
In this submission, the Business Council expresses its support in principle for the Government's intention to acquire a fleet of 10-12 nuclear-powered submarines as set out in the defence White paper of June 1987. Since 1981, when the Council's Task Force on Foreign Policy and Defence was established, the need to strengthen Canada's maritime forces has been a constant theme of Council studies, papers and representations in the area of defence policy.

The Business Council on National Issues is composed of the chief executive officers of 150 leading Canadian corporations. With some 1.5 million employees, these companies administer over \$725 billion in assets and generate over \$275 billion in revenues.

The Council's purpose is fourfold: to help build a strong national and international economy, progressive social policies, healthy political institutions, and a more secure Canada. The Council's President and Chief Executive Officer is Thomas d'Aquino. Its Chairman is David Culver, Chairman and Chief Executive Officer of Alcan Aluminium Limited. Peter Cameron, Past Chairman of the Council's Task Force on Foreign Policy and Defence, is Chairman of the Board and Chief Executive Officer of Chromalox Inc. Dudley Allan is a member of the Task Force and President and Chief Executive Officer of E.H. Industries (Canada) Inc. Alan Marchment, President and Chief Executive Officer of Traders Group Limited, is also a member of the Task Force. The Chairman of the Task Force is Thomas Savage, Chairman and President of ITT Canada Limited. Council Associate Brian Creamer is Secretary to the Task Force.

**INTRODUCTORY STATEMENT BEFORE
THE HOUSE OF COMMONS STANDING COMMITTEE
ON NATIONAL DEFENCE**

May 3, 1988

The Business Council is pleased to appear again before the Standing Committee as it continues its examination of the proposals set out in the White Paper last June. As we noted in our testimony before you in January, we support these proposals. We believe the White Paper demonstrates courage and vision and we congratulate the Government for bringing it forward.

The issue of whether Canada should acquire a fleet of nuclear-powered submarines, as promised in the White Paper, has given rise to considerable public debate in recent months. Regrettably, a good deal of this debate has been ill-informed. The Business Council is pleased to offer the Committee its own perspective on this important issue of national policy.

We believe that the benefits of nuclear-powered submarines would be considerable and have therefore decided to lend our support in principle to the nuclear submarine program. The credibility of Canada's defence commitments -- and Canada's credibility in NATO -- have long been of concern to Council members. The acquisition of nuclear-powered submarines would dramatically reinforce Canadian defence capabilities and enable Canada to make a meaningful contribution to NATO's conventional deterrent posture. It would also send a clear and powerful signal to NATO allies that Canada is now prepared to take its Alliance commitments seriously. By assuming its fair share of the collective defence burden, Canada's status and influence among NATO members would inevitably be reinforced. Nuclear-powered submarines could also restore much of the pride in the Canadian navy that has been lost through decades of neglect. As recent experience with the CF-18 has shown, major equipment acquisitions -- and the general perception they create that defence policy is getting the priority it deserves -- can have a profound impact on morale in the Canadian Forces.

The Council agrees that the overall force value of nuclear-powered submarines is significantly greater than that of diesel-electric models. Their speed and superior tactical flexibility make them ideal for a three-ocean nation like Canada. Moreover, their ability to operate under ice would be of considerable importance in increasingly strategic Arctic Ocean areas. The acquisition of new submarines would also ensure that Canada's overall maritime forces are more balanced, and therefore more effective. Finally, the sovereignty benefits of nuclear-powered submarines cannot be ignored.

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In terms of the industrial and economic benefits of acquiring nuclear-powered submarines, we believe these would be considerable. The submarine program would lend much-needed impetus to Canada's beleaguered maritime construction and nuclear industries and result in significant technology transfer. It would also enhance existing Canadian expertise in such areas as electronics and engineering and stimulate research and development in industry, universities and government laboratories.

