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## **Interim Evaluation of the Structured Financing Facility**

**Final Report**

**Audit and Evaluation Branch**

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# *Executive Summary*

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## *Purpose*

This interim evaluation of the Structured Financing Facility (SFF) is being conducted mid-way in the Program's mandate, with the purpose of looking at results to date and to determine whether the SFF is on track to meeting its objectives. The study focuses on issues identified in the Results-Based Management and Accountability Framework (RMAF): Structured Financing Facility, March 31 2003, which includes questions on relevance, alternatives and cost-effectiveness, reach, success, and design and delivery. Hickling Arthurs Low (HAL) Corporation was engaged by Industry Canada to conduct this study.

## *Background on the Program*

The objective of the SFF program is to stimulate demand for Canadian-built vessels and increase innovation in Canadian shipyards. Specifically, the SFF was designed to respond to requests from industry to modify the tax regulations to exempt owners from the Specified Leasing Property (SLP) restrictions in situations where Canadian built vessels are sold to leasing companies rather than to operators.<sup>1</sup> Specified Leasing Property restrictions of the tax regulations prevent lessors from benefiting from accelerated capital cost provisions. Rather than change the tax regulations, the SFF was established. SFF, at a 15% level of support, provides an equivalent benefit to the accelerated capital cost allowance when compared with regular Class 7 depreciation. Any recipient of SFF is required to waive his right to accelerated capital cost allowance.

The SFF has three components: 1) an interest rate support component (IRS), a non-repayable contribution towards interest costs; 2) a credit insurance component (CIC), a non-repayable contribution towards the cost of loan insurance provided by the private sector; and 3) credit insurance support (CIS), for loan insurance provided by the federal government. The maximum level of support from CIC and CIS, either individually or combined, is equal to 10% of the value of the purchased vessel. As of January 2003, the maximum level of support from IRS was increased from 10% to 15%. Finally, the maximum level of SFF support from a combination of CIC, CIS and IRS remains 15%.

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<sup>1</sup> Breaking Through: The Canadian Shipbuilding Industry," National Shipbuilding and Industrial Marine Partnership Project Committee, April 2001.

## *Study Approach*

The study approach involves three lines of enquiry: document and database reviews; interviews with SFF managers and other stakeholders in industry and government; and, development of case studies of projects benefiting from SFF and projects not benefiting from SFF.

**Consultations:** Interviews were held with individuals representing the interview groups listed below. The interviewees were selected in consultation with the client. Consultations were by telephone, except for those in Ottawa.

### **Breakdown of Interviews**

<b>Interview Groups</b>	<b>Interviews Planned</b>	<b>Interviews Added</b>	<b>Interviews Completed</b>
SFF program managers (Industry Canada)	3	2	5
Federal departments/agencies (Finance, EDC, PEI Ministry of Development and Technology)	3	6	9
Shipyards benefiting from SFF	4	0	4
Shipyards not yet benefiting from SFF	4	0	4
Successful domestic SFF applicants	7	1	5
Successful offshore SFF applicants	3	1	3
Shipping companies that have not used SFF	5	1	3
Industry Associations	2	0	1
Labour representatives	2	0	1
Industry experts	0	3	3
<b>Total</b>	<b>33</b>	<b>14</b>	<b>38</b>

**Case Studies:** Three case studies were undertaken, two of orders for new vessels that went offshore (Algoma Central's order to China for a Great Lakes tanker, and Oceanex' order of a containership from Germany) and one of a new vessel ordered from a Canadian shipyard with the support of SFF (Persistence Shipping's purchase of a live salmon transport from Groupe Maritime Verreault). The studies explore the decisions to source offshore and to use or not use SFF. Data was collected through interviews (a minimum of six for each case) and document review.

## ***Conclusions and Recommendations***

### ***State of Shipbuilding in Canada and Worldwide***

#### **Conclusions**

The world shipbuilding industry has operated for years under state subsidies and protectionism. While many countries, including Canada, have moved unilaterally to end these practices, there are many major shipbuilding and ship owning countries that continue to favour them. This has resulted in artificially low prices, and countries in Europe and North America have seen their market share decline dramatically as a result.

Some countries, notably Australia and the Netherlands, have been successful at using government support to attract a domestic market, and moving into niche foreign markets.

#### **Recommendations**

*a) The Canadian government should increase pressure within international trade groups, such as WTO, OECD and NAFTA, to eliminate subsidies and protectionism in shipbuilding. In particular, the government should monitor US attempts to extend Jones Act provisions to smaller ships and yachts.*

*b) The success of Australia and the Netherlands in building viable shipbuilding industries should be examined in detail to determine lessons of value to developing the Canadian industry.*

### ***Rationale and Relevance***

#### **Conclusions**

SFF fills a need in supporting the shipbuilding industry. The level of support provided has been sufficient to attract foreign buyers to Canadian yards but so far has not been successful in attracting the Canadian domestic market.

SFF is consistent with Industry Canada and government-wide priorities, with two exceptions: (i) SFF is non-repayable unlike other Industry Canada programs of support to industry, and (ii) the less favourable tax treatment of shipbuilding lessors compared to road and rail transport lessors discriminates against shipping, a more environmentally friendly mode of transport, which is at odds with the government's environment policies. It would be difficult to redesign the program to be repayable and it would cause the program to be even more unattractive.

SFF complements and does not duplicate other forms of support available to Canadian yards.

## Recommendations

*c) SFF should be retained by Industry Canada as a non-repayable incentive to the Canadian shipbuilding industry.*

*d) Industry Canada should consider with the Department of Finance means of ensuring that the tax treatment of shipbuilding lessors is equivalent to that of lessors in road and rail.*

*e) The benefits of the SFF to the industry should be enhanced by means of the changes to the program's design and delivery recommended in this report.*

## Program Design and Delivery

### Conclusions

Despite the slow start in designing application details, the SFF program has been well administered, including working with yards and buyers in completing the necessary documentation and monitoring the progress of the projects. However, there are some major domestic ship fleet owners who are not aware of SFF. Further targeted marketing is necessary.

The credit insurance components have not been used in contrast with the interest rate support component because they have been poorly-communicated and difficult to get approved. Industry Canada reacted to early lack of interest in the program by raising the limits for IRS. When the IRS support was raised to 15%, it began to attract a great deal more interest from foreign ship buyers. It is still the case that few domestic shipowners have been attracted to the program and that must be seen as a major failure of SFF.

The major exclusions to SFF support are minor repair and overhaul (R&O) work (though major refurbishments are eligible), and boats and yachts. The R&O and boats and yachts exclusions let SFF focus on the weakest sector of the Canadian industry, new builds of large hulls. It is apparent to us that R&O and the small boat sector, both of which are doing relatively well, should benefit from the same program, as the success of yards doing that work will contribute to the industrial strategy and jobs creation goals of the policy framework. Also, we noticed that Canadian builders of small boats and yachts demonstrated more R&D and innovation than builders of larger hulls. We realize that making R&O and small boats eligible for SFF will create a much larger volume of files through Energy and Marine Branch, so appropriate resources will need to be put in place.

Without some financial engineering, ship owners wanting to pay cash for their new ships are ineligible for support. We understand that it would be possible to circumvent this hurdle by financing the ship with a loan with an option to discharge it early, take delivery of the ship, accept the SFF payment, then discharge the loan with the cash which had been earmarked for the ship purchase in the first place. Industry Canada, however, does not encourage this financial engineering strategy because it risks violating the terms and conditions of the SFF program. If, for example, the loan is discharged after a year or two, the SFF contribution could be an overpayment and the Department may have to retrieve the overpayment especially if there had been a misrepresentation on the part of the applicant. Industry Canada's position on this possible

financial strategy does not appear to be known to shipyards and ship owners. The degree of innovation caused by SFF-supported projects self-reported by the shipyards over-estimates what is occurring in reality. Industry Canada needs to develop a better way of measuring these effects. Orders for new types of vessels or actual man-hours of labour per existing vessels in subsequent builds might be more objective measures of innovation.

The short time frame remaining for SFF is causing difficulties for yards in attracting new orders.

### **Recommendations**

*f) Industry Canada should increase the awareness of SFF amongst Canadian fleet operators by making personal contact with the acquisition decision makers within each Canadian fleet. Non-members of the Canadian Shipowners Association should receive particular attention. The Department should share its market research on upcoming fleet acquisitions with the shipbuilding industry.*

*g) The term of SFF should be extended beyond five years (that is beyond 2006) for a possible two to three years, at a minimum by grandfathering contracts signed before the end of the current program period, to allow Canadian industry more time to increase its market share and develop a good set of reference customers.*

*h) The CIS and CIC components should be retained. Industry Canada and the Department of Finance should create procedures that will facilitate the application process and Industry Canada should communicate the benefit of these components better to the shipyards.*

*i) SFF should be extended to all R&O work and to yachts.*

*j) The current practice of determining incrementality by requiring foreign quotes should be replaced by a certification process with the ship buyer.*

*k) Industry Canada should communicate to the shipbuilding industry that early discharge of loans receiving SFF support is not allowed. Industry Canada should also review with the Department of Finance means for providing an incentive to cash purchasers of ships who are not eligible for SFF support. Possible incentives for domestic cash buyers would be to increase the ACCA amortization rate or to allow amortization during the ship's construction.*

*l) Industry Canada should introduce new measures such as orders for new types of vessels to improve the assessment of innovation in Canadian shipyards.*

### **Program Success**

#### **Conclusions**

The federal government has delivered on its commitment as stated in its June 2001 policy to establish and market the SFF and to facilitate the use of export financing through the EDC. SFF has been a key factor influencing offshore owners to source from Canadian yards, but has had limited success in attracting the Canadian domestic market.

It is clear that no single measure or program, such as SFF, can fix the economics of the industry. Rather, a suite of measures and programs may be needed such as moving ahead on government fleet procurement, combining ACCA and SFF, extending the term of EDC financing, promoting innovation, and providing performance guarantees to prospective buyers. It is noted that EDC can match terms offered by competing countries but normally doesn't initiate transgressing the OECD guidelines which includes limiting the financing period to 12 years.

Without these measures, further consolidation in the shipbuilding industry may be necessary to keep the industry viable. Practically, there is enough work on large ships to keep two or three yards usefully open.

There is some evidence to indicate that smaller yards working in niche markets are able to effectively compete internationally. Obtaining access to foreign markets is the main barrier. These "smaller niche yards" can also benefit from SFF and other complementary measures and programs. Inclusion of smaller repair and refit contract work within SFF eligibility would also help smaller Canadian shipyards.

### **Recommendations**

*m) The government of Canada and relevant provinces, along with Crown Corporations, such as BC Ferries and Marine Atlantic, should embark on a coordinated, multiyear fleet replacement program, with Canadian shipyards getting preferential treatment to win contracts.*

*n) Industry Canada should work with the Department of Finance to allow ACCA and SFF to be applied simultaneously.*

*o) Industry Canada together with the Department of Finance should consider strengthening the balance sheets of Canadian shipyards by providing guarantee performance bonds, in much the same way that that Investment Quebec does.*

*p) Industry Canada should review with EDC the provision in the shipbuilding policy that allows EDC to match financing terms when competitors for a project transgress OECD guidelines to ensure that applicants for SFF can bid with competitive support.*

*q) The Marine and Ocean Industry Technology Roadmap (TRM) should be followed up to determine its impact on the Canadian shipbuilding industry and propose actions necessary to improve the level of innovation in the industry.*

*r) Industry Canada should make Canadian shipyards and labour organizations aware that they are losing commercial work because of their reputation for late deliveries and cost overruns.*

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# *1. Introduction*

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## *1.1 Purpose*

This interim evaluation of the Structured Financing Facility (SFF) is being conducted mid-way in the Program's mandate, with the purpose of looking at results to date and to determine whether the SFF is on track to meeting its objectives. The study focuses on issues identified in the Results-Based Management and Accountability Framework (RMAF): Structured Financing Facility, March 31 2003, which includes questions on relevance, alternatives and cost-effectiveness, reach, success, and design and delivery. Hickling Arthurs Low (HAL) Corporation was engaged by Industry Canada to conduct this study.

