



FY 2010 Budget



Overall Strategy

- **Policy-driven Budget**

- Science, Discovery & Innovation
- Clean, Secure energy
- Economic Prosperity
- Climate Change Policy
- National Security & Legacy

- **Fiscal Discipline**

- Makes tough tradeoff within top line
- Reduces funding from lower priority activities
- Reflects funding from Recovery Act
- Solid starting point for future bottom-up budget reviews

- **Major Investment Emphasis**

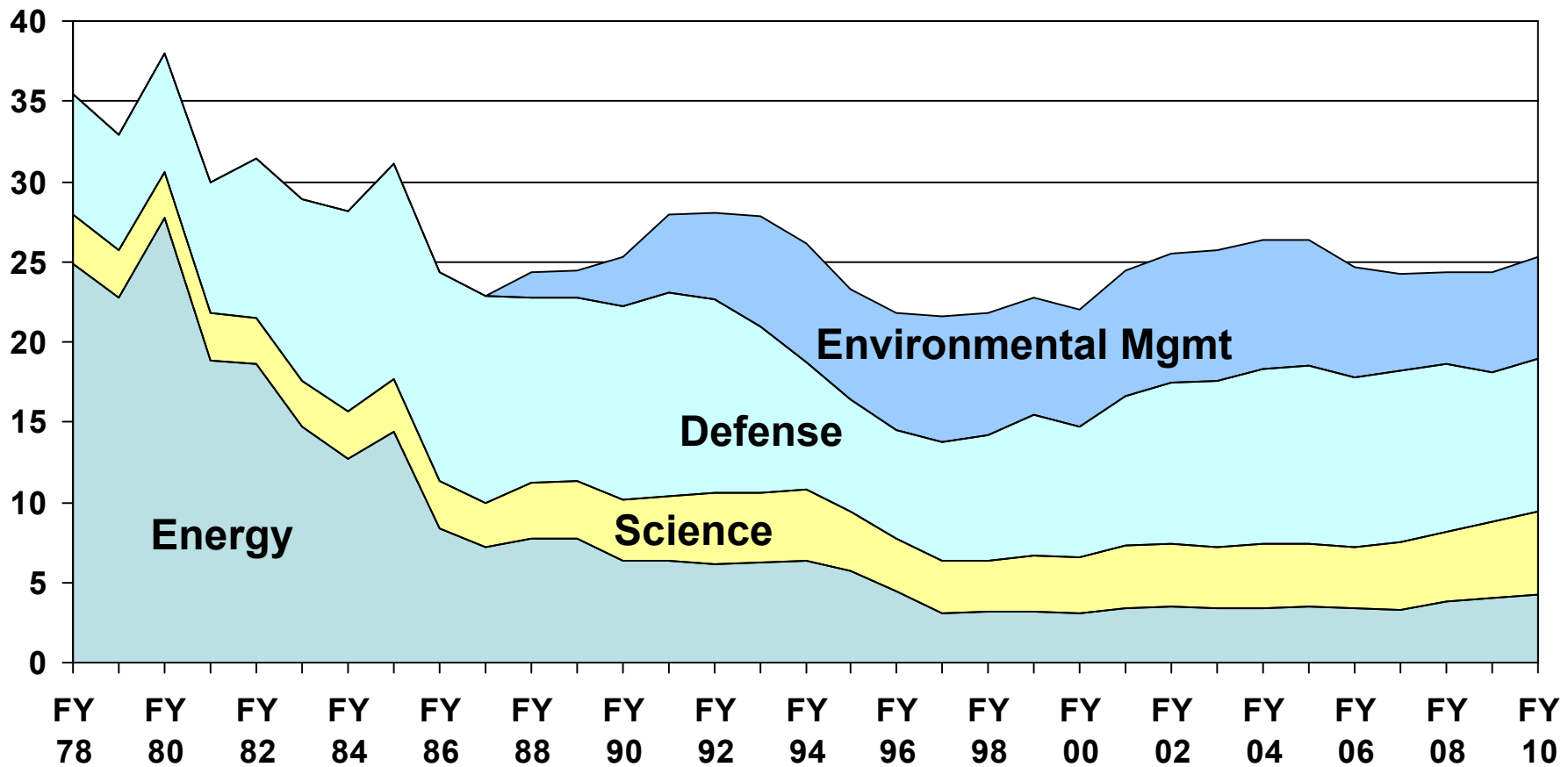
- Doubling of Science by 2016
- New Energy Innovation Hubs
- Call for major education initiative





