

# **Halifax: Becoming a Shipbuilding Centre of Excellence**

## **Measuring the Potential Impact of the National Shipbuilding Procurement Strategy on Nova Scotia**

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The Greater Halifax Partnership

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# 1. INTRODUCTION

The federal government has initiated a process that will culminate in the selection of two Canadian shipyards to anchor its military and civilian shipbuilding, as well as in-service support for the fleet over the next 30 years. If Irving Shipbuilding Inc. (ISI) is chosen as one of the prime contractors, it will have a profound impact on the Greater Halifax and Nova Scotia economies.

This report has been prepared to help government, industry and community leaders, as well as the general public, understand the extent of the project's economic impact. The assumed timelines are largely based on the notional schedule outlined by the National Shipbuilding Procurement Strategy Request for Proposal.

## 1.1 Summary of the Case for Halifax

- *ISI is Canadian owned and committed to transforming Halifax into a shipbuilding centre of excellence.*
- *The Halifax shipyard offers excellent infrastructure, a strong supply chain, high-quality education/training infrastructure and a competitive cost environment. With the ISI head office in Halifax, decisions related to supply chain and partner relationships are made locally.*
- *The economic impact of either the combat or the non-combat fabrication project would have substantial economic impact on the provincial and national economies.*
- *The supply chain and indirect economic benefits from a Nova Scotia location would generate significant economic benefits to the rest of Canada, including Ontario and British Columbia. Not choosing Nova Scotia would lead to very little economic benefits to Atlantic Canada.*
- *The economic impact would have a far greater relative economic impact on the Nova Scotia economy compared to other jurisdictions in the running.*
- *Choosing ISI as a prime contractor of the National Shipbuilding Procurement Strategy would significantly enhance the aerospace and defence cluster in Nova Scotia and anchor future development opportunities.*
- *There is unprecedented support for this project from all corners of society in Nova Scotia and across Atlantic Canada. Business groups, labour leaders, education stakeholders and community leaders are excited about the NSPS as a catalytic investment in the region.*

## 1.2 National Shipbuilding Procurement Strategy: Background

With a combined length of 243,000 kilometres, Canada has the distinction of having the longest coastline of any country in the world. Through the Department of Defence, the Coast Guard and other departments and agencies, the federal government has considerable need for defence and civilian vessels.

Senior officials and industry experts have been advising the federal government to develop a long-term approach to shipbuilding and consolidate larger projects into one or two shipyards. This approach has been adopted by most other countries around the world. Government commitment to a long-term shipbuilding strategy would eliminate the boom-and-bust cycle that has hurt the industry in the past; allow shipyards to make long-term investments in infrastructure, workforce and technology; and, ultimately, benefit Canada by having world-class shipbuilding expertise right here at home.

The National Shipbuilding Procurement Strategy (NSPS) signals a profound change in the federal government's approach to its long-term shipbuilding and in-service support. It is based on a 30-year plan for the fabrication and in-service support of the federal government's requirements. There are three main components to the strategy<sup>1</sup>:

1. One Canadian shipyard will be awarded the "combat" package, which includes the Navy's Arctic/Offshore Patrol Ships and the Canadian Surface Combatants Ships (replacement for the current fleet of Destroyers and Frigates).
2. One Canadian shipyard will be awarded the "non-combat" package, which includes the Navy's Joint Support Ships and the Canadian Coast Guard's offshore science vessels and the new Polar icebreaker.
3. The "small ships" package (vessels less than 1,000 tonnes) will be set aside for other shipyards and includes National Defence's large and small tugboats and the Canadian Coast Guard's science and specialty vessels. While not the same scale as the first two projects, this represents considerable work for smaller shipyards. The Department of National Defence will require both small and large tugboats, and the Canadian Coast Guard will require the following six types of vessel:
  - Search and Rescue Lifeboats
  - Mid-Shore Science Vessels
  - Channel Survey and Sounding Vessels
  - Near-Shore Fishery Research Vessels
  - Specialty Vessels
  - Special Nav-Aid Vessels

The shipyards that are bidding to win one of the two large projects (large combat or large non-combat) will be required to develop a compelling value proposition for their shipyard that shows the following: a commitment to continuous improvement; investment in skills and human resources; capability and infrastructure reinvestment; partnerships with provinces and other enterprises; long-term supply chain development (outsourcing and sub-contracting to small and medium-size enterprises); and how this project could lead to increased commercial work.

In addition, the winning shipyards are expected to commit to sustaining a knowledge-based economy that, through the use of emerging technology and improved efficiencies, will provide technical advancement in shipbuilding and other industries<sup>2</sup>.

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<sup>1</sup> For more information about the NSPS, visit <http://www.tpsgc-pwgsc.gc.ca/app-acq/sam-mps/snacn-nsp-eng.html>.

<sup>2</sup> As outlined by the Request for Proposals issued by Public Works and Government Services Canada in Feb. 2011.

### 1.3 Size and Scope of the Opportunity

This is a substantial opportunity for Greater Halifax and Nova Scotia. If ISI is awarded either of the two large projects, it will create hundreds of millions of dollars' worth of economic activity each year and, at peak fabrication, thousands of good-paying jobs for workers in the Halifax area and across Nova Scotia. Further, because of the long time horizon, the project will provide this economic activity in a sustained way for two decades, providing stability for the workers' careers and their families.

The combat package is the larger of the two and estimated to be worth \$25 billion in total from 2012 to 2030 (direct impact). With direct, indirect and induced economic impacts, the Conference Board of Canada estimates that if this project were awarded to Nova Scotia, it would generate an average of 8,400 jobs across the province each year and 11,500 at peak activity. (See Section 3 for additional details.)

The non-combat package is also substantial and estimated to be worth \$5 billion over the life of the project. The Conference Board of Canada report puts the jobs impact from this package in Nova Scotia at 3,700 per year (direct, indirect and induced), with a peak employment of more than 9,900 jobs.

To put the size of the opportunity into context, we can look at total employment in other sectors of the economy. For example, the arts, entertainment and recreation industry in Nova Scotia employs about 6,100 people—fewer than the new jobs that will be created if ISI becomes the prime contractor of the combat vessels package under the NSPS.

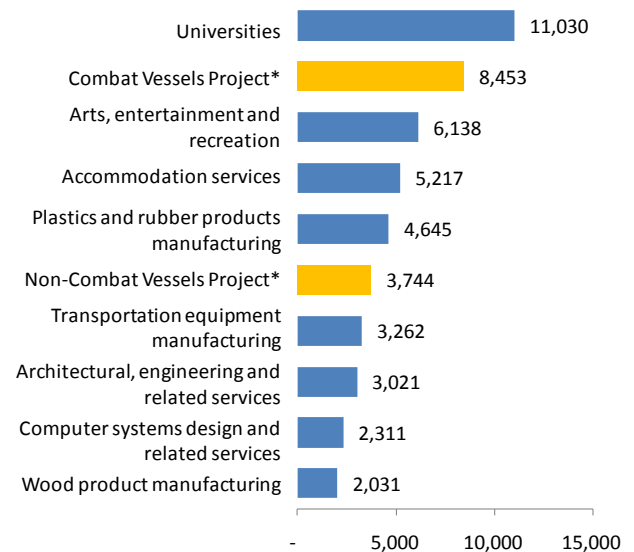
Figure 1 compares the direct, indirect and induced employment impacts from both the combat package and the non-combat package compared to select industries in Nova Scotia.

### 1.4 Halifax Has a Good Business Case

Halifax's status as a major North American port has been a primary driver of the region's economic development since its founding in 1749. The Atlantic Ocean sustains a large part of Nova Scotia's economy through fishing, transportation, the Navy, tourism and other sectors. Shipbuilding has also been an important part of the regional economy for generations.

