

2007 Wholesale Power Rate Case Initial Proposal

**REVENUE REQUIREMENT STUDY
DOCUMENTATION**

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REVENUE REQUIREMENT DOCUMENTATION

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COMMONLY USED ACRONYMS

AANR	Audited Accumulated Net Revenues
AC	Alternating Current
AER	Actual Energy Regulation
Affiliated Tribes	Affiliated Tribes of Northwest Indians
AFDUC	Allowance for Funds Used During Construction
AGC	Automatic Generation Control
aMW	Average Megawatt
Alcoa	Alcoa Inc.
AMNR	Accumulated Modified Net Revenues
ANR	Accumulated Net Revenues
ANRT	Accumulated Net Revenue Threshold
AOP	Assured Operating Plan
APS	Ancillary Products and Services (rate)
ASC	Average System Cost
Avista	Avista Corporation, Water Power Division
BASC	BPA Average System Cost
BiOp	Biological Opinion
BOR	Bureau of Reclamation
BPA	Bonneville Power Administration
BP EIS	Business Plan Environmental Impact Statement
Btu	British thermal unit
C&R Discount	Conservation and Renewables Discount
C&R	Cost and Revenue
CalPX	California Power Exchange
CAISO	California Independent System Operator
CBFWA	Columbia Basin Fish & Wildlife Authority
CBP	Columbia Basin Project
CCCT	Combined-Cycle Combustion Turbine
CEC	California Energy Commission
CFAC	Columbia Falls Aluminum Company
Cfs	Cubic feet per second
COB	California-Oregon Border
COE	U.S. Army Corps of Engineers
ConMod	Conservation Modernization Program
COSA	Cost of Service Analysis
Council	Northwest Power Planning and Conservation Council
CP	Coincidental Peak
CRAC	Cost Recovery Adjustment Clause
CRC	Conservation Rate Credit
CRITFC	Columbia River Inter-Tribal Fish Commission
CSP	Customer System Peak
CSPE	Columbia Storage Power Exchange
CT	Combustion Turbine

CWA	Clear Water Act
CY	Calendar Year (Jan-Dec)
DC	Direct Current
DDC	Dividend Distribution Clause
DJ	Dow Jones
DMP	Data Management Procedures
DO	Debt Optimization
DOE	Department of Energy
DROD	Draft Record of Decision
DSIs	Direct Service Industrial Customers
DSR	Debt Service Reassignment
ECC	Energy Content Curve
EFB	Excess Federal Power
EIA	Energy Information Administration
EIS	Environmental Impact Statement
EN	Energy Northwest, Inc.
Energy Northwest, Inc.	Formerly Washington Public Power Supply System (Nuclear)
Energy Services	Energy Services, Inc.
EPA	Environmental Protection Agency
EPP	Environmentally Preferred Power
ESA	Endangered Species Act
EWEB	Eugene Water & Electric Board
F&O	Financial and Operating Reports
FBPF	Forward Flat-Block Price Forecast
FBS	Federal Base System
FCCF	Fish Cost Contingency Fund
FCRPS	Federal Columbia River Power System
FCRTS	Federal Columbia River Transmission System
FERC	Federal Energy Regulatory Commission
FELCC	Firm Energy Load Carrying Capability
Fifth Power Plan	Council's Fifth Northwest Conservation and Electric Power Plan
FPA	Federal Power Act
FPS	Firm Power Products and Services (rate)
FSEA	Federal Secondary Energy Analysis
F&WCA	Fish and Wildlife Coordination Act
FY	Fiscal Year (Oct-Sep)
GAAP	Generally Accepted Accounting Principles
GCPs	General Contract Provisions
GEP	Green Energy Premium
GI	Generation Integration
GRI	Gas Research Institute
GRSPs	General Rate Schedule Provisions
GSP	Generation System Peak
GSU	Generator Step-Up Transformers

GTA	General Transfer Agreement
GWh	Gigawatthour
HELM	Hourly Electric Load Model
HLFG	High Load Factor Group
HLH	Heavy Load Hour
HOSS	Hourly Operating and Scheduling Simulator
ICNU	Industrial Customers of Northwest Utilities
ICUA	Idaho Consumer-Owned Utilities Association, Inc.
IOU REP Settlement benefits	Investor-Owned Utilities Residential Exchange Program Settlement benefits
IOUs	Investor-Owned Utilities of the Pacific Northwest
IP	Industrial Firm Power (rate)
IP TAC	Industrial Firm Power Targeted Adjustment Charge
IPC	Idaho Power Company
ISC	Investment Service Coverage
ISO	Independent System Operator
KAF	Thousand Acre Feet
kcfs	kilo (thousands) of cubic feet per second
K/I	Kilowatt-hour/Investment Ratio for Low Density Discount
ksfd	thousand second foot day
kV	Kilovolt (1000 volts)
kW	Kilowatt (1000 watts)
kWh	Kilowatt-hour
LB CRAC	Load-Based Cost Recovery Adjustment Clause
LCP	Least-Cost Plan
LDD	Low Density Discount
LLH	Light Load Hour
LOLP	Loss of Load Probability
LRSCP	Lower Snake River Compensation Plan
m/kWh	Mills per kilowatt-hour
MAC	Market Access Coalition Group
MAF	Million Acre Feet
MC	Marginal Cost
MCA	Marginal Cost Analysis
MCS	Model Conservation Standards
M/M	Meters/Miles-of-Line Ratio for Low Density Discount
Mid-C	Mid-Columbia
MIMA	Market Index Monthly Adjustment
MIP	Minimum Irrigation Pool
MMBTU	Million British Thermal Units
MNR	Modified Net Revenues
MOA	Memorandum of Agreement
MOP	Minimum Operating Pool
MORC	Minimum Operating Reliability Criteria
MT	Market Transmission (rate)

MW	Megawatt (1 million watts)
MWh	Megawatt-hour
NCD	Non-coincidental Demand
NEC	Northwest Energy Coalition
NEPA	National Environmental Policy Act
NERC	North American Electric Reliability Council
NEW	Northwestern Energy
NF	Nonfirm Energy (rate)
NFB Adjustment	National Marine Fisheries Service (NMFS) Federal Columbia River Power System (FCRPS) Biological Opinion (BiOp) Adjustment
NLSL	New Large Single Load
NMFS	National Marine Fisheries Service
NOAA Fisheries	National Oceanographic and Atmospheric Administration Fisheries
NOB	Nevada-Oregon Border
NORM	Non-Operating Risk Model
Northwest Power Act	Pacific Northwest Electric Power Planning and Conservation Act
NPV	Net Present Value
NR	New Resource Firm Power (rate)
NRU	Northwest Requirements Utilities
NT	Network Transmission
NTP	Network Integration Transmission (rate)
NTSA	Non-Treaty Storage Agreement
NUG	Non-Utility Generation
NWPP	Northwest Power Pool
NWPPC	Northwest Power Planning Council
NWPPC C&R	Northwest Power Planning Council Cost and Revenues Analysis
O&M	Operation and Maintenance
OMB	Office of Management and Budget
OPUC	Oregon Public Utility Commission
OURCA	Oregon Utility Resource Coordination Association
ORC	Operating Reserves Credit
OY	Operating Year (Aug-Jul)
PA	Public Agency
PacifiCorp	PacifiCorp
PATH	Plan for Analyzing and Testing Hypotheses
PBL	Power Business Line
PDP	Proportional Draft Points
PDR	Power Discharge Requirement
PF	Priority Firm Power (rate)
PFBC	Pressurized Fluidized Bed Combustion
PFR	Power Function Review

PGE	Portland General Electric Company
PGP	Public Generating Pool
PMA	Power Marketing Agencies
PNCA	Pacific Northwest Coordination Agreement
PNGC	Pacific Northwest Generating Cooperative
PNRR	Planned Net Revenues for Risk
PNW	Pacific Northwest
POD	Point of Delivery
POI	Point of Integration/Point of Interconnection
POM	Point of Metering
PPC	Public Power Council
PPLM	PP&L Montana, LLC
Project Act	Bonneville Project Act
PSA	Power Sales Agreement
PSC	Power Sales Contract
PSE	Puget Sound Energy
PSW	Pacific Southwest
PTP	Point-to-Point
PUD	Public or People's Utility District
RAM	Rate Analysis Model (computer model)
RAS	Remedial Action Scheme
Reclamation	Bureau of Reclamation
Renewable Northwest	Renewable Northwest Project
RD	Regional Dialogue
REP	Residential Exchange Program
RFA	Revenue Forecast Application
RFP	Request for Proposal
RiskMod	Risk Analysis Model (computer model)
RiskSim	Risk Simulation Model
RL	Residential Load (rate)
RMS	Remote Metering System
ROD	Record of Decision
RPSA	Residential Purchase and Sale Agreement
RTF	Regional Technical Forum
RTO	Regional Transmission Operator
SCCT	Single-Cycle Combustion Turbine
SCRA	Supplemental Contingency Reserve Adjustment
Shoshone-Bannock	Shoshone-Bannock Tribes
SOS	Save Our Wild Salmon
Slice	Slice of the System product
STREAM	Short-Term Risk Evaluation and Analysis Model
SUB	Springfield Utility Board
SUMY	Stepped-Up Multiyear
SWPA	Southwestern Power Administration
TAC	Targeted Adjustment Charge

TBL	Transmission Business Line
tcf	Trillion Cubic Feet
TCH	Transmission Contract Holder
TDG	Total Dissolved Gas
TPP	Treasury Payment Probability
Transmission System Act	Federal Columbia River Transmission System Act
TRL	Total Retail Load
UAI Charge	Unauthorized Increase Charge
UAMPS	Utah Associated Municipal Power Systems
UCUT	Upper Columbia United Tribes
UDC	Utility Distribution Company
UP&L	Utah Power & Light
URC	Upper Rule Curve
USBR	U.S. Bureau of Reclamation
USFWS	U.S. Fish and Wildlife Service
VOR	Value of Reserves
WAPA	Western Area Power Administration
WECC	Western Electricity Coordinating Council
WPAG	Western Public Agencies Group
WPRDS	Wholesale Power Rate Development Study
WSPP	Western Systems Power Pool
WUTC	Washington Utilities and Transportation Commission
WY	Watt-Year
Yakama	Confederated Tribes and Bands of the Yakama Nation

1. GENERATION REVENUE REQUIREMENTS

1.1 Introduction

This chapter documents how Bonneville Power Administration's (BPA) annual generation revenue requirements are determined. Two tables are presented for each year of the rate period (FYs 2007 – 2009) and for the 7(b)(2) period (FYs 2010 – 2013). On the first table, revenue requirements for FYs 2007 through 2009 (the rate period) and 2010 through 2013 (the outyears for the 7(b)(2) Rate Test) are projected in an income statement format. The second table, a statement of annual cash flows, determines the minimum required net revenues and presents the annual cash flows available for risk mitigation. Revenue requirements are presented for both the program and 7(b)(2) cases.

1.2 Income Statement

A more detailed description of the following line items is included in Chapter 4 of the Revenue Requirement Study, WP-07-E-BPA-02. Operating expenses (lines 1-16) include: operations and maintenance expenses for Corps of Engineers (COE) and U.S. Bureau of Reclamation (BOR), and annual expenses for Energy Northwest (EN) (line 3); Colville Settlement Act payments to the Confederated Colville Tribes (line 4); decommissioning expenses for Trojan and other, unfinished nuclear plants (line 5); short-term purchases of power, both balancing power purchases and system augmentation (line 6); annual expenses associated with the Residential Exchange Program including the subscription settlement with the Investor-Owned Utilities (line 7); the expense portion of BPA's energy conservation activities (including the Energy Efficiency group) and the annual write-down of BPA's capital investment in energy conservation (lines 8); Transmission acquisition and ancillary services expenses necessary to deliver energy to markets (line 9); internal operations expenses necessary to support the power function (line 10); the expense portion of BPA's funding for fish and wildlife protection, mitigation and enhancement pursuant to Section 4(h) of the Northwest Power Act and the annual write-down of BPA's capital investments in fish and wildlife (lines 11); general corporate and administrative expenses (line 12); benefits paid to DSIs (line 13); debt service on capitalized contracts and other fixed, long term contractual obligations (line 14); and annual depreciation for BPA, COE, and BOR plant-in-service (line 15).

Federal interest expense is calculated in generation repayment studies on appropriations granted by Congress for COE and BOR capital investments (line 19) and bonds that BPA issues to the U.S. Treasury (line 20). Bond interest is reduced by interest income from BPA's projected cash reserves (line 21). The capitalization adjustment and the Allowance for Funds Used During Construction (AFUDC) (lines 22-23) further reduce gross interest expense. The capitalization adjustment, a non-cash expense, is the annual recognition of the write-down in principal that resulted from the Bonneville Appropriations Refinancing Act.

Planned net revenues (lines 27-29) are included to ensure coverage of planned amortization and irrigation assistance payments (minimum required net revenues) and to meet the Administrator's risk mitigation policy (planned net revenues for risk). *See*, Risk Analysis Study, WP-07-E-BPA-04.

1.3 Statement of Cash Flows

Cash from Current Operations: Minimum required net revenues (line 2) is the amount necessary to ensure that cash from operations is sufficient for planned amortization and irrigation assistance payments. It is the amount by which these planned payments to the U.S. Treasury exceed the expenses that do not require cash outlays. Non-cash expenses include depreciation and amortization (line 4), amortization of capitalized bond premiums (line 5), the capitalization adjustment (line 6), and accrual revenues (line 7).

Cash Used for Capital Investments: Investment in utility plant (line 11) is the increase in investment for appropriated additions to plant for the COE and BOR and for capital outlays associated with BPA capital equipment and the direct-funding of COE and BOR investments. Investment in conservation (line 12) and fish and wildlife (line 13) is the annual capital outlays for these intangible assets.

Cash from Treasury Borrowing and Appropriations: Increase in bonds issued to the U.S. Treasury (line 16) is the annual increment in bonds that BPA issues to Treasury to fund capital outlays for capital equipment, BOR and COE investments that BPA plans to direct-fund, and BPA conservation and fish and wildlife investments. Repayment of bonds issued to the U.S. Treasury (line 17) is planned amortization of bonds issued to Treasury, as determined in generation repayment studies. Increase in Federal construction appropriations (line 18) is projected annual appropriations to fund new COE and BOR plant-in-service that BPA did not direct-fund with bonds issued to Treasury. Repayment of Federal construction appropriations (line 19) is planned amortization of investments associated with the COE and BOR, as determined in generation repayment studies. Payment of irrigation assistance (line 20) is the payment of appropriated capital construction costs of BOR irrigation facilities that have been determined to be beyond the ability of irrigators to pay and allocated to generation revenues for repayment.

The revenue requirements for the 7(b)(2) case reflect the required exclusion of costs associated with energy conservation, the Residential Exchange Program, and resources acquired under the authority of the Northwest Power Act. These revenue requirements are determined according to the same cost accounting methodology as those in the program case and reflect the same risk mitigation (equivalent annual cash flows) when such is specified.

Table 1A

**GENERATION REVENUE REQUIREMENT
INCOME STATEMENT
(\$000s)**

	A	B	C
	2007	2008	2009
1 OPERATING EXPENSES			
2 POWER SYSTEM GENERATION RESOURCES			
3 OPERATING GENERATION RESOURCES	514,139	471,856	512,425
4 OPERATING GENERATION SETTLEMENT PAYMENTS	16,968	17,354	17,749
5 NON-OPERATING GENERATION	9,350	5,252	2,254
6 CONTRACTED POWER PURCHASES	181,652	150,340	175,435
7 RESIDENTIAL EXCHANGE/IOU SETTLEMENT BENEFITS	301,000	301,000	301,000
8 RENEWABLE AND CONSERVATION GENERATION	103,011	107,873	129,547
9 TRANSMISSION ACQUISITION AND ANCILLARY SERVICES	181,962	182,962	185,662
10 POWER NON-GENERATION OPERATIONS	56,132	57,715	59,422
11 F&W/ENVIRONMENTAL REQUIREMENTS	171,185	172,276	173,367
12 GENERAL AND ADMINISTRATIVE	61,165	61,127	67,519
13 OTHER INCOME, EXPENSES AND ADJUSTMENTS	59,000	59,000	59,000
14 NON-FEDERAL DEBT SERVICE	601,403	593,923	598,015
15 DEPRECIATION AND AMORTIZATION	186,671	192,838	199,779
16 TOTAL OPERATING EXPENSES	2,443,637	2,373,515	2,481,173
17 INTEREST EXPENSE:			
18 INTEREST ON FEDERAL INVESTMENT-			
19 APPROPRIATED FUNDS	200,621	197,658	200,289
20 BONDS ISSUED TO U.S. TREASURY	60,059	77,018	87,641
21 INTEREST CREDIT ON CASH RESERVES	(27,852)	(32,946)	(37,531)
22 AMORTIZATION OF CAPITALIZED BOND PREMIUMS	613	613	185
23 CAPITALIZATION ADJUSTMENT	(45,937)	(45,937)	(45,937)
24 ALLOWANCE FOR FUNDS USED DURING CONSTRUCTION	(8,000)	(8,000)	(8,000)
25 NET INTEREST EXPENSE	179,504	188,406	196,646
26 TOTAL EXPENSES	2,623,142	2,561,921	2,677,820
27 MINIMUM REQUIRED NET REVENUES 1/	34,105	42,876	27,599
28 PLANNED NET REVENUES FOR RISK	97,000	97,000	97,000
29 TOTAL PLANNED NET REVENUES (27+28)	131,105	139,876	124,599
30 TOTAL REVENUE REQUIREMENT	2,754,247	2,701,797	2,802,418

1/ SEE NOTE ON CASH FLOW STATEMENT

Table 1B

**GENERATION REVENUE REQUIREMENT
STATEMENT OF CASH FLOWS
(\$000s)**

	A	B	C
	<u>2007</u>	<u>2008</u>	<u>2009</u>
1 CASH FROM OPERATING ACTIVITIES			
2 MINIMUM REQUIRED NET REVENUES 1/	34,105	42,876	27,599
3 NON-CASH ITEMS:			
4 DEPRECIATION AND AMORTIZATION	186,671	192,838	199,779
5 AMORTIZATION OF CAPITALIZED BOND PREMIUMS	613	613	185
6 CAPITALIZATION ADJUSTMENT	(45,937)	(45,937)	(45,937)
7 ACCRUAL REVENUES	(5,179)	(5,179)	(5,179)
8 CASH PROVIDED BY OPERATING ACTIVITIES	170,273	185,211	176,447
9 CASH FROM INVESTMENT ACTIVITIES:			
10 INVESTMENT IN:			
11 UTILITY PLANT (INCLUDING AFUDC)	(209,119)	(280,796)	(142,817)
12 CONSERVATION	(32,000)	(32,000)	(32,000)
13 FISH & WILDLIFE	(36,000)	(36,000)	(36,000)
14 CASH USED FOR INVESTMENT ACTIVITIES	(277,119)	(348,796)	(210,817)
15 CASH FROM BORROWING AND APPROPRIATIONS:			
16 INCREASE IN BONDS ISSUED TO U.S. TREASURY	201,000	213,000	205,000
17 REPAYMENT OF BONDS ISSUED TO U.S. TREASURY	(68,357)	(104,300)	(59,220)
18 INCREASE IN FEDERAL CONSTRUCTION APPROPRIATIONS	76,119	135,796	5,817
19 REPAYMENT OF FEDERAL CONSTRUCTION APPROPRIATIONS	(101,916)	(77,961)	(110,637)
20 PAYMENT OF IRRIGATION ASSISTANCE	0	(2,950)	(6,590)
21 CASH PROVIDED BY BORROWING AND APPROPRIATIONS	106,846	163,585	34,370
22 ANNUAL INCREASE (DECREASE) IN CASH	0	0	0
23 PLANNED NET REVENUES FOR RISK	97,000	97,000	97,000
24 TOTAL ANNUAL INCREASE (DECREASE) IN CASH	97,000	97,000	97,000

1/ Line 22 must be greater than or equal to zero, otherwise net revenues will be added so that there are no negative cash flows for the year.

Table 1C

**OUTYEAR GENERATION REVENUE REQUIREMENT
INCOME STATEMENT
(\$000s)**

	<u>A</u> 2010	<u>B</u> 2011	<u>C</u> 2012	<u>D</u> 2013
1 OPERATING EXPENSES				
2 POWER SYSTEM GENERATION RESOURCES				
3 OPERATING GENERATION RESOURCES	488,254	530,357	512,481	560,750
4 OPERATING GENERATION SETTLEMENT PAYMENTS	18,153	18,566	18,988	19,421
5 NON-OPERATING GENERATION	1,756	1,758	1,811	1,865
6 CONTRACTED POWER PURCHASES	66,646	63,700	65,611	67,579
7 RESIDENTIAL EXCHANGE/IOU SETTLEMENT BENEFITS	151,159	123,000	171,313	171,313
8 RENEWABLE AND CONSERVATION GENERATION	131,553	132,297	134,635	137,032
9 TRANSMISSION ACQUISITION AND ANCILLARY SERVICES	197,881	200,111	206,115	212,298
10 POWER NON-GENERATION OPERATIONS	62,202	64,005	65,926	67,903
11 F&W/ENVIRONMENTAL REQUIREMENTS	170,195	171,349	176,489	181,784
12 GENERAL AND ADMINISTRATIVE	74,743	76,274	78,563	80,920
13 OTHER INCOME, EXPENSES AND ADJUSTMENTS	59,000	59,000	59,000	59,000
14 NON-FEDERAL DEBT SERVICE	616,605	624,709	711,125	569,115
15 DEPRECIATION AND AMORTIZATION	207,091	216,184	201,413	203,268
16 TOTAL OPERATING EXPENSES	2,245,238	2,281,311	2,403,469	2,332,248
17 INTEREST EXPENSE:				
18 INTEREST ON FEDERAL INVESTMENT-				
19 APPROPRIATED FUNDS	192,702	191,343	194,099	197,756
20 BONDS ISSUED TO U.S. TREASURY	98,720	112,577	125,323	140,041
21 INTEREST CREDIT ON CASH RESERVES	(37,470)	(37,681)	(37,890)	(43,784)
22 AMORTIZATION OF CAPITALIZED BOND PREMIUMS	185	185	185	185
23 CAPITALIZATION ADJUSTMENT	(45,937)	(45,937)	(45,937)	(45,937)
24 ALLOWANCE FOR FUNDS USED DURING CONSTRUCTION	(8,000)	(8,000)	(8,000)	(8,000)
25 NET INTEREST EXPENSE	200,199	212,487	227,780	240,261
26 TOTAL EXPENSES	2,445,437	2,493,799	2,631,249	2,572,509
27 MINIMUM REQUIRED NET REVENUES 1/	5,744	0	0	75,993
28 PLANNED NET REVENUES FOR RISK				
29 TOTAL PLANNED NET REVENUES (27+28)	5,744	0	0	75,993
30 TOTAL REVENUE REQUIREMENT	2,451,181	2,493,799	2,631,249	2,648,502

1/ SEE NOTE ON CASH FLOW STATEMENT

Table 1D

**OUTYEAR GENERATION REVENUE REQUIREMENT
STATEMENT OF CASH FLOWS
(\$000s)**

	<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>
	2010	2011	2012	2013
1 CASH FROM OPERATING ACTIVITIES				
2 MINIMUM REQUIRED NET REVENUES 1/	5,744	0	0	75,993
3 NON-CASH ITEMS:				
4 DEPRECIATION AND AMORTIZATION	207,091	216,184	201,413	203,268
5 AMORTIZATION OF CAPITALIZED BOND PREMIUMS	185	185	185	185
6 CAPITALIZATION ADJUSTMENT	(45,937)	(45,937)	(45,937)	(45,937)
7 ACCRUAL REVENUES	(5,179)	(5,179)	(5,179)	(5,179)
8 CASH PROVIDED BY OPERATING ACTIVITIES	161,904	165,253	150,482	228,330
9 CASH FROM INVESTMENT ACTIVITIES:				
10 INVESTMENT IN:				
11 UTILITY PLANT (INCLUDING AFUDC)	(245,238)	(264,463)	(228,269)	(224,301)
12 CONSERVATION	(40,000)	(40,000)	(40,000)	(40,000)
13 FISH & WILDLIFE	(36,000)	(36,000)	(36,000)	(36,000)
14 CASH USED FOR INVESTMENT ACTIVITIES	(321,238)	(340,463)	(304,269)	(300,301)
15 CASH FROM BORROWING AND APPROPRIATIONS:				
16 INCREASE IN BONDS ISSUED TO U.S. TREASURY	199,000	200,000	211,000	214,000
17 REPAYMENT OF BONDS ISSUED TO U.S. TREASURY	(30,068)	(66,500)	(32,000)	(145,300)
18 INCREASE IN FEDERAL CONSTRUCTION APPROPRIATIONS	122,238	140,463	93,269	86,301
19 REPAYMENT OF FEDERAL CONSTRUCTION APPROPRIATIONS	(131,836)	(92,747)	(35,815)	(38,852)
20 PAYMENT OF IRRIGATION ASSISTANCE	0	0	(706)	(44,178)
21 CASH PROVIDED BY BORROWING AND APPROPRIATIONS	159,334	181,216	235,748	71,971
22 ANNUAL INCREASE (DECREASE) IN CASH	0	6,006	81,961	0
23 PLANNED NET REVENUES FOR RISK	0	0	0	0
24 TOTAL ANNUAL INCREASE (DECREASE) IN CASH	0	6,006	81,961	0

1/ Line 22 must be greater than or equal to zero, otherwise net revenues will be added so that there are no negative cash flows for the year.

Table 1E

**7(b)(2) GENERATION REVENUE REQUIREMENT
INCOME STATEMENT
(\$000s)**

	<u>A</u> <u>2007</u>	<u>B</u> <u>2008</u>	<u>C</u> <u>2009</u>	<u>D</u> <u>2010</u>	<u>E</u> <u>2011</u>	<u>F</u> <u>2012</u>	<u>G</u> <u>2013</u>
1 OPERATING EXPENSES							
2 POWER SYSTEM GENERATION RESOURCES							
3 OPERATING GENERATION RESOURCES	489,473	446,802	486,973	462,378	504,013	485,700	533,524
4 OPERATING GENERATION SETTLEMENT PAYMENTS	16,968	17,354	17,749	18,153	18,566	18,988	19,421
5 NON-OPERATING GENERATION	9,350	5,252	2,254	1,756	1,758	1,811	1,865
6 CONTRACTED POWER PURCHASES	181,652	150,340	175,435	66,646	63,700	65,611	67,579
7 RESIDENTIAL EXCHANGE/IOU SETTLEMENT BENEFITS							
8 RENEWABLE AND CONSERVATION GENERATION							
9 TRANSMISSION ACQUISITION AND ANCILLARY SERVICES	181,962	182,962	185,662	197,881	200,111	206,115	212,298
10 POWER NON-GENERATION OPERATIONS	49,672	51,003	52,449	54,958	56,478	58,173	59,918
11 F&W/ENVIRONMENTAL REQUIREMENTS	171,185	172,276	173,367	170,195	171,349	176,489	181,784
12 GENERAL AND ADMINISTRATIVE	52,698	52,361	58,681	65,612	66,835	68,801	70,830
13 OTHER INCOME, EXPENSES AND ADJUSTMENTS	59,000	59,000	59,000	59,000	59,000	59,000	59,000
14 NON-FEDERAL DEBT SERVICE	584,581	575,478	579,080	597,899	606,026	692,450	550,460
15 DEPRECIATION AND AMORTIZATION	130,282	133,255	136,357	138,462	141,405	144,465	148,260
16 TOTAL OPERATING EXPENSES	1,926,822	1,846,083	1,927,006	1,832,940	1,889,242	1,977,603	1,904,939
17 INTEREST EXPENSE:							
18 INTEREST ON FEDERAL INVESTMENT-							
19 APPROPRIATED FUNDS	200,621	197,658	200,289	197,721	194,766	189,914	179,541
20 BONDS ISSUED TO U.S. TREASURY	60,059	77,018	87,641	40,980	56,155	69,743	81,982
21 INTEREST CREDIT ON CASH RESERVES	(27,828)	(32,875)	(37,412)	(36,803)	(36,819)	(34,870)	(38,418)
22 AMORTIZATION OF CAPITALIZED BOND PREMIUMS							
23 CAPITALIZATION ADJUSTMENT	(45,937)	(45,937)	(45,937)	(45,937)	(45,937)	(45,937)	(45,937)
24 ALLOWANCE FOR FUNDS USED DURING CONSTRUCTION	(8,000)	(8,000)	(8,000)	(8,000)	(8,000)	(8,000)	(8,000)
25 NET INTEREST EXPENSE	178,915	187,864	196,580	147,960	160,165	170,850	169,168
26 TOTAL EXPENSES	2,105,737	2,033,947	2,123,587	1,980,900	2,049,407	2,148,453	2,074,107
27 MINIMUM REQUIRED NET REVENUES 1/	91,107	103,072	90,556	82,927	94,922	82,448	63,207
28 PLANNED NET REVENUES FOR RISK	97,000	97,000	97,000				
29 TOTAL PLANNED NET REVENUES (27+28)	188,107	200,072	187,556	82,927	94,922	82,448	63,207
30 TOTAL REVENUE REQUIREMENT	2,293,844	2,234,019	2,311,143	2,063,827	2,144,330	2,230,901	2,137,314

1/ SEE NOTE ON CASH FLOW STATEMENT

Table 1F

**7(b)(2) GENERATION REVENUE REQUIREMENT
STATEMENT OF CASH FLOWS
(\$000s)**

	<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>E</u>	<u>F</u>	<u>G</u>
	2007	2008	2009	2010	2011	2012	2013
1 CASH FROM OPERATING ACTIVITIES							
2 MINIMUM REQUIRED NET REVENUES 1/	91,107	103,072	90,556	82,927	94,922	82,448	63,207
3 NON-CASH ITEMS:							
4 DEPRECIATION AND AMORTIZATION	130,282	133,255	136,357	138,462	141,405	144,465	148,260
5 AMORTIZATION OF CAPITALIZED BOND PREMIUMS	0	0	0	0	0	0	0
6 CAPITALIZATION ADJUSTMENT	(45,937)	(45,937)	(45,937)	(45,937)	(45,937)	(45,937)	(45,937)
7 ACCRUAL REVENUES	(5,179)	(5,179)	(5,179)	(5,179)	(5,179)	(5,179)	(5,179)
8 CASH PROVIDED BY OPERATING ACTIVITIES	170,273	185,211	175,797	170,273	185,211	175,797	160,350
9 CASH FROM INVESTMENT ACTIVITIES:							
10 INVESTMENT IN:							
11 UTILITY PLANT (INCLUDING AFUDC)	(209,119)	(280,796)	(142,817)	(245,238)	(264,463)	(228,269)	(224,301)
12 CONSERVATION	0	0	0	0	0	0	0
13 FISH & WILDLIFE	(36,000)	(36,000)	(36,000)	(36,000)	(36,000)	(36,000)	(36,000)
14 CASH USED FOR INVESTMENT ACTIVITIES	(245,119)	(316,796)	(178,817)	(281,238)	(300,463)	(264,269)	(260,301)
15 CASH FROM BORROWING AND APPROPRIATIONS:							
16 INCREASE IN BONDS ISSUED TO U.S. TREASURY	169,000	181,000	173,000	159,000	160,000	171,000	174,000
17 REPAYMENT OF BONDS ISSUED TO U.S. TREASURY	(68,357)	0	(19,220)	(68,357)	0	(19,220)	(68)
18 INCREASE IN FEDERAL CONSTRUCTION APPROPRIATIONS	76,119	135,796	5,817	122,238	140,463	93,269	86,301
19 REPAYMENT OF FEDERAL CONSTRUCTION APPROPRIATIONS	(101,916)	(182,261)	(149,987)	(101,916)	(182,261)	(149,987)	(160,282)
20 PAYMENT OF IRRIGATION ASSISTANCE	0	(2,950)	(6,590)	0	(2,950)	(6,590)	0
21 CASH PROVIDED BY BORROWING AND APPROPRIATIONS	74,846	131,585	3,020	110,965	115,252	88,472	99,951
22 ANNUAL INCREASE (DECREASE) IN CASH	0	0	0	0	0	0	0
23 PLANNED NET REVENUES FOR RISK	97,000	97,000	97,000	0	0	0	0
24 TOTAL ANNUAL INCREASE (DECREASE) IN CASH	97,000	97,000	97,000	0	0	0	0

1/ Line 22 must be greater than or equal to zero, otherwise net revenues will be added so that there are no negative cash flows for the year.

2. COSTS OF SERVICES

2.1 Introduction

This chapter documents the development of the costs necessary for ratemaking from the annual generation revenue requirements. For the Cost of Service Analysis (COSA), the total generation revenue requirements (all years of both the program and 7(b)(2) cases) are assigned to each Federal Columbia River Power System (FCRPS) resource pool according to the necessary level of detail. The costs of the generation inputs to ancillary services are developed from the COSA data. Also included is the accrued expense basis for the Slice product revenue requirement.

Data development for the COSA, generation inputs to ancillary services, and the Slice revenue requirement are derived from the annual costs identified in Table 1A - Generation Income Statement. For the COSA, costs are assigned to the resource pools primarily by direct identification, related to the rate development requirements of the Northwest Power Act. Exceptions are net interest expenses and planned net revenues, which are first split between conservation and the remainder of generation by the use of equivalent annual costs (defined below). The generation portions are then divided between the Federal Base System (FBS) Hydro, Fish & Wildlife, and BPA generation programs based on average net investment. These allocations, in turn, form the basis for the association of net interest expenses and, where applicable, planned net revenues with the ancillary services inputs. The O&M and depreciation are direct identification for the ancillary services inputs. The Slice revenue requirement is derived from the generation revenue requirement with the exclusion of certain budget line items.

2.2 Cost Components of COSA Resource Pools

FBS Operating Expenses

- Hydro: COE, BOR, and US Fish & Wildlife O&M, and depreciation; Colville payment; upstream benefits.
- Fish and Wildlife: BPA F&W direct program O&M and amortization of F&W direct program capital investments.
- Remaining FBS items: Contractual costs associated with Trojan, CGS, WNP-1 and -3 (excluding WNP 3 investor owned utility (IOU) settlement costs); balancing (short-term) power purchases and potential system augmentation purchases.

New Resources Operating Expenses

- Contractual obligations associated with energy acquired under the long-term generating projects and renewable generation programs, including the renewables rate credit.

Residential Exchange Operating Expenses

- Financial settlement with IOUs as part of subscription.

Conservation Operating Expenses

- Operating expenses associated with PBL's generation conservation programs and PBL conservation support.
- Amortization of BPA capital investments in Legacy conservation, ConAug and Conservation acquisitions.
- Third party debt service in conservation programs backed by BPA.
- Conservation rate credit.

Other Generation Costs Operating Expenses

- BPA programs are expense programs, including Power Marketing and Business Support, Power Scheduling, PBL System Operations, CSRS Pension expense, agency Administrative & Support Services, DSI benefit payments and the Planning Council; depreciation associated with investment in capital equipment (office furniture & fixtures, data processing hardware and software) for PBL and Corporate.

Transmission Costs

- TBL transmission is estimated costs of BPA transmission service acquired when necessary for delivery of BPA wholesale power.
- Ancillary services are estimated annual costs of BPA Generation Integration transmission facilities (Note: while these are not specifically ancillary service product costs, this is the program under which this interbusiness line expense currently is being reported).
- General Transfer Agreements are annual expenses associated with General Transfer Agreements for delivery of BPA wholesale power and non-BPA wheeling acquired for same.

Equivalent annual costs are used to prorate net interest expense and planned net revenues between conservation and the remainder of generation, are calculated as levelized principal and interest payments (mortgage basis) using completed plant and projected additions. A weighted average interest rate is used for the historical plant and projected interest rates for additions. The prorating is based on the sum of all calculated proxy-payments for COE, BOR, and BPA plant and BPA fish and wildlife investment (generation) and all BPA conservation investments (conservation). The generation portion is then allocated between FBS and other generation based on average net plant investment.

2.3 Generation Inputs to Ancillary Services Operating Reserves

All Hydro Projects

- O&M: sum of generation O&M for each hydro project, including Colville payment (associated with Columbia Basin), less F&W related O&M at projects.
- Depreciation: depreciation expense associated with generation investments at each hydro project.

- Net Interest Expense/Planned Net Revenues: suballocation from COSA table Hydro line based on generation net plant investment from hydro projects.
- Fish & Wildlife O&M: sum of BPA direct program, US F&W Service (Lower Snake River Compensation Plan) and F&W portion of O&M at individual COE projects, including Columbia River Bypass.
- Amortization/Depreciation: annual write-down of F&W investments from BPA direct program, Lower Snake River Compensation Plan (LSRCP), and Columbia River Bypass (CRB). Net Interest Expense/Planned Net Revenues: suballocation from COSA table Hydro line based on net plant investment from LSRCP and CRB plus amounts in COSA table Fish & Wildlife line.
- A&G Expense: generation revenue requirement O&M for Power Marketing, Power Scheduling, Generation Oversight, (one-half of) Planning Council, and BPA Administrative and Support Services.
- Revenue Credits: offsetting revenues associated with funding for BPA F&W program (4h10C) and annual Colville settlement payments (Colville payment Treasury credit).

Regulation

- All components identical to operating reserves except that data associated with the top 10 COE/BOR hydro plants (Columbia Basin, Bonneville, John Day, The Dalles, Chief Joseph, Ice Harbor, Lower Granite, Lower Monumental, Little Goose, and McNary) is used instead of all COE/BOR projects.

Reactive

- O&M at each COE/BOR project allocated to electric portion by identified percent (COE = 43%, BOR = 44%).
- A&G: Power Scheduling and Generation Oversight O&M from generation revenue requirement.
- Depreciation derived from percent of electric plant investment at each project (separate percentages for historical and projected investments) applied to calculated depreciation.
- WNP-2: identified percent of electric plant (0.74%) applied to debt service and O&M (exclusive of nuclear insurance, fuel and revenue-financed capital additions).
- Net Interest/Minimum Required Net Revenues: sub-allocation from COSA table Hydro line of net interest and required net revenues portion of total planned net revenues based on electric net plant investment.

- Synchronous Condenser Annual Costs (Revenue Credit) from identified investment in synchronous condensers, depreciation expense is calculated and suballocation of interest and required net revenues from Hydro line in COSA table, based on ratio of synchronous condenser net investment to total COE/BOR net plant investment.

