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DOE Budget Earmarks: A Selective Look at Energy Efficiency and Renewable Energy R&D Programs

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Summary

Appropriations earmarks for the Department of Energy's (DOE's) Energy Efficiency and Renewable Energy (EERE) programs have tripled from FY2003 to FY2006. According to the Executive Office of the President and the private American Association for the Advancement of Science (AAAS), this affects the conduct of programs and may delay the achievement of goals. Further, the Administration has proposed new funding for hydrogen, biomass/biorefinery, and solar energy initiatives proposed under the American Competitiveness Initiative/Advanced Energy Initiative (AEI).

The report discusses the potential impact of congressional earmarks on EERE research and development (R&D) programs and, in particular, whether continued high levels of earmarks could lead to new cuts in staff and dilute the desired impact of the AEI initiatives under EERE, should Congress decide to fund them.

The congressional debate over earmarks centers on the transparency of the process, with a focus on earmarks not initially approved in either chamber that appear in a bill's conference report. Opponents contend that the earmarking process is not open, fair, or competitive. Proponents say it is a legitimate practice and is justified by policymakers' knowledge of local needs, as it spreads research money to deserving states and institutions.

The appropriation figures cited as "earmarks" in this report are those labeled by DOE budget requests as "congressionally directed activities" and, for FY2006, appear to be completely consistent with figures in the FY2006 Energy and Water Development (E&W) conference report that are labeled as "congressionally directed projects." In this regard, the earmark figures in this report appear consistent with the definition of a congressional appropriations earmark as "funds set aside within an account for individual projects, locations, or institutions."

This report will be updated as events warrant.

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Background

Definition of Earmark

In general, there is no single, accepted, and specific definition of the term *earmark* for the congressional appropriations process, nor is there a standard practice for earmarks.¹ However, for funding provided by Energy and Water Development (E&W) Appropriations laws to the Department of Energy (DOE), this report defines an earmark as “funds set aside within an account for individual projects, locations, or institutions.” In the FY2006 E&W appropriation law, earmarks were labeled as “congressionally directed projects”² and most often appeared in the joint explanatory statement of the conference report.³ Accordingly, DOE budget request documents usually refer to earmarks as “congressionally directed activities” and often report on them in separate account lines under the functional energy area to which the earmarks are applied.⁴

Debate over Earmarks

There is a general debate in Congress over earmarks, in which a key concern is the transparency of earmark activities in the deliberative process. Critics of the current earmarking process argue that it is not the subject of open debate and that the number of earmarks has grown rapidly. A “dear colleague letter” that seeks to change the process says,

We believe the process of earmarking undermines the confidence of the American public in Congress because the practice is not open, fair, or competitive and tends to reward the politically well-connected.⁵

Opponents further contend, as noted in the letter above, that it is wrong to take an earmark provision that survives neither the House or the Senate version of a bill and,

¹ CRS Report 98-518, *Earmarks and Limitations in Appropriations Bills*, by (name redacted).

² For example, see the *FY2006 E&W Conference Report*, H. Rept. 109-275, p. 143.

³ CRS Memorandum, *Earmarks in Appropriations Acts: FY1994, FY1996, FY1998, FY2000, FY2002, FY2004, FY2005*, by CRS appropriations team, p. 16.

⁴ For example, see the *FY2007 DOE Budget Request*, vol. 3, pp. 23, 145, 180, 181, 250, 320.

⁵ *Dear Colleague Letter from Senators Coburn and McCain on Earmarks*, Jan. 25, 2006, p. 2.

nevertheless, have it inserted into a conference report. This, they say, “stifles debate” and unfairly empowers well-financed lobbyists.