The Halifax Shipyard has a long history of building Canadian Navy and civilian vessels dating back to the 1940s, when it built Tribal Class Destroyers through to the 1990s, when the Kingston Class Patrol Vessels were fabricated at the shipyard.

Figure 1: Employment by Industry Comparison



\*Average annual employment. Source: Conference Board of Canada (May 2011). Other annual industry employment: Statistics Canada CANSIM Table 281-0024. The Table shows only the direct employment in each industry compared to the full employment impact of either of the two shipbuilding projects.

ISI and the Halifax Shipyard are well positioned to become one of the two main contractors under the NSPS. ISI is a secure and stable firm with a long-term commitment to Halifax and Atlantic Canada. It is a member of J.D. Irving, Limited, an Atlantic Canadian-based and well-diversified group of companies. In addition, the company has invested \$90 million in the shipyard in recent years, making it among the most advanced in the country. It has a substantial and talented workforce, a deep supply chain and a strong management team. The firm also has direct experience with similar large federal government shipbuilding projects, since it was a prime contractor on the Canadian Patrol Frigate (CPF) Program in the 1980s and 1990s.

### **Irving Shipbuilding Inc. and Greater Halifax**

ISI's other critically important advantage is the community in which the shipyard is located. Beyond the shipyard itself, Halifax has many of the attributes that support a strong business case for making ISI a prime contractor under the NSPS.

Very few communities across North America can claim a similar depth of training and education infrastructure. There are six highly regarded universities, three campuses of the Nova Scotia Community College (NSCC) and dozens of private training firms. During the 2010–2011 school year, more than 35,000 students were enrolled in the universities and NSCC. These educational institutions turn out graduates in both the trades (welding, sheet metal, machinists) and technical areas (engineers, designers, technologists).

Halifax is also home to a cluster of defence firms, including Lockheed Martin Canada, L-3 Communications Electronic Systems, General Dynamics, MacDonald Dettwiler & Associates, CAE Inc. and Raytheon Canada. Several of these firms could become important suppliers to ISI under the new projects. There is also considerable related R&D underway in the region with private firms and the Department of National Defence and through local university-based research.

Greater Halifax also boasts a reasonable cost of living compared to many large urban centres across North America, which is attractive for any specialized engineering talent that will need to be recruited to support the project.

### **Broad-Based Community Support**

This is one of the most exciting development projects for Nova Scotia in a generation. There is unprecedented broad-based support for both ISI becoming a prime contractor of the NSPS and for Halifax becoming a shipbuilding centre of excellence. For example, the Halifax Chamber of Commerce took the rare step of publicly endorsing the project. Politicians from all parties and at all levels of government wholeheartedly support the project. The Nova Scotia Legislature issued an all-party resolution supporting the ISI bid. Labour leaders in Nova Scotia have expressed public support, and other community leaders are also endorsing the concept.

At its meeting in May 2011, the Council of Atlantic Premiers endorsed the federal government's approach to its shipbuilding needs under the NSPS. It stated in a communiqué that this was a historic opportunity that "has the potential to revive and strengthen the shipbuilding industry in this region."

The general public is starting to sense the importance of this project to the economy of Nova Scotia. The initiative, [www.shipstarthere.com](http://www.shipstarthere.com), which was created to explain this exciting opportunity to the public, has received thousands of visitors, while numerous social media posts express their support.

## 2. J.D. IRVING, LTD. AND IRVING SHIPBUILDING INC. IN NOVA SCOTIA

ISI is already a major economic contributor to both Greater Halifax and Nova Scotia. Becoming a prime contractor of the NSPS would significantly amplify the economic activity and the jobs supported by ISI in the region and province.

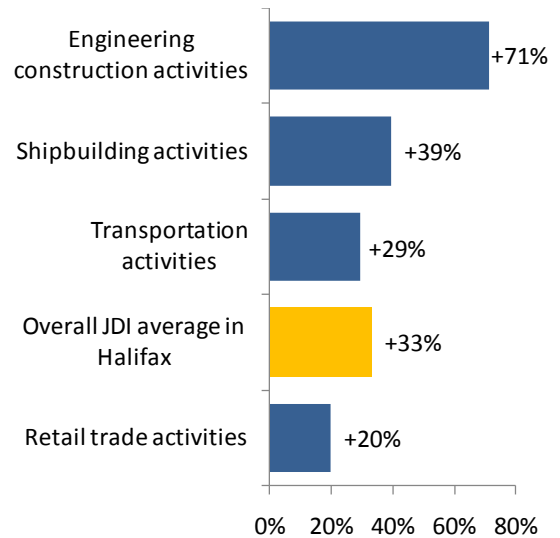
### 2.1 J.D. Irving, Ltd. in Nova Scotia

ISI is part of J.D. Irving, Ltd. (JDI), which is one of Greater Halifax's largest employers with 12 facilities in the region across a wide mix of businesses<sup>3</sup>. Along with shipbuilding and repair, JDI subsidiaries offer engineering services, industrial equipment leasing and services, retail sales operations and transportation/warehousing services across HRM.

In total, JDI has more than 1,350 employees in the Greater Halifax area earning well above average wage rates. (Figure 2 shows the average wage premium for JDI subsidiary employees compared to the provincial average in their respective industries.)

When adding in the impact of indirect employment, JDI operations support 12 out of every 1,000 private sector jobs in the HRM and generate almost \$90 million in direct and indirect employment income across Nova Scotia. This employment income translated into \$64 million in consumer spending and more than \$20 million in personal income taxes and HST paid. In addition, the company and its employees paid an estimated \$3.7 million in property taxes (all numbers are from 2009 data).

**Figure 2: Average Employment Income Premium by JDI Subsidiary Compared to Provincial Averages (full time workers)**



Source: Company wage levels provided by JDI. Industry averages taken from Statistics Canada Survey of Payrolls, Earnings and Hours (2009).

### 2.2 Irving Shipbuilding Inc.: Summary

ISI has two facilities in Greater Halifax: the Halifax Shipyard and the Woodside Shipyard. In addition, the company owns the Shelburne Ship Repair facility. In 2009, the firm directly employed more than 600 full-time equivalent employees in Halifax and indirectly supports another 350 across the province. With both direct and indirect impacts, ISI supports \$54 million in annual employment income across Nova Scotia<sup>3</sup>. ISI is also affiliated with Fleetway Inc. in Halifax, which provides support through the provision of engineering and other technical services.

Current large ISI projects in Nova Scotia include the Halifax Class Modernization FELEX contract and the multi-ship construction Canadian Coast Guard Mid-Shore Patrol Vessel (MSPV) project.

<sup>3</sup> Source: Information provided by J.D. Irving, Limited (2009 data). Employment numbers are shown in FTE. In real employment terms, the numbers are higher as they reflect a mix of full and part time/part year workers.

### **2.3 Halifax Shipyard: Summary**

The Halifax Shipyard is ISI's largest facility and company head office. It is a full-service shipyard offering a range of services for new build up to 120 metres and ship repair for vessels up to Panamax-size beam. It is home to the biggest floating docks and the largest machine shop in Eastern Canada. The Halifax Shipyard offers a comprehensive array of fabrication shops, outfit shops and machine shops, as well as access to a large and extensive local subcontractor community.

In 2009, the Halifax Shipyard employed 470 people (full-time equivalent, or FTE) at average wages of over 50 per cent higher than the average for full-time workers across HRM. Adding indirect employment, the Halifax Shipyard supported nearly \$42 million worth of employment income across Nova Scotia.

