

**2010 BPA Rate Case  
Wholesale Transmission Rate Final Proposal**

**REVENUE REQUIREMENT  
STUDY DOCUMENTATION**

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July 2009

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TR-10-FS-BPA-01A



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**DOCUMENTATION FOR REVENUE REQUIREMENT STUDY  
TABLE OF CONTENTS**

	<b>Page</b>
1. TRANSMISSION REVENUE REQUIREMENTS .....	1
1.1 Introduction .....	1
1.2 Income Statement .....	1
1.3 Statement of Cash Flows .....	2
2. TRANSMISSION EXPENSES .....	5
2.1 Introduction .....	5
2.2 Expenses .....	5
3. FCRTS INVESTMENT BASE.....	13
3.1 Introduction .....	13
3.2 Methodology.....	13
4. PROJECTED CASH BALANCES/INTEREST CREDITS .....	19
4.1 Introduction .....	19
4.2 Interest credits on BPA's projected cash balances.....	19
4.3 Interest income (repayment program calculation).....	19
5. INTEREST RATES AND PRICE DEFLATORS .....	23
5.1 Introduction .....	23
5.2 Source of Forecasts.....	23
5.3 Interest Rate Projections.....	23
5.4 Deflators .....	23
6. HISTORICAL AND PROJECTED NEW BONDS ISSUED TO TREASURY .....	44
6.1 Purpose .....	44
6.2 Method.....	44
6.3 Application of Methodology .....	44
7. NON-FEDERAL PAYMENT OBLIGATIONS .....	46
7.1 Introduction .....	46
7.2 Lease-Purchase Agreements.....	46
7.3 Debt Service Reassignment.....	48
7.4 Calculation of Debt Service Reassignment .....	48
8. REPAYMENT PERIOD REPLACEMENTS .....	52
8.1 Introduction .....	52
8.2 Transmission Replacements .....	52
8.3 AC Intertie Replacements.....	52
9. FINANCIAL RISK AND MITIGATION .....	57
9.1 Background.....	57
9.2 Transmission Risk Analysis .....	57

9.3	Transmission Risk Analysis Model.....	59
9.4	Risk Analysis Computer Software .....	60
9.5	Risk Factors .....	60
9.6	Network and Intertie Transmission Revenue Uncertainties.....	61
9.7	Transmission Operations and Maintenance Expense .....	62
9.8	Ancillary Services Revenue .....	62
9.9	Revenue from Sales of Services to Wind Generators .....	63
9.10	Interest Rate Risk .....	64
9.11	Risk Correlations .....	64
9.12	Risk Analysis Results .....	65
9.13	Financial Reserves and PNRR.....	30
10.	REPAYMENT STUDY INPUT DATA CURRENT STUDY .....	73
11.	REPAYMENT STUDY RESULTS CURRENT STUDY .....	87
12.	REPAYMENT THEORY OF OPERATION .....	114
12.1	Introduction .....	114
12.2	Repayment Program Logic.....	114
12.3	Bond Rollover Feature .....	114
13.	DEBT OPTIMIZATION DEMONSTRATION.....	118
13.1	Background.....	118
13.2	DO Demonstration and Slice Settlement Agreement.....	118
13.3	The Demonstration Tables .....	119
13.4	Attachment A, Excerpt from the Slice Settlement Agreement.....	119
14.	SALES AND REVENUE FORECAST.....	129

## COMMONLY USED ACRONYMS

AC	alternating current
AFUDC	Allowance for Funds Used During Construction
AGC	Automatic Generation Control
ALF	Agency Load Forecast (computer model)
aMW	average megawatt
AMNR	Accumulated Modified Net Revenues
ANR	Accumulated Net Revenues
AOP	Assured Operating Plan
ASC	Average System Cost
ATC	Accrual to Cash
BAA	Balancing Authority Area
BASC	BPA Average System Cost
Bcf	billion cubic feet
BiOp	Biological Opinion
BPA	Bonneville Power Administration
Btu	British thermal unit
CAISO	California Independent System Operator
CBFWA	Columbia Basin Fish & Wildlife Authority
CCCT	combined-cycle combustion turbine
cfs	cubic feet per second
CGS	Columbia Generating Station
CHJ	Chief Joseph
C/M	consumers per mile of line ratio for LDD
COB	California-Oregon Border
COE	U.S. Army Corps of Engineers
COI	California-Oregon Intertie
COSA	Cost of Service Analysis
COU	consumer-owned utility
Council	Northwest Power and Conservation Council
CP	Coincidental Peak
CRAC	Cost Recovery Adjustment Clause
CRC	Conservation Rate Credit
CRFM	Columbia River Fish Mitigation
CRITFC	Columbia River Inter-Tribal Fish Commission
CSP	Customer System Peak
CT	combustion turbine
CY	calendar year (January through December)
DC	direct current
DDC	Dividend Distribution Clause
dec	decremental (pertains to generation movement)
DJ	Dow Jones
DO	Debt Optimization
DOE	Department of Energy
DOP	Debt Optimization Program

DSI	direct-service industrial customer or direct-service industry
DSO	Dispatcher Standing Order
EAF	energy allocation factor
ECC	Energy Content Curve
EIA	Energy Information Administration
EIS	Environmental Impact Statement
EN	Energy Northwest, Inc. (formerly Washington Public Power Supply System)
EPA	Environmental Protection Agency
EPP	Environmentally Preferred Power
EQR	Electric Quarterly Report
ESA	Endangered Species Act
F&O	financial and operating reports
FBS	Federal base system
FCRPS	Federal Columbia River Power System
FCRTS	Federal Columbia River Transmission System
FERC	Federal Energy Regulatory Commission
FELCC	firm energy load carrying capability
FPA	Federal Power Act
FPS	Firm Power Products and Services (rate)
FY	fiscal year (October through September)
GAAP	Generally Accepted Accounting Principles
GARD	Generation and Reserves Dispatch (computer model)
GCL	Grand Coulee
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
HLH	heavy load hour
HOSS	Hourly Operating and Scheduling Simulator (computer model)
HYDSIM	Hydro Simulation (computer model)
IDC	interest during construction
inc	incremental (pertains to generation movement)
IOU	investor-owned utility
IP	Industrial Firm Power (rate)
IPR	Integrated Program Review
IRP	Integrated Resource Plan
ISD	incremental standard deviation
ISO	Independent System Operator
JDA	John Day
kaf	thousand (kilo) acre-feet

kcfs	thousand (kilo) cubic feet per second
K/I	kilowatthour per investment ratio for LDD
ksfd	thousand (kilo) second foot day
kV	kilovolt (1000 volts)
kVA	kilo volt-ampere (1000 volt-amperes)
kVAr	kilo-volt ampere reactive
kW	kilowatt (1000 watts)
kWh	kilowatthour
LDD	Low Density Discount
LGIP	Large Generator Interconnection Procedures
LLH	light load hour
LME	London Metal Exchange
LOLP	loss of load probability
LRA	Load Reduction Agreement
m/kWh	mills per kilowatthour
MAE	mean absolute error
Maf	million acre-feet
MCA	Marginal Cost Analysis
MCN	McNary
Mid-C	Mid-Columbia
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
MOU	Memorandum of Understanding
MRNR	Minimum Required Net Revenue
MVA	mega-volt ampere
MVAr	mega-volt ampere reactive
MW	megawatt (1 million watts)
MWh	megawatthour
NCD	non-coincidental demand
NEPA	National Environmental Policy Act
NERC	North American Electric Reliability Corporation
NFB	National Marine Fisheries Service (NMFS) Federal Columbia River Power System (FCRPS) Biological Opinion (BiOp)
NIFC	Northwest Infrastructure Financing Corporation
NLSL	New Large Single Load
NOAA Fisheries	National Oceanographic and Atmospheric Administration Fisheries (officially National Marine Fisheries Service)
NOB	Nevada-Oregon Border
NORM	Non-Operating Risk Model (computer model)
Northwest Power Act	Pacific Northwest Electric Power Planning and Conservation Act
NPCC	Northwest Power and Conservation Council

