



Budget Structure and Management

Presented to:
NAC Institutional Committee

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Office of the Chief Financial Officer
November 19, 2014

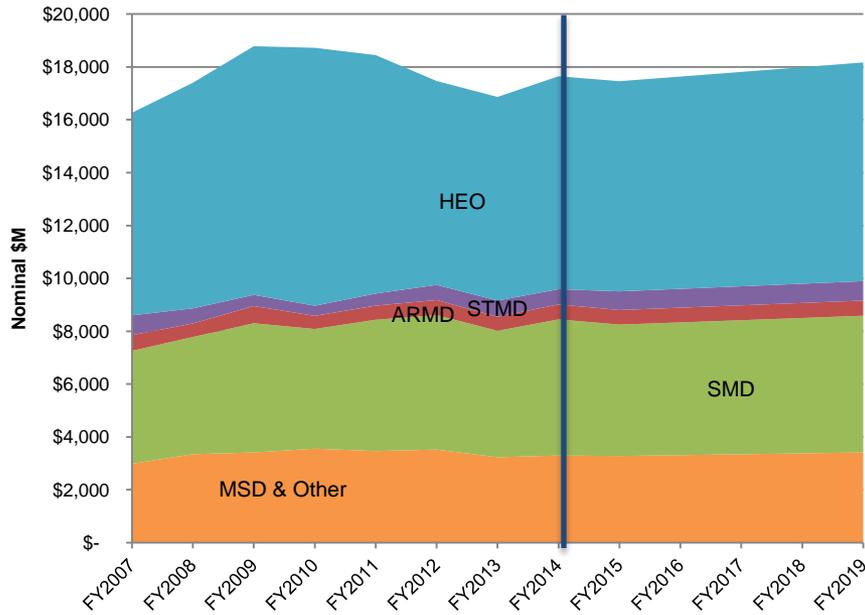


Considerations for Today's Environment

- **Managing and planning with Uncertainty – implications to our strategic issues**
 - Implementing a human exploration program that can be executed within a realistic budget in the far outyears;
 - Aligning NASA's workforce and facilities with existing and future mission needs;
 - Maintaining competitive programs in the Science portfolio given desire to support ongoing and future large directed missions;
 - Ensuring technologies developed by Space Technology and Aeronautics are useful to industry, NASA, or other government agencies
 - **Driving efficiency to offset reduced buying power**
 - **Balancing the right level of insight and control when our systems can get data at the lowest level**
 - **Integrated strategy-performance-budget framework and reporting/oversight**
-
- **President's Second Term Management Agenda Priorities**
 - **Effectiveness**
 - Government transactions made available to citizens and businesses
 - Smarter IT delivery
 - **Efficiency**
 - Shared Services
 - Reduce duplication, admin overhead and improve efficiency
 - **Economic Growth**
 - Make government-generated data as well as R&D results available to the public
 - **People and Culture**
 - Create a culture that values excellence and encourages innovation within the public servant cadre
 - **Federal CFO Council Priorities**
 - Reducing Reporting Burden – Streamlining existing reporting requirements
 - Shared Services Strategy and Implementation
 - Defining a Government Enterprise Risk Management Framework
 - Increased Collaboration and Utilization of Data Analytics

FY 2015 request Starting Point

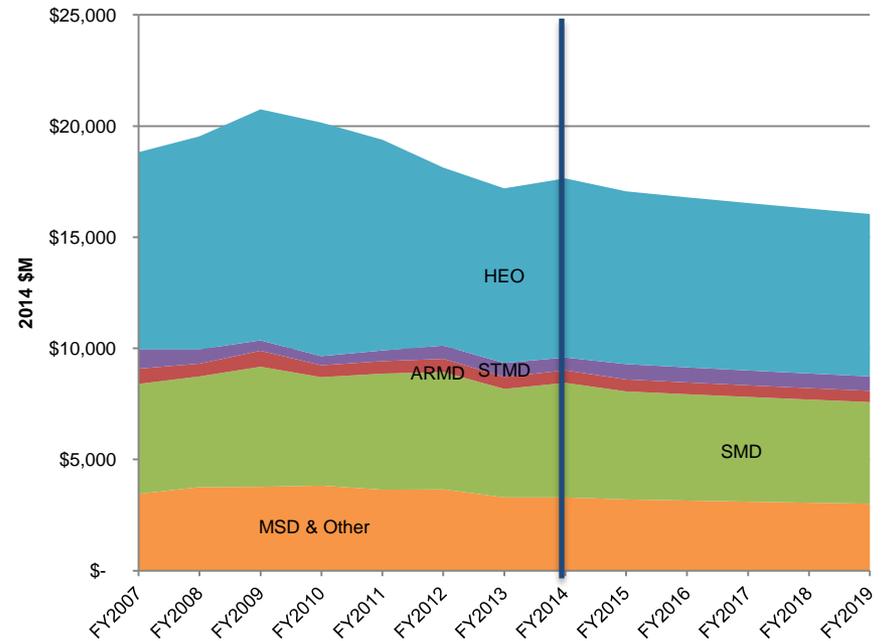
Budget Dollars



NASA's planned budget of \$17.46B is about 7% lower than the \$18.7B NASA received in FY2010.

- Shuttle retirement compensates for some of this loss, but at the expense of a previously planned additional ESMD development wedge.

Buying Power



Adjusted for inflation, by FY19, NASA may be about 80% of the size it was in FY10.

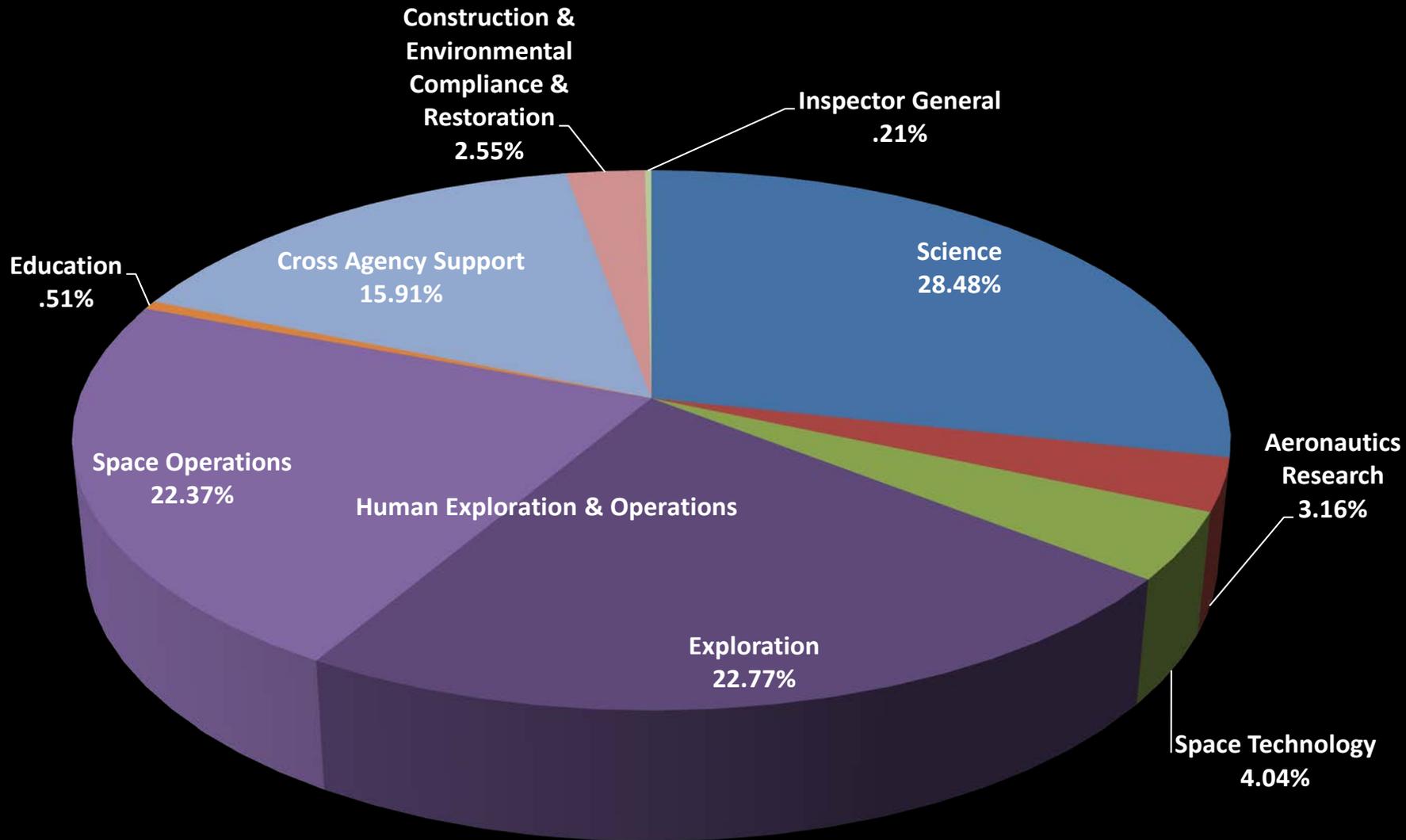
- Agency buying power in FY18 will be about \$16B in 2014\$
- **In effect, inflation sequesters us over time.**

