CONSIDERATIONS REGARDING AN OPEN MARKET SYSTEM FOR ANNUAL SEALIFT

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Summary Report

December 2009

CONTENTS

1. INTRODUCTION

Annual re-supply by the marine mode has always played an important role in the well being of communities in the Arctic. Originally handled by the Hudson Bay Company, it was taken over in the 1950's by the Canadian Coast Guard (CCG) as an outgrowth of construction of DEW line stations. Nunavut took over administrative responsibility for the Eastern Arctic[1] with the 2001 season. The new approach to contracting by the Government of Nunavut (GN) resulted in significant reduction in costs for all communities.

The GN Department of Community and Government Services (CGS) has, since 2005, worked diligently to enhance the annual sealift by materially updating contract concepts, provisions and language. These changes have, despite major increases in fuel costs, resulted in a period of relatively stable shipping costs as well as enhanced service and contract conditions. The use of extended contract periods has also been a factor in enabling the two major carriers to significantly upgrade and enhance their fleets.

The approach to handling shipping requirements up to, and including, the most recent sealift contracts agreed in 2006, is that the GN issues an RFP for delivery of cargo to groups of communities, and carriers bid competitively for multi-year contracts for these regions of Nunavut. All Nunavummiut benefit from the rates, terms and conditions negotiated. CGS now wishes to evaluate whether this remains the best approach to Sealift, or whether an open market concept might better serve Nunavummiut. Under an open market, the GN would step back from involvement and only negotiate for its own cargo needs. Other shippers (of all sizes, including households) would need to make their own arrangements with carriers involved in the annual sealift.

The two systems may be defined as follows:

RFP Process
1. Public Competitive tendering process for a multi-year contract
2. Covers all regions of Nunavut within GN defined shipping areas
3. Includes all GN cargo
4. Includes all GN Construction, Nunavut Housing Corporation, Nunavut Power, Nunavut Liquor Commission, Arctic College cargo, etc.
5. Agreed rates must be extended to all Nunavummiut
6. GN provides or approves contract terms, ship schedules, frequency of community calls

Open Market Process
1. GN only tenders for its own cargo
2. Geographical coverage determined by the carrier
3. Excludes all GN Construction, Nunavut Housing Corporation, Numavut Power, Nunavut liquor Commission, Arctic College cargo, etc.
4. Contractors are free to negotiate their own terms with any shipping company
5. Pricing for Nunavummiut set by the carrier
6. Carrier sets contract terms, ship schedules, frequency of community calls

[1] The Western Arctic continued with NTCL as the sole carrier and without any formal relationship with GN until the 2006 contract year. The Government of Quebec took over administrative responsibility for Northern Quebec in the early 1980's as an outgrowth of the James Bay Agreement.

2. EXECUTIVE SUMMARY & RECOMMENDATIONS

2.1 Mariport has had twenty three stakeholder interviews/exchanges with communities, companies and groups; many of which are based in Iqaluit. Most were not in favour of an open market approach to Sealift, preferring a continuation of the RFP process. Two expressed no opinion as to which approach might be preferred, one community stated that they preferred an open market approach. We have also spoken with the two carriers providing service from the Montreal region (NEAS and NSSI)**,** and with NTCL.

2.2 Two stakeholders indicated that while their organisations usually prefer a competitive open market, they believed that the RFP process carried out by CGS achieved the best compromise between best available price for the service and protection of the interests of Nunavummiut.

2.3 Most stakeholders would like to see the contract rates agreed between GN and the carriers published. These rates are seen as being very important for forward planning purposes.

2.4 Available evidence from Nunavut and Nunavik sealift as well as air service to Iqaluit strongly suggests that, under an open market, carriers would charge the same rates and there would be no competition on price.

2.5 There are only two shipping companies in Canada that have the necessary experience, equipment and ships to handle the annual Sealift out of Montreal into the Eastern Arctic. These companies are effectively a duopoly[2].

2.6 These two companies appear to be focused on Nunavik service where 14 communities received an average of six calls[3] in the 2008 season. Twenty one Nunavut communities in the Eastern Arctic averaged nearly four calls (See Section 3.1 of the report).

2.7 Under an open market system carriers could not determine freight quantities in the way that could be taken for granted under an RFP bid process, and lower volumes into communities would have to be assumed. Freight costs would thus have to rise, and/or number of calls reduced to cover costs.

2.8 Communities and regions that are seen as being at risk under an open market system in terms of possible distance/volume pricing, special surcharges or cessation of service (see Section 6 of the report) are:

- The High Arctic – distance and volume rates
- Baker Lake – cessation of service from Montreal, or transhipment surcharge
- Sanikiluaq – distance surcharge
- Hall Beach and Igloolik – volume and distance rates

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[2] A duopoly exists where only two producers or suppliers control a commodity or service in a given market.

[3] It has been suggested that some of these calls may have been due to lateral cargo movements on behalf of the Kativik Regional Government (road building) and Makivik Corporation (community harbours and landing ramps)

Other regions and communities are seen as being at less risk because of their proximity to Nunavik and the ability of the carriers to integrate ship loads to different communities.

2.9 An open market system is not achievable in Nunavut unless there are at least three, but preferably four, independent carriers that could offer competitive service to each community and if communities had established port facilities (or independent lighterage capability), adequate laydown and warehousing and container stripping facilities A limited one for containerised shipments may be achievable in the future in Iqaluit if a dock is built and/or a local entity is prepared to charter a ship for a container service and offer all the needed logistics and service needs (See Section 5.2 of the report).

2.10 Suggestions during stakeholder interviews that a ferry service to Goose Bay/Happy Valley would reduce costs for Iqaluit have been reviewed and are considered optimistic (See Section 5.3 of the report).

2.11 A suggestion regarding the use of hovercraft during one stakeholder interview has also been reviewed. Such craft are not considered feasible on a long haul route and do not offer any benefits for lightering due to their high operational costs (See Section 5.3 of the report).

2.12 The Financial Administration Act contains mechanisms whereby the GN could contract for shipping services without tendering (see Section 5.2 of the report)). However, the funds involved would probably be at a level that the Minister or Deputy Minister's signature would be required. Such a mechanism would likely result in excessive lobbying relative to carrier selection and detract from other government business.

2.13 The expectation relative to current contract terms and conditions is that they would not be maintained by the carriers, under an open market system.

Recommendations

1. Based on the findings of the study we recommend that the GN retain the RFP process for competitively bidding marine transportation services to communities until such time as certain infrastructure and logistical services are in place.

2. We recommend that Iqaluit and possibly Rankin Inlet eventually move to an open market, but only if they are capable of receiving container traffic via a third carrier.

3. We recommend that the GN consider deferring a new RFP process beyond 2010 and take advantage of current rates and adjustment mechanisms. There are three aspects to this recommendation:

   i. The fuel clauses in the current RFP process contain a mechanism that provides a one-season time lag in fully reflecting changes in marine bunker prices. International prices have declined from their peak and are not expected to make major gains in the next two years.

   ii. The international charter market has declined dramatically and this affects the earning potential of the carriers during the seven months of the year when their ships operate outside Canada in project cargo and heavy lift trades. The carriers may be persuaded to materially increase rates for Arctic service to offset reduced revenue in international service with an early RFP call. Current prices were set when international rates were high.

iii. The development of the hybrid zone date system by the NRC[4] is not yet complete and changes to dates when vessels would be permitted into specific Arctic regions have yet to be determined. The GN may wish to adjust community groupings based on these changes and recommendation #2 above.

