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Defense and Space Lead R&D Growth in Proposed 1979 Budget

• The President's budget for fiscal year 1979 contained a total of $28.0 billion in obligations for Federal R&D programs, or 6 percent more than the 1978 total. A slight drop in constant dollars was indicated, in view of anticipated inflation, in contrast to the three previous years in which the Federal R&D total reflected constant-dollar growth.

• The two largest functional areas—national defense and space—accounted for four-fifths of the rise over 1978 in Federal R&D support proposed for 1979. This is in contrast with the picture for the period, 1969-1978, during which most other functions grew more rapidly.

• Health, energy development and conversion and environment—the three functions next in R&D funding magnitude for the last five years—reflected minimal gains or an actual decline, from 1978 to 1979, in the President's budget proposals. (Budget proposals, however, are generally modified by appropriation and apportionment actions. Based on activities of the Congress by mid-September, an increase over the budget request is expected for health and energy R&D programs and a decrease is expected for defense R&D programs.)

• **Defense** R&D obligations have shown a continuous real increase since 1975. As a share of the Federal R&D total, national defense is expected to represent 49 percent in 1979, compared with 53 percent in 1969. Major growth is planned for Department of Defense tactical systems development, incorporating efforts to improve the early combat capability of the forces in Western Europe.

• **Space** R&D funding since 1975 has shown increases every year, most of them ahead of inflation, but total proposed obligations for this function are still less than they were in 1969. The space share of the Federal R&D total in 1979, an estimated 12 percent, compares with 24 percent in 1969. Chief current emphases are on National Aeronautics and Space Administration space transportation systems programs, in support of the space shuttle, and on NASA's space science programs, including the earth-orbiting space telescope, the Jupiter orbiter probe and the Solar Polar mission.

• **Health** R&D programs showed a relative increase of 4.2 percent in the 1979 budget proposal, compared to an average annual increase of 11.1 percent in the 1969-1978 period. Health R&D obligations were an estimated 11 percent of all Federal R&D obligations in the 1979 budget, compared to 7 percent in 1969. Most activity in this area is sponsored by the National Institutes of Health (Department of Health, Education, and Welfare). In 1979, the proposals emphasized research in child health and human development, while cancer and heart and lung research, the dominant areas in biomedical research, received slight relative increases.

• **Energy** development and conversion obligations are expected to decline slightly in 1979 after a sharp average annual growth of 44 percent in the 1974-1978 period. The share of the proposed energy components within all Federal R&D programs was an estimated 10 percent in 1979, compared with 3 percent in 1969. Nuclear programs composed almost two-fifths of the proposed energy total, compared with more than two-thirds in 1969. Most of them are conducted by the Department of Energy. They were scheduled to decline in 1979 because of the proposed cutback in the breeder reactor program. Nonnuclear programs of DOE (covering fossil, solar, geothermal and conservation research and development) showed an increase, taken as a whole. Chief emphasis was on geothermal energy and conservation.

• For **environment** R&D programs, the proposed growth in 1979 was so slight as to reflect a decline in the real level of support sought. Until the President's 1979 budget, the environment area had displayed strong gains, with an average annual growth rate of 15.8 percent between 1969 and 1978. The only programs among these for which significant growth was sought in 1979 were Environmental Protection Agency programs on energy-related effects and air quality control, NASA climate-related research and National Science Foundation-sponsored work on earthquake hazards mitigation.

• **Science and technology base** programs would increase 7.4 percent in the 1979 budget compared to an average annual growth of 9.5 percent in the 1969-1978 period. Continuing growth was sought for DOE high-energy physics research, NASA materials processing in space and NSF research project support programs.

• **Transportation and communications** was scheduled for virtually no increase in 1979 programs. This function grew during the 1969-1978 period by 6.8 percent on an average annual basis. The chief program is NASA's aeronautical research and technology, which makes up more than one-half of the function total. Although it reflects an 11-percent increase in 1979, a number of smaller programs show declines, so that scarcely any growth is reflected overall.

• **Natural resources** R&D funding would rise in 1979 by less than one-half the average annual increase of 13.2 percent recorded between 1969 and 1978. The only significant growth in the 1979 budget was for the NASA earth resources detection and monitoring program.

• The **food, fiber and other agricultural products** function showed a small proposed increase in 1979, compared to the average annual growth of 10 percent between 1969 and 1978. Chief emphasis in this budget proposal was on Department of Agriculture competitive research grants in food production and human nutrition.