FY15 – Managing Uncertainty

- For the FY15 column in the budget, we have been planning to all these numbers:
 - 17.715B (Notional FY15 column in the FY14 Pres. Request)
 - 17.646B (FY14 enacted...where Congress starts)
 - 17.271B (5% reduction)
 - 16.120B (worst case sequestration)
 - 16.366B (10% reduction)
 - 17.460B (President's request)
 - 17.896B (House mark)
 - 17.900B (Senate mark)
 - ???  Enacted

A \$1.8b swing of uncertainty

FY 2015 Proposal - \$17.5 Billion



FY15 Hill action to date

	<u>FY15</u> <u>PBR</u>	<u>House</u> <u>Floor</u>	Delta House to PBR	<u>Senate</u> <u>Mark</u>	Delta Senate to PBR
Science	4,972	5,193	221	5,200	227
Earth Science	1,770	1,750	-20	1,832	62
Planetary Science	1,280	1,450	170	1,302	21
Astrophysics	607	680	73	708	101
James Webb Space Telescope	645	645	0	645	0
Heliophysics	669	668	-1	671	2
				42	42
Aeronautics	551	666	115	551	0
Space Technology	706	627	-79	580	-125
Exploration	3,976	4,167	191	4,368	392
Exploration Systems Development	2,784	3,055		3,251	
<i>Multi-Purpose Crew Vehicle</i>	1,053	1,140	87	1,200	147
<i>SLS Vehicle Development</i>	1,380	1,600	220	1,700	320
<i>Expl. Grnd Sys.</i>	351	315	-36	351	0
Commercial Spaceflight	848	785	-63	805	-43
Exploration R & D	343	327	-16	311	-32
Space Operations	3,905	3,878	-27	3,831	-75
Space Shuttle	-				
International Space Station	3,051	3,033	-18	3,013	-38
Space and Flight Support	855	845	-10	818	-37
Education	89	106	17	108	19
Cross-Agency Support	2,779	2,779	0	2,779	0
CECR	446	446	0	446	0
Inspector General	37	34	-3	38	1
NASA Total	\$17,461	\$17,896	\$435	\$17,899	\$439



Note areas
of
difference
with
President's
request



FY 2015 Budget Request

Notional

	FY 2013 Op Plan*	FY2014 Enacted	FY2014 Op Plan**	FY2015	FY2016	FY2017	FY2018	FY2019
Science	4,781.6	5,151.2	5,148.2	4,972.0	5,021.7	5,071.9	5,122.6	5,173.9
Earth Science	1,659.2	1,826.0	1,824.9	1,770.3	1,815.5	1,837.6	1,861.9	1,886.3
Planetary Science	1,271.5	1,345.0	1,343.4	1,280.3	1,304.9	1,337.1	1,355.7	1,374.1
Astrophysics	617.0	668.0	678.3	607.3	633.7	651.2	696.8	933.0
James Webb Space Telescope	627.6	658.2	658.2	645.4	620.0	569.4	534.9	305.0
Heliophysics	606.3	654.0	643.3	668.9	647.6	676.6	673.3	675.5
Aeronautics	529.5	566.0	566.0	551.1	556.6	562.2	567.8	573.5
Space Technology	614.5	576.0	576.0	705.5	712.6	719.7	726.9	734.2
Exploration	3,705.5	4,113.2	4,113.2	3,976.0	4,079.9	4,049.4	4,107.7	3,673.4
Exploration Systems Development	2,883.8	3,115.2	3,115.2	2,784.4	2,863.3	2,905.9	2,982.1	3,106.6
Commercial Spaceflight	525.0	696.0	696.0	848.3	872.3	791.7	730.9	172.0
Exploration Research and Development	296.7	302.0	302.0	343.4	344.3	351.8	394.7	394.7
Space Operations	3,724.9	3,778.0	3,776.4	3,905.4	3,951.9	4,062.8	4,085.6	4,601.8
Space Shuttle	38.8							
International Space Station	2,775.9		2,964.1	3,050.8	3,126.5	3,266.9	3,290.3	3,818.6
Space and Flight Support (SFS)	910.2		812.3	854.6	825.4	795.9	795.3	783.2
Education	116.3	116.6	116.6	88.9	89.8	90.7	91.6	92.6
Cross Agency Support	2,711.0	2,793.0	2,793.0	2,778.6	2,806.4	2,834.4	2,862.8	2,891.4
Center Management and Operations	1,991.6		2,041.5	2,038.8	2,059.2	2,079.7	2,100.5	2,121.6
Agency Management and Operations	719.4		751.5	739.8	747.2	754.7	762.3	769.8
Construction & Envrntl Compl Restoration	646.6	515.0	519.6	446.1	379.0	382.7	386.6	390.4
Construction of Facilities	589.5		453.5	370.6	302.7	305.7	308.8	311.8
Environmental Compliance and Restoration	57.0		66.1	75.5	76.3	77.0	77.8	78.6
Inspector General	35.3	37.5	37.5	37.0	37.4	37.7	38.1	38.5
Grand Total	16,865.2	17,646.5	17,646.5	17,460.6	17,635.3	17,811.5	17,989.7	18,169.7

**FY 2013 includes rescissions per P.L.113-6 Division G, Section 3001(b)(1)(B) and Division G, Section 3004(c)(1); it also includes sequester per BBEDCA Section 215A, and August 2013 Operating Plan.*

***FY 2014 reflects funding levels provided in P.L.113-76, Consolidated Appropriations Act, 2014.*

Note: Funds associated with out-year estimates for programmatic construction remain in programmatic accounts.