Table 2A

**Generation Revenue Requirements by Resource Pool
PROGRAM CASE
(\$000s)**

FY 2007

	A INVEST BASE	B NET INT	C NET REVS	D OPER EXP	E TOTAL (B+C+D)
1. GENERATION COSTS					
2. FEDERAL BASE SYSTEM					
3. HYDRO	4,775,952	150,070	109,607	365,397	625,074
4. BPA FISH & WILDLIFE PROGRAM	136,511	4,289	3,133	171,598	179,020
5. TROJAN				17,905	17,905
6. WNP #1				160,723	160,723
7. CGS				510,755	510,755
8. WNP #3				160,848	160,848
9. SYSTEM AUGMENTATION				72,063	72,063
10. BALANCING POWER PURCHASES				107,000	107,000
11. TOTAL FEDERAL BASE SYSTEM	4,912,463	154,359	112,740	1,566,288	1,833,387
12. NEW RESOURCES					
13. IDAHO FALLS				0	0
14. COWLITZ FALLS				14,089	14,089
15. OTHER NEW RESOURCES PURCHASES				46,229	46,229
16. TOTAL NEW RESOURCES				60,318	60,318
17. RESIDENTIAL EXCHANGE SETTLEMENT				301,000	301,000
18. CONSERVATION		24,190	17,668	155,498	197,356
19. OTHER GENERATION COSTS					
20. BPA PROGRAMS	30,387	955	697	178,572	180,224
21. WNP #3 PLANT				0	0
22. TOTAL OTHER GENERATION COSTS	30,387	955	697	178,572	180,224
23. TOTAL GENERATION COSTS	4,942,850	179,504	131,105	2,261,676	2,572,285
24. TRANSMISSION COSTS					
25. TBL TRANSMISSION/ANCILLARY SERVICES				133,662	133,662
26. 3RD PARTY TRANS/ANCILLARY SERVICES				1,300	1,300
27. GENERAL TRANSFER AGREEMENTS				47,000	47,000
28. TOTAL TRANSMISSION COSTS				181,962	181,962
29. TOTAL PBL REVENUE REQUIREMENT		179,504	131,105	2,443,638	2,754,247

Table 2A

**Generation Revenue Requirements by Resource Pool
PROGRAM CASE
(\$000s)**

FY 2008

	A INVEST BASE	B NET INT	C NET REVS	D OPER EXP	E TOTAL (B+C+D)
1. GENERATION COSTS					
2. FEDERAL BASE SYSTEM					
3. HYDRO	4,831,698	157,567	116,980	375,633	650,180
4. FISH AND WILDLIFE	152,758	4,982	3,698	173,269	181,949
5. TROJAN				13,088	13,088
6. WNP #1				168,696	168,696
7. CGS				444,158	444,158
8. WNP #3				161,088	161,088
9. SYSTEM AUGMENTATION				41,626	41,626
10. BALANCING POWER PURCHASES				107,000	107,000
11. TOTAL FEDERAL BASE SYSTEM	4,984,456	162,549	120,678	1,484,558	1,767,785
12. NEW RESOURCES					
13. IDAHO FALLS				0	0
14. COWLITZ FALLS				14,078	14,078
15. OTHER NEW RESOURCES PURCHASES				54,113	54,113
16. TOTAL NEW RESOURCES				68,191	68,191
17. RESIDENTIAL EXCHANGE SETTLEMENT				301,000	301,000
18. CONSERVATION		24,973	18,541	158,242	201,756
19. OTHER GENERATION COSTS					
20. BPA PROGRAMS	27,124	884	657	178,563	180,103
21. WNP #3 PLANT					
22. TOTAL OTHER GENERATION COSTS	27,124	884	657	178,563	180,103
23. TOTAL GENERATION COSTS	5,011,580	188,406	139,876	2,190,554	2,518,835
24. TRANSMISSION COSTS					
25. TBL TRANSMISSION/ANCILLARY SERVICES				134,662	134,662
26. 3RD PARTY TRANS/ANCILLARY SERVICES				1,300	1,300
27. GENERAL TRANSFER AGREEMENTS				47,000	47,000
28. TOTAL TRANSMISSION COSTS				182,962	182,962
29. TOTAL PBL REVENUE REQUIREMENT	5,011,580	188,406	139,876	2,373,516	2,701,797

Table 2A

**Generation Revenue Requirements by Resource Pool
PROGRAM CASE
(\$000s)**

FY 2009

	A INVEST BASE	B NET INT	C NET REVS	D OPER EXP	E TOTAL (B+C+D)
1. GENERATION COSTS					
2. FEDERAL BASE SYSTEM					
3. HYDRO	4,902,276	164,144	104,005	387,714	655,863
4. FISH AND WILDLIFE	167,720	5,616	3,558	174,551	183,725
5. TROJAN				2,200	2,200
6. WNP #1				166,065	166,065
7. CGS				497,872	497,872
8. WNP #3				153,997	153,997
9. SYSTEM AUGMENTATION				66,721	66,721
10. BALANCING POWER PURCHASES				107,000	107,000
11. TOTAL FEDERAL BASE SYSTEM	5,069,996	169,760	107,563	1,556,119	1,833,442
12. NEW RESOURCES					
13. IDAHO FALLS				0	0
14. COWLITZ FALLS				14,089	14,089
15. OTHER LONG-TERM POWER PURCHASES				77,094	77,094
16. TOTAL NEW RESOURCES				91,183	91,183
17. RESIDENTIAL EXCHANGE SETTLEMENT				301,000	301,000
18. CONSERVATION		26,065	16,515	161,985	204,565
19. OTHER GENERATION COSTS					
20. BPA PROGRAMS	24,545	821	521	185,225	186,567
21. WNP #3 PLANT					
22. TOTAL OTHER GENERATION COSTS	24,545	821	521	185,225	186,567
23. TOTAL GENERATION COSTS	5,094,541	196,646	124,599	2,295,512	2,616,757
24. TRANSMISSION COSTS					
25. TBL TRANSMISSION/ANCILLARY SERVICES				134,662	134,662
26. 3RD PARTY TRANS/ANCILLARY SERVICES				3,000	3,000
27. GENERAL TRANSFER AGREEMENTS				48,000	48,000
28. TOTAL TRANSMISSION COSTS				185,662	185,662
29. TOTAL PBL REVENUE REQUIREMENT		196,646	124,599	2,481,174	2,802,419

Table 2A

Generation Revenue Requirements by Resource Pool
PROGRAM CASE
(\$000s)

FY 2010

	A	B	C	D	E
	INVEST	NET	NET	OPER	TOTAL
	<u>BASE</u>	<u>INT</u>	<u>REVS</u>	<u>EXP</u>	<u>(B+C+D)</u>
1. GENERATION COSTS					
2. FEDERAL BASE SYSTEM					
3. HYDRO	4,966,380	166,051	4,764	399,267	570,082
4. FISH AND WILDLIFE	181,766	6,077	174	170,919	177,170
5. TROJAN				1,700	1,700
6. WNP #1				162,044	162,044
7. CGS				498,248	498,248
8. WNP #3				143,663	143,663
9. SYSTEM AUGMENTATION				0	0
10. BALANCING POWER PURCHASES				64,604	64,604
11. TOTAL FEDERAL BASE SYSTEM	5,148,146	172,128	4,938	1,440,444	1,617,510
12. NEW RESOURCES					
13. IDAHO FALLS				0	0
14. COWLITZ FALLS				14,110	14,110
15. OTHER LONG-TERM POWER PURCHASES				77,559	77,559
16. TOTAL NEW RESOURCES				91,669	91,669
17. RESIDENTIAL EXCHANGE SETTLEMENT				151,159	151,159
18. CONSERVATION		27,343	785	169,471	197,599
19. OTHER GENERATION COSTS					
20. BPA PROGRAMS	21,781	728	21	194,614	195,364
21. WNP #3 PLANT					0
22. TOTAL OTHER GENERATION COSTS	21,781	728	21	194,614	195,364
23. TOTAL GENERATION COSTS	5,169,927	200,199	5,744	2,047,357	2,253,300
24. TRANSMISSION COSTS					
25. TBL TRANSMISSION/ANCILLARY SERVICES				140,161	140,161
26. 3RD PARTY TRANS/ANCILLARY SERVICES				1,120	1,120
27. GENERAL TRANSFER AGREEMENTS				56,600	56,600
28. TOTAL TRANSMISSION COSTS				197,881	197,881
29. TOTAL PBL REVENUE REQUIREMENT		200,199	5,744	2,245,238	2,451,181

Table 2A

**Generation Revenue Requirements by Resource Pool
PROGRAM CASE
(\$000s)**

FY 2011

	A INVEST BASE	B NET INT	C NET REVS	D OPER EXP	E TOTAL (B+C+D)
1. GENERATION COSTS					
2. FEDERAL BASE SYSTEM					
3. HYDRO	5,054,274	174,658	0	409,858	584,516
4. FISH AND WILDLIFE	195,118	6,743	0	171,820	178,563
5. TROJAN				1,700	1,700
6. WNP #1				164,248	164,248
7. CGS				513,805	513,805
8. WNP #3				169,131	169,131
9. SYSTEM AUGMENTATION				0	0
10. BALANCING POWER PURCHASES				61,330	61,330
11. TOTAL FEDERAL BASE SYSTEM	5,249,392	181,401	0	1,491,892	1,673,293
12. NEW RESOURCES					
13. IDAHO FALLS				0	0
14. COWLITZ FALLS				14,163	14,163
15. OTHER LONG-TERM POWER PURCHASES				78,977	78,977
16. TOTAL NEW RESOURCES				93,140	93,140
17. RESIDENTIAL EXCHANGE SETTLEMENT				123,000	123,000
18. CONSERVATION		30,427	0	175,929	206,356
19. OTHER GENERATION COSTS					
20. BPA PROGRAMS	19,082	659	0	197,239	197,898
21. WNP #3 PLANT					0
22. TOTAL OTHER GENERATION COSTS	19,082	659	0	197,239	197,898
23. TOTAL GENERATION COSTS	5,268,474	212,487	0	2,081,200	2,293,687
24. TRANSMISSION COSTS					
25. TBL TRANSMISSION/ANCILLARY SERVICES				141,161	141,161
26. 3RD PARTY TRANS/ANCILLARY SERVICES				1,150	1,150
27. GENERAL TRANSFER AGREEMENTS				57,800	57,800
28. TOTAL TRANSMISSION COSTS				200,111	200,111
29. TOTAL PBL REVENUE REQUIREMENT		212,487	0	2,281,311	2,493,798

Table 2A

**Generation Revenue Requirements by Resource Pool
PROGRAM CASE
(\$000s)**

FY 2012

	A INVEST BASE	B NET INT	C NET REVS	D OPER EXP	E TOTAL (B+C+D)
1. GENERATION COSTS					
2. FEDERAL BASE SYSTEM					
3. HYDRO	5,169,519	194,580	0	422,167	616,747
4. FISH AND WILDLIFE	208,161	7,835	0	176,258	184,093
5. TROJAN				1,751	1,751
6. WNP #1				190,251	190,251
7. CGS				554,500	554,500
8. WNP #3				162,659	162,659
9. SYSTEM AUGMENTATION				0	0
10. BALANCING POWER PURCHASES				63,170	63,170
11. TOTAL FEDERAL BASE SYSTEM	5,377,680	202,415	0	1,570,756	1,773,171
12. NEW RESOURCES					
13. IDAHO FALLS				0	0
14. COWLITZ FALLS				14,216	14,216
15. OTHER LONG-TERM POWER PURCHASES				80,661	80,661
16. TOTAL NEW RESOURCES				94,877	94,877
17. RESIDENTIAL EXCHANGE SETTLEMENT				171,313	171,313
18. CONSERVATION		24,744	0	159,677	184,421
19. OTHER GENERATION COSTS					
20. BPA PROGRAMS	16,477	621	0	200,733	201,353
21. WNP #3 PLANT					0
22. TOTAL OTHER GENERATION COSTS	16,477	621	0	200,733	201,353
23. TOTAL GENERATION COSTS	5,394,157	227,780	0	2,197,355	2,425,134
24. TRANSMISSION COSTS					
25. TBL TRANSMISSION/ANCILLARY SERVICES				145,396	145,396
26. 3RD PARTY TRANS/ANCILLARY SERVICES				1,185	1,185
27. GENERAL TRANSFER AGREEMENTS				59,534	59,534
28. TOTAL TRANSMISSION COSTS				206,115	206,115
29. TOTAL PBL REVENUE REQUIREMENT		227,780	0	2,403,469	2,631,249

Table 2A

Generation Revenue Requirements by Resource Pool
PROGRAM CASE
(\$000s)

FY 2013

	A	B	C	D	E
	INVEST	NET	NET	OPER	TOTAL
	<u>BASE</u>	<u>INT</u>	<u>REVS</u>	<u>EXP</u>	<u>(B+C+D)</u>
1. GENERATION COSTS					
2. FEDERAL BASE SYSTEM					
3. HYDRO	5,279,563	205,876	65,117	434,448	705,441
4. FISH AND WILDLIFE	220,798	8,610	2,723	181,697	193,030
5. TROJAN				1,804	1,804
6. WNP #1				274,736	274,736
7. CGS				352,802	352,802
8. WNP #3				177,584	177,584
9. SYSTEM AUGMENTATION				0	0
10. BALANCING POWER PURCHASES				65,065	65,065
11. TOTAL FEDERAL BASE SYSTEM	5,500,361	214,486	67,840	1,488,134	1,770,460
12. NEW RESOURCES					
13. IDAHO FALLS				0	0
14. COWLITZ FALLS				14,262	14,262
15. OTHER LONG-TERM POWER PURCHASES				82,383	82,383
16. TOTAL NEW RESOURCES				96,644	96,644
17. RESIDENTIAL EXCHANGE SETTLEMENT				171,313	171,313
18. CONSERVATION		25,230	7,980	159,351	192,561
19. OTHER GENERATION COSTS					
20. BPA PROGRAMS	13,982	545	173	204,507	205,225
21. WNP #3 PLANT					
22. TOTAL OTHER GENERATION COSTS	13,982	545	173	204,507	205,225
23. TOTAL GENERATION COSTS	5,514,343	240,261	75,993	2,119,950	2,436,204
24. TRANSMISSION COSTS					
25. TBL TRANSMISSION/ANCILLARY SERVICES				149,758	149,758
26. 3RD PARTY TRANS/ANCILLARY SERVICES				1,220	1,220
27. GENERAL TRANSFER AGREEMENTS				61,320	61,320
28. TOTAL TRANSMISSION COSTS				212,298	212,298
29. TOTAL PBL REVENUE REQUIREMENT		240,261	75,993	2,332,248	2,648,502

Table 2B

**Allocation of Net Interest and Planned Net Revenues for COSA
(\$000s)**

	<u>Generation</u>	<u>Conservation</u>	<u>Total Generation</u>
FY 2007			
1 Equivalent Annual Costs	535,173	83,354	618,527
2 Percent	86.52%	13.48%	100%
3 Net Interest Expense	155,314	24,190	179,504
4 Planned Net Revenues	113,437	17,668	131,105
FY 2008			
1 Equivalent Annual Costs	557,617	85,207	642,824
2 Percent	86.74%	13.26%	100%
3 Net Interest Expense	163,433	24,973	188,406
4 Planned Net Revenues	121,335	18,541	139,876
FY 2009			
1 Equivalent Annual Costs	586,092	89,554	675,646
2 Percent	86.75%	13.25%	100%
3 Net Interest Expense	170,581	26,065	196,646
4 Planned Net Revenues	108,084	16,515	124,599
FY 2010			
1 Equivalent Annual Costs	581,563	91,993	673,555
2 Percent	86.34%	13.66%	100%
3 Net Interest Expense	172,856	27,343	200,199
4 Planned Net Revenues	4,959	785	5,744

Table 2B

**Allocation of Net Interest and Planned Net Revenues for COSA
(\$000s)**

FY 2011	<u>Generation</u>	<u>Conservation</u>	<u>Total Generation</u>
1 Equivalent Annual Costs	601,560	100,535	702,095
2 Percent	85.68%	14.32%	100%
3 Net Interest Expense	182,060	30,427	212,487
4 Planned Net Revenues	0	0	0
FY 2012			
1 Equivalent Annual Costs	619,581	75,509	695,090
2 Percent	89.14%	10.86%	100%
3 Net Interest Expense	203,036	24,744	227,780
4 Planned Net Revenues	0	0	0
FY 2013			
1 Equivalent Annual Costs	638,405	74,906	713,311
2 Percent	89.50%	10.50%	100%
3 Net Interest Expense	215,031	25,230	240,261
4 Planned Net Revenues	68,013	7,980	75,993

Table 2C

Equivalent Annual Costs
(\$000s)

	A	B	C	D	E	F	G
	AVG	COMP	WT AV	2007	COMP	WT AV	2008
	SERV	PLANT	INT	EQ ANN	PLANT	INT	EQ ANN
	LIFE	9/30/2007	RATE	COSTS	9/30/2008	RATE	COSTS
Corps of Engineers/Bureau of Reclamation	75	7,227,605	6.65%	\$484,510	7,395,916	6.75%	\$502,974
BPA F&W	15	315,650	5.33%	\$31,093	314,985	5.68%	\$31,757
PBL General Plant	6	105,829	5.08%	\$19,570	119,704	6.07%	\$22,886
TOTAL GENERATION				\$535,173			\$557,617
CONSERVATION	15	846,921	5.33%	\$83,354	811,540	5.31%	\$85,207
PBL							
OFFICE FURNITURE & FIXTURES							
DATA PROCESSING EQUIPMENT							
DATA PROCESSING SOFTWARE							
TOTAL GENERAL PLANT - PBL	6	105,829	16,327	7	119,704	16,199	9
CONSERVATION							
LEGACY							
CONAUG							
CONSERVATION ACQUISITION							
TOTAL CONSERVATION	15	846,921	56,389	14	811,540	59,583	12

Table 2C

Equivalent Annual Costs
(\$000s)

	H	I	J	K	L	M	N	O	P
	COMP	WT AV	2009	COMP	WT AV	2010	COMP	WT AV	2011
	PLANT	INT	EQ ANN	PLANT	INT	EQ ANN	PLANT	INT	EQ ANN
	<u>9/30/2009</u>	<u>RATE</u>	<u>COSTS</u>	<u>9/30/2010</u>	<u>RATE</u>	<u>COSTS</u>	<u>9/30/2011</u>	<u>RATE</u>	<u>COSTS</u>
Corps of Engineers/Bureau of Reclamation	7,565,003	6.92%	\$526,985	7,724,899	6.77%	\$526,848	7,945,391	6.81%	\$544,976
BPA F&W	330,498	5.84%	\$33,674	334,012	6.01%	\$34,413	343,966	6.15%	\$35,764
PBL General Plant	131,965	6.31%	\$25,433	133,450	6.54%	\$20,301	145,674	6.71%	\$20,821
TOTAL GENERATION			\$586,092			\$581,563			\$601,560
CONSERVATION	789,220	5.56%	\$89,554	787,401	5.03%	\$91,993	793,306	5.47%	\$100,535
PBL									
OFFICE FURNITURE & FIXTURES									
DATA PROCESSING EQUIPMENT									
DATA PROCESSING SOFTWARE									
TOTAL GENERAL PLANT - PBL	131,965	15,095	9	133,450	15,044	10	145,674	14,925	10
CONSERVATION									
LEGACY									
CONAUG									
CONSERVATION ACQUISITION									
TOTAL CONSERVATION	789,220	63,423	11	787,401	68,629	11	793,306	74,779	11

Table 2C

Equivalent Annual Costs
(\$000s)

	Q	R	S	T	U	V
	COMP	WT AV	2012	COMP	WT AV	2008
	PLANT	INT	EQ ANN	PLANT	INT	EQ ANN
	<u>9/30/2012</u>	<u>RATE</u>	<u>COSTS</u>	<u>9/30/2013</u>	<u>RATE</u>	<u>COSTS</u>
Corps of Engineers/Bureau of Reclamation	8,165,660	6.83%	\$561,673	8,381,961	6.85%	\$578,182
BPA F&W	351,902	6.25%	\$36,827	365,907	6.34%	\$38,516
PBL General Plant	153,648	6.81%	\$21,081	165,925	6.91%	\$21,707
TOTAL GENERATION			\$619,581			\$638,405
CONSERVATION	650,533	4.85%	\$75,509	596,382	5.61%	\$74,906
PBL						
OFFICE FURNITURE & FIXTURES						
DATA PROCESSING EQUIPMENT						
DATA PROCESSING SOFTWARE						
TOTAL GENERAL PLANT - PBL	153,648	14,759	11	165,925	14,759	
CONSERVATION						
LEGACY						
CONAUG						
CONSERVATION ACQUISITION						
TOTAL CONSERVATION	650,533	56,948	11	596,382	55,008	

Table 2D

**Generation Revenue Requirements by Resource Pool
7B2 CASE
(\$000s)**

FY 2007

	<u>A</u> INVEST BASE	<u>B</u> NET INT	<u>C</u> NET REVS	<u>D</u> OPER EXP	<u>E</u> TOTAL (B+C+D)
1. GENERATION COSTS					
2. FEDERAL BASE SYSTEM					
3. HYDRO	4,775,952	172,874	181,755	365,397	720,026
4. BPA FISH & WILDLIFE PROGRAM	136,511	4,941	5,195	171,598	181,734
5. TROJAN				17,905	17,905
6. WNP #1				160,723	160,723
7. CGS				510,755	510,755
8. WNP #3				160,848	160,848
9. SYSTEM AUGMENTATION				72,063	72,063
10. BALANCING POWER PURCHASES				107,000	107,000
11. TOTAL FEDERAL BASE SYSTEM	4,912,463	177,815	186,950	1,566,288	1,931,053
12. NEW RESOURCES					
13. IDAHO FALLS					0
14. COWLITZ FALLS					0
15. OTHER NEW RESOURCES PURCHASES					0
16. TOTAL NEW RESOURCES					0
17. RESIDENTIAL EXCHANGE SETTLEMENT					0
18. CONSERVATION					0
19. OTHER GENERATION COSTS					
20. BPA PROGRAMS	30,387	1,100	1,157	178,572	180,829
21. WNP #3 PLANT				0	0
22. TOTAL OTHER GENERATION COSTS	30,387	1,100	1,157	178,572	180,829
23. TOTAL GENERATION COSTS	4,942,850	178,915	188,107	1,744,860	2,111,882
24. TRANSMISSION COSTS					
25. TBL TRANSMISSION/ANCILLARY SERVICES				133,662	133,662
26. 3RD PARTY TRANS/ANCILLARY SERVICES				1,300	1,300
27. GENERAL TRANSFER AGREEMENTS				47,000	47,000
28. TOTAL TRANSMISSION COSTS				181,962	181,962
29. TOTAL PBL REVENUE REQUIREMENT		178,915	188,107	1,926,822	2,293,844

Table 2D

**Generation Revenue Requirements by Resource Pool
7B2 CASE
(\$000s)**

FY 2008

	A	B	C	D	E
	INVEST	NET	NET	OPER	TOTAL
	<u>BASE</u>	<u>INT</u>	<u>REVS</u>	<u>EXP</u>	<u>(B+C+D)</u>
1. GENERATION COSTS					
2. FEDERAL BASE SYSTEM					
3. HYDRO	4,831,698	181,121	192,891	375,633	749,645
4. FISH AND WILDLIFE	152,758	5,726	6,098	173,269	185,093
5. TROJAN				13,088	13,088
6. WNP #1				168,696	168,696
7. CGS				444,158	444,158
8. WNP #3				161,088	161,088
9. SYSTEM AUGMENTATION				41,626	41,626
10. BALANCING POWER PURCHASES				107,000	107,000
11. TOTAL FEDERAL BASE SYSTEM	4,984,456	186,847	198,989	1,484,558	1,870,394
12. NEW RESOURCES					
13. IDAHO FALLS					0
14. COWLITZ FALLS					0
15. OTHER NEW RESOURCES PURCHASES					0
16. TOTAL NEW RESOURCES					0
17. RESIDENTIAL EXCHANGE SETTLEMENT					0
18. CONSERVATION					0
19. OTHER GENERATION COSTS					
20. BPA PROGRAMS	27,124	1,017	1,083	178,563	180,662
21. WNP #3 PLANT					
22. TOTAL OTHER GENERATION COSTS	27,124	1,017	1,083	178,563	180,662
23. TOTAL GENERATION COSTS	5,011,580	187,864	200,072	1,663,121	2,051,057
24. TRANSMISSION COSTS					
25. TBL TRANSMISSION/ANCILLARY SERVICES				134,662	134,662
26. 3RD PARTY TRANS/ANCILLARY SERVICES				1,300	1,300
27. GENERAL TRANSFER AGREEMENTS				47,000	47,000
28. TOTAL TRANSMISSION COSTS				182,962	182,962
29. TOTAL PBL REVENUE REQUIREMENT	5,011,580	187,864	200,072	1,846,083	2,234,019

WP-07-E-BP-02

Table 2D

**Generation Revenue Requirements by Resource Pool
7B2 CASE
(\$000s)**

FY 2009

	<u>A</u> INVEST BASE	<u>B</u> NET INT	<u>C</u> NET REVS	<u>D</u> OPER EXP	<u>E</u> TOTAL (B+C+D)
1. GENERATION COSTS					
2. FEDERAL BASE SYSTEM					
3. HYDRO	4,902,276	189,162	180,478	387,714	757,354
4. FISH AND WILDLIFE	167,720	6,472	6,175	174,551	187,198
5. TROJAN				2,200	2,200
6. WNP #1				166,065	166,065
7. CGS				497,872	497,872
8. WNP #3				153,997	153,997
9. SYSTEM AUGMENTATION				66,721	66,721
10. BALANCING POWER PURCHASES				107,000	107,000
11. TOTAL FEDERAL BASE SYSTEM	5,069,996	195,634	186,653	1,556,119	1,938,406
12. NEW RESOURCES					
13. IDAHO FALLS					0
14. COWLITZ FALLS					0
15. OTHER LONG-TERM POWER PURCHASES					0
16. TOTAL NEW RESOURCES					0
17. RESIDENTIAL EXCHANGE SETTLEMENT					0
18. CONSERVATION					0
19. OTHER GENERATION COSTS					
20. BPA PROGRAMS	24,545	946	903	185,225	187,075
21. WNP #3 PLANT					
22. TOTAL OTHER GENERATION COSTS	24,545	946	903	185,225	187,075
23. TOTAL GENERATION COSTS	5,094,541	196,580	187,556	1,741,344	2,125,481
24. TRANSMISSION COSTS					
25. TBL TRANSMISSION/ANCILLARY SERVICES				134,662	134,662
26. 3RD PARTY TRANS/ANCILLARY SERVICES				3,000	3,000
27. GENERAL TRANSFER AGREEMENTS				48,000	48,000
28. TOTAL TRANSMISSION COSTS				185,662	185,662
29. TOTAL PBL REVENUE REQUIREMENT		196,580	187,556	1,927,006	2,311,143

Table 2D

**Generation Revenue Requirements by Resource Pool
7B2 CASE
(\$000s)**

FY 2010

	A	B	C	D	E
	INVEST	NET	NET	OPER	TOTAL
	<u>BASE</u>	<u>INT</u>	<u>REVS</u>	<u>EXP</u>	<u>(B+C+D)</u>
1. GENERATION COSTS					
2. FEDERAL BASE SYSTEM					
3. HYDRO	4,966,380	142,135	79,662	399,267	621,064
4. FISH AND WILDLIFE	181,766	5,202	2,916	170,919	179,037
5. TROJAN				1,700	1,700
6. WNP #1				162,044	162,044
7. CGS				498,248	498,248
8. WNP #3				143,663	143,663
9. SYSTEM AUGMENTATION				0	0
10. BALANCING POWER PURCHASES				64,604	64,604
11. TOTAL FEDERAL BASE SYSTEM	5,148,146	147,337	82,578	1,440,444	1,670,359
12. NEW RESOURCES					
13. IDAHO FALLS					0
14. COWLITZ FALLS					0
15. OTHER LONG-TERM POWER PURCHASES					0
16. TOTAL NEW RESOURCES					0
17. RESIDENTIAL EXCHANGE SETTLEMENT					0
18. CONSERVATION					0
19. OTHER GENERATION COSTS					
20. BPA PROGRAMS	21,781	623	349	194,614	195,586
21. WNP #3 PLANT					0
22. TOTAL OTHER GENERATION COSTS	21,781	623	349	194,614	195,586
23. TOTAL GENERATION COSTS	5,169,927	147,960	82,927	1,635,059	1,865,946
24. TRANSMISSION COSTS					
25. TBL TRANSMISSION/ANCILLARY SERVICES				140,161	140,161
26. 3RD PARTY TRANS/ANCILLARY SERVICES				1,120	1,120
27. GENERAL TRANSFER AGREEMENTS				56,600	56,600
28. TOTAL TRANSMISSION COSTS				197,881	197,881
29. TOTAL PBL REVENUE REQUIREMENT		147,960	82,927	1,832,940	2,063,827

Table 2D

**Generation Revenue Requirements by Resource Pool
7B2 CASE
(\$000s)**

FY 2011

	<u>A</u> INVEST BASE	<u>B</u> NET INT	<u>C</u> NET REVS	<u>D</u> OPER EXP	<u>E</u> TOTAL (B+C+D)
1. GENERATION COSTS					
2. FEDERAL BASE SYSTEM					
3. HYDRO	5,054,274	153,653	91,063	409,858	654,574
4. FISH AND WILDLIFE	195,118	5,932	3,515	171,820	181,267
5. TROJAN				1,700	1,700
6. WNP #1				164,248	164,248
7. CGS				513,805	513,805
8. WNP #3				169,131	169,131
9. SYSTEM AUGMENTATION				0	0
10. BALANCING POWER PURCHASES				61,330	61,330
11. TOTAL FEDERAL BASE SYSTEM	5,249,392	159,585	94,578	1,491,892	1,746,055
12. NEW RESOURCES					
13. IDAHO FALLS					0
14. COWLITZ FALLS					0
15. OTHER LONG-TERM POWER PURCHASES					0
16. TOTAL NEW RESOURCES					0
17. RESIDENTIAL EXCHANGE SETTLEMENT					0
18. CONSERVATION					0
19. OTHER GENERATION COSTS					
20. BPA PROGRAMS	19,082	580	344	197,239	198,163
21. WNP #3 PLANT					0
22. TOTAL OTHER GENERATION COSTS	19,082	580	344	197,239	198,163
23. TOTAL GENERATION COSTS	5,268,474	160,165	94,922	1,689,131	1,944,218
24. TRANSMISSION COSTS					
25. TBL TRANSMISSION/ANCILLARY SERVICES				141,161	141,161
26. 3RD PARTY TRANS/ANCILLARY SERVICES				1,150	1,150
27. GENERAL TRANSFER AGREEMENTS				57,800	57,800
28. TOTAL TRANSMISSION COSTS				200,111	200,111
29. TOTAL PBL REVENUE REQUIREMENT		160,165	94,922	1,889,242	2,144,330

Table 2D

**Generation Revenue Requirements by Resource Pool
7B2 CASE
(\$000s)**

FY 2012

	A	B	C	D	E
	INVEST	NET	NET	OPER	TOTAL
	<u>BASE</u>	<u>INT</u>	<u>REVS</u>	<u>EXP</u>	<u>(B+C+D)</u>
1. GENERATION COSTS					
2. FEDERAL BASE SYSTEM					
3. HYDRO	5,169,519	163,735	79,015	422,167	664,917
4. FISH AND WILDLIFE	208,161	6,593	3,182	176,258	186,033
5. TROJAN				1,751	1,751
6. WNP #1				190,251	190,251
7. CGS				554,500	554,500
8. WNP #3				162,659	162,659
9. SYSTEM AUGMENTATION				0	0
10. BALANCING POWER PURCHASES				63,170	63,170
11. TOTAL FEDERAL BASE SYSTEM	5,377,680	170,328	82,197	1,570,756	1,823,281
12. NEW RESOURCES					
13. IDAHO FALLS					0
14. COWLITZ FALLS					0
15. OTHER LONG-TERM POWER PURCHASES					0
16. TOTAL NEW RESOURCES					0
17. RESIDENTIAL EXCHANGE SETTLEMENT					0
18. CONSERVATION					0
19. OTHER GENERATION COSTS					
20. BPA PROGRAMS	16,477	522	251	200,733	201,506
21. WNP #3 PLANT					0
22. TOTAL OTHER GENERATION COSTS	16,477	522	251	200,733	201,506
23. TOTAL GENERATION COSTS	5,394,157	170,850	82,448	1,771,488	2,024,787
24. TRANSMISSION COSTS					
25. TBL TRANSMISSION/ANCILLARY SERVICES				145,396	145,396
26. 3RD PARTY TRANS/ANCILLARY SERVICES				1,185	1,185
27. GENERAL TRANSFER AGREEMENTS				59,534	59,534
28. TOTAL TRANSMISSION COSTS				206,115	206,115
29. TOTAL PBL REVENUE REQUIREMENT		170,850	82,448	1,977,603	2,230,901

Table 2D

**Generation Revenue Requirements by Resource Pool
7B2 CASE
(\$000s)**

FY 2013

	A INVEST BASE	B NET INT	C NET REVS	D OPER EXP	E TOTAL (B+C+D)
1. GENERATION COSTS					
2. FEDERAL BASE SYSTEM					
3. HYDRO	5,279,563	161,965	60,515	434,448	656,928
4. FISH AND WILDLIFE	220,798	6,774	2,531	181,697	191,002
5. TROJAN				1,804	1,804
6. WNP #1				274,736	274,736
7. CGS				352,802	352,802
8. WNP #3				177,584	177,584
9. SYSTEM AUGMENTATION				0	0
10. BALANCING POWER PURCHASES				65,065	65,065
11. TOTAL FEDERAL BASE SYSTEM	5,500,361	168,739	63,046	1,488,134	1,719,919
12. NEW RESOURCES					
13. IDAHO FALLS					0
14. COWLITZ FALLS					0
15. OTHER LONG-TERM POWER PURCHASES					0
16. TOTAL NEW RESOURCES					0
17. RESIDENTIAL EXCHANGE SETTLEMENT					0
18. CONSERVATION					0
19. OTHER GENERATION COSTS					
20. BPA PROGRAMS	13,982	429	161	204,507	205,096
21. WNP #3 PLANT					
22. TOTAL OTHER GENERATION COSTS	13,982	429	161	204,507	205,096
23. TOTAL GENERATION COSTS	5,514,343	169,168	63,207	1,692,641	1,925,016
24. TRANSMISSION COSTS					
25. TBL TRANSMISSION/ANCILLARY SERVICES				149,758	149,758
26. 3RD PARTY TRANS/ANCILLARY SERVICES				1,220	1,220
27. GENERAL TRANSFER AGREEMENTS				61,320	61,320
28. TOTAL TRANSMISSION COSTS				212,298	212,298
29. TOTAL PBL REVENUE REQUIREMENT		169,168	63,207	1,904,939	2,137,314

WP-07-E-BP-02

Table 2E

**Regulation
Power Revenue Requirement for
Big Ten Hydroelectric Projects and F&W
(\$000s)**

	<u>2007</u>	<u>2008</u>	<u>2009</u>
1 Big 10 Dams			
2 O&M	160,392	166,546	173,120
3 Depreciation	65,328	65,759	66,902
4 Net Interest	102,485	100,222	103,578
5 Planned Net Revenues	70,721	73,847	65,063
6 Subtotal	398,926	406,374	408,663
7 Fish & Wildlife			
8 O&M	208,543	208,938	209,134
9 Amortization/Depreciation	29,539	32,034	34,936
10 Net Interest	27,252	31,916	35,235
11 Planned Net Revenues	19,750	23,517	22,133
12 Subtotal	285,084	296,405	301,438
13 A&G Expense 1/	90,863	93,429	94,597
14 Total Revenue Requirement	774,873	796,209	804,697
15 Revenue Credits:			
16 4(h)(10)(C) (non-operations)	39,917	39,917	39,917
17 Colville payment Treas. Credit	4,600	4,600	4,600
18 Net Revenue Requirement	730,356	751,692	760,180

1/ Power Marketing, Power Scheduling, Generation Oversight, Corporate Expense and 1/2 Planning Council

Table 2E

**Regulation
Power Revenue Requirement for
Big Ten Hydroelectric Projects and F&W
(\$000s)**

	<u>2007</u>	<u>2008</u>	<u>2009</u>
A Big 10 average net plant	3,105,252	3,072,123	3,091,561
B Total COE/BOR av net plt	4,775,952	4,831,698	4,902,276
C Percent of total	65.02%	63.58%	63.06%
D O&M by project			
E Columbia Basin	67,255	69,676	71,995
F Bonneville	19,060	19,557	20,107
G John Day	17,758	18,222	18,735
H The Dalles	15,420	15,823	16,269
I Chief Joseph	17,759	18,224	18,737
J Ice Harbor	8,640	8,866	9,115
K Lower Granite	12,721	13,054	13,421
L Lower Monumental	9,997	10,259	10,548
M Little Goose	8,723	8,951	9,203
N McNary	16,541	16,974	17,451
O Total O&M	193,874	199,606	205,581
P COE/USFW F&W COSTS			
Q O&M: USFW	18,600	19,500	20,400
R COE	37,700	36,900	36,000
S Depreciation	10,526	11,541	13,352
T Interest	22,962	26,933	29,616
U Planned Net Revenues	16,641	19,845	18,603
V Average Net Plant	730,666	825,590	883,950
W Percent of total	15.30%	17.09%	18.03%
X F&W O&M in Big 10 Projects	29,282	28,660	27,961
Y F&W O&M in Col Basin O&M	4,200	4,400	4,500
4(h)(10)(C) non-operations			
Direct Program Expense	143,000	143,000	143,000
Direct Program Capital	36,000	36,000	36,000
Credit @ 22.3%	39,917	39,917	39,917

Table 2F

**Operating Reserves
Power Revenue Requirement for
All Hydroelectric Projects and F&W
(\$000s)**

	<u>2007</u>	<u>2008</u>	<u>2009</u>
1 All Hydro Projects			
2 O&M	203,741	211,721	220,213
3 Depreciation	84,416	85,022	86,326
4 Net Interest	125,354	128,758	132,396
5 Planned Net Revenues	91,793	95,859	84,254
6 Total Revenue Requirement	505,304	521,360	523,189
7 Fish & Wildlife			
8 O&M	208,543	208,938	209,134
9 Amortization/Depreciation	29,539	32,034	34,936
10 Net Interest	27,252	31,916	35,235
11 Planned Net Revenues	19,750	23,517	22,133
12 Subtotal	285,084	296,405	301,438
13 A&G Expense 1/	90,863	93,429	94,597
14 Total Revenue Requirement	881,251	911,195	919,223
15 Revenue Credits			
16 4(h)(10)(C) (non-operations)	39,917	39,917	39,917
17 Colville payment Treas. Credit	4,600	4,600	4,600
18 Net Revenue Requirement	836,734	866,678	874,706

1/ Power Marketing, Power Scheduling, Generation Oversight, Corporate Expense and 1/2 Planning Council

Table 2G

**Reactive - Electric Portion of
Power Revenue Requirement for Federal Base System Generating Units
(\$000s)**

	<u>2007</u>	<u>2008</u>	<u>2009</u>
1 O&M	80,335	83,602	87,078
2 A&G Expense 1/	14,807	15,216	15,640
3 Depreciation	26,490	26,185	26,556
4 CGS	3,780	3,287	3,684
5 Net Interest Expense	39,272	39,159	40,269
6 Minimum Required Net Revenues	7,461	8,908	5,648
7 Total Revenue Requirement	172,145	176,357	178,875

1/ Power Scheduling and Generation Project Coordination

Calculations

	<u>2007</u>	<u>2008</u>	<u>2009</u>
1 Total Electric Average Net Plant	1,249,664	1,200,345	1,201,922
2 Total Corps/Bureau Average Net Plant	4,775,952	4,831,698	4,902,276
3 percent electric	26.17%	24.84%	24.52%
4 Corps/Bureau Net Interest	150,089	157,625	164,244
5 Electric Net Interest	39,272	39,159	40,269
6 Corps/Bureau MRNR	28,513	35,858	23,037
7 Electric MRNR	7,461	8,908	5,648
8 Total COE O&M 1/	123,759	128,781	134,344
9 COE Electric O&M @ 42%	51,979	54,088	56,424
10 Total BOR O&M 2/	63,014	65,586	68,120
11 BOR Electric O&M @ 45%	28,356	29,514	30,654
12 CGS costs 3/	510,755	444,158	497,872
13 CGS Electric @ 0.74%	3,780	3,287	3,684

1/ Excludes Lower Snake F&W and O&M attributable in the aggregate to F&W at projects.

