

Assessing Emergency Towing Vessel Availability in Canada

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About Us

Clear Seas is a Canadian not-for-profit organization that provides independent fact-based information to enable governments, industry, and the public to make informed decisions on marine shipping issues. We work to build awareness and trust so that all people can feel a part of the marine sector. Our vision is a sustainable marine shipping sector that is safe, vibrant, and inclusive, both now and for future generations.

Clear Seas' research and publications are made available at clearseas.org

About This Report

Clear Seas completed research on Emergency Towing Vessels (ETVs) to assess the availability, capability, and market conditions of vessels that could provide emergency towing services within Canadian waters. Building on an earlier 2018 study focused on the Pacific Coast, this research expands the scope nationally to include all of Canada. The analysis combined a database

of towing companies and vessels with input from industry through interviews and requests for information. The outcomes of this research will support decision-makers in evaluating options for securing reliable towing capacity to enhance marine safety and environmental protection in Canada.

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Acronyms and Abbreviations

AHTS	Anchor Handling Tug Supply
BP	Bollard Pull
CCG	Canadian Coast Guard
ETV	Emergency Towing Vessel
OPA90	Oil Pollution Act of 1990
WCMRC	Western Canada Marine Response Corporation

Executive Summary

Canada's coasts and inland waterways support some of the busiest and most diverse marine traffic in the world, from large trans-Pacific container ships to tankers moving through the St. Lawrence and smaller vessels operating in increasing numbers in the Arctic. Exports of both crude oil and LNG are increasing because of recent development projects, contributing to growing tanker traffic on the Pacific coast. The risk presented by the unpowered drift and grounding of a vessel following an engine failure can only be truly mitigated by an emergency towing vessel (ETV) with sufficient capacity to rescue the drifting vessel and prevent a disaster. Recognizing these risks, Clear Seas undertook this study to assess Canada's current and future ETV capacity.

This study assesses the availability and market conditions for ETVs across Canada. Building on a series of 2018 reports that focused on vessel drift risks on the Pacific Coast, this research expands the scope to include the Atlantic, Arctic, Great Lakes, and St. Lawrence regions. The study combined a desk-based review of vessel capacity with direct engagement with towing companies and other industry experts. A database of capable vessels (with 150-220 tonnes bollard pull) was compiled and validated through expert interviews and requests for information. These discussions provided additional insights into operational challenges, cost structures, and the conditions under which companies might make vessels available for emergency response.

WHAT WE LEARNED

- Many countries maintain dedicated emergency towing vessel (ETV) service either through government-owned assets or a long-term contract with a private contractor.
- Contracting ETVs on a short-term lease (<3 years) is expensive because owners need to apply a risk premium to make sure they recover their investment.
- ETVs capable of rescuing large container ships or LNG tankers are rare. Ones with ice capability are rarer still.
- Relying on "Vessels of Opportunity" for emergency response is not a realistic option - Canada's Arctic, Atlantic and Gulf of St. Lawrence regions are particularly lacking in suitable and available ETVs.
- Modifying Canada's emergency response legislation to be comparable with the US Oil Protection Act will not address the lack of capable, available towing vessels in Canadian waters.
- Canada has an opportunity to modify existing icebreakers with towing winches to be dual purpose vessels operating as Arctic ETVs in the summer and Atlantic ETVs in the winter, with trained response crews contracted from Canadian towing operators.

The results confirm that while some capable vessels are present in Canadian waters, their availability is constrained by long-term commercial commitments. Geographic coverage is uneven, with some capacity in the Pacific but significant gaps in the Arctic and Atlantic. Industry

participants emphasized that “tugs of opportunity” – where a vessel in distress calls on a nearby vessel for aid in an emergency – should not be assumed to be available in an emergency, as redeployment is often impractical.



The analysis also showed that cost is a barrier because spot charter rates of around \$40,000 per day are common. Operators stressed that reliable, long-term contracts of at least five years, and ideally ten, would be needed for vessels to be dedicated to ETV service. Some responses highlighted hybrid models, where vessels continue commercial work while remaining on standby, as a viable path forward.

Overall, the study demonstrates that Canada’s emergency towing capacity is limited but can be strengthened. Solutions include contracting arrangements that secure dedicated or hybrid coverage, expanding the definition of ETVs to include multi-purpose vessels, and targeting regional gaps, particularly in the Atlantic offshore and the Arctic, where risks are highest.

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Assessing Emergency Towing Vessel Availability in Canada

1.0 Introduction

Emergency towing vessels (ETVs) play a critical role in systems designed to keep ships safe at sea. When a vessel experiences a malfunction and becomes disabled, it can drift toward the shore or other hazards, creating the risk of a serious accident. ETVs can help prevent accidents by arriving on scene, securing a towline, and guiding the vessel to a safe location. ETVs can provide additional emergency response services such as firefighting, pollution response support, and search and rescue assistance. Whether an ETV can respond effectively depends on several factors, including proximity to the incident, the ability to reach the vessel in prevailing conditions, towing equipment, crew training, and overall towing power. Large commercial vessels, especially ships with high windage like vehicle carriers and container ships, require ETVs to have significant bollard pull and adequate seakeeping ability. Seakeeping is a measure of a vessel's capacity to remain stable, safe, and carry out its intended task in rough ocean conditions.

In this study, Clear Seas engaged with Canadian and international towing vessel operators to understand the range of response services available for large vessels in Canadian waters. The objective was to develop a comprehensive overview of potential ETVs, including their capabilities and availability to respond to emergencies in each of Canada's marine regions.

1.1 Research Objectives

The purpose of this study is to assess the availability, capability, and market conditions of ETVs across all Canadian waters as of Fall 2025. As ETVs may be one of the first responders to vessels in distress, this project also considers the firefighting capacity of ETVs. By collecting information from service providers on their fleet, towing operations, and regional availability, the study aims to present a comprehensive overview of current emergency response capacity. The findings will help identify providers that could respond in emergencies to prevent disabled vessels from drifting into potentially hazardous situations.

1.2 Research Approach

This study was carried out by the Clear Seas research team. The scope of the study is Canada-wide, encompassing both domestic and international vessels that operate, or could operate, in

Canadian waters. While the technical analysis emphasizes vessels with sufficient bollard pull and firefighting capability, the research also considers broader operational and market factors, such as contractual arrangements, industry interest in service expansion, and regional coverage gaps.

Clear Seas completed this nation-wide market assessment of ETV capability by:

- Gathering data from Canadian and international marine towing companies.
- Assessing vessel capabilities, availability, and geographic reach.
- Analyzing costs and business models for emergency towing service delivery.
- Examining firefighting capabilities aboard candidate vessels.
- Summarizing the findings in this comprehensive report.

1.3 Report Structure

Section 2.0 provides background on Canada's emergency towing capacity, building on the 2018 Pacific Coast needs assessment and setting the context for this national study. It highlights evolving maritime conditions across Canadian waters and emphasizes the critical importance of ETV availability.

Section 3.0 outlines the methods used to gather and validate information. This includes desktop research to build a database of companies and vessels (Section 3.1) and industry outreach through interviews and requests for information to supplement and confirm the data (Section 3.2).

