

Aligning Policies and Budgets

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Resources to Implement the Vision Have Eroded

	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
Projected: FY 2005 Pres Budget	15,378	16,244	17,002	17,815	18,001	18,034	18,463	18,777	19,267
<i>% change from previous year</i>		5.6%	4.7%	4.8%	1.0%	0.2%	2.4%	1.7%	2.6%
Actual Appropriation and FY 2008 PB		16,196	16,273	16,264	17,309	17,614	18,026	18,460	18,905
<i>% change from previous year</i>		5.3%	0.5%	-0.1%	6.4%	1.8%	2.3%	2.4%	2.4%
Difference between FY05 and FY08		(48)	(729)	(1,551)	(692)	(420)	(437)	(317)	(362)

NASA has \$3.9 Billion less in FY 2005-2010 than was initially projected when the Vision was announced

- **\$2.9 Billion: In FY 2006, Budget Request Reduced For Deficit Reduction**
 - **\$0.4 Billion: Appropriation Reductions/Rescissions in FY 2005 and FY06 (\$174M and \$210M)**
 - **\$0.6 Billion: Appropriation Reduction in FY 2007 (\$545M to NASA topline, \$577M to Exploration Systems)**
- \$3.9 Billion**

\$7.8 Billion absorbed within NASA's appropriated budget

- **\$1.0 Billion: Appropriation earmarks in FY05-06 (\$426M and \$568M)**
 - **\$2.7 Billion Space Shuttle Return-To-Flight costs through 2010**
 - **\$0.3 Billion: Hubble Servicing Mission – funds needed to preserve option for Shuttle mission**
 - **\$2.4 Billion: Costs to retire/transition Shuttle underestimated for FY08-10 in FY05 placeholder request**
 - **\$1.4 Billion: Costs to support Space Station underestimated for FY08-10 in FY05 placeholder request**
- \$ 7.8 Billion**

The cumulative effects of \$11.7 billion in reductions and costs absorbed within NASA's budget since the Vision for Space Exploration was announced is the overriding reason why NASA cannot develop the Orion/Ares I by 2014.

\$3B Out-year NASA Budget Gap Concentrated in Exploration

Budget Authority (\$ millions)	FY 2008	FY 2009	FY 2010*	FY 2011*	FY 2012*	FY 2013*	FY 2014*
	Actual	Enacted					
FY 2010 President's Budget Request	3,299.4	3,905.5	3,963.1	6,076.6	6,028.5	5,966.5	6,195.3
Constellation Systems	2,675.9	3,433.2	3,505.4	5,543.3	5,472.0	5,407.6	5,602.6
Advanced Capabilities	623.5	472.3	457.7	533.3	556.5	558.9	592.7
FY 2009 President's Budget Request	3,143.1	3,500.5	3,737.7	7,048.2	7,116.8	7,666.8	-
Constellation Systems	2,471.9	3,048.2	3,252.8	6,479.5	6,521.4	7,080.5	-
Advanced Capabilities	671.1	452.3	484.9	568.7	595.5	586.3	-
Total Change from FY2009 President's Budget Request	156.3	405.0	225.4	-971.6	-1,088.3	-1,700.3	

***Following the human spaceflight review, the Administration will provide an updated request for Exploration activities reflecting the review's results.**

	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	Projected at 2.4% inflation		
										FY 2013	FY 2014	
Projected: FY 2005 Pres Budget	15,378	16,244	17,002	17,815	18,001	18,034	18,463	18,777	19,267	19,729.4	20,202.9	
% change from previous year		5.6%	4.7%	4.8%	1.0%	0.2%	2.4%	1.7%	2.6%	2.40%	2.40%	
					FY 2008	FY 2009*	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	
Projected: FY 2010 Pres Budget					17,401.9	18,784.4	18,686.0	18,631.0	18,613.0	18,607.0	18,858.0	
% change from previous year						7.9%	-0.5%	-0.3%	-0.1%	0.0%	1.3%	
*includes Recovery Act												
											total FY10-14	
							223.0	-146.0	-654.0	-1,122.4	-1,344.9	-3,044.3
					FY2008 Act	FY2009 En	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	
Projected: FY 2010 Exploration Budget					3299.4	3905.5	3963.1	6076.6	6028.5	5966.5	6195.3	
FY 2009 Exploration Budget Request					3143.1	3500.5	3737.7	7048.2	7116.8	7666.8	total FY09-13	
Change from FY2009 President's Budget Request					156.3	405	225.4	-971.6	-1088.3	-1700.3	-3,129.8	

The FY2010 Budget Proposal is a Work in Progress

- Between President Bush's budget request of FY05 when the Vision for Space Exploration was announced and what was actually appropriated in FY08, there was a cumulative total of \$11.7 billion in reductions (\$3.9 billion) and costs absorbed (\$7.8 billion, primarily for Shuttle Return to Flight and to complete assembly of the International Space Station) within NASA's budget between FY05-10. These reductions and costs have impacted NASA's plans for Exploration, resulting in a delay of the Initial Operational Capability (IOC) of Orion/Ares I until NET 2015.
- Congress provided an additional \$1 billion for NASA in FY09 recovery funds, including \$400M for Exploration, to which the Obama Administration allocated \$150M for COTS from these Exploration funds.
- The Obama Administration is requesting \$18.686 billion for NASA in FY2010, a \$904 million increase or slightly over 5%. This is helpful in the critical transition years now underway with the upcoming retirement of the Shuttle, but the additional funding is too late to accelerate development of Orion/Ares I.
- Beyond FY2010, NASA's budget is effectively flat from FY2011-2014, and does not keep up with inflation.

Work in Progress (cont.)

- Compared to Bush Administration projections from FY08, the NASA budget projection is now about \$3 billion less in the critical transition years FY2009-2013. The Obama Administration budget cuts Exploration spending primarily to pay for Earth Science and Aeronautics.
- While the Obama Administration's proposed budget for NASA will not likely affect Orion/Ares 1 IOC, it will likely impact Ares V and Altair development and schedule for new manned missions to the Moon (currently planned for NET 2020), especially if NASA continues to pay for extended ISS operations past 2016.
- The Obama Administration's budget will likely have long-term negative impacts on the workforces at KSC, MSFC, MAF, GRC, JSC, and other NASA centers since there is less funding for Exploration (Ares V and Altair) to backfill after retirement of the Shuttle. It is unlikely that sufficient Earth Science and Aeronautics work can be distributed to affected centers to offset these impacts
- The situation may change as a result of the Human Spaceflight Review and any resulting updates to the FY2010 budget proposal and impacts on the FY2011 NASA budget proposal.

Inflation Assumptions Matter

- No OMB Guidance at present for growth rates in FY2015 and beyond
 - This guidance matters a lot to Agency buying power
 - Agencies tend to use last growth rates for out year planning
- FY09 Budget Proposal used 2.4% per year for the NASA top-line
 - Would result in \$59B for FY2014-2020 in Exploration
- FY10 Budget Proposal used 1.36% for 2013-2014
 - Would result in \$48.3B for FY2014-2020 in Exploration
- Growth rate assumptions result in a \$10.7B difference for Exploration in the seven years of FY2014-2020
 - in addition to earlier budget erosions