2/ Excludes payment to Colville Tribes, shown elsewhere in Columbia Basin O&M and F&W.

3/ Debt service and O&M (excludes nuclear insurance, fuel and revenue-financed capital).

Determination of Synchronous Condensator Annual Costs

1 Synchronous Condensers Avg Net Plt	6,885	6,782	6,679
2 Total Corps/Bureau Average Net Plant	4,775,952	4,831,698	4,902,276
3 percent	0.14%	0.14%	0.14%
4 Corps/Bureau Net Interest	150,089	157,625	164,244
5 Sync Cond Net Interest	216	221	224
6 Corps/Bureau MRNR	28,513	35,858	23,037
7 Sync Cond MRNR	41	50	31
8 Sync Cond Depreciation	103	103	103
9 Total Sync Cond Costs	360	374	358

Table 2H

Synchronous Condensers
Net Plant Calculation
(\$000s)

<u>Life</u>	<u>Project</u>	plant- in-service <u>1999</u>	Annual <u>Deprec</u>	Accumulated Depreciation								
				<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>
75.0	John Day	3,956	53	133	186	239	292	345	398	451	504	557
75.0	The Dalles	3,753	50	125	175	225	275	325	375	425	475	525
		7,709	103	258	361	464	567	670	773	876	979	1,082
		net plant investment		7,451	7,348	7,245	7,142	7,039	6,936	6,833	6,730	6,627
		average net plant			7,400	7,297	7,194	7,091	6,988	6,885	6,782	6,679

Table 2I
Investment, Accumulated Depreciation, Depreciation Expense by Project assigned to Reactive
(\$000s)

Service Lives = 75 yrs	9/30/04			9/30/05			9/30/06		
	gross	acc dep	depr exp	gross	acc dep	depr exp	gross	acc dep	depr exp
Bureau of Reclamation									
BOISE	27,576	8,491	368						
historic reactive	14,312	4,407	191	14,312	4,598	191	14,312	4,789	191
projected				205	1	1	410	5	4
COLUMBIA BASIN	1,195,979	368,839	15,946						
1st and 2nd									
historic reactive	597,990	184,420	7,973	597,990	192,393	7,973	597,990	200,366	7,973
projected				20,006	133	133	1,442	276	143
GREEN SPRINGS	11,175	8,481	149						
historic reactive	2,045	1,552	27	2,045	1,579	27	2,045	1,606	27
projected				-	-	-	-	-	-
HUNGRY HORSE	119,508	47,025	1,593						
historic reactive	30,355	11,944	405	30,355	12,349	405	30,355	12,754	405
projected				234	2	2	4,102	31	29
MINIDOKA-PALISADES	110,474	22,819	1,473						
historic reactive	55,458	11,455	739	55,458	12,194	739	55,458	12,933	739
projected				74	-	-	-	-	-
YAKIMA	6,127	3,051	82						
historic reactive	3,682	1,834	49	3,682	1,883	49	3,682	1,932	49
projected				-	-	-	614	4	4
Total Bureau				724,361	225,132	9,520	710,410	234,696	9,564

Table 2I
Investment, Accumulated Depreciation, Depreciation Expense by Project assigned to Reactive
(\$000s)

Service Lives = 75 yrs	9/30/07			9/30/08			9/30/09		
	gross	acc dep	depr exp	gross	acc dep	depr exp	gross	acc dep	depr exp
Bureau of Reclamation									
BOISE									
historic reactive	14,312	4,980	191	14,312	5,171	191	14,312	5,362	191
projected	-	8	3	-	8	-	-	8	-
COLUMBIA BASIN									
1st and 2nd									
historic reactive	597,990	208,339	7,973	597,990	216,312	7,973	597,990	224,285	7,973
projected	2,944	305	29	5,682	363	58	73,246	889	526
GREEN SPRINGS									
historic reactive	2,045	1,633	27	2,045	1,660	27	2,045	1,687	27
projected	-	-	-	-	-	-	-	-	-
HUNGRY HORSE									
historic reactive	30,355	13,159	405	30,355	13,564	405	30,355	13,969	405
projected	240	60	29	1,002	68	8	-	75	7
MINIDOKA-PALISADES									
historic reactive	55,458	13,672	739	55,458	14,411	739	55,458	15,150	739
projected	483	3	3	-	6	3	-	6	-
YAKIMA									
historic reactive	3,682	1,981	49	3,682	2,030	49	3,682	2,079	49
projected	1,354	17	13	-	26	9	-	26	-
Total Bureau	708,862	244,157	9,461	710,526	253,619	9,462	777,088	263,536	9,917

Table 2I
Investment, Accumulated Depreciation, Depreciation Expense by Project assigned to Reactive
(\$000s)

Service Lives = 75 yrs	9/30/04			9/30/05			9/30/06		
	gross	acc dep	depr exp	gross	acc dep	depr exp	gross	acc dep	depr exp
Corps of Engineers									
ALBENI FALLS	43,126	43,126	575						
historic	13,369	13,369	178	13,369	13,547	178	13,369	13,725	178
projected				-	-	-	1,952	13	13
BONNEVILLE	924,603	276,945	12,328						
historic	323,611	96,931	4,315	323,611	101,246	4,315	323,611	105,561	4,315
projected				10,861	72	72	4,001	171	99
CHIEF JOSEPH	571,149	206,648	7,615						
historic	171,345	61,994	2,285	171,345	64,279	2,285	171,345	66,564	2,285
projected				5,476	37	37	4,110	101	64
COUGAR	36,314	7,549	484						
historic	1,816	377	24	1,816	401	24	1,816	425	24
projected				869	6	6	5,342	47	41
DETROIT-BIG CLIFF	41,220	22,138	550						
historic	9,068	4,870	121	9,068	4,991	121	9,068	5,112	121
projected				1,640	11	11	5,779	60	49
DWORSHAK	316,782	97,871	4,224						
historic	22,175	6,851	296	22,175	7,147	296	22,175	7,443	296
projected				760	5	5	2,143	24	19
GREEN PETER-FOSTER	50,955	17,547	679						
historic	7,134	2,457	95	7,134	2,552	95	7,134	2,647	95
projected				1,382	9	9	-	18	9
HILLS CREEK	18,463	9,186	246						
historic	2,769	1,378	37	2,769	1,415	37	2,769	1,452	37
projected				580	4	4	310	10	6
ICE HARBOR	159,247	58,283	2,123						
historic	52,552	19,233	701	52,552	19,934	701	52,552	20,635	701
projected				4,369	29	29	1,369	67	38
JOHN DAY	494,244	165,287	6,590						
historic	128,503	42,975	1,713	128,503	44,688	1,713	128,503	46,401	1,713
projected				543	4	4	5,169	42	38

Table 2I
Investment, Accumulated Depreciation, Depreciation Expense by Project assigned to Reactive
(\$000s)

Service Lives = 75 yrs	9/30/07			9/30/08			9/30/09		
	gross	acc dep	depr exp	gross	acc dep	depr exp	gross	acc dep	depr exp
Corps of Engineers									
ALBENI FALLS									
historic	13,369	13,903	178	13,369	14,081	178	13,369	14,259	178
projected	-	26	13	-	26	-	-	26	-
BONNEVILLE									
historic	323,611	109,876	4,315	323,611	114,191	4,315	323,611	118,506	4,315
projected	2,615	215	44	3,967	259	44	-	285	26
CHIEF JOSEPH									
historic	171,345	68,849	2,285	171,345	71,134	2,285	171,345	73,419	2,285
projected	2,102	142	41	-	156	14	-	156	-
COUGAR									
historic	1,816	449	24	1,816	473	24	1,816	497	24
projected	249	84	37	-	86	2	-	86	-
DETROIT-BIG CLIFF									
historic	9,068	5,233	121	9,068	5,354	121	9,068	5,475	121
projected	2,483	115	55	-	132	17	-	132	-
DWORSHAK									
historic	22,175	7,739	296	22,175	8,035	296	22,175	8,331	296
projected	348	41	17	1,485	53	12	858	69	16
GREEN PETER-FOSTER									
historic	7,134	2,742	95	7,134	2,837	95	7,134	2,932	95
projected	858	24	6	-	30	6	-	30	-
HILLS CREEK									
historic	2,769	1,489	37	2,769	1,526	37	2,769	1,563	37
projected	248	14	4	-	16	2	187	17	1
ICE HARBOR									
historic	52,552	21,336	701	52,552	22,037	701	52,552	22,738	701
projected	-	76	9	-	76	-	1,525	86	10
JOHN DAY									
historic	128,503	48,114	1,713	128,503	49,827	1,713	128,503	51,540	1,713
projected	4,938	109	67	-	142	33	-	142	-

Table 21
Investment, Accumulated Depreciation, Depreciation Expense by Project assigned to Reactive
(\$000s)

Service Lives = 75 yrs	9/30/04			9/30/05			9/30/06		
	gross	acc dep	depr exp	gross	acc dep	depr exp	gross	acc dep	depr exp
Corps of Engineers									
LIBBY	433,212	122,064	5,776						
historic	69,314	19,530	924	69,314	20,454	924	69,314	21,378	924
projected				1,090	7	7	4,183	42	35
LITTLE GOOSE	212,068	77,555	2,828						
historic	63,620	23,267	848	63,620	24,115	848	63,620	24,963	848
projected				948	6	6	1,358	21	15
LOOKOUT POINT	50,192	34,869	669						
historic	12,046	8,369	161	12,046	8,530	161	12,046	8,691	161
projected				1,982	13	13	-	26	13
LOST CREEK	26,972	8,497	360						
historic	5,394	1,699	72	5,394	1,771	72	5,394	1,843	72
projected				-	-	-	884	6	6
LOWER GRANITE	332,599	98,013	4,435						
historic	73,172	21,563	976	73,172	22,539	976	73,172	23,515	976
projected				1,725	12	12	3,406	46	34
LOWER MONUMENTAL	230,564	84,096	3,074						
historic	64,558	23,547	861	64,558	24,408	861	64,558	25,269	861
projected				1,971	13	13	3,763	51	38
MCNARY	300,736	145,014	4,010						
historic	87,213	42,054	1,163	87,213	43,217	1,163	87,213	44,380	1,163
projected				3,620	24	24	1,325	57	33
THE DALLES	308,487	154,192	4,113						
historic	129,565	64,761	1,727	129,565	66,488	1,727	129,565	68,215	1,727
projected				980	7	7	13,071	101	94
Total Corps				1,276,020	471,981	16,756	1,295,389	489,122	17,141
Total Corps and Bureau				2,000,381	697,113	26,276	2,005,799	723,818	26,705

Table 2I
Investment, Accumulated Depreciation, Depreciation Expense by Project assigned to Reactive
(\$000s)

Service Lives = 75 yrs	9/30/07			9/30/08			9/30/09		
	gross	acc dep	depr exp	gross	acc dep	depr exp	gross	acc dep	depr exp
Corps of Engineers									
LIBBY									
historic	69,314	22,302	924	69,314	23,226	924	69,314	24,150	924
projected	-	70	28	-	70	-	-	70	-
LITTLE GOOSE									
historic	63,620	25,811	848	63,620	26,659	848	63,620	27,507	848
projected	-	30	9	1,987	43	13	496	60	17
LOOKOUT POINT									
historic	12,046	8,852	161	12,046	9,013	161	12,046	9,174	161
projected	1,952	39	13	114	53	14	260	55	2
LOST CREEK									
historic	5,394	1,915	72	5,394	1,987	72	5,394	2,059	72
projected	-	12	6	-	12	-	380	15	3
LOWER GRANITE									
historic	73,172	24,491	976	73,172	25,467	976	73,172	26,443	976
projected	6,601	113	67	2,889	176	63	-	195	19
LOWER MONUMENTAL									
historic	64,558	26,130	861	64,558	26,991	861	64,558	27,852	861
projected	-	76	25	1,895	89	13	495	105	16
MCNARY									
historic	87,213	45,543	1,163	87,213	46,706	1,163	87,213	47,869	1,163
projected	-	66	9	-	66	-	3,749	91	25
THE DALLES									
historic	129,565	69,942	1,727	129,565	71,669	1,727	129,565	73,396	1,727
projected	2,331	204	103	-	220	16	4,444	250	30
Total Corps	1,261,949	506,172	17,050	#####	522,918	16,746	1,249,618	539,580	16,662
Total Corps and Bureau	1,970,811	750,329	26,511	#####	776,537	26,208	2,026,706	803,116	26,579

3. GENERATION EXPENSES

3.1 Introduction

This chapter compiles the expenses that are the basis for cost recovery in determination of generation revenue requirements for the rate approval period and the outyears.

3.2 Expenses

O&M program expenses are from the Power Function Review with revisions. See, Revenue Requirement Study, Appendix A, WP-07-E-BPA-02. Federal Projects Depreciation calculations are found in Chapter 4 of this document. Interest expense is summarized here from the results of the annual generation repayment studies. The calculation of AFUDC is also shown in this chapter.

COE and BOR O&M must be functionalized between generation and the transmission component that will be included in transmission rates. The functionalization, as previously done, is based on average gross investment at the individual project level.

Depreciation expense, calculated using the straight-line method, is functionalized according to the associated investment used in the calculations as identified in Chapter 4 of this document.

Interest expense is calculated in the repayment studies for generation using the generation capital appropriations and BPA revenue bonds issued to Treasury at individual interest rates. Generation AFUDC is associated with BPA's direct funding of COE and BOR power-related capital projects.

Table 3A

**Power Business Line Program Spending Levels
(\$000s)**

	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
1 Operating Expenses							
2 Power System Generation Resources							
3 Operating Generation							
4 COLUMBIA GENERATING STATION (WNP-2)	256,300	206,300	238,800	206,000	241,100	214,900	254,600
5 BUREAU OF RECLAMATION	71,654	74,760	77,766	79,666	81,252	83,690	86,200
6 CORPS OF ENGINEERS	161,519	165,742	170,407	176,712	181,661	187,111	192,724
7 LONG-TERM CONTRACT GENERATING PROJECTS	24,666	25,054	25,452	25,876	26,344	26,781	27,225
8 Sub-Total	514,139	471,856	512,425	488,254	530,357	512,481	560,750
9 Operating Generation Settlement Payment							
10 COLVILLE GENERATION SETTLEMENT	16,968	17,354	17,749	18,153	18,566	18,988	19,421
11 SPOKANE GENERATION SETTLEMENT	-	-	-	-	-	-	-
12 Sub-Total	16,968	17,354	17,749	18,153	18,566	18,988	19,421
13 Non-Operating Generation							
14 TROJAN DECOMMISSIONING	9,300	5,200	2,200	1,700	1,700	1,751	1,804
15 WNP-1&3 DECOMMISSIONING	50	52	54	56	58	60	62
16 Sub-Total	9,350	5,252	2,254	1,756	1,758	1,811	1,865
17 Contracted Power Purchases							
18 PNCA HEADWATER BENEFIT	1,714	1,714	1,714	2,042	2,370	2,441	2,514
19 HEDGING/MITIGATION	875	-	-	-	-	-	-
20 OTHER POWER PURCHASES (short term)	107,000	107,000	107,000	64,604	61,330	63,170	65,065
21 Sub-Total	109,589	108,714	108,714	66,646	63,700	65,611	67,579
22 Augmentation Power Purchases							
23 AUGMENTATION POWER PURCHASES	72,063	41,626	66,721	-	-	-	-
24 CONSERVATION AUGMENTATION	-	-	-	-	-	-	-
25 Residential Exchange/IOU Settlement Benefits	301,000	301,000	301,000	151,159	123,000	171,313	171,313
26 Renewable Generation	31,098	37,027	59,200	59,307	60,390	61,770	63,182
27 Generation Conservation							
28 LOW INCOME WEATHERIZATION & TRIBAL	5,000	5,000	5,000	5,000	5,000	5,150	5,305
29 ENERGY EFFICIENCY DEVELOPMENT	12,885	12,908	12,933	12,958	12,985	13,374	13,776
30 ENERGY WEB	1,000	1,000	1,000	1,000	1,000	1,030	1,061
31 LEGACY (Until 11/1/03 this was included with line 72)	3,728	2,638	2,114	1,988	1,622	1,671	1,721
32 MARKET TRANSFORMATION	10,000	10,000	10,000	10,000	10,000	10,300	10,609
33 TECHNOLOGY LEADERSHIP	1,300	1,300	1,300	1,300	1,300	1,339	1,379
34 INFRASTRUCTURE SUPPORT AND EVALUATION	1,000	1,000	1,000	1,000	1,000	1,000	1,000
35 BI-LATERAL CONTRACT ACTIVITY	1,000	1,000	1,000	1,000	1,000	1,000	1,000
36 Sub-Total	35,913	34,846	34,347	34,246	33,907	34,864	35,850
37 CONSERVATION RATE CREDIT	36,000	36,000	36,000	38,000	38,000	38,000	38,000
38 Power System Generation Sub-Total	1,126,120	1,053,675	1,138,409	857,521	869,678	904,839	957,960
39							

Table 3A

Power Business Line Program Spending Levels
(\$000s)

	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
40 PBL Transmission Acquisition and Ancillary Services							
41 PBL Transmission Acquisition and Ancillary Services							
42 PBL - TRANSMISSION & ANCILLARY SERVICES	125,000	126,000	126,000	131,000	132,000	135,960	140,039
43 3RD PARTY GTA WHEELING	47,000	47,000	48,000	56,600	57,800	59,534	61,320
44 PBL - 3RD PARTY TRANS & ANCILLARY SVCS	1,300	1,300	3,000	1,120	1,150	1,185	1,220
45 RESERVE & OTHER SERVICES	8,462	8,462	8,462	8,000	8,000	8,240	8,487
46 TELEMETERING/EQUIP REPLACMT	200	200	200	1,161	1,161	1,196	1,232
47 PBL Trans Acquisition and Ancillary Services Sub-Total	181,962	182,962	185,662	197,881	200,111	206,115	212,298
48							
49 Power Non-Generation Operations							
50 PBL System Operations							
51 EFFICIENCIES PROGRAM	1,553	1,584	1,616	1,650	1,684	1,735	1,787
52 INFORMATION TECHNOLOGY	-	-	-	-	-	-	-
53 GENERATION PROJECT COORDINATION	6,049	6,165	6,286	6,412	6,541	6,737	6,939
54 SLICE IMPLEMENTATION	534	548	563	579	595	613	631
55 Sub-Total	8,136	8,298	8,466	8,640	8,820	9,085	9,357
56 PBL Scheduling							
57 OPERATIONS SCHEDULING	8,758	9,051	9,353	9,667	9,991	10,291	10,600
58 OPERATIONS PLANNING	5,357	5,519	5,687	5,861	6,040	6,222	6,408
59 Sub-Total	14,115	14,570	15,040	15,527	16,031	16,512	17,008
60 PBL Marketing and Business Support							
61 SALES & SUPPORT	15,909	16,304	16,772	18,263	18,763	19,326	19,906
62 PUBLIC COMMUNICATION & TRIBAL LIAISON	1,207	1,236	1,266	1,296	1,327	1,367	1,408
63 STRATEGY, FINANCE & RISK MGMT	7,854	8,084	8,321	8,568	8,819	9,084	9,356
64 EXECUTIVE AND ADMINISTRATIVE SERVICES	2,450	2,512	2,583	2,663	2,717	2,799	2,882
65 CONSERVATION SUPPORT (EE staff costs)	6,460	6,712	6,973	7,245	7,527	7,753	7,985
66 Sub-Total	33,881	34,847	35,915	38,034	39,154	40,329	41,538
67 Power Non-Generation Operations Sub-Total	56,132	57,715	59,422	62,202	64,005	65,926	67,903
68							
69 Fish and Wildlife/USF&W/Planning Council							
70 BPA Fish and Wildlife (includes F&W Shared Services)							
71 FISH & WILDLIFE	143,000	143,000	143,000	139,000	139,000	143,170	147,465
72 F&W HIGH PRIORITY ACTION PROJECTS							
73 Sub-Total	143,000	143,000	143,000	139,000	139,000	143,170	147,465
74 PBL-USF&W Lower Snake Hatcheries							
75 USF&W LOWER SNAKE HATCHERIES	18,600	19,500	20,400	21,600	22,500	23,175	23,870
76 PBL - Planning Council							
77 PLANNING COUNCIL	9,085	9,276	9,467	9,595	9,849	10,144	10,449
78 PBL - ENVIRONMENTAL REQUIREMENTS							
79 ENVIRONMENTAL REQUIREMENTS	500	500	500			-	-
80 Fish and Wildlife/USF&W/Planning Council Sub-Total	171,185	172,276	173,367	170,195	171,349	176,489	181,784
81							

Table 3A

Power Business Line Program Spending Levels
(\$000s)

	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
82 General and Administrative/Shared Services							
83 CSRS							
84 CIVIL SERVICE RETIREMENT SYSTEM	10,550	9,000	15,375	15,375	15,375	15,836	16,311
85 Corporate Support - G&A (excludes direct project support)							
86 CORPORATE G&A	43,400	44,700	44,500	51,500	52,800	54,384	56,016
87 Corporate Support - Shared Services (excluded direct project support)							
88 SHARED SERVICES	6,847	7,053	7,264	7,482	7,707	7,938	8,176
89 Sub-Total Corporate Support Services	50,247	51,753	51,764	58,982	60,507	62,322	64,192
90 TBL Supply Chain - Shared Services	368	374	380	386	393	404	417
91 General and Administrative/Shared Services Sub-Total	61,165	61,127	67,519	74,743	76,274	78,563	80,920
92							
93 Bad Debt Expense							
94 Other Income, Expenses, Adjustments	59,000	59,000	59,000	59,000	59,000	59,000	59,000
95 Non-Federal Debt Service							
96 Energy Northwest Debt Service							
97 COLUMBIA GENERATING STATION DEBT SVC	254,455	237,858	259,072	292,248	272,705	339,600	98,202
98 WNP-1 DEBT SVC	160,673	168,644	166,011	161,988	164,190	190,191	274,674
99 WNP-3 DEBT SVC	160,848	161,088	153,997	143,663	169,131	162,659	177,584
100 EN RETIRED DEBT							
101 EN LIBOR INTEREST RATE SWAP							
102 Sub-Total	575,976	567,590	579,080	597,899	606,026	692,450	550,460
103 Non-Energy Northwest Debt Service							
104 TROJAN DEBT SVC	8,605	7,888	-	-	-	-	-
105 CONSERVATION DEBT SVC	5,203	5,198	5,196	4,940	4,924	4,923	4,917
106 COWLITZ FALLS DEBT SVC	11,619	11,583	11,571	11,566	11,563	11,559	11,546
107 WASCO DEBT SVC	-	1,664	2,168	2,200	2,196	2,193	2,192
108 Sub-Total	25,427	26,333	18,935	18,706	18,683	18,675	18,655
109 Non-Federal Debt Service Sub-Total	601,403	593,923	598,015	616,605	624,709	711,125	569,115
110	-	-	-	-	-	-	-
111	-	-	-	-	-	-	-
112 Total Operating Expenses	2,256,967	2,180,677	2,281,394	2,038,147	2,065,128	2,202,057	2,128,980

Table 3B

**FUNCTIONALIZATION OF COE/BOR O&M
(\$000s)**

	A	B	C	D	E	F	G	H	I
	Average Investment 2007	Percent	O&M 2007	Average Investment 2008	Percent	O&M 2008	Average Investment 2009	Percent	O&M 2009
1 BOISE									
2 GENERATION		100%	4,208		100%	4,391		100%	4,567
3 COLUMBIA BASIN									
4 GENERATION	1,235,160	94.91%	50,287	1,242,532	94.65%	52,322	1,309,992	94.33%	54,246
5 TRANSMISSION	66,297	5.09%	2,699	70,282	5.35%	2,960	78,720	5.67%	3,260
6 TOTAL	1,301,457	100%	52,986	1,312,814	100%	55,282	1,388,712	100%	57,506
7 GREEN SPRINGS									
8 GENERATION		100%	917		100%	957		100%	995
9 HUNGRY HORSE									
10 GENERATION	127,125	98.09%	3,350	128,187	98.10%	3,495	129,043	98.12%	3,636
11 TRANSMISSION	2,477	1.91%	65	2,477	1.90%	68	2,477	1.88%	70
12 TOTAL	129,602	100%	3,415	130,664	100%	3,563	131,520	100%	3,706
13 MINIDOKA-PALISADES									
14 GENERATION	111,014	98.57%	6,929	111,426	98.57%	7,232	111,426	98.57%	7,523
15 TRANSMISSION	1,614	1.43%	759	1,614	1.43%	789	1,614	1.43%	821
16 TOTAL	112,628	100%	7,688	113,040	100%	8,021	113,040	100%	8,344
17 YAKIMA									
18 GENERATION		100%	2,440		100%	2,546		100%	2,648
19 GENERATION 1/			84,182			87,340			90,369
20 TRANSMISSION			3,523			3,817			4,151
21 TOTAL BOR			87,705			91,157			94,520
1/ INCLUDES COLVILLE PAYMENT OF			16,968			17,354			17,749
22 BONNEVILLE									
23 GENERATION	952,243	99.69%	19,060	957,869	99.69%	19,557	961,260	99.69%	20,107
24 TRANSMISSION	3,000	0.31%	60	3,000	0.31%	61	3,000	0.31%	63
25 TOTAL	955,243	100%	19,120	960,869	100%	19,618	964,260	100%	20,170
26 OTHER PROJECTS									
27 CORPS - GENERATION ONLY			142,399			146,124			150,237
28 USF&W (LSRCP)			18,600			19,500			20,400
29 GENERATION			180,059			185,181			190,744
30 TRANSMISSION			60			61			63
31 TOTAL CORPS			180,119			185,242			190,807

Table 3C

Allocation of Total O&M to Projects for COE and BOR based on actual data
(\$000s)

	FY 2004		FY 2003		FY 2002			AVERAGE	FY 2007	FY 2008	FY 2009
	Joint	Specific	Joint	Specific	Oper	Maint					
BOISE	1,050,289	2,098,003	961,618	2,409,720	1,144,380	1,567,888	3,077,299	4,208	4,391	4,567	
COLUMBIA BASIN	9,628,976	28,504,375	12,174,990	27,061,935	13,146,567	25,716,296	38,744,380	52,986	55,282	57,506	
HUNGRY HORSE	646,901	1,570,451	726,527	2,161,495	739,526	1,646,381	2,497,094	3,415	3,563	3,706	
MINIDOKA PALISADES	603,115	4,834,361	2,593,950	3,526,333	2,277,278	3,029,434	5,621,490	7,688	8,021	8,344	
GREEN SPRINGS	206,492	635,093	304,133	330,013	211,486	324,863	670,693	917	957	995	
YAKIMA	912,473	1,073,286	880,809	909,292	549,735	1,027,270	1,784,288	2,440	2,546	2,648	
Total BOR							52,395,245	71,654	74,760	77,766	
ALBENI FALLS	1,437,665	1,766,547	1,642,877	1,895,786	2,130,264	813,893	3,229,011	4,098	4,205	4,323	
BONNEVILLE	7,962,788	6,872,475	7,211,656	7,947,514	8,371,401	6,828,797	15,064,877	19,120	19,618	20,170	
CHIEF JOSEPH	9,117,269	4,501,691	9,378,876	5,598,521	6,895,677	6,488,900	13,993,644	17,759	18,224	18,737	
COUGAR	477,400	177,088	456,071	279,173	358,049	224,264	657,349	834	856	880	
DETROIR BIG CLIFF	1,451,290	717,406	1,550,423	877,083	1,464,232	352,295	2,137,576	2,713	2,784	2,862	
DWORSHAK	2,225,375	4,505,777	2,075,051	9,040,974	8,164,230	470,123	8,827,177	11,203	11,495	11,819	
GREEN-PETER FOSTER	1,459,175	640,655	1,547,252	786,336	1,611,624	591,473	2,212,172	2,807	2,881	2,962	
HILLS CREEK	355,886	95,575	378,653	115,054	331,323	(31,767)	414,908	527	540	556	
ICE HARBOR	3,030,295	4,032,626	2,118,886	3,748,509	6,229,171	1,263,504	6,807,664	8,640	8,866	9,115	
JOHN DAY	7,471,477	5,610,993	8,023,100	6,828,668	8,093,948	5,949,590	13,992,592	17,758	18,222	18,735	
LIBBY	1,992,258	2,962,720	2,066,026	3,309,826	3,224,548	2,589,768	5,381,716	6,830	7,009	7,206	
LITTLE GOOSE	2,260,499	3,794,612	1,772,507	4,044,038	6,933,801	1,814,889	6,873,449	8,723	8,951	9,203	
LOOKOUT POINT DEX	1,808,829	2,068,397	2,088,141	882,943	1,676,710	644,707	3,056,576	3,879	3,981	4,093	
LOST CREEK	1,430,695	236,112	1,247,959	269,231	1,103,395	320,689	1,536,027	1,949	2,000	2,057	
LOWER GRANITE	4,242,206	4,904,376	4,279,643	4,858,406	8,137,787	3,649,132	10,023,850	12,721	13,054	13,421	
LOWER MONUMENT	2,311,587	4,328,233	1,189,091	6,111,525	8,377,560	1,314,787	7,877,594	9,997	10,259	10,548	
MCNARY	4,622,794	8,016,963	4,961,296	7,308,825	13,655,685	535,500	13,033,688	16,541	16,974	17,451	
THE DALLES	8,978,200	3,039,907	9,552,577	3,690,969	6,508,885	4,680,487	12,150,342	15,420	15,823	16,269	
Total COE							127,270,211	161,519	165,742	170,407	

Table 3D

**FEDERAL COLUMBIA RIVER POWER SYSTEM
SUMMARY OF GENERATION CURRENT REPAYMENT STUDY DATA
(\$000s)**

	<u>A</u> <u>2007</u>	<u>B</u> <u>2008</u>	<u>C</u> <u>2009</u>	<u>D</u> <u>2010</u>	<u>E</u> <u>2011</u>	<u>F</u> <u>2012</u>	<u>G</u> <u>2013</u>
1 INTEREST EXPENSE (GROSS)							
2 CORPS	141,714	138,766	141,460	133,873	132,514	135,270	138,927
3 BUREAU	42,442	42,426	42,363	42,363	42,363	42,363	42,363
4 LOWER SNAKE RIVER COMPENSATION PLAN	16,466	16,466	16,466	16,466	16,466	16,466	16,466
5 TOTAL APPROPRIATIONS	200,621	197,658	200,289	192,702	191,343	194,099	197,756
6 BONDS ISSUED TO TREASURY	60,059	77,018	87,641	98,720	112,577	125,323	140,041
7 TOTAL INTEREST EXPENSE	260,680	274,676	287,929	291,421	303,920	319,422	337,797
8 PLANNED AMORTIZATION							
9 CORPS	101,687	77,094	110,637	131,836	92,747	35,815	7,803
10 BUREAU	229	867	-	-	-	-	31,049
11 LOWER SNAKE RIVER COMPENSATION PLAN	-	-	-	-	-	-	-
12 TOTAL APPROPRIATIONS	101,916	77,961	110,637	131,836	92,747	35,815	38,852
13 LONG-TERM DEBT	68,357	104,300	59,220	30,068	66,500	32,000	145,300
14 TOTAL GENERATION AMORTIZATION	170,273	182,261	169,857	161,904	159,247	67,815	184,152
15 IRRIGATION ASSISTANCE	-	2,950	6,590	-	-	706	44,178
16 TOTAL AMORTIZATION/IRRIGATION	170,273	185,211	176,447	161,904	159,247	68,521	228,330

Table 3E

**FEDERAL COLUMBIA RIVER POWER SYSTEM
SUMMARY OF 7(b)(2) CASE REPAYMENT STUDY DATA
(\$000s)**

	<u>A</u> <u>2007</u>	<u>B</u> <u>2008</u>	<u>C</u> <u>2009</u>	<u>D</u> <u>2010</u>	<u>E</u> <u>2011</u>	<u>F</u> <u>2012</u>	<u>G</u> <u>2013</u>
1 INTEREST EXPENSE (GROSS)							
2 CORPS	138,814	135,907	131,085	120,712	120,496	118,880	124,114
3 BUREAU	42,442	42,393	42,363	42,363	39,199	38,919	35,049
4 LOWER SNAKE RIVER COMPENSATION PLAN	16,466	16,466	16,466	16,466	16,466	16,466	16,466
5 TOTAL APPROPRIATIONS	197,721	194,766	189,914	179,541	176,160	174,264	175,629
6 BONDS ISSUED TO TREASURY	40,980	56,155	69,743	81,982	94,798	108,119	121,941
7 TOTAL INTEREST EXPENSE	238,701	250,921	259,657	261,523	270,958	282,383	297,570
8 PLANNED AMORTIZATION							
9 CORPS	101,232	181,849	149,987	116,081	154,033	13,793	67,646
10 BUREAU	684	412	-	44,201	3,908	54,125	42,062
11 LOWER SNAKE RIVER COMPENSATION PLAN	-	-	-	-	-	-	-
12 TOTAL APPROPRIATIONS	101,916	182,261	149,987	160,282	157,941	67,918	109,708
13 LONG-TERM DEBT	68,357	-	19,220	68	-	-	60,000
14 TOTAL GENERATION AMORTIZATION	170,273	182,261	169,207	160,350	157,941	67,918	169,708
15 IRRIGATION ASSISTANCE	-	2,950	6,590	-	-	706	44,178
16 TOTAL AMORTIZATION/IRRIGATION	170,273	185,211	175,797	160,350	157,941	68,624	213,886

Table 3F

**Federal Projects Depreciation Summary
(\$000s)**

	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>
1 BPA (PBL + CORP GP)	16,327	16,199	15,095	15,044	14,925	14,759	14,759
2 Corps	73,738	75,174	77,264	77,483	79,113	80,986	82,229
3 Bureau	21,225	21,412	22,437	23,634	24,419	25,799	27,512
4 Total Depreciation 1/	111,269	112,762	114,773	116,138	118,434	121,521	124,477
5 Amortization of Legacy Conservation	33,049	29,843	27,283	25,289	23,439	20,948	17,408
6 Amortization of Conservation Augmentation	20,140	20,140	20,140	20,140	20,140	0	0
7 Amortization of Conservation Acquisitions	3,200	9,600	16,000	23,200	31,200	36,000	37,600
8 Amortization of Fish & Wildlife	19,013	20,493	21,584	22,324	22,971	22,944	23,783
9 Total Amortization	75,402	80,076	85,006	90,953	97,750	79,892	78,791
10 Total Federal Projects Depreciation	186,671	192,838	199,779	207,091	216,184	201,413	203,268

1/ excludes depreciation from investments
paid for by TBL

21	23	23	23	23	23	23	23
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4. FCRPS GENERATION INVESTMENT BASE

4.1 Introduction

This chapter documents the development of the FCRPS generation investment base by year for the rate approval period and the outyears. The investment data are the source of depreciation calculations and provide certain inputs to the generation repayment studies. It is also the basis for allocations of net interest expense and planned net revenues in the development of the COSA tables and the generation inputs to ancillary services.

4.2 Methodology

The FCRPS plant investment information is separately compiled for the COE, BOR, and BPA, including BPA conservation and fish and wildlife investments. BPA generation (general) plant investment consists of office furniture and fixtures and data processing software and hardware associated with the Power Business Line, including the Energy Efficiency Group. Historical investment data are taken from the supporting documents of FCRPS financial statements. All plant investment is depreciated and intangible plant is amortized using the straight-line method.

For BPA facilities, forecasted depreciation expense is calculated consistent with the group concept methodology used for plant accounting records. For general plant categories, average service lives incorporate an adjustment for salvage applicable to the individual groups. Both historical investment and forecasted additions are depreciated according to their adjusted group life.

BPA conservation investments use three different amortization schedules depending on when the investment occurred. Legacy investments, made before 2002, are amortized over 20 years. Conservation augmentation investments, made from 2002 through 2006, use a declining 10 year ending in 2011. Conservation acquisition investments, made after 2006, are amortized over 5 years.

BPA fish and wildlife investments are amortized over 15 years.

COE and BOR investments are depreciated according to the weighted-average service lives of the individual projects.

Projected investments and projected depreciation expenses are accumulated with historical amounts to provide projected cumulative investments and accumulated depreciation for each forecasted year.

The investment base is calculated for each year of the rate period and outyears as an annual average.