Section 4.0 presents the results of the study, including the companies and vessels identified, their technical capabilities and geographic distribution, and preliminary insights from industry engagement.

Sections 5.0 and 6.0 provide a discussion of the findings, examining the implications for Canada's future ETV requirements, regional coverage gaps, and market considerations.

2.0 Overview of ETVs

2.1 Characteristics of Emergency Towing Vessels (ETVs)

ETVs are specialized tugboats that are available and able to provide critical help when ships are in danger at sea. When a vessel loses power, suffers equipment failure, or is pushed off course by bad weather, it can begin to drift toward hazards such as rocky shores, busy shipping lanes, or ecologically sensitive coastline. This is where an ETV steps in: it travels to the vessel in distress, secures a tow line to the disabled ship and pulls it to a safe place so that damage, pollution, or further risk to crew and environment can be avoided. These vessels are built to operate in difficult sea conditions and must have strong engines, robust towing gear, and well-trained crews.

2.1.1 ETV Capability

Bollard pull is the most often used measure of a tug's capability, defined as the maximum force in metric tonnes that a tug can exert when pulling against a fixed object. Larger ETVs with greater bollard pull also tend to have greater seakeeping ability. Clear Seas' 2018 needs assessment study determined that ETVs typically need a bollard pull of at least 150 tonnes to successfully assist most ships in rough ocean conditions.¹ As shown in Figure 1, in the very worst (99th percentile) ocean conditions, large and very large container ships would require rescue by ETVs with 180 and 210 tonnes of bollard pull, respectively.²

¹ (International Maritime Organization, 1998).

² The ship sizes presented in Figure 1 are defined as follows:

- Large Container Ship (14,500 TEU or twenty-foot equivalent unit)
- Very Large Container Ship (21,413 TEU)
- LNG Carrier (~265,000 m³)
- Vehicle Carrier (138,000 m³)
- Passenger Ship (~4,000 passengers)
- Bulk Carrier (221,478 m³)
- Aframax Tanker (124,167 m³)

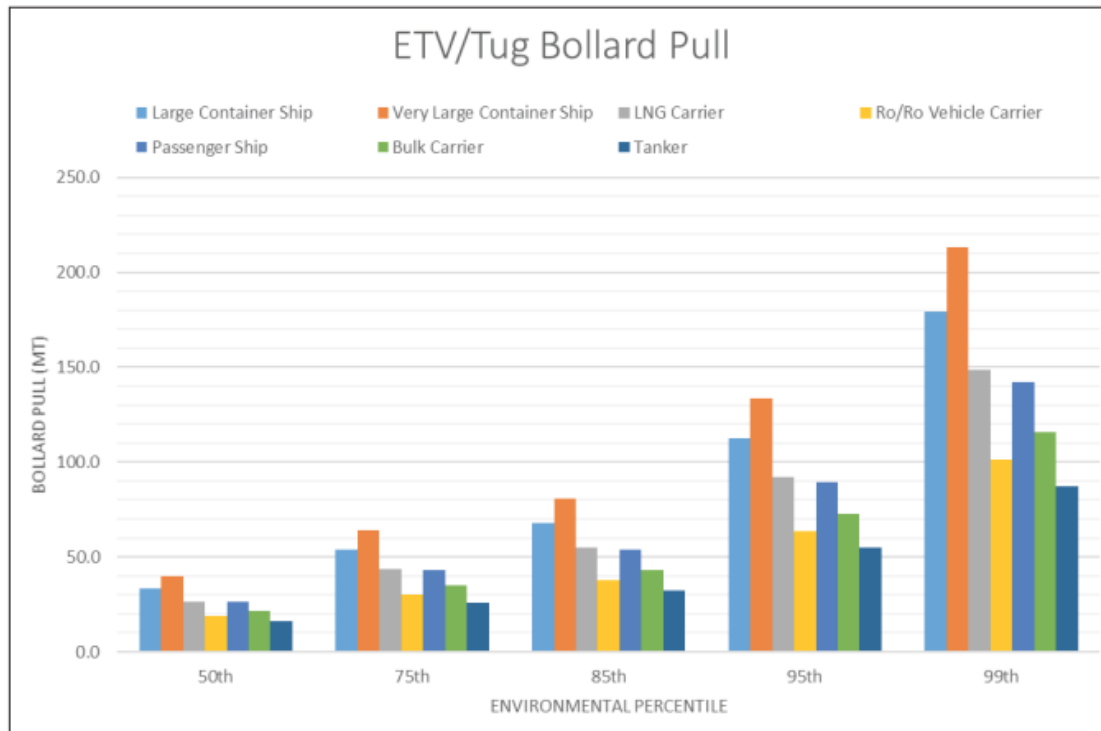


Figure 1 ETV bollard pull required in response to weather conditions

2.1.2 ETV Availability

The effectiveness of an ETV is determined not only by its design and towing power but also by its availability when and where it is needed. Even the most capable tug is of limited value if it cannot reach a disabled vessel before it drifts into danger. Response time is shaped by several factors including the vessel's home port or standby station, its readiness and crew status, and its operational commitments at the time of an incident.

In some countries or regions, dedicated ETVs are contracted to be available around the clock to provide emergency response as needed. In other places, tugs working in commercial trade may be called on to assist in an emergency, even though they are not primarily intended for emergency response. If they happen to be nearby and can be made available, these "tugs of opportunity" can play a critical role in responding to a ship in distress.

Relying solely on tugs of opportunity presents significant challenges. Their deployment is uncertain, as they may be unavailable due to distance or commercial commitments, and their capability may not be sufficient for the task. This uncertainty creates gaps in the system of marine response if tugs of opportunity are the primary response option. Dedicated ETVs, in contrast, provide a more robust system of response: their known capability, crew

preparedness, and geographic placement allow them to be mobilized rapidly under adverse conditions.

2.1.3 Types of ETVs

While this report focuses on high capacity ETVs, defined as greater than 150 tonnes bollard pull (BP), which are primarily anchor handling tug supply (AHTS) vessels, there are a variety of vessel types that can function as ETVs in different conditions.

Anchor Handling Tug Supply (AHTS) Vessels

These vessels are designed for offshore energy operations, particularly repositioning drilling rigs. Their powerful winches, high bollard pull, and excellent seakeeping characteristics make them well suited for performing emergency towing tasks when appropriately equipped. In Canadian waters, these vessels are used extensively in the Newfoundland offshore oil industry. In the Pacific region, the two existing dedicated ETVs operated by the Canadian Coast Guard (CCG), the *Atlantic Eagle* and *Atlantic Raven*, are both AHTS vessels repurposed as ETVs.



Figure 2 Example of an anchor handling tug supply (AHTS) vessel with sufficient bollard pull to act as an ETV. [Pictured: *Atlantic Raven*, bollard pull 162 tonnes]. Image [Source](#).

Ocean Going Tugs

These vessels are purpose-built for long distance towing in exposed conditions. They are robust vessels with sufficient power and endurance to assist most disabled ships offshore. However, they typically have lower bollard pull capability than AHTS vessels. One of these vessels is stationed as an ETV in Neah Bay, Washington, currently supplied by Foss Maritime Company.