### **2.4 Woodside Shipyard**

The Woodside Shipyard also offers various construction, modification, upgrade and maintenance services from its deepwater quayside facilities. The shipyard's fabrication shops and lay-down areas dedicated to offshore work are located next to an extensive array of offshore industry specialty subcontractors. The Woodside Shipyard employed 127 (FTE) in 2009 at above-average wage rates.

### **2.5 Shelburne Ship Repair**

ISI's Shelburne Ship Repair facility is well equipped to serve small and medium-size vessels. The yard has marine railway capable of lifting 3,500 tonnes and can be subdivided for two different vessels. It also has 752 metres of wharf available with a draft of 9.1 metres and can accommodate vessels of up to 229 metres alongside. Shelburne Ship Repair employed 48 employees (FTE) in 2009 at above-average wage rates.

### **2.6 Fleetway Inc.**

Supporting the shipyard activity is Fleetway, which provides a comprehensive mix of naval engineering and technical services. The company works with firms in the Canadian defence, oil and gas, shipbuilding and other sectors. Fleetway provides full-service solutions to customers in two key areas: in-service support (product life data cycle management, maintenance planning and support systems, logistics) and engineering services (production design, technical studies). Fleetway employed more than 80 employees (FTE) in 2009.

### 3. BECOMING A PRIME CONTRACTOR OF THE NSPS

#### 3.1 Modelling the Economic Impact: Direct, Indirect and Induced Economic Activity

The Conference Board of Canada was retained to model the economic impact from ISI being awarded the federal government contract to construct either the new combat ships or the new non-combat ships<sup>4</sup>. The Conference Board of Canada includes the following three different levels of impact in its analysis:

- *Direct impacts*, which measure the impacts from the direct output from the project in the provincial and national economy.
- *Indirect impacts*, which measure the impacts from the economic activity through the supply and services activity related to the project.
- *Induced impacts*, which measure the impacts when employees of the aforementioned industries spend their earnings on housing, consumer goods (and so on) and owners spend their profits on new investments.

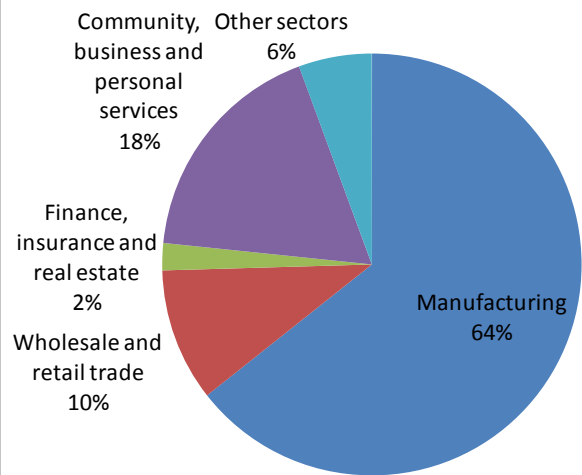
#### Combat Vessels (est. \$25 billion)

If ISI is awarded the \$25 billion contract<sup>5</sup> to construct combat vessels, there would be a significant boost to the Nova Scotia economy for nearly two decades<sup>6</sup>.

The Conference Board of Canada is predicting the annual real GDP (basic prices in constant 2002 dollars) generated from this project will average \$661 million per year. To put that in context, the mining and oil and gas extraction industry in Nova Scotia generated \$665 million worth of GDP in 2009, and the province's accommodation and food services industry generated \$629 million worth of GDP that same year.

Under this scenario, total employment in Nova Scotia (direct, indirect and induced) will average more than 8,400 per year over the life of the project, peaking in 2020 at just below 11,500. While the bulk of the employment gains will be in manufacturing, there will be significant increases in other sectors of the economy (Figure 3). In the peak year, more than 1,100 jobs will be supported in the wholesale and retail sectors of the economy as employers in these sectors add staff to meet the increased demand of the spending on groceries, automobiles and other consumer goods. Another 2,000 jobs will be supported in community, business and personal services such as lawyers, accountants, dentists and hairstylists.

**Figure 3: Nova Scotia Employment Breakdown by Industry (Peak Year) - Combat Vessel Project**  
Total Employment = 11,495



\*Direct, Indirect and Induced Employment.  
Source: Conference Board (2011)

<sup>4</sup> See the Conference Board of Canada study for details on methodology and further analysis.

<sup>5</sup> Note: This is only an initial estimated dollar amount for the project and used here to demonstrate the potential impact.

<sup>6</sup> Note: the Conference Board model assumes 40 per cent of the value of the maintenance work would accrue in British Columbia. See Section 3.8 for more details on the national impacts of this project.

The project is expected to generate, on average, an estimated \$51 million per year in provincial income taxes, \$66 million per year in federal income taxes and \$34 million per year in increased corporate income taxes. Indirect taxes, including HST and property taxes, averaging \$115 million per year will flow to government coffers. In total, the project will generate an average of \$266 million per year in taxes to local, provincial and federal governments.

In 2020, the peak year for production, GDP is expected to be \$897 million (adjusted for inflation using constant 2002 dollars) or \$1,281 million in current 2020 dollars. This supports 11,495 jobs, generating \$354 million in taxes for government. Importantly, it will generate an average of \$293 million in disposable income spent in the province on housing, automobiles, groceries and so on. (See Section 3.2 for a detailed review of the impact of this economic activity on consumer spending in Nova Scotia.)

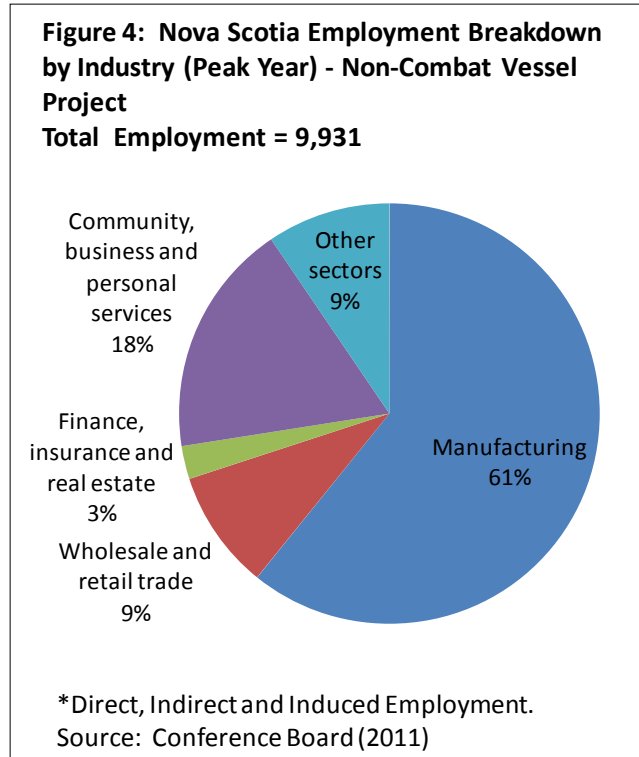
This kind of sustained economic impact will also have a positive effect on business and consumer confidence leading to long-term thinking about investment activity.

**Non-Combat Vessels (est. \$5 billion)**

The second scenario considers the economic impact if ISI is awarded the \$5 billion contract to construct non-combat vessels. In this scenario, the majority of the benefit would occur during the first seven years of the project.

The Conference Board of Canada predicts that the annual real GDP (basic prices in constant 2002 dollars) generated from the non-combat vessels project will average \$278 million per year.

Under this scenario, total employment in Nova Scotia (direct, indirect and induced) will average more than 3,700 per year over the life of the project, peaking in 2016 at more than 9,900 jobs. However, this peak will be sustained for a much shorter period of time than the combat ships project. Again, the bulk of the employment gains will be in manufacturing, but there will be significant increases in other sectors of the economy (Figure 4). In the peak year, more than 900 jobs will be supported in the wholesale and retail sectors of the economy as a result of this project. Another 1,800 or so jobs will be supported in community, business and personal services. Corporate profits across Nova Scotia are expected to increase by an average of \$13 million per year (\$30 million in the peak year).



