

### Is the accuracy of the devices a concern?

Yes, CSA Z662 requires the following:

*Clause 10.9.5.5 – Pressure-limiting and pressure-relieving systems (or devices) shall be set at or below the correct pressure, with accuracy of the devices and test instruments taken into account.*