Escort Tugs with Enhanced Seakeeping

These vessels are primarily built to guide tankers and other large vessels in confined coastal waters, but certain designs include additional capabilities that could allow them to function effectively in emergency scenarios. Such vessels typically demonstrate high seakeeping performance, with operability on the order of 95%, enabling them to maintain effective towage and control functions across a broad range of environmental conditions, short of extreme sea states. KOTUG Canada is introducing two such advanced escort tugs in Vancouver in 2026 to support tankers calling on the expanded Westridge Terminal. These vessels have approximately 120 metric tonnes BP, are dual-fueled, and are expected to be the most capable of their kind in Canada once operational.

Purpose-Built ETVs

These vessels are engineered specifically for emergency towing missions and incorporate features such as exceptional bollard pull, redundant systems, reinforced towing gear, and crews trained for deployment in heavy weather. No such vessels currently exist in Canada. A notable international example is the “Abeille” fleet of dedicated ETV vessels in France, such as the Abeille Bretagne. Another slightly different example is the Finnish vessel Louhi, which is a purpose-built multipurpose response vessel, including oil and chemical spill response, icebreaking, and emergency towing capabilities.

2.2 Operators in the Canadian Towing Landscape

A range of towing and offshore support companies operate in Canadian waters, from large international firms to regional operators. These companies provide services such as emergency towing, offshore supply, and oil spill response, operating across the Atlantic, Pacific, and Arctic coastlines. The following profiles highlight some of the companies active in the Canadian towing industry.

Canadian Operators

Atlantic Towing Limited

Founded in 1961, Atlantic Towing is a Canadian regional operator headquartered in Saint John, New Brunswick, and is part of the J.D. Irving Limited group. The company operates a fleet of tugs, barges, offshore supply vessels, and AHTS vessels, mainly serving Atlantic Canada and Arctic/ice-prone regions.

Horizon Maritime Services Ltd

Founded in 2015 and headquartered in St. John's, Newfoundland and Labrador, Horizon Maritime is a medium-sized regional offshore operator. It specializes in offshore supply, AHTS vessels, subsea support, and Arctic operations, with some joint ventures, including a partnership with Heiltsuk Nation called [Heiltsuk Horizon](#). The company serves all three coastlines in Canada.

KOTUG Canada

KOTUG is a family-owned international towage company headquartered in the Netherlands, with regional subsidiaries such as KOTUG Canada operating on the west coast of Canada. It provides towage, offshore support, and oil-spill response services. The Canadian subsidiary partners with WCMRC and operates specialized escort tugs and offshore support vessels.

Groupe Océan

Founded in 1972 and headquartered in Québec City, Groupe Océan is one of Canada's largest marine service providers, operating a diverse fleet of tugs, barges, workboats, and specialized marine construction vessels. The company provides harbour towage, coastal and long-distance towage, dredging, marine construction, and shipyard services. Its operations span the St. Lawrence River, Great Lakes, Arctic, and Atlantic regions, with growing international presence through its Groupe Océan subsidiaries.

McKeil Marine

Based in Burlington, Ontario, McKeil Marine is a long-standing Canadian marine transportation and project-services operator. The company operates a fleet of tugs, barges, and bulk transport vessels, supporting cargo transport, marine construction, and specialized towage across the Great Lakes, St. Lawrence, and Atlantic Canada. McKeil is known for multi-decade involvement in heavy-lift and project cargo operations and continues to serve industrial, energy, and marine infrastructure sectors throughout Eastern Canada.

HaiSea Marine

Founded in 2021 and headquartered in Kitimat, British Columbia, HaiSea Marine is an Indigenous-majority-owned joint venture between the Haisla Nation and Seaspan ULC. The company was established to provide escort tug and harbour towage services for LNG carriers calling at the LNG Canada export facility. HaiSea Marine operates a fleet of battery-electric and hybrid escort tugs, supporting LNG shipping operations along Canada's west coast. Its services include escort towage, harbour towage, and emergency response in confined coastal waterways.

International Operators

Royal Boskalis Westminster (Boskalis)

Boskalis is a large international maritime services company headquartered in Papendrecht, Netherlands, with origins dating back over 100 years. It operates over 500 vessels worldwide, including tugs, AHTS vessels, dredgers, and heavy-lift vessels. Boskalis provides ocean towage, salvage, offshore construction, and subsea support, making it one of the largest global players.

DOF Group

Established in 1981, DOF Group is headquartered in Austevoll, Norway, and operates globally through subsidiaries such as DOF Subsea. Its fleet includes AHTS vessels, platform supply vessels, and construction support vessels. The company provides offshore support, towage, subsea construction, and maintenance, with operations in Norway, UK, USA, Brazil, Canada, Angola, and Australia. The DOF Canada headquarters, which opened in 2004, are located in Paradise, Newfoundland.

Sea1 Offshore Inc.

Originally founded in 2005 as Siem Offshore and renamed Sea1 Offshore in 2024, the company is headquartered in Kristiansand, Norway. It operates a fleet of around 34 offshore vessels, including AHTS vessels, subsea support vessels, and oil-spill recovery vessels, with global operations in the North Sea, West Africa, Brazil, Canada, Australia, and Southeast Asia.

2.3 Previous Research on ETVs in Canada

In 2018, Clear Seas released the [*Emergency Towing Vessel \(ETV\) Needs Assessment*](#) for Canada's Pacific coast, undertaken by Vard Marine. That study provided the first comprehensive analysis of the requirements for dedicated emergency towing capacity in Canadian waters, with a focus on large, high-windage commercial vessels currently transiting or expected to transit the Pacific coast. It examined the forces acting on disabled vessels through a range of turning simulations with varying metocean conditions, and evaluated factors beyond bollard pull that

contribute to a capable ETV, including tug size, speed, endurance, seakeeping, and crew capability. The report established a foundation for understanding the technical, operational, and risk-based considerations involved in providing Canada with the capability to prevent disabled ships from drifting aground in sensitive coastal areas.

In addition to that work, other Clear Seas research projects have contributed important insights to understanding Canada's towing and marine emergency response landscape. [Vessel Drift and Response Analysis for Canada's Pacific Coast](#) explored how quickly disabled ships can drift under real weather and ocean conditions. The study went beyond other previous analyses on tankers to consider high windage vessel types and demonstrate these vessels can drift faster and require more response capacity than laden tankers. The results highlighted the need for capable, strategically located towing vessels to provide a layer of safety for the marine environment.

[Availability of Tugs of Opportunity in Canada's Pacific Region](#) assessed the capability and transit patterns of the commercial tugs operating on the West Coast to understand whether they could be relied on during an emergency. The study identified few tugs with sufficient towing power, meaning these vessels are unlikely to be an adequate primary response option.

Clear Seas also published an article "[Emergency Towing Vessels: Providing a Lifeline to Safety for Ships in Distress Around the World](#)", which reviewed how other countries manage emergency towing. Some coastal nations use dedicated ETVs as part of their marine safety systems, showing how Canada's approach differs from international practices.

