

Boulder Canyon Project



Fiscal Year 2018 Base Charge

Boulder Canyon Project
Base Charge Summary (in thousands)

	FY 2016 Actuals	Revised FY 2017 Budget Est.	Proposed FY 2018 Base Charge
<u>Bureau of Reclamation (BOR)</u>			
Operations	\$6,082	\$6,819	\$7,146
Maintenance	16,969	17,115	17,086
A&GE	16,453	20,144	20,751
Extraordinary Maintenance	3,459	5,577	4,669
O&M	42,963	49,655	49,652
Replacements	3,123	21,243	8,592
OM&R	46,086	70,898	58,244
Post Retirement Benefits (PRB)	1,791	1,539	1,569
OM&R w/PRB	47,877	72,437	59,813
<u>Western Area Power Administration (WAPA)</u>			
Facility Expenses	2,996	3,442	3,192
Systemwide Expenses	5,073	4,929	5,775
O&M	8,070	8,371	8,967
Replacements	106	809	200
OM&R	8,175	9,179	9,167
Post Retirement Benefits	237	194	196
OM&R w/PRB	8,413	9,374	9,363
Total O&M	53,166	60,568	60,584
Total OM&R	56,289	81,810	69,176
<u>Other Expense</u>			
Visitor Services	7,962	12,369	8,765
Payments to States - Reclamation	600	600	600
Upgrading Payments - Interest	2,596	199	-
Upgrading Payments - Principal	12,396	5,035	-
Debt Service Investments - Interest	548	505	434
Other Interest (CME and Warehouse)	27	11	17
Debt Service Investments - Principal Pmt.	2,242	2,368	538
Total Other Expense	26,372	21,086	10,354
Total Expense	82,662	102,896	79,530
Prior Year Carryover	23,452	23,817	0
<u>Other Revenue</u>			
BOR	17,006	15,500	12,000
WAPA	1,454	1,300	1,202
Other Revenue	18,460	16,800	13,202
Water Sales Revenue	635	580	580
Working Capital	-	-	15,000
Base Charge	40,114	61,699	80,748
Subtotal - Cash Available	23,622	7,963	
Less Change in UDOs	(780)		
Less Net Change in AR	585		
Unapplied Carryover		7,963	
Carryover	\$23,817	0	-

**Boulder Canyon Project
FY 2016 Base Charge vs. Actuals**

	FY 2016 Base Charge	FY 2016 Actuals	Change
<u>BOR</u>			
Operations	\$ 6,801,000	\$ 6,081,820	\$ (719,180)
Maintenance	17,069,000	16,968,891	(100,109)
A&GE	18,274,000	16,855,178	(1,418,822)
A&GE Refund Adjustment (Security)	(300,000)	(402,281)	(102,281)
Subtotal A&GE	17,974,000	16,452,897	(1,521,103)
Extraordinary Maintenance	3,217,000	3,459,260	242,260
O&M	45,061,000	42,962,868	(2,098,132)
Replacements	11,504,000	3,123,107	(8,380,893)
OM&R	56,565,000	46,085,975	(10,479,025)
Post Retirement Benefits (PRB)	1,518,340	1,790,540	272,200
OM&R w/PRB	58,083,340	47,876,515	(10,206,825)
<u>WAPA</u>			
Facility Expenses	3,233,691	2,996,471	(237,220)
Systemwide Expenses	4,192,291	5,073,110	880,819
O&M	7,425,982	8,069,581	643,599
Replacements	60,000	105,776	45,776
OM&R	7,485,982	8,175,357	689,375
Post Retirement Benefits (PRB)	187,660	237,485	49,825
OM&R w/PRB	7,673,642	8,412,842	739,200
Total O&M	54,252,982	53,166,249	(1,086,733)
Total OM&R	65,756,982	56,289,356	(9,467,626)
<u>Other Expense</u>			
Visitor Services	8,834,000	7,962,163	(871,837)
Payments to States - Reclamation	600,000	600,000	-
Upgrading Payments - Interest	2,029,217	2,596,094	566,877
Upgrading Payments - Principal	12,766,452	12,396,477	(369,975)
Debt Service Investments - Interest	571,944	548,467	(23,477)
Other Interest (CME and Warehouse)	10,000	27,421	17,421
Debt Service Investments - Principal Pmt.	2,241,595	2,241,595	-
Other Expense	27,053,208	26,372,217	(680,991)
Total Expense	92,810,190	82,661,573	(10,148,617)
Prior Year Carryover	14,344,334	23,452,354	9,108,020
<u>Other Revenue</u>			
BOR	13,000,000	17,006,079	4,006,079
WAPA	1,200,000	1,454,408	254,408
Other Revenue	14,200,000	18,460,487	4,260,487
Water Sales Revenue	530,000	635,097	105,097
Base Charge	\$ 63,735,856	\$ 40,113,634	\$ (23,622,221)
Cash Available	-	23,622,222	23,622,222
Less Change in UDO's	-	(780,371)	(780,371)
Less Net Change in AR	-	585,400	585,400
FY 2016 Carryover	\$ -	\$ 23,817,193	\$ 23,817,193