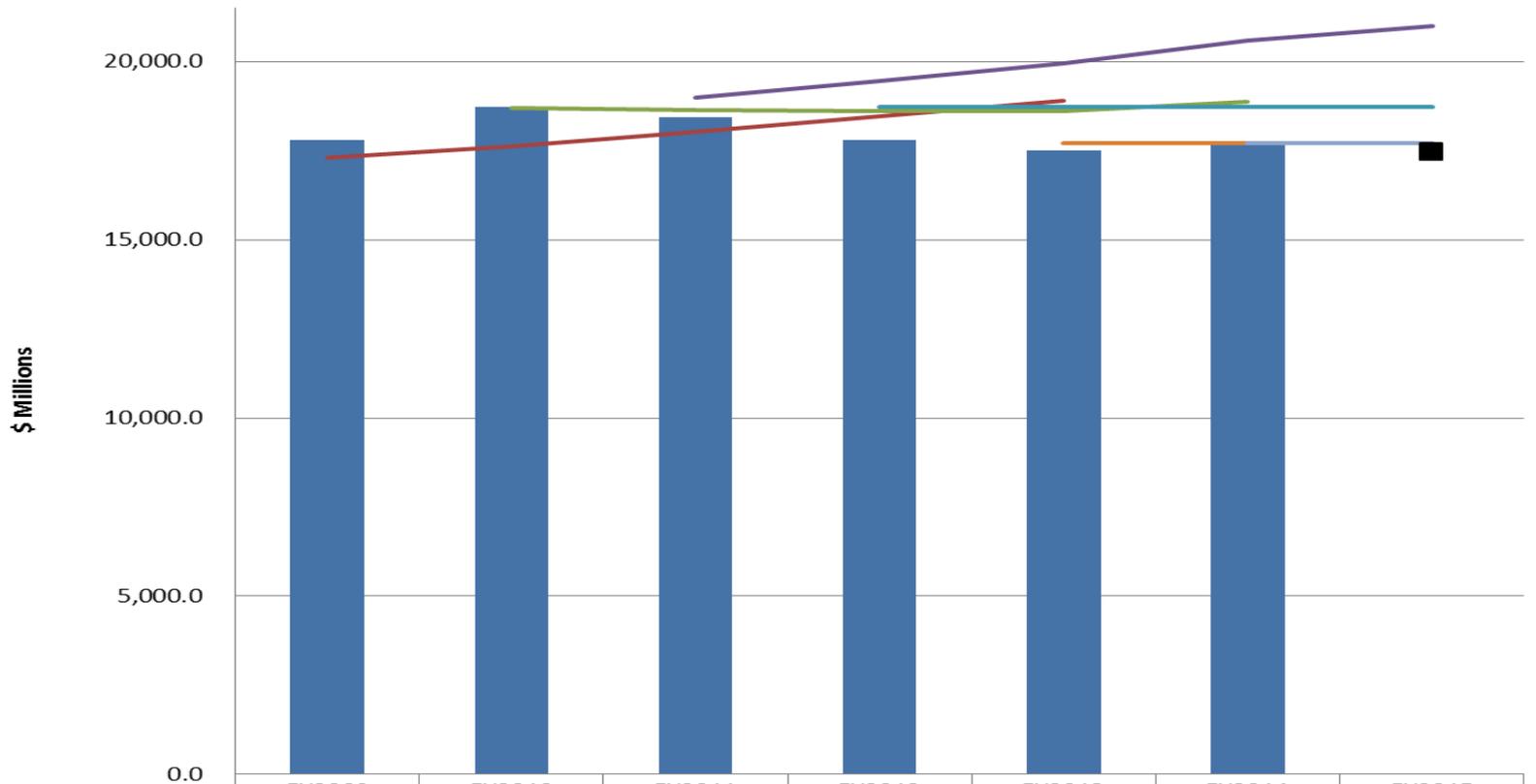
Account Comparison of Presidents Budget Request to Enacted Budgets

Observations

- This Administration has requested over \$109B (FY10 thru FY15) for NASA. \$52B of that has been for Human exploration and Operations.
- Thru FY14 Administration has requested 91.8B from Congress. Congress has appropriated \$89.4B. This is \$2.4B less than requested.
- Over the last four years we have invested \$12.5 Billion on SLS, Orion and the ground systems to launch them.
- During this time NASA requested 3 billion for the commercial crew program and was provided less than 2 billion.



Total Agency



	FY2009	FY2010	FY2011	FY2012	FY2013	FY2014	FY2015
■ Enacted	17,782.4	18,724.3	18,448.0	17,800.0	17,491.7	17,646.5	
— FY2009 PBR	17,309.4	17,614.2	18,026.3	18,460.4	18,905.0		
— FY2010 PBR		18,686.0	18,631.0	18,613.0	18,607.0	18,858.0	
— FY2011 PBR			19,000.0	19,450.0	19,960.0	20,600.0	20,990.0
— FY2012 PBR				18,724.3	18,724.3	18,724.3	18,724.3
— FY2013 PBR					17,711.4	17,711.4	17,711.4
— FY2014 PBR						17,715.4	17,715.4
■ FY2015 PBR							17,460.6

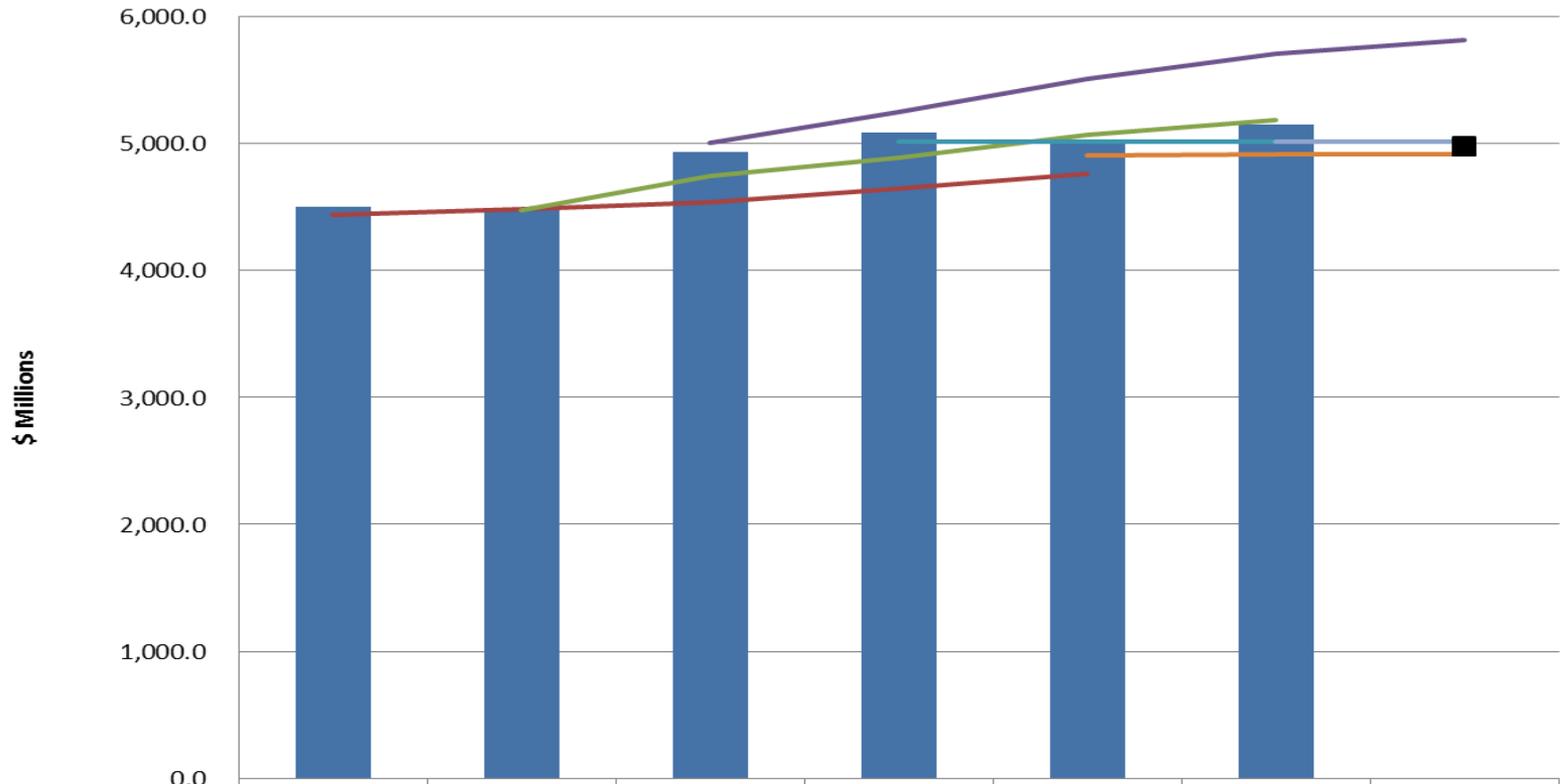
Notes:

*FY 2011 Enacted does not include rescission.