In addition to corporate income taxes, the project is expected to generate, on average, an estimated \$19 million per year in provincial personal income taxes and \$25 million per year in federal personal income taxes. Indirect taxes, including HST and property taxes, averaging \$44 million per year will flow to government coffers. In total, the project will generate an average of \$100 million per year in taxes to local, provincial and federal governments.

The Conference Board of Canada estimates the non-combat vessels fabrication project will generate an average of \$125 million in disposable income spent in the province on housing, automobiles, groceries, etc. (See Section 3.2 for a detailed review of the impact of this economic activity on consumer spending in Nova Scotia.)

In 2016, the peak year for production, GDP is expected to be \$727 million (basic prices in constant 2002 dollars) supporting 9,931 jobs and generating \$244 million in total taxes for government.

### 3.2 Modelling the Economic Impact: Consumer Spending

If ISI is awarded either of the two main NSPS projects, the economic impacts will be significant. The Conference Board of Canada report estimates the average annual personal income generated in Nova Scotia as a result of the combat vessel project will be \$447 over the life of the project (2012–2030). Using this personal income level and Statistics Canada estimates of how households spend their money in Nova Scotia, the consumer-spending impacts in the province can be estimated<sup>7</sup>. Table 1 shows the top-level spending impacts across the main categories. Shelter includes costs associated with housing (mortgage payments, repairs). Transportation includes vehicles and maintenance, as well other modes of travel such as air and bus. Household operation includes utilities and other similar costs. Health care spending includes dentistry, optometry, prescription drugs and the cost of health insurance.

**Table 1: Average Annual Consumer Spending in Nova Scotia from the Combat Vessels Project**  
Estimated Breakdown by Major Expenditure Category

	\$ millions
Shelter	83.0
Transportation	65.6
Food	50.6
Personal insurance payments and pension contributions	26.4
Recreation	26.0
Household operation	24.8
Clothing	16.4
Health care	13.3
Household furnishings and equipment	12.7
Gifts of money and contributions	12.0
Tobacco products and alcoholic beverages	10.5
Miscellaneous expenditures	8.0
Personal care	7.6
Education	6.8
Games of chance (net)	1.7
Reading materials and other printed matter	1.6

Estimated household spending by major expenditure category derived using Statistics Canada Table 203-0001: Survey of household spending (SHS), household spending, summary-level categories (2009).

<sup>7</sup> The analysis in this section is based on the combat vessels project. The non-combat vessels project would have a lesser but still substantial impact.

### Governments: A Primary Beneficiary

As detailed in Section 3.1, all three levels of government will generate tens of millions of dollars in taxes each year. Local government in Nova Scotia, particularly in the Halifax region, will be a major beneficiary of a project this size. Given the aging population and the increased pressure on public spending for health care, this two-decade-long source of significant tax revenue will be very important.

Using Statistics Canada estimates for residential property taxes, the combat vessels project will generate almost \$13 million in local property taxes<sup>8</sup>, which will help keep residential and commercial property tax rates stable. Over the life of the project, municipalities (in particular the Halifax Regional Municipality) can expect to receive almost \$250 million in property tax revenues from this project.

**Table 2: Average Annual Taxes Generated in Nova Scotia from the Combat Vessels Project**

Personal income taxes	\$117 million
Corporate income taxes	\$34 million
Indirect taxes (including HST and property taxes)	<u>\$115 million</u>
Annual taxes generated	\$266 million

Source: Conference Board of Canada 2011.

### The Construction/Housing Sector: A Primary Beneficiary

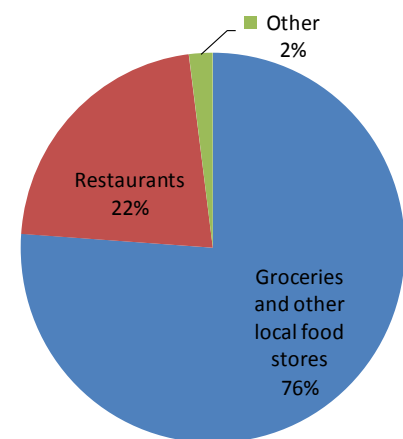
One of the industries that benefits the most from a project this size is the construction and housing sector. In addition to any industrial or commercial construction, this project will result in millions of dollars in new residential construction. The \$477 million in annual personal income generated by the combat vessels project will translate into an estimated \$26 million in mortgage payments on owned residences and \$15 million in rent payments on rented residences.

Over the past 20 years in Halifax, the ratio of new residential units per incremental employed person in the workforce has been 0.95 to 1. In other words, there has been an increase of 0.95 residential units (all types)<sup>9</sup> for every net new job created over 20 years. Assuming this ratio holds, the combat vessel fabrication project would support nearly 8,000 new residential units across Nova Scotia, mostly constructed in the first decade of the project.

The project will also generate about \$3 million in homeowners' insurance on owned residences and nearly \$20 million in utilities payments (water, fuel, electricity) for owned residences.

The home maintenance and repair industry will benefit from an estimated \$4 million in home and rental unit maintenance and upgrades.

**Figure 5: Estimated Annual Spending in Nova Scotia on Food (% of Total)**



Source: Extrapolated based on Statistics Canada CANSIM Table 203-0002 - Survey of household spending (SHS), household spending on food.

<sup>8</sup> Derived using Statistics Canada CANSIM Table 203-0003. This is a conservative estimate because it is based on average spending across Nova Scotia. Property taxes paid in Halifax Regional Municipality would be higher.

<sup>9</sup> Using CMHC housing completion data and Statistics Canada Labour Force Survey employment estimates.

### **Food: A Major Beneficiary**

Behind housing and transportation, the third-largest consumer-spending category is food. Whether purchased in grocery stores, corner stores or restaurants, the average annual personal income from the combat vessels project will generate more than \$50 million in new food sales each year across Nova Scotia. More than \$11 million of that amount will be spent in fast food and full-service restaurants (Figure 5).

### **Automobile Industry: A Major Beneficiary**

From automobile dealers and gasoline stations to maintenance and repair service providers, the automobile industry will be a major beneficiary of the new shipbuilding activity. An estimated \$66 million will be spent each year in the Nova Scotia economy as a result of the combat vessels fabrication project. Some \$22 million of that amount will go toward the purchase of new vehicles (owned or leased) and more than \$17 million to gasoline expenditures. At an average new-car price of \$30,000, this will mean about 750 new cars sold each year in Nova Scotia. According to Statistics Canada, Nova Scotia has witnessed a sharp increase in the number of motorcycles and trailers sold in the past decade, up 147 per cent and 67 per cent, respectively<sup>10</sup>. The new shipbuilding activity will generate significant new sales for these retailers as well.

The automobile insurance industry will benefit from \$7.5 million each year in vehicle insurance premiums. More than \$5 million will be spent on public transportation such as city buses, taxis and air travel.

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**Table 3: Average Annual Transportation-Related Spending in Nova Scotia (Generated from the Combat Vessels Project)**

Private transportation	\$65.6 million
Purchase of automobiles, trucks and vans	\$22.4 million
Gasoline	\$17.2 million
Vehicle insurance premiums	\$7.5 million
Public transportation	\$5 million

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Derived using Statistics Canada Table 203-0007: Survey of household spending (SHS), household spending, on transportation (2009).

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### **Retailers: A Major Beneficiary**

A wide variety of retailers will generate millions in annual sales if ISI is awarded the combat vessels fabrication project. Based on direct, indirect and induced impacts, nearly \$4 million will be spent annually on furniture and another \$1 million on lawn, garden and snow-removal equipment (Table 4).