4 National Research Council

3. CURRENT SYSTEM

In this section of the report we will describe shipping arrangements in the Eastern and Western Arctic, the different carriers and route systems.

3.1 Eastern Arctic

The primary Eastern Arctic carriers are NEAS[5] and NSSI/Taqramut Transport in both Nunavut and in Nunavik. Logistec, as a part owner of NEAS, and Groupe Desgagnes as the supplier of ships to NSSI and Taqramut Transport have had a long association with service in both Northern Quebec and the Eastern Arctic. These companies have built a distinctive skills-set that is a combination of management, shipboard crews and equipment to serve the unique and challenging logistics needs for remote communities that have no port facilities, extreme tidal conditions and a short shipping season. It should be noted that service by both carriers to Nunavut and Nunavik is often combined on a single voyage. Except at Nanisivik, where there is a dock, all cargo from ships operating in the Eastern Arctic is transferred from the vessel at anchor to a small lighterage barge. The barge is pushed to the shore by a yarding tug where forklift trucks transfer the cargo to the beach or into the laydown area.

Nanisivik is used as a transfer point for cargo to Kugaaruk, which is part of the Kitikmeot region, but served from the East. Until 1994 all cargo was airlifted into the community because of access issues through Pelly Bay. CCG commenced Petroleum product and dry cargo service in 1995, following an agreement with the Government of Northwest Territories to refit vessels for this service. In 2004 Woodward's commenced petroleum product service with their Type A tanker ***Tuvaq***, using the AIRSS[6] approach to arctic navigation. They have successfully provided this service in subsequent seasons. CCG continues to provide dry cargo service under an agreement with the GN.

The situation in most of the Kivalliq region is somewhat different, both from an historical perspective an in terms of companies involved. Until 1975 Chimo Shipping provided service with small general cargo ships out of Montreal. In 1975 the Federal government "assigned" the region to NTCL with operations out of Churchill, although not all communities could be served by NTCL's tug and barge shipping model that combined fuel requirements inside the barge and dry cargo on the barge deck. Rates for dry cargo were supported by rates charged for fuel, with a linkage of approximately +/- 1¢/litre on fuel being equivalent to +/- $10.00/ton on deck cargo[7]. Montreal carriers also offered some calls on an opportunity basis and Rankin Inlet and Coral Harbour saw one or more ship calls each season out of Montreal.

In 2003 this arrangement was effectively pre-empted by Government of Nunavut Petroleum Products Division (PPD) who bid the fuel competitively. The loss of all

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5 NEAS is reportedly owned 51% by Nunavut Umiak Corporation (NUC) and 49% by Transport Nanuk (other sources have indicated the holdings as 60/40) NUC is jointly owned by Makivik Corporation, Qiqiktaaluk Corporation and Sakku Investments. Transport Nunuk is jointly owned by The Northwest Company and Logistec Corporation.

6 Arctic Ice Regime Shipping System

7 "Rankin Inlet Marine Re-supply Terminal, Review and Analysis", The Mariport Group Ltd for GNWT April 1996

fuel to direct tanker delivery reduced POL costs, but threw NTCL's business model into disarray and they were forced to withdraw from the region.

An independent carrier, Kivalliq Marine[8], moved in to fill the void for dry cargo movement with a tug and barge operation and carriers out of Montreal also offered some service. Shipping arrangements were materially improved from 2006 onwards with contract carriers from Montreal (NSSI) and Churchill (NTCL). NSSI also offer a private service via Churchill.

In 2005 the GN commissioned a wide ranging study into Annual Sealift and many of the recommendations made in that study were incorporated into the 2006 RFP process. These included:

- Earlier community calls
- Increased guaranteed number of calls
- Consistency in annual schedule through GN oversight

Mariport analysed carrier activities during the 2008 season, which had high cargo volumes, coupled with poor weather and ice conditions. It should be noted that the Quebec based carriers fully integrate both Nunavik and Nunavut into vessel schedules, and the summary of calls which follows only counts one call to a community on each voyage. Occasionally a carrier will call more than once at a community, and it has been assumed that some calls were frustrated due to weather or ice and discharge could not be undertaken or had to be cut short. Calls to serve mines or National Defence sites are not counted towards community calls.

Nunavik Calls Summary 2008

COMMUNITY	NEAS	NSSI	Total
Kangiqsulaujjauq	6	3	9
Kuujjuaq	3	7	10
Tasiujaq	3	5	8
Aupaluk	2	3	5
Kangirsuk	2	3	5
Qaqtak	3	2	5
Kangiqsujjuak	4	3	7
Salluit	4	5	9
Ivujivik	3	2	5
Akulivik	3	3	6
Puvirnituq	3	3	6
Inukjuaq	3	2	5
Umiujaq	3	2	5
Kuujjuarapik	3	1	4

NSSI and NEAS called 89 times at the 14 communities in Nunavik[9], averaging 6.4 calls per community. No community received less than three calls in the season. Kuujjuaq received 10 calls. Call frequency may have been influenced by a road

8 The tug and barge arrangement used by NTCL and Kivalliq Marine employs one or two barges (2-3,000 tonnes capacity) and a high power tug. The barge is pushed ashore at high water, ramps are lowered and cargo is either rolled off or carried off with a forklift trucks.

9 Kuujjuarapik is served both by the Nunavik carriers and Moosonee Transport. The latter company does not report to NORDREG because it operates South 60° N.

asphalting programme by the Kativik Regional Government and ongoing work on the community harbour programme by Makivik Corporation.

The carriers made 78 calls to 21 Eastern Arctic Nunavut communities, averaging 3.8 calls per community. Most received only two calls. Iqaluit received 17 calls, but three of these were for less than one day, and cargo was probably not handled. Some additional community calls were provided by NTCL in both the Kivalliq and Kitikmeot regions. NSSI also made one call to each of four Kitikmeot communities.

Eastern Arctic Nunavut Community Calls 2008

COMMUNITY	NEAS	NSSI[10]	NTCL	Total
Qikiqtarjuaq	1	1		2
Clyde River	3	2		5
Pond Inlet	3	1		4
Arctic Bay	2	1		3
Nanisivik[11]	1	2		3
Grise Fjord	1	1		2
Resolute Bay	1	1		2
Repulse Bay	1	1		2
Igloolik	1	1		2
Hall Beach	1	1		2
Iqaluit	8	9		17
Pangnirtung	2	2		4
Kimmirut	2	1		3
Cape Dorset	2	3		5
Baker Lake	0	0 + 3	5	8
Chesterfield Inlet	0	2 + 0	3	5
Rankin Inlet	0	3 + 1	4	8
Whale Cove	0	2 + 2	4	8
Arviat	1	1 + 1	3	6
Coral Harbour	1	2 + 0	1	4
Sanikiluaq	0	2 + 0	0	2
Churchill	0	3 + 1	6	10

