

**2007 Supplemental Wholesale Power Rate Case
Final Proposal**

**FY 2009 REVENUE REQUIREMENT
STUDY DOCUMENTATION**

Volume 1

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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
AFUDC	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 (FY 2009) and for the 7(b)(2) period (FY 2010–2013). On the first table, revenue requirements for FY 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. These revenue requirements form the basis of both the program and the 7(b)(2) cases for the 7(b)(2) Rate Test.

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-FS-BPA-10. 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 (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); other miscellaneous expenses (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 1920) 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-FS-BPA-12 for a discussion of BPA risk mitigation policy and planned net revenues for risk.*)

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 projected 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
	2009
1 OPERATING EXPENSES	
2 POWER SYSTEM GENERATION RESOURCES	
3 OPERATING GENERATION RESOURCES	586,822
4 OPERATING GENERATION SETTLEMENT PAYMENTS	20,909
5 NON-OPERATING GENERATION	2,904
6 CONTRACTED POWER PURCHASES	292,669
7 RESIDENTIAL EXCHANGE/IOU SETTLEMENT BENEFITS	2,000
8 RENEWABLE AND CONSERVATION GENERATION	124,481
9 TRANSMISSION ACQUISITION AND ANCILLARY SERVICES	175,098
10 POWER NON-GENERATION OPERATIONS	76,024
11 F&W/ENVIRONMENTAL REQUIREMENTS	229,438
12 GENERAL AND ADMINISTRATIVE	60,271
13 OTHER INCOME, EXPENSES AND ADJUSTMENTS	3,600
14 NON-FEDERAL DEBT SERVICE	563,720
15 DEPRECIATION AND AMORTIZATION	188,580
16 TOTAL OPERATING EXPENSES	2,326,515
17 INTEREST EXPENSE:	
18 INTEREST ON FEDERAL INVESTMENT-	
19 APPROPRIATED FUNDS	224,695
20 BONDS ISSUED TO U.S. TREASURY	51,202
21 INTEREST CREDIT ON CASH RESERVES	(57,900)
22 AMORTIZATION OF CAPITALIZED BOND PREMIUMS	185
23 CAPITALIZATION ADJUSTMENT	(45,937)
24 ALLOWANCE FOR FUNDS USED DURING CONSTRUCTION	(11,400)
25 NET INTEREST EXPENSE	160,845
26 TOTAL EXPENSES	2,487,360
27 MINIMUM REQUIRED NET REVENUES 1/	0
28 PLANNED NET REVENUES FOR RISK	0
29 TOTAL PLANNED NET REVENUES (27+28)	0
30 TOTAL REVENUE REQUIREMENT	2,487,360

1/ SEE NOTE ON CASH FLOW STATEMENT

Table 1B

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

	A
	<u>2009</u>
1 CASH FROM OPERATING ACTIVITIES	
2 MINIMUM REQUIRED NET REVENUES 1/	0
3 NON-CASH ITEMS:	
4 DEPRECIATION AND AMORTIZATION	188,580
5 AMORTIZATION OF CAPITALIZED BOND PREMIUMS	185
6 CAPITALIZATION ADJUSTMENT	(45,937)
7 ACCRUAL REVENUES	(3,524)
8 CASH PROVIDED BY OPERATING ACTIVITIES	139,304
9 CASH FROM INVESTMENT ACTIVITIES:	
10 INVESTMENT IN:	
11 UTILITY PLANT (INCLUDING AFUDC)	(255,952)
12 CONSERVATION	(27,200)
13 FISH & WILDLIFE	(50,000)
14 CASH USED FOR INVESTMENT ACTIVITIES	(333,152)
15 CASH FROM BORROWING AND APPROPRIATIONS:	
16 INCREASE IN BONDS ISSUED TO U.S. TREASURY	327,335
17 REPAYMENT OF BONDS ISSUED TO U.S. TREASURY	(92,990)
18 INCREASE IN FEDERAL CONSTRUCTION APPROPRIATIONS	5,817
19 REPAYMENT OF FEDERAL CONSTRUCTION APPROPRIATIONS	(10,075)
20 PAYMENT OF IRRIGATION ASSISTANCE	(7,279)
21 CASH PROVIDED BY BORROWING AND APPROPRIATIONS	222,808
22 ANNUAL INCREASE (DECREASE) IN CASH	28,960
23 PLANNED NET REVENUES FOR RISK	0
24 TOTAL ANNUAL INCREASE (DECREASE) IN CASH	28,960

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> <u>2010</u>	<u>B</u> <u>2011</u>	<u>C</u> <u>2012</u>	<u>D</u> <u>2013</u>
1 OPERATING EXPENSES				
2 POWER SYSTEM GENERATION RESOURCES				
3 OPERATING GENERATION RESOURCES	581,789	693,804	654,479	713,528
4 OPERATING GENERATION SETTLEMENT PAYMENTS	21,328	21,754	22,189	22,633
5 NON-OPERATING GENERATION	2,618	2,728	2,738	2,848
6 CONTRACTED POWER PURCHASES	303,083	406,872	257,904	341,167
7 RESIDENTIAL EXCHANGE/IOU SETTLEMENT BENEFITS	2,000	2,000	2,000	2,000
8 RENEWABLE AND CONSERVATION GENERATION	128,676	130,160	164,813	166,315
9 TRANSMISSION ACQUISITION AND ANCILLARY SERVICES	175,418	176,068	177,356	177,365
10 POWER NON-GENERATION OPERATIONS	82,793	86,650	87,846	87,969
11 F&W/ENVIRONMENTAL REQUIREMENTS	263,541	270,618	278,095	285,875
12 GENERAL AND ADMINISTRATIVE	67,414	68,278	70,318	72,302
13 OTHER INCOME, EXPENSES AND ADJUSTMENTS	1,800	3,600	3,672	3,745
14 NON-FEDERAL DEBT SERVICE	554,299	570,105	658,126	601,520
15 DEPRECIATION AND AMORTIZATION	197,602	209,597	207,842	217,339
16 TOTAL OPERATING EXPENSES	2,382,361	2,642,234	2,587,379	2,694,607
17 INTEREST EXPENSE:				
18 INTEREST ON FEDERAL INVESTMENT-				
19 APPROPRIATED FUNDS	227,567	228,298	229,418	228,002
20 BONDS ISSUED TO U.S. TREASURY	62,372	74,491	88,740	105,410
21 INTEREST CREDIT ON CASH RESERVES	(60,726)	(60,712)	(60,050)	(62,236)
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	(10,800)	(10,200)	(10,200)	(10,200)
25 NET INTEREST EXPENSE	172,661	186,125	202,155	215,224
26 TOTAL EXPENSES	2,555,022	2,828,360	2,789,534	2,909,830
27 MINIMUM REQUIRED NET REVENUES 1/	58,725	39,159	0	32,223
28 PLANNED NET REVENUES FOR RISK				
29 TOTAL PLANNED NET REVENUES (27+28)	58,725	39,159	0	32,223
30 TOTAL REVENUE REQUIREMENT	2,613,748	2,867,519	2,789,534	2,942,053

1/ SEE NOTE ON CASH FLOW STATEMENT

Table 1D

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

	A	B	C	D
	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>
1 CASH FROM OPERATING ACTIVITIES				
2 MINIMUM REQUIRED NET REVENUES 1/	58,725	39,159	0	32,223
3 NON-CASH ITEMS:				
4 DEPRECIATION AND AMORTIZATION	197,602	209,597	207,842	217,339
5 AMORTIZATION OF CAPITALIZED BOND PREMIUMS	185	185	185	185
6 CAPITALIZATION ADJUSTMENT	(45,937)	(45,937)	(45,937)	(45,937)
7 ACCRUAL REVENUES	(3,524)	(3,524)	(3,524)	(3,524)
8 CASH PROVIDED BY OPERATING ACTIVITIES	207,051	199,480	158,566	200,286
9 CASH FROM INVESTMENT ACTIVITIES:				
10 INVESTMENT IN:				
11 UTILITY PLANT (INCLUDING AFUDC)	(138,000)	(166,000)	(110,000)	(160,000)
12 CONSERVATION	(47,600)	(47,600)	(47,600)	(47,600)
13 FISH & WILDLIFE	(70,000)	(60,000)	(50,000)	(50,000)
14 CASH USED FOR INVESTMENT ACTIVITIES	(255,600)	(273,600)	(207,600)	(257,600)
15 CASH FROM BORROWING AND APPROPRIATIONS:				
16 INCREASE IN BONDS ISSUED TO U.S. TREASURY	167,600	177,600	157,600	147,600
17 REPAYMENT OF BONDS ISSUED TO U.S. TREASURY	(144,749)	(135,000)	(75,000)	(132,800)
18 INCREASE IN FEDERAL CONSTRUCTION APPROPRIATIONS	88,000	96,000	50,000	110,000
19 REPAYMENT OF FEDERAL CONSTRUCTION APPROPRIATIONS	(62,302)	(64,480)	(61,442)	(7,716)
20 PAYMENT OF IRRIGATION ASSISTANCE	0	0	(1,201)	(59,770)
21 CASH PROVIDED BY BORROWING AND APPROPRIATIONS	48,549	74,120	69,957	57,314
22 ANNUAL INCREASE (DECREASE) IN CASH	0	0	20,923	0
23 PLANNED NET REVENUES FOR RISK	0	0	0	0
24 TOTAL ANNUAL INCREASE (DECREASE) IN CASH	0	0	20,923	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>2009</u>	<u>B</u> <u>2010</u>	<u>C</u> <u>2011</u>	<u>D</u> <u>2012</u>	<u>E</u> <u>2013</u>
1 OPERATING EXPENSES					
2 POWER SYSTEM GENERATION RESOURCES					
3 OPERATING GENERATION RESOURCES	555,300	549,900	661,461	623,403	682,294
4 OPERATING GENERATION SETTLEMENT PAYMENTS	20,909	21,328	21,754	22,189	22,633
5 NON-OPERATING GENERATION	2,904	2,618	2,728	2,738	2,848
6 CONTRACTED POWER PURCHASES	292,669	303,083	406,872	257,904	341,167
7 RESIDENTIAL EXCHANGE/IOU SETTLEMENT BENEFITS					
8 RENEWABLE AND CONSERVATION GENERATION					
9 TRANSMISSION ACQUISITION AND ANCILLARY SERVICES	175,098	175,418	176,068	177,356	177,365
10 POWER NON-GENERATION OPERATIONS	68,028	73,434	76,703	77,276	77,038
11 F&W/ENVIRONMENTAL REQUIREMENTS	229,438	263,541	270,618	278,095	285,875
12 GENERAL AND ADMINISTRATIVE	51,433	58,283	58,839	60,556	62,212
13 OTHER INCOME, EXPENSES AND ADJUSTMENTS	3,600	1,800	3,600	3,672	3,745
14 NON-FEDERAL DEBT SERVICE	544,793	535,454	551,422	639,451	582,865
15 DEPRECIATION AND AMORTIZATION	141,013	144,550	148,875	154,654	159,671
16 TOTAL OPERATING EXPENSES	2,085,185	2,129,408	2,378,940	2,297,294	2,397,713
17 INTEREST EXPENSE:					
18 INTEREST ON FEDERAL INVESTMENT-					
19 APPROPRIATED FUNDS	214,984	216,320	215,639	217,158	218,144
20 BONDS ISSUED TO U.S. TREASURY	38,531	52,090	62,415	73,789	87,584
21 INTEREST CREDIT ON CASH RESERVES	(56,775)	(59,535)	(59,345)	(57,460)	(59,065)
22 AMORTIZATION OF CAPITALIZED BOND PREMIUMS					
23 CAPITALIZATION ADJUSTMENT	(45,937)	(45,937)	(45,937)	(45,937)	(45,937)
24 ALLOWANCE FOR FUNDS USED DURING CONSTRUCTION	(11,400)	(10,800)	(10,200)	(10,200)	(10,200)
25 NET INTEREST EXPENSE	139,403	152,138	162,571	177,350	190,526
26 TOTAL EXPENSES	2,224,588	2,281,546	2,541,511	2,474,644	2,588,239
27 MINIMUM REQUIRED NET REVENUES 1/	17,806	111,958	94,771	0	54,482
28 PLANNED NET REVENUES FOR RISK	0	0	0	0	0
29 TOTAL PLANNED NET REVENUES (27+28)	17,806	111,958	94,771	0	54,482
30 TOTAL REVENUE REQUIREMENT	2,242,394	2,393,504	2,636,282	2,474,644	2,642,721

1/ SEE NOTE ON CASH FLOW STATEMENT

Table 1F

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

	<u>A</u> <u>2009</u>	<u>B</u> <u>2010</u>	<u>C</u> <u>2011</u>	<u>D</u> <u>2012</u>	<u>E</u> <u>2013</u>
1 CASH FROM OPERATING ACTIVITIES					
2 MINIMUM REQUIRED NET REVENUES 1/	17,806	111,958	94,771	0	54,482
3 NON-CASH ITEMS:					
4 DEPRECIATION AND AMORTIZATION	141,013	144,550	148,875	154,654	159,671
5 AMORTIZATION OF CAPITALIZED BOND PREMIUMS	0	0	0	0	0
6 CAPITALIZATION ADJUSTMENT	(45,937)	(45,937)	(45,937)	(45,937)	(45,937)
7 ACCRUAL REVENUES	(3,524)	(3,524)	(3,524)	(3,524)	(3,524)
8 CASH PROVIDED BY OPERATING ACTIVITIES	109,358	207,047	194,184	105,193	164,692
9 CASH FROM INVESTMENT ACTIVITIES:					
10 INVESTMENT IN:					
11 UTILITY PLANT (INCLUDING AFUDC)	(255,952)	(259,121)	(281,800)	(243,541)	(313,799)
12 CONSERVATION	0	0	0	0	0
13 FISH & WILDLIFE	(50,000)	(70,000)	(60,000)	(50,000)	(50,000)
14 CASH USED FOR INVESTMENT ACTIVITIES	(305,952)	(329,121)	(341,800)	(293,541)	(363,799)
15 CASH FROM BORROWING AND APPROPRIATIONS:					
16 INCREASE IN BONDS ISSUED TO U.S. TREASURY	195,952	241,121	245,800	243,541	253,799
17 REPAYMENT OF BONDS ISSUED TO U.S. TREASURY	(32,990)	(124,749)	(135,000)	(75,000)	(60,000)
18 INCREASE IN FEDERAL CONSTRUCTION APPROPRIATIONS	110,000	88,000	96,000	50,000	110,000
19 REPAYMENT OF FEDERAL CONSTRUCTION APPROPRIATIONS	(69,089)	(82,298)	(59,184)	(28,127)	(44,922)
20 PAYMENT OF IRRIGATION ASSISTANCE	(7,279)	0	0	(1,201)	(59,770)
21 CASH PROVIDED BY BORROWING AND APPROPRIATIONS	196,594	122,074	147,616	189,213	199,107
22 ANNUAL INCREASE (DECREASE) IN CASH	0	0	0	865	0
23 PLANNED NET REVENUES FOR RISK	0	0	0	0	0
24 TOTAL ANNUAL INCREASE (DECREASE) IN CASH	0	0	0	865	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 settlement payment; PNCA headwater 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

- IOU and COU Residential Exchange benefits and program implementation expenses.

Conservation Operating Expenses

- Operating expenses associated with PS's generation conservation programs and PS 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.
- Energy Efficiency group's share of corporate expense.

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 Northwest Planning and Conservation Council (NWPCC); depreciation associated with investment in capital equipment (office furniture & fixtures, data processing hardware and software) for PS and Corporate.

Transmission Costs

- TS 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, and 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 are used 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

Tables 2E through 2J have been deleted from this document because they were not changed as part of this supplemental proceeding.

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	5,345,120	138,413	0	411,799	550,212
4. FISH AND WILDLIFE	176,547	4,572	0	231,929	236,501
5. TROJAN				2,500	2,500
6. WNP #1				169,746	169,746
7. CGS				518,334	518,334
8. WNP #3				150,817	150,817
9. SYSTEM AUGMENTATION				161,121	161,121
10. BALANCING POWER PURCHASES				74,835	74,835
11. TOTAL FEDERAL BASE SYSTEM	5,521,667	142,985	0	1,721,081	1,864,066
12. NEW RESOURCES					
13. IDAHO FALLS				6,436	6,436
14. COWLITZ FALLS				14,089	14,089
15. OTHER LONG-TERM POWER PURCHASES				61,483	61,483
16. TOTAL NEW RESOURCES				82,008	82,008
17. RESIDENTIAL EXCHANGE				2,000	2,000
18. CONSERVATION		17,166	0	157,322	174,488
19. OTHER GENERATION COSTS					
20. BPA PROGRAMS	26,824	694	0	189,006	189,700
21. WNP #3 PLANT					
22. TOTAL OTHER GENERATION COSTS	26,824	694	0	189,006	189,700
23. TOTAL GENERATION COSTS	5,548,491	160,845	0	2,151,417	2,312,262
24. TRANSMISSION COSTS					
25. TBL TRANSMISSION/ANCILLARY SERVICES				123,728	123,728
26. 3RD PARTY TRANS/ANCILLARY SERVICES				1,000	1,000
27. GENERAL TRANSFER AGREEMENTS				50,370	50,370
28. TOTAL TRANSMISSION COSTS				175,098	175,098
29. TOTAL PBL REVENUE REQUIREMENT		160,845	0	2,326,515	2,487,360

Table 2A

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

FY 2010

	A	B	C	D	E
	INVEST	NET	NET	OPER	TOTAL
	BASE	INT	REVS	EXP	(B+C+D)
1. GENERATION COSTS					
2. FEDERAL BASE SYSTEM					
3. HYDRO	5,435,317	146,679	49,888	438,362	634,929
4. FISH AND WILDLIFE	213,196	5,753	1,957	264,462	272,172
5. TROJAN				2,200	2,200
6. WNP #1				163,422	163,422
7. CGS				502,112	502,112
8. WNP #3				139,538	139,538
9. SYSTEM AUGMENTATION				158,272	158,272
10. BALANCING POWER PURCHASES				83,902	83,902
11. TOTAL FEDERAL BASE SYSTEM	5,648,513	152,432	51,845	1,752,270	1,956,547
12. NEW RESOURCES					
13. IDAHO FALLS				6,436	6,436
14. COWLITZ FALLS				14,110	14,110
15. OTHER LONG-TERM POWER PURCHASES				59,418	59,418
16. TOTAL NEW RESOURCES				79,964	79,964
17. RESIDENTIAL EXCHANGE				2,000	2,000
18. CONSERVATION		19,420	6,605	170,989	197,014
19. OTHER GENERATION COSTS					
20. BPA PROGRAMS	29,975	809	275	201,721	202,805
21. WNP #3 PLANT					0
22. TOTAL OTHER GENERATION COSTS	29,975	809	275	201,721	202,805
23. TOTAL GENERATION COSTS	5,678,488	172,661	58,725	2,206,943	2,438,330
24. TRANSMISSION COSTS					
25. TBL TRANSMISSION/ANCILLARY SERVICES				123,728	123,728
26. 3RD PARTY TRANS/ANCILLARY SERVICES				1,000	1,000
27. GENERAL TRANSFER AGREEMENTS				50,690	50,690
28. TOTAL TRANSMISSION COSTS				175,418	175,418
29. TOTAL PBL REVENUE REQUIREMENT		172,661	58,725	2,382,361	2,613,748

Table 2A

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

FY 2011

	A	B	C	D	E
	INVEST	NET	NET	OPER	TOTAL
	BASE	INT	REVS	EXP	(B+C+D)
1. GENERATION COSTS					
2. FEDERAL BASE SYSTEM					
3. HYDRO	5,474,513	155,477	32,711	457,965	646,153
4. FISH AND WILDLIFE	252,385	7,168	1,508	273,239	281,915
5. TROJAN				2,300	2,300
6. WNP #1				165,333	165,333
7. CGS				586,834	586,834
8. WNP #3				164,683	164,683
9. SYSTEM AUGMENTATION				276,217	276,217
10. BALANCING POWER PURCHASES				69,169	69,169
11. TOTAL FEDERAL BASE SYSTEM	5,726,898	162,645	34,219	1,995,740	2,192,604
12. NEW RESOURCES					
13. IDAHO FALLS				6,436	6,436
14. COWLITZ FALLS				14,163	14,163
15. OTHER LONG-TERM POWER PURCHASES				61,588	61,588
16. TOTAL NEW RESOURCES				82,187	82,187
17. RESIDENTIAL EXCHANGE				2,000	2,000
18. CONSERVATION		22,482	4,730	179,107	206,319
19. OTHER GENERATION COSTS					
20. BPA PROGRAMS	35,155	998	210	207,132	208,341
21. WNP #3 PLANT					0
22. TOTAL OTHER GENERATION COSTS	35,155	998	210	207,132	208,341
23. TOTAL GENERATION COSTS	5,762,053	186,125	39,159	2,466,166	2,691,451
24. TRANSMISSION COSTS					
25. TBL TRANSMISSION/ANCILLARY SERVICES				123,728	123,728
26. 3RD PARTY TRANS/ANCILLARY SERVICES				1,000	1,000
27. GENERAL TRANSFER AGREEMENTS				51,340	51,340
28. TOTAL TRANSMISSION COSTS				176,068	176,068
29. TOTAL PBL REVENUE REQUIREMENT		186,125	39,159	2,642,234	2,867,519

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	5,537,070	171,213	0	472,180	643,393
4. FISH AND WILDLIFE	279,664	8,648	0	280,676	289,324
5. TROJAN				2,300	2,300
6. WNP #1				190,379	190,379
7. CGS				609,051	609,051
8. WNP #3				157,810	157,810
9. SYSTEM AUGMENTATION				101,541	101,541
10. BALANCING POWER PURCHASES				94,626	94,626
11. TOTAL FEDERAL BASE SYSTEM	5,816,734	179,861	0	1,908,564	2,088,425
12. NEW RESOURCES					
13. IDAHO FALLS				0	0
14. COWLITZ FALLS				14,216	14,216
15. OTHER LONG-TERM POWER PURCHASES				98,399	98,399
16. TOTAL NEW RESOURCES				112,616	112,616
17. RESIDENTIAL EXCHANGE				2,000	2,000
18. CONSERVATION		21,055	0	175,469	196,524
19. OTHER GENERATION COSTS					
20. BPA PROGRAMS	40,088	1,239	0	211,374	212,614
21. WNP #3 PLANT					0
22. TOTAL OTHER GENERATION COSTS	40,088	1,239	0	211,374	212,614
23. TOTAL GENERATION COSTS	5,856,822	202,155	0	2,410,022	2,612,178
24. TRANSMISSION COSTS					
25. TBL TRANSMISSION/ANCILLARY SERVICES				123,928	123,928
26. 3RD PARTY TRANS/ANCILLARY SERVICES				1,000	1,000
27. GENERAL TRANSFER AGREEMENTS				52,428	52,428
28. TOTAL TRANSMISSION COSTS				177,356	177,356
29. TOTAL PBL REVENUE REQUIREMENT		202,155	0	2,587,379	2,789,534

Table 2A

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

FY 2013

	A	B	C	D	E
	INVEST	NET	NET	OPER	TOTAL
	BASE	INT	REVS	EXP	(B+C+D)
1. GENERATION COSTS					
2. FEDERAL BASE SYSTEM					
3. HYDRO	5,606,593	181,408	27,160	484,958	693,526
4. FISH AND WILDLIFE	300,436	9,721	1,455	288,649	299,825
5. TROJAN				2,400	2,400
6. WNP #1				285,566	285,566
7. CGS				493,755	493,755
8. WNP #3				172,110	172,110
9. SYSTEM AUGMENTATION				195,624	195,624
10. BALANCING POWER PURCHASES				83,556	83,556
11. TOTAL FEDERAL BASE SYSTEM	5,907,029	191,129	28,615	2,006,619	2,226,363
12. NEW RESOURCES					
13. IDAHO FALLS				0	0
14. COWLITZ FALLS				14,262	14,262
15. OTHER LONG-TERM POWER PURCHASES				99,613	99,613
16. TOTAL NEW RESOURCES				113,875	113,875
17. RESIDENTIAL EXCHANGE				2,000	2,000
18. CONSERVATION		22,680	3,396	181,018	207,094
19. OTHER GENERATION COSTS					
20. BPA PROGRAMS	43,723	1,415	212	213,729	215,356
21. WNP #3 PLANT					
22. TOTAL OTHER GENERATION COSTS	43,723	1,415	212	213,729	215,356
23. TOTAL GENERATION COSTS	5,950,752	215,224	32,223	2,517,242	2,764,688
24. TRANSMISSION COSTS					
25. TBL TRANSMISSION/ANCILLARY SERVICES				123,928	123,928
26. 3RD PARTY TRANS/ANCILLARY SERVICES				1,000	1,000
27. GENERAL TRANSFER AGREEMENTS				52,437	52,437
28. TOTAL TRANSMISSION COSTS				177,365	177,365
29. TOTAL PBL REVENUE REQUIREMENT		215,224	32,223	2,694,607	2,942,053

Table 2B**Allocation of Net Interest and Planned Net Revenues for
Program Case COSA
(\$000s)**

<u>FY 2009</u>	<u>Generation</u>	<u>Conservation</u>	<u>Total Generation</u>
1 Equivalent Annual Costs	598,006	71,446	669,451
2 Percent	89.33%	10.67%	100%
3 Net Interest Expense	143,679	17,166	160,845
4 Planned Net Revenues	0	0	0
<u>FY 2010</u>			
1 Equivalent Annual Costs	597,465	75,717	673,182
2 Percent	88.75%	11.25%	100%
3 Net Interest Expense	153,241	19,420	172,661
4 Planned Net Revenues	52,120	6,605	58,725
<u>FY 2011</u>			
1 Equivalent Annual Costs	610,508	83,873	694,380
2 Percent	87.92%	12.08%	100%
3 Net Interest Expense	163,643	22,482	186,125
4 Planned Net Revenues	34,429	4,730	39,159
<u>FY 2012</u>			
1 Equivalent Annual Costs	625,112	72,675	697,787
2 Percent	89.58%	10.42%	100%
3 Net Interest Expense	181,100	21,055	202,155
4 Planned Net Revenues	0	0	0
<u>FY 2013</u>			
1 Equivalent Annual Costs	641,298	75,539	716,837
2 Percent	89.46%	10.54%	100%
3 Net Interest Expense	192,544	22,680	215,224
4 Planned Net Revenues	28,827	3,396	32,223

Table 2C

Equivalent Annual Costs
(\$000s)

	<u>A</u> <u>AVG</u> <u>SERV</u> <u>LIFE</u>	<u>B</u> <u>COMP</u> <u>PLANT</u> <u>9/30/2007</u>	<u>C</u> <u>WT AV</u> <u>INT</u> <u>RATE</u>	<u>D</u> <u>2007</u> <u>EQ ANN</u> <u>COSTS</u>	<u>E</u> <u>COMP</u> <u>PLANT</u> <u>9/30/2008</u>	<u>F</u> <u>WT AV</u> <u>INT</u> <u>RATE</u>	<u>G</u> <u>2008</u> <u>EQ ANN</u> <u>COSTS</u>	<u>H</u> <u>COMP</u> <u>PLANT</u> <u>9/30/2009</u>	<u>I</u> <u>WT AV</u> <u>INT</u> <u>RATE</u>	<u>J</u> <u>2009</u> <u>EQ ANN</u> <u>COSTS</u>	<u>K</u> <u>COMP</u> <u>PLANT</u> <u>9/30/2010</u>
Corps of Engineers/Bureau of Reclamation	75	7,793,160	6.28%	\$494,543	8,009,675	6.36%	\$514,462	8,282,945	6.43%	\$537,613	8,408,603
BPA F&W	15	315,650	5.31%	\$31,051	316,942	5.66%	\$31,912	346,455	5.93%	\$35,509	383,969
PBL General Plant	6	97,080	4.52%	\$19,162	107,305	5.90%	\$22,117	120,019	6.09%	\$24,884	133,890
TOTAL GENERATION				\$544,756			\$568,491			\$598,006	
CONSERVATION	15	721,668	5.59%	\$71,136	682,348	5.58%	\$68,747	667,729	5.94%	\$71,446	681,234

Calculation of Average Service Lives

	<u>A</u> <u>AVG</u> <u>SERV</u> <u>LIFE</u>	<u>B</u> <u>COMP</u> <u>PLANT</u> <u>9/30/2007</u>	<u>C</u> <u>ANNUAL</u> <u>DEPREC</u> <u>9/30/2007</u>	<u>D</u> <u>AVG</u> <u>SERV</u> <u>LIFE</u>	<u>E</u> <u>COMP</u> <u>PLANT</u> <u>9/30/2008</u>	<u>F</u> <u>ANNUAL</u> <u>DEPREC</u> <u>9/30/2008</u>	<u>G</u> <u>AVG</u> <u>SERV</u> <u>LIFE</u>	<u>H</u> <u>COMP</u> <u>PLANT</u> <u>9/30/2009</u>	<u>I</u> <u>ANNUAL</u> <u>DEPREC</u> <u>9/30/2009</u>	<u>J</u> <u>AVG</u> <u>SERV</u> <u>LIFE</u>	<u>K</u> <u>COMP</u> <u>PLANT</u> <u>9/30/2010</u>
PBL General Plant											
OFFICE FURNITURE & FIXTURES											
DATA PROCESSING EQUIPMENT											
DATA PROCESSING SOFTWARE											
TOTAL GENERAL PLANT - PBL	6	97,080	16,503	6	107,305	17,382	11	120,019	10,946	14	133,890
CONSERVATION											
LEGACY											
CONAUG											
CONSERVATION ACQUISITION											
TOTAL CONSERVATION	15	721,668	46,885	15	682,348	45,906	14	667,729	47,566	13	681,234

Table 2C
Equivalent Annual Costs
(\$000s)

	<u>L</u> <u>WT AV</u> <u>INT</u> <u>RATE</u>	<u>M</u> <u>2010</u> <u>EQ ANN</u> <u>COSTS</u>	<u>N</u> <u>COMP</u> <u>PLANT</u> <u>9/30/2011</u>	<u>O</u> <u>WT AV</u> <u>INT</u> <u>RATE</u>	<u>P</u> <u>2011</u> <u>EQ ANN</u> <u>COSTS</u>	<u>Q</u> <u>COMP</u> <u>PLANT</u> <u>9/30/2012</u>	<u>R</u> <u>WT AV</u> <u>INT</u> <u>RATE</u>	<u>S</u> <u>2012</u> <u>EQ ANN</u> <u>COSTS</u>	<u>T</u> <u>COMP</u> <u>PLANT</u> <u>9/30/2013</u>	<u>U</u> <u>WT AV</u> <u>INT</u> <u>RATE</u>	<u>V</u> <u>2013</u> <u>EQ ANN</u> <u>COSTS</u>
Corps of Engineers/Bureau of Reclamation	6.40%	\$543,332	8,584,632	6.37%	\$552,220	8,761,632	6.35%	\$561,914	8,956,632	6.34%	\$573,556
BPA F&W	6.00%	\$39,535	417,923	6.06%	\$43,199	439,859	6.11%	\$45,615	467,864	6.15%	\$48,646
PBL General Plant	6.46%	\$14,599	148,840	6.52%	\$15,088	163,881	6.57%	\$17,582	178,980	6.60%	\$19,095
TOTAL GENERATION		\$597,465			\$610,508			\$625,112			\$641,298
CONSERVATION	5.58%	\$75,717	683,120	5.69%	\$83,873	563,521	5.80%	\$72,675	508,265	5.88%	\$72,565