Boulder Canyon Project
FY 2016 Base Charge vs. Actuals

BOR's Narrative

Operations: Decreased expenditures primarily due to lower than anticipated costs for Salaries, Benefits, Overhead, Overtime and Equipment.

Maintenance: Decreased expenditures primarily due to the Quagga Mussel UV Lights project being pushed to FY2017 for contract changes, solicitation package revisions, and award.

A&GE: Decreased expenditures primarily due to lower than anticipated costs for Services, Equipment, Supplies and Training.

Extraordinary Maintenance: Increased expenditures primarily due to the expenditure of prior-year undelivered orders.

Replacements: Decreased expenditures primarily due to the A2/A4/A7 PRV Modernization and the Elevator Motor & Controller Replacement being pushed to FY2017 for solicitation package revisions, approvals, and award.

Visitor Services: Decreased expenditures primarily due to the Visitor Center Renovation being pushed to FY2017 for receipt of SNPLMA funds and award.

FY 2016 Reduction in FY 2017 PRS: The FY 2016 Base Charge was reduced by a total of \$3.1M for an immediate impact to the FY 2017 Base Charge. This included a \$900K reduction in the Wide Head Range Turbine Replacement, a \$200K reduction in A&GE salaries, and a \$2M increase in projected revenue.

WAPA's Narrative

Facility Expenses: Actuals were lower predominantly due to ongoing Mead Common Facilities projects not being expensed in FY 2016 and WAPA's \$100K contingency (budgeted under Facility Expenses) being reprogrammed for Systemwide Expenses.

Systemwide Expenses: Actuals were higher predominantly due to higher than anticipated costs for Systems Operations & Load Dispatching and Power Marketing (post 2017 re-marketing).

Replacements: Actuals were higher due to the use of carryover funding for the continuation of the Hoover-Mead Transmission Line Hardware Replacement and the 230/69kV KW17A Transformer Relay Replacement projects.

