

The NESD and Federal Funding for Nuclear Energy

How Students get Funded

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Outline



- ① Introduction
- ② DOE Budget Breakdown
- ③ University Funding
- ④ NESD's Role



Introduction: The NESD

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In a climate of deficit reduction, priorities change from maintenance to reinstatement.



DOE Budget: Entire DOE

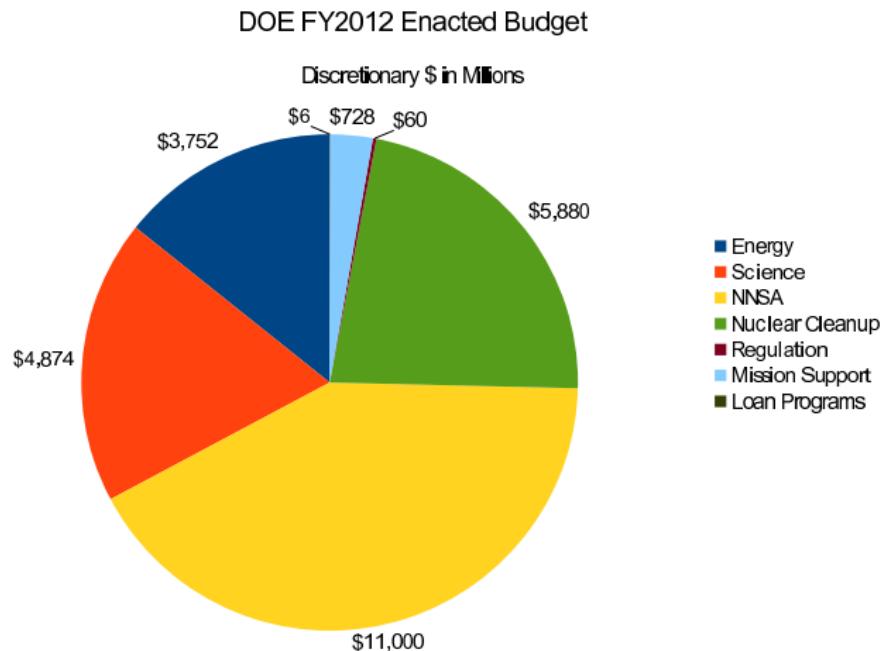


Figure: DOE Budget Breakdown by Office[3]



DOE Budget: Office of Energy

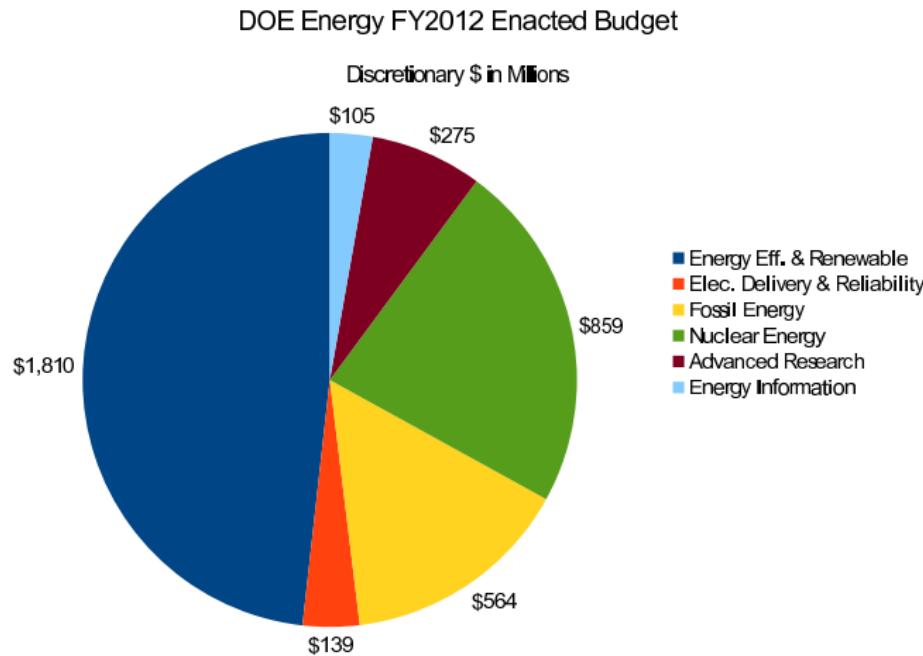


Figure: DOE-E Budget by Office[3]



DOE Budget: Office of Nuclear Energy

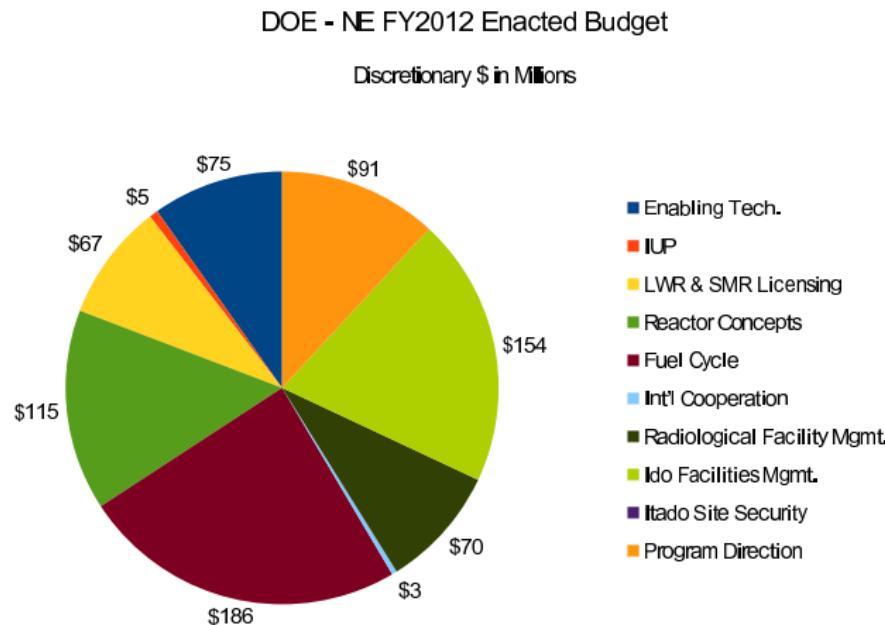


Figure: DOE-NE Budget Breakdown by Office[3]



University Programs: NEUP

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The NEUP *administers* but *does not provide funding* for DOE-NE funded scholarships and fellowships.



