

S
S
T
I

TATE
SCIENCE &
TECHNOLOGY
INSTITUTE

STATE FUNDING

FOR COOPERATIVE

TECHNOLOGY PROGRAMS

JUNE 1996

751 NORTHWEST BOULEVARD
SUITE 305
COLUMBUS, OHIO 43212

614/421-SSTI (7784)
614/421-9123 (FAX)

STATE FUNDING FOR COOPERATIVE TECHNOLOGY PROGRAMS

BACKGROUND

Cooperative technology programs are public-private initiatives involving government and industry, and often universities, that sponsor the development and use of technology and improved practices to benefit specific companies or groups of companies. Currently, all fifty states support cooperative technology programs. The primary goal of the programs is economic growth, although there may be ancillary goals.

The State Science and Technology Institute recently surveyed the states to determine the level and source of state funding for cooperative technology programs in FY95. Only programs administered or directly sponsored by the executive branch of state government were considered state cooperative technology programs. To be included, programs needed to demonstrate that there was an ongoing connection with state government (either on a financial or policy basis), that they involved either a government-industry or government-industry-university partnership, and that the programs had as a primary goal the use of technology to enhance economic growth. This definition precluded the inclusion of a number of university initiatives, for example, that did not meet the above tests. Consequently, the total amount of state spending in this survey should be seen as capturing only one element of the states' total spending on technology programs.

Additionally, state spending is only one element of the overall spending picture on these programs. States often pursue federal and foundation support for these programs. Funding from the private sector is typically a requirement for the state to invest its funds in a particular project.

FUNDING

A recent publication, *Partnerships: A Compendium of State and Federal Cooperative Technology Program*, found that state support for cooperative technology programs has increased significantly in the last several years. A survey of state programs indicates that that support continues to increase. In FY92, the states reported spending slightly more than \$306 million; in FY94, this increased to \$369 million; in FY95, this total increased to more than \$405 million—almost a ten percent increase. Table I summarizes the total state spending on cooperative technology programs in FY94 and FY95.

TABLE 1. STATE COOPERATIVE TECHNOLOGY PROGRAM FUNDING (\$ MILLIONS)

STATE	FY94	FY95	STATE	FY94	FY95
Alabama	1.15	2.20	Montana	3.13 ^a	0.66
Alaska	8.50	5.28	Nebraska	0.24 ^a	1.67
Arizona	0.25	1.97 ^a	Nevada	0.00	0.05
Arkansas	1.51	0.41	New Hampshire	.65	1.25
California	5.19	6.06	New Jersey	20.30	15.11
Colorado	3.41	3.57	New Mexico	1.26	0.80
Connecticut	27.50	22.50	New York	22.88	26.30 ^a
Delaware	2.50 ^a	4.25	North Carolina	37.36	41.59 ^c
Florida	12.60	11.50	North Dakota	1.25 ^a	1.25
Georgia	29.88	32.40 ^b	Ohio	22.63 ^a	38.53
Hawaii	4.61	3.88	Oklahoma	6.69	6.45
Idaho	0.73	0.73	Oregon	0.44	0.69
Illinois	0.60	2.10	Pennsylvania	34.07	37.65
Indiana	5.90	5.90	Rhode Island	0.00	0.00
Iowa	2.35	2.00	South Carolina	1.80	1.80
Kansas	11.10	13.60	South Dakota	3.70	2.00
Kentucky	1.12	2.80	Tennessee	1.30 ^a	1.45
Louisiana	2.65	0.85	Texas	30.26	30.26
Maine	1.64	2.34 ^a	Utah	4.29	8.39
Maryland	12.68	12.09	Vermont	0.20	0.05
Massachusetts	5.05	5.05	Virginia	10.30 ^a	10.30
Michigan	13.20 ^a	15.20	Washington	3.35	5.00
Minnesota	5.20 ^a	6.35	West Virginia	.00	1.80
Mississippi	0.08	0.13	Wisconsin	1.57	5.80
Missouri	1.85	2.75	Wyoming	0.35	0.60
			TOTALS	369.27	405.36

Source: *Partnerships* and State Science and Technology Institute survey

^a Different level than reported previously in *Partnerships*

^b Does not include \$24 million for construction of new building for Georgia Center for Advanced Telecomm Technology

^c Does not include \$2 million for the Information Highway

SOURCES OF STATE FUNDING

The vast majority of states (41) rely on general revenue funds to some extent to fund their cooperative technology programs. In addition to general revenue funds, three other broad funding sources are used in more than one state. Fees generated as the result of the use of natural resources are used by five states; the fees are typically imposed for drilling rights for state-owned oil and natural gas. Five states also use proceeds from some type of gaming activity (e.g., the lottery, horse racing, or casinos) to help support their cooperative technology programs. Bonds are used by three states. Table 2 provides a breakdown of the sources of funding for each state.