## *1.2 Policy Context*

In June 2001, the federal government announced a new Shipbuilding and Industrial Marine Policy Framework<sup>2</sup>. A key element of this policy framework is the SFF, a program that received Treasury Board approval in September 2001.

The Policy Framework listed five primary areas of focus. They are:

- Capturing domestic opportunities,
- Looking globally,
- Innovation as Key to Competitiveness,
- Financing, and
- Stronger Partnerships.

The Framework expands upon the challenges in each area and then lists the concrete policy measures that the federal government will implement in order to address the separate issues. The introduction of the SFF was listed as one of four policy items designed to address the Financing challenges of the domestic shipbuilding industry, the others being maintaining accelerated capital cost allowance for Canadian-built, Canadian-registered ships; maintaining non-concessionary

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<sup>2</sup> "A New Policy Framework for the Canadian Shipbuilding and Industrial Marine Industry: Focussing on Opportunities", Industry Canada 2001.

export financing through EDC; and considering the use of the Canada Account for non-concessionary export financing.

The current study is not a review of all elements of the Policy Framework. The study focus is the SFF, however, we were drawn into considering other factors such as innovation and global competition that impact the success of Canadian yards in addition to the SFF.

## ***1.3 Background on the Program***

The objective of the SFF program is to stimulate demand for Canadian-built vessels and increase innovation in Canadian shipyards. Specifically, the SFF was designed to respond to requests from industry to modify the tax regulations to exempt owners from the Specified Leasing Property (SLP) restrictions in situations where Canadian built vessels are sold to leasing companies rather than to operators.<sup>3</sup> Specified Leasing Property restrictions of the tax regulations prevent lessors from benefiting from accelerated capital cost provisions. Rather than change the tax regulations, the SFF was established. SFF, at a 15% level of support, provides an equivalent benefit to the accelerated capital cost allowance when compared with regular Class 7 depreciation. Any recipient of SFF is required to waive his right to accelerated capital cost allowance.

The SFF has three components: 1) an interest rate support component (IRS), a non-repayable contribution towards interest costs; 2) a credit insurance component (CIC), a non-repayable contribution towards the cost of loan insurance provided by the private sector; and 3) credit insurance support (CIS), for loan insurance provided by the federal government. The maximum level of support from CIC and CIS, either individually or combined, is equal to 10% of the value of the purchased vessel. As of January 2003, the maximum level of support from IRS was increased from 10% to 15%. Finally, the maximum level of SFF support from a combination of CIC, CIS and IRS remains 15%.

## ***1.4 Workplan***

### ***1.4.1 Study Objective***

It was agreed that the study will evaluate all elements of the SFF based on the evaluation issues and research questions identified in the RMAF and through consultations with SFF program management.

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<sup>3</sup> Breaking Through: The Canadian Shipbuilding Industry," National Shipbuilding and Industrial Marine Partnership Project Committee, April 2001.

### 1.4.2 Study Approach

The study approach involves three lines of enquiry: document and database reviews; interviews with SFF managers and other stakeholders in industry and government; and, development of case studies of projects benefiting from SFF and projects not benefiting from SFF. Progress was reported to an SFF Interim Evaluation Study Steering Committee for feedback and direction during the course of the study.

The lines of enquiry are as follows:

**Document reviews:** Documents reviewed include: A New Policy Framework for the Canadian Shipbuilding and Industrial Marine Industry, 2001; Breaking Through, Canadian Shipbuilding Industry, 2001; The Rationale and Benefits of Enhancing the Structured Financing Facility (SIMAC), February and June, 2004; The Jones Act under NAFTA and its Effects on the Canadian Shipbuilding Industry, January, 2004; SFF Program Status Report, 2001-03, December, 2003; SFF RMAF, March, 2003; SFF RBAF, March, 2003; Marine and Ocean Industry Technology Roadmap Special Report, March, 2003. In addition, we have examined relevant files and databases in the Marine Directorate, Industry Canada and numerous other sources.

**Consultations:** Interviews were held with individuals representing the interview groups listed below. The interviewees were selected in consultation with the client.

**Table 1-1: Breakdown of Interviews**

Interview Groups	Interviews Planned	Interviews Added	Interviews Completed
SFF program managers (Industry Canada)	3	2	5
Federal departments/agencies (Finance, EDC, PEI Ministry of Development and Technology)	3	6	9
Shipyards benefiting from SFF	4	0	4
Shipyards not yet benefiting from SFF	4	0	4
Successful domestic SFF applicants	7	1	5
Successful offshore SFF applicants	3	1	3
Shipping companies that have not used SFF	5	1	3
Industry Associations	2	0	1
Labour representatives	2	0	1
Industry experts	0	3	3
<b>Total</b>	<b>33</b>	<b>14</b>	<b>38</b>

Over the course of the project, HAL added another 14 interview subjects that we felt could contribute to the objectives of the report. Eighty-one per cent of the planned 47 interviews have been completed. Individuals not interviewed have not responded to repeated requests for an interview. Consultations were by telephone, except for those in Ottawa. The consultations were

semi-structured, allowing for effective probing of issues, and guided by a questionnaire. Respondents were assured of the confidentiality of their responses.

**Case Studies:** Three case studies were undertaken, two of orders for new vessels that went offshore (Algoma Central's order to China for a Great Lakes tanker, and Oceanex' order of a containership from Germany) and one of a new vessel ordered from a Canadian shipyard with the support of SFF (Persistence Shipping's purchase of a live salmon transport from Groupe Maritime Verreault). The studies explore the decisions to source offshore and to use or not use SFF. Data was collected through interviews (a minimum of six for each case) and document review.

## ***2. SFF Program Profile***

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### ***2.1 Funding***

The initial budget of SFF was \$30 million per year over five years; \$5 million, or \$1 million per year was reserved for operating costs. The program was expected to leverage approximately \$200 million of shipyard sales annually.

In January 2003, the SFF budget was re-profiled, and \$20 million was removed from the SFF budget. The average annual disbursement was thus lowered from \$29 million to \$25 million; the target average annual sales volume for the life of the Program was also lowered, from \$200 million to \$180 million. It is noted that the SFF budget is being further reduced, another \$15 million from this year's budget, and \$24 million from next year's, for a total reduction of \$59 million from the original allocation of \$150 million. The target annual sales volume will also go down as a consequence.

### ***2.2 Components***

The IRS component is delivered in the form of a non-repayable contribution to the institution that provides financing for a Canadian-built vessel, which can then lower the cost of borrowing to the buyer of the ship, in a manner determined between the lender and owner. The contribution is made to the financing institution at the time of the delivery of the vessel. Interest expense incurred during the financing of the construction of the vessel is also eligible for support. It can be paid directly to the buyer at the time of vessel delivery in order to reimburse them for interest already paid.

The IRS can never buy-down more than three-quarters of the interest payment obligation without requesting a Ministerial exemption. In addition, in cases where vessels are built for export and financed by a fixed-rate loan, the interest rate cannot be bought down below the relevant Commercial Interest Reference Rate (CIRR) as per the Organization for Economic Co-operation and Development (OECD) guidelines.

The credit insurance element of SFF is designed to permit companies to obtain credit in circumstances where they would otherwise have had difficulty. The Canadian government would be able to insure all or part of the loan or lease for a Canadian-built vessel. The Department of Finance requires the SFF Program to set aside from its budget a sum of money

equal to the loss provision in the credit insurance, and leave this money in the government's consolidated revenue fund to apply to any losses that arise from this insurance. The SFF contribution to this loan/lease 'set aside' or loss provision cannot exceed 10% of the value of the vessel.

## ***2.3 Project Approval Process***

Energy and Marine Branch assigns an officer to an applicant based upon the geographic location of the yard; an officer in Ottawa handles Ontario, the Halifax office deals with yards on the East Coast, the Montreal office handles Quebec applications and the Vancouver office deals with the West Coast.

An application is first checked to make sure it matches requirements: eligible product, which is financially and technically feasible; to be built in a Canadian yard in existence in 2001; owners need to prove that SFF is needed to build the ship in Canada; the project meets applicable federal environmental acts; SFF support will be consistent with Canada's international agreements. Project approval is simpler than with other federal programs such as TPC, but Industry Canada does need a few weeks for ADM/DM/Minister signatures.

If any owner applies for CIS or CIC, Industry Canada, as required by the Department of Finance, hires a third party to assess the risk. On the one project where CIS was requested, approximately \$25,000 was spent on the third part risk assessment. In that case, the loan was ruled extremely risky and turned down.

Programs and Services Branch (PSB) performs a program integrity review of each SFF project with contributions of \$500,000 or above including clarification of terms and incrementality (assurance that project not already undertaken or built by shipyard for its own use). Contributions under \$500,000 are approved by Energy and Marine Branch (EMB) without having to seek PSB support. PSB would normally supply its comments within two days. The Branch review goes to the Senior Management Advisory Board of Industry Canada, which meets biweekly, and is comprised of six ADMs and six DGs, chaired by the ADM (Comptollership and Administration Sector).

# ***3. State of the Shipbuilding Industry in Canada and Worldwide***

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This chapter presents a brief review of the state of the shipbuilding industry and government support programs in Canada and in a number of other competing countries.

## ***3.1 Canada***

Canada was once a key player in the global shipbuilding industry. By the end of World War II, Canada constructed more than 500 ships for the War effort, employing more than 70,000 persons. The shipping industry grew substantially from 1945 to the 1980's. However as the major military projects of the late 1980's were completed, employment and output in the industry declined, due to the failure to win new major shipbuilding contracts, and cutbacks in government funding. Canadian ships built within the last 30-40 years were constructed under various programs of government support and subsidies. Programs included, the National Shipbuilding Subsidy program that ran from the early 1960s through the late 1980s, an Accelerated Capital Cost Allowance program that is still in effect, and more recently the Structured Financing Facility.

The state of Canada's shipbuilding is described in terms of the Canadian shipbuilding capacity, market, manufacturing output, employment, and salaries and wages. The source of the data, for years up to 2001 and 2002, was Industry Canada and Statistics Canada.

### ***3.1.1 Shipbuilding Capacity***

There are more than 30 shipyards across Canada in British Columbia, Ontario, Québec, and the Atlantic Provinces as shown in Table 3-1. The infrastructure of the yards restricts the size of ships constructed to less than 85,000 deadweight tons (DWT).



**Table 3-1: Breakdown of Canadian Shipyard Employment**

Location	Estimated Employment	Share of Total Employment
14 shipyards and 1 offshore oil and gas fabrication facility in Atlantic Canada	2315	50%
5 shipyards in Québec	570	12%
5 shipyards in Ontario	632	13%
6 shipyards in British Columbia	1190	25%
1 shipyard in Northwest Territories	N/A	N/A
<b>Total: 32 shipyards</b>	<b>4707</b>	<b>100%</b>

Source: Industry Canada, estimate based on industry sources, May 2001

### 3.1.2 Canadian Market

As shown in Table 3-2, the Canadian market has been on an upward trend but that market has been increasingly served through imports rather than by domestic purchases. The value of total shipments from Canadian yards has, consequently, been in decline. The United States was Canada's largest export market in 2001, purchasing 91% of Canadian shipbuilding and industrial marine industry exports, this despite the apparent closure of that market due to the Jones Act.

**Table 3-2: Canadian Market for the Shipbuilding and Repair Industry (in \$ Millions)**

Year	Total Shipments	Exports	Domestic Shipments	Imports	Canadian Market
1994	969.5	44.6	924.9	25.4	950.3
1995	964.8	19.0	945.8	80.2	1,026.0
1996	730.5	17.0	713.5	10.1	723.6
1997	503.5	18.0	485.5	36.8	522.3
1998	393.2	25.8	367.4	278.4	645.9
1999	573.8	184.9	388.9	66.5	455.4
2000	823.0	42.2	780.8	556.7	1,337.5
2001	546.2	56.1	490.1	740.6	1,230.8

Source: Statistics Canada 2002

The following table (Table 3-3) notes manufacturing shipments and manufacturing value-added from Canadian yards. In the most recent statistics, manufacturing value-added has constituted about 70% of the manufacturing shipments indicating that Canadian industry remains a strong supplier of ship materials and components to Canadian shipyards.