The Budget in Context

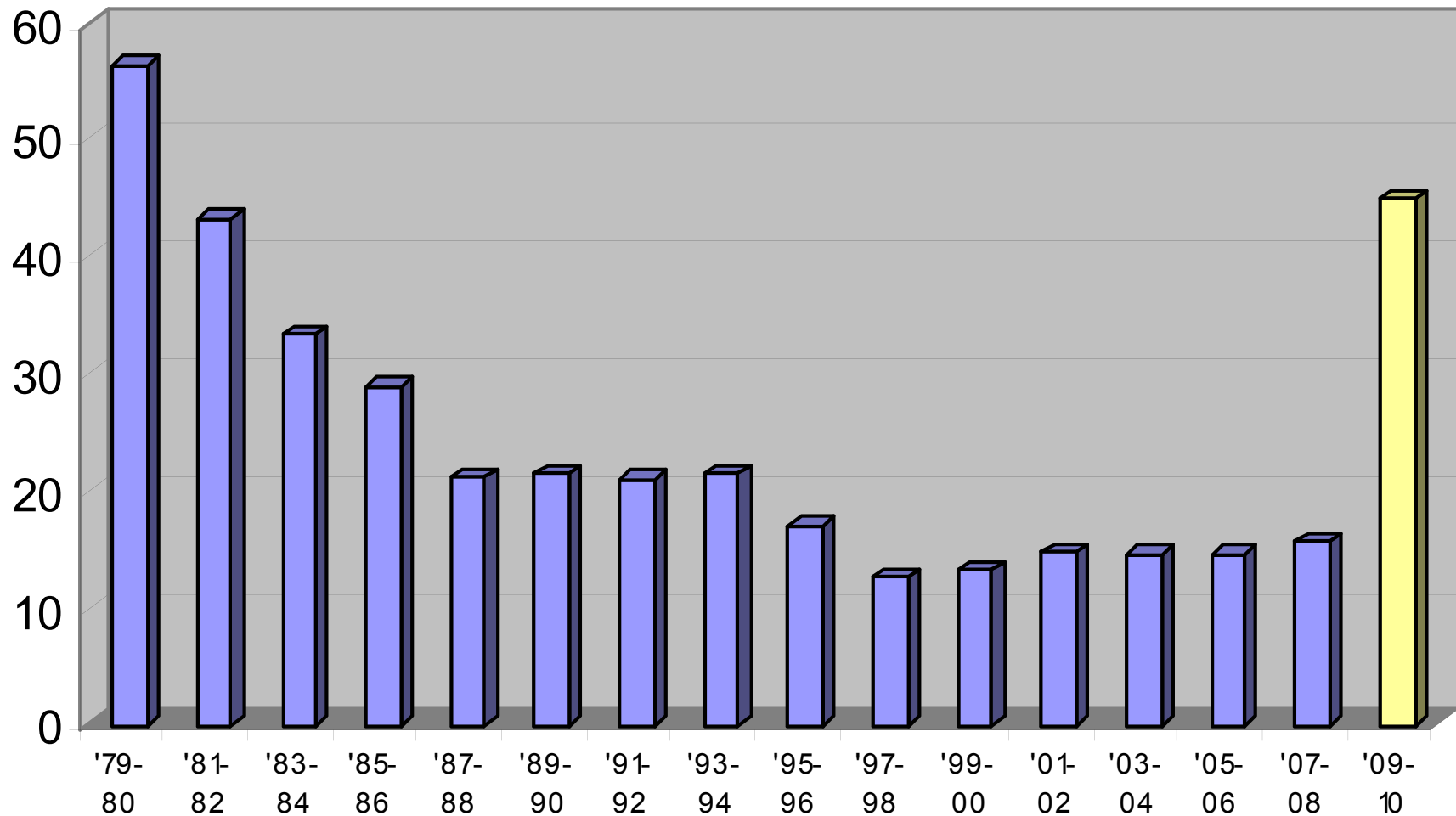
Thirty Years of DOE Funding
(Constant FY 2008 dollars, in billions)