**Boulder Canyon Project
FY 2017 Base Charge vs. Revised Budget**

	FY 2017 Base Charge	Revised FY 2017 Budget Est.	Change
<u>BOR</u>			
Operations	\$ 6,819,000	\$ 6,819,000	\$ -
Maintenance	16,504,000	17,115,013	611,013
A&GE	20,444,000	20,444,000	-
A&GE Refund Adjustment (Security)	(300,000)	(300,000)	-
Subtotal A&GE	20,144,000	20,144,000	-
Extraordinary Maintenance	4,184,000	5,577,096	1,393,096
O&M	47,651,000	49,655,109	2,004,109
Replacements	13,405,000	21,242,526	7,837,526
OM&R	61,056,000	70,897,635	9,841,635
Post Retirement Benefits (PRB)	1,539,142	1,539,142	-
OM&R w/PRB	62,595,142	72,436,777	9,841,635
<u>WAPA</u>			
Facility Expenses	3,312,879	3,441,679	128,800
Systemwide Expenses	4,928,984	4,928,984	-
O&M	8,241,863	8,370,663	128,800
Replacements	800,000	808,815	8,815
OM&R	9,041,863	9,179,478	137,615
Post Retirement Benefits (PRB)	194,071	194,071	-
OM&R w/PRB	9,235,934	9,373,549	137,615
Total O&M	58,426,076	60,567,800	2,141,724
Total OM&R	71,831,076	81,810,326	9,979,250
<u>Other Expense</u>			
Visitor Services	8,356,000	12,368,583	4,012,583
Payments to States - Reclamation	600,000	600,000	-
Upgrading Payments - Interest	215,162	198,927	(16,235)
Upgrading Payments - Principal	5,035,084	5,035,084	-
Debt Service Investments - Interest	469,081	504,696	35,615
Other Interest (CME and Warehouse)	11,000	11,000	-
Debt Service Investments - Principal Pmt.	2,367,858	2,367,858	-
Subtotal Other Annual Expense	17,054,185	21,086,148	4,031,963
Total Expense	88,885,261	102,896,474	14,011,213
Prior Year Carryover	5,342,972	23,817,193	18,474,221
<u>Other Revenue</u>			
BOR	12,000,000	15,500,000	3,500,000
WAPA	1,300,000	1,300,000	-
Other Revenue	13,300,000	16,800,000	3,500,000
Water Sales Revenue	580,000	580,000	-
Base Charge	\$ 69,662,289	\$ 61,699,282	\$ (7,963,007)
Unapplied Carryover	\$ -	\$ 7,963,007	\$ 7,963,007
FY 2017 Carryover	\$ -	\$ -	\$ 0

Boulder Canyon Project
FY 2017 Base Charge vs. Revised Budget

BOR's Narrative

Maintenance: Increased expenditures due to FY 2016 unobligated funds (MYPF) that are needed to accomplish work required in FY2017 for Quagga Mussel Management and 16.5 kV Generator Breaker Maintenance.

Extraordinary Maintenance: Increased expenditures due to FY 2016 unobligated funds (MYPF) that are needed to accomplish work required in FY 2017 for the Power Plant Piping Management Plan, the Fire Piping Plan, and the Turbine Shift Ring Refurbishment.

Replacements: Increased expenditures due to FY 2016 unobligated funds (MYPF) that are needed to accomplish work required in FY 2017 for the A2/A4/A7 PRV Modernization and the Elevator Motor and Controller Replacement.

Visitor Services: Increased expenditures due to FY 2016 unobligated funds (MYPF) that are needed to accomplish work required in FY 2017 for the Visitor Center Renovation.

WAPA's Narrative

Facility Expenses: Mead Common Facilities (Video Surveillance Upgrades and Security Trailer) funds carried over from FY 2016.

Replacement: Hoover-Mead Transmission Line Hardware Replacement funds carried over from FY 2016.

Boulder Canyon Project
FY 2017 Base Charge vs. Preliminary FY 2018 Base Charge

	FY 2017 Base Charge	Preliminary FY 2018 Base Charge	Change
<u>BOR</u>			
Operations	\$ 6,819,000	\$ 7,146,000	\$ 327,000
Maintenance	16,504,000	17,086,000	582,000
A&GE	20,444,000	21,051,000	607,000
A&GE Refund Adjustment (Security)	(300,000)	(300,000)	-
Subtotal A&GE	20,144,000	20,751,000	607,000
Extraordinary Maintenance	4,184,000	4,669,000	485,000
O&M	47,651,000	49,652,000	2,001,000
Replacements	13,405,000	8,592,000	(4,813,000)
OM&R	61,056,000	58,244,000	(2,812,000)
Post Retirement Benefits (PRB)	1,539,142	1,569,078	29,936
OM&R w/PRB	62,595,142	59,813,078	(2,782,064)
<u>WAPA</u>			
Facility Expenses	3,312,879	3,192,044	(120,835)
Systemwide Expenses	4,928,984	5,774,672	845,688
O&M	8,241,863	8,966,716	724,853
Replacements	800,000	200,000	(600,000)
OM&R	9,041,863	9,166,716	124,853
Post Retirement Benefits (PRB)	194,071	196,470	2,399
OM&R w/PRB	9,235,934	9,363,186	127,252
Total O&M	58,426,076	60,584,264	2,158,188
Total OM&R	71,831,076	69,176,264	(2,654,812)
<u>Other Expense</u>			
Visitor Services	8,356,000	8,765,000	409,000
Payments to States - Reclamation	600,000	600,000	-
Upgrading Payments - Interest	215,162	-	(215,162)
Upgrading Payments - Principal	5,035,084	-	(5,035,084)
Debt Service Investments - Interest	469,081	433,661	(35,420)
Other Interest (CME and Warehouse)	11,000	17,024	6,024
Debt Service Investments - Principal Pmt.	2,367,858	537,966	(1,829,892)
Other Expense	17,054,185	10,353,651	(6,700,534)
Total Expense	88,885,261	79,529,915	(9,355,346)
Prior Year Carryover	5,342,972	0	(5,342,972)
<u>Other Revenue</u>			
BOR	12,000,000	12,000,000	-
WAPA	1,300,000	1,201,722	(98,278)
Other Revenue	13,300,000	13,201,722	(98,278)
Water Sales Revenue	580,000	580,000	-
Working Capital	-	15,000,000	15,000,000
Base Charge	\$ 69,662,289	\$ 80,748,193	\$ 11,085,904