Western Arctic Community calls 2008

Community	NSSI	NTCL	Total
Kugluktuk	1	4	5
Cambridge Bay	1	3	4
Bathurst Inlet	0	1	1
Umingmaktok	0	0	0
Gjoa Haven	1	2	3
Taloyoak	1	2	3

The ships involved in Eastern Arctic service in 2008 are given in the following table. Arrangements between NEAS, as operator, and the different owners of their ships is unknown, but may by a bareboat or time charter. Canadian Transportation Agency (CTA) information[12] indicates that the *Aivik* is owned by NEAS[13]. Other sources

10 Figures are first for ship calls, then for calls by charter tug and barge.
11 Cargo transhipped here for Kugaaruk
12 The CTA ship list only appears to list vessels that are permanently in Canadian flag. Ships that flag in and out are missing. Thus true ownership is unknown.

indicate that it is Transport Igloolik. The *Umiavut* is reportedly owned by Transport Umialarik Inc[14] of Iqaluit. Spliethoff, from whom NEAS acquired three ships, may retain an ownership interest in the *Qamutik*, as it trades as the *Edisongracht* when not in NEAS service. The other ships retain their names while listed in the Spliethoff fleet.

Vessels in the NSSI fleet are owned by Groupe Desgagnes and chartered to Desgagnes Transarctik on a seasonal basis. The arrangements between Transarctik and NSSI[15] (Nunavut) and Taqramut Transport (Nunavik) are not known. Groupe Desgagnes acquired three newbuilding ships from the Beluga Group and the ships operate under Beluga management with heavy lift/project cargo during the winter/spring season. The *Anna* and *Camilla Desgagnes* are pooled with the Atlantic Ro-Ro Carriers[16] when not operating in the Arctic.

In 2009 Desgagnes has brought both of their new vessels *Sedna Desgagnes* and *Zelada Desgagnes* into sealift service. These are sisters to the *Rosaire A Desgagnes* and have identical characteristics, except that each has 2 x 180t cranes; the *Rosaire* has 2 x 120t cranes. The company is not expected to need foreign flag charters in 2009.

Ships known to have been involved in the 2008 Sealift

Operator	Ship Name	GEAR	CUBE[17]	TYPE
NEAS	Aivik	2 x 155 t	12,500m^3	RoLo
	Avataq	2 x 50 t	16,500m^3	LoLo
	Qamutiq	3 x 60 t	20,000m^3	LoLo
	Umiavut	2 x 50 t	16,500m^3	LoLo
NSSI	Anna Desgagnes	12.5 –125 t	25,000m^3	RoLo
	Beluga Enterprise[18]	2 x 120 t	20,000m^3	LoLo
	Beluga Federation[7]	2 x 120 t	20,000m^3	LoLo
	Camilla Desgagnes	1 x 45 t	20,000m^3	RoLo
	Rosaire A Desgagnes	2 x 120 t	20,000m^3	LoLo
NSSI Charter	Kaliutik/Kaligak [19]	na	nd	TBU
NSSI Charter	Dutch Runner[20]	2 x 30 t	140 teu	LoLo
NTCL	Keewatin[21]	na	na	TBU

Na = Not applicable; nd = No Data; RoLo = Roll on/off with crane capacity; LoLo = Lift on/off only; TBU = Tug and barge

13 The mv *Aivik* was not scheduled to operate during the 2009 season, and is offered for sale.
14 Sakku Investments reports that they own 50% of Transport Umialarik. However, the Qikiqtaaluk Corporation website indicates that the *Umiavut* is owned jointly by Nunavut Umiak Corp and Transport Nanuk.
15 NSSI is understood to be 75% owned by Arctic Co-Op, 25% by Desgagnes Transarctik.
16 This is a St Peterburg based company that specialises in roll on roll off cargo in transatlantic trades. The *Camilla Desgagnes* is not listed on the company's web site for 2009 operations
17 Cube includes an allowance for deck cargo
18 Foreign flag charter vessel.
19 Charter tug and barge from Torngait Services Inc. This is a Labrador Inuit Company.
20 Canadian flag charter to cover for *Rosaire A Desgagnes* following ice damage in Iqaluit. Single voyage. Vessel is a container ship, cube for arctic service not available.
21 NTCL had other owned tugs and barges as well as charter equipment servicing Rankin Inlet for Meadowbank gold, and Baker Lake for Agnico Eagle gold. The latter operation required multiple shuttles through Chesterfield Narrows throughout the season.

3.2 Western Arctic

Effectively the only carrier available to coastal communities in the Western Arctic, over many decades, has been NTCL. Service commenced out of Waterways (AB) via the Athabasca and Slave Rivers into Great Slave Lake, Mackenzie River and Western Arctic communities prior to the completion of a railway line to serve the Pine Point lead/zinc mine in 1964. Following completion of the rail line to Hay River, this became the primary shipping point for all goods destined to marine dependent communities on the Mackenzie River and in the Western Arctic.

Other carriers in the region are Coopers Barging and E. Grubens Transportation. However, Cooper only operates between Fort Simpson and Norman Wells. Grubens serve the Delta region and although they do haul oil and dry cargo the length of the river, they do not operate out to the coastal communities. NTCL operated until the 1990's as a regulated common carrier, and there was no formal relationship with the GN until the 2006 season, when contract rates were agreed for Nunavut communities in the Western Arctic ex Hay River.

Commencing with the 2008 season, when NSSI took the *Camilla Desgagnes* west of the Boothia Peninsula with a non-contract voyage, NTCL will face competition on rates for the first time. In 2009 NEAS also proposes to sail a vessel from East to West.

Recognising the potential for competition on rates due to the extended and difficult supply lines to the Western Arctic, NTCL has moved to introduce new services for both oil and dry cargo from the west coast. These take advantage of climate change and the very high probability of being able to successfully sail past Point Barrow, returning in the same season[22].

Commencing with the 2005 season they have brought oil in from the west coast of Canada and/or USA. Commencing in 2009 they will introduce a new 1,000 TEU barge, which will sail from Richmond, BC into Tuktoyaktuk. While this service will have some limitations, i.e. one trip per season, cost savings on internal logistics will be considerable[23], and opportunities for sourcing goods in the Vancouver/Lower Mainland area should reduce costs even further.

NTCL only have a postage stamp rate structure for GN contract cargo, all other goods are shipped on a distance basis with rates also dependent on type of cargo. The following provides a comparison based on published rates:

[22] "Seasonality of Arctic Route", The Mariport Group Ltd for GNWT, October 2007
[23] Delivery costs from Edmonton (AB) to Richmond (BC) are understood to be much lower than for Edmonton (AB) to Hay River (NT).

Rates to Cambridge Bay

Carrier and Route	Container[24]	Weight
NTCL from Hay River	$7,758.00	$835.92
NTCL from Richmond (BC)	$5,711.54	$452.03
NEAS[25]from Valleyfield	$7,739.21	$508.46[26]

This shows that NTCL's rates out of Richmond offer significantly lower costs compared with their Hay River service and Eastern carriers.

[24] Includes return charges.
[25] NEAS & NSSI rates are the same.
[26] Weight or measurement rate 1,000kg or $2.5m^3$.