**Table 3-3: Manufacturing Output and Revenues (Principal Establishments\*, \$ millions)**

Year	Manufacturing Shipments	Manufacturing Value-added	Total Revenues
1990	1427.5	553.7	1458.0
1991	1346.7	625.5	1377.6
1992	1158.8	607.3	1167.0
1993	1178.2	773.8	1200.6
1994	969.5	610.0	984.6
1995	964.8	696.6	977.5
1996	730.5	559.3	747.8
1997	503.5	378.0	515.7
1998	393.2	219.9	430.2
1999	573.8	332.5	627.8
2000	823.0	587.6	840.6
2001	546.2	366.6	563.3

Source: Statistics Canada, Annual Survey of Manufactures

\* Incorporated establishments with employees primarily engaged in manufacturing and with sales of manufactured goods equal or greater than \$30,000. Establishments may include support facilities, such as sales offices, or warehouses, in addition to shipyards.

### 3.1.3 *Employment*

Total employment for the shipbuilding and repairing industry in Canada decreased from a high of 11,092 workers in 1992 to 4,284 workers in 2001<sup>4</sup> (employment figures, 1990 to 2001, are given in Table 3-5). This total accounts for approximately 1.8% of those employed in all transportation equipment manufacturing. With the decrease in the size of the industry, new young shipbuilders are not being attracted to this field leaving a workforce that is predominantly composed of an older population. This has led to increasing competition for qualified engineers and tradespersons.

**Table 3-5: Establishments and Employment (Principal Establishments\*)**

Year	Active Establishments	Production Employees	Administrative Employees	Total Employees
1990	58	7,309	3,107	10,416
1991	54	7,412	2,743	10,155
1992	54	8,603	2,489	11,092
1993	51	6,859	2,054	8,913
1994	43	5,711	1,650	7,361
1995	49	5,164	1,404	6,568
1996	50	4,572	1,248	5,820

<sup>4</sup> The discrepancy in the 2001 employment figures between Tables 3-1 and 3-5 is a function of different data sources.

Year	Active Establishments	Production Employees	Administrative Employees	Total Employees
1997	46	3,976	684	4,660
1998	46	4,050	842	4,892
1999	51	5,156	966	6,122
2000	114	4,954	873	5,827
2001	95	3,753	531	4,284

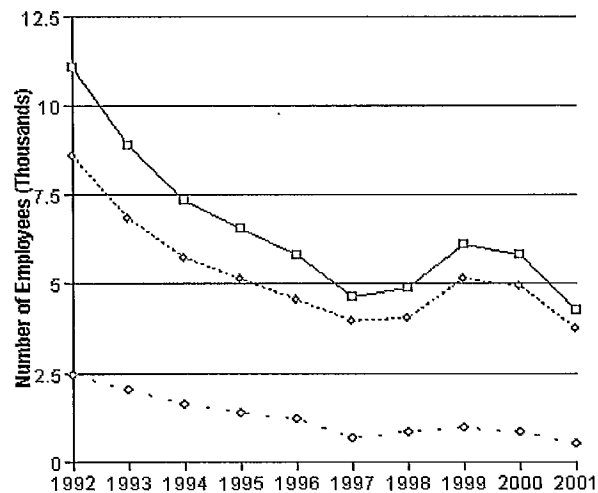
Source: Statistics Canada, Annual Survey of Manufactures

\* Incorporated establishments with employees primarily engaged in manufacturing and with sales of manufactured goods equal or greater than \$30,000. Establishments may include support facilities, such as sales offices, or warehouses, in addition to shipyards.

Since 1998, there has been a decrease in the number of Canadian shipbuilding employees working in research and development (R&D) aspects of the industry<sup>5</sup>. In 1999, shipbuilding R&D expenditures per person-year engaged in R&D amounted to \$61,167. In comparison, in the same year, all manufacturing in Canada spent \$173,697 per person-year employed on R&D.

As shown in Figure 3-1, within the declining total number of employees, the percentage of employees working in production jobs increased from 79.2% in 1993 to 85.3% in 2002, while the percentage of administrative employees decreased. A similar trend occurred during the same period in the Manufacturing Sector as a whole. There are a number of factors such as reorganization of the work force, technological improvements, or outsourcing that may have contributed to the lower demand for administrative workers.

**Figure 3-1: Number of Employees by Type (1992-2001)**



—□— Total      - - - ♦ - - - Production      · · · ♦ · · · Administrative

Source: [www.strategis.gc.ca](http://www.strategis.gc.ca)

<sup>5</sup> The Canadian Shipbuilding and Industrial Marine Industry:  
<http://www.innovation.gc.ca/gol/innovation/interface.nsf/vSSGBasic/in02590e.htm>

### 3.1.4 Salaries and Wages

Salaries and wages have decreased in the ship building and repairing industry in line with the decreasing employment over this same time period. In 1992, payments to employees were \$437.8 million, but had decreased to \$235.1 million by 2001 (Table 3-6). The average salary in 2001 in the industry was \$54,873, compared to \$40,803 for the Manufacturing industry as a whole, with average salaries on the administrative side rising faster than on the production side (Table 3-7).

**Table 3-6: Total Wages and Salaries Paid (Principal Establishments\*)**

Year	Production Employees	Administrative Employees	Total Employees
1990	267.8	98.0	365.8
1991	280.0	89.3	369.2
1992	342.5	95.3	437.8
1993	300.4	96.7	397.1
1994	257.3	69.3	326.6
1995	229.0	55.4	284.3
1996	190.9	46.1	237.0
1997	167.2	32.9	200.0
1998	155.8	41.0	196.8
1999	214.6	50.5	265.1
2000	253.2	40.4	293.6
2001	205.6	29.5	235.1

Source: Statistics Canada, Annual Survey of Manufactures

\* Incorporated establishments with employees primarily engaged in manufacturing and with sales of manufactured goods equal or greater than \$30,000.

**Table 3-7: Average Salaries by Type of Employee (Principal Establishments\*, Value in \$)**

Year	Production Employees	Administrative Employees	Total Employees
1990	36,636	31,538	35,115
1991	37,771	32,542	36,358
1992	39,811	38,307	39,474
1993	43,802	47,065	44,554
1994	45,060	41,971	44,368
1995	44,338	39,441	43,291
1996	41,759	36,949	40,727
1997	42,041	48,035	42,921
1998	38,480	48,656	40,231
1999	41,614	52,308	43,302
2000	51,108	46,258	50,382
2001	54,781	55,522	54,873

Source: Statistics Canada, Annual Survey of Manufactures

\* Incorporated establishments with employees primarily engaged in manufacturing and with sales of manufactured goods equal or greater than \$30,000. Establishments may include support facilities, such as sales offices, or warehouses, in addition to shipyards.

## **3.2** *Worldwide*

The shipbuilding industry has seen many changes in dominance over the past half century, first by European nations, and more recently by Asian nations. In the late 1950s, Japan emerged as a key player, challenging European industry. Today, the three leading shipbuilding nations are South Korea, Japan and China. The current situation in these countries as well as in Europe, Australia, and the United States is briefly reviewed below.

Affecting all yards in these countries, is the rising price of steel which is expected to pose a problem for companies that have filled their books far ahead with fixed-price contracts. In the short term, profits will likely be minimal, or wiped out altogether. New technology and increasing automation in shipbuilding are expected to reduce build times and increase productivity, bringing the yards back into profitability.

### **3.2.1** *South Korea*

South Korea is currently the world's leading shipbuilding nation, with a 40% market share. It is believed that in order for South Korea to hold onto their leading position, its shipbuilders will need to create strategies to smooth labour relationships, balance the supply and demand of raw materials, and enhance international co-operation to overcome the challenge from China. In 2003, there were approximately 65,000 people employed in the South Korean shipbuilding industry. This is likely to decrease as productivity increases. South Korea is expected to take advantage of locations outside of the country where production factors are cheaper. There are already a number of facilities in China and Vietnam, which are partly owned and managed by South Korean entities.

The South Korean shipbuilding industry is widely believed to be heavily subsidized by the national government. For example, the EU has alleged that the government is providing advance payment guarantees and very low export credit financing from the state-owned Export-Import Bank of Korea ("KEXIM"), debt forgiveness, preferential debt-for-equity conversions, interest relief, tax concessions and subsidies for upstream suppliers, especially steel producers.

### **3.2.2** *Japan*

Japan was the leading shipbuilding nation from 1960 until recently when South Korea took the lead. Order books at the majority of yards are full into 2007, causing companies to try and increase output through means of physical expansion, yard takeovers or by upgrading existing facilities. Japan's industry is largely focused on constructing bulk carriers. Recently Japan has

been able to secure a sizeable share of VLCC (very large crude carriers) orders. Car carriers are also built in Japan for domestic ship owning groups.

### 3.2.3 *China*

There are more than 600 Chinese shipbuilding-related enterprises, eight of which are major shipyards. By 2005, these yards will be able to build the latest generation of container ships and tankers. The China Association of National Shipbuilding Industry projects that China's mainland shipbuilding output will hit a new record of more than 8 million tons in 2004, up from 6.1 million tons a year ago. The surge comes despite growing raw material prices and power supply and yard capacity shortages. In 2003, China State Shipbuilding Corporation (CSSC) began construction on the Changxing Shipbuilding Base on the Shanghai coast which will be the largest shipyard of its kind in the world when completed in 2015. Its annual shipbuilding capacity for that yard alone will reach 8 million tons. Many trade groups have argued that the massive capacity increases of Chinese yards have effectively suppressed prices and that the Chinese yards only compete through the use of extremely inexpensive labour. However, our interviews revealed that the Chinese yards are now using the most up-to-date manufacturing equipment and its designers are much more efficient than those in North America.

In the first half of 2004, tonnage increased by 66% year-on-year to 4.1 million tons, accounting for 14% of the world's total. Orders for new ships reached 9.9 million tons in the period, up 21% from a year earlier, and accounting for 19.3% of the world total. At the end of June 2004, the industry backlog had reached 32 million tons, 15.9% of the world total.<sup>6</sup> World market share has been growing rapidly, having been only 9% in the first half of 2002 and 7% in 2000.<sup>7</sup>

### 3.2.4 *Australia*

By the late 1990's, Australian shipbuilders had captured 25% of the value market share of total world aluminium shipbuilding sales and 80% of the high-speed passenger and car ferry market.<sup>8</sup> This is a major turnaround for a country where conventional steel hulled ship construction stopped in the mid-1980s. The change occurred because of a combination of strong domestic design skills for fast ferries, strong domestic demand for aluminium hulled commercial fishing boats and tour and dive boats for the tourist industry. Since 1996, shipbuilding exports (including fast ferries) have averaged AUS\$600 million per annum.

The Australian government supports the shipbuilding industry through the Shipbuilding Innovation Scheme (SIS), and until 2003 had a 3% price subsidy (total budget for 1999-2003 AUS\$28.3 million). The SIS was created in 1998 by the Department of Industry, Science and Resources (AusIndustry). It provides assistance for up to 50% of eligible R&D expenditures incurred, up to a total of 2% of the eligible production costs of a vessel completed on or before 30 June 2004. AusIndustry budgeted AUS\$40.5 million for SIS over the period 1999-2003.

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<sup>6</sup> Marine Log, September 2004

<sup>7</sup> The Institute for Shipping Analysis, Göteborg, November 2002.

<sup>8</sup> Australian Trade Commission

The defence shipbuilding industry is worth more than AUS\$1 billion each year. Domestically, the major customer is the Royal Australian Navy. Its annual expenditure on the repair and refit of naval ships, submarines and equipment is around \$250 million, indicating that Australian shipbuilders have a substantial export market.