While the Council supports the nuclear submarine program in principle, we recognize that doubts about its affordability have been expressed in a number of quarters over the past several months. The need to ensure accurate cost projections is critical, of course, since major cost over-runs could lead to a reduction in the number of submarines purchased or erode other vital acquisition programs and commitments. For its part, the Business Council has concluded that Government cost estimates are reasonably sound given information available to date. The Council notes, however, that the Government itself has indicated that cost estimates may rise as discussions continue and that exchange rates will continue to play a significant role in cost projections. It also underlines the uncertain cost implications of the Defence department's commitment to maintain the operational effectiveness of new submarines through periodic updates in technology. Our own view is that negotiations with the potential supplier country should be pursued further in order to obtain detailed and contractable costs. Once these are known, the Government would be in a position to make a fully informed decision regarding implementation of the program.

Once again, we congratulate this Committee of Parliament for undertaking these hearings and we wish you well in your deliberations.

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GENERAL CONSIDERATIONS

Canadian Credibility/Influence in NATO

Canadian credibility and influence in NATO have long been undermined by Canada's general reluctance to make a commitment to collective defence comparable to that of the majority of its allies. As the recent defence White Paper acknowledged, neglect of the armed forces over the past two decades has resulted in a serious gap in the Canadian Forces' commitments and capabilities. Nowhere is this gap more evident than in the lamentable state of Canada's maritime defences. At present, Canadian Maritime Command (MARCOM) is equipped with only 23 combat vessels, many of which are nearing the end of their effective lives. Its only sub-surface capability is provided by three, 20-year old British-made Oberon submarines. For a nation bordering on three oceans with the longest coastline in the world, this is clearly unacceptable.

The Business Council believes that the acquisition of nuclear-powered submarines, together with the other measures set out in the recent White Paper, would send a clear and powerful signal to NATO members that Canada is now prepared to take its Alliance commitments seriously. By assuming its fair share of the collective defence burden, and making a more credible contribution to NATO's conventional deterrent posture, Canada's status and influence among members of the Alliance would inevitably be reinforced.

Morale of the Canadian Forces

Following World War II, when Canada's maritime fleet was the third largest in the world, morale in the Canadian navy was predictably high. Since then -- primarily due to the serious neglect of the past few decades -- it has fallen off badly. The Defence Minister has suggested that Maritime Command's existing fleet is in danger of imminent "rust-out". By the mid-1990s, when MARCOM's aging destroyers are replaced by the six new patrol frigates announced in 1983, Canada's entire naval fleet could be reduced to just ten ships.

The Business Council believes that the acquisition of nuclear-powered submarines could restore much of the pride in the Canadian navy that has been lost through decades of neglect. As recent experience with the CF-18 fighter jet has shown, major equipment acquisition programs can have a profound

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impact on force morale. In effect, Canada would return to the status it once enjoyed as a significant naval power.

OPERATIONAL CONSIDERATIONS

Force Value

On strictly technical grounds, few would contest the superiority of nuclear-powered over conventionally-powered submarines. The Department of National Defence estimates that the overall force value of nuclear-powered submarines is about three times that of diesel-electric models. Nuclear submarines can travel, for example, at very high speeds for long periods of time and have virtually unlimited flexibility. Their underwater endurance is restricted only by crew considerations and the need to replenish food supplies. Conventional submarines, by way of contrast, can maintain high speeds for only short periods and must frequently surface to recharge their batteries. While charging, they are not only vulnerable to visual, radar and acoustic detection, but to attack by surface ships, aircraft and other submarines. In operational terms, then, the primary distinction between nuclear-powered and conventional submarines is that the former is a vehicle of manoeuvre, while the latter is a vehicle of position.

The Business Council believes that, wherever possible, the Canadian Forces should be provided with the most modern and effective equipment available. In this context, it notes that nuclear-powered submarines are on the leading edge of military technology. They are therefore much less likely to be eclipsed by new technology that might render them obsolete over the next few decades. The Council also notes the Government's intention to ensure that the operational effectiveness of Canadian submarines will be maintained at state-of-the-art levels through periodic updates.