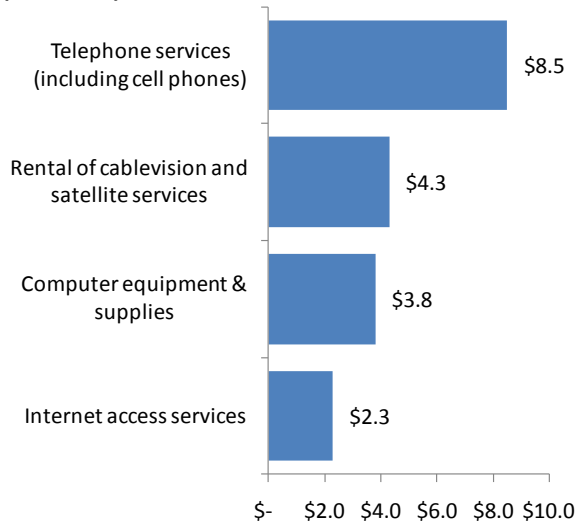
Retailers selling home-entertainment equipment will generate about \$3.2 million in yearly sales, and movie theatres can expect about \$660,000 in sales each year. Retailers selling computers, equipment, software and supplies will generate \$3.8 million in annual sales. Telecommunications and cable-television suppliers will benefit too, with about \$8.5 million telephone service charges, \$4.3 million in cable television or satellite services and \$2.3 million in Internet-access services.

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<sup>10</sup> Source: Statistics Canada. Table 405-0004: Road motor vehicles, registrations.

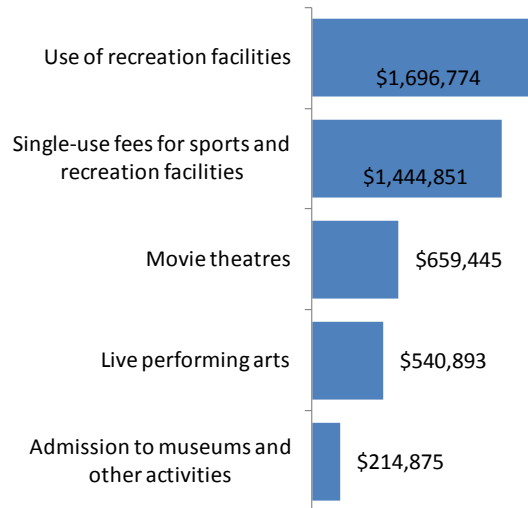
An estimated \$660,000 will be spent each year at the movies, \$540,000 on live performing arts and \$1.7 million on recreational facilities such as gyms and tennis courts (Figure 7).

**Figure 6: Estimated Annual Spending in Nova Scotia on Selected Services and Equipment (\$Millions)**



Source: Extrapolated based on Statistics Canada CANSIM Table 203-0004.

**Figure 7: Estimated Annual Spending in Nova Scotia on Selected Entertainment Activities**



Source: Extrapolated based on Statistics Canada CANSIM Table 203-0010.

**Table 4: Estimated Annual Spending on Selected Retail and Entertainment Categories**

Furniture for indoor or outdoor use	\$3,900,000
Home-entertainment equipment	\$3,200,000
Purchase of recreational vehicles	\$2,800,000
Sports and athletic equipment	\$1,100,000
Lawn, garden and snow-removal tools and equipment	\$1,100,000
Power lawn, garden and snow-removal equipment	\$904,000
Home and workshop tools and equipment	\$882,000
Window coverings and household textiles	\$852,000
Art, antiques and decorative ware	\$800,000
Movie theatres	\$659,000
Power tools and equipment	\$593,000
Cooking equipment (stoves, ranges, convection ovens, barbecues)	\$548,000
Washers and dryers	\$548,000
Refrigerators and freezers	\$533,000
Works of art, carvings and vases	\$452,000
Services related to furnishings and equipment	\$385,000
Non-electric kitchen and cooking equipment	\$341,000

Derived using Statistics Canada Tables 203-0004 and 0010 (2009).

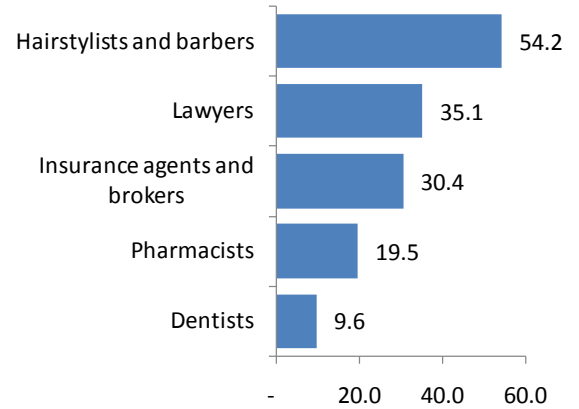
### Professional and Personal Services: Supported by the Shipbuilding Expansion

The Conference Board of Canada report on the economic impact of the combat vessels fabrication project estimates the total employment impact by major industry across the province. Using Statistics Canada data on personal income and service industry employment, an estimate can be derived to determine how many people in various service industries are required to support the new personal income that will be generated from the combat vessels fabrication project.

For example, the average annual personal income will induce the need for 54 hairstylists and barbers across the province and nearly 10 new dentists. As mentioned above, the insurance industry will generate \$7.5 million in sales and will add more than 30 new brokers and agents (Figure 8).

This level of annual personal income supports the need for 35 lawyers and a similar number of accountants and bookkeepers. This is an example of the wide range of small businesses that will be supported directly and indirectly by this project.

**Figure 8: Estimated number of selected service industry employees across Nova Scotia supported by the shipyard expansion\***



\*Average annual employment.

Source: Based on the ratio of service industry employees per million in personal income across the province.

### **3.3 Modelling the Economic Impact: Supply Chain Impacts**

If ISI becomes a prime contractor for the NSPS, there will be considerable opportunities for both larger firms and small and medium-size suppliers to provide their goods and services to the Halifax Shipyard. These firms will become part of the shipyard's supply chain. The federal government's Industrial and Regional Benefits (IRB) policy, which applies to major contracts including shipbuilding, encourages the shipyards to commit to providing a substantial amount of work to small and medium-size firms. Under the IRB policy, the selected prime contractors are likely to be required to undertake IRB business activities in Canada totalling 100 per cent of the value of the contracts. This means the contractor will have to offset the value of any imports from outside Canada with other spending of up to 100 per cent of the value of the contracts.

#### **Supply Chain in Atlantic Canada**

J.D. Irving, Limited's integrated nature and head office location in Atlantic Canada generally favour a higher level of local supply-chain activity. Each year ISI spends millions of dollars on suppliers across Atlantic Canada. In 2009 and 2010, the firm purchased products or services from more than 850 firms across the four Atlantic provinces. (Table 5 shows the breakdown of significant suppliers in the region.)

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**Table 5: Irving Shipbuilding Supply Chain in Atlantic Canada (2009–2010)**

#### **Nova Scotia Suppliers**

- In 2009 and 2010, ISI worked with 630 Nova Scotia suppliers, including:
  - 37 suppliers at more than \$1 million
  - 21 suppliers at \$500,000 to \$1 million
  - 78 suppliers at \$100,000 to \$500,000

#### **Other Atlantic Canada Suppliers**

- In 2009 and 2010, ISI worked with 224 suppliers in New Brunswick, Prince Edward Island and Newfoundland and Labrador, including:
  - 10 suppliers at more than \$1 million
  - 41 suppliers at \$100,000 or higher

Source: Ships Start Here (2011).