Calculation of Average Service Lives

	<u>L</u> <u>ANNUAL</u> <u>DEPREC</u> <u>9/30/2010</u>	<u>M</u> <u>AVG</u> <u>SERV</u> <u>LIFE</u>	<u>N</u> <u>COMP</u> <u>PLANT</u> <u>9/30/2011</u>	<u>O</u> <u>ANNUAL</u> <u>DEPREC</u> <u>9/30/2011</u>	<u>P</u> <u>AVG</u> <u>SERV</u> <u>LIFE</u>	<u>Q</u> <u>COMP</u> <u>PLANT</u> <u>9/30/2012</u>	<u>R</u> <u>ANNUAL</u> <u>DEPREC</u> <u>9/30/2012</u>	<u>S</u> <u>AVG</u> <u>SERV</u> <u>LIFE</u>	<u>T</u> <u>COMP</u> <u>PLANT</u> <u>9/30/2013</u>	<u>U</u> <u>ANNUAL</u> <u>DEPREC</u> <u>9/30/2013</u>
PBL General Plant										
OFFICE FURNITURE & FIXTURES										
DATA PROCESSING EQUIPMENT										
DATA PROCESSING SOFTWARE										
TOTAL GENERAL PLANT - PBL	9,337	16	148,840	9,123	15	163,881	11,003	15	178,980	11,867
CONSERVATION										
LEGACY										
CONAUG										
CONSERVATION ACQUISITION										
TOTAL CONSERVATION	53,052	11	683,120	60,722	11	563,521	53,188	9	508,265	57,668

Table 2D

Generation Revenue Requirement by Resource Pool
7B2 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	5,345,120	134,294	17,153	411,799	563,246
4. FISH AND WILDLIFE	176,547	4,436	567	231,929	236,932
5. TROJAN				2,500	2,500
6. WNP #1				169,746	169,746
7. CGS				518,334	518,334
8. WNP #3				150,817	150,817
9. SYSTEM AUGMENTATION				161,121	161,121
10. BALANCING POWER PURCHASES				74,835	74,835
11. TOTAL FEDERAL BASE SYSTEM	5,521,667	138,730	17,720	1,721,081	1,877,531
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	26,824	673	86	189,006	189,765
21. WNP #3 PLANT					
22. TOTAL OTHER GENERATION COSTS	26,824	673	86	189,006	189,765
23. TOTAL GENERATION COSTS	5,548,491	139,403	17,806	1,910,087	2,067,296
24. TRANSMISSION COSTS					
25. TBL TRANSMISSION/ANCILLARY SERVICES				123,728	123,728
26. 3RD PARTY TRANS/ANCILLARY SERVICES				1,000	1,000
27. GENERAL TRANSFER AGREEMENTS				50,370	50,370
28. TOTAL TRANSMISSION COSTS				175,098	175,098
29. TOTAL PBL REVENUE REQUIREMENT		139,403	17,806	2,085,185	2,242,394

Table 2D

Generation Revenue Requirement by Resource Pool
7B2 Case
(\$000s)

FY 2010

	A	B	C	D	E
	INVEST	NET	NET	OPER	TOTAL
	BASE	INT	REVS	EXP	(B+C+D)
1. GENERATION COSTS					
2. FEDERAL BASE SYSTEM					
3. HYDRO	5,435,317	145,623	107,164	438,362	691,149
4. FISH AND WILDLIFE	213,196	5,712	4,203	264,462	274,377
5. TROJAN				2,200	2,200
6. WNP #1				163,422	163,422
7. CGS				502,112	502,112
8. WNP #3				139,538	139,538
9. SYSTEM AUGMENTATION				158,272	158,272
10. BALANCING POWER PURCHASES				83,902	83,902
11. TOTAL FEDERAL BASE SYSTEM	5,648,513	151,335	111,367	1,752,270	2,014,972
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	29,975	803	591	201,721	203,115
21. WNP #3 PLANT					0
22. TOTAL OTHER GENERATION COSTS	29,975	803	591	201,721	203,115
23. TOTAL GENERATION COSTS	5,678,488	152,138	111,958	1,953,990	2,218,086
24. TRANSMISSION COSTS					
25. TBL TRANSMISSION/ANCILLARY SERVICES				123,728	123,728
26. 3RD PARTY TRANS/ANCILLARY SERVICES				1,000	1,000
27. GENERAL TRANSFER AGREEMENTS				50,690	50,690
28. TOTAL TRANSMISSION COSTS				175,418	175,418
29. TOTAL PBL REVENUE REQUIREMENT		152,138	111,958	2,129,408	2,393,504

Table 2D

Generation Revenue Requirement 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	5,474,513	154,459	90,041	457,965	702,465
4. FISH AND WILDLIFE	252,385	7,121	4,151	273,239	284,511
5. TROJAN				2,300	2,300
6. WNP #1				165,333	165,333
7. CGS				586,834	586,834
8. WNP #3				164,683	164,683
9. SYSTEM AUGMENTATION				276,217	276,217
10. BALANCING POWER PURCHASES				69,169	69,169
11. TOTAL FEDERAL BASE SYSTEM	5,726,898	161,580	94,192	1,995,740	2,251,512
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	35,155	991	579	207,132	208,702
21. WNP #3 PLANT					0
22. TOTAL OTHER GENERATION COSTS	35,155	991	579	207,132	208,702
23. TOTAL GENERATION COSTS	5,762,053	162,571	94,771	2,202,872	2,460,214
24. TRANSMISSION COSTS					
25. TBL TRANSMISSION/ANCILLARY SERVICES				123,728	123,728
26. 3RD PARTY TRANS/ANCILLARY SERVICES				1,000	1,000
27. GENERAL TRANSFER AGREEMENTS				51,340	51,340
28. TOTAL TRANSMISSION COSTS				176,068	176,068
29. TOTAL PBL REVENUE REQUIREMENT		162,571	94,771	2,378,940	2,636,282

Table 2D

Generation Revenue Requirement by Resource Pool
7B2 Case
(\$000s)

FY 2012

	A	B	C	D	E
	INVEST	NET	NET	OPER	TOTAL
	BASE	INT	REVS	EXP	(B+C+D)
1. GENERATION COSTS					
2. FEDERAL BASE SYSTEM					
3. HYDRO	5,537,070	167,667	0	472,180	639,847
4. FISH AND WILDLIFE	279,664	8,468	0	280,676	289,144
5. TROJAN				2,300	2,300
6. WNP #1				190,379	190,379
7. CGS				609,051	609,051
8. WNP #3				157,810	157,810
9. SYSTEM AUGMENTATION				101,541	101,541
10. BALANCING POWER PURCHASES				94,626	94,626
11. TOTAL FEDERAL BASE SYSTEM	5,816,734	176,135	0	1,908,564	2,084,699
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	40,088	1,215	0	211,374	212,589
21. WNP #3 PLANT					0
22. TOTAL OTHER GENERATION COSTS	40,088	1,215	0	211,374	212,589
23. TOTAL GENERATION COSTS	5,856,822	177,350	0	2,119,938	2,297,288
24. TRANSMISSION COSTS					
25. TBL TRANSMISSION/ANCILLARY SERVICES				123,928	123,928
26. 3RD PARTY TRANS/ANCILLARY SERVICES				1,000	1,000
27. GENERAL TRANSFER AGREEMENTS				52,428	52,428
28. TOTAL TRANSMISSION COSTS				177,356	177,356
29. TOTAL PBL REVENUE REQUIREMENT		177,350	0	2,297,294	2,474,644

Table 2D

Generation Revenue Requirement by Resource Pool
7B2 Case
(\$000s)

FY 2013

	A	B	C	D	E
	INVEST	NET	NET	OPER	TOTAL
	BASE	INT	REVS	EXP	(B+C+D)
1. GENERATION COSTS					
2. FEDERAL BASE SYSTEM					
3. HYDRO	5,606,593	179,507	51,331	484,958	715,796
4. FISH AND WILDLIFE	300,436	9,619	2,751	288,649	301,019
5. TROJAN				2,400	2,400
6. WNP #1				285,566	285,566
7. CGS				493,755	493,755
8. WNP #3				172,110	172,110
9. SYSTEM AUGMENTATION				195,624	195,624
10. BALANCING POWER PURCHASES				83,556	83,556
11. TOTAL FEDERAL BASE SYSTEM	5,907,029	189,126	54,082	2,006,619	2,249,827
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	43,723	1,400	400	213,729	215,530
21. WNP #3 PLANT					
22. TOTAL OTHER GENERATION COSTS	43,723	1,400	400	213,729	215,530
23. TOTAL GENERATION COSTS	5,950,752	190,526	54,482	2,220,348	2,465,357
24. TRANSMISSION COSTS					
25. TBL TRANSMISSION/ANCILLARY SERVICES				123,928	123,928
26. 3RD PARTY TRANS/ANCILLARY SERVICES				1,000	1,000
27. GENERAL TRANSFER AGREEMENTS				52,437	52,437
28. TOTAL TRANSMISSION COSTS				177,365	177,365
29. TOTAL PBL REVENUE REQUIREMENT		190,526	54,482	2,397,713	2,642,721

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

Table 3A displays the expenses used in the revenue requirement income statement and statement of cash flows of the Study. (*See Revenue Requirement Study, WP-07-FS-BPA-10, Tables 5A and 5B.*) Table 3B displays the expense statement used in the revised revenue test in the Study. (*Id.* Tables 6A through 9.) Table 3B includes expenses that are revised as a result of the rate development process such as Residential Exchange Benefits, depicted in Figure 1 of the Study. (*Id.* at 7)

O&M program expenses are from the Power Function Review I and II with revisions. (*Id.* at Appendix A.) 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.

Debt service for Energy Northwest (EN) projects are based on the tables found in Chapter 8, Capitalized Contract Obligations, of this document. The EN debt service categories for WNP-1, CGS, and WNP-3 were adjusted to include a late, unexpected cost reduction of \$500,000, split equally between the three categories.

COE and BOR O&M must be functionalized between generation and the transmission component that will be included in transmission rates. In the case of this supplemental proposal, the functionalization has not changed from the WP-07 Final Proposal so Tables 3C and 3D have not been included in this document.

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 Services Program Spending Levels
(\$000s)

		Rate Period	7b2 Period			
		FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Operating Generation						
1	COLUMBIA GENERATING STATION	293,700	269,200	365,000	317,352	368,119
2	BUREAU OF RECLAMATION	82,100	87,700	98,550	104,690	107,200
3	CORPS OF ENGINEERS	179,500	193,000	197,911	201,361	206,975
4	LONG-TERM CONTRACT GENERATING PROJECTS	31,522	31,889	32,343	31,076	31,234
5	Sub-Total	586,822	581,789	693,804	654,479	713,528
Operating Generation Settlement Payment						
6	COLVILLE GENERATION SETTLEMENT	20,909	21,328	21,754	22,189	22,633
7	SPOKANE GENERATION SETTLEMENT					
8	Sub-Total	20,909	21,328	21,754	22,189	22,633
Non-Operating Generation						
9	TROJAN DECOMMISSIONING	2,500	2,200	2,300	2,300	2,400
10	WNP-1&3 DECOMMISSIONING	404	418	428	438	448
11	Sub-Total	2,904	2,618	2,728	2,738	2,848
Gross Contracted Power Purchases (excluding bookout adjustments) <Note 1						
12	DSI MONETIZED POWER SALES	54,999	58,867	58,867	58,867	58,867
13	PNCA HEADWATER BENEFITS	1,714	2,042	2,620	2,870	3,120
14	HEDGING/MITIGATION					
15	OTHER POWER PURCHASES - (e.g. Short-Term)	74,835	83,902	69,169	94,626	83,556
16	Sub-Total	131,548	144,811	130,656	156,363	145,543
17	Bookout Adjustments to Contracted Power Purchases <Note 1					
Augmentation Power Purchases (includes IOU Load Reduc. and Buy Backs)						
18	AUGMENTATION POWER PURCHASES	161,121	158,272	276,217	101,541	195,624
19	CONSERVATION AUGMENTATION	-	-	-	-	-
Exchanges & Settlements						
20	PUBLIC RESIDENTIAL EXCHANGE	-	-	-	-	-
21	IOU RESIDENTIAL EXCHANGE	2,000	2,000	2,000	2,000	2,000
22	OTHER SETTLEMENTS	-	-	-	-	-
Renewable Generation						
23	RENEWABLE CONSERVATION RATE CREDIT	6,000	-	-	-	-
24	RENEWABLES	37,955	41,588	43,438	75,214	76,404

Table 3A

Power Services Program Spending Levels
(\$000s)

		Rate Period	7b2 Period			
		FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Generation Conservation						
25	DSM TECHNOLOGY	1,600	1,600	1,600	1,600	1,600
26	CONSERVATION ACQUISITION	7,000	14,000	14,000	15,000	15,000
27	LOW INCOME WEATHERIZATION & TRIBAL	5,812	5,000	5,000	6,000	6,000
28	ENERGY EFFICIENCY DEVELOPMENT	22,000	20,500	20,500	22,000	22,000
29	LEGACY	2,114	1,988	1,622	999	1,311
30	MARKET TRANSFORMATION	10,000	12,000	12,000	12,000	12,000
31	Sub-Total	48,526	55,088	54,722	57,599	57,911
32	Conservation Rate Credit (CRC)	32,000	32,000	32,000	32,000	32,000
33	Power System Generation Sub-Total	1,029,785	1,039,494	1,257,319	1,104,124	1,248,491
Power Services System Operations						
34	EFFICIENCIES PROGRAM	-	-	-	-	-
35	INFORMATION TECHNOLOGY	5,423	6,359	6,324	6,519	6,720
36	GENERATION PROJECT COORDINATION	7,648	7,892	8,118	8,272	6,129
37	SLICE IMPLEMENTATION	2,486	2,790	2,870	2,717	2,653
38	Sub-Total	15,557	17,042	17,311	17,508	15,502
Power Services Scheduling						
39	OPERATIONS SCHEDULING	9,571	9,999	10,350	9,639	9,972
40	OPERATIONS PLANNING	5,969	6,207	6,473	6,594	6,662
41	Sub-Total	15,540	16,206	16,823	16,233	16,635
Power Services Marketing and Business Support						
42	SALES & SUPPORT	18,988	19,391	19,617	20,271	20,956
43	PUBLIC COMMUNICATION & TRIBAL LIAISON	-	-	-	-	-
44	STRATEGY, FINANCE & RISK MGMT	14,820	17,151	17,632	17,771	18,384
45	EXECUTIVE AND ADMINISTRATIVE SERVICES	3,123	3,645	5,320	5,493	5,561
46	CONSERVATION SUPPORT	7,996	9,359	9,947	10,570	10,931
47	Sub-Total	44,927	49,545	52,515	54,105	55,833
48	Power Non-Generation Operations Sub-Total	76,024	82,793	86,650	87,846	87,969
PBL Transmission Acquisition and Ancillary Services						
49	POWER SERVICES TRANSMISSION & ANCILLARY SERVICES	116,878	116,878	116,878	116,878	116,878
50	3RD PARTY GTA WHEELING	50,370	50,690	51,340	52,428	52,437
51	POWER SERVICES - 3RD PARTY TRANS & ANCILLARY SVCS	1,000	1,000	1,000	1,000	1,000
52	GENERATION INTEGRATION	6,800	6,800	6,800	7,000	7,000
53	TELEMETERING/EQUIP REPLACEMT	50	50	50	50	50
54	Power Srvcs Trans Acquisition and Ancillary Services Sub-Total	175,098	175,418	176,068	177,356	177,365

Table 3A

Power Services Program Spending Levels
(\$000s)

		Rate Period	7b2 Period			
		FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
BPA Fish and Wildlife (includes F&W Shared Services)						
55	FISH & WILDLIFE	199,998	230,000	236,000	242,000	248,000
56	F&W HIGH PRIORITY ACTION PROJECTS	-	-	-	-	-
57	Sub-Total	199,998	230,000	236,000	242,000	248,000
58	USF&W Lower Snake Hatcheries	19,690	23,600	24,480	25,760	27,340
59	Planning Council	9,450	9,641	9,838	10,035	10,235
60	Environmental Requirements	300	300	300	300	300
61	Fish and Wildlife/USF&W/Planning Council Sub-Total	229,439	263,541	270,618	278,095	285,875
62	Additional Post-Retirement Contribution	15,277	15,598	16,071	16,395	16,740
63	Agency Services G&A (excludes direct project support)	44,994	51,816	52,207	53,923	55,562
64	Shared Services (includes Supply Chain & excludes direct project support)					
65	BPA Internal Support Sub-Total	60,271	67,414	68,278	70,318	72,302
66	Bad Debt Expense	-	-	-	-	-
67	Other Income, Expenses, Adjustments	3,600	1,800	3,600	3,672	3,745
Non-Federal Debt Service						
Energy Northwest Debt Service						
68	COLUMBIA GENERATING STATION DEBT SVC	224,634	232,912	221,834	291,700	125,636
69	WNP-1 DEBT SVC	169,342	163,004	164,905	189,941	285,118
70	WNP-3 DEBT SVC	150,817	139,538	164,683	157,810	172,110
71	EN RETIRED DEBT	-	-	-	-	-
72	EN LIBOR INTEREST RATE SWAP	-	-	-	-	-
73	Sub-Total	544,793	535,454	551,422	639,451	582,865
Non-Energy Northwest Debt Service						
74	TROJAN DEBT SVC	-	-	-	-	-
75	CONSERVATION DEBT SVC	5,188	5,079	4,924	4,923	4,917
76	COWLITZ FALLS DEBT SVC	11,571	11,566	11,563	11,559	11,546
77	NORTHERN WASCO DEBT SVC	2,168	2,200	2,196	2,193	2,192
78	Sub-Total	18,927	18,845	18,683	18,675	18,655
79	Non-Federal Debt Service Sub-Total	563,719	554,299	570,105	658,126	601,520
80	Depreciation	118,832	120,029	121,773	126,313	129,557
81	Amortization	69,748	77,573	87,824	81,529	87,782
82	Total Operating Expenses	2,326,516	2,382,361	2,642,234	2,587,379	2,694,606

Table 3B

Power Services Program Spending Levels for Revised Revenue Test
(\$000s)

		Rate Period FY 2009
Operating Generation		
1	COLUMBIA GENERATING STATION	293,700
2	BUREAU OF RECLAMATION	82,100
3	CORPS OF ENGINEERS	179,500
4	LONG-TERM CONTRACT GENERATING PROJECTS	31,522
5	Sub-Total	586,822
Operating Generation Settlement Payment		
6	COLVILLE GENERATION SETTLEMENT	20,909
7	SPOKANE GENERATION SETTLEMENT	
8	Sub-Total	20,909
Non-Operating Generation		
9	TROJAN DECOMMISSIONING	2,500
10	WNP-1&3 DECOMMISSIONING	404
11	Sub-Total	2,904
Gross Contracted Power Purchases (excluding bookout adjustments) <Note 1		
12	DSI MONETIZED POWER SALES	54,999
13	PNCA HEADWATER BENEFITS	1,714
14	HEDGING/MITIGATION	
15	OTHER POWER PURCHASES - (e.g. Short-Term)	74,835
16	Sub-Total	131,548
17	Bookout Adjustments to Contracted Power Purchases	-
Augmentation Power Purchases (includes IOU Load Reduc. and Buy Backs)		
18	AUGMENTATION POWER PURCHASES	161,121
19	CONSERVATION AUGMENTATION	-
Exchanges & Settlements		
20	PUBLIC RESIDENTIAL EXCHANGE	1,107
21	IOU RESIDENTIAL EXCHANGE 1/	250,309
22	OTHER SETTLEMENTS	-
Renewable Generation		
23	RENEWABLE CONSERVATION RATE CREDIT	6,000
24	RENEWABLES	37,955
Generation Conservation		
25	DSM TECHNOLOGY	1,600
26	CONSERVATION ACQUISITION	7,000
27	LOW INCOME WEATHERIZATION & TRIBAL	5,812
28	ENERGY EFFICIENCY DEVELOPMENT	22,000
29	LEGACY	2,114
30	MARKET TRANSFORMATION	10,000
31	Sub-Total	48,526
32	Conservation Rate Credit (CRC)	32,000
33	Power System Generation Sub-Total	1,279,201

Table 3B

Power Services Program Spending Levels for Revised Revenue Test
(\$000s)

		Rate Period
	Power Services System Operations	
34	EFFICIENCIES PROGRAM	-
35	INFORMATION TECHNOLOGY	5,423
36	GENERATION PROJECT COORDINATION	7,648
37	SLICE IMPLEMENTATION	2,486
38	Sub-Total	15,557
	Power Services Scheduling	
39	OPERATIONS SCHEDULING	9,571
40	OPERATIONS PLANNING	5,969
41	Sub-Total	15,540
	Power Services Marketing and Business Support	
42	SALES & SUPPORT	18,988
43	PUBLIC COMMUNICATION & TRIBAL LIAISON	-
44	STRATEGY, FINANCE & RISK MGMT	14,820
45	EXECUTIVE AND ADMINISTRATIVE SERVICES	3,123
46	CONSERVATION SUPPORT	7,996
47	Sub-Total	44,927
48	Power Non-Generation Operations Sub-Total	76,024
	PBL Transmission Acquisition and Ancillary Services	
49	POWER SERVICES TRANSMISSION & ANCILLARY SERVICES	116,878
50	3RD PARTY GTA WHEELING	50,370
51	POWER SERVICES - 3RD PARTY TRANS & ANCILLARY SVCS	1,000
52	GENERATION INTEGRATION	6,800
53	TELEMETERING/EQUIP REPLACEMT	50
54	Power Srvcs Trans Acquisition and Ancillary Services Sub-Total	175,098
	BPA Fish and Wildlife (includes F&W Shared Services)	
55	FISH & WILDLIFE	199,998
56	F&W HIGH PRIORITY ACTION PROJECTS	-
57	Sub-Total	199,998
58	USF&W Lower Snake Hatcheries	19,690
59	Planning Council	9,450
60	Environmental Requirements	300
61	Fish and Wildlife/USF&W/Planning Council Sub-Total	229,439
62	Additional Post-Retirement Contribution	15,277
63	Agency Services G&A (excludes direct project support)	44,994
64	Shared Services (includes Supply Chain & excludes direct project support)	
65	BPA Internal Support Sub-Total	60,271
66	Bad Debt Expense	-
67	Other Income, Expenses, Adjustments	3,600

Table 3B

Power Services Program Spending Levels for Revised Revenue Test
(\$000s)

		Rate Period
Non-Federal Debt Service		
Energy Northwest Debt Service		
68	COLUMBIA GENERATING STATION DEBT SVC	224,634
69	WNP-1 DEBT SVC	169,342
70	WNP-3 DEBT SVC	150,817
71	EN RETIRED DEBT	-
72	EN LIBOR INTEREST RATE SWAP	-
73	Sub-Total	544,793
Non-Energy Northwest Debt Service		
74	TROJAN DEBT SVC	-
75	CONSERVATION DEBT SVC	5,188
76	COWLITZ FALLS DEBT SVC	11,571
77	NORTHERN WASCO DEBT SVC	2,168
78	Sub-Total	18,927
79	Non-Federal Debt Service Sub-Total	563,719
80	Depreciation	118,832
81	Amortization	69,748
82	Total Operating Expenses	2,575,932

1/ Calculation of IOU Residential Exchange Program

IOU REP Benefits	265,691
Deemer Adjustment	(16,530)
Program O&M	<u>1,148</u>
Total IOU REP Program Expense	250,309

Table 3E**FEDERAL COLUMBIA RIVER POWER SYSTEM
SUMMARY OF CURRENT REPAYMENT STUDY DATA
(\$000s)**

	<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>E</u>
	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>
1 INTEREST EXPENSE (GROSS)					
2 CORPS	164,820	167,692	168,423	169,605	168,189
3 BUREAU	43,390	43,390	43,390	43,328	43,328
4 LOWER SNAKE RIVER COMPENSATION PLAN	16,485	16,485	16,485	16,485	16,485
5 TOTAL APPROPRIATIONS	224,695	227,567	228,298	229,418	228,002
6 BONDS ISSUED TO TREASURY	51,202	62,372	74,491	88,740	105,410
7 TOTAL INTEREST EXPENSE	275,897	289,939	302,789	318,157	333,412
8 PLANNED AMORTIZATION					
9 CORPS	10,075	62,302	63,613	61,442	7,716
10 BUREAU	0	0	867	0	0
11 LOWER SNAKE RIVER COMPENSATION PLAN	0	0	0	0	0
12 TOTAL APPROPRIATIONS	10,075	62,302	64,480	61,442	7,716
13 LONG-TERM DEBT	92,990	144,749	135,000	75,000	132,800
14 TOTAL GENERATION AMORTIZATION	103,065	207,051	199,480	136,442	140,516
15 IRRIGATION ASSISTANCE	7,279	0	0	1,201	59,770
16 TOTAL AMORTIZATION/IRRIGATION	110,344	207,051	199,480	137,643	200,286

Table 3F**FEDERAL COLUMBIA RIVER POWER SYSTEM
SUMMARY OF 7(b)(2) CASE REPAYMENT STUDY DATA
(\$000s)**

	<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>E</u>
	2009	2010	2011	2012	2013
1 INTEREST EXPENSE (GROSS)					
2 CORPS	155,172	156,507	155,826	157,345	158,331
3 BUREAU	43,328	43,328	43,328	43,328	43,328
4 LOWER SNAKE RIVER COMPENSATION PLAN	16,485	16,485	16,485	16,485	16,485
5 TOTAL APPROPRIATIONS	214,984	216,320	215,639	217,158	218,144
6 BONDS ISSUED TO TREASURY	38,531	52,090	62,415	73,789	87,584
7 TOTAL INTEREST EXPENSE	253,515	268,410	278,054	290,946	305,728
8 PLANNED AMORTIZATION					
9 CORPS	69,089	82,298	59,184	28,127	44,922
10 BUREAU	0	0	0	0	0
11 LOWER SNAKE RIVER COMPENSATION PLAN	0	0	0	0	0
12 TOTAL APPROPRIATIONS	69,089	82,298	59,184	28,127	44,922
13 LONG-TERM DEBT	32,990	124,749	135,000	75,000	60,000
14 TOTAL GENERATION AMORTIZATION	102,079	207,047	194,184	103,127	104,922
15 IRRIGATION ASSISTANCE	7,279	0	0	1,201	59,770
16 TOTAL AMORTIZATION/IRRIGATION	109,358	207,047	194,184	104,328	164,692

Table 3G

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

	<u>A</u> <u>2009</u>	<u>B</u> <u>2010</u>	<u>C</u> <u>2011</u>	<u>D</u> <u>2012</u>	<u>E</u> <u>2013</u>
1 BPA (PBL + CORP GP)	10,946	9,337	9,123	11,003	11,867
2 Corps	85,567	87,175	88,348	89,628	90,295
3 Bureau	<u>22,319</u>	<u>23,517</u>	<u>24,302</u>	<u>25,682</u>	<u>27,395</u>
4 Total Depreciation 1/ 2/	118,832	120,029	121,773	126,313	129,557
5 Amortization of Legacy Conservation	27,283	25,289	23,439	20,948	17,408
6 Amortization of Conservation Augmentation	13,335	13,335	13,335	-	-
7 Amortization of Conservation Acquisitions	6,948	14,428	23,948	32,240	40,260
8 Amortization of Fish & Wildlife	<u>22,181</u>	<u>24,521</u>	<u>27,102</u>	<u>28,341</u>	<u>30,114</u>
9 Total Amortization	69,748	77,573	87,824	81,529	87,782
10 Total Federal Projects Depreciation	188,580	197,602	209,597	207,842	217,339
1/ Includes CRFM Intangible Asset Amortization of:	4,955	4,955	4,955	4,955	4,955
2/ excludes depreciation from investments paid for by TBL	23	23	23	23	23

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. Tables 4A and 4B have not been republished in this supplement because they are not necessary for calculations for FY 2009.