Since the publication of this research, Canada's marine transportation system has continued to evolve. Vessel traffic volumes have grown and diversified, influenced by new trade agreements, energy and resource export projects, and ongoing expansion of shipping.^{3,4,5} At the same time, climate change is altering environmental conditions across the country's coasts and waterways, amplifying the frequency and severity of extreme weather events that increase the likelihood of propulsion or steering failures becoming emergencies.⁶ These developments highlight the need to revisit previous research on towing with a broader, national lens. A new national assessment can help identify where towing capacity exists today, where gaps may be forming, and what level of preparedness is needed to keep Canada's coasts safe in the years ahead.

³ (Clear Seas, 2025)

⁴ (St. Lawrence Seaway Management Corporation, Great Lakes St. Lawrence Seaway Development Corporation, 2024)

⁵ (CBC, 2024)

⁶ (Berg, Hirdaris, & Ćatipović, 2024)

2.4 Regulations

Under the Canada Shipping Act, 2001, there is no explicit requirement for vessels to have access to emergency towing. The Act does mandate that vessels carrying oil or hazardous substances maintain approved emergency plans, but pre-arranged access to ETVs or salvage services is left to the discretion of vessel owners and operators. To address this gap Transport Canada [proposed new regulations in 2024](#) that would require certain commercial vessels to have formal arrangements for emergency response, including emergency towing, firefighting, and salvage, in case they become disabled at sea. These rules would establish clear definitions and standards for response capability, equipment, and trained personnel, with owners and operators responsible for securing contracts or agreements with capable providers. If implemented, these changes are likely to increase demand for ETVs throughout Canadian waters.

A similar regulatory approach exists in the United States. The [Oil Pollution Act of 1990 \(OPA 90\)](#) requires vessels to maintain approved Vessel Response Plans that identify and pre-arrange access to salvage, towing, and other emergency services. While OPA 90 does not mandate a government-operated ETV fleet, it obligates shipowners to contract private towing and salvage providers in advance, supporting the availability and use of emergency towing as part of spill-response and casualty-response planning.

Washington State Department of Ecology maintains a [dedicated ETV stationed year-round at Neah Bay](#) to protect the outer coast and the entrance to the Juan de Fuca Strait. Funded through industry fees and managed by the [Emergency Response Towing Vessel \(ERTV\) Compliance Group](#), the tug must remain on constant standby and be able to get underway within 20 minutes, with enough power to control or tow large disabled ships in severe weather. This program was initiated in 1999 and considered a key part of the region's spill-prevention system. This tug has responded to vessels in distress in Canadian waters as well as US waters.

In 2024, the International Maritime Organization introduced new amendments to the Safety of Life at Sea (SOLAS) Convention that will affect emergency towing on a global scale. As of January 2028, all newly built non-tankers over 20,000 gross tonnes must have emergency towing arrangements that can be quickly deployed to connect to a tow vessel, even if the ship has lost main power. These requirements, already in effect for tankers, are intended to make emergency towing capabilities more consistent across the global fleet. By requiring large vessels to carry reliable towing equipment, the crew and assisting response teams have a functional system ready to use to execute an efficient towing operation in critical situations.

2.5 International Context

Approaches to emergency towing vary widely across countries, reflecting different assessments of risk, cost, and responsibility. Table 1 highlights international examples, from renewed investment in dedicated fleets to reliance on commercial alternatives, illustrating the range of strategies used to safeguard coastlines.

Table 1 International emergency towing arrangements

Country	Number of ETVs / Vessels	Capability (Bollard Pull)	Contract / Ownership Structure	Context / Notes
Australia	1 current ETV, <i>Reef Keeper</i> ; 1 new-build ETV entering service in 2026	<i>Reef Keeper</i> ~120 t BP	Government-contracted private operator	ETV program operating since 2006 for Torres Strait and Great Barrier Reef. <i>Reef Keeper</i> introduced in 2024 as upgraded capability (46% more powerful than prior ETV, <i>Coral Knight</i>).
France	4 ETVs + 1 oil spill response vessel	ETVs all >200 t BP	Government-contracted private operator (Les Abeilles)	System created after <i>Amoco Cadiz</i> (1978) oil spill. France maintains a strong, high-BP ETV fleet as a core maritime safety measure.
Germany	8 ETVs total (North Sea + Baltic Sea) including <i>Nordic</i> , <i>Baltic</i> , <i>Fairplay-35</i>	<i>Nordic</i> 201 t BP; <i>Baltic</i> 127 t BP; <i>Fairplay-35</i> ~104 t BP; others vary	Mixed model: government-owned ETVs operated by federal agencies; government-chartered private tugs under long-term contracts (Fairplay Towage Group)	National emergency towing policy created after <i>Pallas</i> fire, grounding and oil spill (1998). Policy ensures two-hour response anywhere on coast. Fleet strategically stationed in North Sea and Baltic Sea. Fairplay Towage operates many chartered units.
Netherlands	2 ETVs (<i>Multraship Commander</i> , <i>Multraship Protector</i>); 1 supplementary ETV (<i>Guardian</i>); 3 new low-emission ETVs planned for 2026	<i>Multraship Commander</i> 192 t BP <i>Multraship Protector</i> 198 t BP	Government-contracted private operator (Multraship).	Multraship awarded contract in 2022. Dutch agency Rijkswaterstaat is launching 25-year contract for new low-emission ETVs in 2026.
South Africa	1 ETV, <i>Umkhuseli</i> + 1 firefighting support vessel, <i>Siyanda</i>	<i>Umkhuseli</i> ~220 t BP	Government-contracted private operator (AMSOL)	<i>Umkhuseli</i> is the primary national ETV. <i>Siyanda</i> provides additional firefighting and emergency response capability.

Country	Number of ETVs / Vessels	Capability (Bollard Pull)	Contract / Ownership Structure	Context / Notes
Spain	~14 multipurpose rescue/ETV-capable vessels under SASEMAR	Range: ~60 t BP to 128 t BP with larger 200 t BP vessel under construction	Government-owned fleet operated by national maritime rescue agency (SASEMAR)	Large, distributed national fleet used for towing, search and rescue, and pollution response. Includes heavy units and smaller salvage tugs. New high-BP salvage tug under construction indicates ongoing renewal.
United Kingdom	0 dedicated government ETVs (fleet withdrawn in 2011)	—	Previously government-contracted; now none	ETVs withdrawn to save costs. Decision criticized due to risks to remote regions (Shetland, Western Isles). Past incidents (<i>Sea Empress</i> , <i>MSC Napoli</i> , <i>HMS Astute</i>) highlighted the need for dedicated ETV capability.

2.6 Canadian Context

Canada's long coast and diverse maritime regions are exposed to the risk of vessel groundings and spills. Having ETVs available increases the likelihood of timely emergency response on the Pacific and Atlantic coasts where shipping lanes pass near shorelines that are environmentally and culturally sensitive and a disabled vessel could drift to ground relatively quickly. In the Arctic, limited infrastructure and extreme operating conditions make timely response essential, despite the lower overall traffic volumes. On the Great Lakes and St. Lawrence, the density of vessel movements means that delays in response may impact navigation safety and trade flows.