NPV	net present value
NR	New Resource Firm Power (rate)
NT	Network Transmission
NTSA	Non-Treaty Storage Agreement
NUG	non-utility generation
NWPP	Northwest Power Pool
OATT	Open Access Transmission Tariff
O&M	operation and maintenance
OMB	Office of Management and Budget
OTC	Operating Transfer Capability
OY	operating year (August through July)
PDP	proportional draft points
PF	Priority Firm Power (rate)
PI	Plant Information
PMA	(Federal) Power Marketing Agency
PNCA	Pacific Northwest Coordination Agreement
PNRR	Planned Net Revenues for Risk
PNW	Pacific Northwest
POD	Point of Delivery
POI	Point of Integration or Point of Interconnection
POM	Point of Metering
POR	Point of Receipt
Project Act	Bonneville Project Act
PS	BPA Power Services
PSC	power sales contract
PSW	Pacific Southwest
PTP	Point to Point Transmission (rate)
PUD	public or people's utility district
RAM	Rate Analysis Model (computer model)
RAS	Remedial Action Scheme
Reclamation	U.S. Bureau of Reclamation
RD	Regional Dialogue
REC	Renewable Energy Certificate
REP	Residential Exchange Program
RevSim	Revenue Simulation Model (component of RiskMod)
RFA	Revenue Forecast Application (database)
RFP	Request for Proposal
RiskMod	Risk Analysis Model (computer model)
RiskSim	Risk Simulation Model (component of RiskMod)
RMS	Remote Metering System
RMSE	root-mean squared error
ROD	Record of Decision
RPSA	Residential Purchase and Sale Agreement
RTF	Regional Technical Forum
RTO	Regional Transmission Operator
SCADA	Supervisory Control and Data Acquisition

SCCT	single-cycle combustion turbine
Slice	Slice of the System (product)
SME	subject matter expert
TAC	Targeted Adjustment Charge
TDA	The Dalles
Tcf	trillion cubic feet
TPP	Treasury Payment Probability
Transmission System Act	Federal Columbia River Transmission System Act
TRL	Total Retail Load
TRM	Tiered Rate Methodology
TS	BPA Transmission Services
UAI	Unauthorized Increase
UDC	utility distribution company
URC	Upper Rule Curve
USFWS	U.S. Fish and Wildlife Service
VOR	Value of Reserves
WECC	Western Electricity Coordinating Council (formerly WSCC)
WIT	Wind Integration Team
WPRDS	Wholesale Power Rate Development Study
WREGIS	Western Renewable Energy Generation Information System
WSPP	Western Systems Power Pool

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## 1. TRANSMISSION REVENUE REQUIREMENTS

### 1.1 Introduction

This chapter documents how Bonneville Power Administration's (BPA) annual transmission revenue requirements are determined. Two tables are presented showing both years of the rate period (FYs 2010 and 2011). On the first table, revenue requirements for FYs 2010 and 2011 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.

### 1.2 Income Statement

A more detailed description of the following line items is presented in Chapter 4 of the Revenue Requirement Study, TR-10-FS-BPA-01. Operating expenses (lines 1-9) include: BPA's transmission system operation (line 2), system maintenance (line 3), system engineering and design (line 4); ancillary services and inter-business lines expenses (primarily the generation inputs for ancillary services) (line 5), internal support services and overheads (line 6), and depreciation and amortization (line 8). The other income, expense, and adjustments category (line 7) reflects the Administrator's decision to exclude a portion of TS expenses from recovery by rates. *See*, Revenue Requirement Study, TR-10-FS-BPA-01, section 2.1.

Interest expense includes both non-Federal and Federal interest expenses. Federal interest expense is calculated in transmission repayment studies on appropriations granted by Congress for BPA capital investments prior to the Transmission Systems Act (line 12) and on bonds that BPA issues to the U.S. Treasury (line 14). The capitalization adjustment, a non-cash expense, is the annual recognition of the write-down in principal that resulted from the BPA Refinancing Act (lines 13). Amortization of capitalized bond premiums (line 15) is the annual amortization of call premiums resulting from early retirement of bonds that have been refinanced. The call premiums are capitalized and included in the principal of the replacement bonds. They are then amortized over the term of the respective replacement bonds and constitute a non-cash component of interest expense. Debt Service Reassignment interest consists of the interest component of the debt service reassigned to TS through the Debt Optimization Program (line 16). Non-Federal interest consists of interest paid on BPA's lease financing projects and interest on customer prepayments for Large Generator Interconnection Agreements (LGIA). The LGIA payments accrue interest on the outstanding balances until they are returned to customers through credits for transmission service (line 17). The Allowance for Funds Used During Construction (AFUDC) (line 18) reduces gross interest expense. Bond interest is reduced by interest income from BPA's projected cash reserves (line 19).

Planned net revenues (lines 22-23) are included to ensure coverage of planned amortization payments (minimum required net revenues) and to meet the Administrator's risk mitigation

policy (planned net revenues for risk). *See* Chapter 9 of this volume and Revenue Requirement Study, TR-10-FS-BPA-01, section 2.2.

### 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 payments. It is the amount by which these planned payments to the U.S. Treasury exceed the expenses that do not require cash outlays (depreciation and amortization (line 4), transmission credit projects debt service is the interest that accrues on outstanding LGIA deposits (line 5), amortization of capitalized bond premiums (line 6), and the capitalization adjustment (line 7) and the revenues that do not provide cash in that year (accrual revenues from AC Intertie capacity ownership and fiber optic cable leases and revenue credits given to customers for LGIA payments) (line 9). BPA is drawing on cash reserves for capital investments (line 8).
- **Cash Used for Capital Investments:** Investment in utility plant (line 13) is the increase in capital outlays associated with BPA investments for transmission, environment and general plant assets.
- **Cash from Treasury Borrowing and Appropriations:** Increase in long-term debt (line 16) is the annual increment in bonds that BPA issues to Treasury to fund capital outlays for transmission, environment and general plant assets. Debt Service Reassignment Principal is the principal component of the debt service obligation reassigned to TS through the Debt Optimization Program (line 17). Repayment of long-term debt (line 18) is planned amortization of bonds issued to Treasury, as determined in transmission repayment studies. Repayment of capital appropriations (line 19) is planned amortization associated with pre-Transmission System Act appropriations, as determined in transmission repayment studies.

**Table 1-1: Transmission Revenue Requirement Income Statement**

(\$000s)

	A	B
	FY 2010	FY 2011
1 OPERATING EXPENSES		
2 TRANSMISSION OPERATIONS	117,472	119,695
3 TRANSMISSION MAINTENANCE	127,306	132,346
4 TRANSMISSION ENGINEERING	23,540	23,675
5 TRANSMISSION ACQUISITION & ANCILLARY SERVICES	103,328	116,422
6 BPA INTERNAL SUPPORT	65,312	65,716
7 OTHER INCOME, EXPENSES & ADJUSTMENTS	(8,000)	(32,000)
8 DEPRECIATION & AMORTIZATION	189,702	201,536
9 TOTAL OPERATING EXPENSES	618,661	627,390
10 INTEREST EXPENSE AND AFUDC		
11 INTEREST EXPENSE		
12 FEDERAL APPROPRIATIONS	32,979	27,538
13 CAPITALIZATION ADJUSTMENT	(18,968)	(18,968)
14 LONG-TERM DEBT	90,812	112,508
15 AMORTIZATION OF CAPITALIZED BOND PREMIUMS	758	692
16 DEBT SERVICE REASSIGNMENT INTEREST	56,781	56,780
17 NON-FEDERAL INTEREST	32,814	40,878
18 AFUDC	(16,501)	(22,648)
19 INTEREST INCOME	(24,479)	(23,201)
20 NET INTEREST EXPENSE	154,196	173,579
21 TOTAL EXPENSES	772,857	800,970
22 MINIMUM REQUIRED NET REVENUES 1/	74,517	75,641
23 PLANNED NET REVENUES FOR RISK	0	0
24 TOTAL PLANNED NET REVENUES	74,517	75,641
<b>25 TOTAL REVENUE REQUIREMENT</b>	<b>847,374</b>	<b>876,610</b>

1/ SEE NOTE ON CASH FLOW TABLE.