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 schedule 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 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	6,403,841	6,535,028	6,469,435
4 GEN INTEGRATION	3,000	3,000	3,000
5 TOTAL COMPLETED PLANT	6,406,841	6,538,028	6,472,435
6 ACCUMULATED DEPRECIATION			
7 HYDROELECTRIC GEN	2,214,446	2,299,973	2,257,210
8 GEN INTEGRATION	320	360	340
9 TOTAL ACCUMULATED DEPRECIATION	2,214,766	2,300,333	2,257,550
10 NET COMPLETED PLANT			
11 HYDROELECTRIC GEN	4,189,395	4,235,055	4,212,225
12 GEN INTEGRATION	2,680	2,640	2,660
13 TOTAL NET COMPLETED PLANT	4,192,075	4,237,695	4,214,885
14 BUREAU OF RECLAMATION			
15 COMPLETED PLANT			
16 HYDROELECTRIC GEN	1,528,461	1,653,668	1,591,065
17 GEN INTEGRATION	74,373	91,249	82,811
18 TOTAL COMPLETED PLANT	1,602,834	1,744,917	1,673,876
19 ACCUMULATED DEPRECIATION			
20 HYDROELECTRIC GEN	512,836	534,050	523,443
21 GEN INTEGRATION	17,997	19,102	18,550
22 TOTAL ACCUM DEPRECIATION	530,833	553,152	541,993
23 NET COMPLETED PLANT			
24 HYDROELECTRIC GEN	1,015,625	1,119,618	1,067,622
25 GEN INTEGRATION	56,376	72,147	64,261
26 TOTAL NET COMPLETED PLANT	1,072,001	1,191,765	1,131,883
27 CONSERVATION			
28 CUMULATIVE INVESTMENT	682,348	667,729	675,039
29 ACCUM PREPAID EXPENSE	486,443	492,190	489,316
30 NET CONSERVATION	195,905	175,539	185,723
31 FISH AND WILDLIFE			
32 CUMULATIVE INVESTMENT	316,942	346,455	331,699
33 ACCUM PREPAID EXPENSE	154,305	155,999	155,152
34 NET FISH AND WILDLIFE	162,637	190,456	176,547
35 BPA PLANT (PBL)			
36 CUMULATIVE INVESTMENT	107,305	120,019	113,662
37 ACCUMULATED DEPRECIATION	81,365	92,311	86,838
38 NET BPA PLANT INVESTMENT	25,940	27,708	26,824
39 TOTAL NET PLANT INVESTMENT	5,648,559	5,823,163	5,735,862

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	6,535,028	6,623,028	6,579,028
4 GEN INTEGRATION	3,000	3,000	3,000
5 TOTAL COMPLETED PLANT	6,538,028	6,626,028	6,582,028
6 ACCUMULATED DEPRECIATION			
7 HYDROELECTRIC GEN	2,299,973	2,387,108	2,343,541
8 GEN INTEGRATION	360	400	380
9 TOTAL ACCUMULATED DEPRECIATION	2,300,333	2,387,508	2,343,921
10 NET COMPLETED PLANT			
11 HYDROELECTRIC GEN	4,235,055	4,235,920	4,235,487
12 GEN INTEGRATION	2,640	2,600	2,620
13 TOTAL NET COMPLETED PLANT	4,237,695	4,238,520	4,238,107
14 BUREAU OF RECLAMATION			
15 COMPLETED PLANT			
16 HYDROELECTRIC GEN	1,653,668	1,691,326	1,672,497
17 GEN INTEGRATION	91,249	91,249	91,249
18 TOTAL COMPLETED PLANT	1,744,917	1,782,575	1,763,746
19 ACCUMULATED DEPRECIATION			
20 HYDROELECTRIC GEN	534,050	556,350	545,200
21 GEN INTEGRATION	19,102	20,319	19,711
22 TOTAL ACCUM DEPRECIATION	553,152	576,669	564,911
23 NET COMPLETED PLANT			
24 HYDROELECTRIC GEN	1,119,618	1,134,976	1,127,297
25 GEN INTEGRATION	72,147	70,930	71,538
26 TOTAL NET COMPLETED PLANT	1,191,765	1,205,906	1,198,835
27 CONSERVATION			
28 CUMULATIVE INVESTMENT	667,729	681,234	674,482
29 ACCUM PREPAID EXPENSE	492,190	511,147	501,669
30 NET CONSERVATION	175,539	170,087	172,813
31 FISH AND WILDLIFE			
32 CUMULATIVE INVESTMENT	346,455	383,969	365,212
33 ACCUM PREPAID EXPENSE	155,999	148,033	152,016
34 NET FISH AND WILDLIFE	190,456	235,936	213,196
35 BPA PLANT (PBL)			
36 CUMULATIVE INVESTMENT	120,019	133,890	126,955
37 ACCUMULATED DEPRECIATION	92,311	101,648	96,980
38 NET BPA PLANT INVESTMENT	27,708	32,242	29,975
39 TOTAL NET PLANT INVESTMENT	5,823,163	5,882,690	5,852,926

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	6,623,028	6,719,028	6,671,028
4 GEN INTEGRATION	3,000	3,000	3,000
5 TOTAL COMPLETED PLANT	6,626,028	6,722,028	6,674,028
6 ACCUMULATED DEPRECIATION			
7 HYDROELECTRIC GEN	2,387,108	2,475,416	2,431,262
8 GEN INTEGRATION	400	440	420
9 TOTAL ACCUMULATED DEPRECIATION	2,387,508	2,475,856	2,431,682
10 NET COMPLETED PLANT			
11 HYDROELECTRIC GEN	4,235,920	4,243,612	4,239,766
12 GEN INTEGRATION	2,600	2,560	2,580
13 TOTAL NET COMPLETED PLANT	4,238,520	4,246,172	4,242,346
14 BUREAU OF RECLAMATION			
15 COMPLETED PLANT			
16 HYDROELECTRIC GEN	1,691,326	1,771,355	1,731,341
17 GEN INTEGRATION	91,249	91,249	91,249
18 TOTAL COMPLETED PLANT	1,782,575	1,862,604	1,822,590
19 ACCUMULATED DEPRECIATION			
20 HYDROELECTRIC GEN	556,350	579,435	567,893
21 GEN INTEGRATION	20,319	21,536	20,928
22 TOTAL ACCUM DEPRECIATION	576,669	600,971	588,821
23 NET COMPLETED PLANT			
24 HYDROELECTRIC GEN	1,134,976	1,191,920	1,163,448
25 GEN INTEGRATION	70,930	69,713	70,321
26 TOTAL NET COMPLETED PLANT	1,205,906	1,261,633	1,233,769
27 CONSERVATION			
28 CUMULATIVE INVESTMENT	681,234	683,120	682,177
29 ACCUM PREPAID EXPENSE	511,147	526,156	518,652
30 NET CONSERVATION	170,087	156,964	163,525
31 FISH AND WILDLIFE			
32 CUMULATIVE INVESTMENT	383,969	417,923	400,946
33 ACCUM PREPAID EXPENSE	148,033	149,089	148,561
34 NET FISH AND WILDLIFE	235,936	268,834	252,385
35 BPA PLANT (PBL)			
36 CUMULATIVE INVESTMENT	133,890	148,840	141,365
37 ACCUMULATED DEPRECIATION	101,648	110,771	106,210
38 NET BPA PLANT INVESTMENT	32,242	38,069	35,155
39 TOTAL NET PLANT INVESTMENT	5,882,690	5,971,672	5,927,180

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	6,719,028	6,769,028	6,744,028
4 GEN INTEGRATION	3,000	3,000	3,000
5 TOTAL COMPLETED PLANT	6,722,028	6,772,028	6,747,028
6 ACCUMULATED DEPRECIATION			
7 HYDROELECTRIC GEN	2,475,416	2,565,004	2,520,210
8 GEN INTEGRATION	440	480	460
9 TOTAL ACCUMULATED DEPRECIATION	2,475,856	2,565,484	2,520,670
# NET COMPLETED PLANT			
# HYDROELECTRIC GEN	4,243,612	4,204,024	4,223,818
# GEN INTEGRATION	2,560	2,520	2,540
# TOTAL NET COMPLETED PLANT	4,246,172	4,206,544	4,226,358
# BUREAU OF RECLAMATION			
# COMPLETED PLANT			
# HYDROELECTRIC GEN	1,771,355	1,898,355	1,834,855
# GEN INTEGRATION	91,249	91,249	91,249
# TOTAL COMPLETED PLANT	1,862,604	1,989,604	1,926,104
# ACCUMULATED DEPRECIATION			
# HYDROELECTRIC GEN	579,435	603,900	591,668
# GEN INTEGRATION	21,536	22,753	22,145
# TOTAL ACCUM DEPRECIATION	600,971	626,653	613,813
# NET COMPLETED PLANT			
# HYDROELECTRIC GEN	1,191,920	1,294,455	1,243,187
# GEN INTEGRATION	69,713	68,496	69,104
# TOTAL NET COMPLETED PLANT	1,261,633	1,362,951	1,312,291
# CONSERVATION			
# CUMULATIVE INVESTMENT	683,120	563,521	623,321
# ACCUM PREPAID EXPENSE	526,156	412,145	469,150
# NET CONSERVATION	156,964	151,376	154,171
# FISH AND WILDLIFE			
# CUMULATIVE INVESTMENT	417,923	439,859	428,891
# ACCUM PREPAID EXPENSE	149,089	149,366	149,227
# NET FISH AND WILDLIFE	268,834	290,493	279,664
# BPA PLANT (PBL)			
# CUMULATIVE INVESTMENT	148,840	163,881	156,361
# ACCUMULATED DEPRECIATIO	110,771	121,774	116,273
# NET BPA PLANT INVESTMENT	38,069	42,107	40,088
# TOTAL NET PLANT INVESTMENT	5,971,672	6,053,471	6,012,572

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	6,769,028	6,834,028	6,801,528
4 GEN INTEGRATION	3,000	3,000	3,000
5 TOTAL COMPLETED PLANT	6,772,028	6,837,028	6,804,528
6 ACCUMULATED DEPRECIATION			
7 HYDROELECTRIC GEN	2,565,004	2,655,259	2,610,132
8 GEN INTEGRATION	480	520	500
9 TOTAL ACCUMULATED DEPRECIATION	2,565,484	2,655,779	2,610,632
10 NET COMPLETED PLANT			
11 HYDROELECTRIC GEN	4,204,024	4,178,769	4,191,396
12 GEN INTEGRATION	2,520	2,480	2,500
13 TOTAL NET COMPLETED PLANT	4,206,544	4,181,249	4,193,896
14 BUREAU OF RECLAMATION			
15 COMPLETED PLANT			
16 HYDROELECTRIC GEN	1,898,355	2,028,355	1,963,355
17 GEN INTEGRATION	91,249	91,249	91,249
18 TOTAL COMPLETED PLANT	1,989,604	2,119,604	2,054,604
19 ACCUMULATED DEPRECIATION			
20 HYDROELECTRIC GEN	603,900	630,078	616,989
21 GEN INTEGRATION	22,753	23,970	23,362
22 TOTAL ACCUM DEPRECIATION	626,653	654,048	640,351
23 NET COMPLETED PLANT			
24 HYDROELECTRIC GEN	1,294,455	1,398,277	1,346,366
25 GEN INTEGRATION	68,496	67,279	67,887
26 TOTAL NET COMPLETED PLANT	1,362,951	1,465,556	1,414,253
27 CONSERVATION			
28 CUMULATIVE INVESTMENT	563,521	508,265	535,893
29 ACCUM PREPAID EXPENSE	412,145	366,957	389,551
30 NET CONSERVATION	151,376	141,308	146,342
31 FISH AND WILDLIFE			
32 CUMULATIVE INVESTMENT	439,859	467,864	453,861
33 ACCUM PREPAID EXPENSE	149,366	157,484	153,425
34 NET FISH AND WILDLIFE	290,493	310,380	300,436
35 BPA PLANT (PBL)			
36 CUMULATIVE INVESTMENT	163,881	178,980	171,431
37 ACCUMULATED DEPRECIATION	121,774	133,641	127,708
38 NET BPA PLANT INVESTMENT	42,107	45,339	43,723
39 TOTAL NET PLANT INVESTMENT	6,053,471	6,143,832	6,098,650

PBL GENERAL PLANT INVESTMENT (INCLUDING CORPORATE ALLOCATION)

Table 4H

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>
2007		-	-	107	996	2,137	1,141
2008		-	-	107	1,103	2,137	1,034
2009		-	-	107	1,210	2,137	927
2010		-	-	107	1,317	2,137	820
2011		-	-	107	1,424	2,137	713
2012		-	-	107	1,531	2,137	606
2013		-	-	107	1,638	2,137	499

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>
2007	5,125	360	720	3,743	11,515	19,131	7,616
2008		-	-	3,251	14,766	19,131	4,365
2009		-	-	3,251	18,017	19,131	1,114
2010		-	-	1,114	19,131	19,131	-
2011		-	-	-	19,131	19,131	-
2012		-	-	-	19,131	19,131	-
2013		-	-	-	19,131	19,131	-

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>
2007	4,742	435	869	12,623	48,135	71,231	23,096
2008	10,225	937	1,874	13,994	62,129	81,456	19,327
2009	12,714	1,165	2,330	7,558	69,687	94,170	24,483
2010	13,871	1,272	2,543	8,086	77,773	108,041	30,268
2011	14,950	1,370	2,740	8,986	86,759	122,991	36,232
2012	15,041	1,379	2,757	10,866	97,625	138,032	40,407
2013	15,099	1,384	2,768	11,754	109,379	153,131	43,752

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>
2007		0	0	30	3,337	4,581	1,244
2008		0	0	30	3,367	4,581	1,214
2009		0	0	30	3,397	4,581	1,184
2010		0	0	30	3,427	4,581	1,154
2011		-	0	30	3,457	4,581	1,124
2012		-	0	30	3,487	4,581	1,094
2013		-	0	6	3,493	4,581	1,088

Table 4L
SUMMARY - PBL GENERAL PLANT

<u>FY</u>	<u>ANNUAL DEPR</u>	<u>ACCUM DEPR</u>	<u>CUMUL INVEST</u>	<u>NET INVEST</u>
2007	16,503	63,983	97,080	33,097
2008	17,382	81,365	107,305	25,940
2009	10,946	92,311	120,019	27,708
2010	9,096	101,407	131,269	29,862
2011	8,303	109,710	142,519	32,809
2012	9,496	119,206	153,769	34,563
2013	9,660	128,866	165,019	36,153

Table 4M
BPA FISH & WILDLIFE INVESTMENT
(\$000s)

<u>FY</u>	<u>INVEST</u>	<u>FIRST</u> <u>YEAR</u>	<u>FULL</u> <u>YEAR</u>	<u>ANNUAL</u> <u>AMORT</u>	<u>ACCUM</u> <u>AMORT</u>	<u>CUMUL</u> <u>INVEST</u>	<u>NET</u> <u>INVEST</u>
1985	4,318	138	288	138	138	4,318	4,180
1986	5,590	220	373	508	646	9,908	9,262
1987	4,709	113	314	774	1,419	14,617	13,198
1988	7,727	167	515	1,141	2,561	22,344	19,783
1989	8,267	227	551	1,717	4,277	30,611	26,334
1990	16,193	337	1,080	2,378	6,655	46,804	40,149
1991	17,680	520	1,179	3,640	10,295	64,484	54,189
1992	11,178	310	745	4,609	14,904	75,662	60,758
1993	17,338	484	1,156	5,528	20,433	93,000	72,567
1994	20,487	638	1,366	6,838	27,271	113,487	86,216
1995	32,486	932	2,166	8,498	35,768	145,973	110,205
1996	26,046	519	1,736	10,251	46,019	172,019	126,000
1997	28,064	1,210	1,871	12,678	58,697	200,083	141,386
1998	21,995	900	1,466	14,239	72,936	222,078	149,142
1999	14,748	902	983	15,707	88,643	236,826	148,183
2000	13,898	692	927	16,495	105,138	250,724	145,586
2001	16,493	89	1,100	15,725	110,955	257,309	146,354
2002	6,102	70	407	18,253	129,208	263,411	134,203
2003	11,156	47	744	17,023	133,743	262,079	128,336
2004	5,849	28	390	17,276	142,465	259,374	116,909
2005	14,575	733	972	17,710	143,982	257,756	113,774
2006	33,747	726	2,250	17,412	143,715	272,620	128,905
2007	35,635		2,376	18,482	151,019	296,885	145,866
2008	36,000	1,200	2,400	20,624	154,305	316,942	162,637
2009	50,000	1,667	3,333	22,181	155,999	346,455	190,456
2010	70,000	2,333	4,667	24,521	148,033	383,969	235,936
2011	60,000	2,000	4,000	27,102	149,089	417,923	268,834
2012	50,000	1,667	3,333	28,341	149,366	439,859	290,493
2013	50,000	1,667	3,333	30,114	157,484	467,864	310,380

Table 4N
BPA LEGACY CONSERVATION INVESTMENT
(\$000s)

<u>FY</u>	<u>INVEST</u>	<u>FIRST</u> <u>YEAR</u>	<u>FULL</u> <u>YEAR</u>	<u>ANNUAL</u> <u>AMORT</u>	<u>ACCUM</u> <u>AMORT</u>	<u>CUMUL</u> <u>INVEST</u>	<u>NET</u> <u>INVEST</u>
1982	61,940	1,418	3,097	1,418	1,418	61,940	60,522
1983	204,092	2,067	10,205	5,164	6,582	266,032	259,450
1984	66,783	334	3,339	13,636	20,218	332,815	312,597
1985	103,067	945	5,153	17,586	37,804	435,882	398,078
1986	97,618	1,312	4,881	23,106	60,910	533,500	472,590
1987	67,381	969	3,369	27,644	88,554	600,881	512,327
1988	54,320	2,396	2,716	32,440	120,994	655,201	534,207
1989	41,819	301	2,091	33,061	154,055	697,020	542,965
1990	34,095	145	1,705	34,996	189,051	731,115	542,064
1991	45,714	320	2,286	36,876	225,927	776,829	550,902
1992	62,151	730	3,108	39,572	265,499	838,980	573,481
1993	96,717	2,060	4,836	44,010	309,509	935,697	626,188
1994	115,030	2,274	5,752	49,060	358,569	1,050,727	692,158
1995	72,428	1,259	3,621	53,797	412,366	1,123,155	710,789
1996	39,450	889	1,973	57,048	469,414	1,162,605	693,191
1997	20,329	494	1,016	58,626	528,040	1,182,934	654,894
1998	14,308	506	715	59,654	587,694	1,197,242	609,548
1999	13,716	335	686	60,198	647,892	1,210,958	563,066
2000	347	225	6	60,774	708,666	1,211,305	502,639
2001	57			60,555	769,221	1,211,362	442,141
2002				59,794	829,015	1,211,362	382,347
2003				54,918	821,993	1,149,422	327,429
2004		-	-	46,430	664,331	945,330	280,999
2005		-	-	42,637	640,185	878,547	238,362
2006		-	-	37,552	574,670	775,480	200,810
2007		-	-	33,049	442,649	610,481	167,832
2008		-	-	29,843	418,172	556,161	137,989
2009		-	-	27,283	403,636	514,342	110,706
2010		-	-	25,289	394,830	480,247	85,417
2011		-	-	23,439	372,555	434,533	61,978
2012				20,948	331,352	372,382	41,030
2013				17,408	252,043	275,665	23,622

Table 40
BPA CONSERVATION AUGMENTATION INVESTMENT
(\$000s)

<u>FY</u>	<u>INVEST</u>	<u>FIRST</u> <u>YEAR</u>	<u>FULL</u> <u>YEAR</u>	<u>ANNUAL</u> <u>AMORT</u>	<u>ACCUM</u> <u>AMORT</u>	<u>CUMUL</u> <u>INVEST</u>	<u>NET</u> <u>INVEST</u>
2002	28,266	2,827	2,827	2,827	2,827	28,266	25,439
2003	23,040	2,560	2,560	5,387	8,214	51,306	43,092
2004	19,436	2,430	2,430	7,816	16,030	70,742	54,712
2005	14,750	2,107	2,107	9,923	25,953	85,492	59,539
2006	14,970	2,495	2,495	12,418	38,371	100,462	62,091
2007	4,586	917	917	13,335	51,706	105,048	53,342
2008	-	-	-	13,335	65,042	105,048	40,006
2009	-	-	-	13,335	78,377	105,048	26,671
2010	-	-	-	13,335	91,712	105,048	13,336
2011	-	-	-	13,335	105,048	105,048	-
2012	-	-	-	-	-	-	-
2013	-	-	-	-	-	-	-

Table 4P
BPA CONSERVATION ACQUISITIONS INVESTMENT
(\$000s)

<u>FY</u>	<u>INVEST</u>	<u>FIRST</u> <u>YEAR</u>	<u>FULL</u> <u>YEAR</u>	<u>ANNUAL</u> <u>AMORT</u>	<u>ACCUM</u> <u>AMORT</u>	<u>CUMUL</u> <u>INVEST</u>	<u>NET</u> <u>INVEST</u>
2007	6,139	-	1,228	501	501	6,139	5,638
2008	15,000	1,500	3,000	2,728	3,229	21,139	17,910
2009	27,200	2,720	5,440	6,948	10,177	48,339	38,162
2010	47,600	4,760	9,520	14,428	24,605	95,939	71,334
2011	47,600	4,760	9,520	23,948	48,553	143,539	94,986
2012	47,600	4,760	9,520	32,240	80,793	191,139	110,346
2013	47,600	4,760	9,520	40,260	114,914	232,600	117,686

Table 4Q

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

	ACCUM DEPR	INVESTMENT 9/30/2007	2008 ADDTNS	DEPR EXP	ACCUM DEPR	INVESTMENT 9/30/2008	2009 ADDTNS	DEPR EXP	ACCUM DEPR	INVESTMENT 9/30/2009	2010 ADDTNS	DEPR EXP
1 BOISE												
2 GENERATION	8,352	28,983		386	8,738	28,983		386	9,124	28,983		386
3 COLUMBIA BASIN												
4 GENERATION	399,475	1,237,879	9,712	16,570	416,045	1,247,591	125,207	17,469	433,514	1,372,798	37,658	18,555
5 TRANSMISSION /DELIVERY	15,532	70,282		937	16,469	70,282	16,876	1,050	17,519	87,158		1,162
6 TOTAL	415,007	1,308,161	9,712	17,507	432,514	1,317,873	142,083	18,519	451,033	1,459,956	37,658	19,717
7 GREEN SPRINGS												
8 GENERATION	8,260	10,821		144	8,404	10,821		144	8,548	10,821		144
9 HUNGRY HORSE												
10 GENERATION	47,158	121,550	1,713	1,632	48,790	123,263		1,644	50,434	123,263		1,644
11 TRANSMISSION /DELIVERY	1,074	2,477		33	1,107	2,477		33	1,140	2,477		33
12 TOTAL	48,232	124,027	1,713	1,665	49,897	125,740	-	1,677	51,574	125,740	-	1,677
13 MINIDOKA-PALISADES												
14 GENERATION	26,056	111,660		1,489	27,545	111,660		1,489	29,034	111,660		1,489
15 TRANSMISSION /DELIVERY	399	1,614		22	421	1,614		22	443	1,614		22
16 TOTAL	26,455	113,274	-	1,511	27,966	113,274	-	1,511	29,477	113,274	-	1,511
17 YAKIMA												
18 GENERATION	3,232	6,143		82	3,314	6,143		82	3,396	6,143		82
19 TOTAL USBR	509,538	1,591,409	11,425	21,295	530,833	1,602,834	142,083	22,319	553,152	1,744,917	37,658	23,517
20 GENERATION	492,533	1,517,036		20,303	512,836	1,528,461		21,214	534,050	1,653,668		22,300
21 TRANSMISSION	17,005	74,373		992	17,997	74,373		1,105	19,102	91,249		1,217
22 TOTAL	509,538	1,591,409		21,295	530,833	1,602,834		22,319	553,152	1,744,917		23,517

Table 4Q

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

	ACCUM DEPR	INVESTMENT 9/30/2010	2011 ADDTNS	DEPR EXP	ACCUM DEPR	INVESTMENT 9/30/2011	2012 ADDTNS	DEPR EXP	ACCUM DEPR	INVESTMENT 9/30/2012	2013 ADDTNS	DEPR EXP	ACCUM DEPR	INVESTMENT 9/30/2013
1 BOISE														
2 GENERATION		9,510		386	9,896	28,983		386	10,282	28,983		386	10,668	28,983
3 COLUMBIA BASIN														
4 GENERATION	452,069	1,410,456	80,029	19,340	471,409	1,490,485	127,000	20,720	492,129	1,617,485	130,000	22,433	514,562	1,747,485
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	470,750	1,497,614	80,029	20,502	491,252	1,577,643	127,000	21,882	513,134	1,704,643	130,000	23,595	536,729	1,834,643
7 GREEN SPRINGS														
8 GENERATION	8,692	10,821		144	8,836	10,821		144	8,980	10,821		144	9,124	10,821
9 HUNGRY HORSE														
10 GENERATION	52,078	123,263		1,644	53,722	123,263		1,644	55,366	123,263		1,644	57,010	123,263
11 TRANSMISSION /DELIVERY	1,173	2,477		33	1,206	2,477		33	1,239	2,477		33	1,272	2,477
12 TOTAL	53,251	125,740	-	1,677	54,928	125,740	-	1,677	56,605	125,740	-	1,677	58,282	125,740
13 MINIDOKA-PALISADES														
14 GENERATION	30,523	111,660		1,489	32,012	111,660		1,489	33,501	111,660		1,489	34,990	111,660
15 TRANSMISSION /DELIVERY	465	1,614		22	487	1,614		22	509	1,614		22	531	1,614
16 TOTAL	30,988	113,274	-	1,511	32,499	113,274	-	1,511	34,010	113,274	-	1,511	35,521	113,274
17 YAKIMA														
18 GENERATION	3,478	6,143		82	3,560	6,143		82	3,642	6,143		82	3,724	6,143
19 TOTAL USBR	576,669	1,782,575	80,029	24,302	600,971	1,862,604	127,000	25,682	626,653	1,989,604	130,000	27,395	654,048	2,119,604
20 GENERATION	556,350	1,691,326		23,085	579,435	1,771,355		24,465	603,900	1,898,355		26,178	630,078	2,028,355
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	576,669	1,782,575		24,302	600,971	1,862,604		25,682	626,653	1,989,604		27,395	654,048	2,119,604

Table 4R

Corps of Engineers: Investment and Depreciation
(S000s)

	A	B	C	D	E	F	G	H	I	J	K
	2007			2008	2008			2009	2009		
	ACCUM	INVESTMENT	2008	DEPR	ACCUM	INVESTMENT	2009	DEPR	ACCUM	INVESTMENT	2010
	DEPR	9/30/2007	ADDTNS	EXP	DEPR	9/30/2008	ADDTNS	EXP	DEPR	9/30/2009	ADDTNS
1 BONNEVILLE											
2 GENERATION	345,983	993,602	6,782	13,293	359,276	1,000,384		13,338	372,614	1,000,384	
3 TRANSMISSION	280	3,000		40	320	3,000		40	360	3,000	
4 TOTAL	346,263	996,602		13,333	359,596	1,003,384		13,378	372,974	1,003,384	
5 OTHER PROJECTS											
6 (GENERATION ONLY)											
7 ALBENI FALLS	20,870	43,318		578	21,448	43,318		578	22,026	43,318	
8 CHIEF JOSEPH	272,393	573,304		7,644	280,037	573,304		7,644	287,681	573,304	
9 COUGAR	9,713	82,291		1,097	10,810	82,291		1,097	11,907	82,291	
10 DETROIT-BIG CLIFF	25,941	50,949		679	26,620	50,949		679	27,299	50,949	
11 DWORSHAK	107,004	294,855	2,539	3,948	110,952	297,394	1,466	3,975	114,927	298,860	
12 GREEN PETER-FOSTER	22,360	55,658		742	23,102	55,658		742	23,844	55,658	
13 HILLS CREEK	10,992	20,582		274	11,266	20,582	320	277	11,543	20,902	
14 ICE HARBOR	74,115	166,224		2,216	76,331	166,224	2,606	2,234	78,565	168,830	
15 JOHN DAY	206,805	509,388		6,792	213,597	509,388		6,792	220,389	509,388	
16 LIBBY	146,713	731,522		9,754	156,467	731,522		9,754	166,221	731,522	
17 LITTLE GOOSE	96,111	216,878	3,396	2,914	99,025	220,274	848	2,943	101,968	221,122	
18 LOOKOUT POINT-DEXTER	40,826	61,049	195	815	41,641	61,244	444	820	42,461	61,688	
19 LOST CREEK	10,884	28,522		380	11,264	28,522	650	385	11,649	29,172	
20 LOWER GRANITE	129,434	341,303	4,938	4,584	134,018	346,241		4,617	138,635	346,241	
21 LOWER MONUMENTAL	104,187	239,050	3,240	3,209	107,396	242,290	847	3,236	110,632	243,137	
22 MCNARY	186,398	340,079		4,534	190,932	340,079	6,409	4,577	195,509	346,488	
23 THE DALLES	186,507	363,795		4,851	191,358	363,795	7,597	4,901	196,259	371,392	
24 LOWER SNAKE F&W	36,264	256,581		3,421	39,685	256,581		3,421	43,106	256,581	
25 COLUMBIA R. FISH BYPASS 1/	98,157	829,801	184,000	11,064	109,221	1,013,801	110,000	13,517	122,738	1,123,801	88,000
26 TOTAL OTHER	1,785,674	5,205,149	198,308	69,496	1,855,170	5,403,457	131,187	72,189	1,927,359	5,534,644	88,000
27 TOTAL CORPS	2,131,937	6,201,751	198,308	82,829	2,214,766	6,406,841	131,187	85,567	2,300,333	6,538,028	88,000
28 GENERATION	2,131,657	6,198,751		82,789	2,214,446	6,403,841		85,527	2,299,973	6,535,028	
29 TRANSMISSION	280	3,000		40	320	3,000		40	360	3,000	
30 TOTAL	2,131,937	6,201,751		82,829	2,214,766	6,406,841		85,567	2,300,333	6,538,028	
1/ Includes FAS 71 Intangible Asset	-	371,613		4,955	4,955	371,613		4,955	9,910	371,613	

Table 4R

Corps of Engineers: Investment and Depreciation
(S000s)

	L	M	N	O	P	Q	R	S	T	U	V
	2010	2010			2011	2011			2012	2012	
	DEPR	ACCUM	INVESTMENT	2011	DEPR	ACCUM	INVESTMENT	2012	DEPR	ACCUM	INVESTMENT
	EXP	DEPR	9/30/2010	ADDTNS	EXP	DEPR	9/30/2011	ADDTNS	EXP	DEPR	9/30/2012
1 BONNEVILLE											
2 GENERATION	13,338	385,952	1,000,384		13,338	399,290	1,000,384		13,338	412,628	1,000,384
3 TRANSMISSION	40	400	3,000		40	440	3,000		40	480	3,000
4 TOTAL	13,378	386,352	1,003,384		13,378	399,730	1,003,384		13,378	413,108	1,003,384
5 OTHER PROJECTS											
6 (GENERATION ONLY)											
7 ALBENI FALLS	578	22,604	43,318		578	23,182	43,318		578	23,760	43,318
8 CHIEF JOSEPH	7,644	295,325	573,304		7,644	302,969	573,304		7,644	310,613	573,304
9 COUGAR	1,097	13,004	82,291		1,097	14,101	82,291		1,097	15,198	82,291
10 DETROIT-BIG CLIFF	679	27,978	50,949		679	28,657	50,949		679	29,336	50,949
11 DWORSHAK	3,985	118,912	298,860		3,985	122,897	298,860		3,985	126,882	298,860
12 GREEN PETER-FOSTER	742	24,586	55,658		742	25,328	55,658		742	26,070	55,658
13 HILLS CREEK	279	11,822	20,902		279	12,101	20,902		279	12,380	20,902
14 ICE HARBOR	2,251	80,816	168,830		2,251	83,067	168,830		2,251	85,318	168,830
15 JOHN DAY	6,792	227,181	509,388		6,792	233,973	509,388		6,792	240,765	509,388
16 LIBBY	9,754	175,975	731,522		9,754	185,729	731,522		9,754	195,483	731,522
17 LITTLE GOOSE	2,948	104,916	221,122		2,948	107,864	221,122		2,948	110,812	221,122
18 LOOKOUT POINT-DEXTER	823	43,284	61,688		823	44,107	61,688		823	44,930	61,688
19 LOST CREEK	389	12,038	29,172		389	12,427	29,172		389	12,816	29,172
20 LOWER GRANITE	4,617	143,252	346,241		4,617	147,869	346,241		4,617	152,486	346,241
21 LOWER MONUMENTAL	3,242	113,874	243,137		3,242	117,116	243,137		3,242	120,358	243,137
22 MCNARY	4,620	200,129	346,488		4,620	204,749	346,488		4,620	209,369	346,488
23 THE DALLES	4,952	201,211	371,392		4,952	206,163	371,392		4,952	211,115	371,392
24 LOWER SNAKE F&W	3,421	46,527	256,581		3,421	49,948	256,581		3,421	53,369	256,581
25 COLUMBIA R. FISH BYPASS 1/	14,984	137,722	1,211,801	96,000	16,157	153,879	1,307,801	50,000	17,437	171,316	1,357,801
26 TOTAL OTHER	73,797	2,001,156	5,622,644	96,000	74,970	2,076,126	5,718,644	50,000	76,250	2,152,376	5,768,644
27 TOTAL CORPS	87,175	2,387,508	6,626,028	96,000	88,348	2,475,856	6,722,028	50,000	89,628	2,565,484	6,772,028
28 GENERATION	87,135	2,387,108	6,623,028		88,308	2,475,416	6,719,028		89,588	2,565,004	6,769,028
29 TRANSMISSION	40	400	3,000		40	440	3,000		40	480	3,000
30 TOTAL	87,175	2,387,508	6,626,028		88,348	2,475,856	6,722,028		89,628	2,565,484	6,772,028
1/ Includes FAS 71 Intangible Asset	4,955	14,865	371,613		4,955	19,820	371,613		4,955	24,775	371,613

Table 4R

Corps of Engineers: Investment and Depreciation
(S000s)

	W	X	Y	Z
	2013 ADDTNS	2013 DEPR EXP	2013 ACCUM DEPR	INVESTMENT 9/30/2013
1 BONNEVILLE				
2 GENERATION		13,338	425,966	1,000,384
3 TRANSMISSION		40	520	3,000
4 TOTAL		13,378	426,486	1,003,384
5 OTHER PROJECTS				
6 (GENERATION ONLY)				
7 ALBENI FALLS		578	24,338	43,318
8 CHIEF JOSEPH		7,644	318,257	573,304
9 COUGAR		1,097	16,295	82,291
10 DETROIT-BIG CLIFF		679	30,015	50,949
11 DWORSHAK		3,985	130,867	298,860
12 GREEN PETER-FOSTER		742	26,812	55,658
13 HILLS CREEK		279	12,659	20,902
14 ICE HARBOR		2,251	87,569	168,830
15 JOHN DAY		6,792	247,557	509,388
16 LIBBY		9,754	205,237	731,522
17 LITTLE GOOSE		2,948	113,760	221,122
18 LOOKOUT POINT-DEXTER		823	45,753	61,688
19 LOST CREEK		389	13,205	29,172
20 LOWER GRANITE		4,617	157,103	346,241
21 LOWER MONUMENTAL		3,242	123,600	243,137
22 MCNARY		4,620	213,989	346,488
23 THE DALLES		4,952	216,067	371,392
24 LOWER SNAKE F&W		3,421	56,790	256,581
25 COLUMBIA R. FISH BYPASS 1/	65,000	18,104	189,420	1,422,801
26 TOTAL OTHER	65,000	76,917	2,229,293	5,833,644
27 TOTAL CORPS	65,000	90,295	2,655,779	6,837,028
28 GENERATION		90,255	2,655,259	6,834,028
29 TRANSMISSION		40	520	3,000
30 TOTAL		90,295	2,655,779	6,837,028
1/ Includes FAS 71 Intangible Asset		4,955	29,730	371,613

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>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>
1 Annual Cash Surplus/(Deficit)		28,960	-	-	20,923	-
2 SOY Cash Balance		892,000	906,480	906,480	906,480	927,403
3 EOY Cash Balance	892,000	920,960	906,480	906,480	927,403	927,403
4 Average Cash Balance		906,480	906,480	906,480	916,941	927,403
5 Interest Income Rate		5.50%	5.50%	5.50%	5.50%	5.50%
6 Repayment Study Interest Income		8,044	10,870	10,856	9,618	11,229
7 Annual Interest Income		57,900	60,726	60,712	60,050	62,236

Table 5B

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

	<u>2008</u>	<u>2009</u>
1 Annual Cash Surplus/(Deficit)		
2 SOY Cash Balance		892,000
3 EOY Cash Balance	892,000	920,960
4 Average Cash Balance		906,480
5 Interest Income Rate		5.50%
6 Repayment Study Interest Income		8,044
7 Annual Interest Income		57,900

Table 5C

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

	<u>2008</u>	<u>2009</u>	<u>Repayment Period</u>
1 Annual Cash Surplus/(Deficit)		28,686	
2 SOY Cash Balance		892,000	970,535
3 EOY Cash Balance	892,000	920,686	970,535
4 Average Cash Balance		906,343	970,535
5 Interest Income Rate		5.50%	5.50%
6 Repayment Study Interest Income		8,044	
7 Annual Interest Income		57,893	53,379

Table 5D

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

	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>
1 Annual Cash Surplus/(Deficit)	-	-	-	865	-
2 SOY Cash Balance	892,000	892,000	892,000	892,000	892,865
3 EOY Cash Balance	892,000	892,000	892,000	892,865	892,865
4 Average Cash Balance	892,000	892,000	892,000	892,432	892,865
5 Interest Income Rate	5.50%	5.50%	5.50%	5.50%	5.50%
6 Repayment Study Interest Income	7,715	10,475	10,285	8,376	9,957
7 Annual Interest Income	56,775	59,535	59,345	57,460	59,065

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:

$$[(FY_1/100) \times 0.5] + 1 = \text{Cumulative Price Deflator}_1$$

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.