Recent marine incidents in Canadian waters have highlighted the risks posed by any drifting vessel.

In February 2025, the *MSC Baltic III* lost power during stormy conditions off the coast of Newfoundland and drifted until running aground on the rocky shoreline. The offshore service vessel *Avalon Sea* attended the scene but lacked the towing capacity to move the *MSC Baltic III* to safety. Several CCG vessels also responded to the scene, including the *CCGS Jean Goodwill*, but none of the vessels had sufficient towing equipment or capacity to move the vessel to safety. At the time of this report, the vessel was still grounded and deteriorating, posing an ongoing environmental threat.



Figure 3 The container ship *MSC Baltic III* ran aground off the west coast of Newfoundland in February 2025 following a loss of power. Image [Source](#).

In March 2022, a towline was successfully attached to the *MSC Kim* to prevent disaster. The container ship had lost power and was drifting in the Cabot Strait, 50 nautical miles off Port au Port, NL. The *Atlantic Kingfisher*, an offshore supply tug based in the area, was hired to secure the vessel and tow it safely to shore. The CCGS *Terry Fox* and the CCGS *Jean Goodwill* supported the endeavor, providing escort and icebreaking duties while the *MSC Kim* and the *Atlantic Kingfisher* were in transit.



Figure 4 The *MSC Kim* drifting off Port au Port, NL, in March 2022. Image [Source](#).

The Pacific Coast has seen similar incidents requiring emergency response in recent years. In 2018, the *MOL Prestige*, a container ship with 23 people onboard, experienced a major engine room fire while in transit off the south coast of Haida Gwaii.⁷ The incident resulted in multiple serious injuries and required a helicopter-assisted crew evacuation. The *Denise Foss*, an American ETV stationed at Neah Bay, WA, was contracted to tow the disabled vessel to Seattle, WA.

Another incident on the west coast of Canada involved the 135 m cargo vessel, the *MV Simushir*. In October 2014, the *Simushir* lost propulsion in severe weather off the west coast of Haida Gwaii. The 50 tonne BP CCGS *Gordon Reid* was nearby and reached the scene 20 hours after the *Simushir's* loss of power. The *Gordon Reid* was able to tow the ship away from land for a time, but heavy seas caused the tow line to fail repeatedly. The owners of the *Simushir* contracted the American tug *Barbara Foss*, which was in Prince Rupert at the time, to respond. The tug successfully secured a tow 40 hours after loss of power and brought the *Simushir* safely into port. The response involved coordination among the Canadian Coast Guard, Joint Rescue

⁷ (Veentjer, 2019)

Coordination Centre, U.S. Coast Guard, and commercial operators. The incident highlighted the operational challenges posed by limited high-capacity emergency towing resources on the Pacific coast.

2.7 New Developments

Even with the longest coastline in the world and a busy marine shipping sector, Canada has very few dedicated ETVs on standby under contract. In 2018, the Canadian Coast Guard (CCG) contracted Atlantic Towing Limited for the services of two ETVs, *Atlantic Raven* and *Atlantic Eagle*, funded under the national Oceans Protection Plan. Both towing assets are stationed on the Pacific coast of Canada to assist disabled vessels as needed. As of 2025, no dedicated ETVs are stationed on Canada's Atlantic or Arctic coasts.

A more recent addition to Pacific coast emergency response is the *K.J. Gardner*, a 74.5-metre offshore supply and oil spill response vessel operated by KOTUG Canada, in partnership with the SC'IA'NEW First Nation, under contract with Western Canada Marine Response Corporation (WCMRC). The *K.J. Gardner* has a maximum 200 tonnes bollard pull and is equipped with towing winches and firefighting capacity. Since 2024 it is based at Beecher Bay on Vancouver Island and is available 24/7 to respond to incidents along the Salish Sea, Haro Strait, and Juan de Fuca Strait. While the vessel's primary purpose is oil spill response, its design and onboard systems also enable emergency towing, emergency escort, and firefighting.

Across the border, the ETV *Lauren Foss* is stationed at Neah Bay. *Lauren Foss* has approximately 88 tonnes bollard pull and is equipped for emergency towing and firefighting operations. In 2023, the Washington State Department of Ecology published a report, [Analysis of an Additional Emergency Response Towing Vessel](#), which uses a drift-and-oil-spill risk model to evaluate whether stationing a second ETV in the Salish Sea, to serve Haro Strait, Boundary Pass, Rosario Strait, and connected navigable waterways, would reduce the risk of grounding and oil spills after a vessel loses propulsion. The study assessed seven candidate station locations and concluded that an additional ETV could provide a small potential reduction in drift-grounding and spill risk under certain failure scenarios.

In addition to dedicated ETVs, escort and support tugs can provide supplemental towage in emergencies. KOTUG Canada escort tugs operate primarily along Trans Mountain tanker routes, with bollard pulls of approximately 120 tonnes and firefighting equipment. HaiSea escort tugs, based in Kitimat and associated with LNG Canada operations, have 105 tonnes bollard pull. On Canada's East Coast, Groupe Océan operates two icebreaking escort tugs, the *Ocean Taiga* and

Ocean Tundra, with bollard pulls of 101 and 113 tonnes, respectively. These tugs were commissioned to support year-round shipping operations on the St Lawrence Seaway system and the Atlantic coast.⁸

Although escort tugs may be able to respond and are equipped with firefighting and spill response equipment, they are not dedicated ETVs, and their effectiveness depends on availability, assignment, and readiness. They may not have sufficient power, equipment, or training to handle the largest disabled vessels in severe weather.

⁸ (Robert Allan, 2016)

3.0 Methods for Assessing ETV Availability

3.1 Desktop Research

For the first stage of the project, desktop research was undertaken to map out the current landscape of emergency towing capacity in Canada before engaging directly with the industry.

3.1.1 Database of Companies and Vessels

The project began with a systematic review of towing service providers operating in Canada. The objective was to identify companies that could potentially provide emergency towing services, with a focus on vessels within the range of 160–220 tonnes bollard pull. This range was initially determined by industry norms and international guidelines for emergency towing, reflecting the bollard pull required to control and maneuver large high-windage vessels in adverse sea states.⁹ In alignment with Clear Seas’ 2018 study that indicated the bollard pull required to respond to most vessels in most weather conditions, and in order to increase the number of vessels that could be considered, the threshold for inclusion was lowered to 150 tonnes bollard pull. Vessels with a bollard pull greater than 220 tonnes were also included.¹⁰ A comprehensive search was undertaken using marine industry directories, company websites, and vessel traffic databases.

From this search, companies with at least one vessel meeting the required bollard pull criteria were included in the database. In addition, several international towing companies were identified whose vessels in the same capacity range are known to operate in Canadian waters. This approach ensured that the inventory captured both domestic and international assets with realistic potential to provide emergency towing services.

The resulting database was structured in an Excel inventory, serving as the central repository for all company- and vessel-level data. For each company, detailed vessel information was compiled, including technical specifications (e.g., bollard pull, firefighting capabilities), operating profiles, and regional presence. Notably, some prominent Canadian towing companies, such as Groupe Océan, did not have vessels within the specified bollard pull range but were retained in the outreach sample for informational purposes and potential future interest in service expansion.