Supporters of earmarking generally agree on the need for more transparency, but they counter-argue that earmarks are not inherently wrong, nor should they be forbidden by rules of congressional process. At a February 2006 hearing on the subject, one proponent said,

[The Constitution] placed the responsibility for making spending decisions, not in the Executive Branch, but in the Congress.... Congress has always had the final say on that issue. Some would say that the earmarking process has been abused in recent years and I would agree, especially in cases where earmarks are inserted into Conference Reports that have not been scrutinized by either body.⁶

In general, proponents agree that some modification of the process may be needed, but otherwise contend that earmarking is legitimate under the Constitution and is justified because elected officials are better able to make decisions about funding for local needs than program managers in the executive branch.⁷

DOE Energy Efficiency and Renewable Energy Earmark Funding

In a review of the FY2006 DOE budget, the American Academy for the Advancement of Science (AAAS) examined earmarks for DOE energy research and development (R&D) programs and found that

... earmarks eat up whatever increases there are for most energy programs and cut deeply into core R&D programs. Energy R&D earmarks total \$266 million in 2006, more than double the previous record from last year, and make up one out of every five R&D dollars. But they are especially concentrated in some areas, including biomass R&D where they make up more than 50% of total program funds, hydrogen (27%), and wind energy (33%), ratios far higher than in previous years. As a result, there will be enormous cuts to competitively awarded R&D grants in those areas.⁸

Table 1, below, shows the funding trends for earmarks under programs in DOE’s Office of Energy Efficiency and Renewable Energy (EERE) and DOE’s

⁶ U.S. Congress, Senate Committee on Rules and Administration, *Hearing to Examine Procedures to Make the Legislative Process More Transparent*, [http://rules.senate.gov/hearings/2006/020806_hearing.htm], Feb. 8, 2006. Statement of Chairman Trent Lott, p. 2.

⁷ Legislation to increase the transparency of the earmarking process has been introduced by proponents (e.g., S.Res. 365) and by opponents (e.g., S. 2265).

⁸ AAAS, *R&D Earmarks Hit New Record of \$2.4 Billion, Up 13 Percent* (R&D Funding Update), Jan. 4, 2006, p. 5, [<http://www.aaas.org/spp/rd/earm06c.pdf>]. AAAS defines an R&D earmark as “congressionally designated performer-specific R&D projects not included in agency budget requests.”

Office of Electricity Delivery and Energy Reliability (OE). These trends are illustrated in **Figure 1**, at the end of this report. The table shows that EERE funding earmarks have more than tripled, from \$46.0 million in FY2003 to \$159.0 million in FY2006.

Table 1: Earmark Funding Trends for EERE and OE
(\$ millions)

Office of Energy Efficiency and Renewable Energy (EERE)	FY2003	FY2004	FY2005	FY2006
Renewable Energy	34.0	44.8	52.0	82.6
Energy Efficiency	12.1	35.4	34.0	76.4
Total	46.0	80.2	85.9	159.0
Office of Electricity Delivery and Energy Reliability (OE)				
Office of Electricity Delivery and Energy Reliability (OE)	FY2003	FY2004	FY2005	FY2006
Electricity R&D	26.0	28.6	35.1	63.3
Electricity Restructuring	3.9	0.0	16.2	3.5
Total	30.0	28.6	51.3	66.7

Sources: DOE Budget Requests FY2005, FY2006, and FY2007 and H. Rept. 109-275.

For FY2006, **Table 3** (below) shows a \$30.7 million increase in renewable energy R&D earmarks, including increases of \$16.4 million for Biomass & Biorefinery, \$8.3 million for Wind Energy, and \$4.1 million for Solar Energy. Of the \$42.5 million increase for energy efficiency R&D earmarks, nearly half (\$20.3 million) was for Vehicle Technologies. Also, **Table 3** shows a \$28.8 million increase for Electricity R&D earmarks under the Office of Electricity (OE).