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

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 2006 GI forecast.

memorandum

DATE: April 28, 2006

REPLY TO
ATTN OF: KFW

SUBJECT: FY 2006 Agency Borrowing Rate and Inflation Forecasts

TO: See Attached

BPA borrowing rate and inflation forecasts for the period FY 2006 through 2035 are attached. The FY 2006 forecast is summarized in the following tables:

- Table 1: 30-year term (2006 Forecast)
- Table 2: 30-year term (Comparison of 2006 and 2005 Forecasts)
- Table 3: 20-year term (2006 Forecast)
- Table 4: 15-year term (2006 Forecast).
- Table 5: Appropriations
- Table 6: BPA Treasury borrowing
- Table 7: Municipal taxable borrowing
- Table 8: Municipal tax-exempt borrowing
- Table 9: Projected change in the GDP price deflator
- Table 10: Summary of equivalent cumulative discount rates for alternative base years

These forecasts provide an internally consistent basis for BPA decisions regarding: debt management, budget formulation, and other financial analyses, as well as capital budgeting, and strategic planning efforts. The projected near-term increase in the cost of BPA borrowing compared to our last forecast reflects a consensus expectation that interest rates will rise significantly over the next four years. However, beyond 2010, the FY 2006 projections are generally lower than the FY 2005 forecast.

FY 2006 Borrowing Rate and Inflation Forecasts

The FY 2006 forecast of BPA cost of funds and inflation expectations is based on the Global Insight (GI) February 2006 First Quarter Long-Term Economic Outlook.

Table 1 illustrates the basis of BPA's Treasury borrowing rate. GI calendar year (CY) projections of 30-year Treasury bond yields are shown in Column A. BPA 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 Treasury borrowing. The markup reflects the Government Agency spread over the Treasury yield curve, and, when appropriate, an adder for call options in BPA Treasury borrowings. The mark-up ranges from 23 basis points (bp) over the 1-year Treasury note to 90 bp over the 30-year Treasury bond. The estimated Treasury markup is a value derived from: (1) the historical Government Agency/Treasury yield curve spreads, (2) past BPA Treasury borrowings, and (3) the knowledge and experience gained from previous Treasury borrowings.

BPA inflation assumptions reflect projected changes in the U.S. Gross Domestic Product (GDP) Price Deflator. This index assumes a base year of 2000. 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 2006-2035 on a calendar year basis and in column B by BPA fiscal year. Column C provides the cumulative price index projections. The forecast expresses fiscal year dollar values as mid-year dollar values.

BPA Borrowing Forecasts

The FY 2006 forecast begins in an environment of transition from historically low interest rates to a significantly higher long-term equilibrium. The Federal Reserve Board (Fed) increased interest rates in 2005 at every meeting of the Federal Open Market Committee (FOMC). Although the Fed increased short term interest rates from 1.00 percent in 2004 to 4.75 percent by December 2005, the U.S. economy has continued to perform well with solid growth in most sectors. In addition to rapidly rising interest rates the U.S. economy withstood the economic buffeting of hurricane Katrina and an explosive spike in energy prices.

Notwithstanding future random events, monetary policy will remain an important determinant for interest rates in 2006 and the near-term. The Fed's major concern is that the pace of economic expansion will ignite inflationary pressures. However, the Fed will at the same time, be forward looking on policy as rate increases already sanctioned will not have their main impact until later in 2006. As a consequence, the Fed will likely be more responsive to ongoing economic trends in 2006, and will not tighten in the same mechanical fashion of 2005.

Although most forecasters believe the steady increase in Fed rate hikes is coming to an end, just when this occurs is problematic. In February 2006, GI believed the last rate hike would occur at the Fed's March meeting. It now appears that inflationary risks associated with the economy's continued robust strength will require additional Fed tightening of monetary policy. However, given the net risks to the economy, GI believes it is unlikely the Fed will tighten beyond the CY second quarter (June 2006).

The 2-year Treasury note rate is projected to increase 76 bp, from 4.51 percent in FY 2006 to 5.27 percent in 2009. The 10-year Treasury bond rate is projected to increase 80 bp from 4.68 percent to 5.48 percent while the 30-year Treasury bond rate is projected to increase 87 bp from 4.86 percent to 5.73 percent.

This outlook suggests BPA borrowing rates will increase significantly over all funding sources. BPA borrowing rate forecasts are a direct reflection of the Treasury yield curve. Most of the increase is expected to occur over the next four years. By 2010, BPA's 10-year borrowing rate from the U.S. Treasury is expected to increase 103 bp from 5.23 percent in FY 2006 to 6.26 percent while the municipal taxable 10-year rate rises 128 bp from 5.61 percent to 6.89 percent. The municipal tax-exempt 10-year rate is expected to increase 86 bp from 4.17 percent to 5.03 percent. Beyond 2010, BPA borrowing rates are expected to remain flat.

The assumptions underlying the FY 2006 forecast of BPA borrowing costs, as well as how the current forecast differs from the FY 2005 forecast are described in the attached appendix.

Inflation Forecast

The GDP Price Deflator is the broadest measure of inflation in the U.S. economy. GDP reflects the value of all 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 real GDP calculations reflect both the changing mix of the components in GDP, and the relative price changes in these components.

The GI February 2006 Trend forecast assumes inflation will remain subdued over the next 30 years. The U.S economy grows more slowly than the FY 2005 forecast. Greater slack in the economy reduces inflationary pressures.

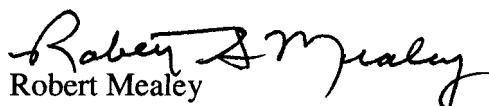
GI expects the rate of GDP inflation in 2006 will remain close to 2005 levels. Inflation slips to 2.68 percent in 2006 from a 2.75 percent rate in 2005. Beyond 2006 the forecast assumes a significantly lower rate of inflation. In 2007, inflationary pressures drop to a 1.82 percent annual rate. This rate rises slightly to a long-term average equilibrium rate of approximately 2.00 percent by 2008 and does not change significantly thereafter. Overall, the annual rate of inflation in the February 2006 forecast is approximately half a percent lower than the 2005 projection beyond 2011 (See Table 9).

Note: As a broad measure of inflation, the GDP price deflator is a reasonable approximation of BPA Agency-wide inflation. However, it will likely be less representative of inflation associated with specific components of BPA's budget. For example, GDP inflation may not be the best measure for estimating the annual increase in labor costs. We are currently investigating the development of a more representative measure.

The attached appendix: (1) provides a general description of the specific assumptions underlying FY 2006 expectations regarding future trends in BPA cost of capital and inflation, (2) documents differences from the FY 2005 forecast, as well as limiting assumptions and risks, (3) provides a basis for evaluating the adequacy and required frequency of forecasts of commonly shared financial assumptions, and (4) provides an understanding that supports on-going efforts to develop financial forecasts that are of interest to BPA decision-makers.

We are interested in feedback that would: (1) enhance the effectiveness of forecasts supporting common financial assumptions used throughout the Agency, and (2) help identify gaps between available forecasts and the decision-support information needs of the Agency.

If you have any questions, feedback, or suggestions concerning the FY 2006 borrowing rate and inflation forecasts, please contact Robert Mealey 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
Economist

2 Attachments
Appendix
Tables

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

Appendix – Forecast Assumptions/Source of Change

This appendix provides a general description of the assumptions underlying BPA FY 2006 expectations regarding future trends in BPA cost of capital and inflation. The FY 2006 forecast includes borrowing costs associated with four sources of capital. Agency assumptions regarding the expected cost of BPA and third-party debt financing are projected for: (1) BPA borrowing from the U.S. Treasury, (2) Congressional Appropriations, (3) third-party municipal taxable BPA-backed borrowings, and (4) third-party municipal tax-exempt BPA-backed borrowings. Agency inflation assumptions are represented by a single broad-based price index.

The Global Insight (GI) February 2006 Long-term Economic Outlook Base Case is a trend forecast. It is the integration of the GI short-term (10-Year) economic outlook and the GI long-term outlook (30-year focus). The short end of the forecast accounts for more of the variability associated with future interest and inflation rates, while the long end describes their general direction. These expectations have changed significantly since the BPA FY 2005 forecast.

Core Forecast Assumptions

The FY 2006 forecast is based on several core assumptions that are shared with the FY 2005 forecast. Both forecasts assume:

- There are no internal imbalances associated with the current growth path of the U.S. economy.
- The retirement of a generation of Baby Boomers will not create relative labor force scarcities that increase long-term inflationary pressures in the economy.
- Federal budget deficits will decline from current record-setting levels. GI believes the reduction of Federal budget deficits will be sufficient to reduce the public/private competition for available capital and mitigate upward pressure on interest rates.
- Capital formation from domestic savings along with necessary large and rapidly expanding inflows of foreign capital are sufficient to support the development of new technologies required to raise labor productivity and support projected rates of economic growth. Domestic U.S. savings rates will increase from very low levels. American households will reform their spendthrift habits and become savers.
- The U.S. economy avoids significant external shocks and recessionary cycles over the next 30 years.

FY 2006 Forecast Differences

The GI long-term forecast normally changes little from one year to the next. However in 2006 there were some significant differences from the 2005 long-term forecast.

- Restrictive monetary policy, over the past year, has continued longer than anticipated by the FY 2005 forecast. The FY 2005 GI forecast assumed that the short-term Federal Funds rate would peak at 4.07 percent in 2007. The February FY 2006 GI forecast estimates that the Fed will now push the Federal Funds rate up to 4.75 percent.
- Interest rates, over the next four years are expected to move higher, beyond FY 2005 expectations.

Near-term inflationary worries have risen in the FY 2006 forecast. The inflationary expectations ignited in 2005 by high world oil prices have persisted. Over the past year, crude oil prices have more than doubled. Although the U.S. economy has been more tolerant of both higher energy prices and rising short-term interest rates, stronger growth in CY 2006 has aggravated inflation worries.

- GI is less concerned about the long run. The GI 2006 forecast reflects a general belief that inflation is more contained than was reflected in the FY 2005 forecast. The U.S. economy is projected to grow more slowly over the long run. Slower growth will help to mitigate inflationary pressures on interest rates.
- Beyond 2010 interest rates are scaled back from levels projected in the FY 2005 forecast.
- Lower inflationary expectations and interest rate projections in the FY 2006 forecast also assumes the Fed will do a better job managing the U.S. economy and inflation. The new Fed Chairman is expected to dispel some of the uncertainty surrounding monetary policy with greater transparency and explicit inflation targets. Explicit targets will focus monetary policy on inflation risks. If the Fed is successful in enhancing the effectiveness of monetary policy, the need to step on the interest rate brake will diminish with slack in the economy.

FY 2006 Forecast Risks

Risks associated with the FY 2006 GI forecast include the following.

- Escalating energy price shocks that persist over an extended period could raise the rate of inflation. Natural disasters, geopolitical events, and regional conflicts that would disrupt the supply of fossil fuels could generate significant price shocks.

GI believes that, while energy price shocks might raise the level of inflation, these shocks would not be sustained. Once the economy adjusted to higher energy costs, the rate of inflation would settle back to a long-term equilibrium rate.

- A more serious threat to the forecast might emerge from the accelerating energy demands of emerging economies such as China and India. These rapidly expanding economies could cause global demand to outpace the rate of new oil discoveries and the world supply of fossil fuels over an extended period. GI believes that over the long run, new fuel efficiency (new vehicle CAFÉ standards) should help contain the growth of energy demands.
- The likelihood of ballooning Federal budget deficits could increase significantly. In the near-term the Iraq war and hurricane Katrina have been budget busters. While GI believes the Federal budget deficit will begin to decline over the next five years, the likelihood of

international conflagrations, as well as the growing health care and retirement needs of senior citizens may raise the level of deficit spending above current expectations.

- Over a 30 year forecast, the impacts of global warming cannot be ignored. Climate change could dramatically affect agricultural production, commodity markets, the location of industrial production, and exacerbate inflationary pressures. This is a qualitative risk that while beyond our ability to fully understand, measure and predict with any confidence, illustrates the expanding range of possible future scenarios.
- Productivity is an important assumption in the forecast and is a significant risk to the forecast. A key determinant of total productivity is technological productivity. It's a measure of how much productivity contributes to the real GDP growth. Between 1990 and 2000, the economy grew 3.5 percent annually. Of this rate 1.1 percent was due to technology. Between 2005 and 2020 GI projects the economy will grow 3.2 percent per year. Of this, 1.3 percent is attributed to technological productivity. The rate at which productivity increases is dependent on the growth of capital formation and investment. Given a low domestic savings rate, the rate at which productivity and the U.S. economy grows is heavily dependent on the continued availability of foreign sources of capital. If the attractiveness of the U.S. dollar as an international reserve currency and the relative attractiveness of U.S. investments were to diminish, interest rates and the cost of capital in the U.S. economy would rise significantly, productivity would fall, and the rate of inflation would accelerate. The most common risk associated with economic forecasts is lower than expected productivity.

GI has given the likelihood of their FY 2006 Trend Forecast an 80 percent probability. However, the range of possible scenarios is bounded by an expanding set of possible futures. A subset of these futures is captured in the GI optimistic and pessimistic forecast scenarios. GI has assigned a 20 percent probability to alternative scenarios that would fall outside this range.

Table 1
30 YEAR TREASURY YIELDS
FY 2006 FORECAST OF BPA TREASURY BORROWING RATES

Calendar/Fiscal Years 2006 - 2035

<u>YEAR</u>	(A) BOND RATE 1/ <u>Calendar Year</u>	(B) BOND RATE <u>Fiscal Year</u>	(C) BPA RATE 2/ <u>Fiscal Year</u>
2006	4.95	4.86	5.76
2007	5.15	5.10	6.00
2008	5.52	5.42	6.32
2009	5.80	5.73	6.63
2010	6.00	5.95	6.85
2011	6.00	6.00	6.90
2012	6.00	6.00	6.90
2013	6.00	6.00	6.90
2014	6.00	6.00	6.90
2015	6.00	6.00	6.90
2016	6.00	6.00	6.90
2017	6.00	6.00	6.90
2018	6.01	6.00	6.90
2019	6.01	6.01	6.91
2020	6.01	6.01	6.91
2021	6.01	6.01	6.91
2022	6.01	6.01	6.91
2023	6.01	6.01	6.91
2024	6.01	6.01	6.91
2025	6.01	6.01	6.91
2026	6.01	6.01	6.91
2027	6.01	6.01	6.91
2028	6.01	6.01	6.91
2029	6.01	6.01	6.91
2030	6.01	6.01	6.91
2031	6.01	6.01	6.91
2032	6.01	6.01	6.91
2033	6.01	6.01	6.91
2034	6.01	6.01	6.91
2035	6.01	6.01	6.91

1/ BPA Forecast April 2006, Global Insight CY 2006.Q1 long-term outlook.
The U.S. Economy: 30-Year Focus, February 2006 Forecast, Base Case

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

Table 2
30 YEAR TREASURY YIELDS
FY 2006 COMPARISON OF BPA BORROWING RATE FORECASTS

Fiscal Years 2006 - 2035

<u>YEAR</u>	(A) FY 2006 FORECAST 1/ <u>BPA RATE</u>	(B) FY 2005 FORECAST 2/ <u>BPA RATE</u>	(C) DIFFERENCE <u>(A-B)</u>
2006	5.76	6.36	-0.60
2007	6.00	6.67	-0.67
2008	6.32	6.98	-0.66
2009	6.63	7.22	-0.59
2010	6.85	7.52	-0.67
2011	6.90	7.59	-0.69
2012	6.90	7.57	-0.67
2013	6.90	7.55	-0.65
2014	6.90	7.54	-0.64
2015	6.90	7.54	-0.64
2016	6.90	7.55	-0.65
2017	6.90	7.60	-0.70
2018	6.90	7.66	-0.76
2019	6.91	7.73	-0.82
2020	6.91	7.77	-0.86
2021	6.91	7.79	-0.88
2022	6.91	7.79	-0.88
2023	6.91	7.77	-0.86
2024	6.91	7.78	-0.87
2025	6.91	7.77	-0.86
2026	6.91	7.75	-0.84
2027	6.91	7.75	-0.84
2028	6.91	7.74	-0.83
2029	6.91	7.74	-0.83
2030	6.91	7.76	-0.85
2031	6.91	7.76	-0.85
2032	6.91	7.76	-0.85
2033	6.91	7.76	-0.85
2034	6.91	7.76	-0.85
2035	6.91	7.76	-0.85

1/ BPA Forecast April 2006, Global Insight CY 2006.Q1 long-term outlook.
The U.S. Economy: 30-Year Focus, February 2006 Forecast, Base Case

2/ BPA Forecast May 2005, Global Insight CY 2005.Q3 long-term outlook.
The U.S. Economy: 25-Year Focus, February 2005 Core Forecast

Table 3
20 YEAR TREASURY YIELDS
FY 2006 FORECAST OF BPA TREASURY BORROWING RATES

Calendar/Fiscal Years 2006 - 2035

<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>
2006	4.88	4.77	5.59
2007	5.06	5.02	5.84
2008	5.40	5.31	6.13
2009	5.67	5.61	6.43
2010	5.88	5.82	6.64
2011	5.87	5.87	6.69
2012	5.87	5.87	6.69
2013	5.88	5.88	6.70
2014	5.88	5.88	6.70
2015	5.88	5.88	6.70
2016	5.88	5.88	6.70
2017	5.88	5.88	6.70
2018	5.88	5.88	6.70
2019	5.88	5.88	6.70
2020	5.88	5.88	6.70
2021	5.88	5.88	6.70
2022	5.88	5.88	6.70
2023	5.88	5.88	6.70
2024	5.88	5.88	6.70
2025	5.88	5.88	6.70
2026	5.88	5.88	6.70
2027	5.88	5.88	6.70
2028	5.88	5.88	6.70
2029	5.88	5.88	6.70
2030	5.88	5.88	6.70
2031	5.88	5.88	6.70
2032	5.88	5.88	6.70
2033	5.88	5.88	6.70
2034	5.88	5.88	6.70
2035	5.88	5.88	6.70

1/ BPA Forecast April 2006, Global Insight CY 2006.Q1 long-term outlook.
The U.S. Economy: 30-Year Focus, February 2006 Forecast, Base Case

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

Table 4
15 YEAR TREASURY YIELDS
FY 2006 FORECAST OF BPA TREASURY BORROWING RATES

Calendar/Fiscal Years 2006 - 2035

<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>
2006	4.84	4.72	5.41
2007	5.02	4.98	5.67
2008	5.34	5.26	5.95
2009	5.61	5.55	6.24
2010	5.81	5.76	6.45
2011	5.81	5.81	6.50
2012	5.81	5.81	6.50
2013	5.81	5.81	6.50
2014	5.81	5.81	6.50
2015	5.81	5.81	6.50
2016	5.81	5.81	6.50
2017	5.81	5.81	6.50
2018	5.81	5.81	6.50
2019	5.81	5.81	6.50
2020	5.81	5.81	6.50
2021	5.81	5.81	6.50
2022	5.81	5.81	6.50
2023	5.81	5.81	6.50
2024	5.81	5.81	6.50
2025	5.81	5.81	6.50
2026	5.81	5.81	6.50
2027	5.81	5.81	6.50
2028	5.81	5.81	6.50
2029	5.81	5.81	6.50
2030	5.81	5.81	6.50
2031	5.81	5.81	6.50
2032	5.81	5.81	6.50
2033	5.81	5.81	6.50
2034	5.81	5.81	6.50
2035	5.81	5.81	6.50

1/ BPA Forecast April 2006, Global Insight CY 2006.Q1 long-term outlook.
The U.S. Economy: 30-Year Focus, February 2006 Forecast, Base Case

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

Table 5
FY 2006.Q3 BPA APPROPRIATIONS BORROWING RATE FORECAST 1/
 FORECAST PREPARED APRIL 28, 2006

BPA Fiscal Years 2006 - 2035

MATURITY

<u>Year</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>	<u>17 Year</u>	<u>18 Year</u>
2006 2/	3.88	4.00	4.00	4.00	4.00	4.00	4.13	4.13	4.13	4.25	4.25	4.25	4.25	4.38	4.38	4.38	4.38	4.50
2007	4.79	4.80	4.82	4.84	4.85	4.87	4.88	4.90	4.92	4.93	4.94	4.95	4.96	4.97	4.98	4.98	4.99	5.00
2008	4.96	5.01	5.04	5.07	5.10	5.12	5.14	5.16	5.18	5.20	5.21	5.22	5.23	5.25	5.26	5.27	5.28	5.29
2009	5.18	5.27	5.30	5.33	5.37	5.39	5.41	5.44	5.46	5.48	5.50	5.51	5.52	5.53	5.55	5.56	5.57	5.58
2010	5.36	5.47	5.50	5.53	5.56	5.59	5.62	5.65	5.67	5.70	5.71	5.73	5.74	5.75	5.76	5.78	5.79	5.80
2011	5.40	5.51	5.54	5.57	5.61	5.64	5.66	5.69	5.72	5.75	5.76	5.77	5.79	5.80	5.81	5.82	5.84	5.85
2012	5.40	5.51	5.54	5.57	5.61	5.64	5.66	5.69	5.72	5.75	5.76	5.77	5.79	5.80	5.81	5.82	5.84	5.85
2013	5.40	5.51	5.54	5.57	5.61	5.64	5.66	5.69	5.72	5.75	5.76	5.78	5.79	5.80	5.81	5.83	5.84	5.85
2014	5.40	5.51	5.54	5.57	5.61	5.64	5.66	5.69	5.72	5.75	5.76	5.77	5.79	5.80	5.81	5.82	5.84	5.85
2015	5.40	5.51	5.54	5.57	5.61	5.64	5.66	5.69	5.72	5.75	5.76	5.77	5.79	5.80	5.81	5.82	5.84	5.85
2016	5.40	5.51	5.54	5.57	5.61	5.64	5.66	5.69	5.72	5.75	5.76	5.77	5.79	5.80	5.81	5.82	5.84	5.85
2017	5.40	5.51	5.54	5.57	5.61	5.64	5.66	5.69	5.72	5.75	5.76	5.78	5.79	5.80	5.81	5.83	5.84	5.85
2018	5.40	5.51	5.54	5.57	5.61	5.64	5.66	5.69	5.72	5.75	5.76	5.78	5.79	5.80	5.81	5.83	5.84	5.85
2019	5.40	5.51	5.54	5.57	5.61	5.64	5.66	5.69	5.72	5.75	5.76	5.78	5.79	5.80	5.81	5.83	5.84	5.85
2020	5.40	5.51	5.54	5.57	5.61	5.64	5.66	5.69	5.72	5.75	5.76	5.78	5.79	5.80	5.82	5.83	5.84	5.85
2021	5.40	5.51	5.54	5.57	5.61	5.64	5.66	5.69	5.72	5.75	5.76	5.78	5.79	5.80	5.82	5.83	5.84	5.86
2022	5.40	5.51	5.54	5.57	5.61	5.64	5.66	5.69	5.72	5.75	5.76	5.78	5.79	5.80	5.82	5.83	5.84	5.85
2023	5.40	5.51	5.54	5.57	5.61	5.64	5.66	5.69	5.72	5.75	5.76	5.78	5.79	5.80	5.82	5.83	5.84	5.86
2024	5.40	5.51	5.54	5.57	5.61	5.64	5.66	5.69	5.72	5.75	5.76	5.78	5.79	5.80	5.82	5.83	5.84	5.86
2025	5.40	5.51	5.54	5.57	5.61	5.64	5.66	5.69	5.72	5.75	5.76	5.78	5.79	5.80	5.82	5.83	5.84	5.86
2026	5.41	5.51	5.54	5.58	5.61	5.64	5.66	5.69	5.72	5.75	5.76	5.78	5.79	5.80	5.82	5.83	5.84	5.86
2027	5.41	5.51	5.54	5.58	5.61	5.64	5.66	5.69	5.72	5.75	5.76	5.78	5.79	5.80	5.82	5.83	5.84	5.86
2028	5.41	5.51	5.55	5.58	5.61	5.64	5.67	5.69	5.72	5.75	5.76	5.78	5.79	5.80	5.82	5.83	5.84	5.86
2029	5.41	5.52	5.55	5.58	5.61	5.64	5.67	5.69	5.72	5.75	5.76	5.78	5.79	5.80	5.82	5.83	5.84	5.86
2030	5.42	5.52	5.55	5.58	5.61	5.64	5.67	5.69	5.72	5.75	5.76	5.78	5.79	5.80	5.82	5.83	5.84	5.86
2031	5.42	5.52	5.55	5.58	5.61	5.64	5.67	5.69	5.72	5.75	5.76	5.78	5.79	5.80	5.82	5.83	5.84	5.86
2032	5.42	5.52	5.55	5.58	5.61	5.64	5.67	5.69	5.72	5.75	5.76	5.78	5.79	5.80	5.82	5.83	5.84	5.86
2033	5.43	5.53	5.56	5.58	5.61	5.64	5.67	5.70	5.72	5.75	5.76	5.78	5.79	5.80	5.82	5.83	5.84	5.86
2034	5.43	5.53	5.56	5.59	5.61	5.64	5.67	5.70	5.72	5.75	5.76	5.78	5.79	5.80	5.82	5.83	5.84	5.86
2035	5.43	5.53	5.56	5.59	5.61	5.64	5.67	5.70	5.72	5.75	5.76	5.78	5.79	5.80	5.82	5.83	5.84	5.85

1/ Global Insight CY 2006.Q1 long-term outlook. The U.S. Economy: 30-Year Focus, February 2006 Forecast, Base Case

2/ FY 2006 Appropriation rates are determined in accordance with BPA Appropriations Refinancing Act, 16 U.S.C. 838I enacted on April 26, 1996, and are independent of the Global Insight Treasury Yield forecasts.