Historical Funding for Science and Energy

(Constant FY 2008 dollars)



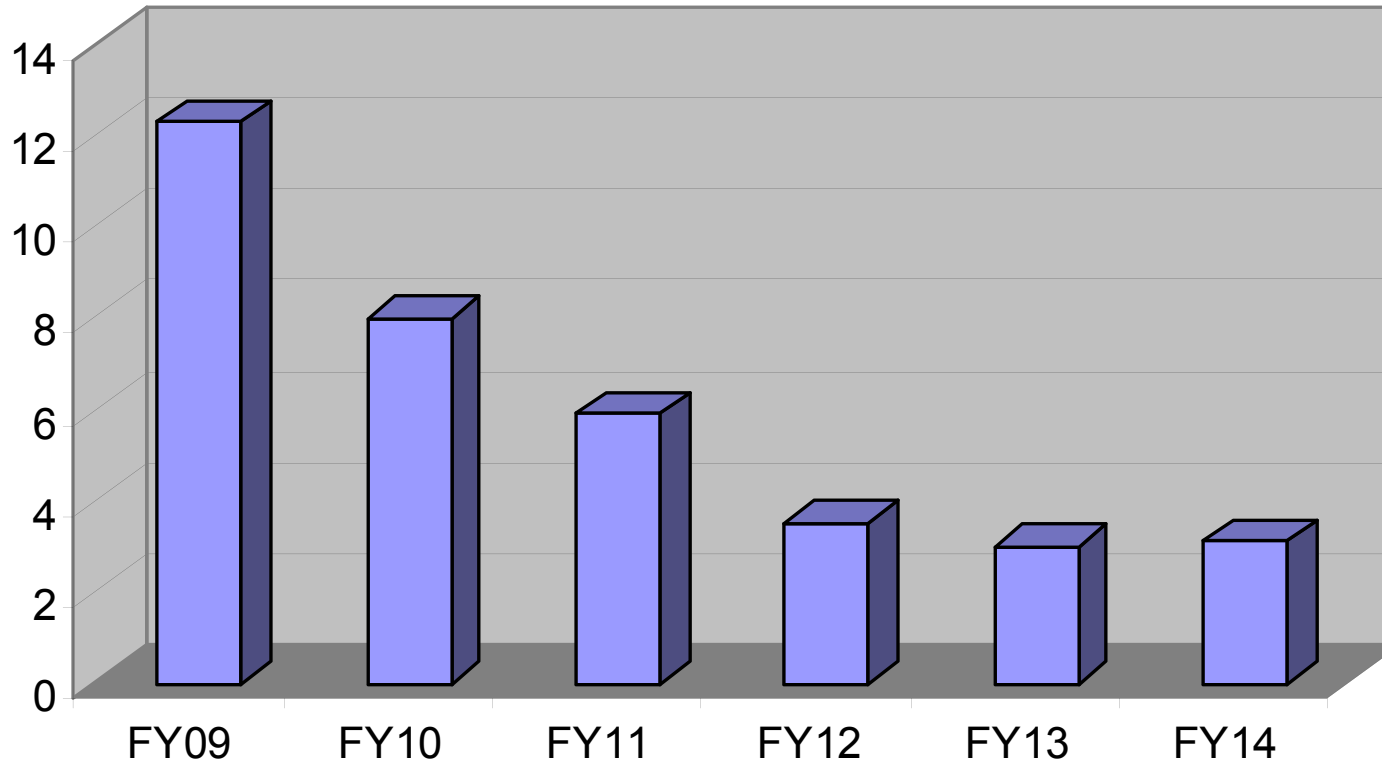
Major increases in Science and Energy in FY 2009 and FY 2010