Table 4A

FCRPS INVESTMENT BASE
 FY 2007
 (\$000s)

	A BALANCE-AS-OF <u>9/30/2006</u>	B <u>9/30/2007</u>	C AVERAGE <u>2007</u>
1 CORPS OF ENGINEERS			
2 COMPLETED PLANT			
3 HYDROELECTRIC GEN	5,506,125	5,624,508	5,565,317
4 TRANSMISSION	3,000	3,000	3,000
5 TOTAL COMPLETED PLANT	5,509,125	5,627,508	5,568,317
6 ACCUMULATED DEPRECIATION			
7 HYDROELECTRIC GEN	1,820,124	1,893,822	1,856,973
8 TRANSMISSION	240	280	260
9 TOTAL ACCUMULATED DEPRECIATION	1,820,364	1,894,102	1,857,233
10 NET COMPLETED PLANT			
11 HYDROELECTRIC GEN	3,686,001	3,730,686	3,708,344
12 TRANSMISSION	2,760	2,720	2,740
13 TOTAL NET COMPLETED PLANT	3,688,761	3,733,406	3,711,084
14 BUREAU OF RECLAMATION			
15 COMPLETED PLANT			
16 HYDROELECTRIC GEN	1,517,142	1,525,724	1,521,433
17 TRANSMISSION	66,402	74,373	70,388
18 TOTAL COMPLETED PLANT	1,583,544	1,600,097	1,591,821
19 ACCUMULATED DEPRECIATION			
20 HYDROELECTRIC GEN	498,706	518,992	508,849
21 TRANSMISSION	16,066	17,005	16,536
22 TOTAL ACCUM DEPRECIATION	514,772	535,997	525,385
23 NET COMPLETED PLANT			
24 HYDROELECTRIC GEN	1,018,436	1,006,732	1,012,584
25 TRANSMISSION	50,336	57,368	53,852
26 TOTAL NET COMPLETED PLANT	1,068,772	1,064,100	1,066,436
27 CONSERVATION			
28 CUMULATIVE INVESTMENT	912,539	846,921	879,730
29 ACCUM PREPAID EXPENSE	611,030	569,801	590,415
30 NET CONSERVATION	301,509	277,120	289,315
31 FISH AND WILDLIFE			
32 CUMULATIVE INVESTMENT	271,501	296,323	283,912
33 ACCUM PREPAID EXPENSE	143,484	151,318	147,401
34 NET FISH AND WILDLIFE	128,017	145,005	136,511
35 BPA PLANT (PBL)			
36 CUMULATIVE INVESTMENT	93,704	105,829	99,767
37 ACCUMULATED DEPRECIATION	61,216	77,543	69,380
38 NET BPA PLANT INVESTMENT	32,488	28,286	30,387
39 TOTAL NET PLANT INVESTMENT	5,219,548	5,247,917	5,233,733

Table 4B

**FCRPS INVESTMENT BASE
FY 2008
(\$000s)**

	A	B	C
	BALANCE-AS-OF		AVERAGE
	<u>9/30/2007</u>	<u>9/30/2008</u>	<u>2008</u>
1 CORPS OF ENGINEERS			
2 COMPLETED PLANT			
3 HYDROELECTRIC GEN	5,624,508	5,781,394	5,702,951
4 GEN INTEGRATION	3,000	3,000	3,000
5 TOTAL COMPLETED PLANT	5,627,508	5,784,394	5,705,951
6 ACCUMULATED DEPRECIATION			
7 HYDROELECTRIC GEN	1,893,822	1,968,956	1,931,389
8 GEN INTEGRATION	280	320	300
9 TOTAL ACCUMULATED DEPRECIATION	1,894,102	1,969,276	1,931,689
10 NET COMPLETED PLANT			
11 HYDROELECTRIC GEN	3,730,686	3,686,001	3,771,562
12 GEN INTEGRATION	2,720	2,760	2,700
13 TOTAL NET COMPLETED PLANT	3,733,406	3,688,761	3,774,262
14 BUREAU OF RECLAMATION			
15 COMPLETED PLANT			
16 HYDROELECTRIC GEN	1,525,724	1,537,149	1,531,437
17 GEN INTEGRATION	74,373	74,373	74,373
18 TOTAL COMPLETED PLANT	1,600,097	1,611,522	1,605,810
19 ACCUMULATED DEPRECIATION			
20 HYDROELECTRIC GEN	518,992	539,412	529,202
21 GEN INTEGRATION	17,005	17,997	17,501
22 TOTAL ACCUM DEPRECIATION	535,997	557,409	546,703
23 NET COMPLETED PLANT			
24 HYDROELECTRIC GEN	1,006,732	997,737	1,002,235
25 GEN INTEGRATION	57,368	56,376	56,872
26 TOTAL NET COMPLETED PLANT	1,064,100	1,054,113	1,059,107
27 CONSERVATION			
28 CUMULATIVE INVESTMENT	846,921	811,540	829,231
29 ACCUM PREPAID EXPENSE	569,801	562,002	565,902
30 NET CONSERVATION	277,120	249,538	263,329
31 FISH AND WILDLIFE			
32 CUMULATIVE INVESTMENT	296,323	314,985	305,654
33 ACCUM PREPAID EXPENSE	151,318	154,474	152,896
34 NET FISH AND WILDLIFE	145,005	160,511	152,758
35 BPA PLANT (PBL)			
36 CUMULATIVE INVESTMENT	105,829	119,704	112,767
37 ACCUMULATED DEPRECIATION	77,543	93,742	85,643
38 NET BPA PLANT INVESTMENT	28,286	25,962	27,124
39 TOTAL NET PLANT INVESTMENT	5,247,917	5,178,885	5,276,580

Table 4C

**FCRPS INVESTMENT BASE
FY 2009
(\$000s)**

	A	B	C
	BALANCE-AS-OF		AVERAGE
	<u>9/30/2008</u>	<u>9/30/2009</u>	<u>2009</u>
1 CORPS OF ENGINEERS			
2 COMPLETED PLANT			
3 HYDROELECTRIC GEN	5,781,394	5,808,398	5,794,896
4 GEN INTEGRATION	3,000	3,000	3,000
5 TOTAL COMPLETED PLANT	5,784,394	5,811,398	5,797,896
6 ACCUMULATED DEPRECIATION			
7 HYDROELECTRIC GEN	1,968,956	2,046,180	2,007,568
8 GEN INTEGRATION	320	360	340
9 TOTAL ACCUMULATED DEPRECIATION	1,969,276	2,046,540	2,007,908
10 NET COMPLETED PLANT			
11 HYDROELECTRIC GEN	3,812,438	3,730,686	3,787,328
12 GEN INTEGRATION	2,680	2,720	2,660
13 TOTAL NET COMPLETED PLANT	3,815,118	3,733,406	3,789,988
14 BUREAU OF RECLAMATION			
15 COMPLETED PLANT			
16 HYDROELECTRIC GEN	1,537,149	1,662,356	1,599,753
17 GEN INTEGRATION	74,373	91,249	82,811
18 TOTAL COMPLETED PLANT	1,611,522	1,753,605	1,682,564
19 ACCUMULATED DEPRECIATION			
20 HYDROELECTRIC GEN	539,412	560,744	550,078
21 GEN INTEGRATION	17,997	19,102	18,550
22 TOTAL ACCUM DEPRECIATION	557,409	579,846	568,628
23 NET COMPLETED PLANT			
24 HYDROELECTRIC GEN	997,737	1,101,612	1,049,675
25 GEN INTEGRATION	56,376	72,147	64,261
26 TOTAL NET COMPLETED PLANT	1,054,113	1,173,759	1,113,936
27 CONSERVATION			
28 CUMULATIVE INVESTMENT	811,540	789,220	800,380
29 ACCUM PREPAID EXPENSE	562,002	571,105	566,554
30 NET CONSERVATION	249,538	218,115	233,826
31 FISH AND WILDLIFE			
32 CUMULATIVE INVESTMENT	314,985	330,498	322,742
33 ACCUM PREPAID EXPENSE	154,474	155,570	155,022
34 NET FISH AND WILDLIFE	160,511	174,928	167,720
35 BPA PLANT (PBL)			
36 CUMULATIVE INVESTMENT	119,704	131,965	125,835
37 ACCUMULATED DEPRECIATION	93,742	108,837	101,290
38 NET BPA PLANT INVESTMENT	25,962	23,128	24,545
39 TOTAL NET PLANT INVESTMENT	5,305,242	5,323,335	5,330,015

Table 4D

**FCRPS INVESTMENT BASE
FY 2010
(\$000s)**

	A	B	C
	BALANCE-AS-OF		AVERAGE
	<u>9/30/2009</u>	<u>9/30/2010</u>	<u>2010</u>
1 CORPS OF ENGINEERS			
2 COMPLETED PLANT			
3 HYDROELECTRIC GEN	5,808,398	5,930,636	5,869,517
4 GEN INTEGRATION	3,000	3,000	3,000
5 TOTAL COMPLETED PLANT	5,811,398	5,933,636	5,872,517
6 ACCUMULATED DEPRECIATION			
7 HYDROELECTRIC GEN	2,046,180	2,123,623	2,084,902
8 GEN INTEGRATION	360	400	380
9 TOTAL ACCUMULATED DEPRECIATION	2,046,540	2,124,023	2,085,282
10 NET COMPLETED PLANT			
11 HYDROELECTRIC GEN	3,762,218	3,812,438	3,784,615
12 GEN INTEGRATION	2,640	2,680	2,620
13 TOTAL NET COMPLETED PLANT	3,764,858	3,815,118	3,787,235
14 BUREAU OF RECLAMATION			
15 COMPLETED PLANT			
16 HYDROELECTRIC GEN	1,662,356	1,700,014	1,681,185
17 GEN INTEGRATION	91,249	91,249	91,249
18 TOTAL COMPLETED PLANT	1,753,605	1,791,263	1,772,434
19 ACCUMULATED DEPRECIATION			
20 HYDROELECTRIC GEN	560,744	583,161	571,953
21 GEN INTEGRATION	19,102	20,319	19,711
22 TOTAL ACCUM DEPRECIATION	579,846	603,480	591,664
23 NET COMPLETED PLANT			
24 HYDROELECTRIC GEN	1,101,612	1,116,853	1,109,232
25 GEN INTEGRATION	72,147	70,930	71,538
26 TOTAL NET COMPLETED PLANT	1,173,759	1,187,783	1,180,770
27 CONSERVATION			
28 CUMULATIVE INVESTMENT	789,220	787,401	788,311
29 ACCUM PREPAID EXPENSE	571,105	597,915	584,510
30 NET CONSERVATION	218,115	189,486	203,801
31 FISH AND WILDLIFE			
32 CUMULATIVE INVESTMENT	330,498	334,012	332,255
33 ACCUM PREPAID EXPENSE	155,570	145,408	150,489
34 NET FISH AND WILDLIFE	174,928	188,604	181,766
35 BPA PLANT (PBL)			
36 CUMULATIVE INVESTMENT	131,965	133,450	132,708
37 ACCUMULATED DEPRECIATION	108,837	113,017	110,927
38 NET BPA PLANT INVESTMENT	23,128	20,433	21,781
39 TOTAL NET PLANT INVESTMENT	5,354,787	5,401,424	5,375,353

Table 4E

**FCRPS INVESTMENT BASE
FY 2011
(\$000s)**

	A	B	C
	BALANCE-AS-OF		AVERAGE
	<u>9/30/2010</u>	<u>9/30/2011</u>	<u>2011</u>
1 CORPS OF ENGINEERS			
2 COMPLETED PLANT			
3 HYDROELECTRIC GEN	5,930,636	6,071,099	6,000,868
4 GEN INTEGRATION	3,000	3,000	3,000
5 TOTAL COMPLETED PLANT	5,933,636	6,074,099	6,003,868
6 ACCUMULATED DEPRECIATION			
7 HYDROELECTRIC GEN	2,123,623	2,202,696	2,163,160
8 GEN INTEGRATION	400	440	420
9 TOTAL ACCUMULATED DEPRECIATION	2,124,023	2,203,136	2,163,580
10 NET COMPLETED PLANT			
11 HYDROELECTRIC GEN	3,807,013	3,762,218	3,837,708
12 GEN INTEGRATION	2,600	2,640	2,580
13 TOTAL NET COMPLETED PLANT	3,809,613	3,764,858	3,840,288
14 BUREAU OF RECLAMATION			
15 COMPLETED PLANT			
16 HYDROELECTRIC GEN	1,700,014	1,780,043	1,740,029
17 GEN INTEGRATION	91,249	91,249	91,249
18 TOTAL COMPLETED PLANT	1,791,263	1,871,292	1,831,278
19 ACCUMULATED DEPRECIATION			
20 HYDROELECTRIC GEN	583,161	606,363	594,762
21 GEN INTEGRATION	20,319	21,536	20,928
22 TOTAL ACCUM DEPRECIATION	603,480	627,899	615,690
23 NET COMPLETED PLANT			
24 HYDROELECTRIC GEN	1,116,853	1,173,680	1,145,267
25 GEN INTEGRATION	70,930	69,713	70,321
26 TOTAL NET COMPLETED PLANT	1,187,783	1,243,393	1,215,588
27 CONSERVATION			
28 CUMULATIVE INVESTMENT	787,401	793,306	790,354
29 ACCUM PREPAID EXPENSE	597,915	638,599	618,257
30 NET CONSERVATION	189,486	154,707	172,097
31 FISH AND WILDLIFE			
32 CUMULATIVE INVESTMENT	334,012	343,966	338,989
33 ACCUM PREPAID EXPENSE	145,408	142,333	143,871
34 NET FISH AND WILDLIFE	188,604	201,633	195,118
35 BPA PLANT (PBL)			
36 CUMULATIVE INVESTMENT	133,450	145,674	139,562
37 ACCUMULATED DEPRECIATION	113,017	127,942	120,480
38 NET BPA PLANT INVESTMENT	20,433	17,732	19,082
39 TOTAL NET PLANT INVESTMENT	5,395,919	5,382,323	5,442,173

Table 4F

**FCRPS INVESTMENT BASE
FY 2012
(\$000s)**

	A	B	C
	BALANCE-AS-OF		AVERAGE
	<u>9/30/2011</u>	<u>9/30/2012</u>	<u>2012</u>
1 CORPS OF ENGINEERS			
2 COMPLETED PLANT			
3 HYDROELECTRIC GEN	6,071,099	6,164,368	6,117,734
4 GEN INTEGRATION	3,000	3,000	3,000
5 TOTAL COMPLETED PLANT	6,074,099	6,167,368	6,120,734
6 ACCUMULATED DEPRECIATION			
7 HYDROELECTRIC GEN	2,202,696	2,283,642	2,243,169
8 GEN INTEGRATION	440	480	460
9 TOTAL ACCUMULATED DEPRECIATION	2,203,136	2,284,122	2,243,629
10 NET COMPLETED PLANT			
11 HYDROELECTRIC GEN	3,868,403	3,807,013	3,874,565
12 GEN INTEGRATION	2,560	2,600	2,540
13 TOTAL NET COMPLETED PLANT	3,870,963	3,809,613	3,877,105
14 BUREAU OF RECLAMATION			
15 COMPLETED PLANT			
16 HYDROELECTRIC GEN	1,780,043	1,907,043	1,843,543
17 GEN INTEGRATION	91,249	91,249	91,249
18 TOTAL COMPLETED PLANT	1,871,292	1,998,292	1,934,792
19 ACCUMULATED DEPRECIATION			
20 HYDROELECTRIC GEN	606,363	630,945	618,654
21 GEN INTEGRATION	21,536	22,753	22,145
22 TOTAL ACCUM DEPRECIATION	627,899	653,698	640,799
23 NET COMPLETED PLANT			
24 HYDROELECTRIC GEN	1,173,680	1,276,098	1,224,889
25 GEN INTEGRATION	69,713	68,496	69,104
26 TOTAL NET COMPLETED PLANT	1,243,393	1,344,594	1,293,993
27 CONSERVATION			
28 CUMULATIVE INVESTMENT	793,306	650,533	721,920
29 ACCUM PREPAID EXPENSE	638,599	512,774	575,687
30 NET CONSERVATION	154,707	137,759	146,233
31 FISH AND WILDLIFE			
32 CUMULATIVE INVESTMENT	343,966	351,902	347,934
33 ACCUM PREPAID EXPENSE	142,333	137,213	139,773
34 NET FISH AND WILDLIFE	201,633	214,689	208,161
35 BPA PLANT (PBL)			
36 CUMULATIVE INVESTMENT	145,674	153,648	149,661
37 ACCUMULATED DEPRECIATIO	127,942	138,425	133,184
38 NET BPA PLANT INVESTMENT	17,732	15,223	16,477
39 TOTAL NET PLANT INVESTMENT	5,488,428	5,521,878	5,541,969

Table 4G

**FCRPS INVESTMENT BASE
FY 2013
(\$000s)**

	A	B	C
	BALANCE-AS-OF		AVERAGE
	<u>9/30/2012</u>	<u>9/30/2013</u>	<u>2013</u>
1 CORPS OF ENGINEERS			
2 COMPLETED PLANT			
3 HYDROELECTRIC GEN	6,164,368	6,250,669	6,207,519
4 GEN INTEGRATION	3,000	3,000	3,000
5 TOTAL COMPLETED PLANT	6,167,368	6,253,669	6,210,519
6 ACCUMULATED DEPRECIATION			
7 HYDROELECTRIC GEN	2,283,642	2,365,831	2,324,737
8 GEN INTEGRATION	480	520	500
9 TOTAL ACCUMULATED DEPRECIATION	2,284,122	2,366,351	2,325,237
10 NET COMPLETED PLANT			
11 HYDROELECTRIC GEN	3,880,726	3,868,403	3,882,782
12 GEN INTEGRATION	2,520	2,560	2,500
13 TOTAL NET COMPLETED PLANT	3,883,246	3,870,963	3,885,282
14 BUREAU OF RECLAMATION			
15 COMPLETED PLANT			
16 HYDROELECTRIC GEN	1,907,043	2,037,043	1,972,043
17 GEN INTEGRATION	91,249	91,249	91,249
18 TOTAL COMPLETED PLANT	1,998,292	2,128,292	2,063,292
19 ACCUMULATED DEPRECIATION			
20 HYDROELECTRIC GEN	630,945	657,240	644,093
21 GEN INTEGRATION	22,753	23,970	23,362
22 TOTAL ACCUM DEPRECIATION	653,698	681,210	667,455
23 NET COMPLETED PLANT			
24 HYDROELECTRIC GEN	1,276,098	1,379,803	1,327,950
25 GEN INTEGRATION	68,496	67,279	67,887
26 TOTAL NET COMPLETED PLANT	1,344,594	1,447,082	1,395,837
27 CONSERVATION			
28 CUMULATIVE INVESTMENT	650,533	596,382	623,458
29 ACCUM PREPAID EXPENSE	512,774	473,631	493,203
30 NET CONSERVATION	137,759	122,751	130,255
31 FISH AND WILDLIFE			
32 CUMULATIVE INVESTMENT	351,902	365,907	358,905
33 ACCUM PREPAID EXPENSE	137,213	139,001	138,107
34 NET FISH AND WILDLIFE	214,689	226,906	220,798
35 BPA PLANT (PBL)			
36 CUMULATIVE INVESTMENT	153,648	165,925	159,787
37 ACCUMULATED DEPRECIATION	138,425	153,184	145,805
38 NET BPA PLANT INVESTMENT	15,223	12,741	13,982
39 TOTAL NET PLANT INVESTMENT	5,595,511	5,680,443	5,646,154

Table 4H

**PBL GENERAL PLANT INVESTMENT (INCLUDING CORPORATE ALLOCATION)
(\$000s)**

FERC ACCOUNT 391.1 OFFICE FURNITURE AND FIXTURES

ASL, Remaining Life, Annual Percent=5.18% 9.9% as of FY 2006

<u>FY</u>	<u>INVEST</u>	<u>FIRST YEAR</u>	<u>FULL YEAR</u>	<u>ANNUAL DEPR</u>	<u>ACCUM DEPR</u>	<u>CUMUL INVEST</u>	<u>NET INVEST</u>
2004		-	-	107	675	2,137	1,462
2005		-	-	107	782	2,137	1,355
2006	1,419	70	140	107	889	3,556	2,667
2007	875	44	87	107	996	4,431	3,435
2008	2,625	130	260	107	1,103	7,056	5,953
2009	1,011	50	100	107	1,210	8,067	6,857
2010	1,099	55	109	107	1,317	9,166	7,849
2011	974	48	96	107	1,424	10,140	8,716
2012	1,000	50	99	107	1,531	11,140	9,609
2013	1,027	51	102	107	1,638	12,167	10,529

Table 4I

FERC ACCOUNT 391.2 DATA PROCESSING EQUIPMENT

ASL, Remaining Life, Annual Percent=20% 18.07% as of FY 2006

<u>FY</u>	<u>INVEST</u>	<u>FIRST YEAR</u>	<u>FULL YEAR</u>	<u>ANNUAL DEPR</u>	<u>ACCUM DEPR</u>	<u>CUMUL INVEST</u>	<u>NET INVEST</u>
2004	6,390		1,278	1,906	5,453	10,864	5,411
2005		-	-	1,895	7,348	10,864	3,516
2006		-	-	1,155	8,503	10,864	2,361
2007		-	-	1,155	9,658	10,864	1,206
2008		-	-	1,155	10,813	10,864	51
2009		-	-	51	10,864	10,864	-
2010		-	-			-	-
2011		-	-			-	-
2012		-	-			-	-
2013		-	-			-	-

Table 4J

FERC ACCOUNT 391.3 DATA PROCESSING SOFTWARE

18.33% as of FY 2006

<u>FY</u>	<u>INVEST</u>	<u>FIRST YEAR</u>	<u>FULL YEAR</u>	<u>ANNUAL DEPR</u>	<u>ACCUM DEPR</u>	<u>CUMUL INVEST</u>	<u>NET INVEST</u>
2004	57,450		11,490	11,490	24,149	57,450	33,301
2005	5,608	561	1,122	12,051	36,200	63,058	26,858
2006	11,950	1,095	2,190	12,654	48,854	75,008	26,154
2007	11,250	1,031	2,062	14,780	63,634	86,258	22,624
2008	11,250	1,031	2,062	14,652	78,286	97,508	19,222
2009	11,250	1,031	2,062	14,652	92,938	108,758	15,820
2010	11,250	1,031	2,062	14,652	107,590	120,008	12,418
2011	11,250	1,031	2,062	14,652	122,242	131,258	9,016
2012	11,250	1,031	2,062	14,652	136,894	142,508	5,614
2013	11,250	1,031	2,062	14,652	151,546	153,758	2,212

Table 4K

FERC ACCOUNT 397 COMMUNICATION EQUIPMENT

ASL, Remaining Life, Annual Percent=6.02%

<u>FY</u>	<u>INVEST</u>	<u>FIRST YEAR</u>	<u>FULL YEAR</u>	<u>ANNUAL DEPR</u>	<u>ACCUM DEPR</u>	<u>CUMUL INVEST</u>	<u>NET INVEST</u>
2004	4,276		285	285	2,400	4,276	1,876
2005		0	0	285	2,685	4,276	1,591
2006		0	0	285	2,970	4,276	1,306
2007		0	0	285	3,255	4,276	1,021
2008		0	0	285	3,540	4,276	736
2009		0	0	285	3,825	4,276	451
2010		0	0	285	4,110	4,276	166
2011		-	0	166	4,276	4,276	-
2012		-	0	-	-	-	-
2013		-	0	-	-	-	-

Table 4L

SUMMARY - PBL GENERAL PLANT

<u>FY</u>	<u>ANNUAL DEPR</u>	<u>ACCUM DEPR</u>	<u>CUMUL INVEST</u>
2005	14,338	47,015	80,335
2006	14,201	61,216	93,704
2007	16,327	77,543	105,829
2008	16,199	93,742	119,704
2009	15,095	108,837	131,965
2010	15,044	113,017	133,450
2011	14,925	127,942	145,674
2012	14,759	138,425	153,648
2013	14,759	153,184	165,925

Table 4M

**BPA FISH & WILDLIFE INVESTMENT
(\$000s)**

<u>FY</u>	<u>INVEST</u>	<u>FIRST YEAR</u>	<u>FULL YEAR</u>	<u>ANNUAL AMORT</u>	<u>ACCUM AMORT</u>	<u>CUMUL INVEST</u>
1985	4,318	138	288	138	138	4,318
1986	5,590	220	373	508	646	9,908
1987	4,709	113	314	774	1,419	14,617
1988	7,727	167	515	1,141	2,561	22,344
1989	8,267	227	551	1,717	4,277	30,611
1990	16,193	337	1,080	2,378	6,655	46,804
1991	17,680	520	1,179	3,640	10,295	64,484
1992	11,178	310	745	4,609	14,904	75,662
1993	17,338	484	1,156	5,528	20,433	93,000
1994	20,487	638	1,366	6,838	27,271	113,487
1995	32,486	932	2,166	8,498	35,768	145,973
1996	26,046	519	1,736	10,251	46,019	172,019
1997	28,064	1,210	1,871	12,678	58,697	200,083
1998	21,995	900	1,466	14,239	72,936	222,078
1999	14,748	902	983	15,707	88,643	236,826
2000	13,898	692	927	16,495	105,138	250,724
2001	16,493	89	1,100	15,725	110,955	257,309
2002	6,102	70	407	18,253	129,208	263,411
2003	11,156	47	744	17,023	133,743	262,079
2004	5,849	28	390	17,276	142,465	259,374
2005	10,000	333	667	17,310	143,582	253,181
2006	36,000	1,200	2,400	17,581	143,484	271,501
2007	36,000	1,200	2,400	19,013	151,318	296,323
2008	36,000	1,200	2,400	20,493	154,474	314,985
2009	36,000	1,200	2,400	21,584	155,570	330,498
2010	36,000	1,200	2,400	22,324	145,408	334,012
2011	36,000	1,200	2,400	22,971	142,333	343,966
2012	36,000	1,200	2,400	22,944	137,213	351,902
2013	36,000	1,200	2,400	23,783	139,001	365,907

Table 4N

**BPA LEGACY CONSERVATION INVESTMENT
(\$000s)**

<u>FY</u>	<u>INVEST</u>	<u>FIRST YEAR</u>	<u>FULL YEAR</u>	<u>ANNUAL AMORT</u>	<u>ACCUM AMORT</u>	<u>CUMUL INVEST</u>
1982	61,940	1,418	3,097	1,418	1,418	61,940
1983	204,092	2,067	10,205	5,164	6,582	266,032
1984	66,783	334	3,339	13,636	20,218	332,815
1985	103,067	945	5,153	17,586	37,804	435,882
1986	97,618	1,312	4,881	23,106	60,910	533,500
1987	67,381	969	3,369	27,644	88,554	600,881
1988	54,320	2,396	2,716	32,440	120,994	655,201
1989	41,819	301	2,091	33,061	154,055	697,020
1990	34,095	145	1,705	34,996	189,051	731,115
1991	45,714	320	2,286	36,876	225,927	776,829
1992	62,151	730	3,108	39,572	265,499	838,980
1993	96,717	2,060	4,836	44,010	309,509	935,697
1994	115,030	2,274	5,752	49,060	358,569	1,050,727
1995	72,428	1,259	3,621	53,797	412,366	1,123,155
1996	39,450	889	1,973	57,048	469,414	1,162,605
1997	20,329	494	1,016	58,626	528,040	1,182,934
1998	14,308	506	715	59,654	587,694	1,197,242
1999	13,716	335	686	60,198	647,892	1,210,958
2000	347	225	6	60,774	708,666	1,211,305
2001	57			60,555	769,221	1,211,362
2002				59,794	829,015	1,211,362
2003				54,918	821,993	1,149,422
2004		-	-	46,430	664,331	945,330
2005		-	-	42,637	640,185	878,547
2006		-	-	37,552	574,670	775,480
2007		-	-	33,049	510,101	677,862
2008		-	-	29,843	472,563	610,481
2009		-	-	27,283	445,526	556,161
2010		-	-	25,289	428,996	514,342
2011		-	-	23,439	418,340	480,247
2012				20,948	393,574	434,533
2013				17,408	348,831	372,382

Table 40

**BPA CONSERVATION AUGMENTATION INVESTMENT
(\$000s)**

<u>FY</u>	<u>INVEST</u>	<u>FIRST YEAR</u>	<u>FULL YEAR</u>	<u>ANNUAL AMORT</u>	<u>ACCUM AMORT</u>	<u>CUMUL INVEST</u>
2002	28,227	2,827	2,822	2,827	2,827	28,227
2003	22,900	2,847	2,507	5,669	8,496	51,127
2004	19,432	2,205	2,461	7,534	16,030	70,559
2005	22,500	1,200	3,550	8,990	25,020	93,059
2006	44,000	-	8,800	11,340	36,360	137,059
2007		-	-	20,140	56,500	137,059
2008		-	-	20,140	76,639	137,059
2009		-	-	20,140	96,779	137,059
2010		-	-	20,140	116,919	137,059
2011		-	-	20,140	137,059	137,059
2012						
2013						

Incorporates actual data through 2004

Table 4P

**BPA CONSERVATION ACQUISITIONS INVESTMENT
(\$000s)**

<u>FY</u>	<u>INVEST</u>	<u>FIRST YEAR</u>	<u>FULL YEAR</u>	<u>ANNUAL AMORT</u>	<u>ACCUM AMORT</u>	<u>CUMUL INVEST</u>
2007	32,000	3,200	6,400	3,200	3,200	32,000
2008	32,000	3,200	6,400	9,600	12,800	64,000
2009	32,000	3,200	6,400	16,000	28,800	96,000
2010	40,000	4,000	8,000	23,200	52,000	136,000
2011	40,000	4,000	8,000	31,200	83,200	176,000
2012	40,000	4,000	8,000	36,000	119,200	216,000
2013	40,000	4,000	8,000	37,600	124,800	224,000

Table 4Q

**Bureau of Reclamation: Investment and Depreciation
(\$000s)**

	A	B	C	D	E	F	G	H	I	J	K	L
	2004			2005	2005			2006	2006		2007	2007
	ACCUM	INVESTMENT	2005	DEPR	ACCUM	INVESTMENT	2006	DEPR	ACCUM	INVESTMENT	2007	DEPR
	DEPR	9/30/04	ADDTNS	EXP	DEPR	9/30/05	ADDTNS	EXP	DEPR	9/30/06	ADDTNS	EXP
1 BOISE												
2 GENERATION	8,491	27,576	350	370	8,861	27,926	700	377	9,238	28,626		382
3 COLUMBIA BASIN												
4 GENERATION	368,839	1,195,979	34,199	16,174	385,013	1,230,178	2,465	16,419	401,432	1,232,643	5,033	16,469
5 TRANSMISSION /DELIVERY	13,118	42,536	19,775	699	13,817	62,311		831	14,648	62,311	7,971	884
6 TOTAL	381,957	1,238,515	53,974	16,873	398,830	1,292,489	2,465	17,250	416,080	1,294,954	13,004	17,353
7 GREEN SPRINGS												
8 GENERATION	8,481	11,175		149	8,630	11,175		149	8,779	11,175		149
9 HUNGRY HORSE												
10 GENERATION	47,025	119,508	400	1,596	48,621	119,908	7,012	1,646	50,267	126,920	410	1,695
11 TRANSMISSION /DELIVERY	975	2,477		33	1,008	2,477		33	1,041	2,477		33
12 TOTAL	48,000	121,985	400	1,629	49,629	122,385	7,012	1,679	51,308	129,397	410	1,728
13 MINIDOKA-PALISADES												
14 GENERATION	22,819	110,474	127	1,474	24,293	110,601		1,475	25,768	110,601	825	1,480
15 TRANSMISSION /DELIVERY	333	1,614		22	355	1,614		22	377	1,614		22
16 TOTAL	23,152	112,088	127	1,496	24,648	112,215	-	1,497	26,145	112,215	825	1,502
17 YAKIMA												
18 GENERATION	3,051	6,127		82	3,133	6,127	1,050	89	3,222	7,177	2,314	111
19 TOTAL USBR	473,132	1,517,466	54,851	20,599	493,731	1,572,317	11,227	21,041	514,772	1,583,544	16,553	21,225
20 GENERATION	458,706	1,470,839		19,845	478,551	1,505,915		20,155	498,706	1,517,142		20,286
21 TRANSMISSION	14,426	46,627		754	15,180	66,402		886	16,066	66,402		939
22 TOTAL	473,132	1,517,466		20,599	493,731	1,572,317		21,041	514,772	1,583,544		21,225

Table 4Q

**Bureau of Reclamation: Investment and Depreciation
(\$000s)**

	M	N	O	P	Q	R	S	T	U	V	W	X
	2007			2008	2008			2009	2009		2010	
	ACCUM	INVESTMENT	2008	DEPR	ACCUM	INVESTMENT	2009	DEPR	ACCUM	INVESTMENT	2010	DEPR
	DEPR	9/30/07	ADDTNS	EXP	DEPR	9/30/08	ADDTNS	EXP	DEPR	9/30/09	ADDTNS	EXP
1 BOISE												
2 GENERATION	9,620	28,626		382	10,002	28,626		382	10,384	28,626		382
3 COLUMBIA BASIN												
4 GENERATION	417,901	1,237,676	9,712	16,567	434,468	1,247,388	125,207	17,467	451,935	1,372,595	37,658	18,552
5 TRANSMISSION /DELIVERY	15,532	70,282		937	16,469	70,282	16,876	1,050	17,519	87,158		1,162
6 TOTAL	433,433	1,307,958	9,712	17,504	450,937	1,317,670	142,083	18,517	469,454	1,459,753	37,658	19,714
7 GREEN SPRINGS												
8 GENERATION	8,928	11,175		149	9,077	11,175		149	9,226	11,175		149
9 HUNGRY HORSE												
10 GENERATION	51,962	127,330	1,713	1,709	53,671	129,043		1,721	55,392	129,043		1,721
11 TRANSMISSION /DELIVERY	1,074	2,477		33	1,107	2,477		33	1,140	2,477		33
12 TOTAL	53,036	129,807	1,713	1,742	54,778	131,520	-	1,754	56,532	131,520	-	1,754
13 MINIDOKA-PALISADES												
14 GENERATION	27,248	111,426		1,486	28,734	111,426		1,486	30,220	111,426		1,486
15 TRANSMISSION /DELIVERY	399	1,614		22	421	1,614		22	443	1,614		22
16 TOTAL	27,647	113,040	-	1,508	29,155	113,040	-	1,508	30,663	113,040	-	1,508
17 YAKIMA												
18 GENERATION	3,333	9,491		127	3,460	9,491		127	3,587	9,491		127
19 TOTAL USBR	535,997	1,600,097	11,425	21,412	557,409	1,611,522	142,083	22,437	579,846	1,753,605	37,658	23,634
20 GENERATION	518,992	1,525,724		20,420	539,412	1,537,149		21,332	560,744	1,662,356		22,417
21 TRANSMISSION	17,005	74,373		992	17,997	74,373		1,105	19,102	91,249		1,217
22 TOTAL	535,997	1,600,097		21,412	557,409	1,611,522		22,437	579,846	1,753,605		23,634

Table 4Q

**Bureau of Reclamation: Investment and Depreciation
(\$000s)**

	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL
	2010			2011	2011			2012	2012			2013	2013	
	ACCUM	INVESTMENT	2011	DEPR	ACCUM	INVESTMENT	2012	DEPR	ACCUM	INVESTMENT	2013	DEPR	ACCUM	INVESTMENT
	DEPR	9/30/10	ADDTNS	EXP	DEPR	9/30/11	ADDTNS	EXP	DEPR	9/30/12	ADDTNS	EXP	DEPR	9/30/13
1 BOISE														
2 GENERATION	10,766	28,626		382	11,148	28,626		382	11,530	28,626		382	11,912	28,626
3 COLUMBIA BASIN														
4 GENERATION	470,487	1,410,253	80,029	19,337	489,824	1,490,282	127,000	20,717	510,541	1,617,282	130,000	22,430	532,971	1,747,282
5 TRANSMISSION /DELIVERY	18,681	87,158		1,162	19,843	87,158		1,162	21,005	87,158		1,162	22,167	87,158
6 TOTAL	489,168	1,497,411	80,029	20,499	509,667	1,577,440	127,000	21,879	531,546	1,704,440	130,000	23,592	555,138	1,834,440
7 GREEN SPRINGS														
8 GENERATION	9,375	11,175		149	9,524	11,175		149	9,673	11,175		149	9,822	11,175
9 HUNGRY HORSE														
10 GENERATION	57,113	129,043		1,721	58,834	129,043		1,721	60,555	129,043		1,721	62,276	129,043
11 TRANSMISSION /DELIVERY	1,173	2,477		33	1,206	2,477		33	1,239	2,477		33	1,272	2,477
12 TOTAL	58,286	131,520	-	1,754	60,040	131,520	-	1,754	61,794	131,520	-	1,754	63,548	131,520
13 MINIDOKA-PALISADES														
14 GENERATION	31,706	111,426		1,486	33,192	111,426		1,486	34,678	111,426		1,486	36,164	111,426
15 TRANSMISSION /DELIVERY	465	1,614		22	487	1,614		22	509	1,614		22	531	1,614
16 TOTAL	32,171	113,040	-	1,508	33,679	113,040	-	1,508	35,187	113,040	-	1,508	36,695	113,040
17 YAKIMA														
18 GENERATION	3,714	9,491		127	3,841	9,491		127	3,968	9,491		127	4,095	9,491
19 TOTAL USBR	603,480	1,791,263	80,029	24,419	627,899	1,871,292	127,000	25,799	653,698	1,998,292	130,000	27,512	681,210	2,128,292
20 GENERATION	583,161	1,700,014		23,202	606,363	1,780,043		24,582	630,945	1,907,043		26,295	657,240	2,037,043
21 TRANSMISSION	20,319	91,249		1,217	21,536	91,249		1,217	22,753	91,249		1,217	23,970	91,249
22 TOTAL	603,480	1,791,263		24,419	627,899	1,871,292		25,799	653,698	1,998,292		27,512	681,210	2,128,292

Table 4R

Corps of Engineers: Investment and Depreciation
(\$000s)

	A	B	C	D	E	F	G	H	I	J	K	L
	2004			2005	2005			2006	2006		2007	2007
	ACCUM	INVESTMENT	2005	DEPR	ACCUM	INVESTMENT	2006	DEPR	ACCUM	INVESTMENT	2007	DEPR
	DEPR	9/30/04	ADDTNS	EXP	DEPR	9/30/05	ADDTNS	EXP	DEPR	9/30/06	ADDTNS	EXP
1 BONNEVILLE												
2 GENERATION	276,945	924,603	18,566	12,452	289,397	943,169	6,839	12,621	302,018	950,008	4,470	12,697
3 TRANSMISSION	160	3,000		40	200	3,000		40	240	3,000		40
4 TOTAL	277,105	927,603	18,566	12,492	289,597	946,169	6,839	12,661	302,258	953,008		12,737
5 OTHER PROJECTS												
6 (GENERATION ONLY)												
7 ALBENI FALLS	19,443	43,126		575	20,018	43,126	3,336	597	20,615	46,462		619
8 CHIEF JOSEPH	206,648	571,149	9,360	7,678	214,326	580,509	7,025	7,787	222,113	587,534	3,594	7,858
9 COUGAR	7,549	36,314	1,485	494	8,043	37,799	9,131	565	8,608	46,930	425	629
10 DETROIT-BIG CLIFF	22,138	41,220	2,804	568	22,706	44,024	9,878	653	23,359	53,902	4,244	747
11 DWORSHAK	97,871	316,782	1,299	4,232	102,103	318,081	3,663	4,266	106,369	321,744	595	4,294
12 GREEN PETER-FOSTER	17,547	50,955	2,362	695	18,242	53,317		711	18,953	53,317	1,467	721
13 HILLS CREEK	9,186	18,463	992	253	9,439	19,455	530	263	9,702	19,985	424	269
14 ICE HARBOR	58,283	159,247	7,468	2,173	60,456	166,715	2,340	2,238	62,694	169,055		2,254
15 JOHN DAY	165,287	494,244	929	6,596	171,883	495,173	8,836	6,661	178,544	504,009	8,441	6,776
16 LIBBY	122,064	433,212	1,863	5,789	127,853	435,075	7,151	5,849	133,702	442,226		5,896
17 LITTLE GOOSE	77,555	212,068	1,621	2,838	80,393	213,689	2,321	2,865	83,258	216,010		2,880
18 LOOKOUT POINT-DEXTER	34,869	50,192	3,388	692	35,561	53,580		714	36,275	53,580	3,337	737
19 LOST CREEK	8,497	26,972		360	8,857	26,972	1,511	370	9,227	28,483		380
20 LOWER GRANITE	98,013	332,599	2,949	4,454	102,467	335,548	5,822	4,513	106,980	341,370	11,283	4,627
21 LOWER MONUMENTAL	84,096	230,564	3,369	3,097	87,193	233,933	6,433	3,162	90,355	240,366		3,205
22 MCNARY	145,014	300,736	6,188	4,051	149,065	306,924	2,265	4,107	153,172	309,189		4,123
23 THE DALLES	154,192	308,487	1,676	4,124	158,316	310,163	22,343	4,284	162,600	332,506	3,984	4,460
24 LOWER SNAKE F&W	22,286	256,193		3,416	25,702	256,193		3,416	29,118	256,193		3,416
25 COLUMBIA R. FISH BYPASS	50,621	376,958	134,139	5,026	55,647	511,097	22,159	6,815	62,462	533,256	76,119	7,110
26 TOTAL OTHER	1,401,159	4,259,481	181,892	57,111	1,458,270	4,441,373	114,744	59,836	1,518,106	4,556,117	113,913	61,001
27 TOTAL CORPS	1,678,264	5,187,084	200,458	69,603	1,747,867	5,387,542	121,583	72,497	1,820,364	5,509,125	113,913	73,738
28 GENERATION	1,678,104	5,184,084		69,563	1,747,667	5,384,542		72,457	1,820,124	5,506,125		73,698
29 TRANSMISSION	160	3,000		40	200	3,000		40	240	3,000		40
30 TOTAL	1,678,264	5,187,084		69,603	1,747,867	5,387,542		72,497	1,820,364	5,509,125		73,738