**Table 1-2: Transmission Revenue Requirement Statement of Cash Flows**  
(\$000s)

	<b>A</b>	<b>B</b>
	<b>FY 2010</b>	<b>FY 2011</b>
1 CASH FROM CURRENT OPERATIONS:		
2 MINIMUM REQUIRED NET REVENUES 1/	74,517	75,641
3 EXPENSES NOT REQUIRING CASH:		
4 DEPRECIATION & AMORTIZATION	189,702	201,536
5 TRANSMISSION CREDIT PROJECTS DEBT SERVICE	10,696	13,057
6 AMORTIZATION OF CAPITALIZED BOND PREMIUMS	758	692
7 CAPITALIZATION ADJUSTMENT	(18,968)	(18,968)
8 DRAWDOWN OF CASH RESERVES FOR CAPITAL FUNDING	15,000	15,000
9 ACCRUAL REVENUES (AC INTERTIE/FIBER/LGIA)	(41,537)	(47,097)
10 CASH PROVIDED BY CURRENT OPERATIONS	230,168	239,861
11 CASH USED FOR CAPITAL INVESTMENTS:		
12 INVESTMENT IN:		
13 UTILITY PLANT	(443,957)	(454,575)
14 CASH USED FOR CAPITAL INVESTMENTS	(443,957)	(454,575)
15 CASH FROM TREASURY BORROWING AND APPROPRIATIONS:		
16 INCREASE IN LONG-TERM DEBT	428,957	439,575
17 DEBT SERVICE REASSIGNMENT PRINCIPAL	(12)	(154)
18 REPAYMENT OF LONG-TERM DEBT	(140,251)	(100,000)
19 REPAYMENT OF CAPITAL APPROPRIATIONS	(74,905)	(124,707)
20 CASH FROM TREASURY BORROWING AND APPROPRIATIONS	213,790	214,714
21 ANNUAL INCREASE (DECREASE) IN CASH	0	0
22 PLANNED NET REVENUES FOR RISK	0	0
23 TOTAL ANNUAL INCREASE (DECREASE) IN CASH	0	0

1/ Line 21 must be greater than or equal to zero to indicate that cash cost recovery requirements are being achieved. If they are not, net revenues (MRNR) are added so that net cash flows for the year, prior to any cash considerations for risk mitigation, are zero.

## 2. TRANSMISSION EXPENSES

### 2.1 Introduction

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

### 2.2 Expenses

Table 2-1 displays the forecasted program spending levels that are the basis for the revenue requirement study. BPA used O&M expenses reflected in the Integrated Program Review process and decisions explained in the Study, Chapter 2. Inter-business line expenses, including the cost of redispatch, are the generation inputs for ancillary services and the COE and Reclamation annual costs of network transmission and utility delivery facilities of those agencies. These inter-business line expenses are calculated by BPA's generation function. *See* Generation Inputs Study and Documentation, WP-10-FS-BPA-08.

Depreciation and amortization expense, calculated using the straight-line method and remaining life technique is determined for lines, substations, and each of the FERC Accounts in the general plant category. *See* Chapter 3.

Interest expense is calculated in the transmission repayment study, using the capital appropriations and BPA revenue bonds issued to Treasury at individual interest rates. *See* Chapter 4 for calculation of the interest credit on cash reserves.

**Table 2-1: Transmission Program Spending Forecast  
(\$000s)**

Program & Other Operating Costs	A FY2010	B FY2011
<b>1 Transmission's Transmission Acquisition</b>		
2 Leased Facilities	5,917	6,457
3 Settlements	500	500
4 Stability Reserve Payments	6,735	6,735
<b>5 Sub-Total Transmission Acquisition</b>	<b>13,152</b>	<b>13,692</b>
<b>6 Transmission System Operations</b>		
7 Information Technology	7,005	6,761
8 Power System Dispatching	11,461	11,864
9 Control Center Support	13,172	13,541
10 Technical Operations	5,882	6,096
11 Substation Operations	19,024	19,206
<b>12 Sub-Total Transmission System Operations</b>	<b>56,544</b>	<b>57,468</b>
<b>13 Transmission Scheduling</b>		
14 Management Supervision & Administration	703	734
15 Reservations	1,023	1,074
16 Pre-Scheduling	448	470
17 Real-Time Scheduling	4,808	5,028
18 Scheduling Technical Support	2,271	2,369
19 Scheduling After-The-Fact	415	447
<b>20 Sub-Total Transmission Scheduling</b>	<b>9,668</b>	<b>10,122</b>
<b>21 Transmission Marketing</b>		
22 Transmission Sales	3,120	3,261
23 Transmission Finance	291	302
24 Contract Management	4,706	4,905
25 Transmission Billing	2,224	2,309
26 Business Strategy & Assessment	6,732	7,007
27 Marketing IT Support	2,012	2,112
28 Meter Data	0	0
<b>29 Sub-Total Transmission Marketing</b>	<b>19,086</b>	<b>19,896</b>
30		
<b>31 Transmission Business Support</b>		
32 Executive and Admin Services 1/	7,618	7,871
34 TBL Internal G&A 1/	14,447	14,865
35 Aircraft Services	1,160	1,203
36 Logistics Services	7,566	6,841
37 Security Enhancements	1,383	1,429
<b>38 Sub-Total Transmission Business Support</b>	<b>32,174</b>	<b>32,209</b>
<b>39 Transmission System Development</b>		
40 Research & Development	6,117	5,701
41 TSD Planning & Analysis	8,539	8,811
42 Capital to Expense Transfer	3,000	3,000
43 Inventory Management	1,000	1,000
44 Regulatory & Region Association Fees	4,807	5,083
45 Environmental Analysis	78	80
<b>46 Sub-Total Transmission System Development</b>	<b>23,540</b>	<b>23,675</b>

**Table 2-1: Transmission Program Spending Forecast  
(\$000s)**

<b>Program &amp; Other Operating Costs</b>	<b>A FY2010</b>	<b>B FY2011</b>
<b>47 Transmission System Maintenance</b>		
48 Non-Electric Maintenance	26,046	28,055
49 Substation Maintenance	22,439	22,985
50 Transmission Line Maintenance	25,540	26,179
51 System Protection Control Maintenance	10,798	11,317
52 Power System Control Maintenance	10,147	10,659
53 System Maintenance Management	6,001	6,151
54 Right Of Way Maintenance	18,181	18,508
55 Heavy Mobile Equipment Maintenance	0	0
56 Technical Training	2,657	2,723
<b>57 Sub-Total Transmission System Maintenance</b>	<b>121,810</b>	<b>126,578</b>
<b>58 Transmission Environmental Operations</b>		
59 Environmental Policy & Planning	1,778	1,853
60 Pollution Prevention & Abatement	3,719	3,915
<b>61 Sub-Total Transmission Environmental Operations</b>	<b>5,497</b>	<b>5,769</b>
<b>62 Transmission Other</b>		
63 Unfunded Retirement Benefits	15,447	15,579
64 Undistributed Cost Reduction	(2,000)	(1,999)
65 Non-Federal Debt Service	-	-
<b>66 Sub-Total Transmission Other</b>	<b>13,447</b>	<b>13,580</b>
<b>67 Sub-Total Transmission System Operations &amp; Maintenance</b>	<b>294,918</b>	<b>302,988</b>
<b>68 Between Business Line Expenses</b>		
69 Ancillary Services	78,380	90,943
70 Corps/Bureau/Network/Delivery Facilities	8,167	8,157
71 Redispatch and Station Service	3,629	3,629
<b>72 Sub-Total Between Business Line Expense</b>	<b>90,176</b>	<b>102,730</b>
<b>73 Corporate Expenses</b>		
74 Legal Support - Expense	2,928	3,027
75 Shared Services Costs	0	0
76 Corporate Overhead Distributions	48,937	49,110
<b>77 Sub-Total Corporate Charges</b>	<b>51,865</b>	<b>52,137</b>
<b>78 Total Transmission IPR Program Levels</b>	<b>436,958</b>	<b>457,854</b>

**Table 2-2: Transmission System Capital-Related Costs  
(\$000s)**

**Summary of Transmission Repayment Study Data**

	<b>A</b>	<b>B</b>
	<b>2010</b>	<b>2011</b>
1 DSR Interest	56,781	56,780
2 Schultz-Wautoma & other capital lease payments	16,714	18,778
3 LGIA Interest	16,100	22,100
4 Appropriation Interest	32,979	27,538
5 Bond Interest	<u>90,812</u>	<u>112,508</u>
6 Total Gross Interest	213,386	237,704
5 DSR Principal	12	154
6 Appropriation Principal	24,919	78,792
7 Bond Principal	<u>190,251</u>	<u>140,000</u>
8 Total Principal	215,182	218,946

**Summary of Transmission Depreciation & Amortization**

	<b>A</b>	<b>B</b>
	<b>2010</b>	<b>2011</b>
9 TRANSMISSION PLANT		
10 LINES	53,224	55,538
11 SUBSTATION	66,699	72,674
12 STATION EQUIPMENT	4,441	5,060
13 GENERAL PLANT	64,093	66,865
14 INTANGIBLE ASSETS	<u>1,245</u>	<u>1,399</u>
15 TOTAL	189,702	201,536

