



Power & Energy Solutions Emergency Management Program

MANUAL

Jurisdiction CAN-US

Framework Element Element 11 Emergency, Business
Continuity, & Security Management

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PURPOSE

The purpose of the Power and Energy Solutions (PES) **Emergency Management Program Manual (EMPM)** is to establish TC Energy's governance and framework for emergency management within Power and Energy Solutions (PES). This manual aligns with TC Energy's Operational Management System (TOMS), *TOMS Emergency, Business Continuity, and Security Management (E11) Element Standard (CAN-US-MEX)* (Item ID [CD90000704](#)). The Emergency Management Standard defines the requirements necessary to protect people, the environment, and property, this manual describes how those requirements are implemented.

While the Standard encompasses all three disciplines (Emergency Management, Business Continuity and Security Management) each is supported by a distinct Program Manual. Accordingly, this Program Manual addresses only Emergency Management, with separate manuals available for Business Continuity and Security Management.

The security of TC Energy's pipeline systems and facilities is managed under the *Corporate Security Program Manual (CAN-US-MEX)* (Item ID [014155455](#)). This program addresses threats such as theft, sabotage, terrorism, labour disruptions, and protests that could impact the integrity or operation of Canada Onshore Gas assets.

Physical asset security is evaluated in accordance with the *Security Risk Assessment Standard (CAN-US-MEX)* (Item ID [1020373656](#)) and the *Critical Facility Identification Procedure (CAN-US-MEX)* (Item ID [007044373](#)), which align with CSA Z246.1 – Security Management for Petroleum and Natural Gas Industry Systems. Facilities are classified as critical, discretionary, or non-critical to determine security plan requirements.

Cyber threats to pipeline control systems are managed separately under TC Energy's [Cybersecurity Policy](#) and supporting standards.

SCOPE

This Emergency Management Program Manual references all aspects of emergency preparedness and response and supports all practical activities to ensure public safety, regardless of the cause of the emergency or assignment of fault. This Manual will outline PES guidance related to emergency preparedness and management to prepare for and respond to PES related emergencies.

EXCEPTIONS/VARIANCE

Deviations from the management system elements follow a structured approach of identifying risk, assessing risk, documenting and approving deviation decisions, and monitoring the results of those decisions. The deviation process is described in the *TOMS Deviation Discipline Process (CAN-US-MEX)* (Item ID [CD90001041](#)).

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1 PLAN

1.1 TC Energy TOMS Management System

Power and Energy Solutions (PES) adheres to the requirements outlined in the *TOMS Emergency, Business Continuity, and Security Management (E11) Element Standard (CAN-US-MEX)* (Item ID [CD90000704](#)).

1.2 Hazard Identification and Mitigation

PES identifies hazards (both from internal and external sources) which may result in an emergency affecting TC Energy’s operations and reviews the identified hazards through a risk assessment to determine their likelihood and the nature and scope of their consequence. Risk assessments are used to develop and/or amend additional appropriate barriers, such as emergency response plans, to mitigate impacts of the hazard.

PES abides by the Risk Management (RM), which is Element 2 of TC Energy’s Operational Management System, *TOMS Risk Management (E2) Element Standard (CAN-US-MEX)* (Item ID [CD90000700](#)). This Element provides a consistent approach to identify, actively manage, and monitor hazards and risks that could affect TC Energy’s ability to achieve our objectives. The Element provides a process that is implemented across TC Energy that integrates our values and the principles of consistency, clear accountability, and transparency to support informed decision making. *Risk Management RM Standard (CAN-US-MEX)* (Item ID [008749510](#)) and *Risk Management RM Procedure (CAN-US-MEX)* (Item ID [008717335](#)).

Below is an overview of the Risk Management Procedure as applied to Emergency Management for Power and Energy Solutions.

1. **Establish Context** – Define scope, objectives, and criteria.
2. **Identify Hazards** – Recognize potential events or conditions that could cause an emergency.
3. **Identify Risks**- Determine which hazards could impact objectives.
4. **Analyze Risks** – Assess likelihood and consequence to understand risk level.
5. **Evaluate Risks** - Compare results to risk tolerance and prioritize treatment.
6. **Treat Risks** - Implement actions to reduce or control risk.
7. **Monitor and Report** - Track effectiveness and report results.

Public Awareness is an integral component of the program, promoting education and engagement with the affected public, contractors, emergency responders, and local officials. This outreach ensures understanding of pipeline safety, regulatory obligations, and safe excavation practices.