Impacts of Earmarks

National Renewable Energy Laboratory

In early February 2006, the National Renewable Energy Laboratory (NREL) issued a press release stating that FY2006 earmarks for EERE programs had left it with a \$28 million gap in its operating funds, forcing NREL to cut 32 staff positions in hydrogen, biomass, and basic research programs.⁹ The FY2007 DOE Budget

⁹ NREL Pressroom. *Budget Shortfall Forces Renewable Energy Laboratory to Lay Off 32 Staff*. February 7, 2006. 1 p. [http://www.nrel.gov/news/press/2006/0306_nrel_layoff.html]

Request shows that the EERE share of NREL's budget was reduced from \$182.5 million in FY2005 to \$161.6 million in FY2006, a \$21 million (or 13%) reduction.¹⁰

However, in late February 2006, DOE announced that an additional \$5 million had been sent to NREL to immediately restore all 32 positions. DOE transferred the funding from other accounts and announced that it was working with Congress to restore funds to those accounts through several means, including the "deobligation of funds provided to several congressionally directed projects in 2001 and 2002 that have failed to make progress." DOE further noted, "Should Congress fully fund the President's FY2007 request, unencumbered by earmarks, NREL should be able to maintain a vibrant and stable workforce in the future."¹¹

American Competitiveness Initiative

In the State of the Union Speech given in January 2006, President Bush announced the launch of the American Competitiveness Initiative (ACI), which would increase support for R&D and technological innovation, including certain energy initiatives,¹² to help stimulate economic growth.

The Administration's ACI document expresses concern about the potential for earmarks to impede the proposed initiatives. Consistent with the previously noted definition, it defines earmarks as "the assignment of science funding through the legislative process for use by a specific organization or project." It says,

... the practice signals to potential researchers that there are acceptable alternatives to creating quality research proposals for merit-based consideration, including the use of political influence or appeals to parochial interests. The rapidly growing level of legislatively directed funds undermines America's research productivity.¹³

ACI contends that this type of funding is "rarely the most effective use of taxpayer funds."

On the other hand, some proponents argue that R&D earmarks help spread the research money to states and institutions that would receive less research funding through other means. Also, some supporters of earmarking contend that earmarks

¹⁰ DOE. FY2007 Budget Request. *Laboratory Tables Preliminary*. February 2006. p. 68.

¹¹ DOE. Office of Public Affairs. *DOE Transfers \$5 Million to NREL, Jobs to be Restored*. (Press Release) February 20, 2006. 1 p. [<http://www.energy.gov/news/3223.htm>]

¹² Executive Office of the President. Office of Science and Technology Policy. Domestic Policy Council. *American Competitiveness Initiative: Leading the World in Innovation*. February 2006. p. 13.

¹³ ACI, p. 11. The same points are echoed in the *Budget of the United States Government Fiscal Year 2007, Analytical Perspectives*, February 2006, p. 46.

provide a means for funding unique projects that would not be recognized by the conventional peer-review system.¹⁴

Advanced Energy Initiative

A key component of ACI, the Advanced Energy Initiative (AEI), proposes new initiatives for several energy technologies.¹⁵ In particular, it embraces key initiatives¹⁶ for hydrogen, biomass/biorefinery, and solar energy¹⁷ that are reflected in the FY2007 DOE budget request as major funding increases for corresponding host programs under the Office of Energy Efficiency and Renewable Energy (EERE).¹⁸

AEI Compared with EERE Earmarks

Table 2 shows the FY2006 funding earmarks for the Hydrogen, Biomass/Biorefinery, and Solar Energy programs at EERE. It also shows the proposed FY2007 funding increases for AEI's hydrogen, biomass/biorefinery, and solar energy initiatives under those programs. The table shows that the FY2006 earmarks are nearly equal to the proposed increases for the hydrogen and biomass/biorefinery initiatives; for the solar energy program, however, the total earmark is much smaller than the proposed AEI increase.

¹⁴ *Budget of the United States Government Fiscal Year 2007, Analytical Perspectives*, February 2006, p. 46.