<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>
4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	2006 2/
5.01	5.02	5.03	5.03	5.04	5.05	5.06	5.07	5.08	5.08	5.09	5.10	5.10	2007
5.30	5.31	5.32	5.34	5.35	5.36	5.37	5.38	5.39	5.40	5.41	5.42	5.42	2008
5.59	5.61	5.62	5.63	5.64	5.65	5.67	5.68	5.69	5.70	5.71	5.73	5.73	2009
5.81	5.82	5.84	5.85	5.86	5.87	5.89	5.90	5.91	5.92	5.94	5.95	5.95	2010
5.86	5.87	5.89	5.90	5.91	5.92	5.94	5.95	5.96	5.97	5.99	6.00	6.00	2011
5.86	5.87	5.89	5.90	5.91	5.92	5.94	5.95	5.96	5.97	5.99	6.00	6.00	2012
5.86	5.88	5.89	5.90	5.91	5.93	5.94	5.95	5.96	5.98	5.99	6.00	6.00	2013
5.86	5.87	5.89	5.90	5.91	5.92	5.94	5.95	5.96	5.97	5.99	6.00	6.00	2014
5.86	5.87	5.89	5.90	5.91	5.92	5.94	5.95	5.96	5.97	5.99	6.00	6.00	2015
5.86	5.87	5.89	5.90	5.91	5.92	5.94	5.95	5.96	5.97	5.99	6.00	6.00	2016
5.86	5.88	5.89	5.90	5.91	5.93	5.94	5.95	5.96	5.98	5.99	6.00	6.00	2017
5.86	5.88	5.89	5.90	5.92	5.93	5.94	5.95	5.97	5.98	5.99	6.00	6.00	2018
5.87	5.88	5.89	5.90	5.92	5.93	5.94	5.96	5.97	5.98	6.00	6.01	6.01	2019
5.87	5.88	5.89	5.91	5.92	5.93	5.95	5.96	5.97	5.99	6.00	6.01	6.01	2020
5.87	5.88	5.89	5.91	5.92	5.93	5.95	5.96	5.97	5.99	6.00	6.01	6.01	2021
5.87	5.88	5.89	5.91	5.92	5.93	5.95	5.96	5.97	5.99	6.00	6.01	6.01	2022
5.87	5.88	5.89	5.91	5.92	5.93	5.95	5.96	5.97	5.99	6.00	6.01	6.01	2023
5.87	5.88	5.90	5.91	5.92	5.93	5.95	5.96	5.97	5.99	6.00	6.01	6.01	2024
5.87	5.88	5.90	5.91	5.92	5.94	5.95	5.96	5.97	5.99	6.00	6.01	6.01	2025
5.87	5.88	5.90	5.91	5.92	5.94	5.95	5.96	5.97	5.99	6.00	6.01	6.01	2026
5.87	5.88	5.90	5.91	5.92	5.94	5.95	5.96	5.97	5.99	6.00	6.01	6.01	2027
5.87	5.88	5.90	5.91	5.92	5.94	5.95	5.96	5.98	5.99	6.00	6.01	6.01	2028
5.87	5.88	5.90	5.91	5.92	5.94	5.95	5.96	5.98	5.99	6.00	6.01	6.01	2029
5.87	5.88	5.90	5.91	5.92	5.94	5.95	5.96	5.98	5.99	6.00	6.01	6.01	2030
5.87	5.88	5.90	5.91	5.92	5.94	5.95	5.96	5.98	5.99	6.00	6.01	6.01	2031
5.87	5.88	5.90	5.91	5.92	5.94	5.95	5.96	5.98	5.99	6.00	6.01	6.01	2032
5.87	5.88	5.90	5.91	5.92	5.94	5.95	5.96	5.98	5.99	6.00	6.01	6.01	2033
5.87	5.88	5.90	5.91	5.92	5.94	5.95	5.96	5.98	5.99	6.00	6.01	6.01	2034
5.87	5.88	5.90	5.91	5.92	5.94	5.95	5.96	5.98	5.99	6.00	6.01	6.01	2035

Table 6
BPA FY 2006 BPA TREASURY BORROWING YIELD CURVE FORECAST 1/
 FORECAST PREPARED APRIL 28, 2006

BPA Fiscal Years 2006 - 2035

MATURITY

<u>Year</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>	<u>17 Year</u>	<u>18 Year</u>
2006	4.69	4.88	4.92	4.96	5.00	5.04	5.09	5.14	5.19	5.23	5.27	5.30	5.34	5.37	5.41	5.44	5.47	5.51
2007	5.02	5.17	5.21	5.25	5.28	5.32	5.36	5.41	5.45	5.49	5.52	5.56	5.59	5.63	5.66	5.69	5.73	5.76
2008	5.19	5.38	5.43	5.49	5.53	5.58	5.62	5.67	5.71	5.76	5.80	5.83	5.87	5.91	5.94	5.98	6.02	6.05
2009	5.41	5.64	5.69	5.75	5.80	5.85	5.90	5.94	5.99	6.04	6.08	6.12	6.16	6.19	6.23	6.27	6.31	6.34
2010	5.59	5.83	5.89	5.94	5.99	6.05	6.10	6.15	6.21	6.26	6.30	6.33	6.37	6.41	6.45	6.49	6.52	6.56
2011	5.63	5.88	5.93	5.99	6.04	6.09	6.14	6.20	6.25	6.31	6.35	6.38	6.42	6.46	6.50	6.54	6.57	6.61
2012	5.63	5.88	5.93	5.99	6.04	6.09	6.14	6.20	6.25	6.31	6.35	6.38	6.42	6.46	6.50	6.54	6.57	6.61
2013	5.63	5.88	5.93	5.99	6.04	6.09	6.14	6.20	6.25	6.31	6.35	6.38	6.42	6.46	6.50	6.54	6.57	6.61
2014	5.63	5.88	5.93	5.99	6.04	6.09	6.14	6.20	6.25	6.31	6.35	6.38	6.42	6.46	6.50	6.54	6.57	6.61
2015	5.63	5.88	5.93	5.99	6.04	6.09	6.14	6.20	6.25	6.31	6.35	6.38	6.42	6.46	6.50	6.54	6.57	6.61
2016	5.63	5.88	5.93	5.99	6.04	6.09	6.14	6.20	6.25	6.31	6.35	6.38	6.42	6.46	6.50	6.54	6.57	6.61
2017	5.63	5.88	5.93	5.98	6.04	6.09	6.14	6.20	6.25	6.31	6.35	6.38	6.42	6.46	6.50	6.54	6.57	6.61
2018	5.63	5.88	5.93	5.98	6.04	6.09	6.14	6.20	6.25	6.31	6.35	6.38	6.42	6.46	6.50	6.54	6.57	6.61
2019	5.63	5.88	5.93	5.99	6.04	6.09	6.15	6.20	6.25	6.31	6.35	6.38	6.42	6.46	6.50	6.54	6.58	6.61
2020	5.63	5.88	5.93	5.99	6.04	6.09	6.15	6.20	6.25	6.31	6.35	6.38	6.42	6.46	6.50	6.54	6.58	6.62
2021	5.63	5.88	5.93	5.98	6.04	6.09	6.15	6.20	6.25	6.31	6.35	6.38	6.42	6.46	6.50	6.54	6.58	6.62
2022	5.63	5.88	5.93	5.99	6.04	6.09	6.15	6.20	6.25	6.31	6.35	6.38	6.42	6.46	6.50	6.54	6.58	6.62
2023	5.63	5.88	5.93	5.99	6.04	6.09	6.15	6.20	6.25	6.31	6.35	6.38	6.42	6.46	6.50	6.54	6.58	6.62
2024	5.63	5.88	5.93	5.99	6.04	6.09	6.15	6.20	6.25	6.31	6.35	6.38	6.42	6.46	6.50	6.54	6.58	6.62
2025	5.63	5.88	5.93	5.99	6.04	6.09	6.15	6.20	6.25	6.31	6.35	6.38	6.42	6.46	6.50	6.54	6.58	6.62
2026	5.64	5.88	5.93	5.99	6.04	6.09	6.15	6.20	6.25	6.31	6.35	6.38	6.42	6.46	6.50	6.54	6.58	6.62
2027	5.64	5.88	5.93	5.99	6.04	6.09	6.15	6.20	6.25	6.31	6.35	6.38	6.42	6.46	6.50	6.54	6.58	6.62
2028	5.64	5.88	5.94	5.99	6.04	6.09	6.15	6.20	6.25	6.31	6.35	6.39	6.42	6.46	6.50	6.54	6.58	6.62
2029	5.64	5.88	5.94	5.99	6.04	6.09	6.15	6.20	6.25	6.31	6.35	6.39	6.42	6.46	6.50	6.54	6.58	6.62
2030	5.65	5.89	5.94	5.99	6.04	6.09	6.15	6.20	6.25	6.31	6.35	6.39	6.42	6.46	6.50	6.54	6.58	6.62
2031	5.65	5.89	5.94	5.99	6.04	6.09	6.15	6.20	6.25	6.31	6.35	6.39	6.42	6.46	6.50	6.54	6.58	6.62
2032	5.65	5.89	5.94	5.99	6.04	6.09	6.15	6.20	6.25	6.31	6.35	6.39	6.42	6.46	6.50	6.54	6.58	6.62
2033	5.66	5.90	5.95	6.00	6.04	6.10	6.15	6.20	6.25	6.31	6.35	6.38	6.42	6.46	6.50	6.54	6.58	6.62
2034	5.66	5.90	5.95	6.00	6.04	6.10	6.15	6.20	6.25	6.31	6.35	6.38	6.42	6.46	6.50	6.54	6.58	6.62
2035	5.66	5.90	5.95	6.00	6.04	6.10	6.15	6.20	6.25	6.31	6.35	6.38	6.42	6.46	6.50	6.54	6.58	6.62

1/ Global Insight CY 2006.Q1 long-term outlook. The U.S. Economy: 30-Year Focus, February 2006 Forecast, Base Case

<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>
5.54	5.59	5.60	5.62	5.64	5.65	5.67	5.69	5.70	5.72	5.74	5.76	5.76	2006
5.80	5.84	5.85	5.87	5.89	5.90	5.92	5.94	5.95	5.97	5.98	6.00	6.00	2007
6.09	6.13	6.15	6.17	6.19	6.21	6.23	6.25	6.27	6.29	6.31	6.32	6.32	2008
6.38	6.43	6.45	6.47	6.49	6.51	6.53	6.55	6.57	6.59	6.61	6.63	6.63	2009
6.60	6.64	6.67	6.69	6.71	6.73	6.75	6.77	6.79	6.81	6.83	6.85	6.85	2010
6.65	6.69	6.72	6.74	6.76	6.78	6.80	6.82	6.84	6.86	6.88	6.90	6.90	2011
6.65	6.69	6.72	6.74	6.76	6.78	6.80	6.82	6.84	6.86	6.88	6.90	6.90	2012
6.65	6.69	6.72	6.74	6.76	6.78	6.80	6.82	6.84	6.86	6.88	6.90	6.90	2013
6.65	6.69	6.72	6.74	6.76	6.78	6.80	6.82	6.84	6.86	6.88	6.90	6.90	2014
6.65	6.69	6.72	6.74	6.76	6.78	6.80	6.82	6.84	6.86	6.88	6.90	6.90	2015
6.65	6.69	6.72	6.74	6.76	6.78	6.80	6.82	6.84	6.86	6.88	6.90	6.90	2016
6.65	6.70	6.72	6.74	6.76	6.78	6.80	6.82	6.84	6.86	6.88	6.90	6.90	2017
6.65	6.70	6.72	6.74	6.76	6.78	6.80	6.82	6.84	6.86	6.88	6.90	6.90	2018
6.65	6.70	6.72	6.74	6.76	6.78	6.80	6.82	6.85	6.87	6.89	6.91	6.91	2019
6.65	6.70	6.72	6.74	6.76	6.79	6.81	6.83	6.85	6.87	6.89	6.91	6.91	2020
6.66	6.70	6.72	6.74	6.76	6.79	6.81	6.83	6.85	6.87	6.89	6.91	6.91	2021
6.66	6.70	6.72	6.74	6.76	6.79	6.81	6.83	6.85	6.87	6.89	6.91	6.91	2022
6.66	6.70	6.72	6.74	6.76	6.79	6.81	6.83	6.85	6.87	6.89	6.91	6.91	2023
6.66	6.70	6.72	6.74	6.77	6.79	6.81	6.83	6.85	6.87	6.89	6.91	6.91	2024
6.66	6.70	6.72	6.74	6.77	6.79	6.81	6.83	6.85	6.87	6.89	6.91	6.91	2025
6.66	6.70	6.72	6.74	6.77	6.79	6.81	6.83	6.85	6.87	6.89	6.91	6.91	2026
6.66	6.70	6.72	6.74	6.77	6.79	6.81	6.83	6.85	6.87	6.89	6.91	6.91	2027
6.66	6.70	6.72	6.74	6.77	6.79	6.81	6.83	6.85	6.87	6.89	6.91	6.91	2028
6.66	6.70	6.72	6.75	6.77	6.79	6.81	6.83	6.85	6.87	6.89	6.92	6.92	2029
6.66	6.70	6.72	6.75	6.77	6.79	6.81	6.83	6.85	6.87	6.89	6.92	6.92	2030
6.66	6.70	6.72	6.75	6.77	6.79	6.81	6.83	6.85	6.87	6.89	6.92	6.92	2031
6.66	6.70	6.72	6.75	6.77	6.79	6.81	6.83	6.85	6.87	6.89	6.92	6.92	2032
6.66	6.70	6.72	6.75	6.77	6.79	6.81	6.83	6.85	6.87	6.89	6.92	6.92	2033
6.66	6.70	6.72	6.75	6.77	6.79	6.81	6.83	6.85	6.87	6.89	6.92	6.92	2034
6.66	6.70	6.72	6.75	6.77	6.79	6.81	6.83	6.85	6.87	6.89	6.92	6.92	2035

Table 7
BPA FY 2006 MUNI TAXABLE BORROWING RATE FORECAST 1/
 FORECAST PREPARED APRIL 28, 2006

BPA Fiscal Years 2006 - 2035

MATURITY

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	17 Year	18 Year
2006	5.03	5.15	5.23	5.30	5.37	5.42	5.47	5.52	5.57	5.61	5.63	5.64	5.66	5.67	5.69	5.70	5.72	5.73
2007	5.40	5.54	5.61	5.69	5.76	5.81	5.85	5.90	5.94	5.99	6.00	6.02	6.03	6.05	6.06	6.07	6.09	6.10
2008	5.58	5.77	5.86	5.96	6.05	6.10	6.15	6.20	6.25	6.30	6.32	6.34	6.36	6.37	6.39	6.41	6.43	6.45
2009	5.82	6.05	6.15	6.25	6.36	6.41	6.47	6.52	6.58	6.64	6.66	6.67	6.69	6.71	6.73	6.75	6.77	6.79
2010	6.02	6.27	6.37	6.48	6.58	6.64	6.70	6.77	6.83	6.89	6.91	6.93	6.95	6.97	6.99	7.01	7.03	7.05
2011	6.06	6.32	6.42	6.53	6.63	6.69	6.76	6.82	6.88	6.95	6.97	6.99	7.01	7.03	7.05	7.07	7.09	7.11
2012	6.06	6.32	6.42	6.53	6.63	6.69	6.76	6.82	6.88	6.95	6.97	6.99	7.01	7.03	7.05	7.07	7.09	7.11
2013	6.06	6.32	6.42	6.53	6.63	6.69	6.76	6.82	6.88	6.95	6.97	6.99	7.01	7.03	7.05	7.07	7.09	7.11
2014	6.06	6.32	6.42	6.53	6.63	6.69	6.76	6.82	6.88	6.95	6.97	6.99	7.01	7.03	7.05	7.07	7.09	7.11
2015	6.06	6.32	6.42	6.53	6.63	6.69	6.76	6.82	6.88	6.95	6.97	6.99	7.01	7.03	7.05	7.07	7.09	7.11
2016	6.06	6.32	6.42	6.53	6.63	6.69	6.76	6.82	6.88	6.95	6.97	6.99	7.01	7.03	7.05	7.07	7.09	7.11
2017	6.06	6.32	6.42	6.53	6.63	6.69	6.76	6.82	6.88	6.95	6.97	6.99	7.01	7.03	7.05	7.07	7.09	7.11
2018	6.06	6.32	6.42	6.53	6.63	6.69	6.76	6.82	6.88	6.95	6.97	6.99	7.01	7.03	7.05	7.07	7.09	7.11
2019	6.06	6.32	6.42	6.53	6.63	6.69	6.76	6.82	6.88	6.95	6.97	6.99	7.01	7.03	7.05	7.07	7.09	7.11
2020	6.06	6.32	6.42	6.53	6.63	6.69	6.76	6.82	6.88	6.95	6.97	6.99	7.01	7.03	7.05	7.07	7.09	7.11
2021	6.06	6.32	6.42	6.53	6.63	6.69	6.76	6.82	6.88	6.95	6.97	6.99	7.01	7.03	7.05	7.07	7.09	7.11
2022	6.06	6.32	6.42	6.53	6.63	6.69	6.76	6.82	6.88	6.95	6.97	6.99	7.01	7.03	7.05	7.07	7.09	7.11
2023	6.06	6.32	6.42	6.53	6.63	6.69	6.76	6.82	6.88	6.95	6.97	6.99	7.01	7.03	7.05	7.07	7.09	7.11
2024	6.06	6.32	6.42	6.53	6.63	6.69	6.76	6.82	6.88	6.95	6.97	6.99	7.01	7.03	7.05	7.07	7.09	7.11
2025	6.06	6.32	6.42	6.53	6.63	6.69	6.76	6.82	6.88	6.95	6.97	6.99	7.01	7.03	7.05	7.07	7.09	7.11
2026	6.06	6.32	6.42	6.53	6.63	6.69	6.76	6.82	6.88	6.95	6.97	6.99	7.01	7.03	7.05	7.07	7.09	7.11
2027	6.07	6.32	6.43	6.53	6.63	6.70	6.76	6.82	6.88	6.95	6.97	6.99	7.01	7.03	7.05	7.07	7.09	7.11
2028	6.07	6.32	6.43	6.53	6.63	6.70	6.76	6.82	6.88	6.95	6.97	6.99	7.01	7.03	7.05	7.07	7.09	7.11
2029	6.07	6.33	6.43	6.53	6.63	6.70	6.76	6.82	6.88	6.95	6.97	6.99	7.01	7.03	7.05	7.07	7.09	7.11
2030	6.08	6.33	6.43	6.53	6.63	6.70	6.76	6.82	6.89	6.95	6.97	6.99	7.01	7.03	7.05	7.07	7.09	7.11
2031	6.08	6.33	6.43	6.53	6.63	6.70	6.76	6.82	6.89	6.95	6.97	6.99	7.01	7.03	7.05	7.07	7.09	7.11
2032	6.08	6.33	6.44	6.54	6.64	6.70	6.76	6.82	6.89	6.95	6.97	6.99	7.01	7.03	7.05	7.07	7.09	7.11
2033	6.09	6.34	6.44	6.54	6.64	6.70	6.76	6.82	6.89	6.95	6.97	6.99	7.01	7.03	7.05	7.07	7.09	7.11
2034	6.09	6.34	6.44	6.54	6.64	6.70	6.76	6.82	6.89	6.95	6.97	6.99	7.01	7.03	7.05	7.07	7.09	7.11
2035	6.10	6.34	6.44	6.54	6.64	6.70	6.76	6.82	6.89	6.95	6.97	6.99	7.01	7.03	7.05	7.07	7.09	7.11

1/ Global Insight CY 2006.Q1 long-term outlook. The U.S. Economy: 30-Year Focus, February 2006 Forecast, Base Case

<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>
5.75	5.76	5.77	5.79	5.80	5.82	5.83	5.85	5.86	5.88	5.89	5.91	5.91	2006
6.12	6.13	6.15	6.16	6.17	6.19	6.20	6.22	6.23	6.24	6.26	6.27	6.27	2007
6.46	6.48	6.50	6.52	6.53	6.55	6.57	6.59	6.60	6.62	6.64	6.66	6.66	2008
6.81	6.83	6.85	6.86	6.88	6.90	6.92	6.94	6.96	6.98	7.00	7.02	7.02	2009
7.07	7.09	7.11	7.13	7.14	7.16	7.18	7.20	7.22	7.24	7.26	7.28	7.28	2010
7.13	7.15	7.16	7.18	7.20	7.22	7.24	7.26	7.28	7.30	7.32	7.34	7.34	2011
7.13	7.15	7.16	7.18	7.20	7.22	7.24	7.26	7.28	7.30	7.32	7.34	7.34	2012
7.13	7.15	7.16	7.18	7.20	7.22	7.24	7.26	7.28	7.30	7.32	7.34	7.34	2013
7.13	7.15	7.16	7.18	7.20	7.22	7.24	7.26	7.28	7.30	7.32	7.34	7.34	2014
7.13	7.15	7.16	7.18	7.20	7.22	7.24	7.26	7.28	7.30	7.32	7.34	7.34	2015
7.13	7.15	7.16	7.18	7.20	7.22	7.24	7.26	7.28	7.30	7.32	7.34	7.34	2016
7.13	7.15	7.17	7.19	7.21	7.22	7.24	7.26	7.28	7.30	7.32	7.34	7.34	2017
7.13	7.15	7.17	7.19	7.21	7.23	7.25	7.27	7.29	7.31	7.33	7.35	7.35	2018
7.13	7.15	7.17	7.19	7.21	7.23	7.25	7.27	7.29	7.31	7.33	7.35	7.35	2019
7.13	7.15	7.17	7.19	7.21	7.23	7.25	7.27	7.30	7.32	7.34	7.36	7.36	2020
7.13	7.15	7.17	7.19	7.21	7.23	7.26	7.28	7.30	7.32	7.34	7.36	7.36	2021
7.13	7.15	7.17	7.19	7.21	7.23	7.25	7.28	7.30	7.32	7.34	7.36	7.36	2022
7.13	7.15	7.17	7.19	7.21	7.23	7.26	7.28	7.30	7.32	7.34	7.36	7.36	2023
7.13	7.15	7.17	7.19	7.22	7.24	7.26	7.28	7.30	7.32	7.34	7.36	7.36	2024
7.13	7.15	7.17	7.19	7.22	7.24	7.26	7.28	7.30	7.32	7.34	7.36	7.36	2025
7.13	7.15	7.17	7.19	7.22	7.24	7.26	7.28	7.30	7.32	7.34	7.36	7.36	2026
7.13	7.15	7.17	7.19	7.22	7.24	7.26	7.28	7.30	7.32	7.34	7.36	7.36	2027
7.13	7.15	7.17	7.20	7.22	7.24	7.26	7.28	7.30	7.32	7.34	7.36	7.36	2028
7.13	7.15	7.18	7.20	7.22	7.24	7.26	7.28	7.30	7.32	7.34	7.36	7.36	2029
7.13	7.15	7.18	7.20	7.22	7.24	7.26	7.28	7.30	7.32	7.34	7.36	7.36	2030
7.13	7.15	7.18	7.20	7.22	7.24	7.26	7.28	7.30	7.32	7.34	7.36	7.36	2031
7.13	7.15	7.18	7.20	7.22	7.24	7.26	7.28	7.30	7.32	7.34	7.36	7.36	2032
7.13	7.15	7.18	7.20	7.22	7.24	7.26	7.28	7.30	7.32	7.34	7.36	7.36	2033
7.13	7.15	7.18	7.20	7.22	7.24	7.26	7.28	7.30	7.32	7.34	7.36	7.36	2034
7.13	7.15	7.18	7.20	7.22	7.24	7.26	7.28	7.30	7.32	7.34	7.36	7.36	2035

Table 8
BPA FY 2006 MUNI TAX-EXEMPT BORROWING RATE FORECAST 1/
 FORECAST PREPARED APRIL 28, 2006

BPA Fiscal Years 2006 - 2035

MATURITY

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	17 Year	18 Year
2006	3.35	3.49	3.57	3.66	3.75	3.84	3.92	4.00	4.08	4.17	4.19	4.22	4.25	4.27	4.30	4.33	4.36	4.38
2007	3.58	3.74	3.82	3.91	3.99	4.07	4.15	4.22	4.30	4.38	4.40	4.43	4.45	4.48	4.51	4.53	4.56	4.58
2008	3.70	3.89	3.99	4.09	4.19	4.27	4.36	4.44	4.52	4.60	4.63	4.66	4.69	4.72	4.75	4.78	4.81	4.84
2009	3.85	4.08	4.19	4.29	4.40	4.49	4.58	4.66	4.75	4.84	4.87	4.91	4.94	4.97	5.00	5.03	5.06	5.09
2010	3.98	4.22	4.33	4.44	4.55	4.65	4.74	4.84	4.93	5.03	5.06	5.09	5.12	5.16	5.19	5.22	5.25	5.28
2011	4.01	4.26	4.37	4.48	4.59	4.68	4.78	4.87	4.97	5.07	5.10	5.13	5.17	5.20	5.23	5.26	5.30	5.33
2012	4.01	4.26	4.37	4.48	4.59	4.68	4.78	4.87	4.97	5.07	5.10	5.13	5.17	5.20	5.23	5.26	5.30	5.33
2013	4.01	4.26	4.37	4.48	4.59	4.68	4.78	4.87	4.97	5.07	5.10	5.13	5.17	5.20	5.23	5.26	5.30	5.33
2014	4.01	4.26	4.37	4.48	4.59	4.68	4.78	4.87	4.97	5.07	5.10	5.13	5.17	5.20	5.23	5.26	5.30	5.33
2015	4.01	4.26	4.37	4.48	4.59	4.68	4.78	4.87	4.97	5.07	5.10	5.13	5.17	5.20	5.23	5.26	5.30	5.33
2016	4.01	4.26	4.37	4.48	4.59	4.68	4.78	4.87	4.97	5.07	5.10	5.13	5.17	5.20	5.23	5.26	5.30	5.33
2017	4.01	4.26	4.37	4.48	4.58	4.68	4.78	4.87	4.97	5.07	5.10	5.13	5.17	5.20	5.23	5.26	5.30	5.33
2018	4.01	4.26	4.37	4.48	4.58	4.68	4.78	4.87	4.97	5.07	5.10	5.13	5.17	5.20	5.23	5.26	5.30	5.33
2019	4.01	4.26	4.37	4.48	4.59	4.68	4.78	4.87	4.97	5.07	5.10	5.13	5.17	5.20	5.23	5.27	5.30	5.33
2020	4.01	4.26	4.37	4.48	4.59	4.68	4.78	4.87	4.97	5.07	5.10	5.13	5.17	5.20	5.23	5.27	5.30	5.33
2021	4.01	4.26	4.37	4.48	4.59	4.68	4.78	4.87	4.97	5.07	5.10	5.13	5.17	5.20	5.23	5.27	5.30	5.33
2022	4.01	4.26	4.37	4.48	4.59	4.68	4.78	4.87	4.97	5.07	5.10	5.13	5.17	5.20	5.23	5.27	5.30	5.33
2023	4.01	4.26	4.37	4.48	4.59	4.68	4.78	4.87	4.97	5.07	5.10	5.13	5.17	5.20	5.23	5.27	5.30	5.33
2024	4.01	4.26	4.37	4.48	4.59	4.68	4.78	4.87	4.97	5.07	5.10	5.13	5.17	5.20	5.23	5.27	5.30	5.33
2025	4.01	4.26	4.37	4.48	4.59	4.68	4.78	4.87	4.97	5.07	5.10	5.13	5.17	5.20	5.23	5.27	5.30	5.33
2026	4.01	4.26	4.37	4.48	4.59	4.68	4.78	4.87	4.97	5.07	5.10	5.13	5.17	5.20	5.23	5.27	5.30	5.33
2027	4.02	4.26	4.37	4.48	4.59	4.68	4.78	4.87	4.97	5.07	5.10	5.13	5.17	5.20	5.23	5.27	5.30	5.33
2028	4.02	4.26	4.37	4.48	4.59	4.68	4.78	4.88	4.97	5.07	5.10	5.13	5.17	5.20	5.23	5.27	5.30	5.33
2029	4.02	4.26	4.37	4.48	4.59	4.68	4.78	4.88	4.97	5.07	5.10	5.13	5.17	5.20	5.23	5.27	5.30	5.33
2030	4.02	4.26	4.37	4.48	4.59	4.68	4.78	4.88	4.97	5.07	5.10	5.13	5.17	5.20	5.23	5.27	5.30	5.33
2031	4.02	4.27	4.37	4.48	4.59	4.68	4.78	4.88	4.97	5.07	5.10	5.13	5.17	5.20	5.23	5.27	5.30	5.33
2032	4.03	4.27	4.38	4.48	4.59	4.68	4.78	4.88	4.97	5.07	5.10	5.13	5.17	5.20	5.23	5.27	5.30	5.33
2033	4.03	4.27	4.38	4.48	4.59	4.69	4.78	4.88	4.97	5.07	5.10	5.13	5.17	5.20	5.23	5.27	5.30	5.33
2034	4.03	4.27	4.38	4.48	4.59	4.69	4.78	4.88	4.97	5.07	5.10	5.13	5.17	5.20	5.23	5.27	5.30	5.33
2035	4.03	4.27	4.38	4.48	4.59	4.69	4.78	4.88	4.97	5.07	5.10	5.13	5.17	5.20	5.23	5.27	5.30	5.33

1/ Global Insight CY 2006.Q1 long-term outlook. The U.S. Economy: 30-Year Focus, February 2006 Forecast, Base Case

<u>9 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>
4.41	4.44	4.46	4.49	4.52	4.54	4.57	4.60	4.62	4.65	4.68	4.71	4.71	2006
4.61	4.63	4.66	4.69	4.71	4.74	4.76	4.79	4.82	4.84	4.87	4.89	4.89	2007
4.87	4.90	4.93	4.96	4.98	5.01	5.04	5.07	5.10	5.13	5.16	5.19	5.19	2008
5.12	5.16	5.19	5.22	5.25	5.28	5.31	5.34	5.37	5.41	5.44	5.47	5.47	2009
5.32	5.35	5.38	5.41	5.45	5.48	5.51	5.54	5.58	5.61	5.64	5.67	5.67	2010
5.36	5.39	5.43	5.46	5.49	5.52	5.56	5.59	5.62	5.66	5.69	5.72	5.72	2011
5.36	5.39	5.43	5.46	5.49	5.52	5.56	5.59	5.62	5.66	5.69	5.72	5.72	2012
5.36	5.39	5.43	5.46	5.49	5.52	5.56	5.59	5.62	5.66	5.69	5.72	5.72	2013
5.36	5.39	5.43	5.46	5.49	5.52	5.56	5.59	5.62	5.66	5.69	5.72	5.72	2014
5.36	5.39	5.43	5.46	5.49	5.52	5.56	5.59	5.62	5.66	5.69	5.72	5.72	2015
5.36	5.39	5.43	5.46	5.49	5.52	5.56	5.59	5.62	5.66	5.69	5.72	5.72	2016
5.36	5.39	5.43	5.46	5.49	5.53	5.56	5.59	5.62	5.66	5.69	5.72	5.72	2017
5.36	5.40	5.43	5.46	5.49	5.53	5.56	5.59	5.63	5.66	5.69	5.72	5.72	2018
5.36	5.40	5.43	5.46	5.50	5.53	5.56	5.60	5.63	5.66	5.69	5.73	5.73	2019
5.37	5.40	5.43	5.47	5.50	5.53	5.57	5.60	5.63	5.66	5.70	5.73	5.73	2020
5.37	5.40	5.43	5.47	5.50	5.53	5.57	5.60	5.63	5.67	5.70	5.73	5.73	2021
5.37	5.40	5.43	5.47	5.50	5.53	5.57	5.60	5.63	5.67	5.70	5.73	5.73	2022
5.37	5.40	5.43	5.47	5.50	5.53	5.57	5.60	5.63	5.67	5.70	5.73	5.73	2023
5.37	5.40	5.43	5.47	5.50	5.53	5.57	5.60	5.63	5.67	5.70	5.73	5.73	2024
5.37	5.40	5.43	5.47	5.50	5.53	5.57	5.60	5.63	5.67	5.70	5.73	5.73	2025
5.37	5.40	5.43	5.47	5.50	5.53	5.57	5.60	5.63	5.67	5.70	5.73	5.73	2026
5.37	5.40	5.43	5.47	5.50	5.53	5.57	5.60	5.63	5.67	5.70	5.73	5.73	2027
5.37	5.40	5.43	5.47	5.50	5.53	5.57	5.60	5.63	5.67	5.70	5.73	5.73	2028
5.37	5.40	5.43	5.47	5.50	5.53	5.57	5.60	5.63	5.67	5.70	5.73	5.73	2029
5.37	5.40	5.43	5.47	5.50	5.53	5.57	5.60	5.63	5.67	5.70	5.73	5.73	2030
5.37	5.40	5.43	5.47	5.50	5.53	5.57	5.60	5.63	5.67	5.70	5.73	5.73	2031
5.37	5.40	5.43	5.47	5.50	5.53	5.57	5.60	5.63	5.67	5.70	5.73	5.73	2032
5.37	5.40	5.43	5.47	5.50	5.53	5.57	5.60	5.63	5.67	5.70	5.73	5.73	2033
5.37	5.40	5.43	5.47	5.50	5.53	5.57	5.60	5.63	5.67	5.70	5.73	5.73	2034
5.37	5.40	5.43	5.47	5.50	5.53	5.57	5.60	5.63	6.67	5.70	5.73	5.73	2035