**Table 2-3: Allowance for Funds Used During Construction  
(\$000s)**

<b>Plant Funded from BPA Borrowing</b>		
	<b>A</b>	<b>B</b>
	<b>2010</b>	<b>2011</b>
1 Capital expenditures	401,331	407,024
2 Plant-in-service	349,225	346,674
3 SOY CWIP Balance	291,084	354,287
4 EOY CWIP Balance	343,190	414,637
5 Average CWIP Balance	317,137	384,462
6 AFUDC Rate	5.31%	5.41%
7 AFUDC for Federal Projects	11,097	13,605
<b>Plant Funded from Revenues &amp; by Third Parties</b>		
8 Capital expenditures	88,850	167,101
9 Ending CWIP Balance	101,731	167,092
10 Average CWIP Balance	101,294	134,412
11 AFUDC Rate	5.31%	5.41%
12 AFUDC for Non-Federal Projects	5,404	9,043
13 Total AFUDC	16,501	22,648

**Table 2-4 Amortization of Premiums of Bond Refinancings**

	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>	<b>G</b>	<b>H</b>	<b>I</b>	<b>J</b>	<b>K</b>	<b>L</b>	<b>M</b>	<b>N</b>
	<b>Date of Refinancing</b>	<b>Premium</b>	<b>Proration</b>	<b>No. of Months</b>	<b>Monthly Amortization</b>	<b>Type of Bond</b>	<b>Last Month to Amortize</b>	<b>Calculation of Annual Amounts</b>						
								<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>
1	8/31/1992	7,760,000		180	43,111	Construction	Aug-2007	-	-	-	-	-	-	-
2	8/31/1997	7,954,100		120	66,284	Construction	Aug-2007	-	-	-	-	-	-	-
3	4/30/1998	4,998,330		120	41,653	Construction	Apr-2008	-	-	-	-	-	-	-
4	5/31/1998	4,827,690		132	36,573	Construction	May-2009	293	-	-	-	-	-	-
5	1/0/1900	2,556,947		156	16,391	Construction	May-2011	197	197	131	-	-	-	-
6	5/31/1998	6,322,053		408	15,495	Construction	May-2032	186	186	186	186	186	186	186
7	8/31/1998	4,684,950		360	13,014	Construction	Aug-2028	156	156	156	156	156	156	156
8	8/31/1998	6,560,000		360	18,222	Construction	Aug-2028	<u>219</u>	<u>219</u>	<u>219</u>	<u>219</u>	<u>219</u>	<u>219</u>	<u>219</u>
9	Total	<b>45,664,070</b>			<b>250,743</b>			<b>1,051</b>	<b>758</b>	<b>692</b>	<b>561</b>	<b>561</b>	<b>561</b>	<b>561</b>

**Table 2-5 Between Business Line Costs  
(\$000s)**

	<b>A</b>	<b>B</b>	<b>C</b>
	<b>2010</b>	<b>2011</b>	<b>Average</b>
1 Regulating Reserve	7,699	7,699	7,699
2 Wind Balancing Reserve	38,574	56,246	47,410
3 Operating Reserve - Spinning	16,017	13,419	14,718
4 Operating Reserve - Supplemental	15,477	12,967	14,222
5 Synchronous Condensing	1,964	1,954	1,959
6 Generation Dropping	612	612	612
7 Energy Imbalance	-	-	-
8 Redispatch	400	400	400
9 COE/Reclamation Network/Delivery Facilities Segmentation	6,203	6,203	6,203
10 Station Service	<u>3,229</u>	<u>3,229</u>	<u>3,229</u>
11 Total	90,176	102,730	96,453

**Table 2-6 Summary of Depreciation  
(\$000s)**

	<b>A</b>	<b>B</b>
	<b>2010</b>	<b>2011</b>
1 TRANSMISSION PLANT		
2 LINES	53,224	55,538
3 SUBSTATION	66,699	72,674
4 STATION EQUIPMENT	4,441	5,060
5 GENERAL PLANT	64,093	66,865
6 INTANGIBLE ASSETS	<u>1,245</u>	<u>1,399</u>
7 TOTAL	189,702	201,536

### **3. FCRTS INVESTMENT BASE**

#### **3.1 Introduction**

This chapter documents the development of the FCRTS investment for the rate approval period. In this proposal the investment data primarily serve as the source of depreciation calculations.

#### **3.2 Methodology**

The historical investment information is prepared from BPA's plant investment records. The general plant investment is identified according to different types of facilities (communications, supervisory control, buildings, etc.) by FERC Account.

Forecasted plant additions have been adjusted to take into account the investment associated with Delivery segment facilities projected to be sold prior to the rate approval period.

Depreciation is calculated using the straight-line method, remaining life technique. For general plant categories, annual depreciation rates are used unadjusted. For lines and substations, the annual rate has been weighted by the groups that compose these facilities. The substations category is made up of land and land rights, structures and improvements, and station equipment. Both historical investment and forecasted additions are depreciated according to their group rate.

	A	B	C	D	E	F	G	H	I	J	K
1	<b>Table 3-1: BPA Transmission Plant Depreciation and Accumulated Depreciation</b>										
2	(\$000s)										
3											
4		<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>	<b>G</b>	<b>H</b>	<b>I</b>	
5		<b>2009</b>	<b>2009</b>	<b>2009</b>	<b>2010</b>	<b>2010</b>	<b>2010</b>	<b>2011</b>	<b>2011</b>	<b>2011</b>	
6		<b>PLANT</b>	<b>DEPREC</b>	<b>ACCUM</b>	<b>PLANT</b>	<b>DEPREC</b>	<b>ACCUM</b>	<b>PLANT</b>	<b>DEPREC</b>	<b>ACCUM</b>	
7		<b>INVEST</b>	<b>EXPEN</b>	<b>DEPREC</b>	<b>INVEST</b>	<b>EXPEN</b>	<b>DEPREC</b>	<b>INVEST</b>	<b>EXPEN</b>	<b>DEPREC</b>	
8	1 LINES:										
9	2 GENERATION-INTEGRATION	18,307	396	9,916	18,307	396	10,312	18,307	396	10,708	
10	3 NETWORK	2,104,024	44,498	1,070,959	2,207,919	46,625	1,117,584	2,312,999	48,885	1,166,469	
11	4 SOUTHERN INERTIE	191,259	4,115	101,422	193,738	4,163	105,585	196,284	4,217	109,802	
12	5 EASTERN INERTIE	94,271	2,039	51,060	94,271	2,039	53,099	94,271	2,039	55,138	
13	6 UTILITY DELIVERY	31	1	17	31	1	18	31	1	19	
14	7 DSI DELIVERY	0	0	0	0	0	0	-	0	0	
15	8 TOTAL LINES	2,407,892	51,049	1,233,374	2,514,266	53,224	1,286,598	2,621,892	55,538	1,342,136	
16											
17	9 SUBSTATIONS:										
18	10 GENERATION-INTEGRATION	43,304	1,077	18,383	43,655	1,084	19,467	44,013	1,093	20,560	
19	11 NETWORK	1,911,859	45,563	741,298	2,131,983	50,423	791,721	2,364,664	56,069	847,790	
20	12 SOUTHERN INERTIE	531,697	13,184	224,204	547,291	13,454	237,658	557,068	13,770	251,428	
21	13 EASTERN INERTIE	23,866	595	10,187	23,866	595	10,782	23,866	595	11,377	
22	14 UTILITY DELIVERY	25,917	645	11,012	26,093	649	11,661	26,272	653	12,314	
23	15 DSI DELIVERY	19,803	494	8,453	19,803	494	8,947	19,803	494	9,441	
24	16 TOTAL SUBSTATIONS	2,556,446	61,558	1,013,537	2,792,691	66,699	1,080,236	3,035,686	72,674	1,152,910	
25											
26											
27	<b>Table 3-2: BPA Projected Transmission Plant Investment</b>										
28	(\$000s)										
29											
30		<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>	<b>G</b>			
31		<b>TOTAL</b>		<b>TOTAL</b>		<b>TOTAL</b>		<b>TOTAL</b>			
32		<b>2008</b>	<b>2009</b>	<b>2009</b>	<b>2010</b>	<b>2010</b>	<b>2011</b>	<b>2011</b>			
33		<b>INVEST</b>	<b>ADDITIONS</b>	<b>INVEST</b>	<b>ADDITIONS</b>	<b>INVEST</b>	<b>ADDITIONS</b>	<b>INVEST</b>			
34	1 GENERATION-INTEGRATION	61,367	244	61,611	351	61,962	358	62,320			
35	2 NETWORK	3,753,438	262,445	4,015,883	324,019	4,339,902	337,761	4,677,663			
36	3 SOUTHERN INERTIE	714,906	8,050	722,956	18,073	741,029	12,323	753,352			
37	4 EASTERN INERTIE	118,137	0	118,137	0	118,137	0	118,137			
38	5 UTILITY DELIVERY	25,826	122	25,948	176	26,124	179	26,303			
39	6 DSI DELIVERY	19,803	0	19,803	0	19,803	0	19,803			
40	7 INTANGIBLE - SPACER DAMPERS	29,619	5,417	35,036	106	35,142	109	35,251			
41	8 INTANGIBLE - NON WIRES SOLUTIONS	0	0	0	3,000	3,000	3,000	6,000			
42	9 GENERAL PLANT	973,476	83,059	1,056,535	91,036	1,147,571	82,027	1,229,598			
43	10 TOTAL BPA	5,696,572	359,337	6,055,909	436,761	6,492,670	435,757	6,928,427			