¹⁵ The White House, National Economic Council, *Advanced Energy Initiative*, February 2006, 15 p., [<http://www.whitehouse.gov/stateoftheunion/2006/energy/print/index.html>].

¹⁶ The White House, *State of the Union: Advanced Energy Initiative*, Jan. 31, 2006, [<http://www.whitehouse.gov/news/releases/2006/01/20060131-6.html>]. A request for accelerated funding in FY2007 is presented as a key feature of the Hydrogen Fuel Initiative, Biorefinery Initiative, and Solar America Initiative.

¹⁷ DOE, EERE, *The Solar America Initiative*, February 2006, p. 2. In addition to a major spending increase, DOE notes that the Solar America initiative would also shift the program emphasis away from R&D toward more stress on industry partnerships to accelerate market-ready photovoltaics equipment. It also notes a key role in the initiative for the National Renewable Energy Laboratory (NREL). See [http://www1.eere.energy.gov/solar/solar_america/].

¹⁸ AAAS, *AAAS Preliminary Analysis of R&D in the FY 2007 Budget*, [<http://www.aaas.org/spp/rd/pre107p.htm>], Feb. 8, 2006.

Table 2. Earmark Funding Compared with AEI Proposals
(\$ millions)

Office of Energy Efficiency and Renewable Energy (EERE): Selected Programs	FY2006 Earmarks	FY2007 AEI Proposed Increase	Difference (AEI - Earmark)
Hydrogen	42.5	40.2	-2.3
Biomass & Biorefinery	51.8	59.0	7.2
Solar Energy	14.3	65.3	51.0
Total, Selected Programs	108.6	164.5	55.9

Sources: DOE Budget Requests FY2005, FY2006, and FY2007 and H.Rept. 109-275.

Some Questions for Congressional Consideration

- Do the EERE earmarks seriously weaken R&D programs, as some opponents contend, or do they merely provide a more equitable, although perhaps more decentralized, distribution of R&D funding, as some proponents argue?
- If renewable energy earmarks under EERE continue at the same or higher levels in FY2007, would they lead to new cuts in staff positions at NREL?
- If Congress were to approve the Administration's requested increases for the AEI renewable energy initiatives, would earmarks continued at the same or higher levels act to dilute or otherwise erase some of the technological stimulation that the AEI aims to generate for its hydrogen, biomass/biorefinery, and solar energy goals?

Table 3. DOE EERE and OE Earmarks, FY2005-FY2006
(\$ millions, current)