4. CARRIER COSTS & REVENUES

The review of carrier costs and revenues is not intended to be a formal critique of contract rates, but a bottom up approach, from a knowledge of probable operating costs and ship values, to produce a per diem charter cost. This is then used to project a season cost for shipping including fuel, management and administration fees. These costs will be used to assess the impact of an open market system compared with the existing RFP process.

Although it has been necessary to make a number of assumptions relative to both costs and revenues, the analyses have produced consistent results, with costs for Arctic service, before allowance for profit, at, or slightly below, projected gross revenues[27].

Estimated carrier costs in 2008 were about $52m for Nunavut and Nunavik combined, with revenue slightly higher. We estimate that about $6m in annual carrier costs is due to Federal government tariff and non-tariff barriers imposed on the marine mode.

Based on this comparison of costs between NEAS and NSSI, we have projected "prototype" 2009 rates per ship day of $38,500 at sea and $27,500 per ship day in port and at anchor. Other costs such as stevedoring, wharfage, port charges, pilotage and operation and management costs have been estimated at $46.00/ revenue ton. These costs have been used to assess costs under an RFP approach and an open market system.

Within this analysis of costs, we have assumed that when a carrier bids under an RFP process, that there is an inherent assumption that, if successful, they will obtain 70% of available cargo for that community. This assumption has been borne out by comparative cost exercises, on a postage stamp basis, for the current Sealift areas. Conversely, when pricing under an open market system, the assumption would be that only 40% of cargo for the community could be guaranteed.

Unlike NEAS and NSSI, we have no basis on which to estimate either costs or revenues for NTCL. The company does not make available cargo quantities moved during the season. However, exemplary information is available from their web site, to illustrate the difference between and open market approach and an RFP process leading to a postage stamp rate structure[28].

[27] These revenues exclude DND, federal government, lateral cargo and retrograde cargo except where known or estimates can be made.

[28] A postage stamp rate structure is one where all communities in a group pay the same transportation cost, regardless of unique issues such as difficulty of access, distance or volume.

5. DELIVERY SYSTEMS

This section of the report discusses the advantages and disadvantages of the RFP process and an open market system, as well as referencing the opinion of a broad cross-section of stakeholders, from contractors to municipalities, relative to their perception and concerns.

5.1 RFP Process and Forward Rates

The RFP process has been long established as a means of competitively contracting for Sealift service. Initially CCG contracted on a season-by-season basis, although during the late 1990's, under pressure from the carriers, they started contracting for two years at a time and the final contract period was for three years.

The advantages are that, from a GN perspective, it fits well with their mandated procurement strategy, requires major effort only once every 3-5 years (depending on the bid period) and nominal effort in monitoring the activities of the carrier in terms of performance and any agreed changes in rates on a year by year basis. The RFP process also, more importantly, sets a base reference rate into future years that can be used for budgeting and planning by all users of Sealift services[29].

From a community perspective, given the geographic diversity of Nunavut and the large variation in community sizes, it means that all communities within a contract grouping benefit from the overall volume achieved by the carrier. The postage stamp rates offered are a material benefit to smaller and/or more distant communities that might other wise see higher transportation costs.

Under an RFP approach, the contracting agency can require a minimum number of community calls per season, when those calls take place, dictate contract terms and conditions and make other requirements of the carriers bidding on the business that would be impossible to obtain under an open market system.

CGS has achieved much on behalf of Nunavummiut through the RFP process, including:

- A plain language contract that spells out the rights of the shipper and the carrier (Schedule K)
- Improved liability limits for goods and automobiles ($2,500 vs $500 per package and up to $70,000 per motor vehicle vs $500)
- An alternate dispute resolution process, so problems can be resolved without the need to go to court
- A system that addresses the rule of general average, and assures Nunavummiut that goods will be delivered within the season.

[29] In this respect we have found that the rates are not made available by CGS. This diminishes the value of the RFP process, as users only know the current season rate once the carriers have published it, and have no knowledge of probable future rates.

- A stable pricing system that has benefited both the carriers and Nunavummiut[30] and guarantees that all users within a designated shipping are receive the same rate
- Marshalling and Packaging services in both the Montreal area and Winnipeg
- Minimum number of calls per season and through GN oversight of carrier schedules, consistency in annual community visits

In addition to these contract related aspects of the RFP process, CGS has published a "How to Sealift" guide, offers assistance to shippers through the Manager, Logistics position, facilitates local cartage and provides an expediter in the Montreal area to monitor and trouble shoot shipments.

None of this would have been achievable under an open market system, and the benefits would be lost if an open market system was introduced.

It is instructive, in this respect, that while Nunavik is considered an open market, i.e. neither the Government of Quebec nor Makivik Corp. negotiate a rate on behalf of the region, both carriers charge the same rate. The rationale for a postage stamp rate in Nunavik appears to be historic in origin (going back to the James Bay agreement and shipping in the late 1970's early 1980's) as neither the Kativik Regional Government nor Makivik Corporation reportedly require it. However, we would expect that Makivik Corporation, through its shareholding in NEAS, might well discourage distance, volume or access based rates. One shipping company has said that the existence of long term postage stamp rates in Nunavut has had a material influence on rates and terms in Nunavik.

Most stakeholders, who use sealift and with whom discussions were held, supported a continuation of the RFP process. They did this on the basis that it was important that no community in Nunavut should be disadvantaged in terms of freight costs.

It was also recognised that a carrier bidding for the GN contract for a region might give better rates in the expectation of obtaining more cargo by virtue of being the designated carrier. Thus the GN leverages its own cargo into a volume discount it could not achieve on its own.

5.2 An Open Market System

Under an open market system the GN would step back, only negotiating for its own freight. All communities, agencies, contractors and households would be free to negotiate with any carrier offering service. Under a true open market GN would also step back from the marshalling and packaging agreements leaving such arrangements to the individual shipper. While this arrangement would offer all shippers a choice of carrier, contract terms and conditions, frequency and time of service, liability issues and dispute resolution would be in the hands of the carrier.

Based on the Nunavik experience, it is unlikely there would be any difference in rates between the carriers. See table below for rates charged into that region. Also, we

[30] One carrier indicated that stability in Nunavut's freight rates had had a beneficial impact on rates for Nunavik

understand that the carrier in Nunavut that is not the GN designated carrier for a region charges the same rate as under the GN contract.

NUNAVIK SEALIFT RATES 2000-2009[31]

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Rates	$198	$240	$250	$298	$310	$323	$332	$343	$348	$367

For 1 000 KG or 2.5 cubic meters, rounded to the nearest dollar

An open market system would still involve the same carriers as there are no other companies in Canada with the equipment or skill sets needed to land cargo ashore across a beach. Also, the individual volumes involved to remote small communities requires an understanding of the market and the ability to combine cargoes to build a shipload.

Another aspect is that other carriers would need to build relationships with marshalling and packaging companies to establish a total system that receives cargo from the supplier, prepares it for shipment, tracks the cargo, carries it to the Arctic and then delivers it to the community above the high water mark.

If there were at least three, but preferably four independent carriers that could offer competitive service to each community and if communities had established port facilities (or independent lighterage capability), adequate laydown and warehousing and container stripping facilities, an open market system might be achievable. Without all of these support services in place, the user would have to go to one or other of the existing carriers. The existing duopoly is not an open market.