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	<b>Table 3-3: BPA Transmission Plant Investment Additions</b>													
2	(\$000s)													
3														
4		<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>	<b>G</b>	<b>H</b>	<b>I</b>	<b>J</b>	<b>K</b>	<b>L</b>	
5					<b>TOTAL</b>				<b>TOTAL</b>				<b>TOTAL</b>	
6					<b>2009</b>				<b>2010</b>				<b>2011</b>	
7		<b>LINES</b>	<b>SUBS</b>	<b>OTHER</b>	<b>ADDITIONS</b>	<b>LINES</b>	<b>SUBS</b>	<b>OTHER</b>	<b>ADDITIONS</b>	<b>LINES</b>	<b>SUBS</b>	<b>OTHER</b>	<b>ADDITIONS</b>	
8	1	GENERATION-INTEGRATION	0	244		244	0	351		351	0	358		358
9	2	NETWORK	92,854	169,591		262,445	103,895	220,124		324,019	105,080	232,681		337,761
10	3	SOUTHERN INERTIE	1,998	6,052		8,050	2,479	15,594		18,073	2,546	9,777		12,323
11	4	EASTERN INERTIE	0	0		0	0	0		0	0	0		0
12	5	UTILITY DELIVERY	0	122		122	0	176		176	0	179		179
13	6	DSI DELIVERY	0	0		0	0	0		0	0	0		0
14	7	INTANGIBLE - SPACER DAMPERS			5,417	5,417		106		106			109	109
15	8	INTANGIBLE - NON WIRES SOLUTIONS			0	0		3,000		3,000			3,000	3,000
16	9	GENERAL PLANT			83,059	83,059		91,036		91,036			82,027	82,027
17	10	TOTAL BPA	94,852	176,009	88,476	359,337	106,374	236,245	94,142	436,761	107,626	242,995	85,136	435,757

	A	B	C	D	E	F	G	H	I
1	<b>Table 3-4: Amortization of BPA Transmission Other Deferred Assets</b>								
2	(\$000s)								
3									
4	<b>Spacer Dampers</b>								
5		<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>	<b>G</b>	
6			<b>Partial Year</b>	<b>Full year</b>	<b>Annual</b>	<b>Accumulated</b>	<b>Cumulative</b>	<b>Deferred</b>	
7		<b>FY</b>	<b>Investment</b>	<b>Amortization</b>	<b>Amortization</b>	<b>Amortization</b>	<b>Amortization</b>	<b>Investment</b>	<b>Investment</b>
8	1	2005							
9	2	2006	2,728	45	91	45	45	2,728	5,696
10	3	2007	2,800	47	93	138	183	5,528	6,630
11	4	2008	24,091	575	803	759	942	29,619	
12	5	2009	5,417	181	181	1,168	2,110	35,036	
13	6	2010	106	2	4	1,170	3,280	32,414	
14	7	2011	109	2	4	1,174	4,454	32,523	
15	8	2012	111	2	4	1,178	5,632	32,634	
16	9	2013	113	2	4	1,182	6,814	32,747	
17	10	2014	115	2	4	1,186	8,000	32,862	
18									
19	FY 2008 investment = 9,617 plus total deferred investment from 2006 and 2007.								
20									
21									
22									
23	<b>Non-Wires Program</b>								
24									
25		<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>		
26			<b>Partial Year</b>	<b>Full year</b>	<b>Annual</b>	<b>Accumulated</b>	<b>Cumulative</b>		
27		<b>FY</b>	<b>Investment</b>	<b>Amortization</b>	<b>Amortization</b>	<b>Amortization</b>	<b>Amortization</b>	<b>Investment</b>	
28	11	2005							
29	12	2006							
30	13	2007							
31	14	2008		0	0	0	0	0	
32	15	2009		0	0	0	0	0	
33	16	2010	3,000	75	150	75	75	3,000	
34	17	2011	3,000	75	150	225	300	6,000	
35	18	2012	3,000	75	150	375	675	9,000	
36	19	2013	3,000	75	150	525	1,200	12,000	
37	20	2013	3,000	75	150	675	1,875	15,000	
38									
39									
40									
41	<b>Total FAS 71 Amortization</b>								
42									
43		<b>A</b>							
44		<b>Annual</b>							
45		<b>Amortization</b>							
46	21	2008	759						
47	22	2009	1,168						
48	23	2010	1,245						
49	24	2011	1,399						
50	25	2012	1,553						
51	26	2013	1,707						
52	27	2014	1,861						

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	<b>Table 3-5: BPA General Plant Cumulative Investment</b>												
2	(\$000s)												
3													
4		<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>	<b>G</b>	<b>H</b>	<b>I</b>	<b>J</b>	<b>K</b>	
5			<b>DEPR</b>	<b>FY 2009</b>	<b>FY 2009</b>	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2010</b>	<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2011</b>	<b>FY 2011</b>	
6		<b>FERC</b>	<b>ACCRL</b>	<b>DEPR</b>	<b>ACCUM</b>	<b>TOTAL</b>	<b>DEPR</b>	<b>ACCUM</b>	<b>TOTAL</b>	<b>DEPR</b>	<b>ACCUM</b>	<b>TOTAL</b>	
7		<b>ACCT</b>	<b>RATE</b>	<b>EXP</b>	<b>DEPR</b>	<b>INVEST</b>	<b>EXP</b>	<b>DEPR</b>	<b>INVEST</b>	<b>EXP</b>	<b>DEPR</b>	<b>INVEST</b>	
8	1	LAND & LAND RIGHTS	389	-	15,685	15,685	-	26,320	26,320	-	37,173	37,173	
9	2	STRUCTURES & IMPROVEMENTS	390	0.02030	3,566	46,736	176,907	3,615	50,351	179,297	3,665	54,016	181,766
10	3	OFFICE FURNITURE & FIXTURES	391.1	0.09990	161	1,108	1,611	161	1,269	1,611	161	1,430	1,611
11	4	DATA PROCESSING -EQUIPMENT	391.2	0.18070	4,710	17,107	26,063	4,710	21,817	26,063	4,246	26,063	26,063
12	5	DATA PROCESSING -SOFTWARE	391.3	0.18330	2,874	15,052	15,932	1,418	16,470	16,470	556	17,026	17,026
13	6	TRANSPORT EQUIPMENT	392.1	0.01520	467	26,203	31,329	486	26,689	32,585	505	27,194	33,848
14	7	HELICOPTERS	392.2	0.03600	205	2,034	6,105	462	2,496	19,542	719	3,215	20,389
15	8	AIRPLANES	392.3	0.03160	337	3,150	11,080	363	3,513	11,922	390	3,903	12,769
16	9	STORES EQUIPMENT	393	0.02110	54	1,564	3,157	80	1,644	4,413	106	1,750	5,676
17	10	TOOLS, SHOP & GARAGE EQUIPMENT	394	0.02540	150	1,416	6,331	171	1,587	7,173	193	1,780	8,020
18	11	LAB EQUIPMENT	395	0.05130	1,658	15,647	33,146	1,744	17,391	34,831	1,830	19,221	36,525
19	12	POWER OPERATED EQUIPMENT	396	0.05790	1,706	22,439	30,298	1,803	24,242	31,983	1,901	26,143	33,677
20	13	COMMUNICATIONS EQUIPMENT	397	0.07830	40,721	234,632	534,512	42,960	277,592	562,813	45,284	322,876	593,873
21	14	MISC EQUIPMENT	398	0.06710	1,400	4,639	20,862	1,400	6,039	20,862	1,400	7,439	20,862
22	15	SUBTOTAL GENERAL PLANT			58,009	407,412	913,017	59,373	477,420	975,884	60,956	549,229	1,029,277
23	16	STATION EQUIPMENT	353	0.03790	3,869	39,509	109,119	4,441	43,950	125,260	5,060	49,010	141,761
24	17	TOTAL GENERAL PLANT			61,878	446,921	1,022,136	63,814	521,370	1,101,144	66,016	598,239	1,171,038
25													
26		Corporate Assignment											
27	18	OFFICE FURNITURE & FIXTURES	391.1	0.09990	76	566	759	76	642	759	76	718	759
28	19	DATA PROCESSING -EQUIPMENT	391.2	0.18070	2,412	7,121	15,466	3,005	10,126	17,790	3,434	13,560	20,217
29	20	DATA PROCESSING -SOFTWARE	391.3	0.18330	-	1,813	1,813	-	1,813	1,813	-	1,813	1,813
30	21	COMMUNICATIONS EQUIPMENT	397	0.07830	776	4,064	14,354	1,504	5,568	24,058	2,264	7,832	33,764
31	22	MISC EQUIPMENT	398	0.06710	135	660	2,007	135	795	2,007	135	930	2,007
32	23	TOTAL CORPORATE ASSIGNMENT			3,399	14,224	34,399	4,720	18,944	46,427	5,909	24,853	58,560