### 3.2.5 *Europe*

Shipbuilding in Europe is very diverse in its structure, with each nation focusing on a specific type of vessel, outlined in the following table.

**Table 3-8: Breakdown of European Vessels, by Country**

Country	Type
Germany	Container vessels
Italy	Passenger and RoRo vessels
Denmark	Workboats, tugs and dry cargo vessels
The Netherlands	Tugs, mega-yachts
Spain	Fishing boats
Turkey	Small tankers
Romania	Dry Cargo

According to a 1998 UK Parliament report, "The European Union, together with other AWES (Association of European Shipbuilders and Shiprepairers) countries (Poland and Norway), currently claims about 25 per cent of the world shipbuilding market (by tonnage). Shipbuilding in the European Union is concentrated mostly in high technology, high value vessels involving specialised design and fitting out work. The Chamber of Shipping characterised the strengths of European yards as having "virtually total domination" in passenger ships, and advantages in off-shore oil-related vessels; specialised vessels, where the European Union is a design and technology leader; and fast ferries. Such vessels are not generally suitable for series production, unlike the tankers and bulk carriers that are the main products of many Asian yards."<sup>9</sup> However, the EU is rapidly losing market share; by the first half of 2002, its share had dropped to 10%.<sup>10</sup>

In January 2004, the European Commission sought to extend the temporary shipbuilding subsidies permitted as a "temporary defensive mechanism" (TDM) until March 31, 2005. The subsidies, introduced as part of a two-pronged response to alleged Korean "unfair" shipbuilding practices, were due to end in March 2004. The Commission indicated that the extension until March 2005 is justified because no solution has been found so far bilaterally or at WTO level. The principal provisions of the TDM are the following maximum aid intensity of 6% of contract value on containerships, product and chemical tankers and Liquefied Natural Gas (LNG) tankers.

In addition, individual European countries provide state support for shipbuilding, including financing funds in Germany (50 million Euros budgeted in 2002 to provide ship financing better

<sup>9</sup> Proposal for a Council Regulation establishing new rules on Aid to Shipbuilding, UK House of Lords, 1998

<sup>10</sup> The Institute for Shipping Analysis, *ibid.*

than CIRR) and a Spanish scheme whereby Spanish companies were allowed a corporate tax break on their entire profits if they invested in Spanish-built ships. This program boosted domestic demand; in 2003, 10 of the 13 Spanish-operated ships that were delivered were built in that country. The UK Department of Trade and Industry has a Home Shipbuilding Credit Guarantee Scheme (HSCGS). Scheduled to end in 2005, the HSCGS provides soft credit finance facilities to UK resident purchasers of ships in the form of loan guarantees of up to 80% of contract value for the construction and conversion of vessels. DTI budgets approximate £1 million year to HSCGS. It also ran the Shipbuilding Intervention Fund to subsidize ship prices by up to 9% and was allocating up to £13 million a year to that program, but it was ended in 2004.

Shipyards in the Netherlands have done well by investing heavily in innovation, specializing in certain ship and boat classes and through the use of outsourcing. According to the Netherlands Shipbuilding Industrial Association, shipyards conduct more than three times as much research as the rest of the maritime cluster and new products or services also account for more than 60% of the yards' sales. Revenue increased 128% between 1993 and 1999 and return on capital was over 20% in 1999. Niche markets which the Dutch have exploited include the mega-yacht market (defined as greater than 24 m in length), with shipments of 680 million euros in 2002 and tugs, where yards finish hulls outsourced in eastern Europe.

### 3.2.6 *United States*

The American shipbuilding industry specializes in the construction of tugs, crew boats, and vessels for the offshore industry. It is predicted that many of the buyers for American vessels will be government entities.

In the United States, there are over 280 privately owned shipyards. In 2001, the industry produced \$US10 billion in annual revenues and has nearly 100,000 employees. Department of Defence procurement accounts for about 70 percent of the industry's revenue. The commercial side of the industry is less than half the size of the military but has grown at a faster rate in the last five years. International business plays a very minor role for the U.S. shipbuilding industry and accounts for only about 1 or 2 percent of total revenues.<sup>11</sup> Only 43 yards are capable of dry-docking ships of 122 m in length and only six yards are building Navy combatant ships. The termination of the US construction-differential subsidy program in 1981 curtailed the ability of US yards to win international commercial shipbuilding contracts, but this was largely offset by the decision to expand the US Navy to 600 ships. However, in the 1990s, it was decided to reduce the size of the US Navy fleet to 260 ships and so, yards have seen a major decrease in military work. In 1993, Congress amended Title XI of the Merchant Marine Act, 1936, to permit the US government to guarantee loan obligations for foreign owners of foreign-flagged vessels built in US yards. The terms provided by Title IX financing, particularly the duration, are generally more favourable than those offered by other countries.

The other major legislation affecting the US marine industry is the Merchant Marine Act of 1920, as amended (the "Jones Act"), which requires the ships engaged in coastwise trade to be

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<sup>11</sup> Industrial College of the Armed Forces Industry Studies 2001: Shipbuilding, National Defence University, Washington, D.C.



owned by a US company, crewed by US citizens and built by a US shipbuilder. The Jones Act was excluded from US-Canada (and later NAFTA) free trade negotiations and despite periodic efforts to rescind or modify the Jones Act's provisions, often championed by domestic groups which would benefit from cheaper shipping rates, it is unlikely that any softening of the protectionism provisions will occur.<sup>12</sup> In fact, from our interviews, we learned that the Jones Act might be extended to include small watercraft and yachts. Other interview subjects indicated that an unforeseen effect of the Jones Act has been to make American commercial shipyards vastly uncompetitive internationally in terms of design effort and labour content per ship.

### **3.3 Conclusions**

The world shipbuilding industry has operated for years under state subsidies and protectionism. While many countries, including Canada, have moved unilaterally to end these practices, there are many major shipbuilding and ship owning countries that continue to favour them. This has resulted in artificially low prices, and countries in Europe and North America have seen their market share decline dramatically as a result.

Some countries, notably Australia and the Netherlands, have been successful by attracting a domestic market and by using government support and moving into niche foreign markets.

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<sup>12</sup> Federation of American Scientists' Military Analysis Network.

# 4. *Rationale and Relevance*

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## 4.1 *Does the SFF fill a need or gap in the shipbuilding industry?*

The Structured Financing Facility (SFF) was one of the key responses of the government to the recommendations contained in the report of 2001 of the National Partnership Project aimed at assisting the shipbuilding industry in Canada. The SFF was intended to provide an equivalent benefit to that called for in the industry report without modifying tax regulations. The need was to have financing for the industry that was competitive with that offered by other countries.

The most common response was that SFF is filling a financing gap and helping to bring business to Canadian shipyards. SFF is not considered by stakeholders, however, to have closed the cost gap with competitors. Canadian industry continues to face serious competition from yards in other countries that receive a higher degree of subsidization. From our document review and interviews with the industry, we learned that shipyards in China and South Korea, for example, are fully paid for by government, on the grounds that the shipbuilding industry provides a substantial internal market for steel production in these countries. Other instances of direct and indirect government support for domestic shipbuilding includes Australia (Bounty (Ships) Bill providing a 3% subsidy with phase-out period), the United States (Jones Act, Title XI extended term credit) and Denmark (Danish Ship Finance, an agent of the Ministry of Finance with US\$5.4 billion in outstanding loans to Danish and foreign ship owners).

Foreign subsidies do not, though, fully account for the lack of competitiveness of Canadian yards. Other factors include aging infrastructure, insufficient capacity or capability to build ships above 85,000 DWT or of certain specialized designs, no economies of scale because projects are one-off, and lack of focus into niche markets. High Canadian labour costs were also cited as a competitive issue.

The SFF has attracted foreign buyers to Canadian shipyards but so far has been unsuccessful in drawing in the domestic market. The Shipbuilding and Industrial Marine Advisory Committee (SIMAC)<sup>13</sup> claims that the SFF at 15% falls short of the benefit received by applicants if exempted from the specified leasing property rules which was the original change requested by industry in its 2001 report. SIMAC states that an SFF of 30 - 35% would be required to give an

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<sup>13</sup> The Rationale and Benefits of Enhancing the Structured Financing Facility, SIMAC Presentation to the Department of Finance, June 17, 2004

equivalent after-tax benefit. SIMAC and Canadian yard owners interviewed cited this difference as the major reason the yards have failed to tap into the Canadian market. The fact the financing period was not extended beyond current OECD limits was also noted as a deterrent to the market.

A gap in the shipbuilding industry not being filled by SFF is recreational/personal boatbuilding that is ineligible for program support. Smaller yards in this business believe that access to SFF would make them more competitive with boat builders in Australia, Europe, and the United States (should the Jones Act be extended to cover this element of the US shipbuilding industry).

## ***4.2 Does the SFF program continue to be consistent with Industry Canada and government-wide priorities?***

Most viewed the intent of the program as being consistent with Industry Canada and federal government priorities. The program is viewed as trying to make the yards more competitive and supporting regional economies through the creation of skilled employment opportunities, both outcomes in line with government priorities. Some interviewees questioned whether Industry Canada's innovation agenda was being well-served, given the current level of take-up of SFF. Some yards have taken advantage of Technology Partnerships Canada (TPC) to finance innovations but a concern from the yard operators and ship owners is that some yards have fallen behind technologically. Because of the lack of orders, these yards have not been able to maintain a workforce with up-to-date skills.

The less favourable tax treatment of ships compared to rail and road transport is, according to some, offering inconsistent encouragement to the development of these forms of transport, and out of line with government priorities on, for example, the environment. On the other hand, owner/operators in shipping receive more generous treatment than the other two modes of transport in terms of depreciation; under the ACCA, depreciation on ships is over only four years although the average life of a vessel is 20 years.

The fact that SFF support is non-repayable was noted as being inconsistent with Industry Canada's other industry support programs. However, it is difficult to see how SFF could be made repayable, e.g. against the profit recorded by the shipowner after they begin operating the ship. We believe that, even if a workable repayment scheme was devised, it would make SFF even less attractive to the domestic market.

### ***4.3 Does the SFF complement, duplicate or overlap other federal government programs?***

SFF was seen as a unique initiative by the federal government. Technology Partnerships Canada, IRAP and R&D tax credits (Scientific Research and Experimental Development (SRED)) were seen as instruments for assisting design and technology development for new ships in Canadian yards in the future, and in that sense complemented not duplicated SFF which is concerned with the current building of ships. EDC financing was seen as the most relevant immediate tool for selling ships to foreign buyers although some yard representatives questioned why Canada abided by the relevant Commercial Interest Reference Rates (CIRR) established by OECD while other countries did not. EDC can assist domestic purchases provided the ships are to be used for the transport of goods abroad. The relationship between Industry Canada and EDC is seen as productive by all parties with due diligence being readily shared. The credit insurance component, involving the Department of Finance, has not been used. This latter point is discussed further in Chapter 5.

Provincial incentives to the shipbuilding industry are viewed by yard owners as complementary to SFF. For example, under the Canada/Prince Edward Island Market Development Agreement, the province provided support in the form of wage subsidies to the East Isle Shipyard for an international contract to construct tug boats. Quebec also offers support to yards through loan guarantees and performance bonds provided by Investment Quebec.

### ***4.4 Conclusions***

SFF fills a need in supporting the shipbuilding industry. The level of support provided has been sufficient to attract foreign buyers to Canadian yards but so far has not been successful in pulling in the Canadian domestic market.

SFF is consistent with Industry Canada and government-wide priorities, with two exceptions: (i) SFF is non-repayable unlike other Industry Canada programs of support to industry, and (ii) the less favourable tax treatment of shipbuilding compared to road and rail transport discriminates against shipping, a more environmentally friendly mode of transport, which is at odds with the government's environment policies.

SFF complements and does not duplicate other forms of support available to Canadian yards.

