

**INDUSTRIAL TECHNOLOGIES
INDUSTRY SECTOR
(Dollars in Thousands)**

ENERGY EFFICIENCY SCIENCE INITIATIVE

I. Mission Supporting Goals and Objective

The Energy Efficiency Science Initiative seeks to identify and fund “bridging” research and development (R&D) that falls between fundamental exploratory science and pre-commercial applied R&D. By stimulating R&D that maximizes synergies among different research fields, technologies, investigator communities, and end-use applications, this initiative expands EERE’s R&D activities among energy efficiency technologies. It also cuts across traditional energy end-use sectors by emphasizing distributed power generation applications for industrial and buildings systems, transportation, and stationary power.

This initiative expands on existing cooperative efforts with the Office of Fossil Energy in areas such as natural gas-fueled turbine and fuel cell technologies, combined heat, power and cooling applications, hydrogen production, and carbon emission sequestration. This effort also involves extensive coordination with the Office of Science in pursuing follow-on research in areas critical to energy efficiency and clean energy development, such as basic biosciences, plant genetics, photo emission, heat transfer, new materials, catalysts, and computational science.

In FY 2001, this program will complete its second year. Projects funded to date are being performed in collaboration with academia in partnership with the National Laboratories. As a result of a slow start for this new program in FY 2000, the project performers funded in FY 2000 and FY 2001 will continue work into FY 2001 and FY 2002, respectively. As a part of EERE’s ongoing program evaluation activities, this program will be rebaselined in FY 2002 based on the results of projects completed during FY 2001 and FY 2002. For this reason, no additional funds are requested in FY 2002. Upon completion of the new baseline, funds will be requested in FY 2003.

II. A. Funding Table: ENERGY EFFICIENCY SCIENCE INITIATIVE

Program Activity	FY 2000 Comparable	FY 2001 Comparable	FY 2002 Request	\$ Change	% Change
Energy Efficiency Science Initiative	\$ 3,830	\$ 3,891	\$ 0	\$ -3,891	-100%
Total, Energy Efficiency Science Initiative	<u>\$ 3,830</u>	<u>\$ 3,891</u>	<u>\$ 0</u>	<u>\$ -3,891</u>	<u>-100%</u>

II. B. Laboratory and Facility Funding Table: ENERGY EFFICIENCY SCIENCE INITIATIVE

	FY 2000 Comparable	FY 2001 Comparable	FY 2002 Request	\$ Change	% Change
All Other	\$ 3,830	\$ 3,891	\$ 0	\$ -3,891	-100%
Total, Energy Efficiency Science Initiative	<u>\$ 3,830</u>	<u>\$ 3,891</u>	<u>\$ 0</u>	<u>\$ -3,891</u>	<u>-100%</u>

III. Performance Summary: ENERGY EFFICIENCY SCIENCE INITIATIVE

Program Activity	FY 2000	FY 2001	FY 2002
Energy Efficiency Science Initiative	Energy Efficiency Science Initiative	Energy Efficiency Science Initiative	Energy Efficiency Science Initiative
	<p>Funded approximately 10 to 20 cooperative agreements with research and development teams, which were led by universities and included industrial, national laboratory and other partners. The cooperative agreements focused on fundamental strategic R&D, such as advanced materials, bio-based fuels, combustion-related research, sensors and controls, computational sciences, and microsystems science and engineering. This new initiative supported R&D to bridge the gap between fundamental exploratory science and pre-commercial applied R&D. Conducted a first-of-a-kind strategic visioning workshop (e-vision 2000) involving forefront building designers, industrial and transportation experts as well as academics whose energy efficiency ideas expand the possibilities of technology options for our Nation's future. This workshop influenced the development of the FY 2002 Budget Request and defined specific R&D projects for FY 2001</p>	<p>As part of the continuing initiative to support R&D to bridge the gap between fundamental exploratory science and pre-commercial applied R&D, EERE will conduct a follow-on strategic visioning workshop (e-vision 2001). This workshop will build on the tremendous technology possibilities identified during e-vision 2000, and will broaden the understanding of the proposed options for the Nation's energy future. In succeeding years, it is expected that the e-vision workshops will be conducted biennially. Up to 5 research projects will be awarded as a follow-on to recommendations from e-vision 2000. Additionally, fund approximately 10 to 20 cooperative agreements with research and development teams, which are expected to be led by universities and to include industrial, national laboratory and other partners. The cooperative agreements focus on industrial sector fundamental strategic R&D, as contained in the visions and</p>	<p>As a part of EERE's ongoing program evaluation activities, this program will be rebaselined in FY 2002 on the results of projects completed during FY 2001 and FY 2002. For this reason, no additional funds are requested in FY 2002. Upon completion of the new baseline, funds will be requested in FY 2003. (\$0)</p>

Program Activity	FY 2000	FY 2001	FY 2002
implementation. (\$3,830)		roadmaps for the nine Industries of the Future. (\$3,891)	
TOTAL, ENERGY EFFICIENCY SCIENCE INITIATIVE	\$3,830	\$3,891	\$0