Through consistent engagement, compliance with regulatory requirements, and continual improvement, the *TC Energy Damage Prevention Program (CAN-US-MEX)* (Item ID [009830940](#)) supports the overarching goals of mitigation and prevention.

1.3 Projects EM Requirements

Projects must also adhere to the Project Delivery System (PDS), which provides the framework for project execution and mandates the development of emergency response plans and supporting deliverables. This includes requirements for Emergency Response Plans and processes in adherence to PDS.

1.4 Emergency Response Plans

Information pertaining to the PES Emergency Management Program can be found on the SharePoint site [Power & Energy Solutions Emergency Management](#). This Emergency Management Program Manual is the current **Tier 1** Program document, while PES maintains the following Tier 2 and 3 Emergency Response Plans:

Tier 2: TC Energy has several Tier 2 Emergency Response Plans (ERPs). These Tier 2 Plans provide specific informational resources (contact information, procedures, maps, etc.) which apply to an entire line-of-business or country of Operations. Tier 2 Plans are expected to be reviewed by TC Energy Regulatory Compliance and other internal stakeholders as well as being available to regulators. The general outline and specific contents of each section are prescribed in prescribed in the *Tier 2 Emergency Response Plan Development and Maintenance Procedure* (Item ID [013673254](#)).

Tier 3: Even where a Tier 2 Plan exists, a Tier 3 Plan provides more specific instruction or focus on a specific facility. Tier 3 plans can be developed using the Emergency Response Plan Template *Tier 3 Emergency Response Reference Template* (Item ID [65657283](#)) and are wholly maintained by Operations in accordance with the *Tier 3 Emergency Response References (CAN-US-MEX)* (Item ID [1017375940](#)).

Table 1-1: PES Emergency Response Plans

Tier 2 ERPs	Tier 3 ERPs
<p>Canadian Gas Storage</p> <ul style="list-style-type: none"> • <i>Gas Storage Emergency Response Plan (CAN)</i> (Item ID CD90000247) <p>Power Generation</p> <ul style="list-style-type: none"> • <i>Power Generation Emergency Response Plan (CAN)</i> (Item ID 1017338547) 	<p>Power Generation</p> <ul style="list-style-type: none"> • Bear Creek Response Zone Annex • Carseland Response Zone Annex • Grandview Response Zone Annex • MacKay River Response Zone Annex • Redwater Response Zone Annex • Bécancour Emergency Response Plan (English) • Bécancour Emergency Response Plan (French) • Blue Cloud Emergency Operations Plan • Fluvanna Emergency Operations Plan • Saddlebook Solar – Spark Power <p>Canadian Gas Storage</p> <ul style="list-style-type: none"> • Crossfield Facility Response Zone Annex • Edson Facility Response Zone Annex

1.5 Media, Stakeholder and Rightsholder Engagement

Activities involving Stakeholder and Rightsholder engagement outside of the Risk Management process outlined above are conducted through the Public Awareness Program outlined on their SharePoint site [Public Awareness](#) and their Program Manual *TC Energy Public Awareness Program (CAN)* (Item [1016111195](#)).

The Public Awareness Program is managed through TC Energy’s Communications Department in collaboration with Land, Indigenous Relations, and Community Relations representatives. The program promotes understanding of TC Energy’s operations, pipeline safety, and emergency procedures among stakeholders, including landowners, residents, Indigenous groups, communities, and emergency officials.

All media inquiries are directed to [TC Energy Communications/Media Relations](#) (403-920-7859). Only authorized representatives—typically the PIO or designated spokesperson—may engage with media or issue public statements. TC Energy coordinates, when possible, joint media releases and stakeholder updates with relevant regulatory agencies to ensure consistent messaging.

1.6 Our Commitment

Safe, reliable and sustainable operations are foundational in everything we do – in our culture, our decision-making, with Indigenous groups, landowners, stakeholder engagements and partnerships. It starts with our core values of Safety in Every Step, Personal Accountability, One Team, and Active Learning. We uphold these values in our sustainability commitments. More information and a copy of our Commitment Statement can be found [Our Commitment Statement](#).

2 RESOURCE

2.1 Resource Identification & Availability

Effective emergency response requires timely access to personnel, equipment, and materials. Each facility within Power & Energy Solutions is responsible for ensuring adequate and compliant response resources are available and can be mobilized in a timely manner. This may include company resources, contract resources, public resources along with strategically locating staff and equipment, establishing contracts or mutual aid agreements to close resource gaps.

