

(dollars in thousands)

| FY 2003 | FY 2004 | FY 2005 |
|---------|---------|---------|
|---------|---------|---------|

biological approaches may yield materials for advanced separations and energy storage.

In FY 2005, this activity will continue to explore multi-disciplinary approaches (with biology, chemistry, physics and computational science playing major roles) to model, design and synthesize new and novel materials. Also of interest is the development of new organic electronic materials with novel magnetic, conducting, and optical properties; single crystal growth of advanced materials that will lead to better characterization, and consequently, better understanding of their properties; and polymer interfaces. An additional \$2,437,000 is provided for research on hydrogen production (by biomolecular materials), storage (in complex hydrides, nanocomposites, nanotubes), and fuel cells (novel electrode and membrane materials and processes).

Capital equipment is provided for such items as advanced nuclear magnetic resonance and magnetic resonance imaging instrumentation and novel atomic force microscopes.

▪ **Experimental Program to Stimulate**

| | | | |
|---|---------------|--------------|--------------|
| Competitive Research (EPSCoR)..... | 11,722 | 7,673 | 7,673 |
|---|---------------|--------------|--------------|

This activity supports basic research spanning the complete range of activities within the Department in states that have historically received relatively less Federal research funding. The EPSCoR states are Alabama, Alaska, Arkansas, Hawaii, Idaho, Kansas, Kentucky, Louisiana, Maine, Mississippi, Montana, Nebraska, Nevada, New Mexico, North Dakota, Oklahoma, South Carolina, South Dakota, Vermont, West Virginia, and Wyoming, and the Commonwealth of Puerto Rico. The states of Delaware, Tennessee and Rhode Island, and the U.S. Virgin Islands may also become eligible for the EPSCoR program in FY 2005. The work supported by the EPSCoR program includes research in materials sciences, chemical sciences, biological and environmental sciences, high energy and nuclear physics, fusion energy sciences, fossil energy sciences, and energy efficiency and renewable energy sciences. The following table shows EPSCoR distribution of funds by state.

EPSCoR Distribution of Funds by State

| | (dollars in thousands) | | |
|-------------------------------|------------------------|--------------------|--------------------|
| | FY 2003 | FY 2004 Estimate | FY 2005 Estimate |
| Alabama..... | 946 | 815 | 510 |
| Alaska ^a | 0 | 0 | 0 |
| Arkansas..... | 205 | 140 | 0 |
| Hawaii ^b | 0 | 0 | 0 |
| Idaho..... | 100 | 0 | 102 |
| Kansas..... | 881 | 560 | 560 |
| Kentucky..... | 1,224 | 355 | 224 |
| Louisiana..... | 287 | 0 | 198 |
| Maine..... | 0 | 0 | 0 |
| Mississippi..... | 685 | 535 | 535 |
| Montana..... | 580 | 515 | 375 |
| Nebraska..... | 1,155 | 300 | 0 |
| Nevada..... | 1,146 | 250 | 0 |
| New Mexico ^b | 0 | 0 | 0 |
| North Dakota..... | 137 | 0 | 139 |
| Oklahoma..... | 339 | 140 | 135 |
| Puerto Rico..... | 435 | 375 | 375 |
| South Carolina..... | 781 | 140 | 266 |
| South Dakota..... | 0 | 0 | 0 |
| Vermont..... | 1,064 | 857 | 709 |
| West Virginia..... | 1,405 | 360 | 201 |
| Wyoming..... | 130 | 0 | 130 |
| Technical Support..... | 222 | 100 | 110 |
| Other..... | 0 | 2,231 ^c | 3,104 ^c |
| Total..... | 11,722 | 7,673 | 7,673 |

^a Alaska became eligible for funding in FY 2001.

^b Hawaii and New Mexico became eligible for funding in FY 2002.

^c Uncommitted funds in FY 2004 and 2005 will be competed among all EPSCoR states.