	A	B	C	D	E	F
1	<b>Table 3-6: BPA Transmission General Plant Projected Plant Additions</b>					
2	<b>(\$000s)</b>					
3						
4			<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>
5			<b>FERC</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>
6			<b>ACCT</b>	<b>ADDTNS</b>	<b>ADDTNS</b>	<b>ADDTNS</b>
7	1	LAND & LAND RIGHTS	389	15,638	10,635	10,853
8	2	STRUCTURES & IMPROVEMENTS	390	2,513	2,390	2,469
9	3	OFFICE FURNITURE & FIXTURES	391.1	-	-	-
10	4	DATA PROCESSING -EQUIPMENT	391.2	-	-	-
11	5	DATA PROCESSING -SOFTWARE	391.3	505	538	556
12	6	TRANSPORT EQUIPMENT	392.1	1,243	1,256	1,263
13	7	HELICOPTERS	392.2	834	13,437	847
14	8	AIRPLANES	392.3	834	842	847
15	9	STORES EQUIPMENT	393	1,243	1,256	1,263
16	10	TOOLS, SHOP & GARAGE EQUIPMENT	394	834	842	847
17	11	LAB EQUIPMENT	395	1,667	1,685	1,694
18	12	POWER OPERATED EQUIPMENT	396	1,667	1,685	1,694
19	13	COMMUNICATIONS EQUIPMENT	397	28,884	28,301	31,060
20	14	MISC EQUIPMENT	398	-	-	-
21	15	SUBTOTAL GENERAL PLANT		55,862	62,867	53,393
22	16	STATION EQUIPMENT	353	14,063	16,141	16,501
23	17	TOTAL GENERAL PLANT		69,925	79,008	69,894
24						
25						
26		Corporate Assignment				
27	18	OFFICE FURNITURE & FIXTURES	391.1	4,235	2,324	2,427
28	19	DATA PROCESSING -EQUIPMENT	391.2	-	-	-
29	20	DATA PROCESSING -SOFTWARE	391.3	8,899	9,704	9,706
30	21	COMMUNICATIONS EQUIPMENT	397	-	-	-
31	22	MISC EQUIPMENT	398	-	-	-
32	23	TOTAL CORPORATE ASSIGNMENT		13,134	12,028	12,133

## **4. PROJECTED CASH BALANCES/INTEREST CREDITS**

### **4.1 Introduction**

This chapter projects BPA-TS cash balances for the rate period and estimates the interest income (credits) to be earned on of BPA's projected cash balances and on annual funds to be returned to Treasury. Included in BPA-TS' projected cash balances are proceeds from the sale of Delivery segment facilities projected to be sold prior to the 2010-2011 rate period.

### **4.2 Interest credits on BPA's projected cash balances**

The beginning rate period cash balance was derived from BPA's business unit cash analysis for FY 2008 and from current TS forecasts of revenues, expenses and cash flows for FY 2009. The annual incremental cash provided from forecasted net revenues are added to this, for revenue requirements and the current and revised revenue tests. Reserves during the rate period are reduced by \$15 million each year for the funding of capital expenditures in lieu of Treasury borrowing. Using the existing interest earnings rate, annual interest income is calculated from projected average annual cash balances. In addition, based on an analysis of actual TS within-year cash flows, thirty-three percent of the repayment study interest income is included in the total credit. The resulting interest income is applied as a credit against interest expense in the transmission revenue requirements and in the income statements of the current and revised revenue tests.

### **4.3 Interest income (repayment program calculation)**

Separately, interest income rates listed in this chapter are calculated and used within the repayment program to calculate an interest credit based on the average cash necessary to pay the interest, bond call premiums, and amortization payments calculated by the study for return to Treasury in that year. The repayment program assumes the cash accumulates at a uniform rate throughout the year, except for interest paid on bonds issued to Treasury at mid-year. At the end of the year, the cash balance, together with the interest credit earned thereon, is used in the program for payment of interest expense, amortization of the Federal investment, and payment of bond premiums. For a further explanation of the calculation of the interest credit computed within repayment studies, *see* 2004 Final Transmission Proposal Revenue Requirement Study, TR-04-FS-BPA-01, Appendix A - The Repayment Program.

	A	B	C	D	E
1		<b>Table 4-1: Interest Income from Projected Cash Balances</b>			
2		<b>Revenue Requirement Development</b>			
3		<b>(\$000s)</b>			
4					
5					
6			<b>2009</b>	<b>2010</b>	<b>2011</b>
7	1	Annual Cash Surplus/(Deficit)		-	-
8					
9	2	Adjustments to Cash		(23,000)	(47,000)
10					
11	3	SOY Cash Balance		385,543	362,543
12	4	EOY Cash Balance	385,543	362,543	315,543
13	5	Average Cash Balance		374,043	339,043
14					
15	6	Interest Income Rate		4.70%	4.70%
16					
17	7	Annual Interest Income *		24,479	23,201
18					
19	8	* includes from repayment study		6,899	7,266
20					
21					

	A	B	C	D	E	F
1	<b>Table 4-2: Interest Income from Projected Cash Balances</b>					
2	<b>Revenues from Current Rates</b>					
3	<b>(\$000s)</b>					
4						
5						
6			<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>Repayment Period</b>
7	1	Annual Cash Surplus/(Deficit)		(3,408)	(10,907)	
8						
9	2	Adjustments to Cash		(23,000)	(47,000)	
10						
11	3	SOY Cash Balance		385,543	383,593	349,568
12	4	EOY Cash Balance	385,543	359,135	325,686	349,568
13	5	Average Cash Balance		372,339	354,639	349,568
14						
15	6	Interest Income Rate		4.70%	4.70%	4.70%
16						
17	7	Annual Interest Income *		24,458	23,882	16,430
18						
19	8	* includes from repayment study		6,958	7,214	

	A	B	C	D	E	F
1		<b>Table 4-2: Interest Income from Projected Cash Balances</b>				
2		<b>Revenues from Proposed Rates</b>				
3		<b>(\$000s)</b>				
4						
5						
6			<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>Repayment Period</b>
7	1	Annual Cash Surplus/(Deficit)		4,966	5,629	
8						
9	2	Adjustments to Cash		(23,000)	(47,000)	
10						
11	3	SOY Cash Balance		385,543	392,164	375,466
12	4	EOY Cash Balance	385,543	367,509	350,793	375,466
13	5	Average Cash Balance		376,526	371,478	375,466
14						
15	6	Interest Income Rate		4.70%	4.70%	4.70%
16						
17	7	Annual Interest Income *		24,655	24,673	17,647
18						
19	8	* includes from repayment study		6,958	7,214	

## 5. INTEREST RATES AND PRICE DEFLATORS

### 5.1 Introduction

Interest rates on bonds issued by BPA to Treasury 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.

### 5.2 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.

### 5.3 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 150 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 2010-2011 period the 30-year rate reflects a markup of 220 and 200 basis points respectively.

### 5.4 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:

$$[(FY1/100) \times 0.5] + 1 = \text{Cumulative Price Deflator}_1$$

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.

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

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 2010-2011 spending levels, they are based on the price deflators from the Fourth Quarter 2008 GI forecast.

# memorandum

DATE: June 10, 2009

REPLY TO  
ATTN OF: FTC-2

SUBJECT: FY 2009 (Revised June 2009) Common Agency Assumptions

to: See attached cc list:

Please see the attached BPA borrowing rate and inflation assumptions for the period FY 2009 through 2039.