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#### **Supply Chain: Rest of Canada**

Many of these firms receiving project work, either directly or as a result of the IRB policy, will be based in Nova Scotia, but some of them will be located in other provinces. While the fabrication and much of the support work would be done in Nova Scotia, much of the supply chain is located throughout Canada. For example, many of the raw materials would come from Canadian suppliers outside Nova Scotia. A significant amount of the technology deployed on the vessels would come from suppliers in Ontario and Quebec, where there is considerable expertise in related computer, electronics and weapons-systems technologies.

Plugging Nova Scotia into a national and international supply chain strengthens the economy here and provides benefits across the country. (See Section 3.8 for details on the economic impact across the country from this project, and how putting either of the two main fabrication projects in Nova Scotia offers more distributed economic benefits across the country.)

### The Canadian Patrol Frigate Program Example

If the Halifax Shipyard is chosen as a prime contractor, the vessels would be fabricated and assembled in Halifax, but the supply chain for the manufacturing of these vessels would be national in scope<sup>11</sup>. One of the best examples of the national economic impact from shipbuilding in Atlantic Canada is the CPF Program, which took place in the 1980s. This is the most recent example of a large-scale shipbuilding project in Atlantic Canada whose economic impacts were widely distributed across many provinces.<sup>12</sup>

The contract for the CPF Program was awarded in July 1983 and was completed in 1996. The prime contractor and shipbuilder was Saint John Shipbuilding Limited (now ISI). It was responsible for the fabrication and delivery of nine vessels. Quebec-based shipbuilder MIL Davie Yard (now Davie Yards Inc.) was responsible for the fabrication and delivery of three vessels. The prime subcontractor for combat system integration was Paramax Ltd. (now Lockheed Martin Canada).

The 12 ships and associated combat systems and other deliverables were completed on time and under budget, and they met the quality standards set out by the federal government.

Beyond the delivered vessels, there were five additional objectives from the CPF Program, including: a 100 per cent IRB value; regional distribution of economic benefits; a focus on small business; offsets to generate high-technology work in Canada; and new research and development efforts.

The final report on the CPF Program confirmed that each of the above objectives was met. The project generated a total of \$4.8 billion in direct economic activity (1985 dollars) and, with indirect/induced economic activity, the total economic activity from the project increased to more than \$10 billion (1985 dollars).

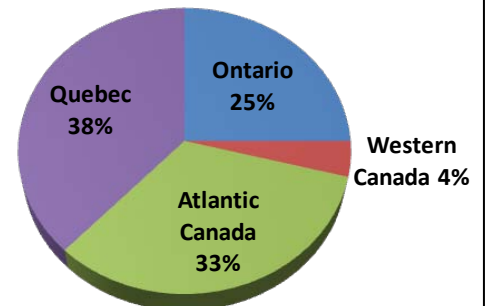
The economic benefits were widely distributed throughout Central and Eastern Canada, with companies in Ontario receiving 25 per cent of the total economic activity and companies in Quebec receiving 38 per cent of the total economic activity. (Figure 9 shows the breakdown of direct spending by region.)

#### Five Objectives for the CPF Program

1. Achieve Canadian content through direct and indirect commitments to 100 per cent total contract value.
2. Regional distribution in Atlantic Canada, Quebec, Ontario and the western provinces.
3. Maximize participation of small business.
4. Offsets to generate high-technology work.
5. Stimulate R&D requirements.

**Figure 9: Economic Impact of the Canadian Patrol Frigate Program**

Regional Breakdown of Direct Spending\*



\*Total Direct Spending: \$4.8 billion (1985 \$\$).  
Source: Saint John Shipbuilding Limited Industrial Benefits Report (Final) CDRL092X. June 1998.

<sup>11</sup> There would also be an international component to the supply chain but the economic impact of those imports would be offset by other spending by the international suppliers in Canada.

<sup>12</sup> Data for this section was taken from the audited and accepted *Saint John Shipbuilding Limited Industrial Benefits Report (Final)* published in June 1998.

### **Western Canada Benefited from In-Service Support**

Western Canadian suppliers benefited as well. Not shown in the Industrial Benefits report, which was limited to the fabrication component, Western Canada also received an above-average share of in-service support contracts.

More than 500 Canadian companies received business directly related to the CPF Program. Some 42 per cent of these firms were located in Ontario, 38 per cent were in Quebec, 8 per cent were in Western Canada and 12 per cent were in Atlantic Canada. Of the 17 primary suppliers of the CPF Program, eight were located in Ontario, five in Quebec and two in both the Atlantic and Western regions. Another nearly 400 firms received offset economic benefits from the CPF Program; most of these firms were located in Ontario.

The final report revealed that the technical expertise and supply chains for the production of the CFP Program were distributed throughout Canada. The project was research intensive, generating \$890 million (1985 dollars) worth of direct & offset R&D spending and more than 14,000 person-years of work. The largest number of companies benefiting from the R&D spending was located in Ontario, followed by Quebec. A full two-dozen firms developed or acquired significant new technology as a result of the CPF Program.

The CPF Program also helped build capacity in small businesses, as hundreds of them received contracts for work relating to the project. In total, \$325 million (1985 dollars) in contracts were issued to small businesses, generating more than 5,300 person-years of work. More than 50 small businesses received contracts worth \$1 million or higher, 31 in Ontario, 14 in Quebec, five in Atlantic Canada and one in Western Canada.

In addition, ISI demonstrated a 100 per cent IRB requirement, offsetting any imported components and systems needed for the vessels.

### **Implications for the New National Shipbuilding Procurement Strategy**

While it is too early to determine the exact distribution of regional economic benefits based on the concentration of related suppliers in Central and Western Canada, there will likely be a similar distribution of economic activity across Canada. Nova Scotia will be the primary beneficiary, with considerable benefits in Ontario, Quebec and beyond. (See Section 3.8 for a detailed assessment of the current project based on the Conference Board of Canada's report.)

### **3.4 Building the Shipbuilding Talent Pool**

One of the most exciting aspects of ISI becoming a prime contractor under the NSPS is that it would help strengthen the skilled trades and engineering expertise in the Greater Halifax region.

During the fabrication phase, ISI would require hundreds of new specialty trades workers in addition to those currently working at the shipyard, including:

- Electricians
- Ironworkers
- Pipefitters
- Paint/Blast Labourers
- Riggers
- Welders
- Engine Fitters
- Sheet Metal Fabricators/Crane Operators/Machinists

In addition to the trades professionals, ISI would need to hire dozens of specialized engineers, including:

- Combat Systems Engineer
- C4I Engineer
- Noise/Shock/Vibration Engineers
- Activation and Test Engineers
- Naval Architect and Design Specialists

#### **Apprenticeship: On-the-Job Training**

Shipbuilding is a highly technical and complex trade, making it an ideal environment for apprenticeship programs. According to ISI, there are already more than 250 apprentices working in the trades at the shipyard preparing for these high-value jobs. The company offers diverse co-op and apprenticeship opportunities in engineering, planning, scheduling and accounting.

#### **Feeding the Talent Pool: NSCC**

Much of the new trades talent required at the shipyard will be plucked from the Nova Scotia Community College system. NSCC offers more than three dozen diploma and certificate courses related to the shipbuilding industry, including industrial engine repair, marine engineering technology, industrial instrumentation, electronic engineering technology, machining and high-pressure pipe welding.

In addition, NSCC can develop customized and new programs to meet the needs of industry. A good example of this is the new training program in the field of wind turbine blade manufacturing, which is supported by funding from the provincial government. NSCC's Pictou campus is developing and will be delivering the program, which will provide training for workers hired by Daewoo Shipbuilding and Marine Engineering (DSME) at the firm's Trenton wind-turbine-fabrication facility.

