

The cost factor as far as Canada is concerned with regard to the Bomarc programme has already been demonstrated. As the result of a cost-sharing agreement with the United States, improvements to the Canadian air-defence system--and this include additional radar sites, gap-fillers for the Pine Tree system, Bomarc missiles and the SAGE electronic control equipment--amount to some \$125 million, of which \$20 million is for the Bomarc. This represents Canada's share in the new programme, the United States sharing the total cost of the programme on an approximate two thirds, one third basis. This compares, as hon. members know, to the estimated cost of \$750 million if the Arrow programme has been continued until that aircraft was in operation. We are getting comparable defence for considerably less money.

Improvements to the air defence of Canada which have been announced include SAGE, one of whose functions is to provide instructions automatically to the Bomarc missiles and to the interceptors, be those interceptors RCAF or United States aircraft; the modification of existing radar stations to make them part of the SAGE complex; seven new heavy radar stations and a number of gap-filler stations to be added to the Pine Tree line. These increase materially the effectiveness of our defences. Each of the seven new heavy radars will be manned by RCAF personnel. Construction will get under way shortly at Moosonee, Ontario, and Chibougamau, Quebec. Preliminary investigations are being carried out for five western radars. When completed each station will be manned by approximately 250 RCAF and civilian personnel.

It might be of interest to hon. members to know that since the decision was made that Canada would adopt SAGE, the first unit has begun successful operation in the north-eastern United States. The version of the system to be installed in Canada will be a later development; its electronic computers will make use of transistors rather than the less efficient and bulkier vacuum tubes. In order to "harden" the SAGE centres, the Canadian unit will be constructed underground.

#### Threat from the Sea

The major threat to Canada from the sea continues to be the submarine. The Royal Canadian Navy and the Maritime Command of the RCAF are being organised equipped and developed so that in close co-operation they can cope with the primary task of locating the destroying submarines. Since there is at present no means of destroying a missile once it has been launched, it is most desirable that missile-carrying submarines be kept as from our shores as possible so that targets ashore are beyond the range of the submarine's weapons. Our ships and marine aircraft are designed and equipped for this purpose.

On each coast a maritime commander has been established who exercises unified operational control over RCN and RCAF forces in his area of responsibility and maintains direct liaison with adjacent NATO and national commanders.