

- b) the universities be actively involved in the basic research and development relevant to the Canadian National Fusion Program and be encouraged to collaborate with government and industry within and outside of Canada.

#### 4. Budget

The budget recommended for a minimal program to achieve the goals stated earlier is shown in Table 1.

The first column represents the federal funds required for the National Fusion Program. Shown as well is the suggested in-house budget for the NRC laser fusion group.

In the projections, it is assumed that the federal National Fusion Program funds will have a "leverage" effect on contributions from other sources (principally the provincial governments and utilities) as part of federal-provincial agreements in selected areas. The magnitude of these other sources of funds is taken as equivalent to the preliminary estimates of capital required for the major facilities (laser fusion - \$18 million, magnetic fusion - \$15 million, engineering technology - \$8 million) although it is not necessary that they be in the form of capital expenditures. Consultations with these non-federal potential sources have not been held and no commitments are implied. Failure to obtain these additional funds in any of the three selected areas would require a reconsideration of that portion of the National Program.

The total program includes implementation of the three major facilities over a period of 5 years (1980-1984) and a steady state operation for the three following years at a constant annual level of \$7 million for laser fusion, \$6 million for magnetic fusion and \$4 million for engineering technology, respectively.

An extensive involvement of the utilities and industry in the planning and execution of the program is essential.

Manpower to implement the above program will rely heavily on the engineering and scientific community now in Canada as well as on new graduates who will become available. It will offer a unique opportunity to repatriate a number of Canadians now in foreign fusion laboratories.