**FY 2013 Enacted does not include sequester.



Science



	FY2009	FY2010	FY2011	FY2012	FY2013	FY2014	FY2015
■ Enacted	4,503.0	4,493.3	4,935.4	5,090.0	5,037.4	5,151.2	
— FY2009 PBR	4,441.5	4,482.0	4,534.9	4,643.4	4,761.6		
— FY2010 PBR		4,477.2	4,747.4	4,890.9	5,069.0	5,184.4	
— FY2011 PBR			5,005.6	5,248.6	5,509.6	5,709.8	5,814.0
— FY2012 PBR				5,016.8	5,016.8	5,016.8	5,016.8
— FY2013 PBR					4,911.2	4,914.4	4,914.4
— FY2014 PBR						5,017.8	5,017.8
■ FY2015 PBR							4,972.0

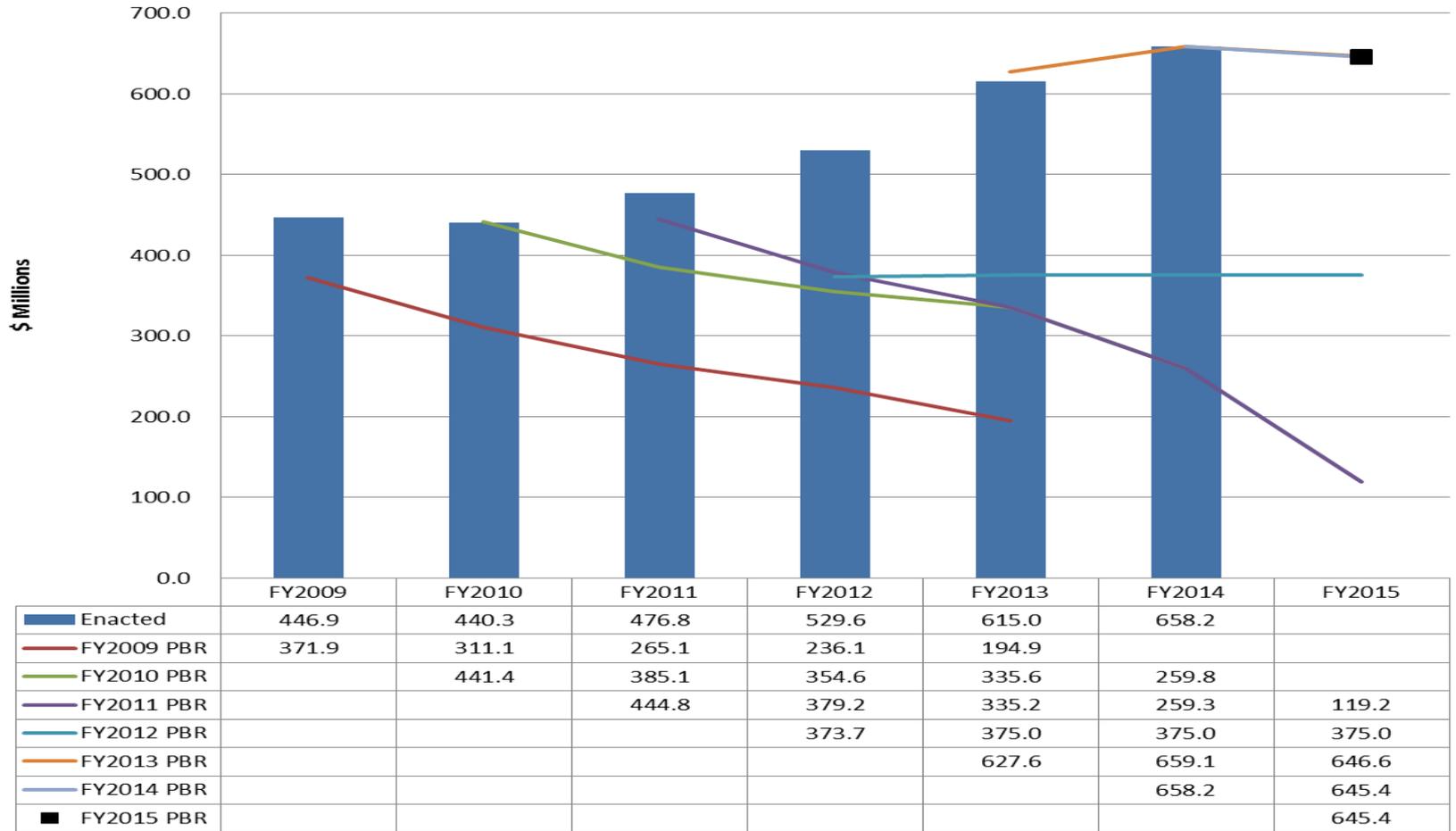
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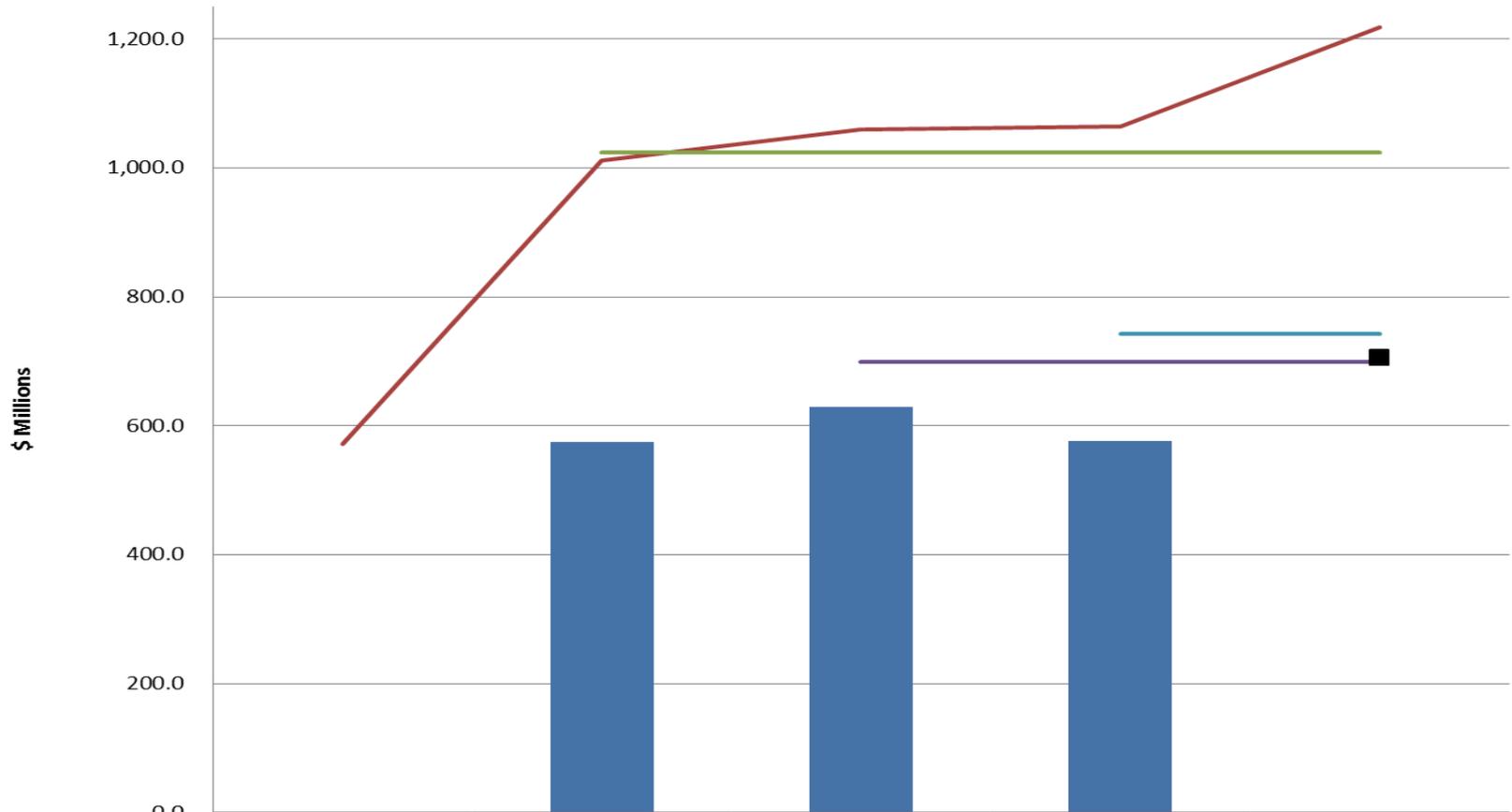
JWST