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 June Revised FY 2009 forecast is summarized in the following tables:

- Table 1: 30-year Treasury Borrowing Rate
- Table 2: 30-year Rate Comparison (FY 2009-June Revised vs. 2009 Forecasts)
- Table 3: 20-year Treasury Borrowing Rate
- Table 4: 15-year Treasury Borrowing Rate
- Table 5: Appropriation Term Rates
- Table 6: BPA Treasury Term Rates
- Table 7: Third-party taxable Term Rates
- Table 8: Third-party tax-exempt Term Rates
- Table 9: FERC (Prime Rate)
- Table 10: LIBOR 3-Month Rate
- Table 11: Projected change in the GDP price deflator
- Table 12: Summary of equivalent cumulative discount rates

BPA's 30-year Treasury borrowing rate is projected to be 55 bp less than the 2009 forecast in 2010. The revised inflation rate projection is 0.56 percent lower than the FY 2009 forecast in 2010.

## **Borrowing Rate Forecast Methodology**

The FY 2009 June Revised forecast is based on the Global Insight (GI) Fourth Quarter November 2008 Long-Term Economic Outlook.

Table 1 illustrates the components of BPA's Treasury borrowing rate forecast. 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.

BPA borrowing rates from the U.S. Treasury reflect a mark-up over the Treasury yield curve. The markup is based upon the Government Agency borrowing rate spread over the Treasury

yield curve, and where appropriate, an adder for call options embedded in BPA Treasury borrowings.

In FY 2009.Q1 the Treasury borrowing rate spread over U.S. Treasury securities widened to historically unprecedented levels with the implosion of Wall Street and financial markets, and the contagion that rapidly spilled over into the banking system to imperil the U.S. economy. This crisis was reflected in a higher near-term trajectory for Treasury borrowing rates. Agency spreads exploded between October-December 2008, and have remained at historically wide margins as the financial health of major segments of the U.S. economy have continued to deteriorate. With a protracted economic recovery and gradual normalization of financial markets, BPA borrowing rates in the near-term reflect a progressive decline in spreads.

### **BPA Borrowing Forecasts**

The FY 2009 June Revised forecast begins in an environment of financial crisis. The major uncertainty surrounding BPA borrowing rate projections centers on the recession's severity and duration.

The FY 2009 June Revised outlook suggests that BPA borrowing rates will decrease in the near term, before rising to a long-term equilibrium equivalent to the FY 2009 forecast. Short-term borrowing rates in the FY 2009 June Revised forecast fall in FY 2010, but then rise significantly in 2011. Borrowing rates increase until they reach a long-term equilibrium level in 2013.

The borrowing rate on FCRPS Appropriations over a 2-year term is projected to increase 264 basis points (bp), from 2.21 percent in FY 2009 to 4.85 percent in 2012. The Appropriation borrowing rate over a 10-year term is projected to increase 171 bp from 3.65 percent to 5.36 percent in 2012. Note: Appropriation borrowing rates in FY 2009 are set by the U.S. Treasury at the beginning of the fiscal year and so do not reflect the full extent of decline reflected in other sources of financing.

By 2012, the 10-year rate on BPA's Treasury borrowing is expected to increase 151 bp from 4.49 percent in FY 2009 to 6.00 percent. The Third-party taxable 10-year rate is expected to increase 216 bp from 4.44 percent to 6.60 percent in 2012, and the Third-party tax-exempt 10-year rate increases 163 bp from 3.21 percent to 4.84 percent. Beyond 2014, BPA borrowing rates reflect a long-term equilibrium rate.

This update includes borrowing based on the Prime rate and a short-term LIBOR. The Prime rate increases 360 bp over the next three years from 3.90 percent in FY 2009 to 7.50 percent in FY 2012. LIBOR rates are projected to increase 116 bp from 4.02 percent in FY 2009 to 5.18 percent in FY 2012.

### **Inflation Forecast**

BPA inflation assumptions reflect projected changes in the U.S. Gross Domestic Product (GDP) Price Deflator. 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.

This index assumes a base year of 2000. The projected change in the GDP price deflator and comparison with the FY 2009 inflation forecast is summarized in Table 11. Column A shows the projected trend in GDP inflation rates between 2009-2039 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.

The GI November 2008 Base Case forecast assumes inflation will remain subdued over the next 30 years. Slower growth and greater slack in the economy reduces inflationary pressures.

Inflationary pressures decline throughout the forecast period. Inflation slows to 1.93 percent annual rate in FY 2009 and 1.46 percent in FY 2010. The pace of inflation increases to 1.57 percent in FY 2011 and reaches a peak of 2.04 percent in FY 2015. With the exception of lower near-term, inflation in the 2009 June Revised forecast is approximately the same outlook as the 2009 forecast (See Table 11).

If you have questions, or suggestions concerning the FY 2009 June Revised Agency 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  
Attachment

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

Table 1  
**30 YEAR TREASURY YIELDS**  
**FY 2009 JUNE REVISED FORECAST - BPA TREASURY BORROWING RATES**

Calendar/Fiscal Years 2009 - 2039

<u>YEAR</u>	(A) <u>BOND RATE 1/ Calendar Year</u>	(B) <u>BOND RATE Fiscal Year</u>	(C) <u>BPA RATE 2/ Fiscal Year</u>
2009	4.08	4.13	6.33
2010	4.29	4.24	6.24
2011	5.48	5.18	7.03
2012	5.79	5.71	7.36
2013	5.79	5.79	7.29
2014	5.79	5.79	7.04
2015	5.79	5.79	6.89
2016	5.79	5.79	6.79
2017	5.79	5.79	6.79
2018	5.79	5.79	6.79
2019	5.79	5.79	6.79
2020	5.79	5.79	6.79
2021	5.79	5.79	6.79
2022	5.79	5.79	6.79
2023	5.79	5.79	6.79
2024	5.79	5.79	6.79
2025	5.79	5.79	6.79
2026	5.79	5.79	6.79
2027	5.79	5.79	6.79
2028	5.79	5.79	6.79
2029	5.79	5.79	6.79
2030	5.79	5.79	6.79
2031	5.79	5.79	6.79
2032	5.79	5.79	6.79
2033	5.79	5.79	6.79
2034	5.79	5.79	6.79
2035	5.79	5.79	6.79
2036	5.79	5.79	6.79
2037	5.79	5.79	6.79
2038	5.79	5.79	6.79
2039	5.79	5.79	6.79

1/ BPA FY 2009 June Revised Forecast, Global Insight CY 2008 Q4 long-term outlook.  
 The U.S. Economy: 30-Year Focus, November 2008 Forecast, Base Case.

2/ Column C = Column B + U.S. Treasury borrowing markup.

Table 2  
 30 YEAR TREASURY YIELDS  
 FY 2009 JUNE REVISED FORECAST - COMPARISON OF BPA BORROWING RATE FORECASTS

Fiscal Years 2009 - 2039

<u>YEAR</u>	(A) FY 2009 FORECAST (JUNE REVISED) <u>BPA RATE 1/</u>	(B) FY 2009 FORECAST (NOVEMBER 2008) <u>BPA RATE 2/</u>	(C) DIFFERENCE <u>(A-B)</u>
2009	6.33	5.35	0.97
2010	6.24	6.79	-0.55
2011	7.03	6.93	0.10
2012	7.36	6.69	0.67
2013	7.29	6.69	0.60
2014	7.04	6.69	0.35
2015	6.89	6.69	0.20
2016	6.79	6.69	0.10
2017	6.79	6.69	0.10
2018	6.79	6.69	0.10
2019	6.79	6.69	0.10
2020	6.79	6.69	0.10
2021	6.79	6.69	0.10
2022	6.79	6.69	0.10
2023	6.79	6.69	0.10
2024	6.79	6.69	0.10
2025	6.79	6.69	0.10
2026	6.79	6.69	0.10
2027	6.79	6.69	0.10
2028	6.79	6.69	0.10
2029	6.79	6.69	0.10
2030	6.79	6.69	0.10
2031	6.79	6.69	0.10
2032	6.79	6.69	0.10
2033	6.79	6.69	0.10
2034	6.79	6.69	0.10
2035	6.79	6.69	0.10
2036	6.79	6.69	0.10
2037	6.79	6.69	0.10
2038	6.79	6.69	0.10
2039	6.79	6.69	0.10

1/ BPA FY 2009 June Revised Forecast; Global Insight CY 2008.Q4 long-term outlook.  
 The U.S. Economy: 30-Year Focus, November 2008 Forecast, Base Case.

2/ BPA FY 2009 Forecast; Global Insight CY 2008.Q3 long-term outlook.  
 The U.S. Economy: 30-Year Focus, August 2008 Core Forecast.