Note: 2009-10 includes \$27 billion in Recovery Act



Historical Funding for Science and Energy

Deficit as percent of GDP

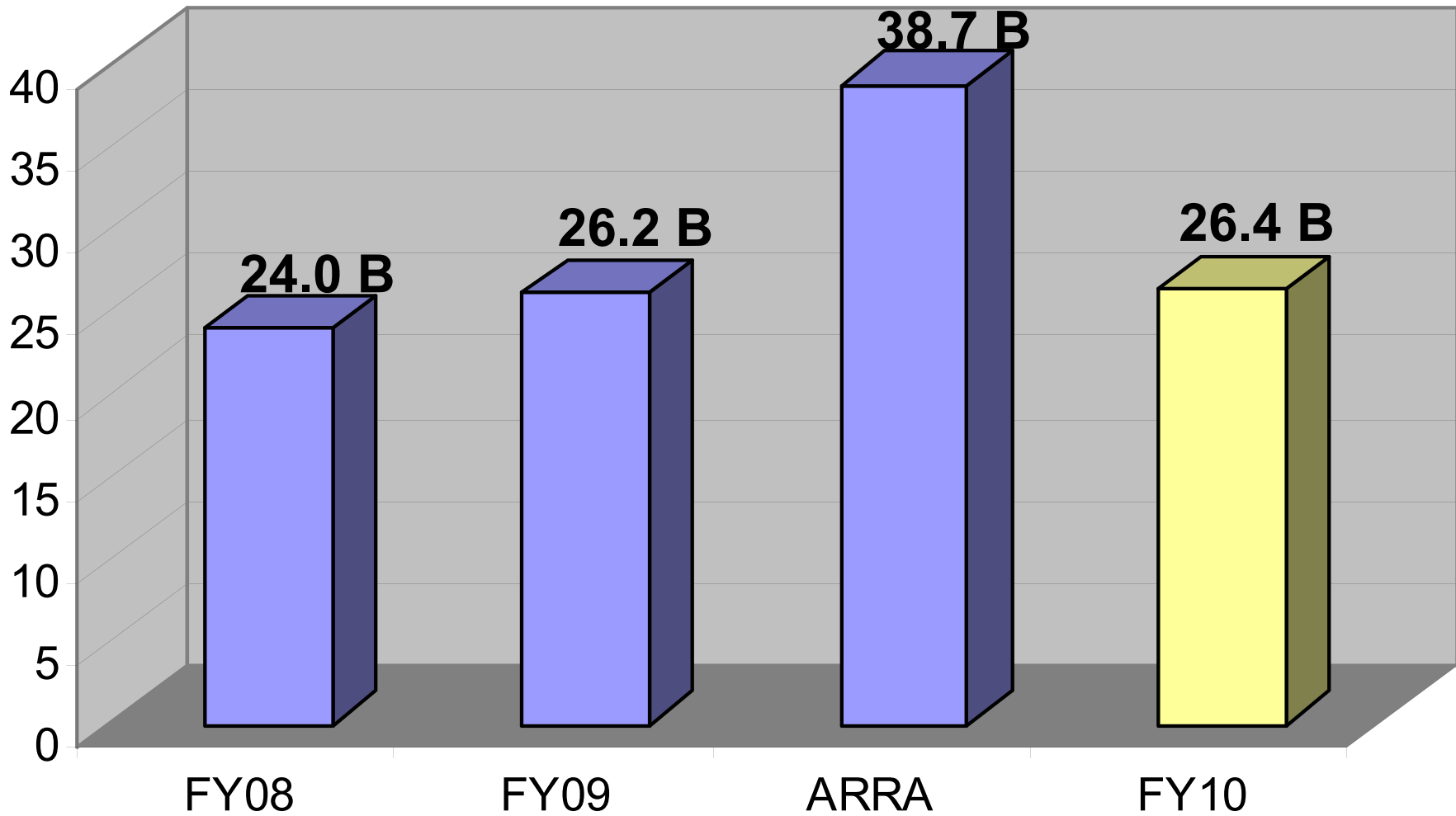


“...while our Budget will run deficits, we must begin the process of making the tough choices necessary to restore fiscal discipline, cut the deficit in half by the end of my first term in office, and put our Nation on sound fiscal footing.” -- President Obama