Congress has consistently supported JWST, appropriating at or above request in each year. The FY 12 Budget was the first released after the Casani Report. NASA informally revised its life-cycle estimate upward. The FY 2013 appropriation was below the request due to rescissions and sequestration. NASA fully funded JWST through the Operating Plan. History of requests shows NASA's continued optimism in FY 09-11 Budgets that JWST was just about over its peak needs.



Space Technology



	FY2011	FY2012	FY2013	FY2014	FY2015
■ Enacted		575.0	628.7	576.0	
— FY2011 PBR	572.2	1,012.2	1,059.7	1,063.9	1,217.9
— FY2012 PBR		1,024.2	1,024.2	1,024.2	1,024.2
— FY2013 PBR			699.0	699.0	699.0
— FY2014 PBR				742.6	742.6
■ FY2015 PBR					705.5

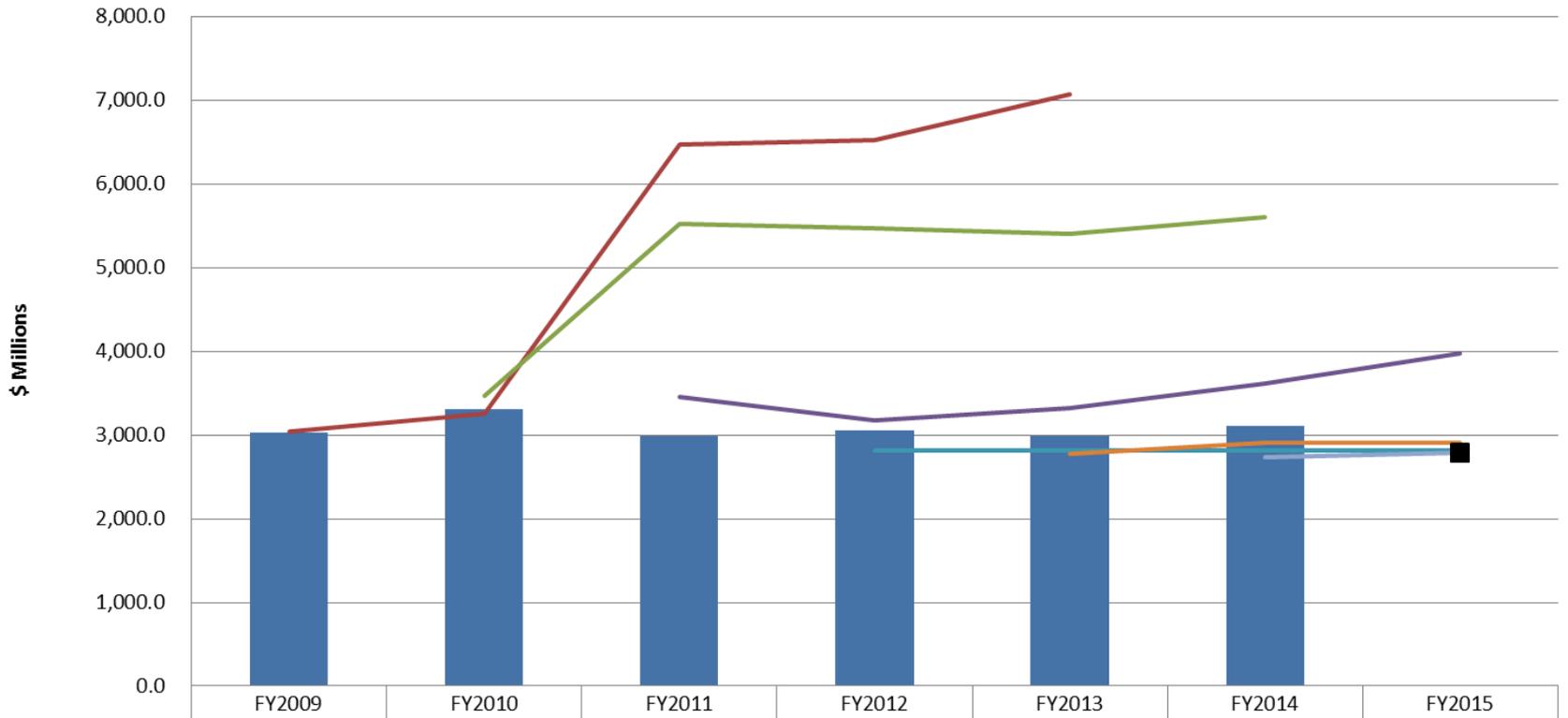
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Exploration Systems Development