TABLE 9

**FY 2006.Q2 FORECAST OF INFLATION TRENDS
CHANGE IN GROSS DOMESTIC PRODUCT PRICE DEFLATOR**

Calendar/Fiscal Years 2006.Q2 vs. 2005.Q3

	(A)	(B)	(C)	(D)	(E)	(F)	(G)
	FY 2006.Q2 1/ CALENDAR YEAR <u>GDP DEFLATOR</u> (% Change)	FY 2006.Q2 1/ FISCAL YEAR <u>GDP DEFLATOR</u> (% Change)	FY 2006.Q2 2/ CUMULATIVE <u>GDP DEFLATOR</u> (Base Year 2005)	FY 2005.Q3 3/ FISCAL YEAR <u>GDP DEFLATOR</u> (% Change)	FY 2005.Q3 3/ CUMULATIVE <u>GDP DEFLATOR</u> (Base Year 2005)	CHANGE IN GDP <u>DEFLATOR</u> (% Change)	CHANGE IN GDP <u>DEFLATOR</u>
2006	2.68%	2.69%	1.013	1.74%	1.027	0.96%	-0.014
2007	1.82%	2.03%	1.034	1.85%	1.046	0.19%	-0.012
2008	2.05%	1.99%	1.055	2.04%	1.068	-0.04%	-0.013
2009	2.01%	2.02%	1.076	2.07%	1.090	-0.06%	-0.014
2010	2.05%	2.04%	1.098	2.18%	1.113	-0.14%	-0.016
2011	1.93%	1.96%	1.119	2.35%	1.140	-0.39%	-0.020
2012	2.05%	2.02%	1.142	2.45%	1.168	-0.43%	-0.026
2013	2.01%	2.02%	1.165	2.41%	1.196	-0.40%	-0.031
2014	1.82%	1.86%	1.187	2.36%	1.224	-0.50%	-0.037
2015	1.86%	1.85%	1.209	2.36%	1.253	-0.52%	-0.044
2016	1.90%	1.89%	1.231	2.40%	1.283	-0.51%	-0.052
2017	1.86%	1.87%	1.255	2.44%	1.314	-0.56%	-0.060
2018	1.90%	1.89%	1.278	2.48%	1.347	-0.59%	-0.069
2019	1.93%	1.92%	1.303	2.49%	1.380	-0.57%	-0.078
2020	1.96%	1.96%	1.328	2.47%	1.414	-0.51%	-0.086
2021	1.93%	1.93%	1.354	2.47%	1.449	-0.53%	-0.095
2022	1.95%	1.95%	1.380	2.47%	1.485	-0.52%	-0.105
2023	1.98%	1.97%	1.408	2.48%	1.522	-0.50%	-0.114
2024	2.01%	2.00%	1.436	2.49%	1.560	-0.49%	-0.124
2025	2.03%	2.02%	1.465	2.48%	1.598	-0.46%	-0.134
2026	1.99%	2.00%	1.494	2.48%	1.638	-0.48%	-0.144
2027	2.07%	2.05%	1.525	2.49%	1.679	-0.44%	-0.154
2028	2.02%	2.03%	1.556	2.49%	1.721	-0.45%	-0.165
2029	2.10%	2.08%	1.588	2.49%	1.763	-0.41%	-0.175
2030	2.11%	2.11%	1.621	2.50%	1.808	-0.39%	-0.186

1/ Source: Global Insight, First Quarter 2006 Long Term Economic Outlook, Trend Forecast

2/ Fiscal Year Cumulative Price Deflator escalates to midyear dollars. The first year, 2006, is determined as follows: $1.0013 = [(2.694/100) \cdot 5] + 1$. An example of subsequent year cumulative growth such as in 2006 is found as: $1.0341 = [1 + (2.033/100)] \cdot 1.0135$

3/ Source: Global Insight, Second Quarter 2005 Long Term Economic Outlook, Trend Forecast

TABLE 10

**FY 2006.Q2 INFLATION FORECAST COMPARISONS
GROSS DOMESTIC PRODUCT PRICE DEFLATOR INDEXES ^{1/}**

BPA Fiscal Year

<u>YEAR</u>	(A)	(B)	(C)
	FY 2006.Q2 ^{2/} <u>CUMULATIVE PRICE DEFLATOR INDEX</u> (Base Year 2005)	FY 2005.Q3 ^{3/} <u>CUMULATIVE PRICE DEFLATOR INDEX</u> (Base Year 2005)	(A - B) <u>DIFFERENCE</u>
2006	1.013	1.027	-0.014
2007	1.034	1.046	-0.012
2008	1.055	1.068	-0.013
2009	1.076	1.090	-0.014
2010	1.098	1.113	-0.016
2011	1.119	1.140	-0.020
2012	1.142	1.168	-0.026
2013	1.165	1.196	-0.031
2014	1.187	1.224	-0.037
2015	1.209	1.253	-0.044
2016	1.231	1.283	-0.052
2017	1.255	1.314	-0.060
2018	1.278	1.347	-0.069
2019	1.303	1.380	-0.078
2020	1.328	1.414	-0.086
2021	1.354	1.449	-0.095
2022	1.380	1.485	-0.105
2023	1.408	1.522	-0.114
2024	1.436	1.560	-0.124
2025	1.465	1.598	-0.134
2026	1.494	1.638	-0.144
2027	1.525	1.679	-0.154
2028	1.556	1.721	-0.165
2029	1.588	1.763	-0.175
2030	1.621	1.808	-0.186

^{1/} Source: Global Insight, First Quarter 2006 Long Term Economic Outlook, Trend Forecast

^{2/} Fiscal Year Cumulative Price Deflator escalates to midyear dollars. The first year, 2006, is determined as follows: $1.0013 = [(2.694/100)^*.5] + 1$. An example of subsequent year cumulative growth such as in 2006 is four $1.0341 = [1 + (2.033/100)]^*1.0135$

^{3/} Source: Global Insight, Second Quarter 2005 Long Term Economic Outlook, Trend Forecast

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 the U.S. 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. 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 (FY 2008 - 2009) and projected borrowing for the 7(b)2 rate test period (FY 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 Through FY 2007
 (\$ 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)			(46.7)	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)	5/31/1998	(11.8)	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	
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	

Table 7A

Bonneville Power Administration
 Total Bonds Issued Through FY 2007
 (\$ 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	107.7	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			9/30/2001/9/30/2002	(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			8/31/2006	(70.0)	none	0.0	Feb/Aug	0
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			5/31/2005	(80.0)	none	0.0	Nov/May	0
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			8/31/2007	(111.3)	none	0.0	Feb/Aug	0
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
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

Table 7A

Bonneville Power Administration
Total Bonds Issued Through FY 2007
(\$ 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				
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			1/31/2005	(53.5)	none	0.0	Jul/Jan	0
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			9/30/2006	(40.0)	none	0.0	Mar/Sep	0
9/30/2000	B	20.0	6.70%	5	2005	none	none			9/30/2005	(20.0)	none	0.0	Mar/Sep	0
1/31/2001	C	20.0	5.65%	4	2005	none	none			1/31/2005	(20.0)	none	0.0	Jul/Jan	0
1/31/2001	F	25.0	5.65%	4	2005	none	none			1/31/2005	(25.0)	none	0.0	Jul/Jan	0
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			3/31/2005	(110.0)	none	0.0	Mar/Sep	0
3/31/2002	B	30.0	4.60%	3	2005	none	none			3/31/2005	(30.0)	none	0.0	Mar/Sep	0
6/30/2002	C	60.0	3.75%	3	2005	none	none			6/30/2005	(60.0)	none	0.0	Jun/Dec	0
6/30/2002	K	40.0	3.75%	3	2005	none	none			6/30/2005	(40.0)	none	0.0	Jun/Dec	0
9/30/2002	C	100.0	3.05%	4	2006	none	none			9/30/2006	(100.0)	none	0.0	Mar/Sep	0
9/30/2002	E	30.0	3.05%	4	2006	none	none			9/30/2006	(30.0)	none	0.0	Mar/Sep	0
9/30/2002	B	20.0	3.05%	4	2006	none	none			9/30/2006	(20.0)	none	0.0	Mar/Sep	0
10/31/2002	C	50.0	3.00%	3	2005	none	none			10/31/2005	(50.0)	none	0.0	Oct/Apr	0
11/30/2002	C	40.0	2.80%	3	2005	none	none			11/30/2005	(40.0)	none	0.0	Nov/May	0
12/31/2002	B	40.0	3.05%	4	2006	none	none			12/31/2006	(40.0)	none	0.0	Jun/Dec	0
4/30/2003	B	40.0	2.40%	3	2006	none	none			4/30/2006	(40.0)	none	0.0	Apr/Oct	0
4/30/2003	B	25.0	2.40%	3	2006	none	none			4/30/2006	(25.0)	none	0.0	Apr/Oct	0
4/30/2003	C	40.0	2.90%	4	2007	none	none			4/30/2007	(40.0)	none	0.0	Apr/Oct	0
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			7/31/2006	(75.0)	none	0.0	Jul/Jan	0
7/31/2003	B	30.0	2.30%	3	2006	none	none			7/31/2006	(30.0)	none	0.0	Jul/Jan	0
7/31/2003	C	25.0	2.95%	4	2007	none	none			7/31/2007	(25.0)	none	0.0	Jul/Jan	0
9/30/2003	C	20.0	2.50%	3	2006	none	none	9/30/2006	(20.0)				0.0	Mar/Sep	0
9/30/2003	B	25.0	2.50%	3	2006	none	none			9/30/2006	(25.0)	none	0.0	Mar/Sep	0
9/30/2003	F	20.0	3.10%	4	2007	none	none			9/30/2007	(20.0)	none	0.0	Mar/Sep	0
1/31/2004	C	60.0	2.50%	3	2007	none	none			1/31/2007	(60.0)	none	0.0	Jul/Jan	0
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			1/31/2007	(25.0)	none	0.0	Jul/Jan	0
4/30/2004	C	65.0	2.95%	3	2007	none	none			4/30/2007	(65.0)	none	0.0	Apr/Oct	0
4/30/2004	B	35.0	2.95%	3	2007	none	none			4/30/2007	(35.0)	none	0.0	Apr/Oct	0
7/31/2004	C	50.0	3.45%	3	2007	none	none	7/31/2007	(50.0)			none	0.0	Jul/Jan	0

Table 7A

**Bonneville Power Administration
Total Bonds Issued Through FY 2007
(\$ 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				
7/31/2004	B	25.0	3.45%	3	2007	none	none			7/31/2007	(25.0)	none	0.0	Jul/Jan	0
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			9/30/2007	(30.0)	none	0.0	Mar/Sep	0
9/30/2004	C	30.0	3.10%	3	2007	none	none			9/30/2007	(30.0)	none	0.0	Mar/Sep	0
9/30/2004	C	40.0	5.60%	30	2034	9/30/2009	104.67						40.0	Mar/Sep	1,120,000
11/30/2004	C	35.0	3.75%	4	2008	none	none						35.0	Nov/May	656,250
11/30/2004	B	20.0	3.50%	3	2007	none	none						20.0	Nov/May	350,000
1/31/2005	C	40.0	5.40%	30	2035	1/31/2010	104.50						40.0	Jul/Jan	1,080,000
1/31/2005	B	20.0	3.60%	3	2008	none	none						20.0	Jul/Jan	360,000
4/30/2005	C	40.0	5.50%	30	2035	4/30/2010	104.58						40.0	Apr/Oct	1,100,000
6/30/2005	B	30.0	3.95%	3	2008	none	none						30.0	Jul/Jan	592,500
6/30/2005	C	40.0	4.00%	4	2009	none	none						40.0	Jul/Jan	800,000
9/30/2005	C	45.0	5.25%	30	2035	9/30/2010	104.38						45.0	Jul/Jan	1,181,250
9/30/2005	B	25.0	4.25%	3	2008	none	none						25.0	Jul/Jan	531,250
9/30/2005	F	20.0	4.25%	3	2008	none	none						20.0	Jul/Jan	425,000
3/31/2006	C	20.0	5.05%	3	2009	none	none						20.0	Mar/Sep	505,000
3/31/2006	E	20.0	5.05%	3	2009	none	none						20.0	Mar/Sep	505,000
3/31/2006	K	20.0	5.05%	3	2009	none	none						20.0	Mar/Sep	505,000
3/31/2006	B	25.0	5.05%	3	2009	none	none						25.0	Mar/Sep	631,250
7/31/2006	C	70.0	5.35%	3	2009	none	none						70.0	Jul/Jan	1,872,500
7/31/2006	B	45.0	5.35%	3	2009	none	none						45.0	Jul/Jan	1,203,750
9/30/2006	C	20.0	4.95%	4	2010	none	none						20.0	Mar/Sep	495,000
9/30/2006	C	15.0	4.95%	4	2010	none	none						15.0	Mar/Sep	371,250
9/30/2006	F	20.0	4.95%	4	2010	none	none						20.0	Mar/Sep	495,000
9/30/2006	B	15.0	4.95%	3	2009	none	none						15.0	Mar/Sep	371,250
1/31/2007	C	25.0	5.10%	3	2010	none	none						25.0	Jul/Jan	637,500
1/31/2007	B	35.0	5.10%	3	2010	none	none						35.0	Jul/Jan	892,500
3/31/2007	B	30.0	4.80%	3	2010	none	none						30.0	Mar/Sep	720,000
3/31/2007	C	40.0	4.85%	5	2012	none	none						40.0	Mar/Sep	970,000
6/30/2007	C	35.0	6.40%	30	2037	6/30/2012	100.00						35.0	Jun/Dec	1,120,000
6/30/2007	B	30.0	5.35%	3	2010	none	none						30.0	Jun/Dec	802,500
6/30/2007	F	30.0	5.35%	3	2010	none	none						30.0	Jun/Dec	802,500
6/30/2007	K	20.0	5.35%	3	2010	none	none						20.0	Jun/Dec	535,000
7/31/2007	C	50.0	5.20%	3	2010	none	none						50.0	Jul/Jan	1,300,000
9/30/2007	F	20.0	4.70%	4	2011	none	none						20.0	Mar/Sep	470,000
TOTAL		<u>\$9,774.0</u>							<u>(\$1,798.4)</u>		<u>(\$5,735.1)</u>		<u>\$2,240.5</u>		<u>60,930,150</u>

Weighted average interest rate for outstanding bonds

5.44%

*Net amount issued \$7,975.6

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 POWER SERVICES
PROGRAM CASE FOR 7B2 PERIOD
(\$ in Millions)**

	<u>Rate Period</u>	<u>7(b)(2) Period</u>				
	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>Average FYs '10-'13</u>
POWER						
<u>Capital Requirements for Revenue Producing Investments</u>						
Corps & Bureau Additions/Replacements - Direct Funded	133.2	157.3	170.9	178.5	188.7	173.8
Corps & Bureau Additions/Replacements - Appropriations ¹	0.0	0.0	0.0	0.0	0.0	0.0
PBL Capital Equipment	12.7	13.9	15.0	15.0	15.1	14.7
Capitalized Bond Premium	0.0	0.0	0.0	0.0	0.0	0.0
CGS: Additions/Replacements ^{2,3}	101.9	92.1	54.7	51.0	32.5	57.5
CGS: Fuel	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
Annual Capital Requirements for Revenue Producing Investments	247.8	263.2	240.5	244.5	236.3	246.1
Cumulative Capital Requirements for Rev Producing Investments	247.8	263.2	503.7	748.2	984.4	
<u>Capital Requirements for Non-Revenue Producing and Public Benefit Investments</u>						
Energy Conservation	27.2	47.6	47.6	47.6	47.6	47.6
Fish Investment						
BPA Fish and Wildlife Investment	50.0	70.0	60.0	50.0	50.0	57.5
Corps & Bureau Fish Investment - Appropriations	110.0	88.0	96.0	50.0	124.3	89.6
Total Fish Investment	160.0	158.0	156.0	100.0	174.3	84.0
Other Third - Party	0.0	0.0	0.0	0.0	0.0	
Annual Capital Req. for Non-Rev. & Public Benefit Invests.	187.2	205.6	203.6	147.6	221.9	194.7
Cumulative Capital Req. for Non-Rev. & Public Benefit Invest.	187.2	205.6	409.2	556.8	778.7	
ANNUAL FUNDING REQUIREMENTS FOR POWER	435.0	468.8	444.1	392.1	458.2	440.8
CUMULATIVE FUNDING REQUIREMENTS FOR POWER	435.0	468.8	912.9	1,305.0	1,763.1	

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

Table 7C

**Association of Transmission Construction Functionalized to Generation Funded By
Bonds 1/
FY 1995 - 2007
(\$ Thousands)**

(A)	(B)	(C)	(D)	(J)	(E)	(F)	(G)	(H)		(I)
<u>Fiscal Year</u>	<u>Plant in Service</u> ^{2/}	<u>Amount Funded by Bonds</u>	<u>Generation Amount Outstanding</u>	<u>Amount of Bond Sales</u> ^{3/}	<u>Interest Rate</u>	<u>Term</u>	<u>Year Due</u>	<u>Refinancing</u>		
								<u>Date</u>	<u>Amount</u>	
1993	38	38	0	100,000	8.35	40	2033			
1995	67	67	0	50,000	7.70	30	2025			
1996	5,622	5,622	0	5,622	5.90	7	2003			
1997	7,400	7,400	0	30,000	6.80	7	2004			
1998	3,181	3,181	3,181	40,000	5.75	10	2008			
1999	950	950	950	60,000	5.90	15	2014			
2000	10,948	10,948	10,948	50,000	7.00	4	2004			
2001	68	68	68	60,000	6.05	10	2010			
2002	1,990	1,990	0	110,000	4.60	15	2005			
2003	45,062	45,062	45,062	50,000	3.00	3	2006			
2004	10,346	10,346	13,357	60,000	2.50	3	2007			
2005	25,977	7,990	7,990	35,000	3.75	4	2009			

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 Dan Hays, Plant Accounting.

Table 7D

Association of Conservation Investment Funded by Bonds ^{1/}
FY 1982 - 2007
(\$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	78,643 125,449 <u>204,092</u>	140,000	0	12.20	20	2003		
1984	66,783	24,551 <u>42,232</u> 66,783	150,000	0	13.05	20	2004	9/30/1989 9/30/1989	66,000 ^{3/} 66,000 ^{4/}
1985	103,067	7,768 50,000 <u>45,299</u> 103,067	50,000	0	10.15	5	1990		
1986	97,618	4,701 75,000 <u>17,917</u> 97,618	50,000 50,000	0 0	8.15 7.80	10 5	1996 1991		
1987	65,958	32,083 <u>33,875</u> 65,958	75,000 50,000	0 0	9.30 8.35	20 5	2007 1992	7/31/1992	80,200 ^{5/}
1988	52,485	52,485	90,000	0	9.90	20	2008		
1989	37,167	3,640 <u>33,527</u> 37,167	40,000	40,000	8.55	20	2009		
1990	33,776	6,473 <u>27,303</u> 33,776							
1991	45,593	<u>45,593</u> 45,593							
1992	74,668	27,104 <u>47,564</u> 74,668	100,000	104,300	7.14	15	2007	9/30/1998	104,300 ^{6/}
1993	97,910	2,436 50,000 40,000 <u>5,474</u> 97,910	50,000 50,000 40,000	0 52,800 0	8.05 7.40 6.75	20 20 20	2013 2013 2013	9/30/1998	52,800 ^{7/}
1994	113,488	44,526 50,000 <u>18,962</u> 113,488	50,000 50,000	0 37,700	6.75 7.10	20 4	2014 1998	5/31/1998	37,700 ^{8/}
1995	73,507	66,038	85,000	0	7.50	20	2015		

Table 7D

Association of Conservation Investment Funded by Bonds ^{1/}
FY 1982 - 2007
(\$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
		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		
		<u>20,336</u>							
1998	14,154	3,469							
		10,685							
		<u>3,469</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	0	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		
		<u>16,876</u>							
2005	59,903	11,072							
		48,831							
		<u>59,903</u>							
2006	14,970	14,970	20,000	20,000	5.05	3	2009		
2007	10,725	-43,801	20,000	20,000	5.35	3	2010		
		54,526							
		<u>10,725</u>							

1/ Investments through 2005 have an estimated average service life of 20 years, 2006-2011 plant

Table 7E

Association of Fish and Wildlife Investment Funded by Bonds ^{1/}
FY 1985 - 2007
(\$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>
1985	4,318	4,318							
1986	5,590	5,590							
1987	4,710	4,710							
1988	7,726	7,726							
1989	8,267	2,656	25,000	0	8.95	10	1999		
		5,611							
		<u>8,267</u>							
1990	16,193	16,193							
1991	17,680	17,680	50,000	0	7.95	5	1996		
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							
1998	21,995	21,995	60,000	60,000	6.10	15	2013		
1999	14,748	2,922	20,000	0	6.30	4	2003	9/30/2003	20,000 ^{4/}
		11,826							
		<u>14,748</u>							
2000	13,898 ^{5/}	8,174							
		5,724							
		<u>13,898</u>							

Table 7E

Association of Fish and Wildlife Investment Funded by Bonds ^{1/}
FY 1985 - 2007
(\$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>
2001	16,494	16,494	25,000	0	5.65	4	2005		
2002	6,102	2,782							
		3,320							
		6,102							
2003	11,156	5,054							
2004	5,849	5,849							
2005	15,829	5,777	20,000	20,000	4.25	3	2008		
		10,052							
		15,829							
2006	33,747	9,948	20,000	20,000	4.95	4	2010		
		23,799							
		33,747							
2007	35,635	6,201	30,000	30,000	5.35	3	2010		
		20,000	20,000	20,000	4.7	4	2011		
		9,434 ^{6/}							
		35,635							

- 1/ These investments have an estimated average service life of 15 years.
- 2/ Investments through 2005 have an estimated average service life of 20 years.
- 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/ Not yet funded.

Table 7F

Association of Corps and Bureau Direct Funded Investment ^{1/}
FY 1982-2007
(\$000s)

(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)
<u>Fiscal Year</u>	<u>Plant in Service</u>	<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>Refinancing Date</u>	<u>Refinancing Amount</u>
1995	35,000	35,000	35,000	0	7.50	20	2015		
1997	50,000	50,000	50,000	0	6.50	3	2000		
1998	25,000	25,000	25,000	25,000	6.00	10	2008		
1999	7,902 ^{2/}	7,902	20,000	0	6.40	5	2004		
2000	50,389	12,098 38,291	40,000 ^{3/}	0	6.85	3	2003	4/30/2003	40,000
		50,389	20,000	0	6.70	5	2005		
2001	24,725	1,709 20,000 3,016	50,000	0	4.75	3	2004		
		24,725							
2002	36,472	36,472	30,000	0	4.60	3	2005		
		36,472	40,000	0	3.05	4	2006		
2003	47,489	10,512 30,000 6,977	25,000 30,000 25,000 40,000	0 0 0 0	2.40 2.30 2.50 3.05	3 3 3 4	2006 2006 2006 2007		
		47,489							
2004	67,041	33,023 25,000 9,018	25,000 35,000 25,000 30,000	0 0 0 0	2.50 2.95 3.45 3.10	3 3 3 3	2007 2007 2007 2007		
		67,041							
2005	167,277	20,982 25,000 40,000 25,000 35,000 21,295	20,000 20,000 30,000 25,000	20,000 20,000 30,000 25,000	3.50 3.60 3.95 4.25	3 3 3 3	2008 2008 2008 2008		
		167,277							
2006	40,799	3,705 30,000 7,094	25,000 45,000 15,000	25,000 45,000 15,000	5.05 5.35 4.95	3 3 3	2009 2009 2009		
		40,799							
2007	76,682	12,906	35,000	35,000	5.10	3	2010		

Table 7F

Association of Corps and Bureau Direct Funded Investment ^{1/}
FY 1982-2007
(\$000s)

(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)
<u>Fiscal Year</u>	<u>Plant in Service</u>	<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>Refinancing Date</u>	<u>Refinancing Amount</u>
		20,000 ^{1/}	30,000	30,000	4.80	3	2010		
		30,000 ^{2/}	30,000	30,000	5.35	3	2010		
		13,776 ^{3/}							
		<u>76,682</u>							

1/ These investments have an estimated average service life of 45 years

2/ Beginning in this year, data comes from person handling COE/BOR investments in the Actg Dept

3/ Refinanced on 4/30/2003 with \$40,000 issued at 2.40% 3 year term, due in 2006

Table 7G
BPA Projected Generation Federal Borrowing
FY 2008 - 2009
(\$000s)

<u>FY</u> <u>Year</u>	<u>Description</u>	<u>Interest</u> <u>Rate</u>	<u>Term</u>	<u>Total</u> <u>Borrowing</u>
2008	IT and Facilities ^{1/}	6.32	35	20,000
	Fish, Wildlife & Environmen	5.94	15	25,000
	Conservation	5.53	5	20,000
	BOR/COE ^{2/}	6.32	45	150,000
				215,000
2009	IT and Facilities ^{1/}	6.63	35	12,714
	Fish, Wildlife & Environmen	6.23	15	50,000
	Conservation	5.80	5	27,200
	BOR/COE ^{2/}	6.63	45	133,238
				223,152

1/ Bonds issued for this purpose are construction bonds and fund IT and facilities equipment

2/ Bonds issued for this purpose are for direct funding efficiency and reliability.

Table 7H
September 2007 (Post 998) Borrowing Capacity
YTD - Information Current Through 9/30/07

<u>Program</u>	<u>Deferred</u> <u>Borrowing</u>	<u>Cap.</u> <u>Expenditures</u>	<u>YTD</u> <u>Borrowing</u>	<u>Total</u>
Construction (Note 1)	\$ 23.3	\$ 145.3	\$ 100.0	\$ 68.6
Environment	(0.8)	5.9	-	5.1
Fish & Wildlife	19.0	35.2	50.0	4.2
Conservation/Con-Aug	15.9	7.0	20.0	2.9
Bureau/Corps	29.8	108.4	95.0	43.1
Generation (Note 2)	-	10.7	-	10.7
Total	\$ 87.2	\$ 312.4	\$ 265.0	\$ 134.6

1/ Excludes \$15.0M of TBL Cash Reserves Financing and all other PFIA. Includes one half of Corporate capital.

2/ Includes Power capital not reported in another category above and one half of Corporate capital.

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. This chapter does not include replacements for the Columbia Generating Station (CGS). This information is included in Chapter 10 of this document.

8.2 Methodology

To determine debt service streams for EN Nuclear Projects WNP-1, 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. Debt service streams include assumptions about projected CGS capital investments and future repayment of WNP-1 debt. It also includes a modeling assumption that some WNP-1 variable rate debt due in FY2016-2017 would be repaid in FY 2013-2015. The data used in the repayment study is shown in the attached tables. This data forms the basis for calculating debt service on the EN projects. (*See Chapter 3.*)

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 8G.