In terms of assessing the future opportunities for an open market, it is feasible that Iqaluit could be considered for a limited third party containerised service, although certain features need to be in place for it to work. This service would take advantage of those ships that are available in the Canadian fleet that are not controlled by either NEAS or NSSI. (see following list of ships). Such a service would need a charterer from Nunavut to become involved and ensure that adequate cargo was booked and full lighterage and shore side services provided.

Ships[32]

Dutch Runner	Great Lakes Feeder Lines
Kathryn Spirit	McKeil Marine
Yancanuk	Purvis Marine

Barges[33]

Alouette Spirit	McKeil Marine
Kent Carrier	Atlantic Towing

31 These rates were received from a source in Nunavik, and are rounded to the nearest dollar. It is understood that they are published by NSSI on a seasonal basis.

32 None of these companies have essential support equipment for beach landings.

33 Note that for an open ocean transit from Southern Canada into the Eastern Arctic a large barge with cargo protection, such as a deck house, is needed. Most Canadian barges are smaller and flat deck without breakwaters.

From a GN perspective an open market system could be accommodated under the Financial Administration Act, which contains mechanisms by which contracts may be entered into without a tender, or RFP process. However, the value of such contracts would likely be of such a size that they would need to be signed by the Minister, or Deputy Minister. Such a process could lead to lobbying by shipping companies to influence decisions relative to carrier contracts. This could lead to distractions from other government business.

Stakeholders with whom we consulted could not support an open market because of the uncertainty that it would bring and the potential to materially disadvantage remote and/or small communities.

5.3 Stakeholder Approach

Stakeholder discussions are summarised below:

The most common reaction to the question of retaining the RFP process, or moving to an open market system was that the RFP process was preferred because it protected smaller communities.

Two stakeholders indicated that while their organisations usually prefer a competitive open market, they believed that the RFP process carried out by CGS achieved the best compromise between best available price for the service and protection of the interests of Nunavummiut.

One stakeholder expressed considerable concern that because his competitor is a shareholder in one of the shipping companies, he could be shut out or be billed non competitive rates under an open market system. He preferred the control exercised through the RFP process, that the carriers were required to offer the same rates and terms to everyone.

One Kitikmeot stakeholder community, that has benefited from the recent new service from the east, was in favour of an open market system.

One shipping company felt very strongly that an open market system was best because it gave all Nunavummiut choice of carrier. Two shipping companies felt that the RFP process provided the best balance for service to the Arctic.

One group suggested that a ferry from Happy Valley/Goose Bay could offer reduced costs. This option was reviewed, but does not appear to offer the frequency of service and cost benefits that have been suggested.

Another stakeholder suggest the use of hovercraft as a means of offering year round high speed service. This opportunity was reviewed, but such craft do not have the ability to operate over extended routes, and costs did not appear to offer benefits for lightering cargo.

6. RISKS & IMPACTS

6.1 Overview

All transportation systems have inherent risks that both the user and the carrier have to accept. The way in which these systems perform also has an impact on the users. This section of the report draws on information from other areas and attempts to quantify the level of risk within a specific approach to Sealift as well as possible impacts at the community level

6.2 RFP Process

Under competitive RFP process the GN leverages its cargo volumes to create an umbrella agreement for groups of communities (in the case of Iqaluit, a single community) to obtain the best possible rate, and lock that in for a period of time. Recognising the inherent instability of fuel costs in 2006, the GN accepted a risk sharing model where a base rate could be adjusted in future years depending on fuel costs[34].

The competitive RFP process is, essentially, a compromise between the desire to obtain the best possible price and the recognition that there are relatively few bidders for such a specialized piece of marine business with comparatively low volumes.

The RFP process, because it establishes a contractual relationship between the GN and the carrier, enables the GN to set terms and conditions. Thus far the GN has tried to ensure that communities are dealt with in an equable manner via a postage stamp rate for each community within a group. At present these groups are:

Iqaluit	
South Baffin	Pangnirtung, Kimmirut, Cape Dorset
Foxe Basin	Igloolik, Hall Beach, Repulse Bay
Kivalliq[35]	Rankin Inlet, Baker Lake, Chesterfield, Coral Harbour, Sanikiluaq, Arviat, Whale Cove
High Arctic	Qikiqtarjuaq, Clyde River, Pond Inlet, Arctic Bay, Nanisivik for furtherance to Kugaaruk), Grise Fjord, Resolute Bay.
Kitikmeot[36]	Kugluktuk, Cambridge Bay, Taloyoak, Gjoa Haven, Bathurst Inlet, Umingmaktok

Community groupings are changed by the GN from time to time based on population, cargo demand and accessibility.

34 In previous contracts, and when CCG was managing Sealift, rates were fixed and included fuel. This was during a period of relatively low and stable fuel prices.

35 There are two contracts for Kivalliq, one out of Churchill and one out of Montreal.

36 Because of the way in which the ASPPR treats Pelly Bay for ice conditions, Kugaaruk is served by CCG with transhipment at Nanisivik. Analysis of ice conditions in Pelly Bay and Committee Bay by the NRC suggests that the present zoning could safely be changed.

2009 rates, by community groups are as follows:

Community Group		**Rate per revenue ton**
Iqaluit		$293.42
South Baffin		$350.80
Foxe Basin		$381.77
Kivalliq ex Churchill		$234.25
Kivalliq ex Montreal area		$381.77
High Arctic		$398.06[37]
Kitikmeot	GN contract ex Hay River	$676.97
	Private ex Richmond (BC)[38]	$452.09
	Private ex Montreal area	$508.46
Nunavik		$366.88

6.3 An Open Market System

As discussed elsewhere, under an open market system the GN steps back from negotiating on behalf of all Nunavummiut and simply negotiates the best deal it can for government cargo. As there would now no longer be any implication to the carrier that the contract will guarantee both the GN cargo as well as the cargo controlled by the Government agencies, i.e. NHC, NLC etc, one can expect rates to rise because neither carrier will be able to estimate how much business they may be able to control. It is also feasible that sailings may be curtailed if the carrier expects less than a shipload and cannot readily combine community cargo for different areas of Nunavut.

The experience in both Nunavut and Nunavik suggests that whatever the rate is that is determined for a community, both carriers will charge the same price[39], or close to the same price. However, unlike in Nunavik, where one of the primary carriers is partially owned by a major commercial manager, and both major carriers are incorporated in the province no such direct or moral control would be possible by the GN. An influence on Nunavik achieving a postage stamp rate may actually be the ease of joint service to Nunavut communities to fill out ships and keep costs down[40].

Although some Nunavut corporations, such as QC and Sakku do have holdings in NEAS, their ability to influence rates, except relative to their own corporate interests or associated project companies is perhaps limited. Northern Stores is also a shareholder in NEAS and the Co-Ops are shareholders in the regional operating

[37] Residents of Kugaaruk pay an additional $114.536/tonne or $45.814/revenue ton of 2.5m^3. The rate for GN Government cargo is higher than this rate, but constitutes a relatively small percentage of total shipments.

[38] NTCL rates vary by destination.

[39] Another example of pricing similarity in an “open market” is air travel to Iqaluit, where First Air and Canadian North charge the same air fare and operate within minutes of each other. Only in service to Yellowknife, where Jazz moved in as a third carrier, and now Westjet have entered the service has led to significant changes in price and schedule. However, this is forcing Canadian North to re-evaluate service to some communities and cut back service on certain routes.