Table 4R

**Corps of Engineers: Investment and Depreciation
(\$000s)**

	M	N	O	P	Q	R	S	T	U	V	W	X
	2007			2008	2008			2009	2009		2010	2010
	ACCUM	INVESTMENT	2008	DEPR	ACCUM	INVESTMENT	2009	DEPR	ACCUM	INVESTMENT	2010	DEPR
	DEPR	9/30/07	ADDTNS	EXP	DEPR	9/30/08	ADDTNS	EXP	DEPR	9/30/09	ADDTNS	EXP
1 BONNEVILLE												
2 GENERATION	314,715	954,478	6,782	12,772	327,487	961,260		12,817	340,304	961,260		12,817
3 TRANSMISSION	280	3,000		40	320	3,000		40	360	3,000		40
4 TOTAL	314,995	957,478		12,812	327,807	964,260		12,857	340,664	964,260		12,857
5 OTHER PROJECTS												
6 (GENERATION ONLY)												
7 ALBENI FALLS	21,234	46,462		619	21,853	46,462		619	22,472	46,462		619
8 CHIEF JOSEPH	229,971	591,128		7,882	237,853	591,128		7,882	245,735	591,128		7,882
9 COUGAR	9,237	47,355		631	9,868	47,355		631	10,499	47,355		631
10 DETROIT-BIG CLIFF	24,106	58,146		775	24,881	58,146		775	25,656	58,146		775
11 DWORSHAK	110,663	322,339	2,539	4,315	114,978	324,878	1,466	4,341	119,319	326,344		4,351
12 GREEN PETER-FOSTER	19,674	54,784		730	20,404	54,784		730	21,134	54,784		730
13 HILLS CREEK	9,971	20,409		272	10,243	20,409	320	274	10,517	20,729		276
14 ICE HARBOR	64,948	169,055		2,254	67,202	169,055	2,606	2,271	69,473	171,661		2,289
15 JOHN DAY	185,320	512,450		6,833	192,153	512,450		6,833	198,986	512,450		6,833
16 LIBBY	139,598	442,226		5,896	145,494	442,226		5,896	151,390	442,226		5,896
17 LITTLE GOOSE	86,138	216,010	3,396	2,903	89,041	219,406	848	2,931	91,972	220,254		2,937
18 LOOKOUT POINT-DEXTER	37,012	56,917	195	760	37,772	57,112	444	764	38,536	57,556		767
19 LOST CREEK	9,607	28,483		380	9,987	28,483	650	384	10,371	29,133		388
20 LOWER GRANITE	111,607	352,653	4,938	4,735	116,342	357,591		4,768	121,110	357,591		4,768
21 LOWER MONUMENTAL	93,560	240,366	3,240	3,226	96,786	243,606	847	3,254	100,040	244,453		3,259
22 MCNARY	157,295	309,189		4,123	161,418	309,189	6,409	4,165	165,583	315,598		4,208
23 THE DALLES	167,060	336,490		4,487	171,547	336,490	7,597	4,537	176,084	344,087		4,588
24 LOWER SNAKE F&W	32,534	256,193		3,416	35,950	256,193		3,416	39,366	256,193		3,416
25 COLUMBIA R. FISH BYPASS	69,572	609,375	135,796	8,125	77,697	745,171	5,817	9,936	87,633	750,988	122,238	10,013
26 TOTAL OTHER	1,579,107	4,670,030	150,104	62,362	1,641,469	4,820,134	27,004	64,407	1,705,876	4,847,138	122,238	64,626
27 TOTAL CORPS	1,894,102	5,627,508	150,104	75,174	1,969,276	5,784,394	27,004	77,264	2,046,540	5,811,398	122,238	77,483
28 GENERATION	1,893,822	5,624,508		75,134	1,968,956	5,781,394		77,224	2,046,180	5,808,398		77,443
29 TRANSMISSION	280	3,000		40	320	3,000		40	360	3,000		40
30 TOTAL	1,894,102	5,627,508		75,174	1,969,276	5,784,394		77,264	2,046,540	5,811,398		77,483

Table 4R

Corps of Engineers: Investment and Depreciation
(\$000s)

	Y 2010 ACCUM DEPR	Z INVESTMENT 9/30/10	AA 2011 ADDTNS	AB 2011 DEPR EXP	AC 2011 ACCUM DEPR	AD INVESTMENT 9/30/11	AE 2012 ADDTNS	AF 2012 DEPR EXP	AG 2012 ACCUM DEPR	AH INVESTMENT 9/30/12	AI 2013 ADDTNS	AJ 2013 DEPR EXP	AK 2013 ACCUM DEPR	AL INVESTMENT 9/30/13
1 BONNEVILLE														
2 GENERATION	353,121	961,260		12,817	365,938	961,260		12,817	378,755	961,260		12,817	391,572	961,260
3 TRANSMISSION	400	3,000		40	440	3,000		40	480	3,000		40	520	3,000
4 TOTAL	353,521	964,260		12,857	366,378	964,260		12,857	379,235	964,260		12,857	392,092	964,260
5 OTHER PROJECTS														
6 (GENERATION ONLY)														
7 ALBENI FALLS	23,091	46,462		619	23,710	46,462		619	24,329	46,462		619	24,948	46,462
8 CHIEF JOSEPH	253,617	591,128		7,882	261,499	591,128		7,882	269,381	591,128		7,882	277,263	591,128
9 COUGAR	11,130	47,355		631	11,761	47,355		631	12,392	47,355		631	13,023	47,355
10 DETROIT-BIG CLIFF	26,431	58,146		775	27,206	58,146		775	27,981	58,146		775	28,756	58,146
11 DWORSHAK	123,670	326,344		4,351	128,021	326,344		4,351	132,372	326,344		4,351	136,723	326,344
12 GREEN PETER-FOSTER	21,864	54,784		730	22,594	54,784		730	23,324	54,784		730	24,054	54,784
13 HILLS CREEK	10,793	20,729		276	11,069	20,729		276	11,345	20,729		276	11,621	20,729
14 ICE HARBOR	71,762	171,661		2,289	74,051	171,661		2,289	76,340	171,661		2,289	78,629	171,661
15 JOHN DAY	205,819	512,450		6,833	212,652	512,450		6,833	219,485	512,450		6,833	226,318	512,450
16 LIBBY	157,286	442,226		5,896	163,182	442,226		5,896	169,078	442,226		5,896	174,974	442,226
17 LITTLE GOOSE	94,909	220,254		2,937	97,846	220,254		2,937	100,783	220,254		2,937	103,720	220,254
18 LOOKOUT POINT-DEXTER	39,303	57,556		767	40,070	57,556		767	40,837	57,556		767	41,604	57,556
19 LOST CREEK	10,759	29,133		388	11,147	29,133		388	11,535	29,133		388	11,923	29,133
20 LOWER GRANITE	125,878	357,591		4,768	130,646	357,591		4,768	135,414	357,591		4,768	140,182	357,591
21 LOWER MONUMENTAL	103,299	244,453		3,259	106,558	244,453		3,259	109,817	244,453		3,259	113,076	244,453
22 MCNARY	169,791	315,598		4,208	173,999	315,598		4,208	178,207	315,598		4,208	182,415	315,598
23 THE DALLES	180,672	344,087		4,588	185,260	344,087		4,588	189,848	344,087		4,588	194,436	344,087
24 LOWER SNAKE F&W	42,782	256,193		3,416	46,198	256,193		3,416	49,614	256,193		3,416	53,030	256,193
25 COLUMBIA R. FISH BYPASS	97,646	873,226	140,463	11,643	109,289	1,013,689	93,269	13,516	122,805	1,106,958	86,301	14,759	137,564	1,193,259
26 TOTAL OTHER	1,770,502	4,969,376	140,463	66,256	1,836,758	5,109,839	93,269	68,129	1,904,887	5,203,108	86,301	69,372	1,974,259	5,289,409
27 TOTAL CORPS	2,124,023	5,933,636	140,463	79,113	2,203,136	6,074,099	93,269	80,986	2,284,122	6,167,368	86,301	82,229	2,366,351	6,253,669
28 GENERATION	2,123,623	5,930,636		79,073	2,202,696	6,071,099		80,946	2,283,642	6,164,368		82,189	2,365,831	6,250,669
29 TRANSMISSION	400	3,000		40	440	3,000		40	480	3,000		40	520	3,000
30 TOTAL	2,124,023	5,933,636		79,113	2,203,136	6,074,099		80,986	2,284,122	6,167,368		82,229	2,366,351	6,253,669

5. PROJECTED CASH BALANCES / INTEREST CREDITS

5.1 Introduction

This chapter documents the projection of the generation interest income (credited to interest expense) to be earned during the rate approval period and the outyears on BPA's projected cash balances and on funds attributable to generation to be returned to Treasury at year-end.

5.2 Interest credits on projected cash balances

The ToolKit model provides the annual cash balances for the rate approval period. In the outyears, the internal cash flows from revenue requirements are added to the ending rate period cash balances separately for the program and 7(b)(2) cases and averaged. The projected interest earnings rate, the projected weighted average interest rate on outstanding bonds from the end of the previous year, is multiplied by the average cash balance to determine the annual interest income. The resulting interest income is applied as a credit against interest expense in the generation revenue requirements.

5.3 Interest income (repayment program calculation)

The interest income rates listed in this chapter are calculated and used in repayment studies to determine an interest income credit on funds collected during each year for year-end payment of amortization and interest on COE and BOR appropriations and bonds BPA issued to Treasury. The repayment program assumes that cash accumulates at a uniform rate throughout the year, except for interest paid on bonds issued to Treasury at mid-year.

Table 5A

**Interest Income from Projected Cash Balances
Generation Revenue Requirement
(\$000s)**

	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>
1 Annual Cash Surplus/(Deficit)		97,000	97,000	97,000	-	6,006	81,961	-
2 SOY Cash Balance		348,000	445,000	542,000	590,500	590,500	596,506	678,466
3 EOY Cash Balance	348,000	445,000	542,000	639,000	590,500	596,506	678,466	678,466
4 Average Cash Balance	174,000	396,500	493,500	590,500	590,500	593,503	637,486	678,466
5 Interest Income Rate		4.75%	4.75%	4.75%	4.75%	4.75%	4.75%	4.75%
6 Repayment Study Interest Income		9,018	9,505	9,482	9,421	9,490	7,609	11,557
7 Annual Interest Income		27,852	32,946	37,531	37,470	37,681	37,890	43,784

Table 5B

**Interest Income from Projected Cash Balances
Generation Current Revenue Test
(\$000s)**

	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>
1 Annual Cash Surplus/(Deficit)		(180,598)	(224,294)	(360,707)
2 SOY Cash Balance		348,000	167,402	(56,892)
3 EOY Cash Balance	348,000	167,402	(56,892)	(417,599)
4 Average Cash Balance	174,000	257,701	55,255	(237,245)
5 Interest Income Rate		4.75%	4.75%	4.75%
6 Repayment Study Interest Income		9,018	9,505	9,482
7 Annual Interest Income		21,259	12,130	(1,787)

Table 5C

**Interest Income from Projected Cash Balances
Generation Revised Revenue Test
(\$000s)**

	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>
1 Annual Cash Surplus/(Deficit)		183,570	139,095	(4,670)
2 SOY Cash Balance		348,000	531,570	670,665
3 EOY Cash Balance	348,000	531,570	670,665	665,995
4 Average Cash Balance	174,000	439,785	601,118	668,330
5 Interest Income Rate		4.75%	4.75%	4.75%
6 Repayment Study Interest Income		9,018	9,505	9,482
7 Annual Interest Income		29,908	38,058	41,228

Table 5D

**Interest Income from Projected Cash Balances
7(b)(2) Generation Revenue Requirement
(\$000s)**

	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>
1 Annual Cash Surplus/(Deficit)	97,000	97,000	97,000	-	-	-	-
2 SOY Cash Balance	348,000	445,000	542,000	588,000	588,000	588,000	588,000
3 EOY Cash Balance	445,000	542,000	639,000	588,000	588,000	588,000	588,000
4 Average Cash Balance	396,500	493,500	590,500	588,000	588,000	588,000	588,000
5 Interest Income Rate	4.75%	4.75%	4.75%	4.75%	4.75%	4.75%	4.75%
6 Repayment Study Interest Income	8,730	9,196	9,020	8,873	8,889	6,940	10,488
7 Annual Interest Income	27,564	32,637	37,069	36,803	36,819	34,870	38,418

6. INTEREST RATES FOR TREASURY SOURCES OF CAPITAL AND PRICE DEFLATORS

6.1 Introduction

Interest rates on bonds issued by BPA to Treasury and interest rates for COE and BOR appropriations are used in development of repayment studies and projections of Federal interest expense in revenue requirements. Price deflators are used for developing spending levels in revenue requirements.

6.2 Source of Forecasts

To project interest rates on bonds issued to Treasury, BPA uses Treasury yield curve forecasts provided by the Global Insights Group (GI). GI is also the source of price deflators that BPA treats as escalators for purposes of developing spending levels. GI develops the price deflators taking into account projections of Gross Domestic Product (GDP). The GDP consists of the sum of consumption, investment, government purchases and net exports, excluding transfers to foreigners.

6.3 Interest Rate Projections

Projected interest rates for BPA bonds issued to Treasury are based on GI's yield curve projections of Treasury market rates, plus a markup of 32 to 90 basis points depending on the length of time to maturity. The markup estimate reflects an interagency agreement that Treasury price BPA bonds at a level comparable to securities (bonds) issued by U.S. government corporations. The markup estimate reflects the average basis point markup on recent intermediate and long-term bonds issued by BPA. As noted in the attached transmittal memo documenting the interest rates in this revenue requirement study, for the FY 2007-2009 period the 30-year rate reflects a markup of 90 basis points.

Interest rates on projected capital investments funded by appropriations are also based on GI's projections of Treasury yield curves. The yield curves used for appropriations do not include the 32 to 90 basis point markup.

6.4 Deflators

The current and cumulative price deflator used to escalate midyear dollars are derived from the fiscal and calendar year price deflators provided by GI. They are calculated as follows:

$$[(FY_t/100) \times 0.5] + 1 = \text{Cumulative Price Deflator}_t$$

The fiscal year GDP price deflator for the current year is divided by one hundred and multiplied by one half. The result, when added to one, yields the cumulative price deflator for the first year.

$$[1 + (FY_t/100)] \times \text{Cumulative Price Deflator}_{t-1} = \text{Cumulative Price Deflator}_t, \text{ when } t > 1$$

The fiscal year GDP price deflator for a future year is divided by one hundred and added to one. The result, when multiplied by the cumulative price deflator from the previous year, yields the cumulative price deflator for the each successive year.

To the extent deflators are used in developing the FY 2007-2009 spending levels they are based on the price deflators from the First Quarter 2005 GI forecast.

memorandum

DATE: May 27, 2005

REPLY TO
ATTN OF: KFW

SUBJECT: FY 2005.Q3 BPA Borrowing Rate and Inflation Projections

TO: See Attached

Updated BPA inflation and borrowing rate projections for FY 2005 through 2030 are attached. Incorporating these assumptions in: debt management, budgeting, and other financial analyses, as well as capital budgeting, and strategic planning efforts provides an internally consistent basis for BPA decisions. BPA's FY 2005.Q3 (FY 2005) projections differ significantly from its FY 2004.Q3 (FY 2004) forecast.

FY 2005.Q3 Forecast Borrowing Rate and Inflation Reports

The FY 2005 forecast of BPA borrowing rate and inflation projections are based on the Global Insight (GI) CY 2005 First Quarter Long-Term Economic Outlook. BPA borrowing rate assumptions are summarized in Tables 1-8. Tables 1-4 provide projections of BPA Treasury borrowing rates for selected of 30-year, 20-year, and 15-year terms. Tables 5-8 provide detailed forecasts of the entire BPA borrowing rate curve associated with four sources of funds. These include: (1) appropriations, (2) BPA Treasury borrowing, (3) Third-Party Muni taxable borrowing and (4) Third-Party Muni tax-exempt borrowing.

Table 1 illustrates the basis of BPA's Treasury borrowing rate. GI CY projections of 30-year T-Bond are shown in Column A. Fiscal year projections are shown in Column B. Column C reflects BPA's Treasury borrowing rate. This rate includes a mark-up over the Treasury yield curve that the Treasury Department assigns to BPA Federal borrowing. The markup reflects the government Agency spread over the Treasury yield curve, and an adder for call options in BPA Treasury borrowing. The mark-up ranges from 32 basis points (bp) over the 1-year T-note to 90 bp over the 30-year T-Bond. The estimated Treasury markup is an average value derived from the experience of past BPA Treasury borrowings and BPA Treasury analysts.

Table 2 compares FY 2005 BPA's Treasury borrowing rate for a 30-year term with the FY 2004 forecast. Tables 3 and 4 provide Treasury borrowing rate projections for 20 and 15-year terms. Table 5 provides a detailed forecast of BPA's borrowing rate curve for 1-year to 50-year terms. Table 6 summarizes the Appropriations borrowing rate curve. Third-party municipal taxable and tax-exempt borrowing rate curves are projected in Tables 7 and 8 respectively.

BPA inflation assumptions reflect projected changes in the U.S. Gross Domestic Product (GDP) Implicit Price Deflator. This index assumes a base year of 2000. BPA inflation assumptions are summarized in tables 9-10. The projected change in the GDP price deflator is summarized in Table 9. Column A shows the projected trend in the GDP inflation rate between 2004-2030 on a calendar year basis and in column B by fiscal year. Column C provides the cumulative price

index projections. The forecast expresses fiscal year dollar values as mid-year dollar values. Table 10 summarizes equivalent cumulative discount rates for alternative base years.

GDP reflects the value of goods and services produced by domestic and foreign capital and labor within the United States. Major components of GDP include: total consumption, investment, government purchases, and net exports. The government's method for calculating GDP changed in 1996. Instead of fixed weights the new measure of GDP is now based on a chain-weighted methodology. This means real GDP calculations now reflect both the changing mix of the components in GDP, and the relative price changes in these components.

BPA Borrowing Rate and Inflation Rate Forecasts

Although BPA's FY 2005 forecast begins in an environment of historically low interest rates, all BPA borrowing rates are projected to rise significantly. Most of the increase will occur over the next 6 years.

BPA borrowing rates reflect the underlying change in the U.S. Treasury yield curve. The short end of the yield curve is projected to experience the sharpest increase. The 2-year T-Note rate is projected to rise 183 bp from 3.31 percent in FY 2005 to 5.14 percent in 2009. The 10-year T-Bond is projected to increase 146 bp from 4.48 percent to 5.94 percent while the 30-year T-Bond is projected to increase 117 bp from 5.14 percent to 6.32 percent.

BPA borrowing rate forecasts maintain similar trajectories. The Appropriation borrowing rate is a direct reflection of the Treasury yield curve with the exception of 2005 which reflects rates established at the beginning of the fiscal year as required by law. Other BPA borrowing rates are also expected to increase in a manner similar to the Treasury yield curve. Over the next 6 years, BPA's 10-year borrowing rate from the U.S. Treasury is expected to rise from 5.04 percent in FY 2005 to 6.50 percent while the Muni taxable rate rises 171 bp from 5.46 percent to 7.17 percent. The Muni tax-exempt rate is expected to rise 122 bp from 3.96 percent to 5.18 percent.

Beyond 2011, there is little change in BPA borrowing rates. Rates remain relatively flat and reflect little volatility.

The evolution of borrowing rate forecasts have trended lower since FY 2002. FY 2004 borrowing rate projections were lowered significantly from the FY 2002 forecast. The FY 2005 forecasts reflects a further decline in borrowing rate expectations, albeit a more incremental adjustment. Over the next 14 years, FY 2005 rates generally approximate the FY 2004 borrowing rate forecast. However, beyond FY 2018 these forecasts begin to diverge. By 2030, the FY 2005 forecast trends more than 70 bp lower than the FY 2004 forecast.

Source of Change

Global Insight's 2005 economic outlook is incrementally more optimistic than the 2004 forecast. It does not reflect the modest inflationary bias in the 2004 forecast. It assumes slightly higher rates of labor productivity and economic growth. As a consequence, interest rates and inflation in the out-years of the forecast are lower and remain relatively unchanged.

The evolving direction of BPA borrowing rates has reflected Global Insight's outlook for the U.S. economy and inflationary risks. Over the past few forecast cycles, Global Insight has reflected moderation in the risk of accelerating inflation and dramatically higher interest rates. BPA's FY 2002 borrowing rate forecasts reflected the mid-point between divergent views of the economy, inflation, and the success of government fiscal and monetary policies. Data Resources Inc (DRI) believed that the Fed would be only partially successful in limiting the inflationary pressures of an expanding U.S. economy. They believed the needs of an older population would require significantly higher levels of government spending. Accommodating fiscal policies would allow inflationary pressures to push interest rates higher.

The WEFA Group was less pessimistic. WEFA believed that worker retention, an older more experienced workforce, and higher labor productivity would moderate inflationary pressures, as well as, the social costs associated with the health and retirement needs of an older society. They believed government policy makers would be successful in containing inflationary pressures.

DRI and WEFA merged in 2002 to become Global Insight. Given the credible basis for their respective views, BPA's FY 2002 borrowing rate and inflation projections reflected a mid-point forecast.

BPA's FY 2004 forecast reflected a more moderate inflationary environment. However, over the near-term a rebounding economy and modest increase in inflationary pressures were projected to push interest rates higher through 2010.

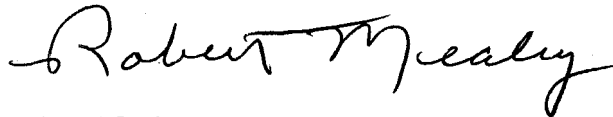
This trend is retained in Global Insight's CY 2005.Q1 long-term economic outlook. GI's FY 2005 forecast assumes:

- There are no internal imbalances associated with the economy's growth path. The U.S. economy grows at its potential rate. Economic growth will converge to its potential level. All resources are fully employed. As a consequence, the growth in real output, income, and real expenditures and general standard of living are determined by supply factors such as: (1) population, (2) demographics, (3) labor force participation rates, (4) average weekly work hours, (5) national savings rate, capital stock accumulation, and productivity growth.
- There are no inflationary labor force constraints. Although population growth slows, immigration and the retention of Baby Boomers support the necessary expansion in the labor force.
- Fed monetary policy is vigilant and successful in containing long-term inflationary pressures.
- Households will raise their savings rate significantly to supply the funds needed for investment and technological innovation. Over the long run, the FY 2005 forecast assumes that labor productivity will rise to offset inflationary pressures and interest rates will remain neutral.

- Although the Federal government continues to run large budget deficits, foreigner central banks and private interest will continue to hold dollars. However, the U.S. dollar continues to depreciate at an orderly pace.
- The U.S. economy avoids significant external shocks. New oil discoveries and the world supply of fossil fuels keep pace with the growing energy demands of rapidly emerging economies (i.e. China and India). New oil reserves limit the OPEC's market power.
- The U.S. economy avoids recession.

Global Insight has given their Trend (long-term equilibrium) forecast a 60 percent probability. The range of possible scenarios is bounded by GI's optimistic and pessimistic scenarios. Global Insight believes there is an only 10 percent probability alternative scenarios would fall outside this range.

If you have any questions concerning BPA borrowing rate and inflation forecasts, please contact me at (503) 230-5389. Also, please forward this to the appropriate people in your group. Your assistance in identifying addressees for future forecasts is appreciated.



Robert Mealey
Financial Economist

Attachment

cc:
See Front List
Official File – KFW (FI-21-12)

Table 1
30 YEAR TREASURY YIELDS
 FY 2005.Q3 FORECAST OF BPA TREASURY BORROWING RATES

Calendar/Fiscal Years 2005 - 2030

<u>YEAR</u>	(A) <u>BOND RATE 1/ Calendar Year</u>	(B) <u>BOND RATE Fiscal Year</u>	(C) <u>BPA RATE 2/ Fiscal Year</u>
2005	5.15	5.14	6.04
2006	5.56	5.46	6.36
2007	5.84	5.77	6.67
2008	6.15	6.08	6.98
2009	6.37	6.32	7.22
2010	6.71	6.62	7.52
2011	6.69	6.69	7.59
2012	6.66	6.67	7.57
2013	6.64	6.65	7.55
2014	6.64	6.64	7.54
2015	6.64	6.64	7.54
2016	6.65	6.65	7.55
2017	6.72	6.70	7.60
2018	6.78	6.76	7.66
2019	6.85	6.83	7.73
2020	6.87	6.87	7.77
2021	6.89	6.89	7.79
2022	6.88	6.89	7.79
2023	6.87	6.87	7.77
2024	6.89	6.88	7.78
2025	6.87	6.87	7.77
2026	6.84	6.85	7.75
2027	6.85	6.85	7.75
2028	6.83	6.84	7.74
2029	6.85	6.84	7.74
2030	6.86	6.86	7.76

1/ BPA Forecast May 2005, Global Insight CY 2005.Q1 long-term outlook.
 The U.S. Economy: 25-Year Focus, February 2005 Trend Forecast

2/ Column C = Column B + U.S. Treasury markup of 90 bp.

Table 2
30 YEAR TREASURY YIELDS
FY 2005.Q3 COMPARISON OF BPA BORROWING RATE FORECASTS

BPA Fiscal Years 2005 - 2030

<u>YEAR</u>	(A) FY 2005.Q3 FORECAST 1/ <u>BPA RATE</u>	(B) FY 2004.Q3 FORECAST 2/ <u>BPA RATE</u>	(C) DIFFERENCE (A-B)
2005	6.04	6.63	-0.59
2006	6.36	6.82	-0.46
2007	6.67	6.90	-0.24
2008	6.98	7.26	-0.29
2009	7.22	7.72	-0.51
2010	7.52	7.83	-0.31
2011	7.59	7.79	-0.19
2012	7.57	7.72	-0.15
2013	7.55	7.67	-0.12
2014	7.54	7.65	-0.11
2015	7.54	7.65	-0.11
2016	7.55	7.66	-0.11
2017	7.60	7.66	-0.05
2018	7.66	7.71	-0.04
2019	7.73	7.82	-0.09
2020	7.77	7.91	-0.14
2021	7.79	8.04	-0.25
2022	7.79	8.08	-0.29
2023	7.77	8.16	-0.39
2024	7.78	8.23	-0.44
2025	7.77	8.27	-0.49
2026	7.75	8.33	-0.58
2027	7.75	8.40	-0.65
2028	7.74	8.46	-0.72
2029	7.74	8.46	-0.72
2030	7.76	0	0

1/ BPA Forecast May 2005, Global Insight CY 2005.Q1 long-term outlook.
The U.S. Economy: 25-Year Focus, February 2005 Trend Forecast

2/ BPA Forecast June 2004, Global Insight CY 2004.Q2 long-term outlook.
The U.S. Economy: 25-Year Focus, Spring 2004 Core Forecast

Table 3
20 YEAR TREASURY YIELDS
FY 2005.Q3 FORECAST OF BPA TREASURY BORROWING RATES

BPA Fiscal Years 2005 - 2030

<u>YEAR</u>	(A) BOND RATE 1/ <u>Calendar Year</u>	(B) BOND RATE <u>Fiscal Year</u>	(C) BPA RATE <u>Fiscal Year</u>
2005	4.85	4.81	5.63
2006	5.31	5.19	6.01
2007	5.63	5.55	6.37
2008	5.97	5.88	6.70
2009	6.18	6.13	6.95
2010	6.55	6.46	7.28
2011	6.54	6.55	7.37
2012	6.53	6.53	7.35
2013	6.52	6.52	7.34
2014	6.52	6.52	7.34
2015	6.52	6.52	7.34
2016	6.52	6.52	7.34
2017	6.57	6.56	7.38
2018	6.59	6.59	7.41
2019	6.63	6.62	7.44
2020	6.64	6.64	7.46
2021	6.66	6.66	7.48
2022	6.65	6.65	7.47
2023	6.64	6.64	7.46
2024	6.66	6.66	7.48
2025	6.64	6.65	7.47
2026	6.61	6.62	7.44
2027	6.62	6.62	7.44
2028	6.61	6.61	7.43
2029	6.62	6.62	7.44
2030	6.64	6.63	7.45

1/ BPA Forecast May 2005, Global Insight CY 2005.Q1 long-term outlook.
The U.S. Economy: 25-Year Focus, February 2005 Trend Forecast

2/ Column C = Column B + U.S. Treasury markup of 82 bp.

Table 4
15 YEAR TREASURY YIELDS
FY 2005.Q3 FORECAST OF BPA TREASURY BORROWING RATES

BPA Fiscal Years 2005 - 2030

<u>YEAR</u>	(A) <u>BOND RATE 1/ Calendar Year</u>	(B) <u>BOND RATE Fiscal Year</u>	(C) <u>BPA RATE Fiscal Year</u>
2005	4.70	4.65	5.34
2006	5.18	5.06	5.75
2007	5.52	5.44	6.12
2008	5.87	5.79	6.47
2009	6.09	6.03	6.72
2010	6.48	6.38	7.07
2011	6.47	6.47	7.16
2012	6.47	6.47	7.16
2013	6.46	6.46	7.15
2014	6.46	6.46	7.15
2015	6.46	6.46	7.15
2016	6.46	6.46	7.15
2017	6.49	6.48	7.17
2018	6.50	6.50	7.18
2019	6.52	6.52	7.21
2020	6.53	6.53	7.22
2021	6.54	6.54	7.23
2022	6.54	6.54	7.23
2023	6.52	6.52	7.21
2024	6.55	6.54	7.23
2025	6.53	6.53	7.22
2026	6.49	6.50	7.19
2027	6.51	6.51	7.20
2028	6.49	6.50	7.18
2029	6.51	6.50	7.19
2030	6.52	6.52	7.21

1/ BPA Forecast May 2005, Global Insight CY 2005.Q1 long-term outlook.
The U.S. Economy: 25-Year Focus, February 2005 Trend Forecast

2/ Column C = Column B + U.S. Treasury markup of 69 bp.

Table 5
FY 2005.Q3 BPA TREASURY BORROWING RATE YIELD CURVE FORECAST 1/

BPA Fiscal Years 2005 - 2030

TERM OF DEBT ISSUED

Year	1 Year	2 Year	3 Year	4 Year	5 Year	6 Year	7 Year	8 Year	9 Year	10 Year	11 Year	12 Year	13 Year	14 Year	15 Year	16 Year
2005	3.32	3.66	3.89	4.12	4.35	4.49	4.63	4.77	4.90	5.04	5.10	5.16	5.22	5.28	5.34	5.40
2006	3.99	4.33	4.53	4.72	4.92	5.03	5.15	5.26	5.38	5.49	5.54	5.60	5.65	5.70	5.75	5.81
2007	4.34	4.74	4.94	5.13	5.33	5.44	5.55	5.66	5.77	5.88	5.93	5.98	6.03	6.08	6.12	6.17
2008	4.74	5.16	5.35	5.54	5.73	5.83	5.94	6.04	6.14	6.25	6.29	6.34	6.38	6.43	6.47	6.52
2009	5.06	5.48	5.66	5.84	6.01	6.11	6.21	6.30	6.40	6.50	6.54	6.59	6.63	6.68	6.72	6.77
2010	5.50	5.90	6.07	6.24	6.40	6.49	6.58	6.67	6.76	6.86	6.90	6.94	6.98	7.03	7.07	7.11
2011	5.61	6.00	6.17	6.34	6.50	6.60	6.69	6.78	6.87	6.96	7.00	7.04	7.08	7.12	7.16	7.20
2012	5.61	5.99	6.16	6.33	6.50	6.59	6.69	6.78	6.87	6.96	7.00	7.04	7.08	7.12	7.16	7.20
2013	5.63	6.01	6.17	6.34	6.51	6.60	6.69	6.78	6.87	6.96	7.00	7.03	7.07	7.11	7.15	7.19
2014	5.65	6.02	6.19	6.35	6.52	6.60	6.69	6.78	6.87	6.96	7.00	7.03	7.07	7.11	7.15	7.19
2015	5.66	6.03	6.20	6.36	6.52	6.61	6.69	6.78	6.87	6.96	7.00	7.03	7.07	7.11	7.15	7.19
2016	5.63	5.99	6.16	6.33	6.50	6.59	6.68	6.77	6.86	6.95	6.99	7.03	7.07	7.11	7.15	7.19
2017	5.59	5.94	6.13	6.31	6.49	6.59	6.68	6.78	6.87	6.97	7.01	7.05	7.09	7.13	7.17	7.21
2018	5.57	5.93	6.11	6.30	6.48	6.58	6.67	6.77	6.87	6.96	7.01	7.05	7.10	7.14	7.18	7.23
2019	5.59	5.94	6.13	6.31	6.49	6.59	6.68	6.78	6.87	6.97	7.02	7.06	7.11	7.16	7.21	7.25
2020	5.63	6.00	6.17	6.34	6.51	6.60	6.70	6.79	6.88	6.97	7.02	7.07	7.12	7.17	7.22	7.26
2021	5.65	6.02	6.19	6.36	6.53	6.62	6.71	6.80	6.89	6.98	7.03	7.08	7.13	7.18	7.23	7.28
2022	5.65	6.03	6.20	6.36	6.53	6.62	6.71	6.80	6.89	6.98	7.03	7.08	7.13	7.18	7.23	7.28
2023	5.65	6.03	6.19	6.35	6.52	6.61	6.70	6.79	6.88	6.97	7.01	7.06	7.11	7.16	7.21	7.26
2024	5.65	6.03	6.20	6.36	6.53	6.62	6.71	6.80	6.89	6.98	7.03	7.08	7.13	7.18	7.23	7.28
2025	5.65	6.03	6.19	6.36	6.53	6.61	6.70	6.79	6.88	6.97	7.02	7.07	7.12	7.17	7.22	7.27
2026	5.65	6.02	6.18	6.34	6.50	6.59	6.68	6.77	6.86	6.94	6.99	7.04	7.09	7.14	7.19	7.24
2027	5.65	6.02	6.19	6.35	6.51	6.60	6.68	6.77	6.86	6.95	7.00	7.05	7.10	7.15	7.20	7.24
2028	5.65	6.02	6.18	6.34	6.50	6.59	6.68	6.76	6.85	6.94	6.99	7.04	7.09	7.14	7.18	7.23
2029	5.65	6.02	6.18	6.34	6.50	6.59	6.68	6.77	6.86	6.95	7.00	7.04	7.09	7.14	7.19	7.24
2030	5.66	6.03	6.19	6.36	6.52	6.61	6.70	6.79	6.88	6.97	7.01	7.06	7.11	7.16	7.21	7.26

1/ Global Insight CY 2005.Q1 long-term outlook. The U.S. Economy: 25-Year Focus, February 2005 Trend Forecast.

Table 5 (Cont.)
FY 2005.Q3 BPA TREASURY BORROWING RATE YIELD CURVE FORECAST 1/

Fiscal Years 2005 - 2030

TERM OF DEBT ISSUED

<u>17 Year</u>	<u>18 Year</u>	<u>19 Year</u>	<u>20 Year</u>	<u>21 Year</u>	<u>22 Year</u>	<u>23 Year</u>	<u>24 Year</u>	<u>25 Year</u>	<u>26 Year</u>	<u>27 Year</u>	<u>28 Year</u>	<u>29 Year</u>	<u>30 Year</u>	<u>50 Year</u>	<u>Year</u>
5.46	5.51	5.57	5.63	5.67	5.71	5.76	5.80	5.84	5.88	5.92	5.96	6.00	6.04	6.04	2005
5.86	5.91	5.96	6.01	6.05	6.08	6.12	6.15	6.18	6.22	6.25	6.29	6.32	6.36	6.36	2006
6.22	6.27	6.32	6.37	6.40	6.43	6.46	6.49	6.52	6.55	6.58	6.61	6.64	6.67	6.67	2007
6.57	6.61	6.66	6.70	6.73	6.76	6.78	6.81	6.84	6.87	6.89	6.92	6.95	6.98	6.98	2008
6.81	6.86	6.90	6.95	6.97	7.00	7.03	7.06	7.08	7.11	7.14	7.16	7.19	7.22	7.22	2009
7.15	7.20	7.24	7.28	7.31	7.33	7.35	7.38	7.40	7.43	7.45	7.48	7.50	7.52	7.52	2010
7.24	7.29	7.33	7.37	7.39	7.41	7.44	7.46	7.48	7.50	7.53	7.55	7.57	7.59	7.59	2011
7.24	7.28	7.31	7.35	7.38	7.40	7.42	7.44	7.46	7.48	7.50	7.53	7.55	7.57	7.57	2012
7.23	7.27	7.31	7.34	7.37	7.39	7.41	7.43	7.45	7.47	7.49	7.51	7.53	7.55	7.55	2013
7.23	7.26	7.30	7.34	7.36	7.38	7.40	7.42	7.44	7.46	7.48	7.50	7.52	7.54	7.54	2014
7.22	7.26	7.30	7.34	7.36	7.38	7.40	7.42	7.44	7.46	7.48	7.50	7.52	7.54	7.54	2015
7.22	7.26	7.30	7.34	7.36	7.38	7.40	7.42	7.44	7.46	7.48	7.51	7.53	7.55	7.55	2016
7.25	7.29	7.34	7.38	7.40	7.42	7.44	7.47	7.49	7.51	7.54	7.56	7.58	7.60	7.60	2017
7.27	7.32	7.36	7.41	7.43	7.46	7.48	7.51	7.53	7.56	7.59	7.61	7.64	7.66	7.66	2018
7.30	7.35	7.40	7.44	7.47	7.50	7.53	7.56	7.59	7.62	7.65	7.68	7.70	7.73	7.73	2019
7.31	7.36	7.41	7.46	7.49	7.52	7.55	7.58	7.61	7.64	7.68	7.71	7.74	7.77	7.77	2020
7.33	7.38	7.43	7.48	7.51	7.54	7.57	7.60	7.63	7.66	7.69	7.72	7.76	7.79	7.79	2021
7.33	7.37	7.42	7.47	7.50	7.54	7.57	7.60	7.63	7.66	7.69	7.72	7.75	7.79	7.79	2022
7.31	7.36	7.41	7.46	7.49	7.52	7.55	7.58	7.62	7.65	7.68	7.71	7.74	7.77	7.77	2023
7.33	7.38	7.43	7.48	7.51	7.54	7.57	7.60	7.63	7.66	7.69	7.72	7.75	7.78	7.78	2024
7.32	7.37	7.42	7.47	7.50	7.53	7.56	7.59	7.62	7.65	7.68	7.71	7.74	7.77	7.77	2025
7.29	7.34	7.39	7.44	7.47	7.50	7.53	7.56	7.59	7.62	7.65	7.69	7.72	7.75	7.75	2026
7.29	7.34	7.39	7.44	7.47	7.50	7.53	7.56	7.60	7.63	7.66	7.69	7.72	7.75	7.75	2027
7.28	7.33	7.38	7.43	7.46	7.49	7.52	7.55	7.58	7.62	7.65	7.68	7.71	7.74	7.74	2028
7.29	7.34	7.39	7.44	7.47	7.50	7.53	7.56	7.59	7.62	7.65	7.68	7.71	7.74	7.74	2029
7.31	7.35	7.40	7.45	7.48	7.51	7.54	7.57	7.60	7.63	7.67	7.70	7.73	7.76	7.76	2030

Table 6
2005.Q3 BPA APPROPRIATIONS/TREASURY YIELD CURVE FORECAST 1/

BPA Fiscal Years 2005 - 2030

Year	<u>TERM OF DEBT ISSUED</u>															
	<u>1 Year</u>	<u>2 Year</u>	<u>3 Year</u>	<u>4 Year</u>	<u>5 Year</u>	<u>6 Year</u>	<u>7 Year</u>	<u>8 Year</u>	<u>9 Year</u>	<u>10 Year</u>	<u>11 Year</u>	<u>12 Year</u>	<u>13 Year</u>	<u>14 Year</u>	<u>15 Year</u>	<u>16 Year</u>
2005 2/	2.13	2.50	2.88	3.13	3.38	3.63	3.88	4.00	4.13	4.25	4.38	4.38	4.50	4.63	4.75	4.75
2006	3.67	3.98	4.15	4.32	4.49	4.58	4.67	4.76	4.85	4.93	4.96	4.99	5.01	5.04	5.06	5.09
2007	4.02	4.39	4.56	4.73	4.91	4.99	5.07	5.16	5.24	5.32	5.35	5.37	5.39	5.41	5.44	5.46
2008	4.42	4.82	4.98	5.14	5.30	5.38	5.46	5.53	5.61	5.69	5.71	5.73	5.75	5.77	5.79	5.80
2009	4.74	5.14	5.29	5.44	5.59	5.66	5.73	5.80	5.87	5.94	5.96	5.98	6.00	6.01	6.03	6.05
2010	5.18	5.55	5.69	5.84	5.98	6.04	6.10	6.17	6.23	6.30	6.31	6.33	6.35	6.36	6.38	6.40
2011	5.28	5.65	5.79	5.94	6.08	6.14	6.21	6.27	6.34	6.40	6.41	6.43	6.44	6.46	6.47	6.49
2012	5.29	5.65	5.79	5.93	6.08	6.14	6.21	6.27	6.34	6.40	6.41	6.43	6.44	6.45	6.47	6.48
2013	5.30	5.66	5.80	5.94	6.08	6.15	6.21	6.27	6.34	6.40	6.41	6.42	6.44	6.45	6.46	6.47
2014	5.33	5.68	5.81	5.95	6.09	6.15	6.21	6.28	6.34	6.40	6.41	6.42	6.44	6.45	6.46	6.47
2015	5.34	5.69	5.82	5.96	6.09	6.15	6.22	6.28	6.34	6.40	6.41	6.42	6.44	6.45	6.46	6.47
2016	5.31	5.65	5.79	5.93	6.08	6.14	6.20	6.27	6.33	6.40	6.41	6.42	6.44	6.45	6.46	6.47
2017	5.26	5.60	5.75	5.91	6.07	6.13	6.20	6.27	6.34	6.41	6.42	6.44	6.45	6.47	6.48	6.50
2018	5.25	5.58	5.74	5.90	6.06	6.13	6.20	6.27	6.34	6.41	6.42	6.44	6.46	6.48	6.50	6.51
2019	5.26	5.59	5.75	5.91	6.07	6.13	6.20	6.27	6.34	6.41	6.43	6.45	6.48	6.50	6.52	6.54
2020	5.31	5.65	5.79	5.94	6.09	6.15	6.22	6.28	6.35	6.41	6.44	6.46	6.48	6.50	6.53	6.55
2021	5.33	5.68	5.82	5.96	6.10	6.17	6.23	6.30	6.36	6.42	6.45	6.47	6.49	6.52	6.54	6.56
2022	5.33	5.68	5.82	5.96	6.10	6.17	6.23	6.29	6.36	6.42	6.45	6.47	6.49	6.51	6.54	6.56
2023	5.33	5.68	5.82	5.95	6.09	6.16	6.22	6.28	6.34	6.41	6.43	6.45	6.48	6.50	6.52	6.55
2024	5.33	5.68	5.82	5.96	6.11	6.17	6.23	6.30	6.36	6.43	6.45	6.47	6.49	6.52	6.54	6.56
2025	5.33	5.68	5.82	5.96	6.10	6.16	6.23	6.29	6.35	6.42	6.44	6.46	6.49	6.51	6.53	6.55
2026	5.33	5.67	5.81	5.94	6.08	6.14	6.20	6.26	6.32	6.39	6.41	6.43	6.46	6.48	6.50	6.52
2027	5.33	5.68	5.81	5.95	6.08	6.14	6.21	6.27	6.33	6.39	6.42	6.44	6.46	6.48	6.51	6.53
2028	5.33	5.68	5.81	5.94	6.07	6.13	6.20	6.26	6.32	6.38	6.40	6.43	6.45	6.47	6.50	6.52
2029	5.33	5.68	5.81	5.94	6.08	6.14	6.20	6.26	6.33	6.39	6.41	6.43	6.46	6.48	6.50	6.52
2030	5.33	5.68	5.82	5.96	6.09	6.16	6.22	6.28	6.34	6.41	6.43	6.45	6.48	6.50	6.52	6.54

1/ Global Insight CY 2005.Q1 long-term outlook. The U.S. Economy: 25-Year Focus, February 2005 Trend Forecast. (With Exception of FY 2005)

2/ FY 2005 Appropriation rates are determined in accordance with BPA Appropriations Refinancing Act, 16 U.S.C. 838l, enacted on April 26, 1996, and are independent of the Global Insight forecast of U.S. Treasury yields.