Boulder Canyon Project
FY 2017 Base Charge vs. Preliminary FY 2018 Base Charge

BOR's Narrative

Operations: Increased estimate primarily due to SCADA replacement costs for servers, workstations, laptops, and network-attached storage.

Maintenance: Increased estimate primarily due to reduced support for Replacement projects, replacement of generation and voltage equipment, and miscellaneous small services.

A&GE: Increased estimate primarily due to Region/Denver/Other support and the Warehouse Sewerline Rehab & Fuel Tank Installation.

Extraordinary Maintenance: Increased estimate primarily due to the following projects' increased or new contract work: Generator Life Extension, Turbine Pit Area Machining, Cableway Cradle Pit Parking Area Resurface, and Rock Fall Mitigation. Increase partially offset by the following projects' decreased or no contract work: Penstock Exterior Spot Coating, Paradox Valve Repairs, Highway Maintenance, Lower Portal Road Bridge Abutment & Slope Stabilization, and Cell Tower Corrosion Repainting.

Replacements: Decreased estimate primarily due to the following projects' decreased or no contract work: Cylinder Gate Stem Replacement, A2/A4/A7 PRV Modernization, Governor Oil Pump Replacement, 480 Volt Switchgear Replacement, and Elevator Motor & Controller Replacement. Decrease partially offset by the following projects' increased or new contract work: Flow Meter Replacement, 16.5 kV Generator Breaker Replacement, and Fiber Optic Cable Paths.

Other Expenses: Visitor Services increased estimate primarily due to upgrading tour guide salaries and increased contract costs. The Uprating Credit program concluded in FY 2017 eliminating these cost categories in FY 2018. Principal and Interest decreased in FY 2018 resulting from the payoff of the Dam and

WAPA's Narrative

Facility Expenses: Substation maintenance budget is higher due to increases in physical security needs at MEAD substation, changes in indirect substation maintenance cost allocation to better reflect cost causation and shifts in how Information Technology costs are allocated.

Systemwide Expenses: Budget is higher predominantly due to increased costs in power marketing attributable to post-2017 Hoover contract implementation, a shift in how Information Technology costs are allocated and increases in system operations costs.

Replacements: Budget is lower due to fewer anticipated replacement projects.

**Boulder Canyon Project
Proposed Base Charge Comparison**

	Measure	FY 2017 Base Charge	Proposed FY 2018 Base Charge	Change	
				Amount	%
Base Charge		\$69,662,289	\$80,748,193	\$11,085,904	15.91%
Composite Rates	Mills/kWh	19.63	20.98	1.34	6.83%
Energy Rate	Mills/kWh	9.82	10.49	0.67	6.83%
Energy Sales	MWh	3,547,892	3,849,647	301,755	8.51%
Capacity Rate	(\$/kW-Mo)	\$1.89	\$2.09	\$0.19	10.24%
Capacity Sales		1,534,000	1,613,000	79,000	5.15%

Note:

- Energy and Capacity Sales are based on the final FY 2018 Master Schedule