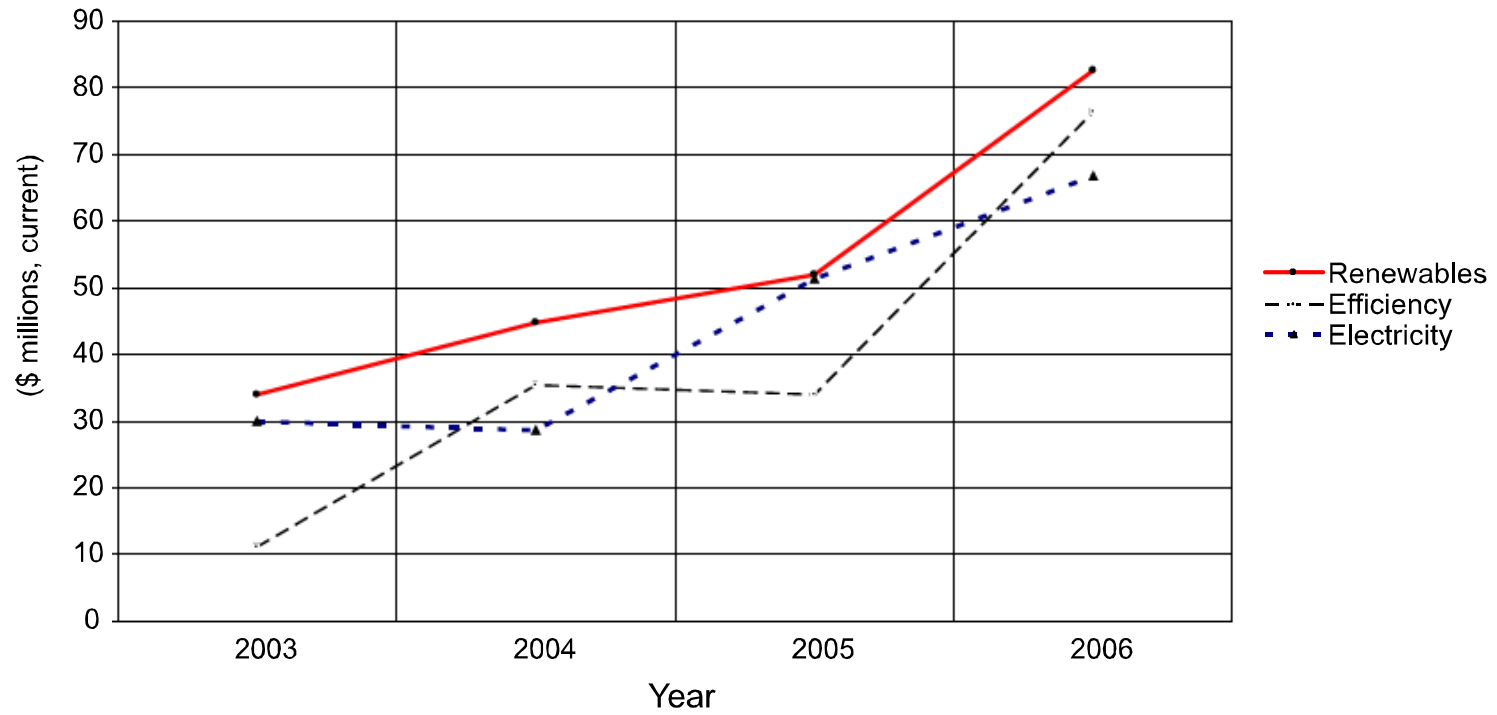
Office of EERE	FY2005	FY2006	Diff.	Percent
Hydrogen	21.4	42.5	21.1	98.5%
Biomass & Biorefinery (R)	35.3	51.8	16.4	46.5%
Solar Energy (R)	10.2	14.3	4.1	39.8%
Wind Energy (R)	4.6	12.9	8.3	182.3%
Geothermal Energy (R)	1.9	3.7	1.8	97.9%
Vehicle Technologies	—	20.3	20.3	—

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Building Technologies	—	5.3	5.3	—
Distributed Energy Resources	1.0	—	—	—
Weatherization & Intergovernmental	4.2	4.8	0.6	15.2%
Program Management	7.4	3.5	-3.9	-53.1%
Subtotal, Renewables (R)	52.0	82.6	30.7	59.0%
Subtotal, Energy Efficiency	34.0	76.4	42.5	125.0%
Total	85.9	159.0	73.1	85.1%
Office of Electricity (OE)	FY2005	FY2006	Diff.	Percent
Superconductivity	14.9	14.6	-0.3	-1.9%
Transmission Reliability	10.7	12.9	2.2	20.6%
Electric Distribution Transformation	2.6	29.7	27.1	1,031.4%
Storage	2.0	1.5	-0.5	-25.2%
Gridwise	3.0	2.5	-0.5	-16.8%
Gridworks	2.0	2.8	0.8	39.7%
Subtotal, Electricity	35.1	63.9	28.8	82.0%
Subtotal, Electricity (after 1% rescission)	—	63.2	28.1	80.1%

Sources: DOE, *FY2007 Budget Request*, vol. 3; H.Rept. 109-275, pp. 143-145; and personal communication with Mr. Randy Steer, DOE/EERE, Feb. 23, 2006.

Figure 1. DOE Earmark Funding for Renewables, Energy Efficiency, and Electricity



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