Table 6 (Cont.)

2005.Q3 BPA APPROPRIATIONS/TREASURY YIELD CURVE FORECAST 1/

BPA Fiscal Years 2005 - 2030

TERM OF DEBT ISSUED

<u>17 Year</u>	<u>18 Year</u>	<u>19 Year</u>	<u>20 Year</u>	<u>21 Year</u>	<u>22 Year</u>	<u>23 Year</u>	<u>24 Year</u>	<u>25 Year</u>	<u>26 Year</u>	<u>27 Year</u>	<u>28 Year</u>	<u>29 Year</u>	<u>30 Year</u>	<u>50 Year</u>	<u>Year</u>
4.88	5.00	5.00	5.00	5.00	5.13	5.13	5.13	5.13	5.13	5.13	5.13	5.13	5.13	5.13	2005 2/
5.12	5.14	5.17	5.19	5.22	5.25	5.27	5.30	5.32	5.35	5.38	5.40	5.43	5.46	5.46	2006
5.48	5.50	5.52	5.55	5.57	5.59	5.61	5.64	5.66	5.68	5.70	5.72	5.75	5.77	5.77	2007
5.82	5.84	5.86	5.88	5.90	5.92	5.94	5.96	5.98	6.00	6.02	6.04	6.06	6.08	6.08	2008
6.07	6.09	6.11	6.13	6.15	6.17	6.18	6.20	6.22	6.24	6.26	6.28	6.30	6.32	6.32	2009
6.41	6.43	6.45	6.46	6.48	6.49	6.51	6.53	6.54	6.56	6.58	6.59	6.61	6.62	6.62	2010
6.50	6.52	6.53	6.55	6.56	6.58	6.59	6.61	6.62	6.64	6.65	6.66	6.68	6.69	6.69	2011
6.49	6.51	6.52	6.53	6.55	6.56	6.58	6.59	6.60	6.62	6.63	6.64	6.66	6.67	6.67	2012
6.49	6.50	6.51	6.52	6.54	6.55	6.56	6.57	6.59	6.60	6.61	6.62	6.64	6.65	6.65	2013
6.48	6.50	6.51	6.52	6.53	6.54	6.56	6.57	6.58	6.59	6.60	6.62	6.63	6.64	6.64	2014
6.48	6.49	6.51	6.52	6.53	6.54	6.55	6.57	6.58	6.59	6.60	6.61	6.62	6.63	6.64	2015
6.48	6.50	6.51	6.52	6.53	6.55	6.56	6.57	6.58	6.60	6.61	6.62	6.63	6.65	6.65	2016
6.51	6.53	6.54	6.56	6.57	6.59	6.60	6.62	6.63	6.64	6.66	6.67	6.69	6.70	6.70	2017
6.53	6.55	6.57	6.59	6.60	6.62	6.64	6.66	6.67	6.69	6.71	6.73	6.75	6.76	6.76	2018
6.56	6.58	6.60	6.62	6.64	6.66	6.69	6.71	6.73	6.75	6.77	6.79	6.81	6.83	6.83	2019
6.57	6.60	6.62	6.64	6.66	6.69	6.71	6.73	6.75	6.78	6.80	6.82	6.84	6.87	6.87	2020
6.59	6.61	6.63	6.66	6.68	6.70	6.72	6.75	6.77	6.79	6.82	6.84	6.86	6.89	6.89	2021
6.58	6.61	6.63	6.65	6.68	6.70	6.72	6.75	6.77	6.79	6.82	6.84	6.86	6.89	6.89	2022
6.57	6.59	6.62	6.64	6.66	6.69	6.71	6.73	6.76	6.78	6.80	6.83	6.85	6.87	6.87	2023
6.59	6.61	6.63	6.66	6.68	6.70	6.72	6.75	6.77	6.79	6.82	6.84	6.86	6.88	6.88	2024
6.58	6.60	6.62	6.65	6.67	6.69	6.71	6.74	6.76	6.78	6.81	6.83	6.85	6.87	6.87	2025
6.55	6.57	6.59	6.62	6.64	6.66	6.69	6.71	6.73	6.76	6.78	6.80	6.82	6.85	6.85	2026
6.55	6.58	6.60	6.62	6.64	6.67	6.69	6.71	6.74	6.76	6.78	6.80	6.82	6.85	6.85	2027
6.54	6.56	6.59	6.61	6.63	6.66	6.68	6.70	6.72	6.75	6.77	6.79	6.82	6.84	6.84	2028
6.55	6.57	6.59	6.62	6.64	6.66	6.68	6.71	6.73	6.75	6.77	6.80	6.82	6.84	6.84	2029
6.57	6.59	6.61	6.63	6.65	6.68	6.70	6.72	6.74	6.77	6.79	6.81	6.83	6.86	6.86	2030

Table 7
FY 2005.Q3 MUNICIPAL TAXABLE ALL-IN RATE CURVE FORECAST 1/

BPA Fiscal Years 2005 - 2030

TERM OF DEBT ISSUED

Year	<u>1 Year</u>	<u>2 Year</u>	<u>3 Year</u>	<u>4 Year</u>	<u>5 Year</u>	<u>6 Year</u>	<u>7 Year</u>	<u>8 Year</u>	<u>9 Year</u>	<u>10 Year</u>	<u>11 Year</u>	<u>12 Year</u>	<u>13 Year</u>	<u>14 Year</u>	<u>15 Year</u>	<u>16 Year</u>
2005	3.24	3.86	4.14	4.41	4.69	4.85	5.00	5.15	5.31	5.46	5.51	5.55	5.59	5.64	5.68	5.72
2006	3.91	4.60	4.85	5.09	5.34	5.47	5.60	5.73	5.86	5.99	6.03	6.06	6.10	6.13	6.17	6.21
2007	4.27	5.05	5.31	5.56	5.81	5.94	6.07	6.19	6.32	6.45	6.48	6.51	6.54	6.58	6.61	6.64
2008	4.67	5.52	5.77	6.02	6.27	6.39	6.51	6.63	6.75	6.88	6.90	6.93	6.96	6.99	7.02	7.05
2009	5.00	5.88	6.12	6.35	6.59	6.71	6.82	6.94	7.06	7.17	7.20	7.23	7.26	7.28	7.31	7.34
2010	5.44	6.34	6.57	6.80	7.04	7.15	7.26	7.37	7.48	7.59	7.62	7.64	7.67	7.69	7.72	7.74
2011	5.55	6.45	6.68	6.92	7.15	7.27	7.38	7.49	7.60	7.71	7.74	7.76	7.78	7.81	7.83	7.85
2012	5.55	6.44	6.68	6.92	7.15	7.27	7.38	7.49	7.60	7.71	7.73	7.76	7.78	7.80	7.82	7.84
2013	5.57	6.46	6.69	6.93	7.16	7.27	7.38	7.49	7.60	7.71	7.73	7.75	7.77	7.80	7.82	7.84
2014	5.59	6.48	6.71	6.94	7.17	7.28	7.38	7.49	7.60	7.71	7.73	7.75	7.77	7.79	7.81	7.83
2015	5.61	6.49	6.72	6.94	7.17	7.28	7.39	7.50	7.60	7.71	7.73	7.75	7.77	7.79	7.81	7.83
2016	5.57	6.44	6.68	6.92	7.15	7.26	7.37	7.48	7.60	7.71	7.73	7.75	7.77	7.79	7.81	7.83
2017	5.53	6.39	6.64	6.89	7.14	7.26	7.37	7.49	7.61	7.72	7.75	7.77	7.79	7.82	7.84	7.86
2018	5.52	6.37	6.62	6.87	7.13	7.25	7.36	7.48	7.60	7.72	7.75	7.77	7.80	7.83	7.86	7.88
2019	5.53	6.39	6.64	6.89	7.14	7.26	7.37	7.49	7.61	7.73	7.76	7.79	7.82	7.85	7.88	7.91
2020	5.57	6.44	6.68	6.92	7.16	7.28	7.39	7.50	7.61	7.73	7.76	7.79	7.83	7.86	7.89	7.93
2021	5.59	6.48	6.71	6.95	7.18	7.30	7.41	7.52	7.63	7.74	7.77	7.81	7.84	7.88	7.91	7.94
2022	5.60	6.48	6.72	6.95	7.18	7.29	7.41	7.52	7.63	7.74	7.77	7.81	7.84	7.87	7.91	7.94
2023	5.60	6.48	6.71	6.94	7.17	7.28	7.39	7.50	7.61	7.72	7.75	7.79	7.82	7.86	7.89	7.92
2024	5.60	6.48	6.72	6.95	7.19	7.30	7.41	7.52	7.63	7.74	7.78	7.81	7.84	7.88	7.91	7.94
2025	5.60	6.48	6.71	6.95	7.18	7.29	7.40	7.51	7.62	7.73	7.76	7.80	7.83	7.86	7.90	7.93
2026	5.60	6.47	6.70	6.93	7.15	7.26	7.37	7.48	7.59	7.70	7.73	7.76	7.80	7.83	7.86	7.90
2027	5.60	6.48	6.70	6.93	7.16	7.27	7.38	7.48	7.59	7.70	7.74	7.77	7.80	7.84	7.87	7.90
2028	5.60	6.47	6.70	6.92	7.15	7.26	7.37	7.47	7.58	7.69	7.72	7.76	7.79	7.82	7.86	7.89
2029	5.60	6.48	6.70	6.93	7.15	7.26	7.37	7.48	7.59	7.70	7.73	7.76	7.80	7.83	7.86	7.90
2030	5.60	6.48	6.71	6.94	7.17	7.28	7.39	7.50	7.61	7.72	7.75	7.79	7.82	7.85	7.89	7.92

1/ Global Insight CY 2005.Q1 long-term outlook. The U.S. Economy: 25-Year Focus, February 2005 Trend Forecast.

Table 7 (Cont.)
FY 2005.Q3 MUNICIPAL TAXABLE ALL-IN RATE CURVE FORECAST 1/

BPA Fiscal Years 2005 - 2030

TERM OF DEBT ISSUED

<u>17 Year</u>	<u>18 Year</u>	<u>19 Year</u>	<u>20 Year</u>	<u>21 Year</u>	<u>22 Year</u>	<u>23 Year</u>	<u>24 Year</u>	<u>25 Year</u>	<u>26 Year</u>	<u>27 Year</u>	<u>28 Year</u>	<u>29 Year</u>	<u>30 Year</u>	<u>50 Year</u>	<u>Year</u>
5.77	5.81	5.85	5.90	5.94	5.98	6.03	6.07	6.11	6.16	6.20	6.24	6.29	6.33	6.33	2005
6.24	6.28	6.31	6.35	6.38	6.42	6.46	6.49	6.53	6.56	6.60	6.63	6.67	6.71	6.71	2006
6.67	6.70	6.73	6.76	6.80	6.83	6.86	6.89	6.92	6.95	6.99	7.02	7.05	7.08	7.08	2007
7.08	7.10	7.13	7.16	7.19	7.22	7.25	7.27	7.30	7.33	7.36	7.39	7.42	7.45	7.45	2008
7.37	7.40	7.42	7.45	7.48	7.51	7.54	7.56	7.59	7.62	7.65	7.68	7.70	7.73	7.73	2009
7.77	7.80	7.82	7.85	7.87	7.90	7.92	7.95	7.97	8.00	8.02	8.05	8.07	8.10	8.10	2010
7.88	7.90	7.92	7.95	7.97	7.99	8.02	8.04	8.07	8.09	8.11	8.14	8.16	8.18	8.18	2011
7.87	7.89	7.91	7.93	7.95	7.98	8.00	8.02	8.04	8.07	8.09	8.11	8.13	8.15	8.15	2012
7.86	7.88	7.90	7.92	7.94	7.96	7.98	8.00	8.02	8.05	8.07	8.09	8.11	8.13	8.13	2013
7.85	7.87	7.89	7.91	7.94	7.96	7.98	8.00	8.02	8.04	8.06	8.08	8.10	8.12	8.12	2014
7.85	7.87	7.90	7.92	7.94	7.96	7.98	8.00	8.01	8.03	8.05	8.07	8.09	8.11	8.11	2015
7.89	7.91	7.93	7.96	7.98	8.01	8.03	8.05	8.08	8.10	8.12	8.15	8.17	8.19	8.19	2016
7.91	7.94	7.97	7.99	8.02	8.05	8.07	8.10	8.13	8.16	8.18	8.21	8.24	8.27	8.27	2017
7.94	7.97	8.01	8.04	8.07	8.10	8.13	8.16	8.19	8.22	8.26	8.29	8.32	8.35	8.35	2018
7.96	7.99	8.03	8.06	8.09	8.12	8.16	8.19	8.22	8.26	8.29	8.32	8.36	8.39	8.39	2019
7.98	8.01	8.04	8.08	8.11	8.14	8.18	8.21	8.24	8.28	8.31	8.35	8.38	8.41	8.41	2020
7.97	8.01	8.04	8.07	8.11	8.14	8.18	8.21	8.24	8.28	8.31	8.35	8.38	8.41	8.41	2021
7.96	7.99	8.02	8.06	8.09	8.13	8.16	8.19	8.23	8.26	8.29	8.33	8.36	8.39	8.39	2022
7.98	8.01	8.04	8.08	8.11	8.14	8.18	8.21	8.24	8.28	8.31	8.34	8.38	8.41	8.41	2023
7.96	8.00	8.03	8.06	8.10	8.13	8.16	8.20	8.23	8.26	8.30	8.33	8.36	8.40	8.40	2024
7.93	7.96	8.00	8.03	8.06	8.10	8.13	8.16	8.20	8.23	8.27	8.30	8.33	8.37	8.37	2025
7.94	7.97	8.00	8.04	8.07	8.10	8.14	8.17	8.20	8.24	8.27	8.30	8.34	8.37	8.37	2026
7.92	7.96	7.99	8.02	8.06	8.09	8.12	8.16	8.19	8.22	8.26	8.29	8.32	8.36	8.36	2027
7.93	7.96	8.00	8.03	8.06	8.10	8.13	8.16	8.19	8.22	8.26	8.29	8.33	8.36	8.36	2028
7.95	7.98	8.02	8.05	8.08	8.11	8.15	8.18	8.21	8.25	8.28	8.31	8.34	8.38	8.38	2029
															2030

Table 8
2005.Q3 MUNICIPAL TAX-EXEMPT ALL-IN RATE CURVE FORECAST 1/

BPA Fiscal Years 2005 - 2030

TERM OF DEBT ISSUED

Year	<u>1 Year</u>	<u>2 Year</u>	<u>3 Year</u>	<u>4 Year</u>	<u>5 Year</u>	<u>6 Year</u>	<u>7 Year</u>	<u>8 Year</u>	<u>9 Year</u>	<u>10 Year</u>	<u>11 Year</u>	<u>12 Year</u>	<u>13 Year</u>	<u>14 Year</u>	<u>15 Year</u>	<u>16 Year</u>
2005	2.17	2.62	2.83	3.04	3.25	3.39	3.53	3.67	3.82	3.96	4.00	4.05	4.10	4.14	4.19	4.23
2006	2.61	3.12	3.31	3.50	3.69	3.82	3.95	4.08	4.21	4.34	4.38	4.42	4.46	4.50	4.54	4.58
2007	2.84	3.41	3.61	3.81	4.01	4.14	4.27	4.40	4.53	4.66	4.70	4.74	4.78	4.82	4.86	4.90
2008	3.10	3.73	3.92	4.12	4.31	4.45	4.58	4.71	4.84	4.97	5.01	5.04	5.08	5.12	5.16	5.20
2009	3.32	3.96	4.15	4.34	4.53	4.66	4.79	4.92	5.05	5.18	5.22	5.26	5.29	5.33	5.37	5.41
2010	3.60	4.27	4.46	4.65	4.84	4.97	5.09	5.22	5.35	5.48	5.52	5.55	5.59	5.63	5.67	5.70
2011	3.67	4.34	4.53	4.72	4.92	5.05	5.18	5.31	5.44	5.56	5.60	5.64	5.67	5.71	5.75	5.78
2012	3.67	4.33	4.53	4.72	4.92	5.05	5.18	5.31	5.44	5.56	5.60	5.64	5.67	5.71	5.74	5.78
2013	3.69	4.34	4.54	4.73	4.92	5.05	5.18	5.31	5.44	5.56	5.60	5.63	5.67	5.70	5.74	5.77
2014	3.70	4.36	4.55	4.74	4.93	5.05	5.18	5.31	5.44	5.56	5.60	5.63	5.67	5.70	5.73	5.77
2015	3.71	4.36	4.55	4.74	4.93	5.06	5.18	5.31	5.44	5.56	5.60	5.63	5.67	5.70	5.73	5.77
2016	3.69	4.33	4.53	4.72	4.92	5.04	5.17	5.30	5.43	5.56	5.60	5.63	5.66	5.70	5.73	5.77
2017	3.66	4.30	4.50	4.70	4.91	5.04	5.17	5.31	5.44	5.57	5.61	5.65	5.68	5.72	5.75	5.79
2018	3.65	4.28	4.49	4.69	4.90	5.03	5.17	5.30	5.44	5.57	5.61	5.65	5.69	5.73	5.77	5.81
2019	3.66	4.30	4.50	4.70	4.91	5.04	5.17	5.31	5.44	5.57	5.62	5.66	5.70	5.74	5.79	5.83
2020	3.69	4.33	4.53	4.73	4.92	5.05	5.18	5.31	5.45	5.58	5.62	5.66	5.71	5.75	5.79	5.84
2021	3.70	4.36	4.55	4.74	4.94	5.07	5.20	5.33	5.46	5.59	5.63	5.67	5.72	5.76	5.81	5.85
2022	3.70	4.36	4.55	4.74	4.94	5.07	5.20	5.32	5.45	5.58	5.63	5.67	5.72	5.76	5.80	5.85
2023	3.70	4.36	4.55	4.74	4.93	5.06	5.19	5.31	5.44	5.57	5.62	5.66	5.70	5.75	5.79	5.84
2024	3.70	4.36	4.55	4.75	4.94	5.07	5.20	5.33	5.46	5.59	5.63	5.67	5.72	5.76	5.81	5.85
2025	3.70	4.36	4.55	4.74	4.93	5.06	5.19	5.32	5.45	5.58	5.62	5.67	5.71	5.75	5.80	5.84
2026	3.70	4.35	4.54	4.73	4.92	5.04	5.17	5.30	5.43	5.55	5.60	5.64	5.68	5.73	5.77	5.82
2027	3.71	4.36	4.54	4.73	4.92	5.05	5.17	5.30	5.43	5.56	5.60	5.65	5.69	5.73	5.78	5.82
2028	3.71	4.35	4.54	4.73	4.91	5.04	5.17	5.29	5.42	5.55	5.59	5.64	5.68	5.72	5.77	5.81
2029	3.71	4.36	4.54	4.73	4.92	5.04	5.17	5.30	5.43	5.56	5.60	5.64	5.69	5.73	5.77	5.82
2030	3.71	4.36	4.55	4.74	4.93	5.06	5.19	5.31	5.44	5.57	5.61	5.66	5.70	5.75	5.79	5.83

1/ Global Insight CY 2005.Q1 long-term outlook. The U.S. Economy: 25-Year Focus, February 2005 Trend Forecast.

Table 8 (Cont.)
2005.Q3 MUNICIPAL TAX-EXEMPT ALL-IN RATE CURVE FORECAST 1/

BPA Fiscal Years 2005 - 2030

TERM OF DEBT ISSUED

<u>17 Year</u>	<u>18 Year</u>	<u>19 Year</u>	<u>20 Year</u>	<u>21 Year</u>	<u>22 Year</u>	<u>23 Year</u>	<u>24 Year</u>	<u>25 Year</u>	<u>26 Year</u>	<u>27 Year</u>	<u>28 Year</u>	<u>29 Year</u>	<u>30 Year</u>	<u>50 Year</u>	<u>Year</u>
4.28	4.33	4.37	4.42	4.46	4.51	4.56	4.60	4.65	4.69	4.74	4.79	4.83	4.88	4.88	2005
4.63	4.67	4.71	4.75	4.79	4.83	4.87	4.92	4.96	5.00	5.04	5.08	5.12	5.16	5.16	2006
4.94	4.98	5.02	5.06	5.10	5.14	5.17	5.21	5.25	5.29	5.33	5.37	5.41	5.45	5.45	2007
5.23	5.27	5.31	5.35	5.39	5.42	5.46	5.50	5.54	5.58	5.61	5.65	5.69	5.73	5.73	2008
5.45	5.49	5.52	5.56	5.60	5.64	5.68	5.72	5.76	5.79	5.83	5.87	5.91	5.95	5.95	2009
5.74	5.78	5.82	5.85	5.89	5.93	5.97	6.00	6.04	6.08	6.12	6.15	6.19	6.23	6.23	2010
5.82	5.86	5.89	5.93	5.96	6.00	6.04	6.07	6.11	6.15	6.18	6.22	6.26	6.29	6.29	2011
5.81	5.85	5.88	5.92	5.95	5.99	6.02	6.06	6.09	6.13	6.16	6.20	6.23	6.27	6.27	2012
5.80	5.84	5.87	5.91	5.94	5.98	6.01	6.04	6.08	6.11	6.15	6.18	6.22	6.25	6.25	2013
5.80	5.84	5.87	5.90	5.94	5.97	6.00	6.04	6.07	6.11	6.14	6.17	6.21	6.24	6.24	2014
5.80	5.83	5.87	5.90	5.94	5.97	6.00	6.04	6.07	6.10	6.14	6.17	6.21	6.24	6.24	2015
5.80	5.84	5.87	5.90	5.94	5.97	6.01	6.04	6.08	6.11	6.14	6.18	6.21	6.25	6.25	2016
5.83	5.86	5.90	5.94	5.97	6.01	6.05	6.08	6.12	6.15	6.19	6.23	6.26	6.30	6.30	2017
5.84	5.88	5.92	5.96	6.00	6.04	6.08	6.12	6.16	6.20	6.24	6.28	6.32	6.36	6.36	2018
5.87	5.91	5.95	6.00	6.04	6.08	6.12	6.16	6.21	6.25	6.29	6.33	6.38	6.42	6.42	2019
5.88	5.93	5.97	6.01	6.06	6.10	6.14	6.19	6.23	6.27	6.32	6.36	6.41	6.45	6.45	2020
5.89	5.94	5.98	6.03	6.07	6.11	6.16	6.20	6.25	6.29	6.33	6.38	6.42	6.47	6.47	2021
5.89	5.94	5.98	6.02	6.07	6.11	6.16	6.20	6.24	6.29	6.33	6.38	6.42	6.47	6.47	2022
5.88	5.92	5.97	6.01	6.06	6.10	6.14	6.19	6.23	6.28	6.32	6.36	6.41	6.45	6.45	2023
5.89	5.94	5.98	6.03	6.07	6.11	6.16	6.20	6.25	6.29	6.33	6.38	6.42	6.46	6.46	2024
5.89	5.93	5.97	6.02	6.06	6.10	6.15	6.19	6.24	6.28	6.32	6.37	6.41	6.46	6.46	2025
5.86	5.90	5.95	5.99	6.04	6.08	6.12	6.17	6.21	6.26	6.30	6.34	6.39	6.43	6.43	2026
5.86	5.91	5.95	6.00	6.04	6.08	6.13	6.17	6.21	6.26	6.30	6.35	6.39	6.43	6.43	2027
5.86	5.90	5.94	5.99	6.03	6.07	6.12	6.16	6.20	6.25	6.29	6.34	6.38	6.42	6.42	2028
5.86	5.90	5.95	5.99	6.03	6.08	6.12	6.16	6.21	6.25	6.30	6.34	6.38	6.43	6.43	2029
5.88	5.92	5.96	6.01	6.05	6.09	6.14	6.18	6.22	6.27	6.31	6.35	6.40	6.44	6.44	2030

Table 9
FY 2005.Q3 FORECAST OF INFLATIONARY TRENDS
CHANGE IN GROSS DOMESTIC PRODUCT PRICE DEFLATOR

Calendar/Fiscal Years 2005.Q3 vs. 2004.Q3

<u>YEAR</u>	(A) <u>FY 2005.Q3 1/ CALENDAR YEAR GDP DEFLATOR</u> (% Change)	(B) <u>FY 2005.Q3 1/ FISCAL YEAR GDP DEFLATOR</u> (% Change)	(C) <u>FY 2005.Q3 2/ CUMULATIVE GDP DEFLATOR</u> (Base Year 2005)	(D) <u>FY 2004.Q3 3/ FISCAL YEAR GDP DEFLATOR</u> (% Change)	(E) <u>FY 2004.Q3 3/ CUMULATIVE GDP DEFLATOR</u> (Base Year 2005)	(F) <u>CHANGE IN GDP DEFLATOR</u> (% Change)	(G) <u>CHANGE IN GDP DEFLATOR</u>
2005	1.79%	1.96%	1.010	1.65%	1.008	0.31%	0.002
2006	1.72%	1.74%	1.027	1.56%	1.024	0.18%	0.003
2007	1.89%	1.85%	1.046	1.82%	1.043	0.02%	0.004
2008	2.08%	2.04%	1.068	2.02%	1.064	0.01%	0.004
2009	2.07%	2.07%	1.090	2.08%	1.086	-0.01%	0.004
2010	2.22%	2.18%	1.113	2.25%	1.110	-0.06%	0.003
2011	2.39%	2.35%	1.140	2.43%	1.137	-0.08%	0.002
2012	2.47%	2.45%	1.168	2.41%	1.165	0.04%	0.003
2013	2.40%	2.41%	1.196	2.36%	1.192	0.06%	0.004
2014	2.35%	2.36%	1.224	2.41%	1.221	-0.05%	0.003
2015	2.37%	2.36%	1.253	2.46%	1.251	-0.09%	0.002
2016	2.41%	2.40%	1.283	2.49%	1.282	-0.09%	0.001
2017	2.44%	2.44%	1.314	2.52%	1.314	-0.08%	0.000
2018	2.49%	2.48%	1.347	2.56%	1.348	-0.08%	-0.001
2019	2.49%	2.49%	1.380	2.57%	1.382	-0.08%	-0.002
2020	2.46%	2.47%	1.414	2.59%	1.418	-0.12%	-0.004
2021	2.47%	2.47%	1.449	2.62%	1.455	-0.15%	-0.006
2022	2.47%	2.47%	1.485	2.62%	1.494	-0.16%	-0.008
2023	2.48%	2.48%	1.522	2.61%	1.533	-0.14%	-0.011
2024	2.49%	2.49%	1.560	2.61%	1.573	-0.12%	-0.013
2025	2.48%	2.48%	1.598	2.63%	1.614	-0.15%	-0.015
2026	2.48%	2.48%	1.638	2.64%	1.657	-0.16%	-0.018
2027	2.49%	2.49%	1.679	2.65%	1.701	-0.17%	-0.022
2028	2.49%	2.49%	1.721	2.67%	1.746	-0.18%	-0.025
2029	2.50%	2.49%	1.763	2.71%	1.793	-0.21%	-0.030
2030	2.50%	2.50%	1.808	0	0		

1/ Source: Global Insight, First Quarter 2005 Long Term Economic Outlook, Trend Forecast

2/ Fiscal Year Cumulative Price Deflator escalates to midyear dollars. The first year, 2005, is determined as follows: $1.0098 = [(1.955/100) \cdot 5] + 1$. An example of subsequent year cumulative growth such as in 2006 is found as: $1.0273 = [1 + (1.738/100)] \cdot 1.0098$

3/ Source: Global Insight, Second Quarter 2004 Long Term Economic Outlook, Trend Forecast

Table 10
FY 2005.Q3 INFLATION FORECAST COMPARISONS
GROSS DOMESTIC PRODUCT PRICE DEFLATOR INDEXES 1/

BPA Fiscal Years

<u>YEAR</u>	(A) FY 2005.Q3 2/ <u>CUMULATIVE PRICE DEFLATOR INDEX</u> (Base Year 2005)	(B) FY 04.Q3 3/ <u>CUMULATIVE PRICE DEFLATOR INDEX</u> (Base Year 2005)	(C) <u>(A - B) DIFFERENCE</u>
2005	1.010	1.008	0.002
2006	1.027	1.024	0.003
2007	1.046	1.043	0.004
2008	1.068	1.064	0.004
2009	1.090	1.086	0.004
2010	1.113	1.110	0.003
2011	1.140	1.137	0.002
2012	1.168	1.165	0.003
2013	1.196	1.192	0.004
2014	1.224	1.221	0.003
2015	1.253	1.251	0.002
2016	1.283	1.282	0.001
2017	1.314	1.314	0.000
2018	1.347	1.348	-0.001
2019	1.380	1.382	-0.002
2020	1.414	1.418	-0.004
2021	1.449	1.455	-0.006
2022	1.485	1.494	-0.008
2023	1.522	1.533	-0.011
2024	1.560	1.573	-0.013
2025	1.598	1.614	-0.015
2026	1.638	1.657	-0.018
2027	1.679	1.701	-0.022
2028	1.721	1.746	-0.025
2029	1.763	1.793	-0.030
2030	1.808		

1/ Fiscal Year Cumulative Price Deflator escalates to midyear dollars. The first year, 2005, follows: $1.0098 = [(1.955/100)^*.5] + 1$. An example of subsequent year cumulative growth: $1.0273 = [1 + (1.738/100)] * 1.0098$

1/ Source: Global Insight, First Quarter 2005 Long Term Economic Outlook, Trend Foreca

3/ Source: Global Insight, Second Quarter 2004 Long Term Economic Outlook, Trend For

7. PROJECTED BONDS ISSUED TO TREASURY

7.1 Introduction

This chapter documents the bonds that BPA projects it will issue to the U.S. Treasury to finance BPA capital investments and BOR/COE investments that will be direct-funded by BPA.

7.2 Issuing Bonds

BPA primarily funds capital outlays by issuing new long-term debt in the form of bonds issued to Treasury. BPA issues four types of bonds for PBL: Construction, Conservation, Fish and Wildlife/Environment, and BOR/COE direct - funded. Construction bonds included in the generation study are the portions of bonds that fund furniture, ADP hardware and software for PBL. (Construction bonds are also issued to fund capital expenditures of the Transmission Business Line including ADP hardware and software and furniture.) Conservation bonds are issued to fund the capital portion of BPA's conservation program. Fish and Wildlife bonds are issued to fund the capital portion of BPA's Fish and Wildlife program. *See*, Chapter 13. Environment bonds are issued to fund work done by the Transmission Business Line and are not included in the generation repayment study. BPA also issues bonds to fund BOR/COE generation efficiency and reliability improvements. All bonds projected for issuance have been entered into the generation repayment study.

BOR/COE direct funding bonds are entered in the repayment program with a maximum period to maturity of 45 years. Construction bonds are given a maximum repayment period of 40 years, Fish and Wildlife bonds are entered with a period to maturity of 15 years, and Conservation is given a maturity of 5 years.

New bonds for the cost evaluation period (FYs 2005 - 2009) and projected borrowing for the 7(b)2 rate test period (FYs 2010-13) are based on projected BPA and BOR/COE capital program outlays. Maturities reflect the average services lives of the assets. The assignment practices for interest rates are discussed in Chapter 2 of the Study . The interest rates used are in Chapter 6 of this document.