# 5. *Program Design and Delivery*

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This chapter examines the initial and evolving design of the SFF program and ascertain how well it has been delivered. The chapter addresses the overall objectives of the program, the attractiveness and effectiveness of the individual SFF components and the effectiveness of Industry Canada's Energy and Marine Branch in managing the marketing and administration of the program.

## 5.1 *Is the SFF program well-designed?*

### 5.1.1 *Are the objectives and desired outcomes of the SFF clearly identified and agreed upon?*

While most interviewees indicated that the desired outcome of the SFF was to maintain and create jobs in Canadian shipyards and to help modernize processes in the shipyards, there appear to be differing views in the shipbuilding industry and in government on how those objectives are to be achieved.

Industry indicated that while they had been lobbying Industry Canada and other departments for a number of years on the need for financial support to compete against subsidized foreign shipyards, the response from the federal government was a "surprise" in terms of how this support was to be manifested. The shipbuilding industry believes that while Industry Canada is a supporter of the means proposed in the National Partnership report, the SFF represented a more limited response to addressing the subsidy issue, as noted in Chapter 4.

Another objective of SFF noted by the interviewees, was meant to be a stop-gap measure designed to give time to address wider global shipbuilding subsidies. It appears that OECD talks have been slowed by China's unwillingness to participate and Industry Canada does not anticipate a quick resolution to global shipbuilding subsidies.

Some interviewees from government indicated that the objective of SFF was to fill a gap in demand until government procurement was in place and to build capability in Canadian shipyards to fulfill government fleet procurement requirements. It appears that the US government is supporting its shipyards in the opposite manner. Some US industrial respondents

indicated that US government fleet procurement was designed to provide a base load for US shipyards, covering their overhead costs, so that the yards would then be able to win more-profitable commercial work.

### *5.1.2 How effective are the components?*

The only component of the program being used is the IRS and only after it had been increased to 15% support from 10%. The credit insurance elements, consisting of a credit insurance component (CIC), a non-repayable contribution towards the cost of loan insurance provided by the private sector, and credit insurance support (CIS) for loan insurance provided by the federal government, has not been used. Many industry respondents indicated that they had no knowledge of either the credit insurance components, or if they did, the difficult process of applying for them made them unattractive.

The short timeframe remaining for SFF is seen as a major design difficulty as the program only pays when the ship is delivered. With ship delivery taking between six months and two years, depending upon the design, this limits a five-year limited life program to effectively three years. For this reason, a number of government and industry interviewees advocated an extension of the program within existing budgetary levels to permit new builds to be initiated between now and 2006.

Representative from the domestic shipbuilding industry cited many shortcomings with the existing program, such as its inability to provide incentives to buyers which pay cash, the need to combine SFF and ACCA to begin to match foreign shipyard subsidies, the competitive advantage of moving to a non-taxable benefit for the ship owner (such as a direct price subsidy) and the incrementality concept where a project is only eligible if it can be proven that the work would not go to a Canadian yard. The last point is unique to SFF and hard to prove. The ineligibility of minor repair and retrofit work was also cited as a shortcoming, as was the ineligibility of yachts.

It is difficult to design an incentive for cash buyers that is not a direct subsidy of the shipyard. However, an expansion of ACCA through even more aggressive amortization, or allowing amortization during the ship's build, may be a possible solution, albeit one that only targets domestic demand. The Spanish government, for example, has a scheme that allows Spanish companies buying Spanish-built ships to have a tax break on their entire corporate profits.<sup>14</sup> The program recently ended, but in 2003, 13 Spanish-operated ships were delivered and 10 were built in Spain.

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<sup>14</sup> Fairplay, 29 April 2004, pp.40-41

## ***5.2 Is the SFF program properly delivered?***

### ***5.2.1 How well is the program marketed and communicated?***

In the initial four to six months of the program's existence, there was some minor degree of confusion in the industry as the mechanics of SFF were created and communicated by Energy and Marine Branch. This was due to a three month delay between when the program was announced and when Treasury Board approved it. Since then, it appears that individuals within the Branch have done a good job of communicating the program to both shipyards and potential buyers of ships, through tradeshows and other means. The officers were also seen as being effective at guiding the applications from the buyers through the government approval process. Energy and Marine Branch officers were also seen to be proactive, often communicating purchasing opportunities to Canadian shipyards. The process is seen by the yards as much more efficient than programs such as TPC, in terms of turn around time on applications.

From our interviews with ship owners and ship builders, it was apparent that they were familiar with the general purpose of SFF and that it would act to lower the cost of a ship built in Canada. We did encounter one major Canadian fleet owner, not a member of the Canadian Shipowners Association, who was not aware of the program (this company recently acquired a \$45 million ship from an Asian yard).

SFF program officers can also provide an approval in principle to potential ship buyers, indicating that the financing will likely go through, even when it is officially still "in-process." This process has allowed the yard or the owner to know about the possibility of SFF support so that their proposals can be suitably enhanced. The process can improve the opportunity for Canadian yards to win internationally when competing with other yards. The approval in principle derives from a pro-forma due diligence based on a hypothetical understanding of the possible deal. The process may entail going to the Minister or even to the Treasury Board for approval. If the bid is won by the Canadian yard, the due diligence is redone on a more concrete understanding of the project.

Industry Canada asks the shipyards to report on secondary effects, such as employment, innovation and partnerships, after a project has been completed. These short reports are invariably positive, which did not always coincide with the opinions of shipyard management given in interviews. In particular, from interviews, we were told that innovation cannot occur in SFF-supported projects, as innovation is only possible when the yards have a steady stream of work that SFF so far has not created. The results from the short reports are discussed in Chapter 6.

### ***5.2.2 How efficient and effective is the process for approving project proposals?***

From our interviews, we understand that during the planning stages of the SFF, other federal government departments and Crown Corporations were considered as possible lead agencies for

the program, including EDC and Canadian Commercial Corporation, as these entities already had due diligence mechanisms and personnel in place. Industry Canada decided to keep the administration of the program in-house, within the Energy and Marine Branch (EMB). It appears that EMB and EDC have done a good job of sharing due diligence and otherwise working together on projects.

Many private sector respondents indicated that the application forms ask a number of irrelevant questions, or duplicate the financial questions that are already asked by commercial lenders. In particular, the requirement to get competing foreign bids for potential projects was described as "inviting foreign competition" and "irrelevant for projects that can only be completed in Canada for other reasons." It is not clear how rigorously this particular requirement is enforced, or whether or not it is in fact a requirement at all. In one case, a SFF-supported ship owner indicated that they estimated themselves how much it would cost to build the ship in a foreign yard. In other cases, we were told that work destined for a Canadian yard did go offshore after the buyer examined their SFF mandated foreign yard quote. Government interviewees indicated that this requirement was in place to ensure incrementality; that is, that the procurement would not proceed in Canada, without SFF support.

While the ship owner is meant to complete the necessary Industry Canada paperwork, in reality the shipyards take the lead in managing the communication between the owner and Industry Canada, often completing the applications.

### **5.2.3 *Is the SFF the most cost-effective means for achieving its objectives?***

Most interview subjects noted that the world shipbuilding industry operates with such high levels of subsidies and protectionism that the 15% SFF contribution did not come near to making Canadian shipyards competitive on costs.

On the other hand, some industrial interviewees noted that the federal and provincial taxes generated by SFF projects would more than compensate for the 15% support provided by the federal government under SFF. There are only a few government employees working on SFF administration and the costs of running the program are as a result quite low. The cooperation between EDC, Industry Canada and to a lesser extent, TPC, is a good combination of due diligence resources.

SFF funds have created leverage in that it does allow EDC to lower its ship financing loans to CIRR. We were told that without SFF, EDC would price its loans 2%-3% higher than CIRR, thus making Canadian shipyards even less price competitive.

We also heard from a number of government officials that changing the program to a repayable contribution would both better align SFF with other industrial support programs and decrease the longer-term net cost of the program. It was also suggested that funds should be based upon the number of ships a yard would produce, thus encouraging manufacturing efficiencies.



Others indicated that if innovation was to be encouraged then there would be more direct ways of achieving this than through SFF. TPC was not seen as a viable option for companies with few cash resources and non-existent backlogs.

### ***5.3 Does the SFF program have adequate resources?***

Industry Canada interviewees indicated that the program had been designed initially to allow for up to 15% support of the purchase price on an individual ship procurement. An applicant could select either IRS or credit insurance and receive 10% for the component chosen. If both components were applied for, the total could not exceed 15% with no component receiving more than 10%. After the initial stages of the program, where both of the credit insurance components received little interest and zero take-up and there was only small interest in the IRS component, the program was modified to allow up to 15% from the IRS component alone.

The process that the Department of Finance put in place to approve SFF projects with credit insurance components is seen by ship owners and Industry Canada as very onerous, and likely to be refused. Since an early application was refused, no other applications for credit insurance support have been submitted to the program.

The amount of money allocated to the program was seen by Industry Canada and industry associations as more than adequate as the program is currently designed. The allocation of funds was designed in a rational way, assuming \$1 billion in new ship construction, primarily from Great Lakes cargo ships in the following five years and that a 15% SFF contribution would apply to most of these projects. If the credit insurance components were to be made more attractive, then the \$150 million would be easily allocated during the current time frame of SFF.

### ***5.4 Conclusions***

Despite the slow start in designing application details, the SFF program has been well administered, including working with yards and buyers in completing the necessary documentation and monitoring the progress of the projects. However, there are some major domestic ship fleet owners who are not aware of SFF. Further targeted marketing, primarily to non-members of the Canadian Shipowners Association, is necessary.

The credit insurance components have not been used in contrast with the interest rate support component because they have been poorly-communicated and difficult to get approved. Industry Canada reacted to early lack of interest in the program by raising the limits for IRS. When the IRS support was raised to 15%, it began to attract a great deal more interest from foreign ship buyers. It is still the case that few domestic shipowners have been attracted to the program and that must be seen as a major failure of SFF.

We concur that incrementality is an important consideration, but believe that it can be achieved through a simple certification process by the ship buyer rather than through the current requirement to seek a foreign quote.

The major exclusions to SFF support are minor repair and overhaul (R&O) work (though major refurbishments are eligible), and boats and yachts. The R&O and boats and yachts exclusions let SFF focus on the weakest sector of the Canadian industry, new builds of large hulls. It is apparent to us that R&O and the small boat sector, both of which are doing relatively well, should benefit from the same program, as the success of yards doing that work will contribute to the industrial strategy and jobs creation goals of the policy framework. Also, we noticed that Canadian builders of small boats and yachts demonstrated more R&D and innovation than builders of larger hulls. We realize that making R&O and small boats eligible for SFF will create a much larger volume of files through Energy and Marine Branch, so appropriate resources will need to be put in place.

Without some financial engineering, ship owners wanting to pay cash for their new ships are ineligible for support. Some ship owners believe that this is easily circumvented by financing the ship with a loan with an option to discharge it early, take delivery of the ship, accept the SFF payment, then discharge the loan with the cash which had been earmarked for the ship purchase in the first place. However, Industry Canada does not encourage the strategy because it risks violating the terms and conditions of the SFF program. Possible incentives for domestic cash paying buyers may include increasing the amortization rate on ACCA, or allowing amortization during ship construction.

The degree of innovation caused by SFF-supported projects self-reported by the shipyards over-estimates what is occurring in reality. Industry Canada needs to develop a better way of measuring these effects. Orders for new types of vessels or actual man-hours of labour per existing vessels in subsequent builds might be more objective measures of innovation.

The short time frame remaining for SFF is causing difficulties for yards in attracting new orders.

## 6. *Progress and Success*

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This chapter examines the progress and success of the SFF program in meeting its expected outcomes. A number of issues are addressed including the question of whether the government has delivered on its commitment as stated in its June 2001 policy, barriers or issues impeding progress, effectiveness of the program in meeting its objectives, primary and secondary economic benefits, and the impact of the SFF components on the Canadian shipbuilding industry.

