

FY 2009 Budget Request to Congress Errata sheet

On page 76 of volume 4 (Science) of the Department of Energy Budget Request to Congress, under the header “**Significant Program Shifts**” within Basic Energy Sciences, the paragraph reading “Additional research funding is provided in the following areas:” should be replaced with the text below.

In 2001, BESAC conducted a far-reaching study to assess the scope of fundamental scientific research that must be considered to address the DOE missions in energy efficiency, renewable energy resources, improved use of fossil fuels, safe and publicly acceptable nuclear energy, future energy sources, and reduced environmental impacts of energy production and use. That report inspired a series of ten follow-on “*Basic Research Needs*” workshops over the next five years, which together attracted more than 1,500 participants from universities, industry, and DOE laboratories. Topics included the hydrogen economy; solar energy utilization; superconductivity; solid-state lighting; advanced nuclear energy systems; combustion of 21st century transportation fuels; electrical-energy storage; geosciences as it relates to the storage of energy wastes (the long-term storage of both nuclear waste and CO₂); materials under extreme environments; and catalysis for energy-related processes. Together, these workshop reports highlighted the remarkable scientific journey that has taken place during the past few decades. The resulting scientific challenges, which no longer were discussed in terms of traditional scientific disciplines, described a new era of science—an era in which materials functionalities are designed to specifications and chemical transformations are manipulated at will.

To implement the collective recommendations of these twelve workshops, BES will institute Energy Frontier Research Centers (EFRCs). The EFRC awards are expected to be in the \$2–5 million range annually for an initial 5-year period. It is anticipated that approximately \$100 million will be available for multiple EFRC awards starting in FY 2009.

EFRCs will bring together the skills and talents of multiple investigators to enable research of a scope and complexity that would not be possible with the standard individual investigator or small group award. An EFRC will have the following characteristics:

- The research program is at the forefront of one or more of the challenges described in the BESAC report *Directing Matter and Energy: Five Challenges for Science and the Imagination* (http://www.sc.doe.gov/bes/reports/files/GC_rpt.pdf).
- The research program addresses one or more of the energy challenges described in the ten BES workshop reports in the *Basic Research Needs* series (<http://www.sc.doe.gov/bes/reports/list.html>).
- The program is balanced and comprehensive, and, as needed, supports experimental, theoretical, and computational efforts and develops new approaches in these areas.
- The program provides opportunities to inspire, train, and support leading scientists of the future who have an appreciation for the global energy challenges of the 21st century.
- The center leadership communicates effectively with scientists of all disciplines and promotes awareness of the importance of energy science and technology.
- There is a comprehensive management plan for a world-leading program that encourages high-risk, high-reward research. The Center’s management plan demonstrates that the whole is substantially greater than the sum of the individual parts.

Based on an open competition, EFRCs will include funding identified in the following areas:

On page 472 of volume 4 (Science) of the Department of Energy Budget Request to Congress, within the Education Crosscut Funding Summary table, the following amounts should be changed:

For “**Educator Programs, K–12 students**”, the FY 2009 amount should be changed from **13,172** to **11,155**.

For “**Workforce Development for Teachers and Scientists**”, the FY 2009 amount should be changed from **10,930** to **8,913**.

For “DOE Academies Creating Teacher Scientists”, the FY 2009 amount should be changed from 8,415 to 6,398.

For “**Total, SC Education Funding**”, the FY 2009 amount should be changed from **38,706** to **36,689**.