[40] One shipping company stated that the Nunavut RFP process has had a major influence on Nunavik pricing and rate stability

companies associated with Desgagnes Transarctik While these companies have a commercial interest in keeping costs as low as possible, it is moot whether they would influence the carriers relative to the overall rate structure. The carriers may be expected to concentrate on those Nunavut communities or regions that generate high volumes of cargo and/or are easy to serve relative to their core business in Nunavik, and seek to raise rates to more remote, smaller or difficult to access communities.

There is also the impact of cargo to mining and exploration companies to consider. While business is reduced in 2009, operations will return and a large, lucrative contract to service a mine site over a number of years could well take precedence in carrier planning regarding ship availability for community service.

Consequently it can be expected that while rates to easy access and high volume communities may remain stable, or even decline, rates to more remote and less easy to serve communities could well increase, and service might decline. It is feasible that for more remote communities, the carrier may offer only a single voyage with much of the ship capacity taken by its corporate partner's cargo.

For example, carriers serving Baker Lake in the Kivalliq out of the Montreal area need to charter or acquire equipment to transfer cargo through Chesterfield Narrows. NTCL's tug and barge equipment is compatible with navigation requirements.

As an example of how rates may develop under an open market system, NTCL publishes two tariffs for the Kitikmeot region. The GN tariff is a postage stamp rate for Kitikmeot communities served from Hay River (NT). For 2009 the rate is \$614.03/short ton[41]. The rate per metric tonne is \$676.94 and, although a rate per revenue ton (equivalent to those agreed by GN with Eastern Canadian carriers) is not given, the rate per cubic metre when multiplied up to a revenue ton of $2.5m^3$, the value is the same as the per metric ton rate.

The alternate tariffs for 2009 are distance related. Unlike the shipping companies that quote an umbrella rate, NTCL's tariff is organised both by commodity and distance. The following examples are extracted from the tariff.

EXTRACT FROM NTCL 2009 TARIFF EX HAY RIVER

Community	Container[42]	Weight Cargoes	Distance from Hay River
Kugluktuk	\$7,153.20	\$762.49	1,608
Bathurst Inlet	7,758.20	835.92	1,728
Cambridge Bay	7,758.20	835.92	1,798
Umingmaktok	7,758.20	835.92	1,798
Gjoa Haven	8,440.20	919.70	1,948
Taloyoak	8,748.20	956.97	2,038

The rates are roughly proportional to the distance from Hay River. Note that the rates quoted above are significantly higher than the GN rate of \$676.94/revenue ton.

41 NTCL deck barges are weight and surface area limited rather than cubic limited like a ship. They have traditionally quoted rates per short ton with provisions for different types of cargo.

42 Includes usage charge of \$936.00.

6.4 Communities Most at Risk Under an Open Market System

The following is a review based on the current community groupings for Sealift.

Iqaluit is one of the closest communities to Eastern Canada and has the highest volume of any community in the Arctic served by marine. There are circumstances under which an alternate carrier could offer service – see Section 5 of the report – although investment needs are fairly high, the benefits suggest that the entry of a third party, in partnership with a local entity, could materially reduce freight costs.

The community generates between 30-40,000 revenue tons of cargo and would be the least impacted by an open market system.

South Baffin The three communities are relatively close to Eastern Canada and while the apparent port range is small, in reality Pangnirtung in the east to Cape Dorset in the west is 728nm. The grouping is not growing in population and cargo generation is about 8,500 revenue tons. This is just over one shipload and community calls would have to be supported by other regions.

Cape Dorset and Kimmirut are usually served as a part of the current carrier's Nunavik service and consequently would not be at great risk under an open market arrangement. Rates could conceivably rise to be equivalent to Nunavik service, or about 5%. Pangnirtung would most likely be served as part of East Baffin community calls, and rates would probably remain the same.

There are no known active mine developments that would increase volumes. Pangnirtung is being developed as a fishing harbour, and this may lead to greater opportunities for inbound and outbound cargo.

Foxe Basin The Foxe Basin is relatively distant from Eastern Canada and although the community sailing distances are +/- 20nm around the average; the range between Hall Beach in the north and Repulse Bay in the south is 332nm. The grouping is estimated to generate about 8,000 revenue tons of cargo. Under an open market system, Repulse Bay would probably be added to Kivalliq port calls[43] leaving Hall Beach and Igloolik as remote communities.

This region has some opportunity for enhanced cargo activity if Baffinland Iron Ore selects Steensby Inlet as its shipping point for iron ore. We understand that there is some question about this port proceeding due to navigability issues in the Foxe Basin for the very large, deep draft ore carriers being considered. It is possible that the company may keep logistics needs moving through Milne Inlet. The mine at Roche Bay would also impact freight into the region, but this project is not as far advanced as Baffinland. Both projects may elect to ship most logistics supplies from offshore to minimise costs. A review of ice conditions in Fury and Hecla Strait and the East side of the Gulf of Boothia suggests that it would be many years before this route was reliable as a through passage to the west. We consider that this region would be somewhat at risk under an open market system as rates could rise from current levels to over $500/revenue ton.

[43] Ice conditions in Roes welcome Sound indicate an easier approach to Repulse Bay than from the North. Port rotations observed from the carriers indicate that this route is frequently used.

Kivalliq The mainland communities of the Kivalliq are a fairly compact group, with a growing population and a relatively high cargo generation potential. Total Kivalliq cargo generation is estimated to be close to 26,000 revenue tons, of which Baker Lake represents 5,000 and Sanikiluaq 2,250. Coral Harbour, although remote from the mainland, can be readily served inbound to this region. Current rate structures for Montreal area origin cargo include an apportionment of the cost of lightering through Chesterfield narrows, as well as service extension to Sanikiluaq.

Thus, in terms of risk**,** Baker Lake represents a cost and service issue because of the need to tranship cargo through Chesterfield Narrows. Also, Sanikiluaq is remote from the mainland, and closer to the Quebec Shore and Moosonee in Ontario

Under an open market system, Eastern carriers might abandon service to Baker Lake because of cost and inconvenience and Sanikiluaq could face a distance surcharge, although its proximity to Quebec may mitigate problems.

The mainland region in Baker Lake and through Rankin Inlet has considerable mining potential that is currently being actively developed (Agnico Eagle and Meadowbank), or is at an advanced planning stage (Kiggavik). Logistics needs for the Agnico Eagle property at Baker Lake and the Areva development of Kiggavik could well offer a solution to service through Chesterfield Narrows by providing a large volume for transhipment, although this does depend on who provided Sealift service to the mining companies. If it is NTCL, then their equipment and mode of operation can run through the Narrows without the need to re-handle cargo. A ship-based carrier could better justify a transhipment operation if more cargo were available.

Costs from Montreal to all communities between Coral Harbour and Arviat, including Repulse Bay, are estimated at $313.66/revenue ton if Baker Lake transhipment is excluded. This compares with a current postage stamp rate of $381.77

Baker Lake would likely not be served from Montreal if it had to carry the full cost of transhipment as rates needed to support this operation would make service uncompetitive with NTCL service through Churchill using tugs and barges with direct service.