TABLE 2. SOURCE OF STATE FUNDING FOR COOPERATIVE TECHNOLOGY PROGRAMS

STATE	GENERAL REVENUE FUND	NATURAL RESOURCES	BONDS	GAMING	MISC.
Alabama	√	√			
Alaska		√			
Arizona	√			√	
Arkansas	√				
California	√				
Colorado	√				
Connecticut			√		
Delaware	√		√		
Florida	√				
Georgia	√			√	
Hawaii	√				
Idaho	√				
Illinois	√				
Indiana	√				
Iowa	√				
Kansas				√	
Kentucky	√				
Louisiana	√	√			
Maine	√				

TABLE 2. SOURCE OF STATE FUNDING FOR COOPERATIVE TECHNOLOGY PROGRAMS

STATE	GENERAL REVENUE FUND	NATURAL RESOURCES	BONDS	GAMING	MISC.
Maryland	√				
Massachusetts	√				
Michigan				√	
Minnesota	√				
Mississippi	√				
Missouri	√				
Montana		√			√
Nebraska	√				
Nevada					
New Hampshire	√				
New Jersey	√				
New Mexico	√				
New York	√				
North Carolina	√				
North Dakota	√				
Ohio	√		√		
Oklahoma	√				
Oregon	√			√	
Pennsylvania	√	√			
Rhode Island	√				
South Carolina					√
South Dakota					√
Tennessee	√				
Texas	√				
Utah	√				
Vermont	√				

TABLE 2. SOURCE OF STATE FUNDING FOR COOPERATIVE TECHNOLOGY PROGRAMS

STATE	GENERAL REVENUE FUND	NATURAL RESOURCES	BONDS	GAMING	MISC.
Virginia	√				
Washington	√				
West Virginia					
Wisconsin	√				
Wyoming	√				
TOTAL	41	5	3	5	3

Source: *Partnerships* and State Science and Technology Institute survey

Notes:

- AL-- part of the state's funding source comes from interest earned on the Research Trust Fund, which was established from lease payments made to the state for the right to drill for oil and natural gas
- AK-- the state's funding source is derived from earnings on an endowment created from oil revenues
- AZ-- in the last five years, the state has switched to using lottery proceeds and general revenue funds
- GA-- most of the state funds are derived from general revenue funds, but some capital expenditures are made from lottery proceeds
- KS-- funds are provided through the Economic Development Initiatives Fund, which is derived from proceeds from the Kansas Lottery and Racing Commission
- LA-- part of the state's funding source comes from interest and recurring revenues to the Louisiana Educational Quality Trust Fund, which was established with \$550 million received as part of the Federal Outer Continental Shelf Lands Act; the remaining funds come from the general revenue fund
- MI-- in the last two years, the state has switched from using revenue generated by the sale or lease of oil and gas to using a percentage of the proceeds earned by Indian casinos
- MIN-- in the last five years, the state has switched from lottery proceeds to general revenue funds
- MT-- programs are funded through authority granted to invest funds from the Permanent Coal Tax Trust Fund and return on investments
- OH-- funding for coal development projects comes from bond proceeds authorized as a result of a voter approved amendment to the Ohio Constitution
- PA-- funding for the Environmental Technology Research and Development Fund comes from tipping fees charged by the Department of Environmental Protection
- SC-- the South Carolina Research Authority is self-supporting
- SD-- funds are derived from the state's unemployment insurance fund

FUNDING ANALYSIS FOR STATE COOPERATIVE TECHNOLOGY PROGRAMS

While the diversity of funding sources documents the wide variety of cooperative technology programs in the states, comparison among the states reveals several important national developments. First, thirty-four states (almost seventy percent) have experienced an upward trend in their cooperative technology budgets over the past three years. Several states have sustained remarkable increases in their budget levels. Arizona has increased its budget seven-fold, Wisconsin's budget has more than quadrupled, Kentucky's budget doubled, and a host of states experienced an increase of more than fifty percent.

The most populous states continue to dominate spending in cooperative technology programs. With the exception of Connecticut and Kansas, the largest cooperative technology program budgets are located in the eleven largest states. In fact, the top ten program budgets account for \$273.1 million, two-thirds of the total spent by state cooperative technology programs.

The average per capita spending on cooperative technology programs for FY95 was \$1.56 per person. Unlike total spending, per capita spending has no correlation to state population. The ten largest per capita budgets include many small and medium states such as: Alaska (48th in population), Connecticut (27th), Delaware (46th), Kansas (32nd), and Utah (34th). Table 3 provides a detailed breakdown of cooperative technology programs by population, budget, and per capita spending.