Table 7A

Bonneville Power Administration
Total Bonds Issued
(\$ in millions)

Date	Type	Amount Issued	Interest Rate	Term	Maturity Date	----1st Call----		Refinanced Bonds		Amortized Bonds		Call Price	Out-Stand	Interest Due	Semiannual Interest
						Date	Price	Date	Amount	Date	Amount				
9/30/1978	C	50.0	8.95%	35	2013	9/30/1983	107.64			9/30/1991	(50.0)	105.53	0.0	Mar/Sep	0
6/30/1979	C	75.0	9.45%	35	2014	6/30/1984	108.10			9/30/1985/86/91	(75.0)	various	0.0	Dec/Jan	0
9/30/1979	C	50.0	9.90%	35	2014	9/30/1984	108.49			9/30/1985	(50.0)	108.20	0.0	Mar/Sep	0
9/30/1980	C	115.0	13.00%	35	2015	9/30/1985	111.14			9/30/1985	(115.0)	111.14	0.0	Mar/Sep	0
9/30/1981	C	175.0	16.60%	35	2016	9/30/1986	114.23			9/30/1986	(175.0)	114.23	0.0	Mar/Sep	0
12/31/1981	C	50.0	14.40%	35	2016	12/31/1986	112.34			2/28/1987	(50.0)	112.34	0.0	Jun/Dec	0
4/30/1982	C	100.0	14.40%	35	2017	4/30/1987	112.34			4/30/1987	(100.0)	112.34	0.0	Oct/Apr	0
7/31/1982	C	85.0	14.15%	35	2017	7/31/1987	112.13	7/31/1987	(85.0)			112.13	0.0	Jan/Jul	0
11/30/1982	C	40.0	10.85%	35	2017	11/30/1987	109.30	2/29/1988	(40.0)			109.30	0.0	May/Nov	0
6/30/1983	C	30.0	11.70%	35	2018	6/30/1988	110.03			11/30/1988	(30.0)	110.03	0.0	Dec/Jan	0
9/30/1983	C	45.0	12.25%	35	2018	9/30/1988	110.50			9/30/1988	(45.0)	110.50	0.0	Mar/Sep	0
9/30/1983	K	140.0	12.20%	20	2003	9/30/1988	109.15			9/30/1988	(140.0)	109.15	0.0	Mar/Sep	0
11/30/1983	C	30.0	12.30%	35	2018	11/30/1988	110.54			11/30/1988	(30.0)	110.54	0.0	May/Nov	0
9/30/1984	C	60.0	13.05%	35	2019	9/30/1989	111.19			9/30/1989	(60.0)	111.19	0.0	Mar/Sep	0
9/30/1984	K	150.0	13.05%	20	2004	9/30/1989	109.79	9/30/1989	(120.0)			109.79	0.0	Mar/Sep	0
6/30/1985	C	100.0	11.25%	45	2030	6/30/1990	110.00			6/30/1990	(100.0)	110.00	0.0	Dec/Jan	0
9/30/1985	K	50.0	10.15%	5	1990	none	none			9/30/1990	(50.0)	none	0.0	Mar/Sep	0
3/31/1986	C	100.0	8.15%	10	1996	none	none			3/31/1996	(100.0)	none	0.0	Sep/Mar	0
3/31/1986	K	50.0	8.15%	10	1996	none	none			3/31/1996	(50.0)	none	0.0	Sep/Mar	0
3/31/1986	K	50.0	7.80%	5	1991	none	none			3/31/1991	(50.0)	none	0.0	Sep/Mar	0
6/30/1986	C	300.0	8.95%	45	2031	6/30/1991	107.96	8/31/92,5/31/94	(240.0)	9/30/1991/94	(60.0)	various	0.0	Dec/Jan	0
4/30/1987	C	100.0	9.30%	45	2032	4/30/1992	108.27	4/30/1992	(100.0)			108.27	0.0	Oct/Apr	0
4/30/1987	K	75.0	9.30%	20	2007	4/30/1992	106.98	7/31/1992	(75.0)			106.98	0.0	Oct/Apr	0
6/30/1987	C	100.0	8.35%	5	1992	none	none			6/30/1992	(100.0)	none	0.0	Dec/Jan	0
6/30/1987	K	50.0	8.35%	5	1992	none	none			6/30/1992	(50.0)	none	0.0	Dec/Jan	0
7/31/1987	C	95.0	9.55%	30	2017	7/31/1992	107.96			9/30/1992	(95.0)	107.96	0.0	Jan/Jul	0
7/31/1987	C	50.0	9.55%	45	2032	7/31/1992	108.49			7/31/1993	(50.0)	108.49	0.0	Jan/Jul	0
2/29/1988	C	150.0	9.50%	45	2033	2/28/1993	108.44	10/31/93,5/31/94	(150.0)			various	0.0	Aug/Feb	0
2/29/1988	C	43.7	9.50%	30	2018	2/28/1993	107.92			9/30/1993	(43.7)	107.92	0.0	Aug/Feb	0
4/30/1988	K	90.0	9.90%	20	2008	4/30/1993	107.43			5/31/1993	(90.0)	107.43	0.0	Oct/Apr	0
6/30/1988	C	40.0	9.90%	45	2033	6/30/1993	108.80			6/30/1993	(40.0)	108.80	0.0	Dec/Jan	0
5/31/1989	F	25.0	8.95%	10	1999	none	none			5/31/1999	(25.0)	none	0.0	Nov/May	0
5/31/1989	C	75.0	8.95%	10	1999	none	none	5/31/1999	(26.2)	5/31/1999	(48.8)	none	0.0	Nov/May	0
7/31/1989	K	40.0	8.55%	20	2009	none	none						40.0	Jan/Jul	1,710,000
9/30/1989	K	66.0	8.60%	6	1995	none	none			9/30/1995	(66.0)	none	0.0	Mar/Sep	0
9/30/1989	K	66.0	8.65%	13	2002	none	none			9/30/2002	(66.0)	none	0.0	Mar/Sep	0
1/31/1990	C	50.0	9.25%	40	2030	1/31/2000	106.94	1/31/2000	(50.0)			106.94	0.0	Jul/Jan	0
2/28/1991	C	60.0	7.55%	4	1995	none	none			2/28/1995	(60.0)	none	0.0	Aug/Feb	0
5/31/1991	F	50.0	7.95%	5	1996	none	none			5/31/1996	(50.0)	none	0.0	Nov/May	0
4/30/1992	C	150.0	8.80%	40	2032	4/30/1997	107.70	8/31/1997	(103.3)			107.70	0.0	Oct/Apr	0
4/30/1992	C	50.0	7.00%	5	1997	none	none			4/30/1997	(50.0)	none	0.0	Oct/Apr	0
4/30/1992	C	80.0	6.20%	3	1995	none	none			4/30/1995	(80.0)	none	0.0	Oct/Apr	0
4/30/1992	C	28.3	7.00%	5	1997	none	none			4/30/1997	(28.3)	none	0.0	Oct/Apr	0
7/31/1992	C	150.0	8.13%	40	2032	7/31/1997	107.11	4/30 & 5/31/98	(138.2)			107.11	0.0	Jan/Jul	0
7/31/1992	K	100.0	7.14%	15	2007	7/31/1997	104.76	9/30/1998	(100.0)			104.28	0.0	Jan/Jul	0
7/31/1992	K	80.2	5.80%	5	1997	none	none			7/31/1997	(80.2)	none	0.0	Jan/Jul	0

Table 7A

Bonneville Power Administration
Total Bonds Issued
(\$ in millions)

Date	Type	Amount Issued	Interest Rate	Term	Maturity Date	----1st Call----		Refinanced Bonds		Amortized Bonds		Call Price	Out-Stand	Interest Due	Semiannual Interest
						Date	Price	Date	Amount	Date	Amount				
8/31/1992	C	107.8	6.60%	8	2000	none	none	8/31/2000	(15.3)	8/31/2000	(92.5)	none	0.0	Feb/Aug	0
8/31/1992	C	107.7	7.25%	15	2007	8/31/1997	104.83	8/31/1998	(107.7)				0.0	Feb/Aug	0
10/31/1992	C	50.0	6.05%	5	1997	none	none			10/31/1997	(50.0)	none	0.0	Apr/Oct	0
10/31/1992	K	50.0	8.05%	20	2012	10/31/1997	106.04			5/31/1998	(50.0)	106.04	0.0	Apr/Oct	0
10/31/1992	C	100.0	8.35%	40	2032	10/31/1997	107.31			5/31/1998	(100.0)	107.31	0.0	Apr/Oct	0
2/28/1993	F	20.0	6.95%	15	2008	2/28/1998	104.63			9/30/2002	(20.0)	102.78	0.0	Aug/Feb	0
2/28/1993	K	50.0	7.40%	20	2013	2/28/1998	105.55	9/30/1998	(50.0)				0.0	Aug/Feb	0
2/28/1993	C	130.0	7.80%	40	2033	2/28/1998	106.83	5/31/1998	(130.0)				0.0	Aug/Feb	0
4/30/1993	C	100.0	7.50%	40	2033	4/30/1998	106.56	8/31/1998	(100.0)				0.0	Oct/Apr	0
8/31/1993	C	110.0	6.95%	40	2033	8/31/1998	106.08			9/30/2003	(110.0)	105.21	0.0	Feb/Aug	0
8/31/1993	K	40.0	6.75%	20	2013	8/31/1998	105.06			9/30/2002	(40.0)	103.71	0.0	Feb/Aug	0
10/31/1993	C	108.4	6.85%	40	2033	10/31/1998	105.99			9/30/2003	(108.4)	105.31	0.0	Apr/Oct	0
10/31/1993	C	50.0	6.85%	40	2033	10/31/1998	105.99			9/30/2003 1/31/2004	(50.0)	105.31	0.0	Apr/Oct	0
1/31/1994	K	50.0	6.75%	20	2014	1/31/1999	105.06			9/30/2002/2003	(50.0)	103.71	0.0	Jul/Jan	0
1/31/1994	C	50.0	7.05%	40	2034	1/31/1999	106.17			9/30/2003	(50.0)	105.46	0.0	Jul/Jan	0
5/31/1994	C	50.0	8.20%	40	2034	5/31/1999	107.18			6/30/1999	(50.0)	107.18	0.0	Nov/May	0
5/31/1994	K	50.0	7.10%	4	1998	5/31/1995	100.00	5/31/98	(37.7)	9/30/1996	(12.3)	100.00	0.0	Nov/May	0
5/31/1994	C	97.1	7.10%	4	1998	5/31/1995	100.00			9/30/1995	(97.1)	100.00	0.0	Nov/May	0
9/30/1994	C	55.0	7.65%	5	1999	9/30/1995	100.00			9/30/1995	(55.0)	100.00	0.0	Mar/Sep	0
9/30/1994	F	20.0	7.65%	5	1999	9/30/1995	100.00			9/30/1995	(20.0)	100.00	0.0	Mar/Sep	0
1/31/1995	C	55.0	8.35%	6	2001	1/31/1996	100.00			3/31/1996	(55.0)	100.00	0.0	Jul/Jan	0
5/31/1995	K	85.0	7.50%	20	2015	5/31/2000	105.63			5/31/2000	(85.0)	105.63	0.0	Nov/May	0
5/31/1995	B	35.0	7.50%	20	2015	5/31/2000	105.63			9/30/2001	(35.0)	105.25	0.0	Nov/May	0
7/31/1995	C	50.0	7.70%	30	2025	7/31/2000	106.42			9/30/2001/2002/2003	(50.0)	105.14	0.0	Jan/Jul	0
8/31/1995	C	65.0	7.70%	30	2025	8/31/2000	106.42			9/30/2002	(65.0)	106.90	0.0	Feb/Aug	0
8/31/1995	F	35.0	7.20%	15	2010	8/31/2000	104.80			9/30/2001	(35.0)	104.32	0.0	Feb/Aug	0
1/31/1996	C	60.0	5.90%	7	2003	none	none			1/31/2003	(60.0)	none	0.0	Jul/Jan	0
1/31/1996	K	30.0	6.70%	15	2011	1/31/2001	104.47			1/31/2004	(30.0)	103.13	0.0	Jul/Jan	0
8/31/1996	C	70.0	7.05%	10	2006	none	none						70.0	Feb/Aug	2,467,500
11/30/1996	K	40.0	7.20%	20	2016	11/30/2001	105.40			9/30/2002	(40.0)	105.04	0.0	May/Nov	0
11/30/1996	E	40.0	6.95%	15	2011	11/30/2001	104.63			1/31/2004	(40.0)	103.71	0.0	May/Nov	0
1/31/1997	C	30.0	6.80%	7	2004	none	none			1/31/2004	(30.0)	none	0.0	Jul/Jan	0
5/31/1997	C	80.0	6.90%	8	2005	none	none						80.0	Nov/May	2,760,000
5/31/1997	B	50.0	6.50%	3	2000	none	none			5/31/2000	(50.0)	none	0.0	Nov/May	0
8/31/1997	C	111.3	6.65%	10	2007	none	none						111.3	Feb/Aug	3,700,725
1/31/1998	F	60.0	6.10%	15	2013	none	none						60.0	Jul/Jan	1,830,000
4/30/1998	C	75.3	6.00%	10	2008	none	none						75.3	Oct/Apr	2,259,000
4/30/1998	C	50.0	6.65%	30	2028	4/30/2008	104.43						50.0	Oct/Apr	1,662,500
4/30/1998	B	25.0	6.00%	10	2008	none	none						25.0	Oct/Apr	750,000
5/31/1998	C	72.7	6.00%	11	2009	none	none						72.7	Nov/May	2,181,000
5/31/1998	C	40.0	6.20%	13	2011	none	none						40.0	Nov/May	1,240,000
5/31/1998	C	98.9	6.70%	34	2032	5/31/2008	104.73						98.9	Nov/May	3,313,150
5/31/1998	K	37.7	6.00%	11	2009	none	none						37.7	Nov/May	1,131,000
8/31/1998	C	106.5	5.85%	30	2028	none	none						106.5	Feb/Aug	3,115,125
8/31/1998	C	112.3	5.85%	30	2028	none	none						112.3	Feb/Aug	3,284,775
8/31/1998	C	40.0	5.75%	10	2008	none	none						40.0	Feb/Aug	1,150,000

Table 7A

Bonneville Power Administration
Total Bonds Issued
(\$ in millions)

Date	Type	Amount Issued	Interest Rate	Term	Maturity Date	----1st Call----		Refinanced Bonds		Amortized Bonds		Call Price	Out-Stand	Interest Due	Semiannual Interest
						Date	Price	Date	Amount	Date	Amount				
9/30/1998	K	104.3	5.30%	10	2008	none	none						104.3	Mar/Sep	2,763,950
9/30/1998	K	52.8	5.60%	15	2013	none	none						52.8	Mar/Sep	1,478,400
2/28/1999	C	60.0	5.90%	15	2014	none	none						60.0	Aug/Feb	1,770,000
5/31/1999	C	26.2	5.95%	5	2004	none	none			5/31/2004	(26.2)	none	0.0	Nov/May	0
9/30/1999	C	40.0	6.20%	3	2002	none	none			9/30/2002	(40.0)	none	0.0	Mar/Sep	0
9/30/1999	F	20.0	6.30%	4	2003	none	none	9/30/2003	(20.0)				0.0	Mar/Sep	0
9/30/1999	B	20.0	6.40%	5	2004	none	none			9/30/2004	(20.0)	none	0.0	Mar/Sep	0
11/30/1999	C	40.0	6.40%	3	2002	none	none			11/30/2002	(40.0)	none	0.0	May/Nov	0
1/31/2000	C	53.5	7.15%	5	2005	none	none						53.5	Jul/Jan	1,912,625
4/30/2000	B	40.0	6.85%	3	2003	none	none	4/30/2003	(40.0)				0.0	Oct/Apr	0
7/31/2000	K	32.0	6.95%	3	2003	none	none			7/31/2003	(32.0)	none	0.0	Jan/Jul	0
7/31/2000	C	50.0	7.00%	4	2004	none	none			7/31/2004	(50.0)	none	0.0	Jan/Jul	0
8/31/2000	C	15.3	6.85%	3	2003	none	none			8/31/2003	(15.3)	none	0.0	Feb/Aug	0
9/30/2000	C	40.0	6.75%	6	2006	none	none						40.0	Mar/Sep	1,350,000
9/30/2000	B	20.0	6.70%	5	2005	none	none						20.0	Mar/Sep	670,000
1/31/2001	C	20.0	5.65%	4	2005	none	none						20.0	Jul/Jan	565,000
1/31/2001	F	25.0	5.65%	4	2005	none	none						25.0	Jul/Jan	706,250
1/31/2001	E	30.0	6.05%	9	2010	none	none						30.0	Jul/Jan	907,500
1/31/2001	C	60.0	6.05%	9	2010	none	none						60.0	Jul/Jan	1,815,000
6/30/2001	B	50.0	4.75%	3	2004	none	none			6/30/2004	(50.0)	none	0.0	Jun/Dec	0
6/30/2001	C	25.0	5.95%	10	2011	none	none						25.0	Jun/Dec	743,750
8/31/2001	C	50.0	5.75%	10	2011	none	none						50.0	Aug/Feb	1,437,500
3/31/2002	C	110.0	4.60%	3	2005	none	none						110.0	Mar/Sep	2,530,000
3/31/2002	B	30.0	4.60%	3	2005	none	none						30.0	Mar/Sep	690,000
6/30/2002	C	60.0	3.75%	3	2005	none	none						60.0	Jun/Dec	1,125,000
6/30/2002	K	40.0	3.75%	3	2005	none	none						40.0	Jun/Dec	750,000
9/30/2002	C	100.0	3.05%	4	2006	none	none						100.0	Mar/Sep	1,525,000
9/30/2002	E	30.0	3.05%	4	2006	none	none						30.0	Mar/Sep	457,500
9/30/2002	B	20.0	3.05%	4	2006	none	none						20.0	Mar/Sep	305,000
10/31/2002	C	50.0	3.00%	3	2005	none	none						50.0	Oct/Apr	750,000
11/30/2002	C	40.0	2.80%	3	2005	none	none						40.0	Nov/May	560,000
12/31/2002	B	40.0	3.05%	4	2006	none	none						40.0	Jun/Dec	610,000
4/30/2003	B	40.0	2.40%	3	2006	none	none						40.0	Apr/Oct	480,000
4/30/2003	B	25.0	2.40%	3	2006	none	none						25.0	Apr/Oct	300,000
4/30/2003	C	40.0	2.90%	4	2007	none	none						40.0	Apr/Oct	580,000
4/30/2003	C	40.0	5.55%	30	2033	4/30/2008	104.63						40.0	Apr/Oct	1,110,000
7/31/2003	C	75.0	2.30%	3	2006	none	none						75.0	Jul/Jan	862,500
7/31/2003	B	30.0	2.30%	3	2006	none	none						30.0	Jul/Jan	345,000
7/31/2003	C	25.0	2.95%	4	2007	none	none						25.0	Jul/Jan	368,750
9/30/2003	C	20.0	2.50%	3	2006	none	none						20.0	Mar/Sep	250,000
9/30/2003	B	25.0	2.50%	3	2006	none	none						25.0	Mar/Sep	312,500
9/30/2003	F	20.0	3.10%	4	2007	none	none						20.0	Mar/Sep	310,000
1/31/2004	C	60.0	2.50%	3	2007	none	none						60.0	Jul/Jan	750,000
1/31/2004	C	65.0	2.95%	4	2008	none	none						65.0	Jul/Jan	958,750
1/31/2004	K	30.0	2.95%	4	2008	none	none						30.0	Jul/Jan	442,500
1/31/2004	B	25.0	2.50%	3	2007	none	none						25.0	Jul/Jan	312,500
4/30/2004	C	65.0	2.95%	3	2007	none	none						65.0	Apr/Oct	958,750

Table 7A

Bonneville Power Administration
Total Bonds Issued
(\$ in millions)

Date	Type	Amount Issued	Interest Rate	Term	Maturity Date	----1st Call----		Refinanced Bonds		Amortized Bonds		Call Price	Out-Stand	Interest Due	Semiannual Interest
						Date	Price	Date	Amount	Date	Amount				
4/30/2004	B	35.0	2.95%	3	2007	none	none						35.0	Apr/Oct	516,250
7/31/2004	C	50.0	3.45%	3	2007	none	none						50.0	Jul/Jan	862,500
7/31/2004	B	25.0	3.45%	3	2007	none	none						25.0	Jul/Jan	431,250
7/31/2004	C	25.0	3.80%	4	2008	none	none						25.0	Jul/Jan	475,000
9/30/2004	B	30.0	3.10%	3	2007	none	none						30.0	Mar/Sep	465,000
9/30/2004	C	30.0	3.10%	3	2007	none	none						30.0	Mar/Sep	465,000
9/30/2004	C	40.0	5.60%	30	2034	9/30/2009	104.67						40.0	Mar/Sep	1,120,000
TOTAL		<u>\$8,874.0</u>						<u>(\$1,728.4)</u>		<u>(\$4,245.3)</u>			<u>\$2,900.3</u>		<u>70,653,500</u>

Weighted average interest rate for outstanding bonds 4.87%

*Net amount issued \$7,145.6

C= Transmission Construction
K= Conservation
F= Fish and Wildlife
B= Corps and Bureau
E= Environment

Table 7B

FEDERAL COLUMBIA RIVER POWER SYSTEM (FCRPS)
PROJECTED CAPITAL FUNDING REQUIREMENTS FOR THE POWER BUSINESS LINE
2007 RATE PROPOSAL
(\$ in Millions)

	Actual	Current Rate Period					Next Rate Period				
	Average FYs '97-'01	Actual FY 2002	Actual FY 2003	Actual FY 2004	Est. FY 2005	Est. FY 2006	Average FYs '02-'06	FY 2007	FY 2008	FY 2009	Average FYs '07-'09
POWER											
Capital Requirements for Revenue Producing Investments											
Corps & Bureau Additions/Replacements - Direct Funded	33.7	50.0	120.0	115.0	126.1	131.0	108.4	133.0	145.0	137.0	138.3
Corps & Bureau Additions/Replacements - Appropriations ¹	40.8	4.4	1.4	16.2	0.0	0.0	4.4	0.0	0.0	0.0	0.0
PBL Capital Equipment	4.9	2.0	45.1	13.4	19.2	13.4	18.6	12.1	13.9	12.3	12.8
Capitalized Bond Premium	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CGS: Additions/Replacements ^{2,3}	12.4	0.0	41.3	26.6	0.0	31.0	19.8	12.1	25.6	8.7	15.5
CGS: Fuel ⁴	0.0	0.0	0.0	0.0	93.4	0.0	18.7	0.0	0.0	0.0	0.0
Other Non - Federal	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Annual Capital Requirements for Revenue Producing Investments	93.3	56.4	207.8	171.2	238.7	175.4	169.9	157.2	184.5	158.0	166.6
Cumulative Capital Requirements for Rev Producing Investments		56.4	264.2	435.5	674.2	849.5		157.2	341.7	499.7	
Capital Requirements for Non-Revenue Producing and Public Benefit Investments											
Energy Conservation	16.2	40.0	0.0	30.0	22.5	44.0	27.3	32.0	32.5	32.5	32.3
Fish Investment											
BPA Fish and Wildlife Investment ⁵	18.0	0.0	20.0	0.0	10.0	36.0	13.2	36.0	36.0	36.0	36.0
Corps & Bureau Fish Investment - Appropriations ⁵	8.2	9	68	60.6	134.2	22.2	58.8	76.1	135.8	5.8	72.6
Total Fish Investment	26.2	9	88	60.6	144.2	58.2	72.0	112.1	171.8	41.8	108.6
Other Third - Party	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Annual Capital Req. for Non-Rev. & Public Benefit Invests.	42.4	48.8	88.4	90.6	166.7	102.2	99.3	144.1	204.3	74.3	140.9
Cumulative Capital Req. for Non-Rev. & Public Benefit Invest.		48.8	137.2	227.8	394.5	496.7		144.1	348.4	422.7	
ANNUAL FUNDING REQUIREMENTS FOR POWER	135.7	105.2	296.2	261.8	405.4	277.5	269.2	301.3	388.8	232.3	307.5
CUMULATIVE FUNDING REQUIREMENTS FOR POWER	0.0	105.2	401.4	663.3	1,068.7	1,346.2		301.3	690.1	922.4	

FOOTNOTES:

¹ Reflects plant in service, including IDC, not expenditures.

² CGS new capital requirements were revenue-financed prior to FY 2002. For FY 2002-2006 these costs are debt-financed. The bond amount is shown for each year.

³ FY 2003 includes the amount of capital for which bonds were issued for the Independent Spent Fuel Storage Installation Facility (ISFSI) project and other capital additions for Energy Northwest FY 2002, FY 2003, and FY 2004;

FY 2004 includes the amount of capital for which bonds were issued for Energy Northwest FY 2005 capital additions;

FY 2006 includes the following amounts of capital for which bonds will be issued: \$4.9M for Energy Northwest FY 2006 and \$26.1M for Energy Northwest FY 2007;

FY 2007 includes the amount of capital for which bonds will be issued for Energy Northwest FY 2008.

FY 2008 includes the amount of capital for which bonds will be issued for Energy Northwest FY 2009;

FY 2009 includes the amount of capital for which bonds will be issued for Energy Northwest FY 2010.

⁴ FY 2005 includes \$93.4M for Energy Northwest fuel purchases covering several years.

⁵ Reflects annual average of the plant-in-service in all 13 scenarios used in 2002-2006 rate proposal.

Table 7C

**FEDERAL COLUMBIA RIVER POWER SYSTEM (FCRPS)
PROJECTED CAPITAL FUNDING REQUIREMENTS FOR THE POWER BUSINESS LINE
2007 RATE PROPOSAL**

(\$ in Millions)

	Next Rate Period				7(b)(2) Rate Period				
	FY 2007	FY 2008	FY 2009	<u>Average</u> FYs '07-'09	FY 2010	FY 2011	FY 2012	FY 2013	<u>Average</u> FYs '10-'13
POWER									
Capital Requirements for Revenue Producing Investments									
Corps & Bureau Additions/Replacements - Direct Funded	133.0	145.0	137.0	138.3	123.0	124.0	135.0	138.0	130.0
Corps & Bureau Additions/Replacements - Appropriations ¹	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PBL Capital Equipment	12.1	13.9	12.3	12.8	12.3	12.2	12.3	12.3	12.3
Capitalized Bond Premium	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CGS: Additions/Replacements ^{2,3}	12.1	25.6	8.7	15.5	0.0	0.0	0.0	0.0	0.0
CGS: Fuel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other Non - Federal	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Annual Capital Requirements for Revenue Producing Investments	157.2	184.5	158.0	166.6	135.3	136.2	147.3	150.3	142.3
Cumulative Capital Requirements for Rev Producing Investments	157.2	341.7	499.7		135.3	271.5	418.8	569.1	
Capital Requirements for Non-Revenue Producing and Public Benefit Investments									
Energy Conservation	32.0	32.5	32.5	32.3	40.0	40.0	40.0	40.0	40.0
Fish Investment									
BPA Fish and Wildlife Investment	36.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0
Corps & Bureau Fish Investment - Appropriations	76.1	135.8	5.8	72.6	122.2	140.4	93.2	86.3	110.5
Total Fish Investment	112.1	171.8	41.8	108.6	158.2	176.4	129.2	122.3	186.5
Other Third - Party	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Annual Capital Req. for Non-Rev. & Public Benefit Invests.	144.1	204.3	74.3	140.9	198.2	216.4	169.2	162.3	226.5
Cumulative Capital Req. for Non-Rev. & Public Benefit Invest.	144.1	348.4	422.7		198.2	414.6	583.8	746.1	
ANNUAL FUNDING REQUIREMENTS FOR POWER	301.3	388.8	232.3	307.5	333.5	352.6	316.5	312.6	368.8
CUMULATIVE FUNDING REQUIREMENTS FOR POWER	301.3	690.1	922.4		333.5	686.1	1,002.6	1,315.2	

FOOTNOTES:

¹ Reflects plant in service, including IDC, not expenditures.

² CGS new capital requirements were revenue-financed prior to FY 2002. For FY 2002-2006 these costs are debt-financed. The bond amount is shown for each year.

³ FY 2003 includes the amount of capital for which bonds were issued for the Independent Spent Fuel Storage Installation Facility (ISFSI) project and other capital additions for Energy Northwest FY 2002, FY 2003, and FY 2004;

FY 2004 includes the amount of capital for which bonds were issued for Energy Northwest FY 2005 capital additions;

FY 2006 includes the following amounts of capital for which bonds will be issued: \$4.9M for Energy Northwest FY 2006 and \$26.1M for Energy Northwest FY 2007;

FY 2007 includes the amount of capital for which bonds will be issued for Energy Northwest FY 2008.

FY 2008 includes the amount of capital for which bonds will be issued for Energy Northwest FY 2009;

FY 2009 includes the amount of capital for which bonds will be issued for Energy Northwest FY 2010.

Table 7D

Association of Transmission Construction Functionalized to Generation Funded by Bonds ^{1/}
 FY 1993 - 2004
 (\$000s)

(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)
<u>Fiscal Year</u>	<u>Plant in Service</u> ^{2/}	<u>Amount Funded by Bonds</u>	<u>Amount of Bond Sales</u> ^{3/}	<u>Generation Amount Outstanding</u>	<u>Interest Rate</u>	<u>Term</u>	<u>Year Due</u>	<u>Refinancing</u>	
								<u>Date</u>	<u>Amount</u>
1993	38	38	100,000	0	8.35	40	2033		
1995	67	67	50,000	0	7.70	30	2025		
1996	5,622	5,622	60,000	0	5.90	7	2003		
1997	7,400	7,400	30,000	0	6.80	7	2004		
1998	3,181	3,181	40,000	3,181	5.75	10	2008		
1999	950	950	60,000	60,000	5.90	15	2014		
2000	10,948	10,948	50,000	50,000	7.00	4	2004		
2001	68	68	60,000	60,000	6.05	10	2010		
2002	1,990	1,990	110,000	110,000	4.60	15	2005		
2003	45,062	45,062	50,000	45,062	3.00	3	2006		
2004	13,357	13,357	60,000	13,357	2.50	3	2007		

1/ These investments are funded out of Transmission Construction bonds, and have an estimated average service life of 40 years and a maximum repayment period of 40 years.

2/ Data comes From Summary Utility Plant.

3/ Total amount of Construction Bond. Remainder functionalized to Transmission.

Table 7E

Association of Conservation Investment Funded by Bonds ^{1/}
 FY 1982 - 2004
 (\$000s)

(A) Fiscal Year	(B) Plant in Service ^{2/}	(C) Amount Funded by Bonds	(D) Amount of Bond Sales	(E) Amount Outstanding	(F) Interest Rate	(G) Term	(H) Year Due	(I) Refinancing Date	(J) Amount
1982	61,357	61,357							
1983	204,092	78,643	140,000	0	12.20	20	2003		
		125,449							
		204,092							
1984	66,783	24,551	150,000	0	13.05	20	2004	9/30/1989	60,000 ^{3/}
		42,232						9/30/1989	60,000 ^{4/}
		66,783							
1985	103,067	7,768	50,000	0	10.15	5	1990		
		50,000							
		45,299							
		103,067							
1986	97,618	4,701	50,000	0	8.15	10	1996		
		75,000	50,000	0	7.80	5	1991		
		17,917							
		97,618							
1987	65,958	32,083	75,000	0	9.30	20	2007	7/31/1992	75,000 ^{5/}
		33,875	50,000	0	8.35	5	1992		
		65,958							
1988	52,485	52,485	90,000	0	9.90	20	2008		
1989	37,167	3,640	40,000	40,000	8.55	20	2009		
		33,527	66,000	0	8.60	6	1995		
		66,000	66,000	0	8.65	13	2002		
		37,167							
1990	33,776	6,473							
		27,303							
		33,776							
1991	45,593	38,697							
		6,896							
		45,593							
1992	74,668	27,104	100,000	0	7.14	15	2007	9/30/1998	100,000 ^{6/}
		47,564							
		74,668							
1993	97,910	2,436	50,000	0	8.05	20	2013		
		50,000	50,000	0	7.40	20	2013	9/30/1998	50,000 ^{7/}
		40,000	40,000	0	6.75	20	2013		
		5,474							
		97,910							
1994	113,488	44,526	50,000	0	6.75	20	2014		
		50,000	50,000	0	7.10	4	1998	5/31/1998	37,700 ^{8/}
		18,962							

Table 7E

Association of Conservation Investment Funded by Bonds ^{1/}
FY 1982 - 2004
(\$000s)

(A) Fiscal Year	(B) Plant in Service ^{2/}	(C) Amount Funded by Bonds	(D) Amount of Bond Sales	(E) Amount Outstanding	(F) Interest Rate	(G) Term	(H) Year Due	(I) Refinancing Date	(J) Refinancing Amount
		113,488							
1995	73,507	66,038	85,000	0	7.50	20	2015		
		7,469							
		<u>73,507</u>							
1996	38,726	22,531	30,000	0	6.70	15	2011		
		16,195							
		<u>38,726</u>							
1997	20,336	20,336	40,000	0	7.20	20	2016		
1998	14,154	3,469							
		10,685							
		<u>14,154</u>							
1999	12,424	12,424							
2000	0	0	32,000	0	6.95	3	2003		
2001	141	141							
2002	25,344	8,750	40,000	40,000	3.75	3	2005		
		16,594							
		<u>25,344</u>							
2003	25,458	23,406							
		2,052							
		<u>25,458</u>							
2004	16,876	16,876	30,000	30,000	2.95	4	2008		

1/ Prior to 2002, estimated service life is 20 years.
2/ BPA's Annual Report, Statements of Cash Flows.
3/ Refinanced on 9/30/89 with \$66,000 issued at 8.60%, 6 year term, due in 1995.
4/ Refinanced on 9/30/89 with \$66,000 issued at 8.65%, 13 year term, due in 2002.
5/ Refinanced on 7/31/92 with \$80,200 issued at 5.80%, 5 year term, due in 1997.
6/ Refinanced on 9/30/98 with \$104,300 issued at 5.30% 10 year term, due in 2008.
7/ Refinanced on 9/30/98 with \$52,800 issued at 5.60% 15 year term, due in 2013.
8/ Refinanced on 5/31/98 with \$37,700 issued at 6.00% 11 year term, due in 2009.

Table 7F

Association of Fish and Wildlife Investment Funded by Bonds ^{1/}
 FY 1985 - 2004
 (\$000s)

(A) Fiscal Year	(B) Plant in Service ^{2/}	(C) Amount Funded by Bonds	(D) Amount of Bond Sales	(E) Amount Outstanding	(F) Interest Rate	(G) Term	(H) Year Due	(I) Date	(J) Refinancing Amount
1985	4,318	4,318	25,000	0	8.95	10	1999		
1986	5,590	5,590							
1987	4,710	4,710							
1988	7,726	7,726							
1989	8,267	2,656							
		5,611							
		<u>8,267</u>							
1990	16,193	16,193	50,000	0	7.95	5	1996		
1991	17,680	17,680							
1992	11,178	10,516							
		662							
		<u>11,178</u>							
1993	17,338	17,338	20,000	0	6.95	15	2008		
1994	20,487	2,000	20,000	0	7.65	5	1999		
		18,487							
		<u>20,487</u>							
1995	32,486	1,513	35,000	0	7.20	15	2010		
		30,973							
		<u>32,486</u>							
1996	26,046	4,027	15,000 ^{3/}						
		15,000							
		7,019							
		<u>26,046</u>							
1997	28,064	28,064	60,000	60,000	6.10	15	2013		
1998	21,995	21,995							
1999	14,748	2,922							
		11,826							
		<u>14,748</u>							
2000	13,898 ^{5/}	8,174	20,000	0	6.30	4	2003	9/30/2003	20,000 ^{4/}
		5,724							
		<u>13,898</u>							

Table 7F

Association of Fish and Wildlife Investment Funded by Bonds ^{1/}
 FY 1985 - 2004
 (\$000s)

(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)
<u>Fiscal Year</u>	<u>Plant in Service</u> ^{2/}	<u>Amount Funded by Bonds</u>	<u>Amount of Bond Sales</u>	<u>Amount Outstanding</u>	<u>Interest Rate</u>	<u>Term</u>	<u>Year Due</u>	<u>Date</u>	<u>Refinancing Amount</u>
		13,898							
2001	16,494	16,494	25,000	25,000	5.65	4	2005		
2002	6,102	2,782							
		3,320 ^{6/}							
		6,102							
2003	11,156	5,054	20,000	20,000	3.10	4	2007		
2004	5,849	5,849 ^{6/}							

- 1/ These investments have an estimated average service life of 15 years.
- 2/ BPA's Annual Report, Statements of Cash Flows.
- 3/ As proposed in Revenue Requirements for 1996 in the 1995 Final Rate Proposal \$15 million of Fish & Wildlife investment was financed from revenues.
- 4/ Refinanced on 9/30/2003 with \$20,000 issued at 3.10% 4 year term, due in 2007
- 5/ Beginning in this year, data comes from BPA Annual Report - Statements of Cash Flows
- 6/ These investments have not yet been borrowed for.

Table 7G

**BPA Projected Generation Federal Borrowing
FY 2005 - 2009 ^{1/}
(\$000s)**

<u>FY Year</u>	<u>Description</u>	<u>Interest Rate</u>	<u>Term</u>	<u>Total Borrowing</u>
2005	IT and Facilities ^{2/}	3.75	3	19,220
	Fish, Wildlife & Environmental Conservation	5.34	15	10,000
		4.49	5	22,500
	BOR/COE ^{3/}	6.04	45	86,100
	BOR/COE ^{3/}	3.50	3	20,000
	BOR/COE ^{3/}	3.60	3	<u>20,000</u>
				177,820
2006	IT and Facilities ^{2/}	6.36	35	13,369
	Fish, Wildlife & Environmental Conservation	5.75	15	36,000
		4.92	5	44,000
	BOR/COE ^{3/}	6.36	45	<u>131,000</u>
				224,369
2007	IT and Facilities ^{2/}	6.67	35	12,125
	Fish, Wildlife & Environmental Conservation	6.12	15	36,000
		5.33	5	32,000
	BOR/COE ^{3/}	6.67	45	<u>133,000</u>
				213,125
2008	IT and Facilities ^{2/}	6.98	35	13,875
	Fish, Wildlife & Environmental Conservation	6.47	15	36,000
		5.73	5	32,000
	BOR/COE ^{3/}	6.98	45	<u>145,000</u>
				226,875
2009	IT and Facilities ^{2/}	7.20	35	12,261
	Fish, Wildlife & Environmental Conservation	6.72	15	36,000
		6.01	5	32,000
	BOR/COE ^{3/}	7.22	45	<u>137,000</u>
				217,261

- 1/ Projected borrowing over the cost evaluation period includes FYs 2005-09.
- 2/ Bonds issued for this purpose are construction bonds and fund IT and facilities equipment.
- 3/ Bonds issued for this purpose are for direct funding efficiency and reliability.

Table 7H

**September 2004 Borrowing Capacity
YTD - Information Current Through 9/30/04
(\$ in millions)**

Program	9/30/03 Deferred Borrowing	+	Cap. Spending	-	YTD Borrowing	=	9/30/04 Deferred Borrowing
Construction	78.0		287.0		335.0		30.0
Fish & Wildlife	2.9		8.5		0.0		11.4
Environment	3.6		4.5		0.0		8.1
Conservation/Con-Aug	13.7		17.0		30.0		0.7
Bureau/Corps	<u>4.4</u>		<u>111.3</u>		<u>115.0</u>		<u>0.7</u>
Total	102.6		428.3		480.0		50.9

Capital Spending through: September 30, 2004
YTD Borrowing through: September 30, 2004

8. CAPITALIZED CONTRACTS AND OTHER LONG TERM RESOURCE ACQUISITION OBLIGATIONS

8.1 Introduction

This chapter documents the data on third party debt service or payment costs associated with capitalized contracts and other long-term, fixed contractual obligations.

8.2 Methodology

To determine debt service streams for EN Nuclear Projects WNP-1, Columbia Generating Station (CGS), and WNP-3, a bond model specifically developed for EN debt is used, and streams are based on the amount of EN debt outstanding. The debt service streams reflect all EN refinancings to date. Debt service streams for other capitalized contracts are derived from such sources as Official Statements, Agency agreements, Agency contracts, and budgetary data. The data used in the repayment study is shown in the attached tables.

Debt service for the Northern Wasco project is also included in this chapter. After the bond issuance, BPA decided to cancel its participation in the project. The debt service goes from 1999 to 2025. It will be paid from the construction fund until it is exhausted in 2007. The debt service in the repayment study is zero from 1999 to 2007. From 2008 to 2025, the repayment study reflects the data on Table 8F.