### 6.1 *Has the government delivered on its commitment stated in its June 2001 policy?*

Most respondents indicated that the Canadian government is fulfilling the commitment made in the policies described in its June 2001 Shipbuilding Policy Framework as they relate to SFF. The SFF and the necessary support within Industry Canada to run it were created; furthermore, ship owners, and particularly offshore owners, indicated that SFF was a key factor in their decision to source from a Canadian yard.

However, to effectively compete against foreign yards, SFF alone is insufficient. SFF needs to be combined with other measures and programs, in particular, all five components of the policy framework (capturing domestic opportunities, looking globally, innovation, financing, and stronger partnerships). Specific examples include: most yards and owners felt that SFF and ACCA should be combined; for some owners, having a performance guarantee was more important than SFF; and for some owners, obtaining EDC support was more important than SFF. Some yards believe that the only effective way to compete against the heavily subsidized Asian yards is through a direct subsidy, i.e., to fight fire with fire.

Some smaller yards, as noted in the Marine and Ocean Industry Technology Roadmap, "have proven their capability to compete in both cost and quality on the international stage. Witness the recent sales of world-class tugs by the Irving Shipbuilding Group (East Isle Shipyard, P.E.I.) and Industries Ocean Inc. (Ile aux Coudres, Que.)<sup>15</sup> to a variety of owners in Europe, Panama, and the Caribbean. These examples prove the potential for Canadian yards to compete in Europe and Central America with even the historically low cost builders of the U.S. Gulf Coast." However, the Roadmap goes on to note that, "the size of the Central American market is not large, and competition into the European market is quite fierce. Any upward fluctuation from

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<sup>15</sup> We note that Industries Ocean went bankrupt during the build of a tug.

present exchange rates will likely impact our market access significantly.”<sup>16</sup> The list of fifteen SFF projects (12 completed and 3 in progress) is provided in Table 6-1, at the end of this chapter. As noted in Table 6-1, both the Irving Shipbuilding Group and Industries Ocean Inc. participated in the SFF program.

## 6.2 *Are there any barriers or issues that will impede the progress of the SFF program?*

The short timeframe remaining for SFF is seen as a major difficulty as noted in Chapter 5. Other shortcomings with the existing program noted by representatives of the shipbuilding industry included, the inability through the SFF to provide incentives to buyers which pay cash, the need to combine SFF and ACCA to begin to match foreign shipyard subsidies, the competitive advantage of moving to a non-taxable benefit for the ship owner (such as a direct price subsidy) and the incrementality concept where a project is only eligible if it can be proven that the work would not go to a Canadian yard without SFF support.

The ineligibility of yachts was also cited as a shortcoming. Some noted that the Dutch decided to support their yacht builders, and today they are seen as the world’s best. Thirty years ago, the Dutch yacht industry did not exist.

Some yards noted that under the Jones Act, the Americans restrict their procurement to American yards, and even some states restrict procurement to their state. This is not the case in Canada. The press<sup>17</sup> and many shipyards have commented that BC Ferries intends to procure from a

<sup>16</sup> Marine and Ocean Industry Technology Roadmap Special Report, March 2003, p. 24.

<sup>17</sup> See for example: 1) *B.C. Ferries Defends Decision to Build in Europe*, MarineLog.com, July 31, 2004: “Against a backdrop of mounting protests from local unions, shipbuilders and some politicians, B.C. Ferries yesterday defended a decision to build three new Super C Class ferries in Europe. The former Crown corporation plans to build up to three of the 370 vehicle, 1,600 passenger vessels in what is widely reported as a C\$500 million project ...competition has now been narrowed to two European yards, one in Germany and one in Finland...the only Canadian yard to bid was Washington Marine Group, but BC Ferries rejected it because “expert evaluations conclude that [it] did not have the shipbuilding infrastructure, technology or experience required to build large complex vessels”; 2) *Mayors Issue Plea to B.C. Ferries to Reconsider*, CBC News British Columbia, August 3, 2004, “North Shore mayors are issuing a plea to B.C. Ferries to consider local shipbuilders for construction of three new ferries – a contract worth about \$500 million. The mayors of North Vancouver, West Vancouver and the District of North Vancouver want the company to overturn its earlier decision – and not send the lucrative contract overseas...B.C. Ferries maintains local shipbuilders have lost the capacity to take on major projects, but can still qualify to build smaller vessels”; 3) *Open Letter from BC Ferries’ President and CEO David Hahn*, July 30, 2004, “BC Ferries is poised to launch the most aggressive new vessel program in its history. It’s a long-term plan to rebuild our fleet and is particularly critical since the average age of our vessels is currently 32 years. We need to replace 22 ships of varying sizes over the next 15 years. And to do this, we will be working with both international and domestic shipbuilders...The three largest Canadian yards, including B.C.’s largest yard, and 11 international shipyards were invited to participate. Two Canadian yards declined to submit bids...The expert evaluations concluded that the Canadian bidder did not have the shipbuilding infrastructure, technology or experience to build large, complex vessels like the Super C class ferries...Over the next 15 years, the majority of our 22 new vessels will be small to medium-sized open car-deck ferries, the sort of work where B.C. shipyards have demonstrated expertise, and projects where our yards should be very competitive.”

European yard; there is no Canadian yard on the short list of bidders. BC Ferries was a crown corporation, but even as a “privatized” entity, the Province of BC is the sole shareholder. Some believe that the reason Canadian yards were excluded by BC Ferries is because of the short timeframe remaining for SFF (e.g., delivery would be after the SFF program ends), and/or no Canadian yard could meet the quality and technical specifications (e.g., we note in Section 6.5 that due to the lack of business Canadian yards have been unable to keep up with the quality of foreign yards). The point being made by Canadian yards is that government, or a government-supported organization, should be trying to increase, not decrease, Canadian content. However, as we note below, the lack of business has hurt the ability of Canadian yards to compete, and to maintain quality and innovativeness.

Unlike their American counterparts, Canadian yards have not been able to rely on renewal of navy vessels to sustain them. As noted in the Technology Roadmap, “it is very expensive to design and build Canadian warships. There no longer exists the people or the infrastructure to do this work. It may be necessary for these ships to be common with and fully integrated with the United States fleet, or at the very least with other NATO vessels. In spite of past successes, there has never been a continuing demand to sustain a military shipbuilding industry in Canada. And there appears to be no expectation that there will be in the future.”<sup>18</sup>

A further issue is the leverage on further business being generated through SFF support. The yards benefiting from SFF that we examined in our case studies have not been able to use SFF to create additional orders; reasons include poor performance in the SFF-supported project, ongoing financial instability of the yards and lack of demand from their customers.

### ***6.3 Is the program effective in meeting its objectives within budget and without unwanted outcomes?***

The low demand for ships, especially those that will ply their trade on the Great Lakes was cited as an unforeseen limitation on the take up of SFF. The high average age of the Great Lakes fleet and relatively high shipping costs were thought, when the SFF program was designed, to be major drivers of shipbuilding demand. The uneven level of demand for Canadian government owned ships was also seen as a problem for the domestic yards maintaining a baseline capacity.

The unanticipated effect of SFF most often cited was the increase in foreign demand for Canadian-built ships. Foreign owners confirmed that SFF is a useful cost reducer for foreign buyers purchasing ships on credit, because they can also continue to take advantage of other financial incentives offered by their own country. The increased foreign demand has reached the point where one respondent expressed concern that SFF may attract unwanted attention from the WTO.

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<sup>18</sup> Marine and Ocean Industry Technology Roadmap Special Report, March 2003, p. 20.

## ***6.4 How many jobs have been directly created due to SFF? What evidence is there that these jobs would not have been created without SFF?***

Energy and Marine Branch relies on a post-project questionnaire from the shipyard to quantify the economic benefits, such as sales and jobs. As noted in Table 6-2, actual shipyard sales are very close to projected sales, with the nine completed SFF projects resulting in sales of approximately \$131 million. This has apparently resulted in 485 person-years. Representatives of the shipyards that have participated in the SFF program indicated that these 485 person-years were not “created”, but rather, the SFF has helped to “maintain” existing jobs. They noted that the economic impact of maintaining jobs is still significant, with the indirect multiplier effect being approximately 1.5 times the direct.

As noted in Chapter 3, total shipments and employment for the Shipbuilding and Repairing industry in Canada have decreased by roughly 50% in the latter half of the 1990s. Total shipments declined from approximately \$970 million in 1994 to \$546 million in 2001, while the number of workers declined from approximately 7,360 in 1994 to 4,280 in 2001. Shipyard representatives noted that this downward trend has continued over the 2001 to 2004 period. This decline in business makes it difficult to attract and retain promising apprentices. Continuity in business is needed for labour stability, but this will not happen if the economics of the industry are not fixed.

## ***6.5 Has the SFF program had any impact on secondary effects, such as increased worker skill levels, improved innovation or development of new markets?***

Table 6-3 provides the secondary impacts of SFF, such as increased skill levels of workers, innovation and improved partnerships, as reported by the post-project questionnaire from the shipyards. As noted in Table 6-3, feedback from the seven yards responding to the secondary economic benefits component of the post-project questionnaire is mixed. On the question of “innovativeness”, 57% indicated that this is very high, while 43% indicated that this is very low. There was more uniformity on “skill level”, with five reporting a “4” or a “5” (on a scale of 1 to 5, with 1 being very low and 5 being very high). There also appears to be some uniformity with respect to “productivity and cost competitiveness”, with five reporting a “4” or a “3”. The response was mixed for “expanding markets”, with 57% indicating high or very high, and 29% indicating very low. The response was also mixed for “expanding partnerships”, with 71% indicating a “4” or a “3”, and 29% indicating a “1” (very low).

The feedback from the interviews was similarly mixed. Some noted that innovation, skills, competitiveness, etc. have improved as a result of new business obtained through the SFF program, while others noted that with the current level of activity, skills, productivity and partnerships are only being maintained, not enhanced. The interviews tended to be less positive than the questionnaire responses on the question of innovation resulting from SFF stating that a steady flow of business was a necessary condition for innovation to take place in the yards with respect to design and construction.

The yards benefiting from SFF that we examined in our case studies have not been able to use SFF to create additional orders; reasons are particular to the examples, and include poor performance in the SFF-supported project, ongoing financial instability of the yards and lack of demand from their customers.

## ***6.6 What evidence is there that any of the three SFF components is assisting the Canadian shipbuilding industry? Are the three SFF components adequate?***

To date, 12 SFF projects have been completed and three are in progress, as noted in Table 6-1. Evidence suggests that most of these would not have proceeded in Canada without SFF support. Other than the live salmon transport ship built for Persistence Shipping by Groupe Verreault, it appears that no projects began until they had passed the necessary incrementality tests and received Industry Canada approval.

As noted in Chapter 4, “the Shipbuilding and Industrial Marine Advisory Committee (SIMAC)<sup>19</sup> claims that the SFF at 15% falls short of the benefit received by applicants if exempted from the specified leasing property rules which was the original change requested by industry in its 2001 report. SIMAC states that an SFF of 30 - 35% would be required to give an equivalent after-tax benefit. SIMAC and Canadian yard owners interviewed cited this difference as the major reason the yards have failed to tap into the Canadian market. The fact the financing period was not extended beyond current OECD limits was also noted as a deterrent to the market.”

SFF and the three components need to be combined with other measures such as ACCA and programs such as government fleet procurement in order for Canadian yards to effectively compete against heavily subsidized foreign yards. Maintaining current fleet size (RCN 39 ships, CCG/DFO 125, BC Ferries 35, Marine Atlantic 4 plus others) assuming an average useful ship life of 30 years, would cause a demand of six-seven ships/year. Government procurement would allow the yards to spread their overhead over a larger number of ships, thus allowing them to charge less to commercial shipowners. In addition, this steady work would allow the yards to

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<sup>19</sup> The Rationale and Benefits of Enhancing the Structured Financing Facility, SIMAC Presentation to the Department of Finance, June 17, 2004

keep existing highly skilled workers and invest in innovation in design, manufacturing processes and materials.