Placing our budget on a trajectory of fiscal discipline



Total DOE Funding



The total FY10 Request level is \$146M or 0.6% above FY 2009

NOTE: Does not include \$7.5B in ATVM loan subsidy costs for FY 2009



FY 2010 Budget Submission

Program (\$ in millions)	FY 2008 Approp.	FY 2009 Enacted	FY 2009 Recovery Act	FY 2010 Request	FY 2010 vs. FY 2009	
					\$	%
Energy Efficiency and Renewable Energy..	1,704	2,179	16,800	2,319	+140	+6%
Electricity Delivery & Energy Reliability.....	136	137	4,500	208	+71	+52%
Fossil Energy.....	889	1,110	3,400	882	-229	-21%
Nuclear Energy.....	754	871	—	845	-26	-3%
Science.....	4,083	4,758	1,600	4,942	+184	+4%
ARPA-E.....	—	15	400	10	-5	-33%
National Nuclear Security Administration...	9,093	9,617	—	9,945	+328	+3%
Environmental Management.....	5,757	5,992	6,000	5,830	-162	-3%
Civilian Radioactive Waste Management...	386	288	—	197	-92	-32%
Other.....	1,230	1,283	6,025	1,218	-65	-5%
Total, Discretionary Funding.....	24,032	26,248	38,725	26,394	+146	+0.6%

* NOTE: Displays MOX in NNSA and does not include \$7.5 billion ATVM



DOE Energy Innovation Hubs

- **Energy Efficient Building Systems Design (EERE)**
- **Solar Electricity (EERE)**
- **Grid Materials, Devices and Systems (OE)**
- **Carbon Capture and Sequestration (FE)**
- **Extreme Materials (NE)**
- **Modeling and Simulation (NE)**
- **Fuels from Sunlight (SC)**
- **Batteries and Energy Storage (SC)**



Energy Efficiency and Renewable Energy

Program (\$ in millions)	FY 2008 Approp.	FY 2009 Enacted	FY 2009 Recovery Act	FY 2010 Request	FY 2010 vs. FY 2009	
					\$	%
Solar energy.....	166	175	—	320	+145	83%
Wind energy.....	49	55	118	75	+20	36%
Geothermal technology.....	19	44	400	50	+6	14%
Biomass.....	196	217	787	235	+18	8%
Fuel cell technologies.....	206	169	43	68	-101	-60%
Vehicle technologies.....	208	273	2,700	333	+60	22%
Building technologies.....	107	140	—	238	+98	70%
RE-ENERGYSE.....	—	—	—	115	+115	N/A
Other.....	753	1,106	12,752	421	—	—
Total.....	1,704	2,179	16,800	2,319	+140	6%

- **Builds off significant funding in Recovery Act**
- **Major increases for solar, wind, vehicles, and building**
- **Funds two Energy Innovation Hubs: Solar and Energy Efficient Buildings**
- **Includes funding for RE-ENERGYSE education initiative**
- **Reduces hydrogen technology funding and refocuses on fuel cells**



Electricity Delivery & Energy Reliability

Program (\$ in millions)	FY 2008 Approp.	FY 2009 Enacted	FY 2009 Recovery Act	FY 2010 Request	FY 2010 vs. FY 2009	
					\$	%
Research and development.....	83	85	4,185	174	+89	+105%
Permitting, siting and analysis.....	—	—	—	7	+7	N/A
Infrastructure security & energy restor.....	—	—	—	6	+6	N/A
Other.....	53	52	315	21	-31	--
Total.....	136	137	4,500	208	+71	+52%