⁹ (International Maritime Organization, 1998)

¹⁰ This decision was made because these vessels would also be capable but may be too expensive to hire.

3.1.2 Confirming Vessels and Vessel Positions

Once potential companies were identified, their fleets were screened to confirm which vessels met the technical and operational criteria. Vessel data was drawn from online marine traffic databases to validate presence in Canadian waters. This step ensured that the database reflected assets that were both technically capable and geographically positioned to respond in Canadian waters.

Each vessel's technical details (e.g., bollard pull rating, firefighting capacity) and operational history were reviewed and cross-referenced against company data to confirm suitability. Vessels that did not meet the criteria were removed from the database. Vessels currently in Canadian waters were flagged in the database, as these assets represent the most immediately available emergency towing capacity. This process resulted in a comprehensive inventory of qualified vessels, organized by operator, that could be used to assess geographic coverage and market capacity.

3.2 Industry Outreach

Industry engagement was initiated to supplement the desktop research and validate the accuracy of the company and vessel database. Outreach included both structured interviews and requests for information designed to gather data on technical capabilities, geographic availability, and cost structures.

Outreach was initiated with a range of industry stakeholders, including:

- Canadian and international operators with at least one vessel technically suitable for high-capacity emergency towing.
- Canadian companies interested in emergency towing whose fleet may not currently include vessels greater than 150 tonnes bollard pull.
- Additional industry stakeholders whose expertise relates to the topic of emergency towing in Canada.

The outreach process also served to capture insights beyond vessel specifications, including perspectives on market dynamics, willingness to expand services, and challenges related to vessel availability.

The qualitative information collected through interviews and requests for information was systematically reviewed to identify common themes and points of divergence. Responses were coded for recurring topics such as vessel availability, contract preferences, and cost

considerations, allowing for a comparative analysis across different participants. This approach ensured that individual perspectives were anonymized while highlighting broader trends relevant to the assessment of ETV capacity in Canada.

4.0 Results

4.1 Companies and Vessels Identified

Companies included in the study database were either Canadian companies, had at least one vessel with greater than 150 tonnes bollard pull operating in Canadian waters, or confirmed ability to work in Canadian waters at the time of the study (August 2025). Other international companies who possessed capable vessels, such as Tidewater, BritOil, and Viking, were examined but ultimately excluded as they did not meet the criteria regarding operations in Canada.

In total, 6 companies and 44 vessels were identified. Of those vessels, 15 were in Canadian waters as of August 21, 2025. All vessels operating in Canadian waters were under short- or long-term contract.

Table 2 Companies identified with towing vessels $\geq$ 150 tonnes bollard pull

Company	Vessel*	Bollard Pull (tonnes)
ATLANTIC TOWING	Atlantic Raven	162
	Atlantic Eagle	158
	Atlantic Kingfisher	168
	Atlantic Merlin	230
BOSKALIS	Manta	178
	Princess	178
	Sovereign	180
	Union Bear	187
	Sherpa	205
	Summit	205
	Alpine	205
	Glacier	205
	Expedition	205
	Boka Forward	219
	Boka Guard	284
	Boka Centre	297
	Boka Keeper	302
	Boka Defender	306
DOF	Boka Striker	312
	Skandi Clipper	180
	Skandi Cutter	180
	Skandi Mariner	241

Company	Vessel*	Bollard Pull (tonnes)
	Skandi Mover	253
	Skandi Mobiliser	260
	Skandi Emerald	201
	Skandi Iceman	319
	Skandi Skansen	349
	Skandi Vega	353
	Skandi Atlantic	193
HORIZON MARITIME	Horizon Arctic	307
WCMRC (KOTUG)	KJ Gardner	200
SEA1 OFFSHORE	Avalon Sea	150
	Sea1 Emerald	281
	Sea1 Aquamarine	284
	Sea1 Amethyst	297
	Sea1 Sapphire	301
	Sea1 Ruby	310
	Brage Viking	250
	Magne Viking	251
	Odin Viking	247
	Njord Viking	251
	Loke Viking	257
	Andreas Viking	258

*Vessels in **bold** were operating in Canadian waters as of August 21, 2025.

Powerful towing vessels with bollard pulls greater than 150 tonnes are present on all three Canadian coasts, though their distribution is uneven (Figure 4). On the Pacific coast, three Canadian-owned tugs of this class were operating as of August 2025. In the Arctic, the CCGS *Captain Molly Kool* (200 t BP) operates as an icebreaker but could also provide towing services, if required. On the Atlantic coast, several internationally owned offshore towing vessels are active off Newfoundland and Labrador, including a cluster of Skandi vessels operated by Norway's DOF Subsea. Additional vessels, such as *Sovereign* and *Union Bear*, were located off New England in American waters and may be close enough to assist in Canadian waters during an emergency.

Two Canadian Coast Guard icebreakers, CCGS *Vincent Massey* (200 t BP) and CCGS *Jean Goodwill* (200 t BP), were originally constructed as offshore towing and anchor-handling vessels before being acquired and converted by the Coast Guard. Both vessels retain the hull form, power characteristics, and structural capabilities associated with high-performance towing vessels, and, if required, could be reconfigured to provide emergency towing services.



Figure 5 Towing vessels with a ≥ 150 tonnes bollard pull present in Canadian waters on August 21, 2025

Some Canadian companies own capable towing vessels that are currently on contract to international operators. These vessels may come available to be leased and could potentially act as ETVs in Canadian waters. Vessels such as the *Horizon Arctic* and *Atlantic Kingfisher*, operating in Europe and South America respectively, have the towing power and firefighting capability to assist ships in distress if they were stationed in Canada. Figure 5 shows the global positions of the tugs assessed as capable for this study on August 21, 2025.



Figure 6 Towing vessels of interest in Canadian and international waters, as of August 21, 2025

4.2 Themes Identified from Industry Engagement

As part of the study, multiple companies and industry stakeholders participated in structured interviews and provided written responses to requests for information. In total, 13 organizations provided input, representing both Canadian and international operators with vessels technically suitable for emergency towing as well as Canadian companies interested in emergency towing whose fleet may not currently include vessels with a bollard pull ≥150 tonnes. Additional industry stakeholders were consulted with expertise related to the topic of emergency towing in Canada. Table 3 provides a list of organizations involved in the study. Key themes that emerged across interviews are summarized in the following sections.

Table 3 Organizations included in thematic analysis

Interview	Request for Information
Atlantic Towing	KOTUG Canada
Groupe Océan	Sea1 Offshore
WCMRC	DOF
Horizon Maritime	Robert Allan Ltd.

Interview	Request for Information
SAAM Towage	
Shipping Federation of Canada	
Council of Marine Carriers	
Washington State Department of Ecology	
Marine Exchange of Puget Sound	

4.2.1 Levels of Availability

A consistent theme across interviews was that while a small number of vessels in the 150–220 tonnes bollard pull range are technically capable of serving as ETVs, their availability is highly constrained. Most of these vessels are contracted to offshore energy projects or other commercial operations, often on long-term or seasonal charters. As one participant noted, “If a vessel is already committed to a job, it cannot simply be released in an emergency, even if it is physically nearby.” Several companies emphasized that the public perception of “tugs of opportunity” is misleading because the presence of a vessel in Canadian waters does not guarantee that it can be diverted for emergency response.