Table 8A

Total WNP-1 2009 Net Debt Service -- GAAP BASIS

Fiscal Year	<u>Principal</u>	<u>Interest</u>	<u>Expenses</u>	<u>Contingency Funds</u>	Total Debt <u>Service</u>
2005	13,868.75	92,006.19	956.50	-1,270.95	105,560.49
2006	57,750.00	92,995.51	954.50	-1,270.95	150,429.06
2007	68,251.68	89,559.59	952.50	-1,270.95	157,492.83
2008	80,166.72	85,617.05	951.00	-1,270.95	165,463.82
2009	82,230.02	80,920.88	951.00	-1,270.95	162,830.95
2010	82,686.25	76,441.60	951.00	-1,270.95	158,807.90
2011	89,401.25	71,929.16	951.00	-1,270.95	161,010.46
2012	120,265.00	67,065.94	951.00	-1,270.95	187,010.99
2013	211,072.99	60,740.95	951.00	-1,270.95	271,493.99
2014	179,451.91	49,677.17	951.00	-1,270.95	228,809.13
2015	144,655.06	40,216.04	951.00	-1,270.95	184,551.15
2016	319,535.42	32,852.11	951.00	-1,270.95	352,067.59
2017	<u>324,398.68</u>	<u>16,716.42</u>	<u>713.25</u>	<u>-953.21</u>	<u>340,875.14</u>
Total	1,773,733.72	856,738.61	12,135.75	-16,204.59	2,626,403.49

Table 8B

**Total 2009 CGS Net Debt Service -- GAAP BASIS
(\$000s)**

Fiscal Year	Principal	Interest	Expenses	Contingency Funds	Total Debt Service
2005	23,511.50	100,849.32	776.75	-2,539.40	122,598.17
2006	109,483.51	109,740.90	721.25	-2,539.40	217,406.26
2007	153,565.08	98,401.99	734.25	-2,539.40	250,161.91
2008	147,788.83	88,019.85	780.00	-2,539.40	234,049.27
2009	172,606.28	84,258.73	780.00	-2,539.40	255,105.60
2010	218,861.25	71,976.69	780.00	-2,539.40	289,078.53
2011	210,126.25	60,981.25	780.00	-2,539.40	269,348.09
2012	287,761.48	50,215.36	780.00	-2,539.40	336,217.44
2013	61,786.74	34,763.82	780.00	-2,539.40	94,791.15
2014	69,637.77	31,661.03	780.00	-2,539.40	99,539.39
2015	95,063.73	28,374.66	780.00	-2,539.40	121,678.98
2016	49,574.38	22,996.89	780.00	-2,539.40	70,811.86
2017	122,918.75	20,301.76	780.00	-2,539.40	141,461.11
2018	<u>242,468.50</u>	<u>89,411.31</u>	<u>585.00</u>	<u>-1,904.55</u>	<u>330,560.26</u>
Total	1,965,154.03	891,953.55	10,617.25	-34,916.81	2,832,808.03

Table 8C

Total 2009 WNP-3 Net Debt Service -- GAAP BASIS

Fiscal Year	<u>Principal</u>	<u>Interest</u>	<u>Expenses</u>	<u>Contingency Funds</u>	Total Debt Service
2005	10,568.75	65,222.84	936.25	-982.69	75,745.15
2006	46,750.18	75,881.28	930.50	-982.69	122,579.28
2007	61,045.13	96,707.14	928.75	-982.69	157,698.33
2008	63,696.50	94,296.06	928.00	-982.69	157,937.88
2009	57,584.98	93,316.65	928.00	-982.69	150,846.95
2010	51,024.97	89,543.18	928.00	-982.69	140,513.46
2011	84,427.34	81,608.30	928.00	-982.69	165,980.95
2012	79,662.93	79,900.58	928.00	-982.69	159,508.83
2013	92,809.19	81,679.36	928.00	-982.69	174,433.87
2014	91,955.87	70,675.23	928.00	-982.69	162,576.42
2015	126,435.05	50,343.58	928.00	-982.69	176,723.95
2016	220,435.84	45,687.46	928.00	-982.69	266,068.62
2017	235,858.90	33,201.13	928.00	-982.69	269,005.34
2018	<u>264,739.32</u>	<u>17,573.74</u>	<u>696.00</u>	<u>-737.02</u>	<u>282,272.04</u>
Total	1,486,994.97	975,636.54	12,771.50	-13,511.96	2,461,891.05

Table 8d

Total Energy Northwest Net Debt Service -- GAAP BASIS
Includes WNP-1 and -3, CGS, and CGS capital additions
(\$000s)

Fiscal					
Year	Principal	Interest	Expenses	Contingency Funds	Total Debt Service
2005	47,949	258,078	2,670	(4,793)	303,904
2006	213,984	278,618	2,606	(4,793)	490,415
2007	282,862	284,669	2,616	(4,793)	565,353
2008	291,652	267,933	2,659	(4,793)	557,451
2009	312,421	258,496	2,659	(4,793)	568,783
2010	352,572	237,961	2,659	(4,793)	588,400
2011	383,955	214,519	2,659	(4,793)	596,340
2012	487,689	197,182	2,659	(4,793)	682,737
2013	365,669	177,184	2,659	(4,793)	540,719
2014	341,046	152,013	2,659	(4,793)	490,925
2015	366,154	118,934	2,659	(4,793)	482,954
2016	589,546	101,536	2,659	(4,793)	688,948
2017	683,176	70,219	2,421	(4,475)	751,342
2018	507,208	106,985	1,281	(2,642)	612,832
Total	5,225,883	2,724,329	35,525	(64,633)	7,921,103

Table 8E

**Total Cares Net Debt Service -- GAAP BASIS
(\$000s)**

Fiscal Year	<u>Principal</u>	<u>Interest</u>	Total Debt <u>Service</u>
2005	1,975.00	1,152.95	3,127.95
2006	2,070.00	1,051.83	3,121.83
2007	2,175.00	945.70	3,120.70
2008	2,280.00	834.33	3,114.33
2009	2,380.00	730.79	3,110.79
2010	2,485.00	622.13	3,107.13
2011	2,600.00	495.00	3,095.00
2012	2,730.00	361.75	3,091.75
2013	2,865.00	221.88	3,086.88
2014	<u>3,005.00</u>	<u>75.13</u>	<u>3,080.13</u>
Total	24,565.00	6,491.46	31,056.46

Table 8F

**Total Tacoma Net Debt Service -- GAAP BASIS
(\$000s)**

<u>Fiscal Year</u>	<u>Principal</u>	<u>Interest</u>	<u>Total Debt Service</u>
2005	1,204.17	628.74	1,832.91
2006	1,256.67	577.77	1,834.43
2007	1,302.50	526.44	1,828.94
2008	1,368.33	461.77	1,830.11
2009	1,434.17	397.84	1,832.00
2010	1,495.00	338.23	1,833.23
2011	1,546.67	281.95	1,828.62
2012	1,613.33	217.88	1,831.21
2013	1,691.67	138.01	1,829.68
2014	1,775.83	54.70	1,830.54
2015	<u>298.33</u>	<u>6.80</u>	<u>305.13</u>
Total	14,986.67	3,630.13	18,616.79

Table 8G

Total N. Wasco Net Debt Service -- GAAP BASIS

Fiscal			Debt Service	Total Debt
Year	Principal	Interest	Reserve Fund	Service
2005	814.17	1,392.12	-2,206.28	0.00
2006	853.33	1,352.55	-2,205.88	0.00
2007	893.33	1,310.12	-2,203.46	0.00
2008	937.50	1,264.14	-538.10	1,663.53
2009	986.67	1,215.15	-34.19	2,167.63
2010	1,036.67	1,163.55	0.00	2,200.22
2011	1,086.67	1,109.41	0.00	2,196.07
2012	1,140.83	1,052.61	0.00	2,193.44
2013	1,200.00	992.41	0.00	2,192.41
2014	1,264.17	928.44	0.00	2,192.61
2015	1,329.17	861.01	0.00	2,190.18
2016	1,398.33	790.10	0.00	2,188.43
2017	1,472.50	715.46	0.00	2,187.96
2018	1,547.50	636.94	0.00	2,184.44
2019	1,626.67	554.41	0.00	2,181.07
2020	1,710.83	467.63	0.00	2,178.47
2021	1,800.00	376.35	0.00	2,176.35
2022	1,894.17	280.30	0.00	2,174.47
2023	1,993.33	179.23	0.00	2,172.56
2024	2,097.50	72.87	0.00	2,170.37
2025	<u>352.50</u>	<u>9.17</u>	<u>0.00</u>	<u>361.67</u>
Total	27,435.83	16,723.93	-7,187.91	36,971.85

Table 8H

Total Cowlitz Net Debt Service -- GAAP BASIS

Fiscal			Total Debt
Year	<u>Principal</u>	<u>Interest</u>	<u>Service</u>
2005	3,700.00	7,105.93	10,805.93
2006	4,700.00	6,895.93	11,595.93
2007	4,930.00	6,689.49	11,619.49
2008	5,110.00	6,472.81	11,582.81
2009	5,360.00	6,211.06	11,571.06
2010	5,630.00	5,936.31	11,566.31
2011	5,915.00	5,647.68	11,562.68
2012	6,215.00	5,344.43	11,559.43
2013	6,520.00	5,026.06	11,546.06
2014	6,850.00	4,691.81	11,541.81
2015	7,190.00	4,340.81	11,530.81
2016	7,545.00	3,972.43	11,517.43
2017	7,930.00	3,585.56	11,515.56
2018	8,325.00	3,179.18	11,504.18
2019	8,740.00	2,752.56	11,492.56
2020	9,175.00	2,304.68	11,479.68
2021	9,635.00	1,834.43	11,469.43
2022	10,120.00	1,340.56	11,460.56
2023	11,035.00	811.68	11,846.68
2024	<u>11,585.00</u>	<u>267.90</u>	<u>11,852.90</u>
Total	146,210.00	84,411.28	230,621.28

Table 8I

Total Trojan Net Debt Service -- GAAP BASIS

Fiscal Year	<u>Principal</u>	<u>Interest</u>	Total Debt <u>Service</u>
2005	3,824.58	562.54	4,387.13
2006	7,465.83	1,140.77	8,606.60
2007	7,837.50	767.48	8,604.98
2008	<u>7,512.08</u>	<u>375.60</u>	<u>7,887.69</u>
Total	26,640.00	2,846.40	29,486.40

9. IRRIGATION ASSISTANCE

9.1 Introduction

This chapter documents the amount of irrigation construction costs for Federal reclamation projects in the Pacific Northwest allocated to irrigation use that the FCRPS has an obligation to repay. These payments are known as irrigation assistance.

9.2 Background

In an effort to encourage settlement of the arid and semiarid lands of the Western United States, the 1902 Reclamation Act created the BOR to develop water resources for irrigation. The 1902 Reclamation Act provided that irrigators using the reclamation projects had 10 years to repay the construction costs of such projects. Title to the reclamation projects, however, remained with the Federal government even after all construction costs were repaid.

By the 1920s, a 10-year repayment period for irrigators was determined to be economically unrealistic. After several leniency acts and extensions, Congress passed the 1939 Reclamation Act, which changed the repayment period on reclamation projects to 40 years after a 10-year development period. Later revisions and project-specific legislation extended repayment periods for most reclamation projects to 50 years after a 10-year development period. However, the Kennewick project has a 66-year repayment period.

Originally, irrigators were responsible for repaying all project construction costs without interest. However, hydropower is a by-product of many reclamation projects and not all of the power generated is needed for irrigation works. As early as the Town Sites and Power Development Act (April 16, 1906, ch. 1631, 34 Stat. 116) Congress authorized BOR to lease surplus power and use the proceeds to repay part of the costs of the reclamation projects.

The concept of power revenues contributing to the repayment of BOR's multipurpose projects evolved to the current policy, in which power revenues are used to repay that portion of the project construction costs allocated to irrigation use that are beyond the irrigators' "ability to repay." Moreover, the costs to be repaid by power revenues, known as irrigation assistance, are to be repaid without interest. BOR has the responsibility to make the determination of the amount that is beyond the irrigators' "ability to repay" through a farm budget analysis. The results of this analysis are used to establish the irrigators' repayment responsibility. The irrigators, as an irrigation district, and BOR formalize this repayment responsibility in irrigation contracts.

9.3 Irrigation Repayment

In the Pacific Northwest, the Third Powerplant, Grand Coulee Dam legislation, P.L. 89-448, authorized repayment of the irrigation assistance costs from net revenues of the entire FCRPS. There are, however, limitations on the FCRPS's repayment responsibility. These limitations were added in amendment to the Third Powerplant, Grand Coulee Dam legislation, P.L. 89-561, and apply to reclamation projects, including projects not previously receiving similar assistance, which are authorized to receive such assistance, for which construction was authorized after September 7, 1966.

9.4 The Limitations

The irrigation assistance for such projects is to be paid only from net revenues of the power system. Net revenues are defined as those revenues over and above the amount needed to recover all costs allocated to power, including the cost of acquiring power by purchase or exchange, and previously authorized irrigation assistance. The construction of such projects shall be scheduled so that the repayment of the irrigation assistance associated with such projects from power revenues will not require an increase in the BPA power rate level.

The total of all irrigation assistance to be repaid from power revenues shall not average more than \$30 million per year in any period of 20 consecutive years.

BOR provides BPA with data on the irrigation assistance to be repaid from each reclamation project, and estimates for future additions to such projects. The generation repayment study includes information provided in August 2004. Because irrigation assistance costs are repaid without interest and BPA repays highest interest-bearing investment first, irrigation assistance is generally scheduled to be repaid in the last year of the repayment period on each reclamation project. BPA made its first payment of \$25,143 thousand in 1997. A payment of \$16,560 thousand was made in 2001. Payments totaling \$739 thousand were made on 9/30/2004. Payments of \$2.95 million and \$6.59 million are due in the 2007-2009 rate period, in 2007 and 2009, respectively.

9.5 Columbia Basin and Green Springs

At Columbia Basin, the Department of Interior issued an Interim Cost Allocation Report that resulted in a reallocation to power of plant previously associated with irrigation (directly as irrigation or indirectly as common general plant). As a result, the investment at the project for which power rates are responsible increased by \$69.2 million, and there was a decrease in irrigation assistance of \$98.3 million. In addition, Green Springs (Rogue River Irrigation Project), a project in southern Oregon, with investment of \$11.17 million, was added to the FCRPS. Irrigation assistance was increased by \$9.9 million for this project.



IN REPLY
REFER TO:

PN-3324
WTR-4.00

Mr. Steve Wright
Administrator
Attention: Mr. Jerry Dinan, KSRD-2
Bonneville Power Administration
P.O. Box 3621
Portland, OR 97208-3621

United States Department of the Interior

BUREAU OF RECLAMATION
Pacific Northwest Region
1150 North Curtis Road, Suite 100
Boise, Idaho 83706-1234

RECEIVED BY BPA ADMINISTRATOR'S OFC-LOG #: 04.0149
RECEIPT DATE: 8.2.04
DUE DATE: 8.16.04

*Memo to Sandy
8-2-04*

ASSIGN: **KFR-2**
cc: FO3, DC/Wash, L-7, P-6, PG-5, PGF-6,
T/Ditt2, Nancy Hagen-KFRO-2

Subject: Federal Columbia River Power System, Assistance to Authorized Bureau of Reclamation Irrigation Projects in the Pacific Northwest, Fiscal Year 2003

Dear Mr. Wright:

Enclosed are three tables which summarize the schedule for repayment of irrigation assistance from the Federal Columbia River Power System (FCRPS) to authorized irrigation projects in the Pacific Northwest Region of the Bureau of Reclamation as of September 30, 2003. This information is being furnished as requested by your letter of September 7, 1966, and your agency's annual call for project cost data on Reclamation projects that are part of the FCRPS. Table 1 is a summary, in chronological order, for all authorized projects. Table 2 contains more detailed data for all projects except the Columbia Basin Project. Table 3 contains the detailed information for the Columbia Basin Project. The data on irrigation assistance reflects Reclamation cost data for fiscal year 2003.

Please note that irrigation assistance for the Avondale, Dalton Gardens, and Rathdrum Prairie (Hayden Lake Unit) projects is due in fiscal year 2004. We have also added the assistance data for the Rogue River Project, previously furnished separately.

As shown, data for the Boise and Palisades Projects reflects that irrigation assistance was due and paid by the Bonneville Power Administration (BPA) in 1997 and 2001, respectively. Public Law 105-9, April 14, 1997, titled the Oroville-Tonasket Claim Settlement and Conveyance Act, transferred title of the irrigation works of the Oroville-Tonasket Project to the Oroville-Tonasket Irrigation District. Section 5(c) of the Act provided that the transfer of title shall not affect the timing and amount of the irrigation assistance obligation of BPA as determined by the Secretary of the Interior. Finally, data for the Columbia Basin Project reflects the current developed platted acreage (558,106 acres). Although the project is authorized to serve over a million acres, Reclamation is currently not requesting Congressional appropriations for construction of the "second half" of the project. Should conditions change, the "second half" of the project could be added to the list.

Four authorized projects are excluded from the list. These projects are the Salmon Falls Division of the Upper Snake River Project; the Merlin Division of the Rogue River Basin Project; the Touchet Division of the Walla Walla Project; and the Kennewick Division Extension of the Yakima Project. If these projects become active in the future, they will be rescheduled and added to the list.

If you have any questions about this data, please call Ms. Kay Henson at 208-378-5073.

Sincerely,



Acting for

J. William McDonald
Regional Director

Enclosures - 3

TABLE 1. --SUMMARY OF FINANCIAL ASSISTANCE TO IRRIGATION - FY 2003
 FEDERAL COLUMBIA RIVER POWER SYSTEM (FCRPS)
 Authorized Projects, Thru Sept. 30, 2003

PROJECT	FISCAL YEAR DUE	Assistance Required	
		AMOUNT (\$1,000)	CUMULATIVE (\$1,000)
BOISE	paid - 1997	24,999	24,999
PALISADES	paid - 2001	16,943	41,942
AVONDALE	2004	184	42,126
DALTON GARDENS	2004	208	42,334
RATHDRUM PRAIRIE	2004	347	42,681
MANN CREEK	2008	2,950	45,631
COLUMBIA BASIN	2009	4,583	50,214
SPOKANE VALLEY	2009	2,007	52,221
COLUMBIA BASIN	2012	706	52,927
COLUMBIA BASIN	2013	44,178	97,105
COLUMBIA BASIN	2014	42,744	139,849
COLUMBIA BASIN	2015	43,752	183,601
COLUMBIA BASIN	2016	56,186	239,787
COLUMBIA BASIN	2017	54,357	294,144
GREATER WENATCHEE	2017	1,057	295,201
YAKIMA,ROZA	2017	1,053	296,254
COLUMBIA BASIN	2018	21,540	317,794
FOSTER CREEK	2018	674	318,468
YAKIMA,ROZA	2018	729	319,197
COLUMBIA BASIN	2019	52,014	371,211
FOSTER CREEK	2019	1,105	372,316
MICHAUD FLATS	2019	2,065	374,381
MICHAUD-FORT HALL	2019	2,065	376,446
YAKIMA,ROZA	2019	567	377,013
COLUMBIA BASIN	2020	30,682	407,695
CROOKED RIVER	2020	2,049	409,744
COLUMBIA BASIN	2021	12,894	422,638
YAKIMA,ROZA	2021	2,026	424,664
COLUMBIA BASIN	2022	12,670	437,334
YAKIMA,ROZA	2022	648	437,982
COLUMBIA BASIN	2023	8,422	446,404
ROGUE RIVER	2023	1,191	447,595
COLUMBIA BASIN	2024	13,530	461,125
GREATER WENATCHEE	2024	1,958	463,083
YAKIMA,KENNEWICK	2024	5,660	468,743
COLUMBIA BASIN	2025	10,050	478,793
CROOKED RIVER EXT	2025	1,184	479,977
WHITESTONE COULEE UNIT	2026	3,810	483,787
COLUMBIA BASIN	2026	10,338	494,125
GREATER WENATCHEE	2026	901	495,026
YAKIMA,ROZA	2026	3,079	498,105
COLUMBIA BASIN	2027	4,041	502,146
LOWER TETON	2027	17,793	519,939
ROGUE RIVER	2027	1,344	521,283
COLUMBIA BASIN	2028	8,516	529,799
THE DALLES	2028	4,203	534,002
BAKER	2029	4,092	538,094
LOWER TETON	2029	9,705	547,799
EAST GREENACRES	2030	2,314	550,113
COLUMBIA BASIN	2031	12,067	562,180
ROGUE RIVER	2033	7,098	569,278
COLUMBIA BASIN	2035	8,469	577,747
WHITESTONE COULEE UNIT	2036	3,660	581,407
MANSON UNIT	2036	16,163	597,570
TUALATIN	2036	9,218	606,788
EAST GREENACRES	2037	4,491	611,279
COLUMBIA BASIN	2037	17,209	628,488
TUALATIN	2039	14,417	642,905
LOWER TETON	2041	5,931	648,836
OROVILLE TONASKET	2042	73,699	722,535
LOWER TETON	2042	6,470	729,005
LOWER TETON	2043	7,009	736,014
LOWER TETON	2044	7,009	743,023
COLUMBIA BASIN	2045	21,775	764,798

Table 2 -- Irrigation Assistance -- Fiscal Year 2003
(All Projects Except Columbia Basin Project)

Project	Irrigated Acres	Initial Testing Year Calendar Year	Development Period Calendar Year	Water Users Repayment Period Calendar Year	Total Irrigation Allocation (\$1,000)	Assistance Required From FCRPS (\$1,000)	Year Assistance Is Due Fiscal Year
In Service as of Sept. 30, 2003							
Boise Project	390,126	--	--	--	69,629	24,999	Pd in 1997
Palisades	528,397	--	--	1961-2000	30,725	16,943	Pd in 2001
Avondale	922	--	--	1964-2003	573	184	2004
Dalton Gardens	944	--	--	1964-2003	564	208	2004
Rathdrum Prairie, Hayden Lake	5,010	--	None	1964-2003	1,233	347	2004
Mann Creek Project	5,110	1967	None	1968-2007	3,763	2,950	2008
Spokane Valley Project	7,241	1966-68	None	1969-2008	5,132	2,007	2009
Yakima Project, Roza Division							
Block 1	9,292	--	--	1942-2016	--	1,053	2017
Block 2	6,628	--	--	1943-2017	--	729	2018
Block 3	4,858	--	--	1944-2018	--	567	2019
Block 4	17,976	--	--	1946-2020	--	2,026	2021
Blocks 5 & 6	5,362	--	--	1947-2021	--	648	2022
Block 7	27,395	--	--	1951-2025	--	3,079	2026
Total	71,511				27,168	8,102	
Chief Joseph Dam Project Greater Wenatchee Division							
Block 1 East Unit	--	1963	1964-66	1967-2016	--	1,057	2017
Blocks 2&3 East & Howard Flat	--	1963	1964-73	1974-2023	--	1,958	2024
Block 4 Brays Landing	--	1965	1966-75	1976-2025	--	901	2026
Total	7,104				8,615	3,916	
Chief Joseph Dam Project Bridgeport Bar Dist. Brewster Flat Dist.							
Bridgeport Bar Dist.	--	1957	1958-67	1968-2017	780	674	2018
Brewster Flat Dist.	--	1958	1959-68	1969-2018	2,571	1,105	2019
Total	2,854				3,351	1,779	
Michaud Flats Project	11,000	1958	1959-68	1969-2018	4,995	2,065	2019
Michaud-Fort Hall	--	--	--	--	--	2,065	2019
Crooked River Project	20,410	--	1963-69	1970-2019	5,514	2,049	2020
Yakima Project, Kennewick Div.	19,171	1957	1958-67	1958-2023	11,798	5,660	2024
Crooked River Project Crooked River Extension	2,890	1967	1968-74	1975-2024	1,686	1,184	2025

Table 2 (continued)

Project	Irrigated Acres	Initial Testing Year Calendar Year	Development Period Calendar Year	Water Users Repayment Period Calendar Year	Total Irrigation Allocation (\$1,000)	Assistance Required From FCRPS (\$1,000)	Year Assistance Is Due Fiscal Year
<u>In Service as of Sept. 30, 2003</u>							
The Dalles Project Western Division	5,420	1965	1968-77	1978-2007	6,824	4,203	2028
Baker Project, Upper Division	18,000	1968	1969-78	1979-2028	5,502	4,092	2029
Chief Joseph Dam Project Chelan Division, Manson Unit	6,055	1975	1976-85	1986-2035	18,823	16,163	2036
Rathdrum Prairie Project East Greenacres Unit							
Block 2	1,780	1976	1977-79	1980-2029	--	2,314	2030
Block 2	3,530	1976	1977-86	1987-2036	--	4,491	2037
Total	5,310				8,211	6,805	
Chief Joseph Dam Project Whitestone Coulee Unit							
Block 1	1,270	1975	None	1976-2025	4,274	3,810	2026
Block 2	1,220	1975	1976-85	1986-2035	4,106	3,660	2036
Total	2,490				8,380	7,470	
Tualatin Project							
Block 1	6,670	1975	1976-85	1986-2035	--	9,218	2036
Block 2	10,330	1978	1979-88	1989-2038	--	14,417	2039
Total	17,000				31,529	23,635	
Chief Joseph Dam Project 1/ Oroville-Tonasket Unit Ext.	10,000	1987	--	1992-2041	86,054	73,699	2041
Teton Basin Project Lower Teton Division 2/	148,210				74,720	53,917	2029
Rogue River Project							
Talent ID	16,300		1963-1972	1973-2032		7,098	2033
Medford ID	11,500			1963-2022		1,191	2023
Rogue River ID	8,049		1967-1976	1977-2026		1,344	2027
Total	35,849				18,069	9,633	

1/ Public Law 105-9, April 14, 1997, transferred title of the project irrigation works to the Oroville Tonasket Irrigation District. Per Section 5(c), the amount or timing of the irrigation assistance obligation by BPA is not changed.

2/ Due to the failure of Teton Dam, all construction work on the project has been terminated. Data reflect the project as scoped prior to failure. The final determination of project cost repayment has not been made.

Table 3
 Columbia Basin Project - Fiscal Year 2003
 Assistance To Irrigation From Federal Columbia River Power System

Block	First Develop. Year (Cal. Year)	First Year of Repayment (Cal. Year)	Irrigable Acres	Cost Allocated To Block \$	Repayment From FCRPS	
					Amount \$	Year Due (Fiscal Year)
1	1949	1959	5,790	5,542,334	4,582,585	2,009
2	1952	1962	1,319	924,819	706,182	2,012
40,41,70,701,71,72	1953	1963	65,644	55,059,000	44,177,869	2,013
11,42,49,73	1954	1964	58,506	52,442,077	42,744,139	2,014
12,15,43,74,75	1955	1965	58,017	53,368,763	43,751,881	2,015
13,16,44,76,78	1956	1966	67,866	67,435,009	56,185,560	2,016
19,45,86,87	1957	1967	54,823	63,444,160	54,356,715	2,017
421,47,89	1958	1968	29,073	26,359,021	21,539,889	2,018
3,14,18,401,46,77,79	1959	1969	57,210	61,497,577	52,014,463	2,019
20,85	1960	1970	24,738	34,782,644	30,682,080	2,020
82,881	1961	1971	11,295	14,766,295	12,894,039	2,021
201,83,88	1962	1972	15,330	15,211,189	12,670,092	2,022
80	1963	1973	11,000	10,245,270	8,421,913	2,023
23	1964	1974	8,770	14,983,753	13,530,040	2,024
17	1965	1975	14,006	12,371,796	10,050,182	2,025
741,81	1966	1976	14,527	12,746,412	10,338,387	2,026
161	1967	1977	4,425	4,774,425	4,040,971	2,027
21,48	1968	1978	7,874	9,820,952	8,515,826	2,028
NONE	1969	1979	0	0	0	2,029
NONE	1970	1980	0	0	0	2,030
25	1971	1981	11,867	14,033,815	12,066,811	2,031
NONE	1972	1982	0	0	0	2,032
NONE	1973	1983	0	0	0	2,033
NONE	1974	1984	0	0	0	2,034
251	1975	1985	8,752	9,919,793	8,468,998	2,035
NONE	1976	1986	0	0	0	2,036
253,24	1977	1987	13,607	19,464,304	17,208,845	2,037
NONE	1978	1988	0	0	0	2,038
NONE	1979	1989	0	0	0	2,039
NONE	1980	1990	0	0	0	2,040
NONE	1981	1991	0	0	0	2,041
NONE	1982	1992	0	0	0	2,042
NONE	1983	1993	0	0	0	2,043
NONE	1984	1994	0	0	0	2,044
26,461(PART 1)	1985	1995	13,668	24,041,060	21,775,456	2,045
TOTALS			558,106	583,234,468	490,722,924	

Allocation and Assistance Summary

Allocation To Irrigation	632,730,165
Less: Master Water Service Contract Costs Recovered	<u>(\$49,495,697)</u>
Equals: Total Irrigation Costs Subject To Irrigation Assistance	<u>\$583,234,468</u>
Repayment:	
Less: Part Time Farm Units	\$500,000
Less: Average Repayment of \$131.60 Per Acre	\$73,446,789
Less: Contributions by; State of Washington, Irrigation, and Misc. Contributions	<u>\$18,564,755</u>

Total Assistance Required

\$490,722,924

10. REPLACEMENTS PROJECTED AFTER THE COST EVALUATION PERIOD

10.1 Introduction

This chapter documents the process used to project the amount of additional capital investment necessary to maintain an existing Federal project at its current operating level after the Cost Evaluation Period. This chapter also includes replacement costs for CGS. Replacement forecasts are included in repayment studies as required by RA 6120.2.

10.2 Methodology

The repayment study incorporates a schedule of Federal investment with the replacements that are expected to occur over the repayment period for existing generation projects. This schedule, expressed in mid-year dollars for each repayment study, FYs 2007 through 2009, is based on the amount of investment in the generating projects for the COE and BOR through the end of the cost evaluation period.

The data received from the COE and BOR are expressed in constant year dollars. The COE estimates its replacement costs for each piece of equipment by project, and by expected service life. Each piece of equipment has a life of 50 years or less as determined by engineering studies. A few years ago, Electric Power Research Institute (EPRI) worked with the COE and did a study that confirmed that the replacement years currently in place are proper.

The BOR estimates its replacements' costs by project and by expected service life to create a single figure for each service life category. The BOR's estimated costs of replacements are obtained from two sources: (1) program schedules reflecting a budget based on anticipated need and condition of facilities, and (2) computer printouts covering the long range estimates of replacements. The replacements are a product of the BOR's indexed capitalized replacement investments procedure, which provides for replacement of original facilities at current costs based on the latest cost indices. The cumulative reimbursable power investments are distributed into various FERC accounts for input into the replacement study. BOR personnel, located in the Engineering and Research Center at Denver, Colorado, compute the latest cost indices.

In order to incorporate projected replacements into the repayment study, an in-service date is calculated when the replacements for the COE and BOR are to begin. Each project's actual in-service date, for each of its respective generating units, is observed and a weighted average in-service date, for each project, is determined by weighting the number of generating units by the in-service years associated with those particular units.

A schedule of replacement investments for CGS is based on the original investment adjusted by the use of the Handy-Whitman indices for a nuclear power plant. The Handy-Whitman Index is widely used in industry for estimating replacement costs for plant. The result of this calculation was converted into a mortgage-style investment with payments sufficient to retire the replacement cost in 35 years.

**BONNEVILLE POWER ADMINISTRATION
GENERATION REPAYMENT STUDY
OCTOBER 1, 2004 - SEPTEMBER 30, 2007 COST EVALUATION PERIOD**

Table 10A: Corps/Bureau Replacements (\$000s) (FY 2007)

In Service Date	Original Principal	Current Principal	Interest Rate	Due Date	Replacement?
2009	132,082	132,082	6.820%	2054	Yes
2010	123,554	123,554	6.820%	2055	Yes
2011	115,478	115,478	6.820%	2056	Yes
2012	107,833	107,833	6.820%	2057	Yes
2013	100,692	100,692	6.820%	2058	Yes
2014	101,059	101,059	6.820%	2059	Yes
2015	101,445	101,445	6.820%	2060	Yes
2016	101,828	101,828	6.820%	2061	Yes
2017	102,273	102,273	6.820%	2062	Yes
2018	102,776	102,776	6.820%	2063	Yes
2019	103,335	103,335	6.820%	2064	Yes
2020	103,944	103,944	6.820%	2065	Yes
2021	104,603	104,603	6.820%	2066	Yes
2022	105,307	105,307	6.820%	2067	Yes
2023	93,738	93,738	6.820%	2068	Yes
2024	83,581	83,581	6.820%	2069	Yes
2025	74,621	74,621	6.820%	2070	Yes
2026	66,724	66,724	6.820%	2071	Yes
2027	59,766	59,766	6.820%	2072	Yes
2028	53,571	53,571	6.820%	2073	Yes
2029	48,097	48,097	6.820%	2074	Yes
2030	43,307	43,307	6.820%	2075	Yes
2031	39,045	39,045	6.820%	2076	Yes
2032	35,283	35,283	6.820%	2077	Yes
2033	50,409	50,409	6.820%	2078	Yes
2034	50,868	50,868	6.820%	2079	Yes
2035	51,369	51,369	6.820%	2080	Yes
2036	51,855	51,855	6.820%	2081	Yes
2037	52,381	52,381	6.820%	2082	Yes
2038	52,944	52,944	6.820%	2083	Yes
2039	53,546	53,546	6.820%	2084	Yes
2040	54,129	54,129	6.820%	2085	Yes
2041	54,747	54,747	6.820%	2086	Yes
2042	55,399	55,399	6.820%	2087	Yes
2043	52,192	52,192	6.820%	2088	Yes
2044	49,175	49,175	6.820%	2089	Yes
2045	46,388	46,388	6.820%	2090	Yes
2046	43,772	43,772	6.820%	2091	Yes
2047	41,323	41,323	6.820%	2092	Yes
2048	39,032	39,032	6.820%	2093	Yes
2049	35,217	35,217	6.820%	2094	Yes
2050	31,823	31,823	6.820%	2095	Yes
2051	28,831	28,831	6.820%	2096	Yes
2052	26,183	26,183	6.820%	2097	Yes
2053	41,003	41,003	6.820%	2098	Yes
2054	41,553	41,553	6.820%	2099	Yes
2055	42,132	42,132	6.820%	2100	Yes
2056	42,740	42,740	6.820%	2101	Yes
2057	43,334	43,334	6.820%	2102	Yes
2058	43,955	43,955	6.820%	2103	Yes

**BONNEVILLE POWER ADMINISTRATION
GENERATION REPAYMENT STUDY
OCTOBER 1, 2004 - SEPTEMBER 30, 2008 COST EVALUATION PERIOD**

Table 10B: Corps/Bureau Replacements (\$000s) (FY 2008)

In Service Date	Original Principal	Current Principal	Interest Rate	Due Date	Replacement?
2010	126,180	126,180	6.930%	2055	Yes
2011	117,932	117,932	6.930%	2056	Yes
2012	110,125	110,125	6.930%	2057	Yes
2013	102,832	102,832	6.930%	2058	Yes
2014	103,207	103,207	6.930%	2059	Yes
2015	103,601	103,601	6.930%	2060	Yes
2016	103,993	103,993	6.930%	2061	Yes
2017	104,447	104,447	6.930%	2062	Yes
2018	104,961	104,961	6.930%	2063	Yes
2019	105,532	105,532	6.930%	2064	Yes
2020	106,154	106,154	6.930%	2065	Yes
2021	106,827	106,827	6.930%	2066	Yes
2022	107,545	107,545	6.930%	2067	Yes
2023	95,731	95,731	6.930%	2068	Yes
2024	85,358	85,358	6.930%	2069	Yes
2025	76,207	76,207	6.930%	2070	Yes
2026	68,142	68,142	6.930%	2071	Yes
2027	61,037	61,037	6.930%	2072	Yes
2028	54,710	54,710	6.930%	2073	Yes
2029	49,119	49,119	6.930%	2074	Yes
2030	44,228	44,228	6.930%	2075	Yes
2031	39,875	39,875	6.930%	2076	Yes
2032	36,033	36,033	6.930%	2077	Yes
2033	51,481	51,481	6.930%	2078	Yes
2034	51,949	51,949	6.930%	2079	Yes
2035	52,461	52,461	6.930%	2080	Yes
2036	52,957	52,957	6.930%	2081	Yes
2037	53,494	53,494	6.930%	2082	Yes
2038	54,070	54,070	6.930%	2083	Yes
2039	54,684	54,684	6.930%	2084	Yes
2040	55,280	55,280	6.930%	2085	Yes
2041	55,911	55,911	6.930%	2086	Yes
2042	56,577	56,577	6.930%	2087	Yes
2043	53,302	53,302	6.930%	2088	Yes
2044	50,220	50,220	6.930%	2089	Yes
2045	47,374	47,374	6.930%	2090	Yes
2046	44,703	44,703	6.930%	2091	Yes
2047	42,201	42,201	6.930%	2092	Yes
2048	39,862	39,862	6.930%	2093	Yes
2049	35,966	35,966	6.930%	2094	Yes
2050	32,499	32,499	6.930%	2095	Yes
2051	29,444	29,444	6.930%	2096	Yes
2052	26,740	26,740	6.930%	2097	Yes
2053	41,875	41,875	6.930%	2098	Yes
2054	42,436	42,436	6.930%	2099	Yes
2055	43,028	43,028	6.930%	2100	Yes
2056	43,649	43,649	6.930%	2101	Yes
2057	44,255	44,255	6.930%	2102	Yes
2058	44,890	44,890	6.930%	2103	Yes
2059	45,553	45,553	6.930%	2104	Yes

BONNEVILLE POWER ADMINISTRATION
GENERATION REPAYMENT STUDY
OCTOBER 1, 2004 - SEPTEMBER 30, 2009 COST EVALUATION PERIOD

Table 10C: Corps/Bureau Replacements (\$000s) (FY 2009)

In Service Date	Original Principal	Current Principal	Interest Rate	Due Date	Replacement?
2011	117,932	117,932	6.930%	2056	Yes
2012	110,125	110,125	6.930%	2057	Yes
2013	102,832	102,832	6.930%	2058	Yes
2014	103,207	103,207	6.930%	2059	Yes
2015	103,601	103,601	6.930%	2060	Yes
2016	103,993	103,993	6.930%	2061	Yes
2017	104,447	104,447	6.930%	2062	Yes
2018	104,961	104,961	6.930%	2063	Yes
2019	105,532	105,532	6.930%	2064	Yes
2020	106,154	106,154	6.930%	2065	Yes
2021	106,827	106,827	6.930%	2066	Yes
2022	107,545	107,545	6.930%	2067	Yes
2023	95,731	95,731	6.930%	2068	Yes
2024	85,358	85,358	6.930%	2069	Yes
2025	76,207	76,207	6.930%	2070	Yes
2026	68,142	68,142	6.930%	2071	Yes
2027	61,037	61,037	6.930%	2072	Yes
2028	54,710	54,710	6.930%	2073	Yes
2029	49,119	49,119	6.930%	2074	Yes
2030	44,228	44,228	6.930%	2075	Yes
2031	39,875	39,875	6.930%	2076	Yes
2032	36,033	36,033	6.930%	2077	Yes
2033	51,481	51,481	6.930%	2078	Yes
2034	51,949	51,949	6.930%	2079	Yes
2035	52,461	52,461	6.930%	2080	Yes
2036	52,957	52,957	6.930%	2081	Yes
2037	53,494	53,494	6.930%	2082	Yes
2038	54,070	54,070	6.930%	2083	Yes
2039	54,684	54,684	6.930%	2084	Yes
2040	55,280	55,280	6.930%	2085	Yes
2041	55,911	55,911	6.930%	2086	Yes
2042	56,577	56,577	6.930%	2087	Yes
2043	53,302	53,302	6.930%	2088	Yes
2044	50,220	50,220	6.930%	2089	Yes
2045	47,374	47,374	6.930%	2090	Yes
2046	44,703	44,703	6.930%	2091	Yes
2047	42,201	42,201	6.930%	2092	Yes
2048	39,862	39,862	6.930%	2093	Yes
2049	35,966	35,966	6.930%	2094	Yes
2050	32,499	32,499	6.930%	2095	Yes
2051	29,444	29,444	6.930%	2096	Yes
2052	26,740	26,740	6.930%	2097	Yes
2053	41,875	41,875	6.930%	2098	Yes
2054	42,436	42,436	6.930%	2099	Yes
2055	43,028	43,028	6.930%	2100	Yes
2056	43,649	43,649	6.930%	2101	Yes
2057	44,255	44,255	6.930%	2102	Yes
2058	44,890	44,890	6.930%	2103	Yes
2059	45,553	45,553	6.930%	2104	Yes

Table 10D

CGS Replacements -- For Repayment Study Purposes Only
(\$000s)

Fiscal Year	Principal	Interest	Expenses	Contingency Funds	Total Debt Service
2019	33,483	303,250	0	0	336,733
2020	35,777	301,104	0	0	336,880
2021	38,228	298,810	0	0	337,038
2022	40,846	296,360	0	0	337,206
2023	43,644	293,742	0	0	337,386
2024	46,634	290,944	0	0	337,578
2025	49,828	287,955	0	0	337,783
2026	53,242	284,761	0	0	338,003
2027	56,889	281,348	0	0	338,237
2028	60,785	277,702	0	0	338,487
2029	64,949	273,805	0	0	338,754
2030	69,398	269,642	0	0	339,040
2031	74,152	265,194	0	0	339,345
2032	79,231	260,441	0	0	339,672
2033	84,659	255,362	0	0	340,020
2034	90,458	249,935	0	0	340,393
2035	96,654	244,137	0	0	340,791
2036	103,275	237,941	0	0	341,216
2037	110,349	231,321	0	0	341,670
2038	117,908	224,248	0	0	342,156
2039	125,984	216,690	0	0	342,674
2040	134,615	208,615	0	0	343,229
2041	143,836	199,986	0	0	343,822
2042	153,689	190,766	0	0	344,454
2043	164,216	180,915	0	0	345,131
2044	175,465	170,388	0	0	345,854
2045	187,485	159,141	0	0	346,625
2046	200,327	147,123	0	0	347,450
2047	214,049	134,282	0	0	348,331
2048	228,712	120,562	0	0	349,273
2049	244,379	105,901	0	0	350,280
2050	261,118	90,237	0	0	351,355
2051	279,005	73,499	0	0	352,503
2052	298,117	55,615	0	0	353,731
2053	318,538	36,505	0	0	355,043
2054	250,970	16,087	0	0	267,057

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