- **Program refocused to support Administration goals of increasing electricity from renewable sources and improving the efficiency and reliability of the grid**
- **Significantly increased investments in R&D advances:**
 - Smart grid technologies (i.e. smart grid functionalities for plug-in hybrid vehicles)
 - Cyber security protections and controls
 - Energy storage technologies
 - Energy Innovation Hub: Grid Materials, Devices and Systems



Fossil Energy

Program (\$ in millions)	FY 2008 Approp.	FY 2009 Enacted	FY 2009 Recovery Act	FY 2010 Request	FY 2010 vs. FY 2009	
					\$	%
Fossil Energy R&D.....	727	876	3,400	618	-258	-29%
Clean Coal Power Initiative (CCPI).....	67	288	800	—	-288	-100%
Carbon Sequestration.....	116	150	—	180	+30	+20%
CCPI Round 3.....	—	—	800	—	—	—
Carbon Capture Competitive Solic.....	—	—	1,520	—	—	—
Strategic Petroleum Reserve.....	188	205	—	229	+24	+12%
Other Programs.....	-26	29	—	35	+6	+21%
Total.....	889	1,110	3,400	882	-228	-21%

- **Funds Energy Innovation Hub in Carbon Capture & Sequestration**
- **No funding for Clean Coal Power Initiative given major Recovery Act funding**
- **Increase in Strategic Petroleum Reserve for needed repairs of cavern**
- **Request repeal of the Ultra-Deepwater Fund via a legislative proposal.**



Nuclear Energy

Program (\$ in millions)	FY 2008 Approp.	FY 2009 Enacted	FY 2009 Recovery Act	FY 2010 Request	FY 2010 vs. FY 2009	
					\$	%
Research and development.....	257	515	—	403	-112	-22%
Fuel Cycle R&D.....	—	145	—	192	+47	+32%
Nuclear Power 2010.....	134	178	—	20	-158	-89%
Generation IV nuclear systems.....	114	180	—	191	+11	+6%
Infrastructure	239	285	—	364	+79	+28%
Other.....	258	71	—	71	—	—
Total.....	754	871	—	845	-26	-3%

- **Renewed emphasis on long term reactor and fuel cycle R&D**
- **Two New Energy Hubs for Modeling and Simulation and Extreme Materials**
- **Resumes Pu-238 production**
- **Completes NP 2010 program and terminates Nuclear Hydrogen program**

* NOTE: Assumes MOX in NNSA budget all years



Science

Program (\$ in millions)	FY 2008 Approp.	FY 2009 Enacted	FY 2009 Recovery Act	FY 2010 Request	FY 2010 vs. FY 2009	
					\$	%
High energy physics.....	703	796	232	819	+23	+3%
Nuclear physics.....	424	512	155	552	+40	+8%
Biological and environmental research.....	531	602	166	604	+3	+0%
Basic energy sciences.....	1,253	1,572	555	1,686	+114	+7%
Advanced scientific computing research.....	342	369	157	409	+40	+11%
Fusion energy sciences.....	295	403	91	421	+18	+5%
Workforce dev for teachers and scientists....	8	14	13	21	+7	+52%
Other.....	528	491	231	430	-61	-26%
Total.....	4,083	4,758	1,600	4,942	+184	+4%

- **Science doubles over 10 years**
- **Funds two new Energy Hubs in Fuels from Sunlight and Batteries and Energy Storage**
- **Includes new graduate research fellowships program in support of Department's education effort**



ARPA-E

Program (\$ in millions)	FY 2008 Approp.	FY 2009 Enacted	FY 2009 Recovery Act	FY 2010 Request	FY 2010 vs. FY 2009	
					\$	%
Total.....	—	15	400	10	-5	-33%

NOTE: FY 2009 in Science budget

- **Funding provides for continued administration of program**
- **Recovery Act funding to support solicitations through FY 2010**



National Nuclear Security Administration

Program (\$ in millions)	FY 2008 Approp.	FY 2009 Enacted	FY 2009 Recovery Act	FY 2010 Request	FY 2010 vs. FY 2009	
					\$	%
Weapons.....	6,302	6,380	—	6,384	4	0%
Defense Nuclear Nonproliferation.....	1,614	1,969	—	2,137	167	8%
Naval Reactors.....	775	828	—	1,003	175	21%
Office of the Administrator.....	402	439	—	421	-18	-4%
Total.....	9,093	9,617	—	9,945	328	3%

- **Weapons Activities**
 - Constant at FY 2009 levels to meet immediate needs of the stockpile
 - New emphasis placed on revitalizing science

- **Defense Nuclear Nonproliferation**
 - Provides installation of radiation detection equipment at an additional 42 foreign sites and an additional 15 Megaports.