Interviewees also stressed that very few assets are sitting idle; most operators run at or near full capacity, with no “extra” tugs available for tasking. Even in major ports, dispatching a tug for emergency response can disrupt regular operations, further limiting availability. On the East Coast, participants noted that while several AHTS vessels are present, none can be reliably counted on for emergency use given their ongoing commercial commitments. Interviews cautioned that diverting a tug for its regular service to support an emergency response can also introduce safety risks, as it may leave scheduled vessel movements understaffed or force remaining tugs to operate under compressed timelines and elevated workloads.

4.2.2 Willingness to Expand

Despite these limitations, some participants expressed openness to making vessels available for ETV service on a short-term or case-by-case basis. Others indicated interest in longer-term contracts with government, though they stressed that contract duration and rate certainty would be key to making such arrangements viable. One participant suggested that “multi-year agreements of at least five years, and ideally ten, would be necessary to justify the financial commitment.” Shorter contracts of a few months were considered less attractive given the opportunity costs of withdrawing vessels from higher-paying markets. Several participants underscored that few Canadian operators would consider dedicating vessels to emergency

towing without a contract of 10 years or more, particularly in light of competition from U.S. providers that can offer better rates and bring larger fleets to the table.

4.2.3 Cost Considerations

Costs associated with large AHTS vessels are significant, with day rates reported in the tens of thousands of dollars. One operator suggested a benchmark of approximately \$40,000 per day for a capable vessel with high bollard pull, not including fuel. Others indicated that overhead costs alone can exceed \$20,000–25,000 per day, meaning that reliable long-term contracting would be required for operators to dedicate a vessel for ETV service. In addition to day rates, participants highlighted mobilization and demobilization fees, fuel charges, insurance, and maintenance as key cost drivers. Others pointed out that U.S. operators benefit from economies of scale, allowing them to spread overhead across larger fleets and sometimes undercut Canadian rates.

Multiple participants noted that costs fluctuate considerably by region and contract structure, with rates varying depending on who is paying the bill and what services are included. While many companies do not post day rates due to these considerations, one publicly shared example of a day rate for an AHTS vessel rendering emergency services is the K.J. Gardner, which is listed by KOTUG Canada at \$40,062.50 per day plus fuel.¹¹

The age of AHTS vessels impacts their market value and suitability for ETV roles. Older, well-maintained vessels, often in the 25-30 year range, tend to be far more affordable than newly built ships, especially given the substantial cost increases in offshore vessel construction in recent years. However, offshore industry norms around vessel age have also shifted to become more flexible, such that operators can now charter vessels older than 15 years. As a result, older vessels now remain in service longer, potentially leading to fewer opportunities for acquisition for use as an ETV at a reasonable cost.

4.2.4 Operational Challenges

Industry outreach also highlighted the operational complexities of deploying vessels for emergency towing. Some participants pointed to sea state and weather as critical constraints, noting that vessels designed primarily for escort or port operations are not suitable for open ocean towing in adverse conditions. Others emphasized that ETV capability requires not only bollard pull but also factors such as dynamic positioning, firefighting equipment, crew training,

¹¹ (Kotug Canada, 2026)

speed, and endurance. Multiple participants stressed that range and endurance are often overlooked: while harbour tugs can move large vessels in confined waters, they are ill-suited to prolonged offshore towing in heavy weather. Another consideration is that if a tug is capable but slow, it may not be suitable to reach vessels in immediate distress. It was also noted that polar-capable assets are extremely limited, with only a small number of ice-strengthened tugs in operation globally.

4.2.5 Future Directions

Several participants suggested that Canada's needs could be met through a mix of solutions, including hybrid models where vessels continue to serve commercial purposes but remain on standby for emergency response. Others pointed to potential opportunities in aligning ETV roles with spill response or escort duties, thereby spreading overhead costs across multiple service functions. One participant also noted growing interest in new vessel types, including dual-fuel and ice-class certified tugs, which could be incorporated into future ETV planning. Another recommended looking more closely at U.S. models, where larger fleets and dedicated ETV programs have been developed, and suggested that Canada could benefit from similar approaches. One participant mentioned their participation in a newly formed international tug alliance as an effort to improve knowledge-sharing and potentially create opportunities for increased mobility of assets across jurisdictions.

In addition to commercial and hybrid options, participants noted that Canada already possesses two Coast Guard icebreakers originally built as offshore towing vessels. While currently outfitted for work as icebreakers, these vessels could be partially or fully reconverted to towing roles to boost national ETV capacity without having to acquire new vessels.

5.0 Discussion

5.1 ETVs Available in Canadian Waters

This study highlights the central challenge facing Canada's emergency towing system: while there are a small number of vessels in the 160–220 tonnes bollard pull class that are technically capable of fulfilling an ETV role, their actual availability for emergency service is far more limited. Operators confirmed that most of these vessels are contracted for offshore or commercial work and cannot easily be redeployed in an emergency. As a result, the practical pool of ETV capacity in Canadian waters is narrower than the database alone might suggest.

5.1.1 Limited Numbers and Even More Limited Availability

Across Canada's maritime regions, only a handful of vessels meet the technical specifications necessary for open-ocean emergency towing. However, most are engaged in long-term offshore energy or escort contracts, reducing the likelihood that they would be available at short notice. Furthermore, operators generally run at or near full utilization, with few idle vessels available. Dispatching a tug for emergency use can disrupt local operations, reducing willingness to assign assets for towing emergencies. This underscores that presence in Canadian waters does not equate to availability. Moreover, in regions such as the Arctic and parts of the Atlantic, capable vessels are absent altogether, creating geographic gaps.

5.1.2 Expanding the Definition of ETV

Discussions with operators revealed an evolving view of what constitutes an ETV. While large AHTS vessels remain the benchmark for capability, some participants suggested that offshore supply vessels, multi-purpose tugs, and even escort tugs could serve as interim or hybrid solutions if equipped with appropriately sized towing winches and staffed with trained crew. For example, the two new high-capacity escort tugs from KOTUG Canada in operation as of 2026 in Vancouver will be capable of providing ETV support for the West Coast in scenarios when they are not actively escorting. This broader perspective reflects a recognition that Canada's limited pool of vessels with high bollard pull necessitates creative approaches to building resilience and additional capacity into the towing system.

5.2 Cost as a Factor

5.2.1 Large Towing Vessel Overhead

Maintaining large towing vessels in a state of emergency readiness is costly. These vessels are expensive assets that require continuous investment just to remain operational. Crewing costs,

technical maintenance, insurance, and compliance activities accumulate daily, regardless of whether the vessel is earning revenue. These vessels need steady commercial employment to offset these expenses, and without reliable revenue from a long-term contract, keeping them available solely for emergency response is financially unsustainable.