### Feeding the Talent Pool: Local Universities

There are six universities in the Halifax region, in which more than 5,000 graduate students and 25,000 undergraduate students are enrolled. These institutions will incubate much of the skilled engineering, design and information technology talent needed for the ISI expansion.

As an example, Dalhousie University is one of the most popular places in the country to study engineering and conduct related research. Dalhousie offers engineering specializations in computer, electrical, industrial, materials and mechanical engineering.

Also in Halifax, Saint Mary's University offers degree programs in engineering and computing science and will turn out candidates for the expanded Halifax Shipyard. Elsewhere in Nova Scotia, Acadia University, Cape Breton University and St. Francis Xavier University offer engineering and computer science degree and masters programs.

### Feeding the Talent Pool: Attracting Skilled Workers

Some of the talent required for the fabrication of both the combat and the non-combat vessels will be highly specialized and need to be imported into Nova Scotia.

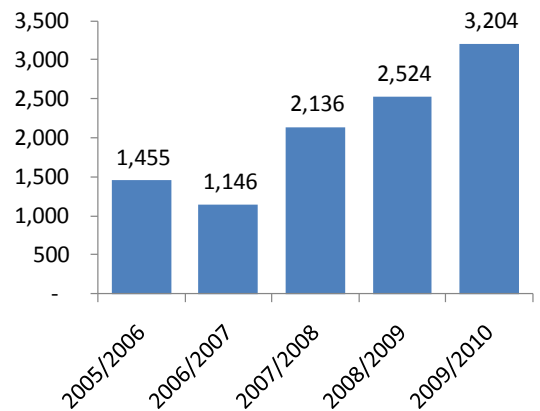
Halifax is a magnet for people from across Canada as well as internationally because it offers a wide variety of career options; cultural, artistic and entertainment venues; and a high quality of life. In addition, compared to larger urban centres, Halifax offers an attractive and moderate cost of living.

In recent years, the number of people moving into Halifax from outside the province has been rising in response to increasing economic opportunities in the area. (Figure 10 shows the new population that has been attracted to Halifax from the rest of Canada and international sources over the past six years.)

In addition, the provincial government recently announced a new immigration agreement between the federal and provincial governments that will make it easier to attract more skilled international workers to Nova Scotia.

The Halifax Regional Municipality will be an important asset for ISI as it recruits this specialized trades and engineering talent to Nova Scotia. This project could reverse the flow of talent out of the province and reverse the declining population in Nova Scotia as more immigrants make it their home and expatriates return because of the demand for the skills this project will require.

**Figure 10: New Population Attracted to Halifax from Outside Nova Scotia**



Includes net interprovincial and international migration (including non-permanent residents).  
Source: Statistics Canada. Table 051-0047 - Components of population growth by census metropolitan area.

### **3.5 Enhancing Nova Scotia's Marine and Aerospace & Defence Clusters**

Industry clusters are important because they foster significant synergies and industry-wide strengths. For example, companies within a cluster share talent as people move among companies. They may also have common elements in their supply chains, generate joint projects and collectively fund R&D.

According to a report published in 2009<sup>13</sup>, the marine/ocean industry generates a direct GDP impact in the Nova Scotia economy of about \$2.6 billion each year. This industry is broad based and includes offshore oil and gas, fishing, national defence/federal government-related activity, the Port of Halifax, ocean tourism and ship and boatbuilding. Essentially, the economic activity is derived from Nova Scotia's geographic and strategic position on the East Coast of North America. If ISI becomes a prime contractor for the NSPS, this will significantly increase economic activity in the province that would be impossible to generate in a landlocked location.

The aerospace and defence industry is a close cousin to the marine/ocean sector because much of its activity is based on geography, history and capacity built up over the years in and around Nova Scotia's ports. Nova Scotia already has one of the most dynamic aerospace and defence clusters in Canada, with more than 200 companies employing about 6,000 people and generating about \$600 million in annual revenues. When combined with military spending, the sector contributes more than \$1.5 billion to the provincial economy each year, which is more than six per cent of GDP<sup>14</sup>.

Aerospace and defence companies are involved in advanced engineering, information systems, component manufacturing and related work. This represents a broad base in both the defence and commercial aerospace subsectors. Nova Scotia is also home to about 45 per cent of Canada's military assets.

The Nova Scotia aerospace and defence cluster features companies involved in a wide range of products, services and technologies. These include information technology applications development and simulation technologies, aerostructures, highly engineered niche products, composites, ship and military maintenance repair and overhaul, shipbuilding and naval technologies and R&D.

If ISI becomes a prime contractor for the NSPS, the aerospace and defence cluster's capacity would be greatly enhanced and the supply chain would be strengthened. Many of the skill sets, niche products and services required by the Halifax Shipyard would be applicable to other segments of the aerospace and defence cluster.

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<sup>13</sup> Economic Value of the Ocean Sector in Nova Scotia. Gardiner Pinfold (March 2009).

<sup>14</sup> Source: Aerospace and Defence Industries Association of Nova Scotia (ADIANS).

### 3.6 Strengthening Halifax's R&D and Technology Sectors

The Request for Proposals issued for the NSPS specified that the winning shipyards are expected to “commit to sustaining a knowledge-based economy that, through the use of emerging technology and improved efficiencies, will provide technical advancement in shipbuilding and other industries.”

Halifax is already a significant player in defence-related research and technology development. The Department of National Defence's research arm, Defence Research and Development Canada (DRDC), has a significant R&D facility in Halifax focusing on a variety of areas such as anti-submarine warfare, mine and torpedo defence, shipboard command and control, and air and naval platform technology. DRDC Atlantic also has research programs in emerging materials, signature management, maritime information and knowledge management, virtual platforms and virtual combat systems.

A number of global defence technology firms also have a substantial presence in Halifax, including Lockheed Martin Canada, L-3 Communications Electronic Systems, General Dynamics, MacDonald Dettwiler & Associates, Raytheon Canada and Ultra Electronics Maritime Systems. Many of them have the potential to become technology suppliers to the project if ISI becomes a prime contractor for the NSPS.

Lockheed Martin Canada has already indicated in the press its interest in taking part in the Canadian Surface Combatant program<sup>15</sup>.

Local universities in Halifax are currently active in research that supports the defence sector. Dalhousie University's Faculty of Engineering is home to a number of related research laboratories, including the Innovation in Design Lab (iDLab), the Institute for Research in Materials (IRM) and the Nova Scotia CAD/CAM Centre.

Dalhousie also has a history of close collaboration with industry on specialized research projects. For example, Dalhousie recently signed a memorandum of understanding with Korea-based Daewoo Shipbuilding & Marine Engineering (DSME) to collaborate on renewable-energy research.

Dalhousie's new Halifax Marine Research Institute (HMRI)<sup>16</sup> will become an important part of marine research. The HMRI will apply world-class science to economic, social and environmental challenges for regional and global oceans. It will foster collaborative industry-led research involving university and government research partners to increase the competitiveness of Nova Scotia's marine community.

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<sup>15</sup> Defence Watch, *Ottawa Citizen*, March 14, 2011.

<sup>16</sup> The HMRI will be launched on June 2, 2011.

### **3.7 Fostering Positive Economic Impacts Across Nova Scotia**

The fabrication of the new ships will be done at the Halifax Shipyard, and most of the direct employment will be in the Halifax region. However, there are supply-chain opportunities across Nova Scotia. More than 70 per cent of Nova Scotia's manufacturers, including much of the metal-fabrication capacity, is located outside Greater Halifax. Nearly 40 per cent of the province's R&D and technical consulting services firms are located outside the capital city, as are nearly 40 per cent of the province's engineering and related services firms<sup>17</sup>. ISI itself owns the Shelburne Ship Repair facility in southwestern Nova Scotia.