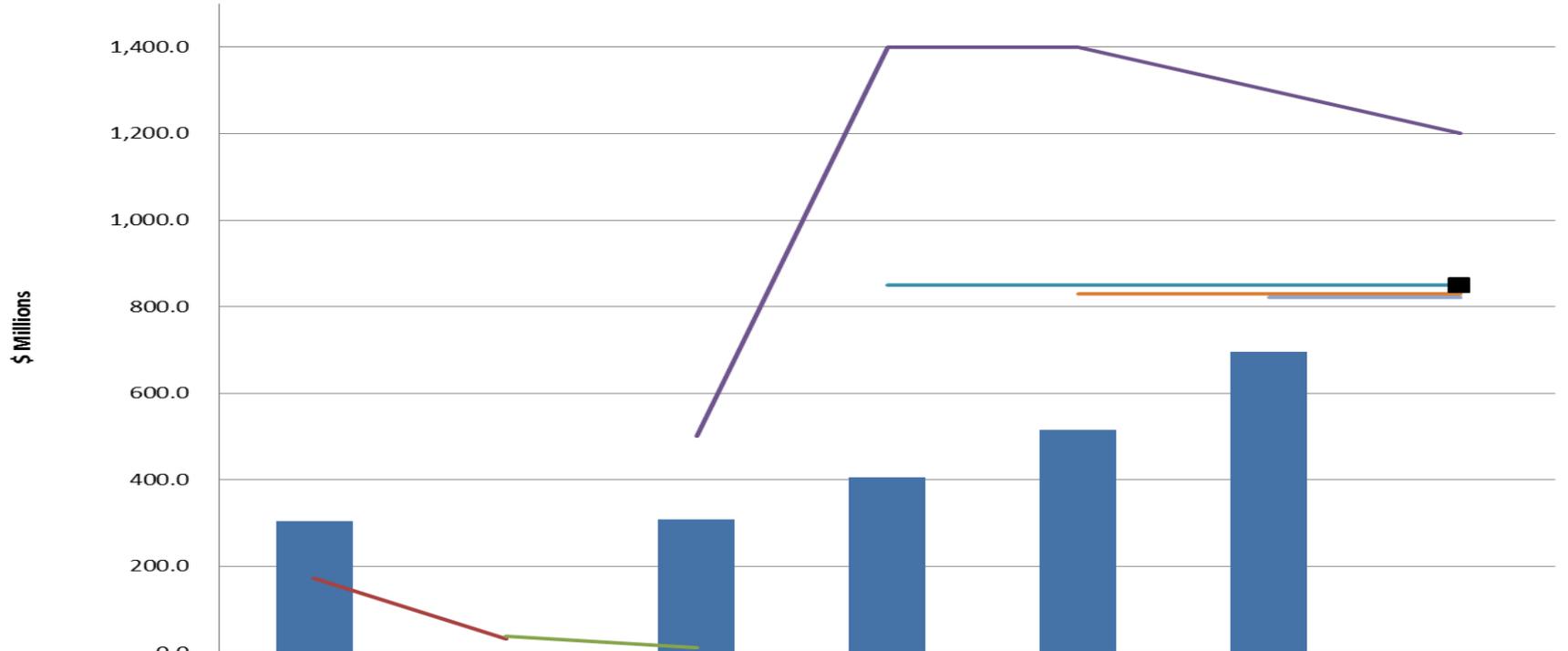
	FY2009	FY2010	FY2011	FY2012	FY2013	FY2014	FY2015
■ Enacted	3,033.2	3,306.8	2,994.0	3,060.0	2,990.7	3,115.2	
— FY2009 PBR	3,048.2	3,252.8	6,479.5	6,521.4	7,080.5		
— FY2010 PBR		3,466.4	5,531.3	5,472.0	5,407.6	5,602.6	
— FY2011 PBR			3,451.4	3,177.4	3,318.9	3,623.3	3,979.3
— FY2012 PBR				2,810.2	2,810.2	2,810.2	2,810.2
— FY2013 PBR					2,769.4	2,913.1	2,913.1
— FY2014 PBR						2,730.0	2,789.8
■ FY2015 PBR							2,784.4

Notes:

- *FY 2011 Enacted does not include rescission.
- **FY 2013 Enacted does not include sequester.
- ***FY2013 and FY2014 PBR excludes Programmatic CoF.



Commercial Crew

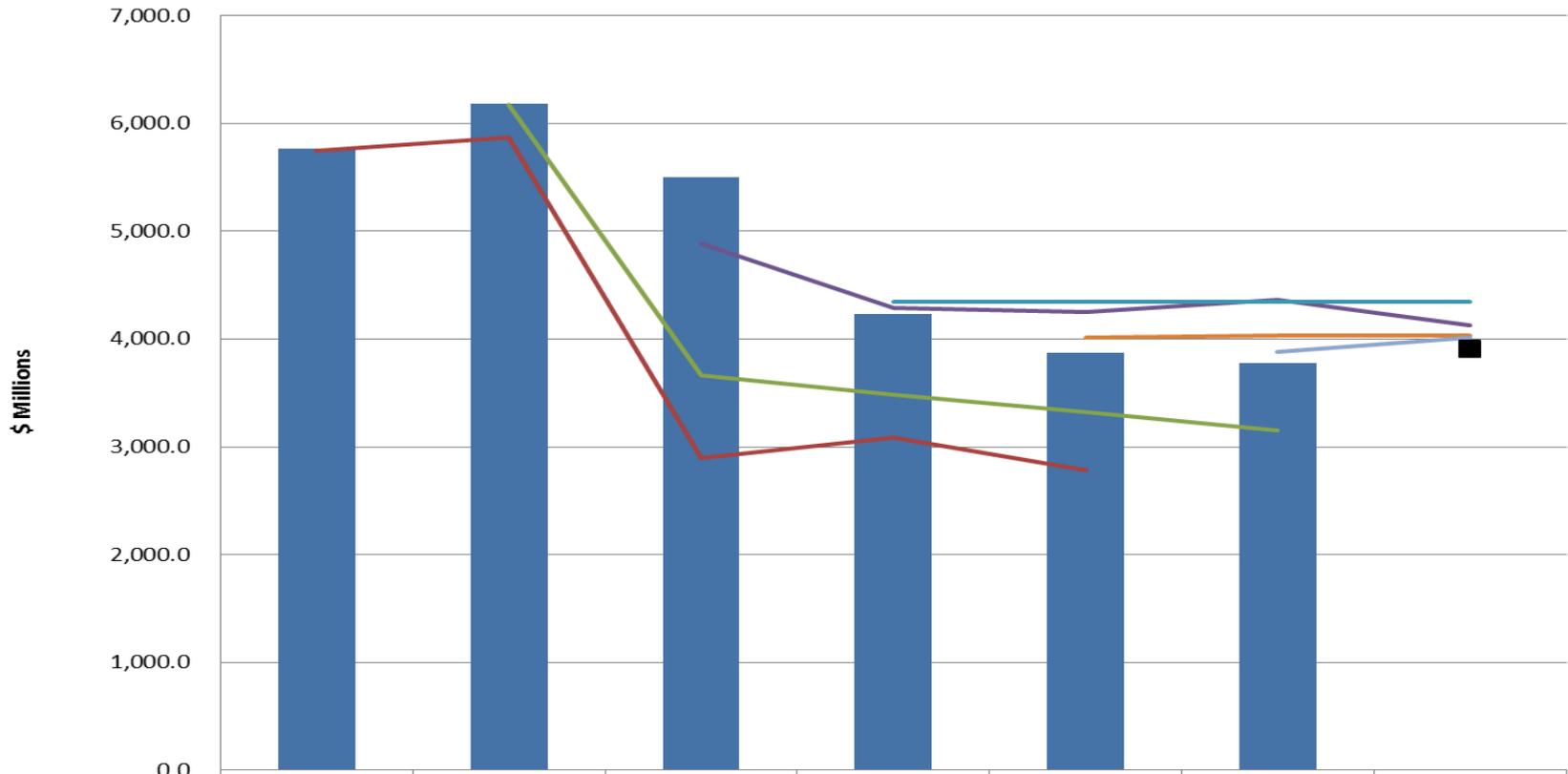


	FY2009	FY2010	FY2011	FY2012	FY2013	FY2014	FY2015
■ Enacted	303.0		307.4	406.0	514.1	696.0	
■ FY2009 PBR	173.0	31.3					
■ FY2010 PBR		39.1	12.2				
■ FY2011 PBR			500.0	1,400.0	1,400.0	1,300.0	1,200.0
■ FY2012 PBR				850.0	850.0	850.0	850.0
■ FY2013 PBR					829.7	829.7	829.7
■ FY2014 PBR						821.4	821.4
■ FY2015 PBR							848.3

FY2009 – FY2010 is the tail-end of COTS, FY2011 is split between COTS and Commercial Crew, and FY2012 – FY2014 is Commercial Crew only.