Table 8A**Total WNP-1 2009 Debt Service -- GAAP BASIS**

Fiscal Year	Principal	Interest	Expenses	Total Debt Service
2008	61,953,572	73,028,924	1,863,119	136,845,614
2009	86,060,577	81,585,714	1,863,119	169,509,411
2010	86,235,000	75,072,818	1,863,119	163,170,937
2011	92,318,018	70,890,375	1,863,119	165,071,512
2012	121,879,692	66,365,047	1,863,119	190,107,858
2013	223,246,541	60,175,791	1,863,119	285,285,451
2014	218,543,384	48,706,741	1,863,119	269,113,244
2015	161,808,891	37,432,888	1,863,119	201,104,899
2016	286,823,221	28,968,209	1,863,119	317,654,549
2017	<u>242,886,477</u>	<u>13,293,243</u>	<u>1,397,339</u>	257,577,060
Total	1,581,755,373	555,519,752	18,165,410	2,155,440,534

Table 8B
Total CGS Debt Service -- GAAP BASIS

Fiscal Year	Principal	Interest	Expenses	Total Debt Service
2008	32,434,092	87,233,645	989,716	120,657,454
2009	124,939,573	97,525,082	989,716	223,454,371
2010	141,353,750	85,351,243	989,716	227,694,709
2011	137,569,164	78,057,514	989,716	216,616,395
2012	214,630,679	70,861,700	989,716	286,482,095
2013	60,123,701	59,305,142	989,716	120,418,559
2014	82,902,266	56,276,611	989,716	140,168,593
2015	108,246,246	51,996,386	989,716	161,232,348
2016	42,512,842	46,309,320	989,716	89,811,878
2017	115,533,468	43,996,785	989,716	160,519,969
2018	226,103,103	37,580,783	742,287	264,426,172
2019	22,302,500	24,880,888	-	47,183,388
2020	90,356,250	23,738,113	-	114,094,363
2021	94,973,750	19,128,243	-	114,101,993
2022	99,741,250	14,352,240	-	114,093,490
2023	104,741,250	9,351,836	-	114,093,086
2024	<u>81,495,000</u>	<u>4,074,750</u>	-	<u>85,569,750</u>
Total	1,779,958,883	810,020,283	10,639,447	2,600,618,613

Total CGS Capital Additions through 2013 -- GAAP BASIS

Fiscal Year	Principal	Interest	Expenses	Total Debt Service
2008	-	-	-	-
2009		1,346,187	-	1,346,187
2010		6,638,037	-	6,638,037
2011		11,145,275	-	11,145,275
2012	300,000	14,077,066	-	14,377,066
2013	1,345,000	16,565,083	-	17,910,083
2014	1,992,500	17,801,148	-	19,793,648
2015	2,661,250	17,708,342	-	20,369,592
2016	2,788,750	17,585,843	-	20,374,593
2017	2,923,750	17,453,216	-	20,376,966
2018	3,062,500	17,310,708	-	20,373,208
2019	14,386,250	17,158,127	-	31,544,377
2020	48,655,000	16,402,765	-	65,057,765
2021	51,235,000	13,823,059	-	65,058,059
2022	53,975,000	11,082,590	-	65,057,590
2023	56,878,750	8,174,929	-	65,053,679
2024	<u>45,445,000</u>	<u>5,088,448</u>	-	<u>50,533,448</u>
Total	285,648,750	209,360,821		495,009,571

Table 8C

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

Fiscal Year	Principal	Interest	Expenses	Total Debt Service
2008	63,062,750	86,327,138	2,064,697	151,454,585
2009	54,498,732	94,419,461	2,064,697	150,982,890
2010	47,458,720	90,180,222	2,064,697	139,703,639
2011	80,456,090	82,328,549	2,064,697	164,849,336
2012	75,191,685	80,719,684	2,064,697	157,976,065
2013	87,498,849	82,712,683	2,064,697	172,276,229
2014	88,019,077	72,130,112	2,064,697	162,213,886
2015	129,015,424	51,837,392	2,064,697	182,917,513
2016	224,299,213	46,907,706	2,064,697	273,271,617
2017	260,177,266	34,235,747	2,064,697	296,477,710
2018	<u>262,662,101</u>	<u>17,801,808</u>	<u>1,548,523</u>	<u>282,012,432</u>
Total	1,372,339,906	739,600,503	22,195,493	2,134,135,902

Table 8D**Total Energy Northwest Net Debt Service -- GAAP BASIS
Includes WNP-1 and -3, CGS, and CGS capital additions**

Fiscal Year	Principal	Interest	Expenses	Total Debt Service
2008	157,450,414	246,589,707	4,917,532	408,957,653
2009	265,498,882	274,876,445	4,917,532	545,292,859
2010	275,047,470	257,242,321	4,917,532	535,954,034
2011	310,343,272	242,421,713	4,917,532	551,921,991
2012	412,002,055	232,023,496	4,917,532	639,950,766
2013	372,214,091	218,758,699	4,917,532	584,023,236
2014	391,457,226	194,914,612	4,917,532	577,912,384
2015	401,731,810	158,975,009	4,917,532	551,671,421
2016	556,424,027	139,771,079	4,917,532	687,154,706
2017	621,520,961	108,978,991	4,451,752	720,991,400
2018	491,827,704	72,693,299	2,290,810	553,708,718
2019	36,688,750	42,039,015	-	57,154,387
2020	139,011,250	40,140,878	-	137,823,624
2021	146,208,750	32,951,302	-	137,829,020
2022	153,716,250	25,434,831	-	137,817,518
2023	161,620,000	17,526,765	-	137,814,727
2024	126,940,000	9,163,198	-	103,360,244
Total	5,019,702,912	2,314,501,359	51,000,350	7,069,338,686

For the purposes of calculating MNR for FY 2008, EN Rate Case Debt Service is \$543.364 million.

Table 8E

Total Cares Net Debt Service -- GAAP BASIS

Fiscal Year	Principal	Interest	Total Debt Service
2008	2,280,000	834,325	3,114,325
2009	2,380,000	730,788	3,110,788
2010	2,485,000	622,125	3,107,125
2011	2,600,000	495,000	3,095,000
2012	2,730,000	361,750	3,091,750
2013	2,865,000	221,875	3,086,875
2014	<u>3,005,000</u>	<u>75,125</u>	<u>3,080,125</u>
Total	18,345,000	3,340,988	21,685,988

Table 8F

Total Tacoma Net Debt Service -- GAAP BASIS

Fiscal Year	Principal	Interest	Total Debt Service
2008	1,368,333	461,773	1,830,106
2009	1,434,167	397,836	1,832,003
2010	1,495,000	338,228	1,833,228
2011	1,546,667	281,950	1,828,617
2012	1,613,333	217,880	1,831,213
2013	1,691,667	138,008	1,829,675
2014	1,775,833	54,704	1,830,537
2015	<u>298,333</u>	<u>6,800</u>	<u>305,133</u>
Total	11,223,333	1,897,179	13,120,512

Table 8G**Total N. Wasco Net Debt Service -- GAAP BASIS**

Fiscal Year	Principal	Interest	Debt Service Reserve Fund	Total Debt Service
2008	937,500	1,264,139	(538,105)	1,663,534
2009	986,667	1,215,148	(34,189)	2,167,626
2010	1,036,667	1,163,553		2,200,220
2011	1,086,667	1,109,408		2,196,075
2012	1,140,833	1,052,606		2,193,439
2013	1,200,000	992,411		2,192,411
2014	1,264,167	928,438		2,192,605
2015	1,329,167	861,012		2,190,179
2016	1,398,333	790,097		2,188,430
2017	1,472,500	715,455		2,187,955
2018	1,547,500	636,935		2,184,435
2019	1,626,667	554,407		2,181,074
2020	1,710,833	467,632		2,178,465
2021	1,800,000	376,350		2,176,350
2022	1,894,167	280,302		2,174,469
2023	1,993,333	179,227		2,172,560
2024	2,097,500	72,865		2,170,365
2025	<u>352,500</u>	<u>9,165</u>		<u>361,665</u>
Total	24,875,001	12,669,150	(572,294)	36,971,857

Table 8H

Total Cowlitz Net Debt Service -- GAAP BASIS

Fiscal Year	Principal	Interest	Total Debt Service
2008	5,110,000	6,472,806	11,582,806
2009	5,360,000	6,211,056	11,571,056
2010	5,630,000	5,936,306	11,566,306
2011	5,915,000	5,647,681	11,562,681
2012	6,215,000	5,344,431	11,559,431
2013	6,520,000	5,026,056	11,546,056
2014	6,850,000	4,691,806	11,541,806
2015	7,190,000	4,340,806	11,530,806
2016	7,545,000	3,972,431	11,517,431
2017	7,930,000	3,585,556	11,515,556
2018	8,325,000	3,179,181	11,504,181
2019	8,740,000	2,752,556	11,492,556
2020	9,175,000	2,304,681	11,479,681
2021	9,635,000	1,834,431	11,469,431
2022	10,120,000	1,340,556	11,460,556
2023	11,035,000	811,681	11,846,681
2024	<u>11,585,000</u>	<u>267,903</u>	<u>11,852,903</u>
Total	132,880,000	63,719,924	196,599,924

Table 8I

Total Trojan Net Debt Service -- GAAP BASIS

Fiscal Year	Principal	Interest	Total Debt Service
2008	<u>7,512,083</u>	<u>375,604</u>	<u>7,887,687</u>
Total	7,512,083	375,604	7,887,687

Table 8J

Total Emerald PUD Net Debt Service -- GAAP BASIS

<u>Fiscal Year</u>	<u>Total Debt Service</u>
2008	253,344
2009	244,797
2010	<u>138,215</u>
Total	636,356

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 \$25.1 million in 1997. A payment of \$16.56 million was made in 2001. Payments totaling \$739,000 were made on September 30, 2004. Payments of \$2.95 million and \$7.2 million are due in 2008 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.



United States Department of the Interior



TAKE PRIDE
IN AMERICA

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IN REPLY REFER TO:
PN-1828
WTR-4.00

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

SEP 25 2007

Bonneville Power Administration
Attention: Ms. Lisa Kaiser, KSRD-2
P.O. Box 3621
Portland, OR 97208-3621

Subject: Federal Columbia River Power Systems Assistance to Authorized Bureau of Reclamation Irrigation Projects in the Pacific Northwest, Fiscal Year 2006.

Dear Lisa:

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, 2006. 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 2006.

As shown, the irrigation assistance for Boise, Palisades, Avondale, Dalton Gardens and Rathdrum Prairie (Hayden Lake Unit) projects have been paid. The next project due for payment is the Mann Creek Project in 2008.

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

Sincerely,

Acting for

J. William McDonald
Regional Director

Enclosures-3

Table 1
SUMMARY OF FINANCIAL ASSISTANCE TO IRRIGATION - FY 2006

PROJECT	FISCAL YEAR DUE	AMOUNT	CUMULATIVE
Boise	1997	24,999 PAID-1997	24,999
Palisades	2001	16,943 PAID-2001	41,942
Avondale	2004	184 PAID-2004	42,126
Dalton Gardens	2004	208 PAID-2004	42,334
Rathdrum Prairie	2004	347 PAID-2004	42,681
Mann Creek	2008	2,950	45,631
Columbia Basin	2009	5,272	50,903
Spokane Valley	2009	2,007	52,910
Columbia Basin	2012	1,201	54,111
Columbia Basin	2013	59,770	113,881
Columbia Basin	2014	53,271	167,152
Columbia Basin	2015	52,826	219,978
Columbia Basin	2016	61,794	281,772
Columbia Basin	2017	49,918	331,690
Greater Wenatchee	2017	1,058	332,748
Yakima, Roza	2017	1,133	333,881
Columbia Basin	2018	26,472	360,353
Foster Creek	2018	675	361,028
Yakima, Roza	2018	784	361,812
Columbia Basin	2019	52,091	413,903
Foster Creek	2019	1,124	415,027
Michaud Flats	2019	2,080	417,107
Michaud-Fort Hall	2019	2,080	419,187
Yakima, Roza	2019	610	419,797
Columbia Basin	2020	22,525	442,322
Crooked River	2020	2,430	444,752
Columbia Basin	2021	10,284	455,036
Yakima, Roza	2021	2,179	457,215
Columbia Basin	2022	13,958	471,173
Yakima, Roza	2022	697	471,870
Columbia Basin	2023	10,016	481,886
Rogue River	2023	1,355	483,241
Columbia Basin	2024	7,985	491,226
Greater Wenatchee	2024	1,960	493,186
Yakima, Kennewick	2024	7,264	500,450
Columbia Basin	2025	12,753	513,203
Crooked River Ext	2025	1,143	514,346
Whitestone Coulee Unit	2026	3,810	518,156
Columbia Basin	2026	13,227	531,383
Greater Wenatchee	2026	901	532,284
Yakima, Roza	2026	3,312	535,596
Columbia Basin	2027	4,029	539,625
Rogue River	2027	388	540,013
Columbia Basin	2028	7,169	547,182
The Dalles	2028	4,204	551,386
Baker	2029	4,092	555,478
Lower Teton	2029	40,273	595,751
East Greenacres	2030	2,225	597,976
Columbia Basin	2031	10,805	608,781
Rogue River	2033	7,938	616,719
Columbia Basin	2035	7,969	624,688
Whitestone Coulee Unit	2036	3,660	628,348
Manson Unit	2036	16,163	644,511
Tualatin	2036	9,910	654,421
East Greenacres	2037	4,318	658,739
Columbia Basin	2037	12,389	671,128
Tualatin	2039	15,501	686,629
Oroville Tonasket	2042	73,659	760,288
Columbia Basin	2045	11,889	772,177

Table 2 -- Irrigation Assistance -- Fiscal Year 2006
 (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)	Irrigation Assistance Required From FCRPS (\$1,000)	Year Assistance Is Due Fiscal Year
In Service as of Sept. 30, 2006							
Boise	390,126 --	--	--	--	69,629	24,999	PAID 1997
Palisades	528,397 --	--	--	1961-2000	30,725	16,943	PAID 2001
Avondale	922 --	--	--	1964-2003	573	184	PAID 2004
Dalton Gardens	944 --	--	--	1964-2003	564	208	PAID 2004
Rathdrum Prairie, Hayden Lake	5,010 --	--	None	1964-2003	1,233	347	PAID 2004
Mann Creek Project	5,110	--	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 --		1,133	2017
Block 2	6,628 --	--	--	1943-2017 --		784	2018
Block 3	4,858 --	--	--	1944-2018 --		610	2019
Block 4	17,976 --	--	--	1946-2020 --		2,179	2021
Blocks 5 & 6	5,362 --	--	--	1947-2021 --		697	2022
Block 7	27,395 --	--	--	1951-2025 --		3,312	2026
Total	71,511				27,355	8,715	
Chief Joseph Dam Project							
Greater Wenatchee Division							
Block 1 East Unit	--	1963	1964-66	1967-2016 --		1,058	2017
Blocks 2&3 East & Howard Flat	--	1963	1964-73	1974-2023 --		1,960	2024
Block 4 Brays Landing	--	1965	1966-75	1976-2025 --		901	2026
Total	7,104				8,616	3,919	
Chief Joseph Dam Project							
Bridgeport Bar Dist.	--	1957	1958-67	1968-2017	780	675	2018
Brewster Flat Dist.	--	1958	1959-68	1969-2018	2,591	1,124	2019
Total	2,854				3,371	1,799	
Michaud Flats Project	11,000	1958	1959-68	1969-2018	5,009	2,080	2019
Michaud-Fort Hall	--	--	--	--		2,080	2019
Crooked River Project	20,410 --	--	1963-69	1970-2019	7,019	2,430	2020
Yakima Project, Kennewick Div.	19,171	1957	1958-67	1958-2023	11,574	7,264	2024
Crooked River Project							
Crooked River Extension	2,890	1967	1968-74	1975-2024	2,096	1,143	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)	Irrigation Assistance Required From FCRPS (\$1,000)	Year Assistance Is Due Fiscal Year
The Dalles Project							
Western Division	5,420	1965	1968-77	1978-2007	6,824	4,204	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	--	2,225	2030
Block 2	3,530	1976	1977-86	1987-2036	--	4,318	2037
Total	5,310				8,211	6,543	
Chief Joseph Dam Project							
Whitestone Coulee Unit							
Block 1		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	--	9,910	2036
Block 2	10,330	1978	1979-88	1989-2038	--	15,501	2039
Total	17,000				31,529	25,411	
Chief Joseph Dam Project 1/ Oroville-Tonasket Unit Ext.	10,000	1987	--	1992-2041	86,054	73,659	2041
Teton Basin Project							
Lower Teton Division 2/	148,210				61,076	40,273	2029
Rogue River Project							
Talent ID	16,300		1963-1972	1973-2032		7,938	2033
Medford ID	11,500			1963-2022		1,355	2023
Rogue River ID	8,049		1967-1976	1977-2026		358	2027
Total	35,849				17,845	9,681	

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 - FY2006

IRRIGATION ASSISTANCE REQUIRED FOR COSTS INCURRED TO 9-30-06

ALLOCATION TO IRRIGATION	649,039,883.00	From C&RS, total Cost
LESS MASTER WATER SERVICE CONTRACT COSTS	-49,495,697.00	Adjustment for \$pd by WSC
TOTAL IRRIGATION COSTS SUBJECT TO IRRIGATION ASSISTANCE	<u>599,544,186.00</u>	
LESS PART-TIME FARM UNITS	-500,000	
LESS REPAYMENT BY IRRIGATION DISTRICTS	-72,866,168	
LESS STATE OF WASHINGTON CONTRIBUTIONS	-15,000,000	
LESS OTHER CONTRIBUTIONS	-3,564,755	
TOTAL ASSISTANCE REQUIRED	<u>507,613,263</u>	

BLOCK	1ST YEAR OF DEVELOP	1ST YEAR OF REPAYMENT	ACRES	AMOUNT DUE	FY \$ IS DUE
1	1949	1959	5,790	5,271,938	2,009
2	1952	1962	1,319	1,200,982	2,012
40, 41, 70, 701, 71, 72	1953	1963	65,644	59,770,486	2,013
11, 42, 49, 73	1954	1964	58,506	53,271,160	2,014
12, 15, 43, 74, 75	1955	1965	58,017	52,825,914	2,015
13, 16, 44, 76, 78	1956	1966	67,866	61,793,672	2,016
19, 45, 86, 87	1957	1967	54,823	49,917,698	2,017
421, 47, 89	1958	1968	29,073	26,471,686	2,018
3, 14, 18, 401, 46, 77, 79	1959	1969	57,210	52,091,120	2,019
20, 85	1960	1970	24,738	22,524,561	2,020
82, 881	1961	1971	11,295	10,284,377	2,021
201, 83, 88	1962	1972	15,330	13,958,344	2,022
80	1963	1973	11,000	10,015,772	2,023
23	1964	1974	8,770	7,985,302	2,024
17	1965	1975	14,006	12,752,718	2,025
741, 81	1966	1976	14,527	13,227,375	2,026
161	1967	1977	4,425	4,028,890	2,027
21, 48	1968	1978	7,874	7,169,108	2,028
25	1971	1981	11,867	10,804,833	2,031
251	1975	1985	8,752	7,969,277	2,035
253, 24	1977	1987	13,607	12,389,328	2,037
26, 461	1985	1995	13,057	11,888,722	2,045
TOTALS			557,495	507,613,263	
			910.52	507,613,263	
RATE PER ACRE	910.52				

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. Since FY 2007 is now part of the historical period, Table 10A, which documented replacements for the 2007 study year, has not been included in this study.

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, FY 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, 2007 - SEPTEMBER 30, 2008 COST EVALUATION PERIOD**

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

<u>In Service Date</u>	<u>Current Principal</u>	<u>Interest Rate</u>	<u>Due Date</u>
2009	132,082	6.980%	2054
2010	123,554	6.980%	2055
2011	115,478	6.980%	2056
2012	107,833	6.980%	2057
2013	100,692	6.980%	2058
2014	101,059	6.980%	2059
2015	101,445	6.980%	2060
2016	101,828	6.980%	2061
2017	102,273	6.980%	2062
2018	102,776	6.980%	2063
2019	103,335	6.980%	2064
2020	103,944	6.980%	2065
2021	104,603	6.980%	2066
2022	105,307	6.980%	2067
2023	93,738	6.980%	2068
2024	83,581	6.980%	2069
2025	74,621	6.980%	2070
2026	66,724	6.980%	2071
2027	59,766	6.980%	2072
2028	53,571	6.980%	2073
2029	48,097	6.980%	2074
2030	43,307	6.980%	2075
2031	39,045	6.980%	2076
2032	35,283	6.980%	2077
2033	50,409	6.980%	2078
2034	50,868	6.980%	2079
2035	51,369	6.980%	2080
2036	51,855	6.980%	2081
2037	52,381	6.980%	2082
2038	52,944	6.980%	2083
2039	53,546	6.980%	2084
2040	54,129	6.980%	2085
2041	54,747	6.980%	2086
2042	55,399	6.980%	2087
2043	52,192	6.980%	2088
2044	49,175	6.980%	2089
2045	46,388	6.980%	2090
2046	43,772	6.980%	2091
2047	41,323	6.980%	2092
2048	39,032	6.980%	2093
2049	35,217	6.980%	2094
2050	31,823	6.980%	2095
2051	28,831	6.980%	2096
2052	26,183	6.980%	2097
2053	41,003	6.980%	2098
2054	41,553	6.980%	2099
2055	42,132	6.980%	2100
2056	42,740	6.980%	2101
2057	43,334	6.980%	2102
2058	43,955	6.980%	2103

**BONNEVILLE POWER ADMINISTRATION
GENERATION REPAYMENT STUDY
OCTOBER 1, 2007 - SEPTEMBER 30, 2009 COST EVALUATION PERIOD**

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

<u>In Service Date</u>	<u>Current Principal</u>	<u>Interest Rate</u>	<u>Due Date</u>
2010	126,180	6.540%	2055
2011	117,932	6.540%	2056
2012	110,125	6.540%	2057
2013	102,832	6.540%	2058
2014	103,207	6.540%	2059
2015	103,601	6.540%	2060
2016	103,993	6.540%	2061
2017	104,447	6.540%	2062
2018	104,961	6.540%	2063
2019	105,532	6.540%	2064
2020	106,154	6.540%	2065
2021	106,827	6.540%	2066
2022	107,545	6.540%	2067
2023	95,731	6.540%	2068
2024	85,358	6.540%	2069
2025	76,207	6.540%	2070
2026	68,142	6.540%	2071
2027	61,037	6.540%	2072
2028	54,710	6.540%	2073
2029	49,119	6.540%	2074
2030	44,228	6.540%	2075
2031	39,875	6.540%	2076
2032	36,033	6.540%	2077
2033	51,481	6.540%	2078
2034	51,949	6.540%	2079
2035	52,461	6.540%	2080
2036	52,957	6.540%	2081
2037	53,494	6.540%	2082
2038	54,070	6.540%	2083
2039	54,684	6.540%	2084
2040	55,280	6.540%	2085
2041	55,911	6.540%	2086
2042	56,577	6.540%	2087
2043	53,302	6.540%	2088
2044	50,220	6.540%	2089
2045	47,374	6.540%	2090
2046	44,703	6.540%	2091
2047	42,201	6.540%	2092
2048	39,862	6.540%	2093
2049	35,966	6.540%	2094
2050	32,499	6.540%	2095
2051	29,444	6.540%	2096
2052	26,740	6.540%	2097
2053	41,875	6.540%	2098
2054	42,436	6.540%	2099
2055	43,028	6.540%	2100
2056	43,649	6.540%	2101
2057	44,255	6.540%	2102
2058	44,890	6.540%	2103
2059	45,553	6.540%	2104

Table 10D
CGS Replacements
(\$000s)

Fiscal					Total Debt
Year	Principal	Interest	Expenses	Contingency Funds	Service
2024	8,230	75,944	0	0	84,174
2025	33,483	303,250	0	0	336,733
2026	35,777	301,104	0	0	336,880
2027	38,228	298,810	0	0	337,038
2028	40,846	296,360	0	0	337,206
2029	43,644	293,742	0	0	337,386
2030	46,634	290,944	0	0	337,578
2031	49,828	287,955	0	0	337,783
2032	53,242	284,761	0	0	338,003
2033	56,889	281,348	0	0	338,237
2034	60,785	277,702	0	0	338,487
2035	64,949	273,805	0	0	338,754
2036	69,398	269,642	0	0	339,040
2037	74,152	265,194	0	0	339,345
2038	79,231	260,441	0	0	339,672
2039	84,659	255,362	0	0	340,020
2040	90,458	249,935	0	0	340,393
2041	96,654	244,137	0	0	340,791
2042	103,275	237,941	0	0	341,216
2043	110,349	231,321	0	0	341,670
2044	117,908	224,248	0	0	342,156
2045	125,984	216,690	0	0	342,674
2046	134,615	208,615	0	0	343,229
2047	143,836	199,986	0	0	343,822
2048	153,689	190,766	0	0	344,454
2049	164,216	180,915	0	0	345,131
2050	175,465	170,388	0	0	345,854
2051	187,485	159,141	0	0	346,625
2052	200,327	147,123	0	0	347,450
2053	214,049	134,282	0	0	348,331
2054	228,712	120,562	0	0	349,273
2055	244,379	105,901	0	0	350,280
2056	261,118	90,237	0	0	351,355
2057	279,005	73,499	0	0	352,503
2058	298,117	55,615	0	0	353,731
2059	318,538	36,505	0	0	355,043
2060	250,970	16,087	0	0	267,057

11. DEBT OPTIMIZATION DEMONSTRATION

11.1 Background

In FY 2001 BPA began carrying out the Debt Optimization (DO) Program in conjunction with Energy Northwest (EN) as a means for BPA to replenish its Treasury borrowing authority. The basic mechanism of the DO program is that, shortly before the principal of qualifying outstanding EN debt reaches its final maturity (due date) it is repaid with the proceeds of new EN debt that has a final maturity at a later date. The cash that otherwise would have been used to pay the principal of the refunded EN debt is used to repay an equivalent amount of Federal obligations, thereby restoring Treasury borrowing authority or providing opportunities for future restoration of borrowing authority for the agency.

11.2 DO Demonstration and Slice Settlement Agreement

BPA has committed to manage the DO program in a manner such that rates are no higher with DO than they would be in the absence of DO. BPA complies with this commitment by conducting annual DO analysis that involves running two 20-year repayment studies for both transmission and generation, as follows: 1) a base repayment study that includes all debt management activities completed up through the prior year, and 2) a repayment study that includes the above plus new DO projections for the current and upcoming fiscal years. BPA demonstrates achievement of the “rates no higher” commitment when the comparison of the two studies shows that the combined levelized Federal and non-Federal debt service in the repayment study that includes DO is equal to or lower than the debt service in the repayment study that does not include DO.

As part of the Slice Settlement Agreement MOU, BPA agreed to make the above demonstration annually to customers in the late fall/ early winter period. This demonstration is contained in the tables described below. Also, as called for in the agreement, Sections B-1 through B-4 of Exhibit D, the Memorandum of Understanding Concerning the BPA Debt Optimization Program, of the MOU has been included as Attachment A of this chapter.

11.3 The Demonstration Tables

Table 11-1 is the comparison of the results of the two repayment studies. Column B is the total levelized debt service calculated in the generation base repayment study. Column C is the total levelized debt service calculated in the transmission debt optimization repayment study. It matches Column B of Table 11-4. Column D shows the difference between columns B and C.

Table 11-2 summarizes the results of the generation base repayment study. This study incorporates all debt management transactions made on behalf of generation through September 30, 2007. It does not include projections of future DO actions. The study shows what the combined levelized debt service levels would be if no additional DO transactions occurred. Column B is the total levelized Federal and non Federal debt service. Column C is non-Federal

debt service. Column D is gross Federal interest expense calculated in the repayment study. Column E is Federal principal amortization. Column F is irrigation assistance as scheduled by the repayment study. Column G is the revenue surplus.

Table 11-3 shows the projected Federal investments used in the twenty-year study.

Table 11-4 contains the results of the generation debt optimization repayment study. This study incorporates all elements from the base study noted above, plus the DO projections for the current and upcoming fiscal years. Incorporating future DO into this study is the only difference between this and the base study. The columns are laid out in the same manner as Table 11-2, Summary of Base Repayment Study.

Table 11-5 shows the projected Federal investments used in the twenty-year study, which matches the projections shown in Table 11-3.

Tables 11-6 and 11-7 show the projected Energy Northwest net debt service associated with the projected DO bonds and new capital additions for the Columbia Generating Station, respectively. The par amount of the projected bonds and the issuance year are shown in the bottom half of each table. The resulting net debt service stream is in the top half of each table.

11.4 Attachment A, Excerpt from the Slice Settlement Agreement

Sections B-1 through B-4 of Schedule D of Exhibit D, the Memorandum of Understanding Concerning the BPA Debt Optimization Program

improvements in BPA's communications concerning the development and implementation of DOP. This MOU is entered in connection with the settlement of certain litigation involving the Participants. The settlement separately provides for certain actions that will resolve issues in the litigation concerning DOP and other financial issues, and are intended to avoid similar disputes in the future. The Participants intend this MOU to restore and maintain confidence that BPA is effectively managing the DOP in accordance with its commitments and to the benefit of its customers and public purposes.

B. BPA Commitments Concerning the Debt Optimization Program

1. BPA, working with Energy Northwest ("EN"), has developed the DOP to increase its available borrowing authority from the United States Treasury using proceeds accomplished as a result of EN bond refinancings.
2. One of the fundamental principles of the DOP, created at the time Debt Service Reassignment (DSR) (described more fully in Section B.4 below) was developed, is that the rates of each of BPA's business lines (Transmission Business Line ("TBL") and Power Business Line ("PBL")) are no higher with the DOP than they would have been in the absence of the DOP. BPA will manage the DOP in conformance with, and to achieve realization of, this principle, notwithstanding that the mechanics of recording the DOP transactions and understanding their impact on rates are complex. BPA annually demonstrates achievement of this principle by running repayment studies that compare a base repayment study that includes all debt management activities completed to date with a DOP repayment study that includes new DOP projections for the upcoming years, the results of which comply with such principle. BPA will continue to so demonstrate achievement of this principle annually and in the next and subsequent general wholesale power and transmission rate proceedings so long as new DOP refinancings occur. The demonstration for power rates will be made in the power rate case, and for the transmission rates in the transmission rate case. The Participants agree that for purposes of making its demonstration in the next general transmission rate proceeding, BPA will introduce the information for the first time in its rebuttal case, and the Administrator will direct the hearing officer in writing to provide parties a reasonable period of time to respond to such information with surrebuttal testimony and, if requested by any party (including BPA), a further reasonable period of time to respond to such surrebuttal with sur-surrebuttal testimony. Furthermore, BPA will adhere to this principle and will not move away from adherence to this principle without a public review and comment period, consistent with Section C of this MOU and any requirements of law.

3. In a letter to the EN Executive Board on December 11, 2000, BPA's Administrator stated that the success of the DOP in achieving its objectives depends both on the successful completion of the extension of the Columbia Generating Station debt and on the disciplined application of the proceeds from that action by BPA to amortize more Federal debt than would otherwise be scheduled for amortization. The Administrator gave the EN Executive Board BPA's commitment that this increased amortization would equal the reduction in BPA's net billing obligation resulting from debt management actions under this program on an annual basis and that only under extreme financial pressure would BPA consider deviating from the actions required to implement this program. These assurances also apply to extensions of Projects 1 and 3 debt. BPA will adhere to this principle and will not move away from adherence to this principle without a public review and comment period, consistent with Section C of this MOU and any requirements of law.

4. Customers have expressed a desire for assurance that BPA match, by business line, the benefit received (prepayment of Federal debt) with the obligation incurred (issuance of new EN debt). BPA has researched and believes it has implemented the appropriate accounting treatment and rate case methodologies to ensure that costs are recovered (per the repayment study) and debt service expense is attributed accurately as reflected in BPA's PBL and TBL income statements, thereby matching, by business line, the benefit received (prepayment of Federal debt allocated to a business line) with the obligation incurred (issuance of new EN debt) under DOP. When EN debt is issued and there is a resulting benefit to TBL, the original EN debt that was due in that particular year (and refinanced) is considered "paid" by the PBL. The original debt is no longer in existence due to the refinancing and the TBL responsibility for paying the debt service on the new debt is reflected in the accounting and rate case methodologies mentioned above. This all describes DSR, which is a component of DOP. References in this MOU to DOP shall include DSR, unless the context clearly requires otherwise.

BPA intends and will act to ensure that any EN debt service assigned to TBL through DSR cannot be later reassigned or reallocated to PBL customers during the term of such debt, consistent with law and contract. While net billing constraints, priority of payment requirements, and BPA ratemaking requirements to assure total cost recovery make it possible—though a very remote possibility—that BPA could find itself in a position unable to fulfill this commitment, BPA will seek to prevent that and, if it cannot, will inform the Participants consistent with Section C of this MOU. BPA does not now see any reason why it could or would not continue to set transmission rates to recover transmission costs and power rates to recover power costs, *i.e.*, it does not anticipate being in the situation where a transmission cost (*e.g.*, in this context, obligations

resulting from DSR) would need to be reallocated or reassigned to PBL for recovery, but in any event BPA will utilize the Communication Protocols set forth in Section C of this MOU to keep customers apprized of any change in circumstances.

Under BPA's priority of payment requirements, obligations resulting from DSR must be repaid before BPA repays Federal interest and amortization. That priority of payments makes it even more unlikely that obligations resulting from DSR would ever need to be allocated or assigned from TBL to PBL in order to assure total BPA cost recovery. However, in the event BPA did find itself in the situation where obligations resulting from DSR needed to be allocated or assigned back from TBL to PBL in order to assure total BPA cost recovery, BPA commits to treat the allocation or assignment in a manner where the costs would be tracked and the PBL would be fully compensated for its recovery of the TBL cost. The means of compensation would be proposed in a rate case and would be subject to review and comment by parties in that rate case, as addressed below.

