

government-industry agreements with U.S. Federal laboratories to develop new technology. By statute, CRADAs must give preference to business units located in the United States which agree that products embodying inventions made under the cooperative research and development agreement or produced through the use of such inventions "will be manufactured substantially in the United States."⁴⁸

One notable CRADA of importance to Canada is the U.S. Department of Energy's work with Chrysler, Ford and General Motors ("the Big Three") automobile makers to develop batteries for advanced electric cars via the Advanced Battery Consortium (ABC).⁴⁹ Under the ten-year project, U.S. government agencies and laboratories will work on the development of a vehicle that will be up to three times more fuel efficient but that costs no more to own or operate. To coordinate cooperative automotive R&D ventures, the Big Three have also cemented a "members only" Council for Automotive Research (USCAR) that is closed to all other auto makers. The worrying effect for Canada is the underlying orientation of these partnerships toward U.S.-based facilities, aimed to ensure that U.S job opportunities are enhanced.

- **ATP and the Partnership for New Generation of Vehicles (PNGV)**

The Advanced Technology Program (ATP) supports the development of civilian technologies and has similar eligibility requirements as the CRADAs.⁵⁰ The ATP provides matching grants through the National Institute of Standards and Technology (NIST), an agency within the U.S. Department of Commerce, to companies and consortia developing pre-commercial, high risk, "enabling" technologies with potentially high economic returns.⁵¹ Increased ATP funding (over 100% over five

⁴⁸ Canada has most successfully participated in defence-related CRADAs linked to the U.S. Air Force and Navy.

⁴⁹ The number of CRADA partnerships will go from 6,093 in 1995 to an estimated 6,816 in 1996, an increase of over 12 percent with a public-private value in cash and non-cash contributions of nearly \$6 billion. The National Science and Technology Council proposes to invest \$1.8 billion in technology transfer activities in 1996, an increase of \$157 million or 10% over 1995. A Citizen's Guide to the Federal Budget (1995).

⁵⁰ The Advanced Technology Program (ATP) went from a budget of \$68 million in 1993 to an estimated \$431 in 1995. A proposed budget of \$491 million in 1996 would represent an increase of 14%.

⁵¹ Other programs include the High Performance Computing and Communications Program, an inter-agency co-ordinating mechanism for computer R&D, established in 1991 with the backing of then Senator Albert Gore, and the Flat Panel Display Initiative, a Defense Department project to develop flat panel displays.