Three Ocean Capability

As has frequently been pointed out in recent months, nuclear-powered submarines are the only vessels capable of sustained operations under ice. The importance of this capability is two-fold. First, Arctic Ocean areas are acquiring considerable strategic importance. The ice-covered channels of the Canadian archipelago constitute a reasonable alternative for Soviet submarines to gain access to the Atlantic -- where they could disrupt NATO's vital reinforcement and resupply routes to Europe -- should the more direct

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routes between Greenland and Norway be vigorously defended. Second, by virtue of their ability to travel under Arctic ice, nuclear-powered submarines could shift rapidly among the three oceans without using the Panama Canal.

While nuclear submarines would enable Canada to exercise effective surveillance and control in the Arctic, they would also dramatically reinforce the ability of the Canadian navy to deal with the projected threat in the North Atlantic and North Pacific -- a threat posed primarily by Soviet attack submarines. At present, nuclear submarines are the most effective platform for tracking and intercepting other submarines. The knowledge that Canada possessed such vessels would deter military adventurism in Canadian waters or maritime approaches. The great operational flexibility of nuclear-powered submarines would also introduce considerable uncertainty into the plans of a potential enemy.

The Business Council supports the three-ocean concept as set out in the recent defence White Paper. Canada's maritime forces must be capable of meeting challenges in all three oceans that border Canada. In this regard, nuclear-powered submarines would appear to be a wise investment.

Fleet Mix

Canada's maritime forces are called on to play many of the same roles as those of other NATO allies. Unfortunately, their ability to perform these effectively is hampered by imbalances in the mix of Canada's naval fleet. In the United Kingdom and the United States, for example, the ratio of surface ships to submarines is roughly 2:1. In Canada -- with 20 surface ships and only three submarines -- this ratio is almost 7:1.

The importance of a balanced maritime fleet is difficult to overstate. As the Senate Subcommittee on National Defence pointed out in its 1983 report on Canada's maritime defence, air, surface and sub-surface units do more than simply compensate for each other's weaknesses. Operating together, they take on a strength that is greater than the sum of their parts. For this reason, balance in equipment purchases among the various units should always be sought. Moreover, as the Subcommittee went on to argue, it is simply unwise to rely too heavily on any one particular weapons platform given the possibility that it might be rendered permanently or temporarily ineffective.

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The Business Council believes that greater balance in Canada's maritime forces must be achieved. In this respect, the planned acquisition of 10-12 nuclear-powered submarines would bring the surface to submarine ratio of Canada's navy much more into line with those of other NATO navies. At the same time, nuclear submarines would ensure that Canada's overall maritime defences are both less vulnerable and more effective.

SOVEREIGNTY CONSIDERATIONS

One of the great advantages of nuclear-powered submarines, from a political point of view, is that they would directly reinforce Canada's capacity to exercise surveillance and control in the North -- an area where Canadian claims to jurisdiction are not universally shared. The United States, for example, has steadfastly maintained that the waters of the Arctic archipelago are international and has therefore consistently refused to recognize Canada's jurisdiction over them. The longstanding disagreement between the two countries on this point flared up in August 1985 when a U.S. Coast Guard vessel, the Polar Sea, effectively challenged Canadian control of the Northwest Passage -- an incident that prompted the Government to announce the construction of a Class 8 polar icebreaker. The following month, External Affairs Minister Joe Clark announced that Canada was establishing straight baselines around the archipelago, thereby effectively enclosing those areas deemed to be international by the United States.

While the Business Council believes that the primary motives for purchasing nuclear-powered submarines must be military, it acknowledges that their acquisition would greatly reinforce Canadian claims to sovereignty in the North. At present, it is worth bearing in mind, one of the few demonstrations of a tangible Canadian presence in much of the vast north is provided by MARCOM's over-extended fleet of long-range patrol aircraft. The sovereignty benefits of nuclear-powered submarines would not be limited to the Arctic, however. Canadian sub-surface operations are currently limited to the Atlantic. A 10-12 member fleet of nuclear-powered submarines would enable Canada to maintain extensive maritime operations, and a permanent presence, off all three coasts.

