

DEPARTMENT OF ENERGY  
FY 1991 CONGRESSIONAL BUDGET REQUEST  
OFFICE OF ENERGY RESEARCH

OVERVIEW

UNIVERSITY RESEARCH INSTRUMENTATION

The objective of the University Research Instrumentation (URI) program is to strengthen the ability of universities to conduct long-range research related to the high priority energy technologies by assisting these institutions in acquiring the required state-of-the-art instrumentation. Another objective of the URI program is to provide graduate students with hands-on experience in the use of sophisticated research instrumentation.

The Department of Energy's URI program is an annual competitive program, which involves substantial cost-sharing from the institution. The URI awards are made to universities both on the merit and accomplishments of current DOE-supported research projects and the degree to which the new equipment will enable the scientists to substantially advance the understanding of energy-related phenomena. A total of 138 URI awards have been made in the past 6 years, ranging from \$100,000 to \$500,000 (the average award being \$215,000). Total cost sharing provided by the universities has been \$7,200,000.

The URI program is an integral part of the Department's long-range and applied research efforts. In general, the DOE technical program research grants/contracts to universities provide support for research operating costs (i.e., salaries, computer time, etc.). Funding for new instrumentation is generally limited to those smaller instruments costing on the average of \$30,000 or less. The URI program assists the Department's energy research and technology programs by helping universities purchase instruments which cost in excess of \$100,000, and which will be required by a number of faculty researchers. Because of their size and cost, if used by a single investigator these instruments could not be justified on an individual research award. Each year the Department's program managers help select the high priority energy topic areas which are emphasized in the URI program announcement. During the past few years, the URI program has given special attention to the need for advanced scientific equipment for research on metallurgy, ceramics, solid state materials, catalysis, fluid mechanics, nuclear physics, heat transfer, geophysics, nuclear medicine, fermentation, plant growth, atmospheric and marine pollutants, combustion and nuclear waste storage and environmental and health related research.

Since FY 1986 the URI program has encouraged the submission of proposals involving "innovative" instrumentation (equipment generally not available at U.S. universities). In FY 1991, special emphasis will continue to be placed on "innovative" instrumentation needs for advanced topics in energy research. This emphasis will enable the Department to encourage the nation's best scientists to undertake advanced energy research requiring state-of-the-art, often unique research instrumentation. A recent survey estimated that the overall short-term need for advanced scientific instrumentation for university energy research was approximately \$150,000,000. Of this amount, about \$15-20,000,000 was for "innovative" equipment.

DEPARTMENT OF ENERGY  
 FY 1991 CONGRESSIONAL BUDGET REQUEST  
 ENERGY SUPPLY RESEARCH AND DEVELOPMENT  
 (dollars in thousands)

LEAD TABLE

University Research Instrumentation

Activity	FY 1989	FY 1990	FY 1991 Base	FY 1991 Request	Program Change Request vs Base	
					Dollar	Percent
University Research Instrumentation (OE).....	\$4,938 a/	\$4,930 b/	\$4,930	\$4,924	\$ - 6	0

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Authorization: Section 209, P.L. 95-91.

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a/ Total has been reduced by \$62,000 which has been transferred to SBIR.  
 b/ FY 1990 reflects final Gramm-Rudman-Hollings sequester adjustments.

DEPARTMENT OF ENERGY  
FY 1990 CONGRESSIONAL BUDGET REQUEST  
OFFICE OF ENERGY RESEARCH  
(dollars in thousands)

SUMMARY OF CHANGES

University Research Instrumentation

FY 1990 Appropriation .....	\$ 4,930
Adjustments.....	<u>0</u>
FY 1991 Base.....	\$ 4,930
Program increases and decreases:	
Instrumentation awards remain the same as FY 1990.....	- <u>6</u>
FY 1991 Congressional Budget Request.....	\$ 4,924

DEPARTMENT OF ENERGY  
 FY 1991 CONGRESSIONAL BUDGET REQUEST  
 ENERGY SUPPLY, RESEARCH AND DEVELOPMENT  
 (dollars in thousands)

KEY ACTIVITY SUMMARY

UNIVERSITY RESEARCH INSTRUMENTATION

I. Preface: University Research Instrumentation

Support is provided to universities for the purchase of state-of-the-art scientific research equipment costing over \$100,000. The principal objective of the program is to strengthen the ability of university scientists to conduct long-range research related to the high priority DOE fundamental science and energy technology research. An ancillary objective of the URI program is to provide graduate students with hands-on experience in the use of sophisticated research instrumentation.

II. A. Summary Table: University Research Instrumentation

Program Activity	FY 1989 Actual	FY 1990 Estimate	FY 1991 Request	% Change
University Research Instrumentation.....	\$ 4,938	\$ 4,930	\$ 4,924	0
Total, University Research Instrumentation	\$ 4,938	\$ 4,930	\$ 4,924	0

III. Activity Descriptions: (New BA in thousands of dollars)

Program Activity	FY 1989	FY 1990	FY 1991
University Research Instrumentation	Supported 20 instrumentation awards. (\$4,938)	Will support 18-20 instrumentation awards. (\$4,930)	Will support 18-20 instrumentation awards. (\$4,924)
	\$ 4,938	\$ 4,930	\$ 4,924
University Research Instrumentation	\$ 4,938	\$ 4,930	\$ 4,924