PES abides by the Emergency Response Plans listed above outline the process for identifying and verifying competent resources (personnel, equipment, mutual aid) including references to facility equipment lists. More information regarding resourcing can be found through the Supply Chain SharePoint site [Supply Chain Governance and Process](#).

Response assistance agreements are formal understandings between TC Energy and external parties regarding emergency support. These agreements outline the intention to provide services, equipment, or personnel—either unidirectionally or reciprocally. The scope of obligations may range from “best-effort” support to more formalized, guaranteed assistance. The [Emergency Management Assistance Agreement Template](#) is used to facilitate the development of Mutual Emergency Management Assistant Agreements.

3 RESPONSE

3.1 Incident Command System

To effectively manage emergencies PES has an integrated all-hazards approach, risk management and detailed emergency response plans to be able to mitigate and respond to any emergency through their Incident Management Team (IMT). PES uses the **Incident Command System (ICS)** derived from ICS Canada. ICS is a standardized on-scene emergency management system that has considerable flexibility, has been found to be cost-effective and efficient, and can be applied to both emergency and non-emergency events.

ICS is based on the knowledge that every emergency has certain major management activities that must be performed. Even if the event is very small and only one or two people are involved, these activities will always apply to some degree.

PES response priorities are (L.I.P.S.):

- Life Safety
- Incident Stabilization
- Preservation of Property and Environment
- Stakeholder Communication

In the Incident Command System, a **Unified Command (UC)** is an authority structure in which the role of Incident Commander is shared by two or more individuals (inclusive of TC Energy), each already having authority in a different responding organization/agency. Unified Command is one way to carry out command in which responding organizations/agencies and/or jurisdictions with responsibility for the incident share incident management. A UC may be needed for incidents involving multiple jurisdictions or agencies.

More information regarding PES Emergency Response Plans, Responder Checklists, ICS documentation and Everbridge response software can be found on the PES Emergency Management SharePoint site [Power & Energy Solutions Emergency Management](#).

3.1.1 Quebec Emergency Coordination Model

Emergency management in Quebec operates under a distinct **Emergency Site Management (ESM)** system rather than the Incident Command System (ICS). This historic, consensus-based approach governs how agencies and industry partners—such as TC Energy—coordinate during an emergency response.

3.2 Workforce Accountability

PES leverages Everbridge software to provide our workforce with time-sensitive safety messages and direction during severe weather, security events, or business continuity situations as well as to stand-up emergency teams during a response activation. More information can be found on the [Emergency Management Response software](#) SharePoint site. The TRAC2 is also the Threat Response Analysis and Communication Centre providing 24/7 support to operations teams. PES leverages facility emergency plans, Everbridge, and

the TRAC2 as mechanisms in tracking and supporting their personnel. More information for the TRAC2 can be found [here](#).

4 TRAINING AND EXERCISE STRATEGY

4.1 Training

Power & Energy Solutions maintains a structured Emergency Management (EM) Training Program to ensure that all personnel with emergency roles are qualified, trained, and capable of performing their responsibilities safely and effectively.

Abiding by TOMS Element 03 Competency & Training as outlined in the *TOMS Competency and Training (E3) Element Standard (CAN-US-MEX)* (Item ID [CD90000702](#)), PES ensures people are qualified, trained, and deemed competent to perform their jobs safely.

Table 4-1: Training and Frequency

Course	Frequency
Company First Responder	Company First Responder
ICS 100	ICS 100
ICS 200	ICS 200
Position Specific: PSC, IC, SOFR, LOG	Position Specific: PSC, IC, SOFR, LOG
Enterprise Position Specific: PIO, LOFR, ALOFR	Enterprise Position Specific: PIO, LOFR, ALOFR

4.2 Drills and Exercises

Drills and Exercises are planned and conducted based on hazards and identified scenarios based on real events and lessons learned. The drills and exercises outlined in this document includes participation in other exercises, TC Energy-led drills, coordination and conduct of drills, and recordkeeping. Exercises are designed to test the ERP, test exercise objectives, validate training and role competency, and identify areas for improvement through a debrief process.