- **Naval Reactors**
 - Increases fund new R&D initiatives: Ohio-Class Ballistic Missile Submarine Replacement and the Land-Based Prototype Refueling.



Environmental Management

Program (\$ in millions)	FY 2008 Approp.	FY 2009 Enacted	FY 2009 Recovery Act	FY 2010 Request	FY 2010 vs. FY 2009	
					\$	%
Hanford.....	1,002	1,057	1,635	994	-64	-6%
Office of River Protection.....	977	1,010	326	1,098	+88	+9%
Idaho.....	523	489	468	411	-78	-16%
Oak Ridge.....	493	499	755	411	-88	-18%
Paducah.....	148	170	79	145	-25	-15%
Portsmouth.....	224	241	118	320	+79	+33%
Savannah River.....	1,287	1,361	1,615	1,342	-19	-1%
Waste Isolation Pilot Plant.....	239	237	172	225	-12	-5%
Los Alamos National Laboratory.....	175	225	212	189	-36	-16%
Other.....	689	703	620	696	-7	-1%
Total (net).....	5,757	5,992	6,000	5,830	-162	-3%

- **Fully funds tank waste management and treatment activities**
- **\$73M increase in Technology Development (tank waste disposition and groundwater modeling)**



Civilian Radioactive Waste Management

Program (\$ in millions)	FY 2008 Approp.	FY 2009 Enacted	FY 2009 Recovery Act	FY 2010 Request	FY 2010 vs. FY 2009	
					\$	%
Total.....	386	288	—	197	-91	-32%

- **Implements the Administration’s decision to terminate Yucca Mountain program while developing nuclear waste disposal alternatives.**
- **Administration will convene a Blue-Ribbon panel of experts to evaluate alternative approaches for meeting the Federal responsibility to manage and ultimately dispose of spent nuclear fuel and high-level radioactive waste**



Loan Programs

Program (\$ in millions)	FY 2008 Approp.	FY 2009 Enacted	FY 2009 Recovery Act	FY 2010 Request	FY 2010 vs. FY 2009	
					\$	%
Administration Expenses:						
Title XVII Innovative loan.....	5	20	25	43	+23	+116%
Advance Tech Vehicle Manufacturing.....	—	10	10	20	+10	+100%

- **Requests support administration of credit programs**
- **Commitments for Title XVII Innovative Technology Loan Guarantees will total an estimated \$100 billion**
 - About \$51 billion will be available to support Section 1703 loans
 - About \$50 billion will be available to support Section 1705 loans
- **Commitments for the Advanced Technology Vehicles Manufacturing Loans will support up to \$25 billion in direct loans**



Corporate Management & Other Activities

Program (\$ in millions)	FY 2008 Approp.	FY 2009 Enacted	FY 2009 Recovery Act	FY 2010 Request	FY 2010 vs. FY 2009	
					\$	%
Departmental Administration.....	302	322	—	383	+61	+19%
Inspector General.....	46	52	15	51	-1	-2%
Energy Information Agency.....	95	111	—	133	+22	+20%
Health, Safety and Security.....	420	447	—	450	+3	+1%
Total.....	863	932	15	1,017	+85	+9%

- **Departmental Administration supports increases in business systems (i-Manage and i-Budget) and project management to improve management of the Department**
- **IG funding maintains important activities of this office**
- **EIA increase to improve the energy supply model and the coverage and scope of the three energy consumption surveys.**
- **HSS funding continues to support DOE’s commitment to maintain a safe and secure work environment**



Additional Budget Information

- Additional budget information can be found at:

www.DOE.gov