5.2.2 Contract Types

Operators consistently highlighted contract length and structure as determining factors. Short-term agreements are generally unattractive given higher-value opportunities in offshore markets. In contrast, long-term agreements of at least five years, and ideally up to a decade, were seen as necessary to justify investment. Hybrid arrangements, where vessels remain commercially active but obligated to respond in emergencies, were seen as more commercially viable, though they still require federal regulatory and financial involvement to guarantee availability. Previously, older vessels nearing the end of their typical life may have been more easily acquired for ETV service by a government at a reasonable cost. However, with restrictions on age of vessel removed in the offshore industry, these older vessels are more likely to remain engaged in commercial work.

5.3 Potential Models for ETV Use

Based on the feedback gathered, three broad models emerge for meeting Canada's ETV concerns:

- **Dedicated ETVs** stationed in high-risk regions, procured through federal contracts. This model provides the highest level of certainty of timely emergency response but comes with the highest overhead costs.
- **Hybrid commercial/ETV arrangements**, where vessels remain commercially active but are contractually obligated to respond to emergencies within a certain geographic area when needed. This model offers flexibility and cost-sharing but introduces risks around timeliness, readiness, and safety of commercial work if vessels must leave.
- **Regional coordination or pooling of assets**, potentially through organizations already engaged in spill response or vessel escort services. One participant noted the appeal of a "one-stop shop" model, where ETV capacity is integrated into broader marine response systems, such as KJ Gardner.

Each model entails trade-offs between reliability, flexibility, and cost-effectiveness.

5.4 Gaps and Future Opportunities

The study identifies clear regional gaps in ETV coverage. On the Pacific Coast, some capacity exists but is concentrated in areas with the highest concentration of traffic, leaving other stretches of coastline vulnerable. The Atlantic and Arctic coasts face more pronounced capacity limitations, with few or no suitable vessels consistently present or available. In the St. Lawrence, high traffic volumes and large vessels are not matched with available tugs with high bollard pull.

Looking forward, opportunities exist to expand the definition of ETVs, explore hybrid or multi-purpose service models, and incentivize industry participation through longer-term contracting. New vessel technologies, such as dual-fuel tugs and ice-class designs, could also enhance resilience, particularly in the Arctic region. Importantly, federal leadership will be required to balance cost efficiency with the need for reliable, regionally distributed capacity to meet Canada's emergency towing needs by 2026 and beyond.

6.0 Conclusion

This report provides a national perspective on Canada's emergency towing capacity, drawing on both desk-based analysis and direct engagement with industry stakeholders. By combining a detailed inventory of vessels with insights from operators, the study offers a clearer picture of the assets currently available, the limitations that constrain their use, and the opportunities for strengthening capacity in the years ahead. The findings underline the importance of ensuring that technical capability, contractual arrangements, and regional coverage are aligned to provide a reliable safety net for Canada's maritime regions.

6.1 Findings

This study set out to assess the availability and market conditions for ETVs across Canada. Building on earlier work focused on the Pacific Coast, it has expanded the analysis to all major maritime regions, including the Atlantic, Arctic, Great Lakes, and St. Lawrence.

The research confirms that while a small number of vessels in the 150–220 tonnes bollard pull class are technically capable of serving as ETVs, their practical availability is much more limited. Most are engaged in long-term offshore or commercial contracts, making them inaccessible in the event of an emergency. Geographic coverage is uneven, with some dedicated capacity on the Pacific Coast but significant gaps in the Arctic and Atlantic.

Industry outreach revealed strong consensus on two points: first, that dedicated ETVs remain the most reliable safeguard against vessel drift groundings; and second, that maintaining such vessels on standby is financially unsustainable without long-term contracting or hybrid models that share costs with other service functions. The study also highlighted the potential to help fill gaps in high-bollard-pull capacity with support from multi-purpose offshore vessels and smaller tugs, recognizing their more limited roles.

6.2 Recommendations

These findings lead to several recommendations for strengthening Canada's emergency towing capacity in 2026 and beyond:

- Address availability gaps through contracting: Federal leadership and financial commitment is needed to secure long-term agreements with operators, ensuring that capable vessels are available when and where they are required.

- Consider hybrid service models: Explore arrangements that combine commercial operations with standby obligations for emergency response, reducing costs while increasing availability.
- Expand the definition of ETVs: Recognize the potential role of offshore supply vessels, escort tugs, and other assets as complementary elements of a broader towing strategy.
- Consider reconverting CCG icebreakers Jean Goodwill and Vincent Massey to restore their towing capacity so they can act as ETVs in addition to their icebreaking service in the Arctic and Atlantic regions.
- Prioritize regional coverage: Target high-risk and underserved areas, particularly the Atlantic offshore and the Arctic, for dedicated or hybrid capacity.
- Support innovation and fleet renewal: Encourage the adoption of dual-fuel, ice-class, and multi-purpose vessel designs that enhance resilience and flexibility in Canada's towing system by incorporating more capacity overall into commercial vessels and potential ETVs.

Taken together, these measures could help Canada move toward a more robust and sustainable emergency towing system, protecting marine safety and the environment while ensuring that the country's growing and diversifying maritime traffic is supported by reliable response capability.

7.0 References

- Berg, T. E., Hirdaris, S., & Čatipović, I. (2024). Drifting vessel statistics and emergency towing cases. *Journal of Physics: Conference Series*.
- CBC. (2024, December 17). *Ship traffic steadily increasing in Canadian Arctic waters, researchers say*. Retrieved March 2026, from CBC: <https://www.cbc.ca/news/canada/north/ship-traffic-increased-in-the-canadian-arctic-in-2024-1.7412732>
- Clear Seas. (2025, December 9). *Vessel Traffic Forecast to 2040 for Canada's Pacific Region*. Retrieved March 2026, from Clear Seas: <https://clearseas.org/research/vessel-traffic-forecast-pacific/>
- International Maritime Organization. (1998, December 21). *Guidelines for ocean towing*. Retrieved March 2026, from Maritime Safety Innovation Lab: <https://maritimesafetyinnovationlab.org/wp-content/uploads/2014/02/imo-guidelines-for-safe-ocean-towing.pdf>
- Kotug Canada. (2026). *Tariffs*. Retrieved March 2026, from Kotug Canada: <https://www.kotugcanada.ca/towage/tariffs/>
- Robert Allan. (2016, November 10). *Ocean Taiga: The Second Mighty Tundra 3600 For Ocean Group*. Retrieved March 2026, from Robert Allan: <https://ral.ca/2016/11/10/ocean-taiga-second-mighty-tundra-3600-ocean-group/>
- St. Lawrence Seaway Management Corporation, Great Lakes St. Lawrence Seaway Development Corporation. (2024). *St. Lawrence Seaway 2024 Traffic Report*. Retrieved March 2026, from Great Lakes Seaway: https://greatlakes-seaway.com/wp-content/uploads/2025/04/traffic_report_2024_en.pdf
- Veentjer, J. (2019, November 14). *Emergency Response Towing Vessel at Neah Bay*. Retrieved March 2026, from Oil Spill Task Force: <https://oilspilltaskforce.org/docs/2019-salish/John-Veentjer-re-ERTV.pdf>