



Energy Increase of 18 Percent Paces Industrial R&D Spending in 1975

Total energy R&D spending by industry increased 18% between 1974 and 1975 to \$1.4 billion. Overall industry expenditures for research and development increased 5% over the 1974 level of \$22.4 billion, to a new high of \$23.5 billion.

The increase in energy R&D spending was led by a 30%-increase in Federal Government support, to a total of \$620 million. Company funds rose 10% to \$807 million. For 1976 industry projected an increase of another 10% in energy R&D expenditures, to \$1.6 billion.

Over 85% of industry's energy R&D effort was in the nuclear and fossil fuels areas in 1975. The largest relative increases between 1974 and 1975, however, were in geothermal (250%), solar (157%), and energy conservation and utilization (170%). Industrial R&D expenditures related to pollution abatement dropped 1% between 1974 and 1975.

Despite the large increase registered in industrial energy R&D expenditures, and the 5% increase in current-dollar overall industrial R&D expenditures, constant-dollar industrial R&D expenditures declined 4% between the two years.

Six industries accounted for 85% of the total industrial R&D effort in 1975. Expenditures for three of these industries exhibited an increase greater than the 5% industry average between 1974 and 1975. They were chemicals and allied products, 11%; aircraft and missiles, 8%; and machinery, 7%. One of the six industries, motor vehicles and motor vehicle equipment, decreased nearly 2%. The remaining two, professional and scientific instruments and electric equipment and communication, increased R&D expenditures by 4% and 1%, respectively. Both Federal R&D funds to industry and company R&D spending rose 5% between 1974 and 1975, the former increasing to

\$8.8 billion and the latter to \$14.8 billion.

For the first time in over a decade, the ratio of total industrial R&D spending to net sales for a R&D-performing manufacturing companies registered an increase, rising from 3.0% in 1974 to 3.1% in 1975, primarily as a result of slower sales growth than in the past.

Basic research spending by industry increased by 4% between 1974 and 1975 to \$700 million. Industrial applied research spending amounted to \$4.4 billion in 1975, up 6% over 1974, while development increased 5% between the two years to \$18.4 billion.

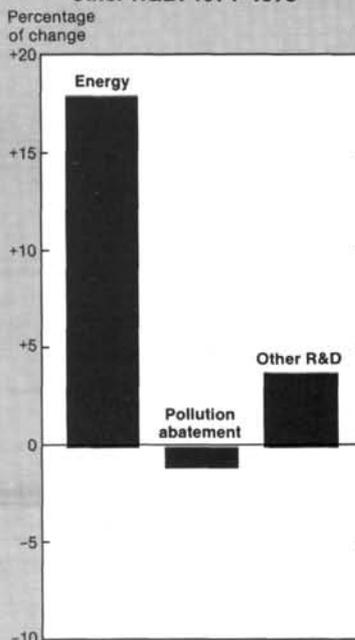
Between January 1975 and January 1976 the full-time-equivalent (FTE) number of R&D scientists and engineers rose 1% to 362,500. This marked the fourth consecutive year that employment of R&D professionals in industry has increased.

Total industrial R&D expenditures for energy and pollution abatement by industry: 1974-76
[Dollars in millions]

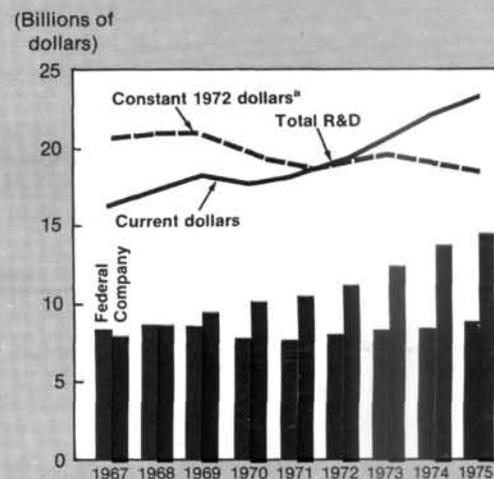
Industry	Energy			Pollution abatement		
	1974	1975	1976 (est.)	1974	1975	1976 (est.)
Total	\$1,213	\$1,427	\$1,577	\$657	\$651	\$663
(Federal funds)	482	620	(...)	51	44	(...)
(Company funds)	731	807	(...)	606	607	(...)
Electrical equipment and communication	389	461	516	16	17	15
Petroleum refining and extraction	375	412	450	61	66	60
Aircraft and missiles	129	169	176	34	37	37
Chemicals and allied products	84	116	123	65	71	77
Motor vehicles and motor vehicle equipment	(1)	(1)	(1)	384	347	356
Other manufacturing	187	214	233	70	79	86
Nonmanufacturing	49	55	79	27	34	32

¹ Not separately available but included in "other manufacturing."

Percentage change in industrial R&D expenditures for energy, pollution abatement, and other R&D: 1974-1975



Total R&D funds, by source



^a The GNP implicit price deflator was used to convert from current to constant dollars.