Table 4-2: Drill and Exercise Frequency

Drills/Exercises	Frequency
Company First Responder Tabletop	Annual
Full-scale Exercise	Annually, rotating across 3 fully owned and operated facilities (Crossfield/Edson/Bécancour)
Everbridge Test Notification Drill	Semi-monthly
Ops IST Test Notification Drill	Quarterly

4.3 Debrief and Lessons Learned

An after-action review debrief is a systematic approach to evaluating emergency responses, focusing on what occurred, the underlying reasons, and opportunities for

improvement. The objective is to analyze the effectiveness of procedures without attributing fault to individuals, while identifying strategies to strengthen Emergency Response Plans and training programs.

Formal debriefings emphasize achievements, pinpoint areas needing enhancement, and recommend actions for ongoing improvements in ERP, training, or exercises. The goal of this process is to determine measures that reinforce positive outcomes and prevent future issues.

This evaluation includes:

- Assessing the efficiency and effectiveness of TC Energy’s response in meeting outlined goals and objectives
- Reviewing the implementation of response management systems, specialized procedures, and emergency response plans
- Prioritizing TC Energy Response Goals (LIPS: Life Safety, Incident Stabilization, Property & Environment Preservation, Stakeholder Communications)

4.4 Recordkeeping

Effective recordkeeping is essential to the integrity and regulatory compliance of the Emergency Management Program. TC Energy utilizes a suite of enterprise systems to ensure that emergency management documentation, training records, and post-incident learnings are securely stored, accessible, and auditable.

- 4.4.1 **Training Records** are maintained through the Learning Management System (LMS) in Workday, which captures completion data for emergency response courses, including those aligned with the Emergency Management Training Matrix and Course Standards Register. This ensures personnel meet competency requirements and that training is traceable for regulatory and internal audits. [[Workday](#)]
- 4.4.2 **Controlled Document Library (CDL)** serves as the central repository for all controlled emergency management documents, including Emergency Response Plans (ERPs), procedures, and work aids. The CDL supports the Management of Change (MoC) process, ensuring that revisions are tracked and approved in alignment with TC Energy’s Operational Management System (TOMS). Emergency Preparedness Coordinators (EPCs) are responsible for maintaining ERP documentation within CDL. [[Controlled Document Library](#)]
- 4.4.3 **OpenText** is used to manage and archive Emergency Management documentation, including Tier 2 and Tier 3 ERP development and maintenance procedures. It supports document versioning and access control, ensuring that only the latest approved materials are used in field operations. [[OpenText](#)]
- 4.4.4 **Enablon** is the designated platform for capturing **post-incident information** and **exercise debriefs**. It supports the second step of the Incident Management Process—Record—and enables the documentation of incidents, near hits, HSE observations, and exercise outcomes.

Lessons learned and corrective actions are tracked to promote continuous improvement and compliance with regulatory expectations. [\[ENABLON\]](#)

Under Element Standard 11: *TOMS Emergency, Business Continuity, and Security Management (E11) Element Standard (CAN-US-MEX)* (Item ID [CD90000704](#)), TC Energy mandates that all emergency management records—including training, exercises, incidents, and ERP updates—be maintained in systems that support traceability, accessibility, and integration with broader risk and compliance frameworks. Metrics such as the percentage of drills with documented lessons learned and ERP review frequency are used to assess the maturity and effectiveness of recordkeeping practices.

5 REFERENCES

5.1 Terms and Definitions

The following table provides definitions for key terms used within this document.

Table 5-1: Terms and Definitions

Term	Definition
PES Emergency Management Program	A consistent and effective approach to emergency management that adheres to all legal requirements or regulations and internal conformance to TOMS Element 11
Hazard Identification and Mitigation	The process of identifying hazards (both internal and external) that may result in an emergency affecting operations, and reviewing these hazards through a risk assessment to determine their likelihood and the nature and scope of their consequence
Incident Command System (ICS)	A standardized on-scene emergency management system that is flexible, cost-effective, and efficient, and can be applied to both emergency and non-emergency events
Tier 2 Emergency Response Plans (ERPs)	Plans that provide emergency management information which apply to an entire line-of-business or country of operations
Tier 3 Emergency Response Plans (ERPs)	Plans that provide more specific information or focus on a specific facility, even where a Tier 2 Plan exists, including maps, contact information, Emergency Planning Zone information etc.
Drill	A short, focused activity that tests a specific task or procedure—like making a notification call or deploying equipment.
Tabletop Exercise	A discussion-based session where team members talk through a simulated emergency scenario to review plans and roles without any physical activity.
Functional Exercise	A simulated emergency conducted in real time, where participants respond as they would in a real event, but without deploying people or equipment in the field.