Space Operations



	FY2009	FY2010	FY2011	FY2012	FY2013	FY2014	FY2015
■ Enacted	5,764.7	6,180.6	5,497.5	4,233.6	3,871.0	3,778.0	
■ FY2009 PBR	5,744.7	5,872.8	2,900.1	3,089.9	2,785.5		
■ FY2010 PBR		6,175.6	3,663.8	3,485.3	3,318.6	3,154.8	
■ FY2011 PBR			4,887.8	4,290.2	4,253.3	4,362.6	4,130.5
■ FY2012 PBR				4,346.9	4,346.9	4,346.9	4,346.9
■ FY2013 PBR					4,013.2	4,035.1	4,035.1
■ FY2014 PBR						3,882.9	4,014.9
■ FY2015 PBR							3,905.4

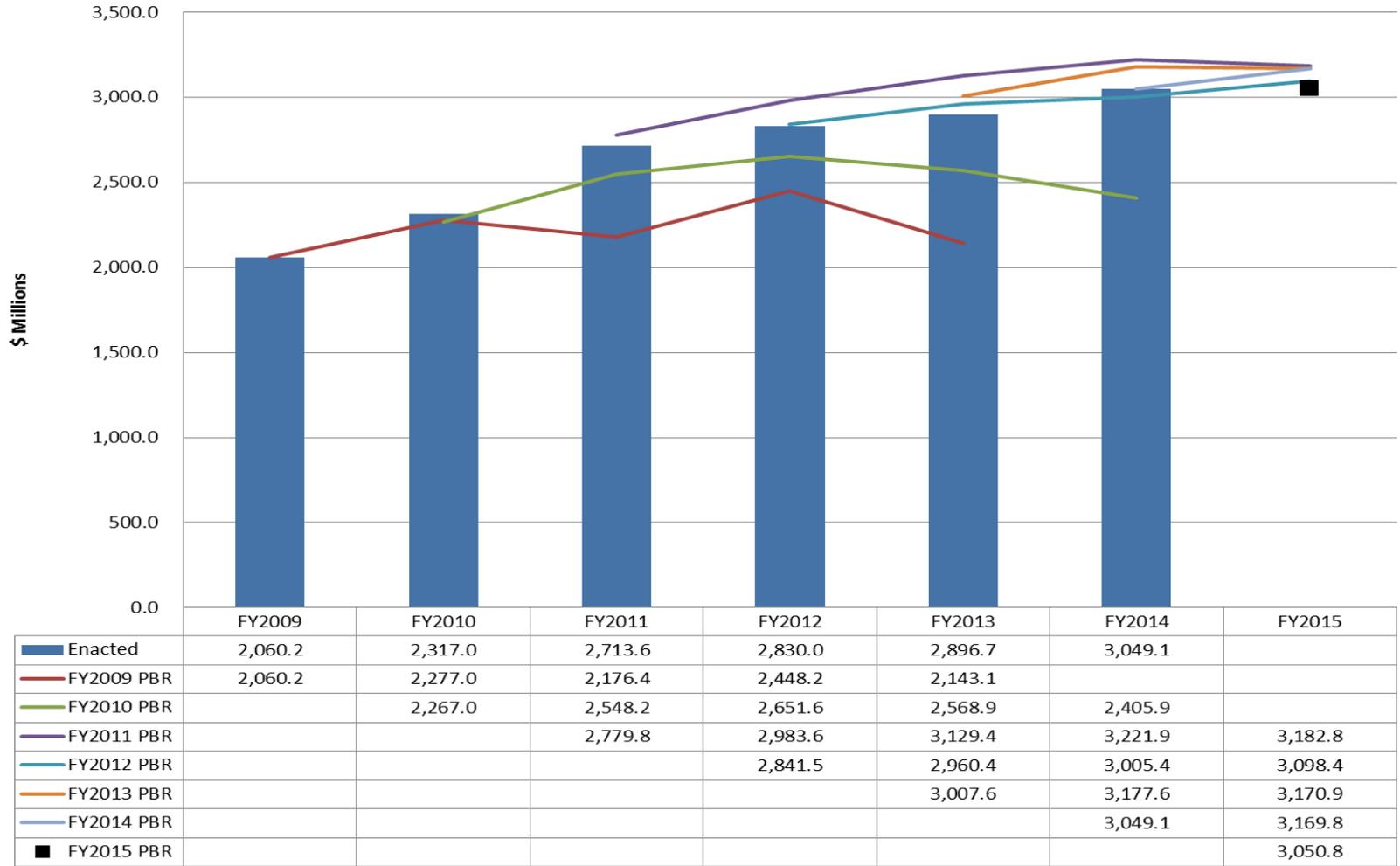
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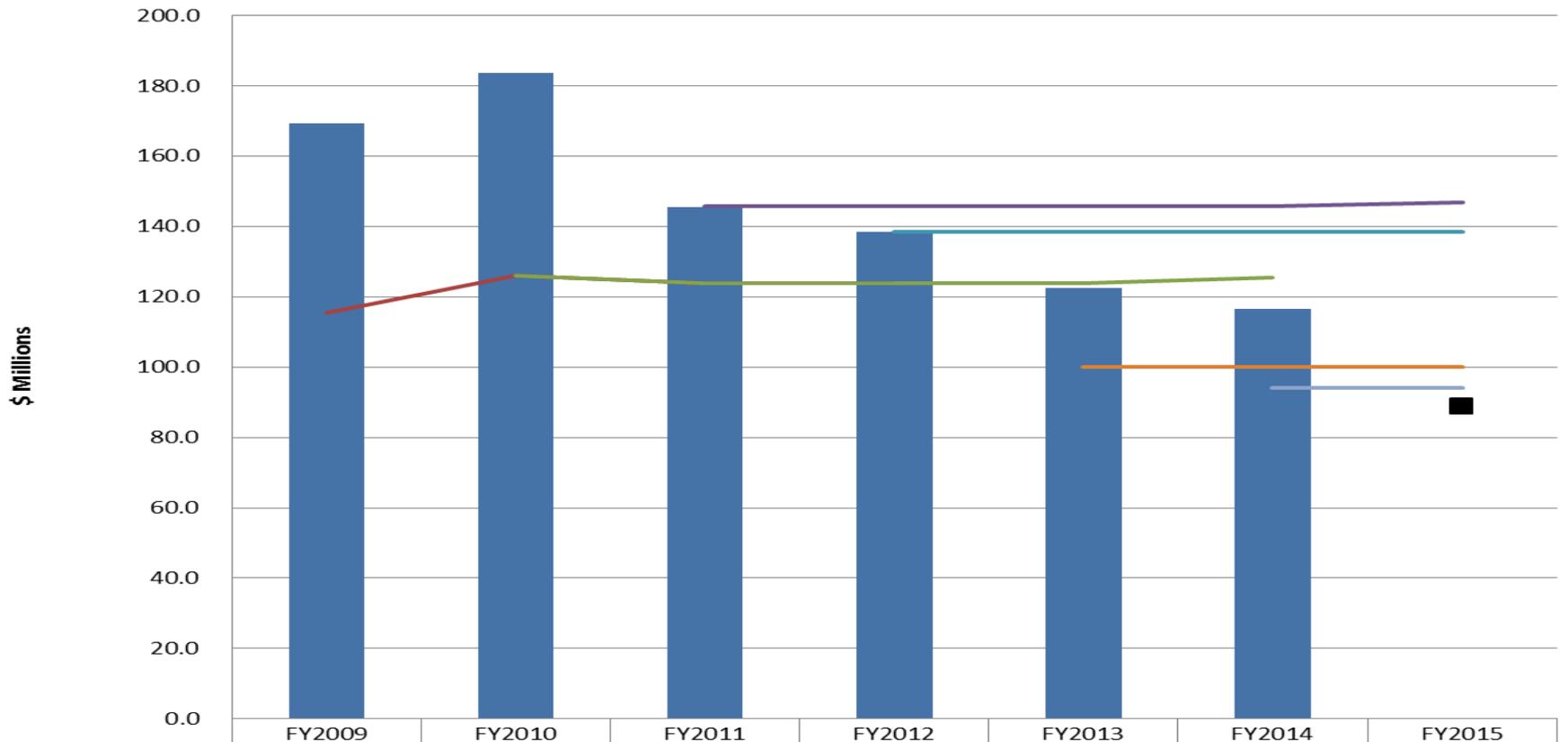
International Space Station