INDUSTRIAL/ECONOMIC BENEFITS

The acquisition of nuclear-powered submarines would result in significant industrial and economic benefits for Canada. Most of the

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construction of the new submarines, for example, will be undertaken in Canada. Moreover, at least 65% of their content will be made up of Canadian-produced components and equipment systems. The Government estimates that, overall, at least 55,000 person-years of employment will be created. The program would also result in significant technology transfer to Canada, notably in the area of nuclear propulsion. Research and development in industry, universities and government laboratories would also be stimulated.

The Business Council believes that the nuclear submarine acquisition program will result in significant job creation and provide much-needed impetus to Canada's maritime construction and nuclear industries. The program will also enhance existing Canadian expertise in areas such as electronics and engineering. Overall industrial and economic benefits, the Council notes, will be broadly distributed throughout the country.

SAFETY CONSIDERATIONS

In light of the much publicized incident at Chernobyl in the Soviet Union, fear surrounding nuclear power has understandably grown. Regrettably, many of these fears -- particularly as they relate to nuclear-powered submarines -- are unfounded. At present, there are over 400 nuclear-powered submarines in service world-wide. With over 4000 reactor years of operating experience, there has never been an accident that has resulted in the release of any hazardous radiation to the environment. It is also worth bearing in mind that the 10-12 member fleet of submarines the Government proposes to buy would produce only about 1/600 the fission waste products produced by Ontario hydro reactors. Similarly, the power plant of a nuclear submarine would deliver only about 5 mega watts of electrical power --compared to the 4,300 mega watts generated by Ontario Hydro's plant at Pickering.

In addition to their concerns in the area of safety, critics have suggested that acquiring nuclear-powered submarines would tarnish Canada's international reputation by contradicting Canada's obligations under the Non-Proliferation Treaty. The NPT Treaty, however, deals with preventing the spread of nuclear weapons -- a goal Canada continues to support vigorously. Canadian submarines, it must be stressed, will be armed with conventional weapons and will use nuclear power only for the purposes of propulsion.

The Business Council believes that nuclear-powered submarines represent a safe option for Canada that is consistent with this country's international obligations.

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COST CONSIDERATIONS

The question of whether Canada can afford nuclear-powered submarines has been much debated since the release of the White Paper last June. The Government maintains that the sailaway cost of each of the 10-12 submarines would be in the order of \$400-\$500 million -- or about 1 1/2 times that of a conventional submarine. Total program costs for the entire fleet, including on-shore support and training facilities, is estimated to be about \$8 billion in 1986-87 dollars. While much public attention has been focused on this \$8 billion figure in recent months, it must be borne in mind that the total costs of the submarine program will be spread over a 27-year period. This amounts to about 3 percent of the defence department's annual budget and less than 10 percent of its capital equipment budget.

Many, of course, have questioned whether the \$8 billion figure provided by the Government is accurate. For its part, the Business Council has concluded that Government cost estimates are reasonably sound given information available to date. The Government itself has acknowledged, however, that such estimates may change as discussions continue and that exchange rates will continue to play a significant role in cost projections. The Council also underlines the uncertain cost implications of the Defence department's commitment to maintain the operational effectiveness of new submarines by incorporating important technical developments into their design as these emerge -- developments in such areas as propulsion, signature reduction and combat systems. Periodic updates in technology, no doubt, will be necessary. The costs involved over the 27-year life of the program, however, cannot be determined in advance.

While such considerations give rise to some concern, the Business Council does not believe that the overall viability of the submarine program is called into question at this time. Nevertheless, the need to ensure affordability is critical since major cost over-runs could lead to a reduction in the number of submarines purchased or erode other vital acquisition programs and commitments. In this respect, the Council believes that it would be prudent to pursue negotiations with the supplier country in order to obtain detailed and contractable costs. Once these have been defined, the Government would be in a position to make a fully informed decision regarding implementation of the program.