The credit insurance components have not been used. The comments we received were that they had low visibility and, if used, had a low probability of being approved by the government.

## **6.7 *Conclusions***

The federal government has delivered on its commitment as stated in its June 2001 policy to establish and market the SFF and to facilitate the use of export financing through the EDC. SFF has been a key factor influencing offshore owners to source from Canadian yards, but has had limited success in attracting the Canadian domestic market.

It is clear that no single measure or program, such as SFF, can fix the economics of the industry. Rather, a suite of measures and programs may be needed such as moving ahead on government fleet procurement, combining ACCA and SFF, extending the term of EDC financing, and providing performance guarantees to prospective buyers.

Without these measures, further consolidation in the shipbuilding industry may be necessary to keep the industry viable. Practically, there is enough work on large ships to keep two-three yards usefully open.

There is some evidence to indicate that smaller yards working in niche markets are able to effectively compete internationally. Obtaining access to foreign markets is the main barrier. These "smaller niche yards" can also benefit from SFF and other complementary measures and programs. Inclusion of smaller repair and refit contract work within SFF eligibility would also help smaller Canadian shipyards.



**Table 6-1: SFF Projects (as of September 21, 2004).**

Date Approved	Date Contracted	Shipyard	Owner	Project	Vessel(s) Value	Approved Contribution
<b>SFF Projects – Completed</b>						
Nov 3 2001	Jan 3 2002	Vancouver Shipyard	Gemini Marine Services Limited	Construction of steel feed barge	\$2,322,477	\$238,378
Jan 8 2002	Apr 30 2002	Victoria Shipyard	Alaska Railbelt Marine Inc.	Conversion of three barges	\$5,671,974	\$477,085
Jan 8 2002	Feb 13 2002	Industries Ocean Inc	Partrederiet Stevens Multi-Ship	Construction of one ASD ocean-going tug	\$10,480,329	\$1,088,880
July 26 2002	Aug 2 2002	Verreault	Persistence Shipping Limited	Construction of 40.6 m live salmon transport vessel	\$5,598,850	\$564,000
Nov 29 2002	Dec 27 2002	RTMC	Excursions Maritimes Charlevoix	Acquire 2 deck 100 passenger day cruise ship	\$962,275	\$96,135
Feb 3 2003	Feb 25 2003	Vancouver Shipyard	Marine Petrobulk	Double-hulled fuel supply barge	\$8,968,937	\$1,360,650
Feb 4 2003	Feb 10 2003	Point Hope	Nanaimo Harbour Link Corp	High speed passenger ferry refit	\$5,625,000	\$234,000
Jan 30 2003	Mar 31 2003	Secunda-Dartmouth	Secunda Marine Services	Conversion of cable-laying vessel	\$8,169,935	\$499,500
Mar 29 2003	Apr 3 2003	ABD Aluminum Yachts	North Co-Corp Ferry Services	21 meter Aluminum Passenger Vessel	\$1,782,200	\$173,000
Mar 4 2004	Mar 12 2004	Léo Leblanc & Fils	Centre Nautique de l'Istorlet	38 foot semi-rigid excursion vessel for 36 passengers	\$400,000	\$60,000
Feb 27 2003	Apr 24 2003	Industries Davie	Torch Offshore Inc.	Ship conversion for deep water pipe laying	\$127,920,000	\$8,131,000
Apr 16 2003	May 14 2003	Irving - East Isle	Caucedo Marine	Two tugs	\$14,937,000	\$1,717,755

Date Approved	Date Contracted	Shipyard	Owner	Project	Vessel(s) Value	Approved Contribution
<b>SFF Projects – In Progress</b>						
Mar 26 2003	Apr 3 2003	Industries Ocean Inc <sup>20</sup>	Partrederiet Stevns Enterprise	Construction of one ASD ocean-going tug	\$11,247,600	\$1,687,140
Aug 1 2003	Dec 3 2003	Glovertown Marine	A.M.P. Fisheries Limited	Construction of fishing and fish processing vessel	\$3,500,000	\$490,000
Dec 5 2003	Dec 22 2003	Hike Metal	Ocean Research	141 foot research vessel	\$13,500,000	\$2,025,000

**Table 6-2: Primary Economic Benefits as Reported by Participating Shipyards**

Project Identification				Projected (PSF) Economic Benefits					Actual (Reported) Economic Benefits				
No.	Owner (Applicant)	Shipyard	Status	Shipyard Sales	Shipyard Persons*	Shipyard Months	Shipyard PYs*	Contribution per Shipyard PY	Shipyard Sales	Shipyard Persons*	Shipyard Months	Shipyard PYs*	Contribution per Shipyard PY
1	Gemini Marine Services Limited	Vancouver Shipyard	Completed	\$2,383,780	42	4	14	\$17,027	\$2,322,477	51	4	17	\$13,634
2	Alaska Railbelt Marine Inc.	Victoria Shipyard	Completed	\$5,300,942	90	3	23	\$21,204	\$5,671,974	87	3	22	\$21,742
3	Partrederiet Stevns Multi-Ship	Industries Ocean Inc	Completed	\$10,888,800	99	18	148	\$7,357	\$10,480,329	140	18	210	\$4,991
4	Persistence Shipping Limited	Verreault	Completed	\$5,640,000	67	10	56	\$10,101	\$5,598,850	69	9	52	\$10,768
5	Excursions Maritimes Charlevoix	RTMC	Completed	\$961,350	26	6	13	\$7,395	\$962,275	21	8	14	\$6,867
6	Marine Petrobulk	Vancouver Shipyard	Completed	\$9,071,000	120	5	50	\$27,213	\$8,968,937	106	5	44	\$30,485
7	Nanaimo Harbour Link Corp	Point Hope	Completed	\$2,340,000	31	5	13	\$18,000	\$2,824,948				
8	Secunda Marine Services	Secunda-Dartmouth	Completed	\$3,739,420	180	2	30	\$16,650	\$3,739,420			0	na
9	North Co-Corp Ferry Services	ABD Aluminum Yachts	Completed	\$1,730,000	11	8	7	\$24,714	\$1,782,200	10	8	7	\$26,175
10	Torch Offshore Inc.	Industries Davie	Completed	\$81,310,000	848	12	848	\$9,588	\$74,796,760				
11	Caucedo Marine	Irving - East Isle	Completed	\$13,249,843	117	18	176	\$9,760	\$13,249,843				
12	Centre Nautique de l'Istorlet	Léo Leblanc & Fils	Completed	\$343,570	2	6	1	\$60,000	\$343,570				
13	A.M.P. Fisheries Limited	Glovertown Marine	In Progress	\$3,500,000	30	12	30	\$16,333					
14	Ocean Research	Hike Metal	In Progress	\$13,500,000	56	24	112	\$18,080					
15	Partrederiet Stevns Enterprise	Industries Ocean Inc	In Progress	\$14,000,000	82	18	123	\$17,073					
				\$136,958,705	1,801	151	1,643	\$11,717	\$130,741,583	485	55	366	\$10,483

<sup>20</sup> Industries Ocean went bankrupt in completing the first tug for Denmark. The order for the second tug subsequently went to East Isle. Industries Ocean's facilities now exist only as a repair yard, repairing the vessels that are used by its parent Group Ocean.

**Table 6-3: Secondary Economic Benefits as Reported by Participating Shipyards**

Project Identification				Actual (Reported) Economic Benefits (1 = very low; 5 = very high)				
No.	Owner (Applicant)	Shipyards	Status	Innovativeness	Skill Level	Productivity & Cost Competitiveness	Expand markets	Expand Partnerships
1	Gemini Marine Services Limited	Vancouver Shipyards	Completed	1	3	4	1	1
2	Alaska Railbelt Marine Inc.	Victoria Shipyards	Completed	1	4	1	5	4
3	Partrederiet Stevns Multi-Ship	Industries Ocean Inc	Completed	5	5	4	4	4
4	Persistence Shipping Limited	Verreault	Completed	5	4	4	4	4
5	Excursions Maritimes Charlevoix	RTMC	Completed	5	4	3	5	3
6	Marine Petrobuk	Vancouver Shipyards	Completed	5	5	4	1	1
7	Nanaimo Harbour Link Corp	Point Hope	Completed	na	na	na	na	na
8	Secunda Marine Services	Secunda-Dartmouth	Completed	na	na	na	na	na
9	North Co-Corp Ferry Services	ABD Aluminum Yachts	Completed	2	2	2	3	3
10	Torch Offshore Inc.	Industries Davie	Completed	na	na	na	na	na
11	Caucedo Marine	Irving - East Isle	Completed	na	na	na	na	na
12	Centre Nautique de l'Istorlet	Léo Leblanc & Fils	Completed	na	na	na	na	na
13	A.M.P. Fisheries Limited	Glovertown Marine	In Progress	na	na	na	na	na
14	Ocean Research	Hike Metal	In Progress	na	na	na	na	na
15	Partrederiet Stevns Enterprise	Industries Ocean Inc	In Progress	na	na	na	na	na
				3.4	3.9	3.1	3.3	2.9

# 7. *Conclusions and Recommendations*

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## 7.1 *State of Shipbuilding in Canada and Worldwide*

### **Conclusions**

The world shipbuilding industry has operated for years under state subsidies and protectionism. While many countries, including Canada, have moved unilaterally to end these practices, there are many major shipbuilding and ship owning countries that continue to favour them. This has resulted in artificially low prices, and countries in Europe and North America have seen their market share decline dramatically as a result.

Some countries, notably Australia and the Netherlands, have been successful at using government support to attract a domestic market, and moving into niche foreign markets.

### **Recommendations**

*a) The Canadian government should increase pressure within international trade groups, such as WTO, OECD and NAFTA, to eliminate subsidies and protectionism in shipbuilding. In particular, the government should monitor US attempts to extend Jones Act provisions to smaller ships and yachts.*

*b) The success of Australia and the Netherlands in building viable shipbuilding industries should be examined in detail to determine lessons of value to developing the Canadian industry.*

## 7.2 *Rationale and Relevance*

### **Conclusions**

SFF fills a need in supporting the shipbuilding industry. The level of support provided has been sufficient to attract foreign buyers to Canadian yards but so far has not been successful in attracting the Canadian domestic market.

SFF is consistent with Industry Canada and government-wide priorities, with two exceptions: (i) SFF is non-repayable unlike other Industry Canada programs of support to industry, and (ii) the less favourable tax treatment of shipbuilding lessors compared to road and rail transport lessors discriminates against shipping, a more environmentally friendly mode of transport, which is at odds with the government's environment policies. It would be difficult to redesign the program to be repayable and it would cause the program to be even more unattractive.

SFF complements and does not duplicate other forms of support available to Canadian yards.

### **Recommendations**

*c) SFF should be retained by Industry Canada as a non-repayable incentive to the Canadian shipbuilding industry.*

*d) Industry Canada should consider with the Department of Finance means of ensuring that the tax treatment of shipbuilding lessors is equivalent to that of lessors in road and rail.*

*e) The benefits of the SFF to the industry should be enhanced by means of the changes to the program's design and delivery recommended in this report.*

## **7.3 Program Design and Delivery**

### **Conclusions**

Despite the slow start in designing application details, the SFF program has been well administered, including working with yards and buyers in completing the necessary documentation and monitoring the progress of the projects. However, there are some major domestic ship fleet owners who are not aware of SFF. Further targeted marketing is necessary.

The credit insurance components have not been used in contrast with the interest rate support component because they have been poorly-communicated and difficult to get approved. Industry Canada reacted to early lack of interest in the program by raising the limits for IRS. When the IRS support was raised to 15%, it began to attract a great deal more interest from foreign ship buyers. It is still the case that few domestic shipowners have been attracted to the program and that must be seen as a major failure of SFF.