Term	Definition
Full-Scale Exercise	A realistic, hands-on simulation involving actual deployment of personnel and equipment, often including multiple agencies and jurisdictions.

5.2 External and Internal References

This document relies on a number of references to regulation, industry codes and standards, general industry guidance and internal references, as outlined in Table 3-2 and Table 3-3. Latest versions of all TC Energy controlled documents can be accessed from the [Controlled Document Library](#).

Table 5-2: External References

Organization	Title
Alberta Energy Regulator (AER)	Directive 071, 2023
Canadian Standards Association (CSA)	Z246.2:23 (Emergency Preparedness And Response For Petroleum And Natural Gas Industry Systems)
Environment and Climate Change Canada (ECCC)	Z341.1:23 (Storage Of Hydrocarbons In Underground Formations)
Quebec Civil Protection Act	Z662:23 (Oil And Gas Pipeline Systems)

Table 5-3: Internal References

Title	Item ID
Our Commitment Statement	n/a
<i>Contingency Planning Process (CDN-US-MEX)</i>	1015904227
<i>Controlled Document Library Standard (CAN-US-MEX)</i>	013841259
<i>Controlled Document Library Variance Procedure (CDN-US-MEX)</i>	007728702
<i>Controlled Document Management of Change Procedure (CANUS-MEX)</i>	1013436424
<i>Corporate Security Program Manual (CAN-US-MEX)</i>	014155455
<i>Critical Facility Identification Procedure (CAN-US-MEX)</i>	007044373
Emergency Management Assistance Agreement Template	n/a
<i>Establish and Monitor Goals Objectives and Targets (CAN-USMEX)</i>	008958835
<i>Gas Storage Emergency Response Plan (CAN)</i>	CD90000247
<i>Incident Recording Procedure (CAN-US-MEX)</i>	1020314675
<i>Legal Requirements Monitoring Process (CAN-MEX)</i>	009264333
<i>Nonconformance and Opportunity for Improvement Procedure (Cdn-US-Mex)</i>	006261835
<i>Operational Risk Matrix – Users Guide (CAN-US-MEX)</i>	1020421071
<i>Physical Security and Security Systems Standard (CAN-US-MEX)</i>	1020373672

Title	Item ID
Power & Energy Solutions Emergency Management	n/a
<i>Power Generation Emergency Response Plan (CAN)</i>	1017338547
<i>Risk Assessment Standard (CAN-US-MEX)</i>	1020373656
<i>Risk Management RM Standard (CAN-US-MEX)</i>	008749510
<i>Risk Management RM Procedure (CAN-US-MEX)</i>	008717335
TC Energy's Code of Business Ethics (COBE) Policy	n/a
<i>TC Energy Damage Prevention Program (CAN-US-MEX)</i>	009830940
<i>TC Energy Public Awareness Program (CAN)</i>	1016111195
<i>Tier 2 Emergency Response Plan Development and Maintenance Procedure</i>	013673254
<i>Tier 3 Emergency Response References (CAN-US-MEX)</i>	1017375940
<i>Tier 3 Emergency Response Reference Template</i>	65657283
<i>TOMS Risk Management (E2) Element Standard (CAN-US-MEX)</i>	CD90000700
<i>TOMS Competency and Training (E3) Element Standard (CAN-US-MEX)</i>	CD90000702
<i>TOMS Emergency, Business Continuity, and Security Management (E11) Element Standard (CAN-US-MEX)</i>	CD90000704
<i>TOMS Deviation Discipline Process (CAN-US-MEX)</i>	CD90001041

6 DOCUMENT HISTORY

Rev.	Description	Effective Date
00	New document.	2025-Dec-19
	Rationale Statement	Document Contact
	This document was developed to address the TOMS Emergency, Business Continuity, and Security Management (E11) Element Standard (CAN-US-MEX) requirements.	Derek Hyland
	Impact Assessment Summary	Document Owner
	No material impacts identified this document was developed to support the retirement of the Emergency Management Corporate Program Manual and to meet the requirements outlined in TOMS Emergency, Business Continuity, and Security Management (E11) Element Standard (CAN-US-MEX).	Power & Energy Solutions HSE & Compliance

7 DESCRIPTION OF CHANGE

Reviews and approvals have been captured on review and approval checklists and attached to the Controlled Document Library (CDL) Document Management of Change (DMOC) record.

Description of Change	This is a new document. This document was developed to address the TOMS Emergency, Business Continuity, and Security Management (E11) Element Standard (CAN-US-MEX) requirements.
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