- Increases driven by transition from Shuttle to Soyuz/Commercial services
- Appropriations have generally been aligned with requests, although relatively small topline reductions and inclusion of Congressionally directed spending (satellite servicing) have forced HEO to reduce the number of planned cargo flights in the budget window



Education



	FY2009	FY2010	FY2011	FY2012	FY2013	FY2014	FY2015
Enacted	169.2	183.8	145.5	138.4	122.4	116.6	
FY2009 PBR	115.6						
FY2010 PBR		126.1					
FY2011 PBR			145.8				
FY2012 PBR				138.4			
FY2013 PBR					100.0		
FY2014 PBR						94.2	
FY2015 PBR							88.9

Notes:

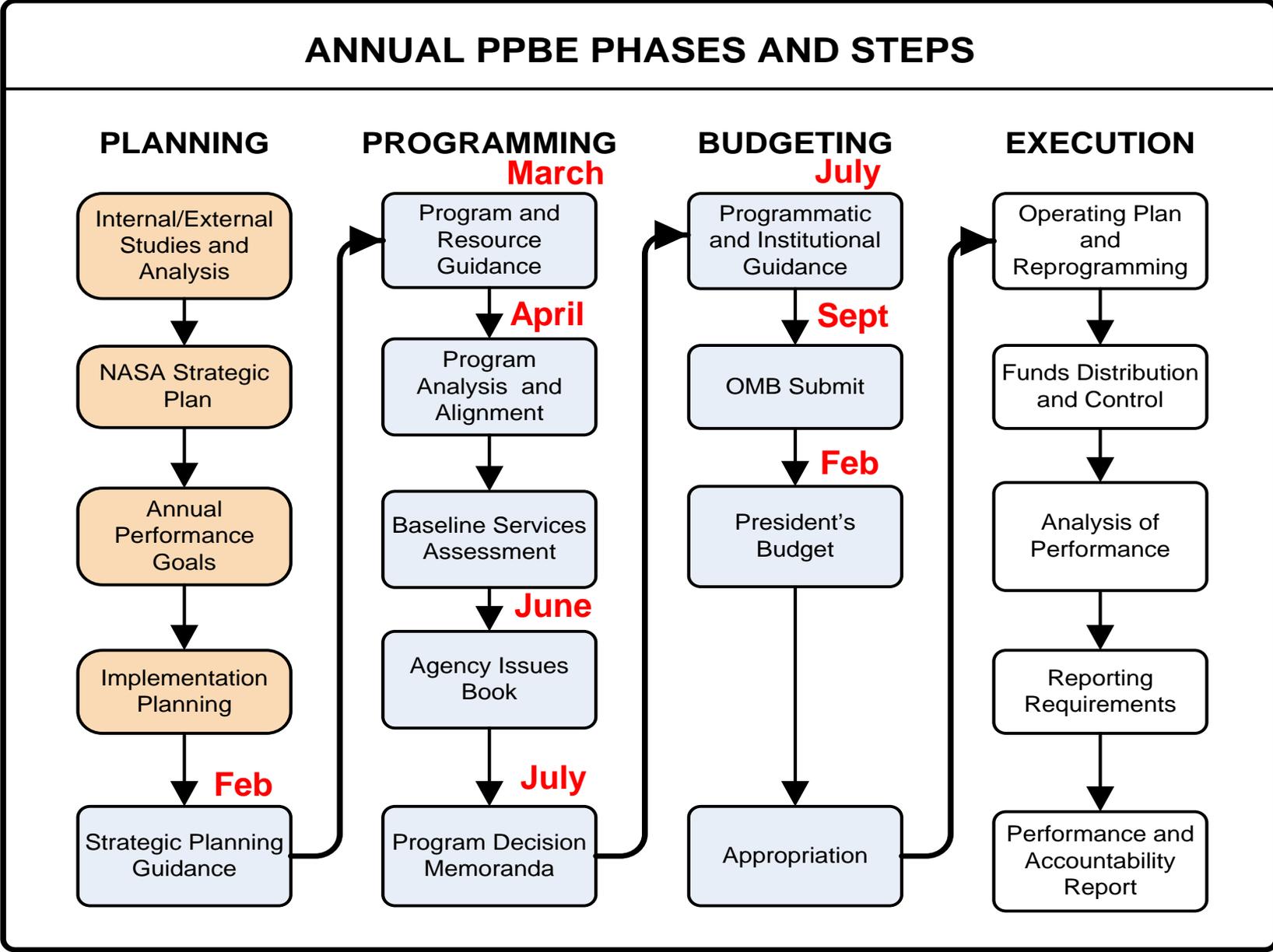
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Backup

NASA "Typical" Budget Process "PPBE"



FY15 PBR – CAS

	Fiscal Year						
	Actual	Enacted	Request	Notional			
	2013	2014	2015	2016	2017	2018	2019
Cross Agency Support	2,711.0	2,793.0	2,778.6	2,806.4	2,834.4	2,862.8	2,891.4
Center Management and Operations	1,991.6	--	2,038.8	2,059.2	2,079.7	2,100.5	2,121.6
Center Management and Operations	1,991.6	--	2,038.8	2,059.2	2,079.7	2,100.5	2,121.6
Center Institutional Capabilities	1,539.7	--	1,584.3	1,600.1	1,615.9	1,632.0	1,648.4
Center Programmatic Capabilities	451.8	--	454.5	459.1	463.8	468.5	473.2
Agency Management and Operations	719.4	--	739.8	747.2	754.7	762.3	769.8
Agency Management	372.3	--	365.6	369.3	373.0	376.7	380.3
Safety and Mission Success	172.5	--	163.7	165.4	167.0	168.8	170.5
Safety and Mission Assurance	46.3	--	46.4	46.9	47.4	47.9	48.4
Chief Engineer	84.5	--	83.7	84.5	85.3	86.2	87.1
Chief Health and Medical Officer	4.2	--	4.2	4.3	4.3	4.4	4.4
Independent Verification and Validation	37.5	--	29.4	29.7	30.0	30.3	30.6
Agency IT Services	148.0	--	183.6	185.3	187.2	189.0	190.9
IT Management	13.3	--	14.6	14.6	14.6	14.6	14.6
Applications	59.1	--	62.5	62.5	62.5	62.5	62.5
Infrastructure	75.5	--	106.5	108.2	110.1	111.9	113.8
Strategic Capabilities Assets Program	26.6	--	26.9	27.2	27.5	27.8	28.1
Construction and Environmental Compliance and Restoration	646.6	515.0	446.1	379.0	382.7	386.6	390.4
Construction of Facilities	589.5	--	370.6	302.7	305.7	308.8	311.8
Institutional CoF	313.1	--	299.7	302.7	305.7	308.8	311.8
Science CoF	3.0	--	--	--	--	--	--
Exploration CoF	252.6	--	52.3	--	--	--	--
Space Operations CoF	20.8	--	18.6	--	--	--	--
Environmental Compliance and Restoration	57.0	--	75.5	76.3	77.0	77.8	78.6
NASA Total	16,865.2	17,646.5	17,460.6	17,635.3	17,811.5	17,989.7	18,169.7