The requirement to prove incrementality on projects is achieved getting competing foreign bids for potential projects can invite foreign competition. We concur that incrementality is an important consideration, but believe that it can be achieved through a simple certification process of the ship buyer. Ship operators should be obtaining alternative quotes as a matter of good management practice in any case.

The major exclusions to SFF support are minor repair and overhaul (R&O) work (though major refurbishments are eligible), and boats and yachts. The R&O and boats and yachts exclusions let SFF focus on the weakest sector of the Canadian industry, new builds of large hulls. It is apparent to us that R&O and the small boat sector, both of which are doing relatively well,

should benefit from the same program, as the success of yards doing that work will contribute to the industrial strategy and jobs creation goals of the policy framework. Also, we noticed that Canadian builders of small boats and yachts demonstrated more R&D and innovation than builders of larger hulls. We realize that making R&O and small boats eligible for SFF will create a much larger volume of files through Energy and Marine Branch, so appropriate resources will need to be put in place.

Without some financial engineering, ship owners wanting to pay cash for their new ships are ineligible for support. We understand that it would be possible to circumvent this hurdle by financing the ship with a loan with an option to discharge it early, take delivery of the ship, accept the SFF payment, then discharge the loan with the cash which had been earmarked for the ship purchase in the first place. Industry Canada, however, does not encourage this financial engineering strategy because it risks violating the terms and conditions of the SFF program. If, for example, the loan is discharged after a year or two, the SFF contribution could be an overpayment and the Department may have to retrieve the overpayment especially if there had been a misrepresentation on the part of the applicant. Industry Canada's position on this possible financial strategy does not appear to be known to shipyards and ship owners.

The degree of innovation caused by SFF-supported projects self-reported by the shipyards overestimates what is occurring in reality. Industry Canada needs to develop a better way of measuring these effects. Orders for new types of vessels or actual man-hours of labour per existing vessels in subsequent builds might be more objective measures of innovation.

The short time frame remaining for SFF is causing difficulties for yards in attracting new orders.

### **Recommendations**

*f) Industry Canada should increase the awareness of SFF amongst Canadian fleet operators by making personal contact with the acquisition decision makers within each Canadian fleet. Non-members of the Canadian Shipowners Association should receive particular attention. The Department should share its market research on upcoming fleet acquisitions with the shipbuilding industry.*

*g) The term of SFF should be extended beyond five years (that is beyond 2006) for a possible two to three years, at a minimum by grandfathering contracts signed before the end of the current program period, to allow Canadian industry more time to increase its market share and develop a good set of reference customers.*

*h) The CIS and CIC components should be retained. Industry Canada and the Department of Finance should create procedures that will facilitate the application process and Industry Canada should communicate the benefit of these components better to the shipyards.*

*i) SFF should be extended to all R&O work and to yachts.*

*j) The current practice of determining incrementality by requiring foreign quotes should be replaced by a certification process with the ship buyer.*

k) *Industry Canada should communicate to the shipbuilding industry that early discharge of loans receiving SFF support is not allowed. Industry Canada should also review with the Department of Finance means for providing an incentive to cash purchasers of ships who are not eligible for SFF support. Possible incentives for domestic cash buyers would be to increase the ACCA amortization rate or to allow amortization during the ship's construction.*

l) *Industry Canada should introduce new measures such as orders for new types of vessels to improve the assessment of innovation in Canadian shipyards.*

## 7.4 Program Success

### Conclusions

The federal government has delivered on its commitment as stated in its June 2001 policy to establish and market the SFF and to facilitate the use of export financing through the EDC. SFF has been a key factor influencing offshore owners to source from Canadian yards, but has had limited success in attracting the Canadian domestic market.

It is clear that no single measure or program, such as SFF, can fix the economics of the industry. Rather, a suite of measures and programs may be needed such as moving ahead on government fleet procurement, combining ACCA and SFF, extending the term of EDC financing, promoting innovation, and providing performance guarantees to prospective buyers. It is noted that EDC can match terms offered by competing countries but normally doesn't initiate transgressing the OECD guidelines which includes limiting the financing period to 12 years.

Without these measures, further consolidation in the shipbuilding industry may be necessary to keep the industry viable. Practically, there is enough work on large ships to keep two or three yards usefully open.

There is some evidence to indicate that smaller yards working in niche markets are able to effectively compete internationally. Obtaining access to foreign markets is the main barrier. These "smaller niche yards" can also benefit from SFF and other complementary measures and programs. Inclusion of smaller repair and refit contract work within SFF eligibility would also help smaller Canadian shipyards.

### Recommendations

m) *The government of Canada and relevant provinces, along with Crown Corporations, such as BC Ferries and Marine Atlantic, should embark on a coordinated, multiyear fleet replacement program, with Canadian shipyards getting preferential treatment to win contracts.*

n) *Industry Canada should work with the Department of Finance to allow ACCA and SFF to be applied simultaneously.*

- o) Industry Canada together with the Department of Finance should consider strengthening the balance sheets of Canadian shipyards by providing guarantee performance bonds, in much the same way that that Investment Quebec does.*
- p) Industry Canada should review with EDC the provision in the shipbuilding policy that allows EDC to match financing terms when competitors for a project transgress OECD guidelines to ensure that applicants for SFF can bid with competitive support.*
- q) The Marine and Ocean Industry Technology Roadmap (TRM) should be followed up to determine its impact on the Canadian shipbuilding industry and propose actions necessary to improve the level of innovation in the industry.*
- r) Industry Canada should make Canadian shipyards and labour organizations aware that they are losing commercial work because of their reputation for late deliveries and cost overruns.*



# *A. Evaluation Issues*

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Evaluation Question I-A: Does the SFF fill a need or gap in the shipbuilding industry?

Evaluation Question I-B: Does the SFF program continue to be consistent with Industry Canada and government-wide priorities?

Evaluation Question I-C: Does the SFF compliment, duplicate or overlap other federal government programs?

Evaluation Question I-D: Has there been an increased use of SFF by Canadian or foreign buyers and lessees?

Evaluation Question II-A: Are the objectives and desired outcomes of the SFF clearly identified and agreed upon? How do the CIC, CIS and IRS components contribute to these?

Evaluation Questions II-B: Are the communication materials and application forms adequate? Are there individuals at IC available to assist the clients in the application process? Are their responses timely and useful?

Evaluation Question II-C: How efficient and effective is the process for approving project proposals?

Evaluation Questions II-D: What SFF activities have been added, modified or discontinued and are there adequate resources for the remaining activities?

Evaluation Questions II-E: What evidence is there that any of the three SFF components is assisting the Canadian shipbuilding industry?

Evaluation Question III-A: Has the government delivered on its commitment stated in its June 2001 policy?

Evaluation Question III-B: Are there any barriers or issues that will impede the progress of the SFF program?

Evaluation Question III-C: Is the program effective in meeting its objectives within budget and without unwanted outcomes?

Evaluation Question III-D: How many jobs have been directly created due to SFF? What evidence is there that these jobs would not have been created without SFF?

Evaluation Question III-E: Has the SFF program had any impact on secondary effects, such as increased worker skill levels, improved innovation or development of new markets?

Evaluation Question III-F: Are results being achieved in the most cost-effective manner within existing resource levels?

Evaluation Questions III-G: Are the three SFF components adequate?

Evaluation Question IV-A: Is the SFF the most appropriate and efficient means for achieving its objectives? How does it compare to programs in other countries?

Evaluation Question IV-B: Has the government allocated sufficient funds for the SFF program?

Evaluation Question V-A: What factors have facilitated or impeded a) the implementation of the SFF in the areas of type of assistance provided, reach/awareness/ promotion, accessibility, planning and coordination, targeting and programming, resources, partnering, visibility and project monitoring, b) achievement of SFF objectives, and c) ongoing performance monitoring and data collection?

## ***B. List of SFF Projects***

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1. Gemini Marine Services Limited
2. Alaska Railbelt Marine Inc.
3. Partrederiet Stevens Multi-Ship
4. Persistence Shipping Limited
5. Excursions Maritimes Charlevoix
6. Marine Petrobulk
7. Nanaimo Harbour Link Corp
8. Secunda Marine Services
9. North Co-Corp Ferry Services
10. Partrederiet Stevns Enterprise
11. Torch Offshore Inc.
12. Caucedo Marine
13. A.M.P. Fisheries Limited
14. Ocean Research
15. Centre Nautique de l'Istorlet

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## *D. List of Interviewees*

<b>Name</b>	<b>Position</b>	<b>Organization</b>
<b>SFF – Federal Departments</b>		
Richard Botham	Chief, Economic Development and Corporate Finance	Department of Finance
Bruce Bowie	Director General, Energy and Marine Branch	Industry Canada
Christian Chouinard	Senior Industry Development Officer	Industry Canada
Rick Domokos	Senior Director, Marine Directorate	Industry Canada
Terry Dooner	Investment Officer	Technology Partnerships Canada (TPC)
Glenn Irving	Manager, Program Integrity and Secretariat, Program and Services Branch	Industry Canada
Peter Johnston	Financial Services Manager, Surface Transportation	Export Development Canada
Shawn Ladd	Senior Economist, Economic Development and Corporate Finance	Department of Finance
Doug Patriquin	Past President	Canadian Commercial Corporation
Art Perron	Former Canadian Ambassador to South Korea	DFAIT
Walter Sims	Commerce Officer, Marine, Energy & Marine Branch	Industry Canada
Peter Welsh	Director of Research	Canadian International Trade Tribunal
<b>SFF – Provincial</b>		
Gary Patipas	Ministry of Development and Technology	Government of Prince Edward Island
Neil Stewart	Ministry of Development and Technology	Government of Prince Edward Island
<b>SFF – Labour Representatives</b>		
Les Holloway	National Representative	Canadian Auto Workers
<b>SFF – Successful Domestic SFF Applicants</b>		
Tony Brewster	General Manager	Marine Petrobulk
Michael Connolly	Vice President, Finance	Secunda Marine Services Ltd.

Name	Position	Organization
Brian Johnstone		Persistence Shipping
Bill McKay	Operations Manager	Nanaimo Harbour Link Corporation
Ed Robinson		Nanaimo Harbour Link Corporation
<b>Shipping companies which have not used SFF</b>		
Colin MacDonald	CEO	Clearwater Seafoods Income Fund
John Majchrowicz	Vice President, Operations	Oceanex
Greg Wight	CFO	Algoma Central
<b>SFF – Successful Offshore SFF Applicants</b>		
Robert Fulton	CFO	Torch Offshore, Inc.
John Chancellor	Finance Special Projects Officer	Torch Offshore Inc.
Steven Sablotsky	Registered Agent	Ocean Research Corporation
<b>SFF – Shipyards</b>		
Richard Bertrand	President	Industrie Davie
Denise Verreault	President	Les Chantiers Verreault Incorporé
David Reid	Vice President	Washington Marine Group
John Shepherd	President	Irving Shipbuilding
<b>Non SFF – Shipyards</b>		
Malcolm McLaren	President	Allied Shipbuilding Ltd.
Dr Russell Saunders	Vice President, Marketing	AF Theriault & Son Ltd
Doug Stones	VP Finance	Canadian Shipbuilding and Engineering
Ron van Wachem	Vice President	Nanaimo Shipyard Ltd.
<b>Industry Associations and Other</b>		
William Bland	Managing Director, Sales	Skipskonsulent AS
Peter Cairns	President	Shipbuilding Association of Canada
Ian Glen	President	BMT Fleet Technologies
Andrew Kendrick	VP Technology	BMT Fleet Technologies



# *E. Steering Committee*

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Marc Whittingham (Chair)  
Sectorial Strategies and Services Branch  
Industry Canada

Peter Cairns  
Shipbuilding Association of Canada

Don Morrison  
Canadian Shipowners Association

Shawn Ladd (Observer)  
Finance Canada

Scott Pittendrigh (Observer)  
Treasury Board Secretariat

Walter Sims  
Marine Directorate  
Industry Canada

Rob Conn  
Audit and Evaluation Branch  
Industry Canada