TABLE 3. STATE COOPERATIVE TECHNOLOGY PROGRAMS BY POPULATION, BUDGET, AND PER CAPITA SPENDING

STATE	POPULATION (MILLIONS)	RANK BY POPULATION	BUDGET (FY95) (\$ MILLIONS)	3-YR BUDGET TREND	RANK BY BUDGET	\$ SPENT PER CAPITA	RANK BY PER CAPITA SPENDING
Alabama	4.22	22	2.20	↗	29	0.52	36
Alaska	0.61	48	5.28	↘	20	8.65	1
Arizona	4.08	23	1.97	↗	33	0.48	40
Arkansas	2.45	33	0.41	↘	45	0.16	46
California	31.43	1	6.06	↗	17	0.19	44
Colorado	3.66	26	3.57	↗	25	0.97	28
Connecticut	3.28	27	22.50	↗	7	6.85	2
Delaware	0.71	46	4.25	↗	23	5.98	3
Florida	13.95	4	11.50	↗	12	0.82	31
Georgia	7.06	11	32.40	↗	4	4.59	6
Hawaii	1.18	40	3.88	↘	24	3.28	9
Idaho	1.13	42	0.73	↘	41	0.64	35
Illinois	11.75	6	2.10	↗	30	0.17	45
Indiana	5.75	14	5.90	→	18	1.02	26
Iowa	2.83	30	2.00	↘	31	0.70	34
Kansas	2.55	32	13.60	↗	10	5.33	5
Kentucky	3.83	24	2.80	↗	26	0.73	43
Louisiana	4.32	21	0.85	↘	39	0.19	42

**TABLE 3. STATE COOPERATIVE TECHNOLOGY PROGRAMS BY POPULATION, BUDGET,
AND PER CAPITA SPENDING**

STATE	POPULATION (MILLIONS)	RANK BY POPULATION	BUDGET (FY95) (\$ MILLIONS)	3-YR BUDGET TREND	RANK BY BUDGET	\$ SPENT PER CAPITA	RANK BY PER CAPITA SPENDING
Maine	1.24	39	2.34	↗	28	1.89	16
Maryland	5.01	19	12.09	↗	11	2.41	12
Massachusetts	6.04	13	5.05	↗	21	0.84	30
Michigan	9.50	8	15.20	↗	8	1.60	18
Minnesota	4.57	20	6.35	↗	16	1.39	22
Mississippi	2.67	31	0.13	↗	47	0.05	48
Missouri	5.28	16	2.75	↗	27	0.52	37
Montana	0.86	44	0.66	↘	46	0.77	32
Nebraska	1.62	37	1.67	↗	36	1.03	25
Nevada	1.46	38	0.05	↗	48	0.03	49
New Hampshire	1.14	41	1.25	↗	37	1.10	24
New Jersey	7.90	9	15.11	↘	9	1.91	15
New Mexico	1.65	36	0.80	↘	40	0.48	39
New York	18.17	3	26.30	↗	6	1.45	20
North Carolina	7.07	10	41.59	↗	1	5.88	4
North Dakota	0.64	47	1.25	↘	38	1.95	14
Ohio	11.10	7	38.53	↗	2	3.47	8
Oklahoma	3.26	28	6.45	↘	15	1.98	13
Oregon	3.09	29	0.69	↗	42	0.22	42
Pennsylvania	12.05	5	37.65	↗	3	3.12	10
Rhode Island	1.00	43	0.00	→	50	0.00	50
South Carolina	3.66	25	1.80	↗	34	0.49	38
South Dakota	0.72	45	2.00	↘	32	2.78	11
Tennessee	5.18	17	1.45	↗	44	0.28	41
Texas	18.38	2	30.26	↘	5	1.65	17

**TABLE 3. STATE COOPERATIVE TECHNOLOGY PROGRAMS BY POPULATION, BUDGET,
AND PER CAPITA SPENDING**

STATE	POPULATION (MILLIONS)	RANK BY POPULATION	BUDGET (FY95) (\$ MILLIONS)	3-YR BUDGET TREND	RANK BY BUDGET	\$ SPENT PER CAPITA	RANK BY PER CAPITA SPENDING
Utah	1.91	34	8.39	↗	14	4.39	7
Vermont	0.58	49	0.05	↗	49	0.09	47
Virginia	6.55	12	10.30	→	13	1.57	19
Washington	5.34	15	5.00	↗	22	0.94	29
West Virginia	1.82	35	1.80	↗	35	0.99	27
Wisconsin	5.08	18	5.80	↗	19	1.14	21
Wyoming	0.48	50	0.60	↗	43	1.25	23
United States	259.81	-	405.36	↗	-	1.56	-

Source: U.S. Bureau of the Census, *Statistical Abstract of the United States: 1995*, 115th edition, (Washington, D.C.: U.S. Government Printing Office, 1995), p. 32-33.

The State Science and Technology Institute wishes to acknowledge the support it received in preparing this report from the Carnegie Corporation of New York, the National Institute of Standards and Technology, NASA and the National Technology Transfer Center. The views expressed herein are those of the Institute, not its supporters.