There are also collaboration opportunities with the province's education institutions outside Greater Halifax. ISI recently signed a \$500,000 gift agreement with Cape Breton University in support of Aboriginal student awards. The Irving Shipbuilding Awards will be available to Aboriginal undergraduate and graduate students who are pursuing studies in environmental remediation and management.

In addition to the supply chain, the economic activity generated from the product will have significant indirect impacts across the province. The hundreds of millions of dollars' worth of taxes collected by the provincial government will be spent on public services across the province.

It is important to point out that successful Canadian provinces and American states have growing and dynamic urban centres. In other words, the ability of Nova Scotia to address its longer-term economic and demographic challenges will depend heavily on the success of its largest urban centre, Halifax. Using Statistics Canada population data for major urban centres across Canada, if the Halifax CMA had achieved a similar population growth rate compared to Toronto over the past 20 years, Nova Scotia's total population growth would have significantly increased to more than six per cent during the same period. If Halifax had grown as fast as Calgary, Nova Scotia as a whole would have witnessed one of the fastest population growth rates among Canada's 10 provinces.

### **3.8 Fostering Positive Economic Impacts Across Canada**

One of the other important benefits of awarding one of the two large shipbuilding projects to ISI in Nova Scotia will be the significant economic impact that will be felt across Canada. If either of the two large projects are sited elsewhere in Canada, it is likely the economic impacts will be highly concentrated in one or two provinces.

According to Conference Board analysis, for every \$1,000 in real GDP from shipbuilding inside Nova Scotia<sup>18</sup>, another \$491 will be spent in other regions across Canada (Figure 11 below). Ontario is the largest beneficiary because of the depth of the supply chain in that province. British Columbia will accrue a significant amount of economic benefit, largely due to the assumption that much of the in-service support activity will occur there.

There is little evidence the opposite is true. If neither of the large shipbuilding fabrication projects are awarded to ISI, Atlantic Canada will likely reap very little economic reward from the NSPS.

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<sup>17</sup> Source: Statistics Canada, Canadian Business Patterns (2010). Includes the number of business establishments in the related industry groups.

<sup>18</sup> Associated with the NSPS combat vessel construction.

This assumption is based on Statistics Canada input/output estimates for the shipbuilding industry<sup>19</sup>, which show where indirect economic and employment impacts occur for various industries in Canada.

Regardless of where in Canada the primary fabrication is done, it is clear that any large shipbuilding project would significantly benefit the Ontario economy.

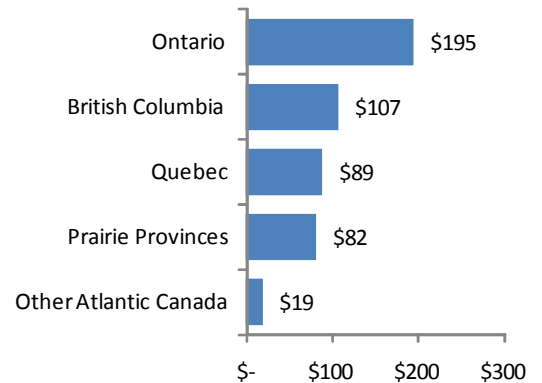
For every direct dollar of output in Ontario's shipbuilding industry, only 11 cents of economic activity accrues outside that province. In Nova Scotia, by contrast, there are 31 cents' worth of economic output in the rest of Canada.

While the shipbuilding industry in British Columbia and Quebec has similar leakage into the rest of Canada, most of that impact is also felt in Ontario.

If the projects are awarded to either Quebec or British Columbia, there will be significant economic benefits both in those provinces and in Ontario but negligible impact in Atlantic Canada.

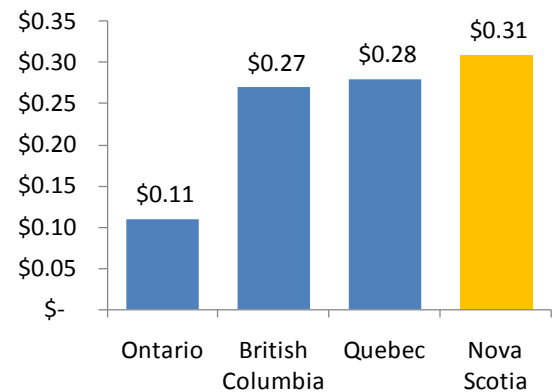
By contrast, awarding one of the two large shipbuilding projects to ISI in Halifax will generate significant economic benefits across Canada and have the greatest national distribution of economic benefits.

**Figure 11: Increase in Real GDP for every \$1,000 of Procurement in Nova Scotia Shipbuilding\***



\*Based on the combat vessels fabrication project.  
Source: Conference Board of Canada (2011).

**Figure 12: Amount of output elsewhere in Canada per one dollar of shipbuilding activity in each province**



Per \$1 of direct industry spending in each province. Shows the direct and indirect output in the rest of Canada.

Source: Statistics Canada Provincial Input-Output Multipliers, 2007.

<sup>19</sup> Based on general shipbuilding activity output in each province and not the NSPS. The Conference Board model also includes induced impacts which are not part of Statistics Canada's I/O tables.

## 4. FOSTERING MORE COMMERCIAL SHIPBUILDING AND REPAIR ACTIVITY

Being awarded one of the two large shipbuilding fabrication projects will lead to a significant expansion of shipbuilding capacity and capability both within ISI and across its supplier base in Nova Scotia.

One of the main reasons for the NSPS was to build centres of shipbuilding excellence in Canada that use federal government contract work as the base from which to attract more commercial shipbuilding activity.

The economic activity outlined in this report is only associated with the NSPS. All additional commercial work would be *above and beyond and amplify the economic impact of the Halifax Shipyard and the shipbuilding industry in Nova Scotia.*

ISI is committed to building Halifax into a shipbuilding centre of excellence. The company has made \$90 million worth of capital and related investments in the past five years and will be spending tens of millions of dollars more if it's chosen as a prime contractor for the NSPS.

## 5. IMPACT OF LOSING OUT ON THIS OPPORTUNITY

As outlined in Section 3.8, Nova Scotia has the most to lose from missing this opportunity. The Conference Board of Canada also looked at the impact of the Halifax Shipyard not winning either of the two NSPS contracts or any commercial work beyond what is on the books. In this scenario, real GDP across Nova Scotia is expected to decline by \$173 million and about 2,000 direct, indirect and induced jobs would be at risk.

Of course, this would not necessarily transpire, but it is a sobering reality check in regard to the importance of this industry to the Nova Scotia economy.

## 6. CONCLUSION

The NSPS is good policy; it will bring stability, efficiency and effective cost management to the long-term shipbuilding and in-service support requirements of the federal government. At the same time, the NSPS will help create two centres of shipbuilding excellence in Canada. Building the combat portion of the NSPS will be good for Nova Scotia and good for Canada.

The Halifax Shipyard is uniquely positioned to become a prime contractor of the NSPS due to the following factors: the fiscal strength and commitment of ISI and the JDI Group of Companies; the deep supply chain and technology expertise already in place in Greater Halifax; the excellent workforce and substantial university and college workforce-development infrastructure in the region; and broad community and provincial support for the development of this industry.

The potential economic impact of this project is undeniable. The Conference Board of Canada analysis reveals a once-in-a-generation opportunity for Nova Scotia to generate big increases in GDP, significant numbers of incremental new jobs, new taxes for all levels of government without increased tax rates and 30 years of business for small and medium-size companies across the province, the region and the nation.

The project will drive a superior distribution of benefits to every region of the country compared to competing cities and will solidify Atlantic Canada's burgeoning oceans cluster at a time when this frontier is growing in national importance.

Indeed, the facts suggest that Halifax represents a superior option for major contracts flowing from the NSPS.