5. In each general BPA PBL and TBL wholesale rate proceeding conducted while EN bonds refinanced under DOP, including EN debt service reassigned under DSR to TBL, are still outstanding, BPA will include the language of Sections B.1, B.2, B.3 and B.4 above in its Revenue Requirement Study, will clearly and transparently describe the DOP-related costs for the business line (PBL or TBL) for which rates are then being set, and will draw attention to that language in its testimony, except that the references to "Section C of this MOU" will be changed to give a complete citation to this MOU. After BPA's rate proceeding, and when BPA files its proposed rates with the Federal Energy Regulatory Commission (FERC), BPA will draw FERC's attention to such Revenue Requirement Study language in its cover letter. BPA will take all necessary and appropriate actions to defend the commitments made in this Section B, before FERC and elsewhere. In the event BPA were to propose to allocate or assign obligations resulting from DSR from TBL to PBL for recovery, BPA agrees that allocation or assignment must be implemented through a section 7(i) hearing and that it will not argue or otherwise assert that the Participant(s) are precluded from arguing or otherwise asserting in any such section 7(i) rate proceeding and thereafter in any proceeding before the FERC for approval of BPA wholesale rates, and thereafter in any proceeding for judicial review of BPA's rates, that BPA's proposal violates the equitable allocation standard or other standard of law.

C. Annual Communication and Management Protocols

1. Participants have requested and BPA will provide them early annual estimates of potential financings under DOP. While these preliminary estimates will be provided by BPA to customers and constituents even if

Bonneville Power Administration

Table 11-1: Comparison of Generation Repayment Studies

(\$000s) (FY 2027)

(A)	(B)	(C)	(D)
Date	Base Total Debt Service	Debt Optimization Total Debt Service	Delta
09/30/2008	1,075,405	1,074,931	(474)
09/30/2009	938,611	936,480	(2,131)
09/30/2010	1,041,292	1,039,860	(1,432)
09/30/2011	1,057,663	1,057,758	95
09/30/2012	1,106,658	1,105,739	(919)
09/30/2013	1,122,792	1,121,913	(879)
09/30/2014	1,135,135	1,134,255	(880)
09/30/2015	1,143,940	1,143,061	(879)
09/30/2016	1,152,516	1,151,636	(880)
09/30/2017	1,159,199	1,158,318	(881)
09/30/2018	1,112,671	1,111,794	(877)
09/30/2019	990,484	989,604	(880)
09/30/2020	998,606	997,713	(893)
09/30/2021	1,004,921	1,004,029	(892)
09/30/2022	1,012,693	1,011,817	(876)
09/30/2023	1,019,599	1,018,705	(894)
09/30/2024	1,028,136	1,025,304	(2,832)
09/30/2025	1,034,894	1,029,008	(5,886)
09/30/2026	1,039,501	1,033,613	(5,888)
09/30/2027	1,049,097	1,043,211	(5,886)
			(35,064)

Bonneville Power Administration
Generation Repayment Study
October 1, 2007 to September 30, 2027 (2007HY)
Generation Base Study
Table 11-2: Summary of Repayment Study(\$000s) (FY 2027)

(A) Date	(B) Total Debt Service	(C) 3rd Party Debt Service	(D) Federal Gross Interest	(E) Federal Amortization	(F) Irrigation Assistance	(G) Rev. Surplus
09/30/2008	1,075,405	572,010	259,962	240,483	2,950	-
09/30/2009	938,611	559,161	269,106	103,065	7,279	-
09/30/2010	1,041,292	554,795	279,552	206,945	-	0
09/30/2011	1,057,663	575,768	291,106	190,789	-	0
09/30/2012	1,106,658	666,741	299,295	124,943	15,679	0
09/30/2013	1,122,792	609,472	313,228	154,800	45,292	0
09/30/2014	1,135,135	595,691	323,076	163,097	53,271	0
09/30/2015	1,143,940	574,722	329,407	117,094	122,718	0
09/30/2016	1,152,516	730,104	338,405	40,000	44,007	-
09/30/2017	1,159,199	765,243	348,950	45,000	5	-
09/30/2018	1,112,671	681,924	357,818	45,000	27,930	-
09/30/2019	990,484	452,250	365,897	106,859	65,479	-
09/30/2020	998,606	559,663	374,064	40,000	24,880	0
09/30/2021	1,004,921	563,417	384,625	40,000	16,879	-
09/30/2022	1,012,693	566,151	395,325	40,000	11,217	-
09/30/2023	1,019,599	570,345	406,279	40,000	2,975	0
09/30/2024	1,028,136	527,279	416,273	67,374	17,209	0
09/30/2025	1,034,894	379,106	422,324	219,568	13,896	-
09/30/2026	1,039,501	378,957	421,275	218,020	21,250	-
09/30/2027	1,049,097	379,187	420,468	245,025	4,417	0
Total	\$21,223,813	\$11,261,986	\$7,016,433	\$2,448,062	\$497,332	\$0

Bonneville Power Administration
Generation Repayment Study
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Generation Base Study

Table 11-3: Projected Federal Investments (\$000s) (FY 2027)

Project	Original Principal	Current Principal	Interest Rate	Due Date	Replacement?	In Service Date	Month	Rollover Date	Rollover Rate
COLUMBIA RIVER FISH MITIGATION	60,000	60,000	4.250%	2058	No	2008	-	-	-
COLUMBIA RIVER FISH MITIGATION	63,000	63,000	5.640%	2060	No	2009	-	-	-
COLUMBIA RIVER FISH MITIGATION	114,000	114,000	5.880%	2060	No	2010	-	-	-
COLUMBIA RIVER FISH MITIGATION	71,000	71,000	5.940%	2061	No	2011	-	-	-
COLUMBIA RIVER FISH MITIGATION	135,000	135,000	5.940%	2062	No	2012	-	-	-
COLUMBIA RIVER FISH MITIGATION	65,000	65,000	5.830%	2063	No	2013	-	-	-
COLUMBIA RIVER FISH MITIGATION	59,608	59,608	5.620%	2064	No	2014	-	-	-
COLUMBIA RIVER FISH MITIGATION	9,345	9,345	5.560%	2065	No	2015	-	-	-
COLUMBIA RIVER FISH MITIGATION	-	-	5.560%	2066	No	2016	-	-	-
COLUMBIA RIVER FISH MITIGATION	-	-	5.560%	2067	No	2017	-	-	-
COLUMBIA RIVER FISH MITIGATION	-	-	5.560%	2068	No	2018	-	-	-
COLUMBIA RIVER FISH MITIGATION	-	-	5.560%	2069	No	2019	-	-	-
COLUMBIA RIVER FISH MITIGATION	-	-	5.560%	2070	No	2020	-	-	-
COLUMBIA RIVER FISH MITIGATION	-	-	5.560%	2071	No	2021	-	-	-
COLUMBIA RIVER FISH MITIGATION	-	-	5.560%	2072	No	2022	-	-	-
COLUMBIA RIVER FISH MITIGATION	-	-	5.560%	2073	No	2023	-	-	-
COLUMBIA RIVER FISH MITIGATION	-	-	5.560%	2074	No	2024	-	-	-
COLUMBIA RIVER FISH MITIGATION	-	-	5.560%	2075	No	2025	-	-	-
COLUMBIA RIVER FISH MITIGATION	-	-	5.560%	2076	No	2026	-	-	-
COLUMBIA RIVER FISH MITIGATION	-	-	5.560%	2077	No	2027	-	-	-
BPA PROGRAM	15,075	15,075	6.150%	2043	No	2008	3	-	-
BPA PROGRAM	25,995	25,995	6.540%	2044	No	2009	3	-	-
BPA PROGRAM	27,399	27,399	6.780%	2045	No	2010	3	-	-
BPA PROGRAM	13,432	13,432	6.840%	2046	No	2011	3	-	-
BPA PROGRAM	13,466	13,466	6.840%	2047	No	2012	3	-	-
BPA PROGRAM	14,001	14,001	6.730%	2048	No	2013	3	-	-
BPA PROGRAM	12,304	12,304	6.520%	2049	No	2014	3	-	-
BPA PROGRAM	12,330	12,330	6.460%	2050	No	2015	3	-	-
BPA PROGRAM	12,357	12,357	6.460%	2051	No	2016	3	-	-
BPA PROGRAM	12,384	12,384	6.460%	2052	No	2017	3	-	-
BPA PROGRAM	12,410	12,410	6.460%	2053	No	2018	3	-	-
BPA PROGRAM	12,437	12,437	6.460%	2054	No	2019	3	-	-
BPA PROGRAM	12,462	12,462	6.460%	2055	No	2020	3	-	-
BPA PROGRAM	12,487	12,487	6.460%	2056	No	2021	3	-	-
BPA PROGRAM	12,512	12,512	6.460%	2057	No	2022	3	-	-
BPA PROGRAM	12,537	12,537	6.460%	2058	No	2023	3	-	-
BPA PROGRAM	12,562	12,562	6.460%	2059	No	2024	3	-	-
BPA PROGRAM	12,587	12,587	6.460%	2060	No	2025	3	-	-
BPA PROGRAM	12,612	12,612	6.460%	2061	No	2026	3	-	-
BPA PROGRAM	12,637	12,637	6.460%	2062	No	2027	3	-	-
BUREAU DIRECT FUND	158,288	158,288	6.150%	2053	No	2008	3	-	-
BUREAU DIRECT FUND	137,000	137,000	6.540%	2054	No	2009	3	-	-
BUREAU DIRECT FUND	143,000	143,000	6.780%	2055	No	2010	3	-	-
BUREAU DIRECT FUND	148,000	148,000	6.840%	2056	No	2011	3	-	-
BUREAU DIRECT FUND	153,000	153,000	6.840%	2057	No	2012	3	-	-
BUREAU DIRECT FUND	158,000	158,000	6.730%	2058	No	2013	3	-	-
BUREAU DIRECT FUND	142,000	142,000	6.520%	2059	No	2014	3	-	-
BUREAU DIRECT FUND	129,000	129,000	6.460%	2060	No	2015	3	-	-
BUREAU DIRECT FUND	105,000	105,000	6.460%	2061	No	2016	3	-	-
BUREAU DIRECT FUND	110,000	110,000	6.460%	2062	No	2017	3	-	-
BUREAU DIRECT FUND	110,000	110,000	6.460%	2063	No	2018	3	-	-
BUREAU DIRECT FUND	113,000	113,000	6.460%	2064	No	2019	3	-	-
BUREAU DIRECT FUND	115,000	115,000	6.460%	2065	No	2020	3	-	-
BUREAU DIRECT FUND	118,000	118,000	6.460%	2066	No	2021	3	-	-
BUREAU DIRECT FUND	121,000	121,000	6.460%	2067	No	2022	3	-	-
BUREAU DIRECT FUND	124,000	124,000	6.460%	2068	No	2023	3	-	-
BUREAU DIRECT FUND	127,000	127,000	6.460%	2069	No	2024	3	-	-
BUREAU DIRECT FUND	130,000	130,000	6.460%	2070	No	2025	3	-	-
BUREAU DIRECT FUND	133,900	133,900	6.460%	2071	No	2026	3	-	-
BUREAU DIRECT FUND	137,917	137,917	6.460%	2072	No	2027	3	-	-

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Table 11-3: Projected Federal Investments (\$000s) (FY 2027)

Project	Original Principal	Current Principal	Interest Rate	Due Date	Replacement?	In Service Date	Month	Rollover Date	Rollover Rate
CONSERVATION	42,000	42,000	5.450%	2013	No	2008	3	-	-
CONSERVATION	42,000	42,000	5.730%	2014	No	2009	3	-	-
CONSERVATION	40,000	40,000	5.910%	2015	No	2010	3	-	-
CONSERVATION	40,000	40,000	5.970%	2016	No	2011	3	-	-
CONSERVATION	45,000	45,000	5.970%	2017	No	2012	3	-	-
CONSERVATION	45,000	45,000	5.860%	2018	No	2013	3	-	-
CONSERVATION	40,000	40,000	5.650%	2019	No	2014	3	-	-
CONSERVATION	40,000	40,000	5.590%	2020	No	2015	3	-	-
CONSERVATION	40,000	40,000	5.590%	2021	No	2016	3	-	-
CONSERVATION	40,000	40,000	5.590%	2022	No	2017	3	-	-
CONSERVATION	40,000	40,000	5.590%	2023	No	2018	3	-	-
CONSERVATION	40,000	40,000	5.590%	2024	No	2019	3	-	-
CONSERVATION	40,000	40,000	5.590%	2025	No	2020	3	-	-
CONSERVATION	40,000	40,000	5.590%	2026	No	2021	3	-	-
CONSERVATION	40,000	40,000	5.590%	2027	No	2022	3	-	-
CONSERVATION	40,000	40,000	5.590%	2028	No	2023	3	-	-
CONSERVATION	40,000	40,000	5.590%	2029	No	2024	3	-	-
CONSERVATION	40,000	40,000	5.590%	2030	No	2025	3	-	-
CONSERVATION	40,000	40,000	5.590%	2031	No	2026	3	-	-
CONSERVATION	40,000	40,000	5.590%	2032	No	2027	3	-	-
FISH, WILDLIFE	36,000	36,000	6.020%	2042	No	2007	3	-	-
FISH, WILDLIFE	36,000	36,000	5.820%	2023	No	2008	3	-	-
FISH, WILDLIFE	36,000	36,000	6.130%	2024	No	2009	3	-	-
FISH, WILDLIFE	36,000	36,000	6.340%	2025	No	2010	3	-	-
FISH, WILDLIFE	36,000	36,000	6.400%	2026	No	2011	3	-	-
FISH, WILDLIFE	36,000	36,000	6.400%	2027	No	2012	3	-	-
FISH, WILDLIFE	36,000	36,000	6.290%	2028	No	2013	3	-	-
FISH, WILDLIFE	36,000	36,000	6.080%	2029	No	2014	3	-	-
FISH, WILDLIFE	36,000	36,000	6.020%	2030	No	2015	3	-	-
FISH, WILDLIFE	36,000	36,000	6.020%	2031	No	2016	3	-	-
FISH, WILDLIFE	36,000	36,000	6.020%	2032	No	2017	3	-	-
FISH, WILDLIFE	36,000	36,000	6.020%	2033	No	2018	3	-	-
FISH, WILDLIFE	36,000	36,000	6.020%	2034	No	2019	3	-	-
FISH, WILDLIFE	36,000	36,000	6.020%	2035	No	2020	3	-	-
FISH, WILDLIFE	36,000	36,000	6.020%	2036	No	2021	3	-	-
FISH, WILDLIFE	36,000	36,000	6.020%	2037	No	2022	3	-	-
FISH, WILDLIFE	36,000	36,000	6.020%	2038	No	2023	3	-	-
FISH, WILDLIFE	36,000	36,000	6.020%	2039	No	2024	3	-	-
FISH, WILDLIFE	36,000	36,000	6.020%	2040	No	2025	3	-	-
FISH, WILDLIFE	36,000	36,000	6.020%	2041	No	2026	3	-	-
FISH, WILDLIFE	36,000	36,000	6.020%	2042	No	2027	3	-	-
		<u>5,044,044</u>							

Bonneville Power Administration
Generation Repayment Study
October 1, 2007 to September 30, 2027 (2007HY)
Generation Debt Optimization Study

Table 11-4: Summary of Repayment Study (\$000s) (FY 2027)

(A)	(B)	(C)	(D)	(E)	(F)	(G)
Date	Total Debt Service	3rd Party Debt Service	Federal Gross Interest	Federal Amortization	Irrigation Assistance	Rev. Surplus
09/30/2008	1,074,931	535,411	259,087	277,483	2,950	-
09/30/2009	936,480	473,729	264,407	191,065	7,279	-
09/30/2010	1,039,860	560,257	270,945	208,658	-	0
09/30/2011	1,057,758	581,230	282,097	194,431	-	0
09/30/2012	1,105,739	672,203	290,790	141,544	1,201	0
09/30/2013	1,121,913	622,184	303,730	136,229	59,770	0
09/30/2014	1,134,255	646,594	315,120	119,270	53,271	-
09/30/2015	1,143,061	649,890	325,164	45,289	122,719	0
09/30/2016	1,151,636	730,104	337,526	40,000	44,007	-
09/30/2017	1,158,318	765,243	348,071	45,000	4	0
09/30/2018	1,111,794	681,924	356,938	45,001	27,931	-
09/30/2019	989,604	452,250	365,058	106,639	65,656	-
09/30/2020	997,713	559,663	373,219	40,000	24,831	0
09/30/2021	1,004,029	563,417	383,781	40,000	16,831	-
09/30/2022	1,011,817	566,151	394,481	40,000	11,185	-
09/30/2023	1,018,705	570,345	405,435	40,000	2,925	0
09/30/2024	1,025,304	527,279	415,475	65,341	17,209	0
09/30/2025	1,029,008	379,106	421,724	214,282	13,896	-
09/30/2026	1,033,613	378,957	421,055	212,351	21,250	-
09/30/2027	1,043,211	379,187	420,653	238,954	4,417	0
	21,188,749	11,295,125	6,954,755	2,441,537	497,332	0

Bonneville Power Administration
Generation Repayment Study
October 1, 2007 to September 30, 2027 (2007HY)
Generation Debt Optimization Study

Table 11-5: Projected Federal Investments (\$000s) (FY 2027)

Project	Original Principal	Current Principal	Interest Rate	Due Date	Replace ment?	In Service Date	Month	Rollove r Date	Rollover Rate
COLUMBIA RIVER FISH MITIGATION	60,000	60,000	4.250%	2058	No	2008	-	-	-
COLUMBIA RIVER FISH MITIGATION	63,000	63,000	5.640%	2060	No	2009	-	-	-
COLUMBIA RIVER FISH MITIGATION	114,000	114,000	5.880%	2060	No	2010	-	-	-
COLUMBIA RIVER FISH MITIGATION	71,000	71,000	5.940%	2061	No	2011	-	-	-
COLUMBIA RIVER FISH MITIGATION	135,000	135,000	5.940%	2062	No	2012	-	-	-
COLUMBIA RIVER FISH MITIGATION	65,000	65,000	5.830%	2063	No	2013	-	-	-
COLUMBIA RIVER FISH MITIGATION	59,608	59,608	5.620%	2064	No	2014	-	-	-
COLUMBIA RIVER FISH MITIGATION	9,345	9,345	5.560%	2065	No	2015	-	-	-
COLUMBIA RIVER FISH MITIGATION	-	-	5.560%	2066	No	2016	-	-	-
COLUMBIA RIVER FISH MITIGATION	-	-	5.560%	2067	No	2017	-	-	-
COLUMBIA RIVER FISH MITIGATION	-	-	5.560%	2068	No	2018	-	-	-
COLUMBIA RIVER FISH MITIGATION	-	-	5.560%	2069	No	2019	-	-	-
COLUMBIA RIVER FISH MITIGATION	-	-	5.560%	2070	No	2020	-	-	-
COLUMBIA RIVER FISH MITIGATION	-	-	5.560%	2071	No	2021	-	-	-
COLUMBIA RIVER FISH MITIGATION	-	-	5.560%	2072	No	2022	-	-	-
COLUMBIA RIVER FISH MITIGATION	-	-	5.560%	2073	No	2023	-	-	-
COLUMBIA RIVER FISH MITIGATION	-	-	5.560%	2074	No	2024	-	-	-
COLUMBIA RIVER FISH MITIGATION	-	-	5.560%	2075	No	2025	-	-	-
COLUMBIA RIVER FISH MITIGATION	-	-	5.560%	2076	No	2026	-	-	-
COLUMBIA RIVER FISH MITIGATION	-	-	5.560%	2077	No	2027	-	-	-
BPA PROGRAM	15,075	15,075	6.150%	2043	No	2008	3	-	-
BPA PROGRAM	25,995	25,995	6.540%	2044	No	2009	3	-	-
BPA PROGRAM	27,399	27,399	6.780%	2045	No	2010	3	-	-
BPA PROGRAM	13,432	13,432	6.840%	2046	No	2011	3	-	-
BPA PROGRAM	13,466	13,466	6.840%	2047	No	2012	3	-	-
BPA PROGRAM	14,001	14,001	6.730%	2048	No	2013	3	-	-
BPA PROGRAM	12,304	12,304	6.520%	2049	No	2014	3	-	-
BPA PROGRAM	12,330	12,330	6.460%	2050	No	2015	3	-	-
BPA PROGRAM	12,357	12,357	6.460%	2051	No	2016	3	-	-
BPA PROGRAM	12,384	12,384	6.460%	2052	No	2017	3	-	-
BPA PROGRAM	12,410	12,410	6.460%	2053	No	2018	3	-	-
BPA PROGRAM	12,437	12,437	6.460%	2054	No	2019	3	-	-
BPA PROGRAM	12,462	12,462	6.460%	2055	No	2020	3	-	-
BPA PROGRAM	12,487	12,487	6.460%	2056	No	2021	3	-	-
BPA PROGRAM	12,512	12,512	6.460%	2057	No	2022	3	-	-
BPA PROGRAM	12,537	12,537	6.460%	2058	No	2023	3	-	-
BPA PROGRAM	12,562	12,562	6.460%	2059	No	2024	3	-	-
BPA PROGRAM	12,587	12,587	6.460%	2060	No	2025	3	-	-
BPA PROGRAM	12,612	12,612	6.460%	2061	No	2026	3	-	-
BPA PROGRAM	12,637	12,637	6.460%	2062	No	2027	3	-	-

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Table 11-5: Projected Federal Investments (\$000s) (FY 2027)

Project	Original Principal	Current Principal	Interest Rate	Due Date	Replace ment?	In Service Date	Month	Rollove r Date	Rollover Rate
BUREAU DIRECT FUND	158,288	158,288	6.150%	2053	No	2008	3	-	-
BUREAU DIRECT FUND	137,000	137,000	6.540%	2054	No	2009	3	-	-
BUREAU DIRECT FUND	143,000	143,000	6.780%	2055	No	2010	3	-	-
BUREAU DIRECT FUND	148,000	148,000	6.840%	2056	No	2011	3	-	-
BUREAU DIRECT FUND	153,000	153,000	6.840%	2057	No	2012	3	-	-
BUREAU DIRECT FUND	158,000	158,000	6.730%	2058	No	2013	3	-	-
BUREAU DIRECT FUND	142,000	142,000	6.520%	2059	No	2014	3	-	-
BUREAU DIRECT FUND	129,000	129,000	6.460%	2060	No	2015	3	-	-
BUREAU DIRECT FUND	105,000	105,000	6.460%	2061	No	2016	3	-	-
BUREAU DIRECT FUND	110,000	110,000	6.460%	2062	No	2017	3	-	-
BUREAU DIRECT FUND	110,000	110,000	6.460%	2063	No	2018	3	-	-
BUREAU DIRECT FUND	113,000	113,000	6.460%	2064	No	2019	3	-	-
BUREAU DIRECT FUND	115,000	115,000	6.460%	2065	No	2020	3	-	-
BUREAU DIRECT FUND	118,000	118,000	6.460%	2066	No	2021	3	-	-
BUREAU DIRECT FUND	121,000	121,000	6.460%	2067	No	2022	3	-	-
BUREAU DIRECT FUND	124,000	124,000	6.460%	2068	No	2023	3	-	-
BUREAU DIRECT FUND	127,000	127,000	6.460%	2069	No	2024	3	-	-
BUREAU DIRECT FUND	130,000	130,000	6.460%	2070	No	2025	3	-	-
BUREAU DIRECT FUND	133,900	133,900	6.460%	2071	No	2026	3	-	-
BUREAU DIRECT FUND	137,917	137,917	6.460%	2072	No	2027	3	-	-
CONSERVATION	42,000	42,000	5.450%	2011	No	2008	3	-	-
CONSERVATION	42,000	42,000	5.730%	2014	No	2009	3	-	-
CONSERVATION	40,000	40,000	5.910%	2015	No	2010	3	-	-
CONSERVATION	40,000	40,000	5.970%	2016	No	2011	3	-	-
CONSERVATION	45,000	45,000	5.970%	2017	No	2012	3	-	-
CONSERVATION	45,000	45,000	5.860%	2018	No	2013	3	-	-
CONSERVATION	40,000	40,000	5.650%	2019	No	2014	3	-	-
CONSERVATION	40,000	40,000	5.590%	2020	No	2015	3	-	-
CONSERVATION	40,000	40,000	5.590%	2021	No	2016	3	-	-
CONSERVATION	40,000	40,000	5.590%	2022	No	2017	3	-	-
CONSERVATION	40,000	40,000	5.590%	2023	No	2018	3	-	-
CONSERVATION	40,000	40,000	5.590%	2024	No	2019	3	-	-
CONSERVATION	40,000	40,000	5.590%	2025	No	2020	3	-	-
CONSERVATION	40,000	40,000	5.590%	2026	No	2021	3	-	-
CONSERVATION	40,000	40,000	5.590%	2027	No	2022	3	-	-
CONSERVATION	40,000	40,000	5.590%	2028	No	2023	3	-	-
CONSERVATION	40,000	40,000	5.590%	2029	No	2024	3	-	-
CONSERVATION	40,000	40,000	5.590%	2030	No	2025	3	-	-
CONSERVATION	40,000	40,000	5.590%	2031	No	2026	3	-	-
CONSERVATION	40,000	40,000	5.590%	2032	No	2027	3	-	-

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Table 11-5: Projected Federal Investments (\$000s) (FY 2027)

Project	Original Principal	Current Principal	Interest Rate	Due Date	Replace ment?	In Service Date	Month	Rollove r Date	Rollover Rate
FISH, WILDLIFE	36,000	36,000	6.020%	2042	No	2007	3	-	-
FISH, WILDLIFE	36,000	36,000	5.820%	2023	No	2008	3	-	-
FISH, WILDLIFE	36,000	36,000	6.130%	2024	No	2009	3	-	-
FISH, WILDLIFE	36,000	36,000	6.340%	2025	No	2010	3	-	-
FISH, WILDLIFE	36,000	36,000	6.400%	2026	No	2011	3	-	-
FISH, WILDLIFE	36,000	36,000	6.400%	2027	No	2012	3	-	-
FISH, WILDLIFE	36,000	36,000	6.290%	2028	No	2013	3	-	-
FISH, WILDLIFE	36,000	36,000	6.080%	2029	No	2014	3	-	-
FISH, WILDLIFE	36,000	36,000	6.020%	2030	No	2015	3	-	-
FISH, WILDLIFE	36,000	36,000	6.020%	2031	No	2016	3	-	-
FISH, WILDLIFE	36,000	36,000	6.020%	2032	No	2017	3	-	-
FISH, WILDLIFE	36,000	36,000	6.020%	2033	No	2018	3	-	-
FISH, WILDLIFE	36,000	36,000	6.020%	2034	No	2019	3	-	-
FISH, WILDLIFE	36,000	36,000	6.020%	2035	No	2020	3	-	-
FISH, WILDLIFE	36,000	36,000	6.020%	2036	No	2021	3	-	-
FISH, WILDLIFE	36,000	36,000	6.020%	2037	No	2022	3	-	-
FISH, WILDLIFE	36,000	36,000	6.020%	2038	No	2023	3	-	-
FISH, WILDLIFE	36,000	36,000	6.020%	2039	No	2024	3	-	-
FISH, WILDLIFE	36,000	36,000	6.020%	2040	No	2025	3	-	-
FISH, WILDLIFE	36,000	36,000	6.020%	2041	No	2026	3	-	-
FISH, WILDLIFE	36,000	36,000	6.020%	2042	No	2027	3	-	-
		<u>5,044,044</u>							

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Total Net Debt Service -- GAAP BASIS
Table 11-6: Debt Optimization Projections

Fiscal Year	Principal	Interest	Net New D/S
2006	-	-	-
2007	-	-	-
2008	-	9,048,631	9,048,631
2009	-	14,139,631	14,139,631
2010	-	15,330,631	15,330,631
2011	-	15,579,131	15,579,131
2012	-	15,796,131	15,796,131
2013	38,400,000	16,229,131	54,629,131
2014	70,166,000	14,591,121	84,757,121
2015	70,166,000	11,544,533	81,710,533
2016	60,500,000	8,412,729	68,912,729
2017	57,168,000	5,605,579	62,773,579
2018	60,400,000	2,897,050	63,297,050
	356,800,000	129,174,297	485,974,297

Par Amounts Of Selected Issues

NET2007-DUE13-18	201,800,000
NET2008-DUE13-18	110,000,000
NET2009-DUE13-18	25,000,000
NET2010-DUE13-18	5,000,000
NET2011-DUE13-18	5,000,000
NET2012-DUE13-18	10,000,000
TOTAL	356,800,000

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Table 11-7: New Capital Projections

Total Net Debt Service -- GAAP BASIS

Fiscal Year	Principal	Interest	Net New D/S
2008	-	1,226,295	1,226,295
2009	-	5,887,224	5,887,224
2010	-	10,206,992	10,206,992
2011	-	15,089,834	15,089,834
2012	360,000	18,027,657	18,387,657
2013	1,682,500	20,366,610	22,049,110
2014	2,826,250	22,133,654	24,959,904
2015	4,345,000	24,307,822	28,652,822
2016	5,631,250	25,887,427	31,518,677
2017	7,392,500	28,100,810	35,493,310
2018	9,097,500	29,998,172	39,095,672
2019	26,343,750	32,864,288	59,208,038
2020	73,020,000	33,162,127	106,182,127
2021	78,118,750	31,659,211	109,777,961
2022	83,118,750	29,230,143	112,348,893
2023	88,800,000	27,152,298	115,952,298
2024	74,885,000	23,476,348	98,361,348
2025	21,387,500	19,564,254	40,951,754
2026	22,451,250	18,503,049	40,954,299
2027	23,577,500	17,372,953	40,950,453
	523,037,500	434,217,166	957,254,666

Par Amounts Of Selected Issues

NEG2008AW2	73,245,000
NEG2008BW2	24,415,000
NEG2009AW2	55,725,000
NEG2009BW2	18,575,000
NEG2010AW2	75,670,000
NEG2010BW2	25,225,000
NEG2011AW2	41,820,000
NEG2011BW2	13,940,000
NEG2012AW2	36,130,000
NEG2012BW2	12,045,000
NEG2013AW2	22,530,000
NEG2013BW2	7,510,000
NEG2014AW2	37,920,000
NEG2014BW2	12,640,000
NEG2015AW2	21,540,000
NEG2015BW2	7,180,000
NEG2016AW2	40,595,000
NEG2016BW2	13,535,000
NEG2017AW2	24,605,000
NEG2017BW2	8,205,000
NEG2018AW2	61,225,000
NEG2018BW2	17,620,000
NEG2019AW2	18,940,000
NEG2019BW2	6,315,000
NEG2020AW2	37,880,000
NEG2020BW2	12,630,000
NEG2021AW2	18,940,000
NEG2021BW2	6,315,000
NEG2022AW2	37,880,000
NEG2022BW2	12,630,000
NEG2023AW2	18,940,000
NEG2023BW2	6,315,000
TOTAL	<u>828,680,000</u>

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