University Programs: IUP

The Integrated University Program provides funding for:

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 - Scholarships
 - Fellowships
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Spread across three government bodies:

- DOE Office of Nuclear Energy (\$5M FY2012)
 - Scholarships & Fellowships
 - Faculty & Curriculum Development
- DOE NNSA (\$15M FY2012)
 - UC-Berkely Security Consortium
 - General R&D
- NRC (\$4.7M FY2012)
 - Faculty & Curriculum Development



University Programs: IUP History

Outlined in the Energy and Water Appropriations Act of 2009, the IUP was to fund a program for \$450M over 10 years evenly split between (authorized to be appropriated):

- DOE - NE
- NRC
- DOE - NNSA

To be split: \$10M - mission related; \$5M discipline related



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- DOE - NE: \$5M
- NRC: \$4.7M
- DOE - NNSA: \$15M



University Programs: DOE Language

From the DOE's FY2013 budget proposal [2]:

In FY 2011, DOE provided no funding in its Operating Plan for the Integrated University Program (IUP) and no funding is being requested in FY 2013 for the program. IUP has consistently been proposed for termination. This program is a less efficient means to advance the Administrations STEM objectives than other existing programs. In addition, as the nuclear industry expands, it will create the incentives necessary for students to enter nuclear-related programs. Although no funding was requested in FY 2012, \$5 million was congressionally-directed for IUP. Funding was used to support nuclear science and engineering study and research through scholarships and fellowships.



University Programs: NRC Language

From the NRC's FY2013 budget proposal [1]:

Resources also support \$5 million for grants to universities for university-led, mission-related support (curriculum development) for nuclear science, engineering, and related disciplines and trades. However, no funding is requested for the Integrated University Program. This reflects the confidence that the nuclear industry, as it expands, will create incentives for students to enter nuclear-related programs.



University Programs: Industry Language

From NEI [5]:

In 2011, the industry contributed more than \$15 million to universities and community colleges to support nuclear engineering programs (\$8.6 million) and nuclear energy technician programs (\$6.6 million). The industry's direct support included cash grants, scholarships, fellowships, equipment donations, internships, co-ops and subject-matter expert support.



NESD's Role: In General

Every year NESD meets for around 4 days.

- Meet with administration and others
 - DOE - Assistant Secretary Lyons
 - NRC - Commissioner Magwood
 - CBO
 - NEI
- Write a policy statement
- Meet with representatives



NESD's Role: A Student Voice

We try to provide the student's perspective to law makers via a policy statement.

Executive Summary

- The Integrated University Program (IUP) is a cornerstone for educating America's future nuclear engineering workforce and is currently zeroed out by the Administration. This void cannot be filled by the commercial nuclear industry since the Federal Government is the single largest employer of nuclear engineering graduates. **The Delegation strongly recommends restoring this funding for FY11 and continuing for FY12 and FY13.**
- The Nuclear Engineering University Program (NEUP) provides significant benefits to nuclear engineering education and should be maintained at its current funding level.
- Continued funding for the NRC Faculty Development Grant Program is needed because this program is crucial to the support of nuclear engineering education as university enrollments continue to grow.
- University research facilities and research reactors in the United States provide unique capabilities that are essential to nuclear engineering education and scientific inquiry; continued federal support through NEUP is essential for the operation of these facilities.
- United States leadership in nuclear engineering is essential for domestic energy supply and security, creation of high-value domestic jobs, meeting climate and air pollution objectives, and giving the United States a voice in nuclear security and nonproliferation issues on the international stage.

Figure: NESD 2011 Executive Summary



NESD's Role: This Year

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From ANS President, Eric Loewen's testimony[4]:

We urge the Subcommittee to support the continuation of the Integrated University Program. Specifically, we request that the Subcommittee to restore the full \$15 million in funding for the Nuclear Regulatory Commission's portion of the IUP program and the \$5 million FY12 appropriated level for DOE-NE.



References

- [1] Nuclear regulatory commission fy2013 budget justification, February 2012.
- [2] Owell Barwin.
Department of energy fy2013 budget justification, vol. 3, February 2012.
- [3] Stephen Chu.
Department of energy fy2013 budget request overview, February 2012.
- [4] Eric Loewen.
Testimony to the house appropriations subcommittee on energy and water development on the fy 2013 energy and water development appropriations bill, March 2012.
- [5] NEI.
Nuclear industry invests record funding for education as federal support withers, March 2012.



The Budget Making Process: Steps

The budget making process is, to say the least, involved.

- ① President makes a budget request
 - formulated by OMB
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 - IUP language introduced in 2009
 - \$450M over 10 years split between ONE, NRC, NNSA



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The budget is then voted on and sent to the President. The end result can be:

- Appropriations Bills from Committees
- Omnibus Bill (bring on the pork)
- Continuing Resolution
 - occurs if no bill is signed into law by the end of the fiscal year
 - keeps funding at the same level as previous
 - all of FY11 was a continuing resolution