Rates to Sanikiluaq, if the community is required to support the full cost of extra sailing time could rise to $504.72.

High Arctic Although the port range between Qikiqtarjuaq and Repulse Bay (840nm) is very similar to Nunavik (800nm) between Kangiqsualujjuaq and Kuujjuarapik, we consider this region to be the most at risk under an open market system. Distance based rates would most likely be imposed and these could create hardships in the more remote communities.

Estimated distance and volume based rates/revenue ton with Kugaaruk continuing to be served through Nanisivik are as follows (compare with the current posted rate of $398.06). These rates include an allowance for the difference between Mariport's calculated RFP rate and the 2009 posted rate:

Qikiqtarjuaq	$347.88
Clyde River	$355.19
Pond Inlet	$380.52
Arctic Bay	$385.32
Nanisivik	$387.38
Grise Fjord	$532.21
Resolute Bay	$858.00

Rates Nanisivik south are less than current GN regional rates, Grise Fjord and Resolute Bay could rise significantly. Under an open market system, carriers would be unlikely to serve Kugaaruk directly, and would continue to deliver cargo at Nanisivik for furtherance by Coast Guard vessels.

Kitikmeot Climate change, and improved reliability of safe passage from the east into the Coronation Gulf, has presented new opportunities with regards to service. The NSSI service offered in 2008 was as a private venture, and NEAS has indicated its intention to sail to the region in 2009 as well as NSSI.

Rates by these two carriers are identical, and for the easterly communities of Taloyoak and Gjoa Haven are quite attractive compared with the rate out of Hay River. The 2009 rate per revenue ton is $508.46, compared with the rate per tonne of $956.97 by NTCL. Container rates by NEAS[44], once the return surcharge is included are $8,131.22 compared with $8,748.20 by NTCL. However, these rates are higher than NTCL's rates of $5,211.54/container out of Richmond (BC), which eastern carriers would need to match in order to build a competitive route.

Technically it is an open market out of Montreal, and the communities have benefited from reduced shipping costs, and may have benefited further because of reduced inland distribution costs.

6.5 Socio-economic implications of an open market system

When evaluating a change from an RFP approach to an open market system for Sealift in Nunavut on the basis of socio-economic considerations, we are really conducting an analysis of the impacts of inflation. A change in market conditions will alter prices and thus impact the financial wealth of the consumer which in turn has an impact on well being. Thus, we are concerned with

a) the price effect,

b) communities at the greatest risk of inflation, and

c) who benefits from an open market and can those benefits subsidise others.

[44] The NSSI rate is the same as the NEAS rate, but there is no indication of a return container surcharge.

The Price Effect

The cost of shipping is a part of the value-added chain that is included in the final price of a good. A move to an open market is a change in market conditions. It will bring about price changes, both positive and negative. In an active market where profits are held in check by the virtue of competition it might be that a portion of any cost increase would be paid for through a reduction in profits. In most Nunavut communities, especially the smaller ones, there is little or no competition in the sale of consumer goods and services, and thus we can assume that an increase in the cost of shipping will be passed onto the consumer in full. Conversely, the absence of a competitive market also means that one cannot assume that the savings incurred as a result of a decrease in the cost of shipping will be reflected fully in consumer prices, a portion of this savings would likely end up as additional profit. For the purpose of the following analysis, we assume that profits are held constant

throughout Nunavut with respect to the cost of shipping. Any change in shipping costs will result in an identical change in the consumer price, regardless of who the buyer is or the efficiency in the market, but the reader should understand this assumption is not likely to hold.

We have estimated this change in price by assessing how the two eastern arctic shipping companies might respond to an open market in Nunavut. The estimated change in prices is reiterated here in the following table. The last column in this table indicates the net impact by community in dollar terms. However, this conclusion must be viewed with an appreciation for the assumptions introduced in determining the open market response. Determining the possible shipping costs for the communities of Hall Beach, Igloolik, Resolute Bay Grise Fjord, Sanikiluaq, Baker Lake held particular challenges. As will be seen from the table, losers are balanced by winners, overall there would be a minor net increase in cost of sealift service to Nunavut. However, the impact of cost increases on losing communities could be devastating.

It should be noted that the estimated costs are those by Mariport, and are not adjusted to represent differences between these costs and the posted 2009 rates

Price Effect of an Open Market Sealift				
Community	Estimate of 2009 RFP Price/revenue ton	Estimated Open Market Price/ revenue ton	Estimated shipping volumes, Rev.tons (2009)	Net Impact ($)
High Arctic				
Qikiqtarjuaq	$363.19	$319.16	1,600	(70,448)
Clyde River	363.19	325.86	2,530	(94,445)
Pond Inlet	363.19	349.11	3,780	(53,222)
Arctic Bay	363.19	353.50	2,080	(20,155)
Nanisivik	363.19	355.39	2,300	(17,940)
Grise Fjord	363.19	488.27	540	67,543
Resolute Bay	363.19	788.07	680	288,918
Kugaaruk	409.004	No change	via Nanisivik	
Kivalliq				
Coral Harbour	348.78	286.45	13,160	(820,263)
Arviat	348.78	286.45		
Rankin Inlet	348.78	286.45		
Chesterfield Inlet	348.78	286.45		
Whale Cove	348.78	286.45		
Baker Lake	348.78	388.77	5,096	203,789
Sanikiluaq	348.78	467.33	2,240	265,552
Foxe Basin				
Igloolik	377.43	455.95	6,090	478,187
Hall Beach	377.43	455.95		
Repulse Bay	377.43	286.45	2,030	(184,689
Kitikmeot				
Kugluktuk				
Cambridge Bay				
Taloyoak				
Gjoa Haven				
South Baffin				
Pangnirtung	346.03	319.16	3,400	(91,358)
Kimmirut	346.03	366.88	5,140	107,169
Cape Dorset	346.03	366.88		
Iqaluit				
Iqaluit	No Impact		45,000	0
Nunavut -net				**58,638**

Note: figures in brackets represent a decrease (lower) in shipping costs.

Communities at Risk

We are most interested in those communities where the change in cost is prohibitive. We are especially concerned with those communities that would see price increases in excess of 20 percent over the current RFP price. Communities in this situation include Grise Fjord, Resolute Bay, Sanikiluaq, Igloolik and Hall Beach. Communities that stand to benefit the most include Repulse Bay and the Kivalliq communities excluding Baker Lake. It is an important finding that the Kivalliq region is the only one that may benefit as a whole from the change to open market competition. However, the extent of this benefit is highly dependent on Baker Lake receiving a competitive price from NTCL out of Churchill.

The communities at risk are burdened by a challenge in marine transportation, either as a result of geography or population or in some cases both. The following table reorganises the winners and losers in an open market system. In some cases the change to an open market is expected to have little or no impact.

Winners and Losers in an Open Market

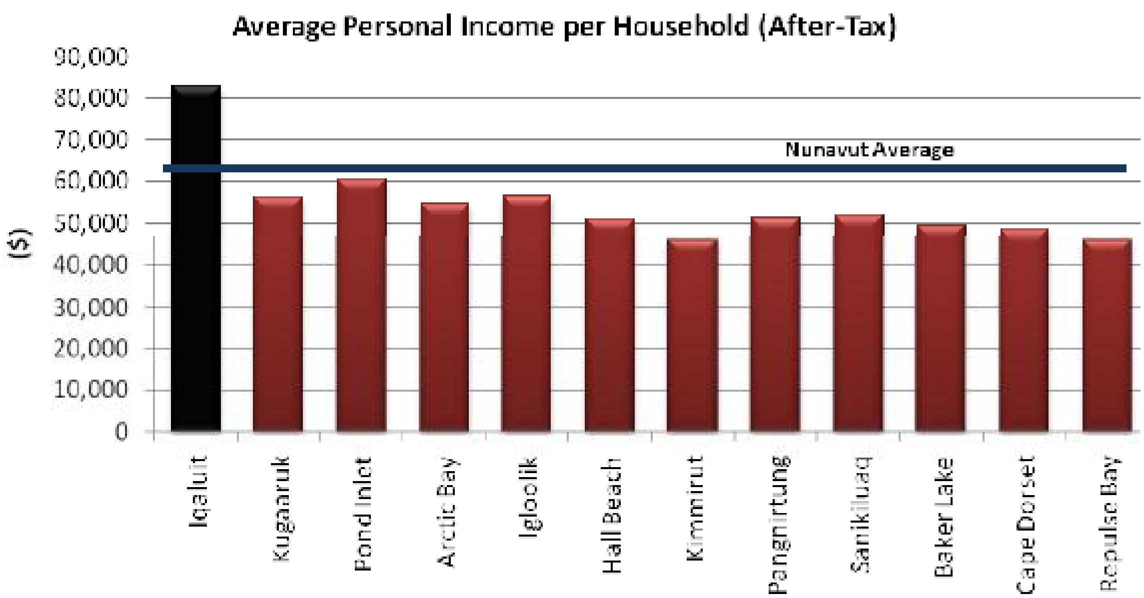
Open Market Winners or Unchanged (change less than +/- $10/rev. tonne)	Open Market Losers
Coral Harbour	*Grise Fjord*
Arviat	*Resolute Bay*
Rankin Inlet	*Sanikiluaq*
Chesterfield Inlet	*Igloolik*
Whale Cove	*Hall Beach*
Clyde River	*Kimmirut*
Iqaluit	*Cape Dorset*
Kugluktuk	*Baker Lake*
Cambridge Bay	
Taloyoak	
Gjoa Haven	
Pangnirtung	
Qikiqtarjuaq	
Pond Inlet	
Arctic Bay	
Nanisivik/Kugaaruk	
Repulse Bay	

There is no single community in Nunavut that would be described as wealthy using Canada as a benchmark. Nunavut’s state of well-being is well documented in reports such as the Nunavut Economic Outlook. These reports show the territory suffers from social and economic challenges too numerous to reiterate in full here; education levels are low, health is generally poor, issues of crime and substance abuse are common, unemployment rates are high resulting in low levels of personal income. This last issue is of particular interest for our study of Nunavut’s sealift as it relates to cost of living.

Ranking Nunavut's communities according to their income per capita, one finds the wealthiest communities are also those that are most likely to benefit from an open market. These communities are generally larger, home to government offices, or are in advantageous geographical locations with respect to shipping routes. For instance, data from the *2006 Canada Census* shows income per capita is highest in the capital city, Iqaluit; a community also characterised by the largest population, lowest unemployment rate and competition in numerous consumer markets. It is also geographically close to Montreal relative to most Nunavut communities, so it already has a benefit there with respect to shipping costs. Conversely, the communities that stand to endure the highest price increases are smaller, more remote, and poorer. These characteristics go hand in hand with the fact that these communities also lack economic opportunities. Baker Lake is an exception to this. It is worth noting that if we were to compare the purchasing power of the average income in Nunavut with that of Canada, the disparity widens.

The chart below lists the income per household in the communities at risk of a price increase of more than $10 per revenue tonne. In all cases, the average incomes fall below the territorial average.

Average Personal Income per Household in Communities at Risk (After Tax)



Note that Resolute and Grise Fjord are not reported. Their populations are too low to warrant the release of Census data by Statistics Canada. However, the Nunavut Bureau of Statistics show in other survey results.

Who Benefits

Both private citizens and government act as purchasers of final goods in Nunavut therefore both groups are at risk should shipping costs increase.

- In the case for the private consumer, any inflation not matched by an increase in personal income leaves that individual worse off.
- Where government is the purchaser of a final good at a higher price, it must choose greater taxation or lower spending to offset the increased costs. (We assume fiscal deficits are not an option.) In this case, all Nunavummiut are affected, not just those residing in communities where the costs have increased.

One could evaluate the price impacts from a macro perspective; that is, determining the net effect. In the case of government, this is appropriate given that it is interested in total expenditures not disparity between communities. If higher costs for shipments to some communities can be offset by savings elsewhere, then the open market would offer an improved fiscal position.

Cargo distribution between carriers and communities is not known. Neither is the quantity of government cargo, or that which is required to be shipped by the carrier that is awarded the GN contract. The actual amount will vary, year by year, depending on projects in the different communities. However, actual year by year government cargo is under 10%, while cargo for NHC and projects can be as much as 50%. Thus an analysis of the impact on Government relative to private consumers is not possible.

Insofar as the consumers are concerned, consultations with stakeholders by Mariport reveal there is little appetite for seeing communities made worse off. There was general consensus that negative fall-out from an open market on the communities at risk would not be tolerated.

This is the most critical piece of information for the socio-economic evaluation; that is, that Nunavummiut are uninterested in the notion of winners and losers that might result from an open market system and generally prefer the existing RFP process as providing a competitive approach that balances costs across different regions. But as noted earlier, any change in market conditions *will* cause price changes. The open market would have to result in increased efficiencies across the board bringing about a wholesale decline in shipping costs in order for the otherwise certain result of winners and losers be avoided.

Mariport has shown that there will most definitely be winners and losers in an open market system. Mitigating this outcome would necessitate government intervention whereby a systematic redistribution of income from market winners to losers can take place. This would require a system whereby taxes are levied on individuals who are made better off and redistributed to those that are not. The challenge rests with the design, execution and complexity of such a program, and is dependent on an efficient and effective tax regime and a methodology to easily identify winners and losers. In all likelihood, such a system would be cumbersome to the point of being unmanageable. The results shown earlier suggest this is a moot point, since the net effect on society is negative and in the cases where communities benefit, namely the

Kivalliq communities, government does not share enough of that market to acquire a net savings.

In a scenario whereby the net change in marine transportation costs is statistically insignificant but requires considerable government intervention in order to redistribute income, one comes quickly to the conclusion that the current system already achieves a measure of parity across the territory, but in a much more efficient manner.

In the case for Nunavut, the results are equivocal for shipping into the eastern Arctic. From the standpoint of socio-economics, an open market sealift in Nunavut would result in a serious decline in standard of living and in quality of life for a number of communities, while the benefits to others would not materially improve their situation. The fact that Nunavut can ill afford any cost inflation or a decline in well-being given its current poor socio-economic condition must lead to a conclusion that, from a socio-economic perspective, the current system broadly serves the best interests of Nunavummiut when all factors are considered.