Table 3  
 20 YEAR TREASURY YIELDS  
 FY 2009 JUNE REVISED FORECAST - BPA TREASURY BORROWING RATES  
 Calendar/Fiscal Years 2009 - 2039

YEAR	(A) BOND RATE 1/ Calendar Year	(B) BOND RATE Fiscal Year	(C) BPA RATE 2/ Fiscal Year
2009	3.86	3.88	5.41
2010	4.09	4.03	5.42
2011	5.30	5.00	6.28
2012	5.62	5.54	6.68
2013	5.62	5.62	6.65
2014	5.62	5.62	6.49
2015	5.62	5.62	6.39
2016	5.62	5.62	6.34
2017	5.62	5.62	6.34
2018	5.62	5.62	6.34
2019	5.62	5.62	6.34
2020	5.62	5.62	6.34
2021	5.62	5.62	6.34
2022	5.62	5.62	6.34
2023	5.62	5.62	6.34
2024	5.62	5.62	6.34
2025	5.62	5.62	6.34
2026	5.62	5.62	6.34
2027	5.62	5.62	6.34
2028	5.62	5.62	6.34
2029	5.62	5.62	6.34
2030	5.62	5.62	6.34
2031	5.62	5.62	6.34
2032	5.62	5.62	6.34
2033	5.62	5.62	6.34
2034	5.62	5.62	6.34
2035	5.62	5.62	6.34
2036	5.62	5.62	6.34
2037	5.62	5.62	6.34
2038	5.62	5.62	6.34
2039	5.62	5.62	6.34

1/ BPA FY 2009 June Revised Forecast; Global Insight CY 2008.Q4; long-term outlook.  
 The U.S. Economy: 30-Year Focus; November 2008 Forecast; Base Case.

2/ Column C = Column B + U.S. Treasury borrowing markup.

Table 4  
**15 YEAR TREASURY YIELDS**  
**FY 2009 JUNE REVISED FORECAST - BPA TREASURY BORROWING RATES**

Calendar/Fiscal Years 2009 - 2039

<u>YEAR</u>	(A) <u>BOND RATE 1/</u> <u>Calendar Year</u>	(B) <u>BOND RATE</u> <u>Fiscal Year</u>	(C) <u>BPA RATE 2/</u> <u>Fiscal Year</u>
2009	3.74	3.76	4.95
2010	3.99	3.93	5.01
2011	5.22	4.91	5.90
2012	5.53	5.45	6.34
2013	5.53	5.53	6.33
2014	5.53	5.53	6.22
2015	5.53	5.53	6.14
2016	5.53	5.53	6.12
2017	5.53	5.53	6.12
2018	5.53	5.53	6.12
2019	5.53	5.53	6.12
2020	5.53	5.53	6.12
2021	5.53	5.53	6.12
2022	5.53	5.53	6.12
2023	5.53	5.53	6.12
2024	5.53	5.53	6.12
2025	5.53	5.53	6.12
2026	5.53	5.53	6.12
2027	5.53	5.53	6.12
2028	5.53	5.53	6.12
2029	5.53	5.53	6.12
2030	5.53	5.53	6.12
2031	5.53	5.53	6.12
2032	5.53	5.53	6.12
2033	5.53	5.53	6.12
2034	5.53	5.53	6.12
2035	5.53	5.53	6.12
2036	5.53	5.53	6.12
2037	5.53	5.53	6.12
2038	5.53	5.53	6.12
2039	5.53	5.53	6.12

1/ BPA FY 2009 June Revised Forecast; Global Insight CY 2008.Q4 long-term outlook.  
 The U.S. Economy, 30-Year Focus, November 2008 Forecast, Base Case.

2/ Column C = Column B + U.S. Treasury borrowing markup.

Table 5  
**BPA FY 2009 JUNE REVISED FORECAST - APPROPRIATIONS BORROWING RATE 1/**

BPA Fiscal Years 2009 - 2039

Year	<b>MATURITY</b>																		
	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	
2009/2/	2.00	2.21	2.31	2.56	2.81	3.04	3.20	3.35	3.51	3.65	3.79	3.94	4.06	4.17	4.38	4.38	4.38	4.38	4.38
2010	2.09	2.25	2.50	2.75	2.99	3.16	3.32	3.49	3.66	3.82	3.84	3.86	3.88	3.87	3.93	3.95	3.97	3.99	3.99
2011	3.79	3.94	4.06	4.18	4.31	4.41	4.51	4.61	4.71	4.82	4.83	4.85	4.87	4.89	4.91	4.93	4.94	4.96	4.96
2012	4.70	4.85	4.93	5.00	5.07	5.13	5.19	5.25	5.30	5.36	5.38	5.40	5.41	5.43	5.45	5.47	5.48	5.50	5.50
2013	4.84	4.99	5.06	5.12	5.19	5.24	5.29	5.34	5.39	5.44	5.46	5.48	5.49	5.51	5.53	5.55	5.56	5.58	5.58
2014	4.84	4.99	5.06	5.12	5.19	5.24	5.29	5.34	5.39	5.44	5.46	5.48	5.49	5.51	5.53	5.55	5.56	5.58	5.58
2015	4.84	4.99	5.06	5.12	5.19	5.24	5.29	5.34	5.39	5.44	5.46	5.48	5.49	5.51	5.53	5.55	5.56	5.58	5.58
2016	4.84	4.99	5.06	5.12	5.19	5.24	5.29	5.34	5.39	5.44	5.46	5.48	5.49	5.51	5.53	5.55	5.56	5.58	5.58
2017	4.84	4.99	5.06	5.12	5.19	5.24	5.29	5.34	5.39	5.44	5.46	5.48	5.49	5.51	5.53	5.55	5.56	5.58	5.58
2018	4.84	4.99	5.06	5.12	5.19	5.24	5.29	5.34	5.39	5.44	5.46	5.48	5.49	5.51	5.53	5.55	5.56	5.58	5.58
2019	4.84	4.99	5.06	5.12	5.19	5.24	5.29	5.34	5.39	5.44	5.46	5.48	5.49	5.51	5.53	5.55	5.56	5.58	5.58
2020	4.84	4.99	5.06	5.12	5.19	5.24	5.29	5.34	5.39	5.44	5.46	5.48	5.49	5.51	5.53	5.55	5.56	5.58	5.58
2021	4.84	4.99	5.06	5.12	5.19	5.24	5.29	5.34	5.39	5.44	5.46	5.48	5.49	5.51	5.53	5.55	5.56	5.58	5.58
2022	4.84	4.99	5.06	5.12	5.19	5.24	5.29	5.34	5.39	5.44	5.46	5.48	5.49	5.51	5.53	5.55	5.56	5.58	5.58
2023	4.84	4.99	5.06	5.12	5.19	5.24	5.29	5.34	5.39	5.44	5.46	5.48	5.49	5.51	5.53	5.55	5.56	5.58	5.58
2024	4.84	4.99	5.06	5.12	5.19	5.24	5.29	5.34	5.39	5.44	5.46	5.48	5.49	5.51	5.53	5.55	5.56	5.58	5.58
2025	4.84	4.99	5.06	5.12	5.19	5.24	5.29	5.34	5.39	5.44	5.46	5.48	5.49	5.51	5.53	5.55	5.56	5.58	5.58
2026	4.84	4.99	5.06	5.12	5.19	5.24	5.29	5.34	5.39	5.44	5.46	5.48	5.49	5.51	5.53	5.55	5.56	5.58	5.58
2027	4.84	4.99	5.06	5.12	5.19	5.24	5.29	5.34	5.39	5.44	5.46	5.48	5.49	5.51	5.53	5.55	5.56	5.58	5.58
2028	4.84	4.99	5.06	5.12	5.19	5.24	5.29	5.34	5.39	5.44	5.46	5.48	5.49	5.51	5.53	5.55	5.56	5.58	5.58
2029	4.84	4.99	5.06	5.12	5.19	5.24	5.29	5.34	5.39	5.44	5.46	5.48	5.49	5.51	5.53	5.55	5.56	5.58	5.58
2030	4.84	4.99	5.06	5.12	5.19	5.24	5.29	5.34	5.39	5.44	5.46	5.48	5.49	5.51	5.53	5.55	5.56	5.58	5.58
2031	4.84	4.99	5.06	5.12	5.19	5.24	5.29	5.34	5.39	5.44	5.46	5.48	5.49	5.51	5.53	5.55	5.56	5.58	5.58
2032	4.84	4.99	5.06	5.12	5.19	5.24	5.29	5.34	5.39	5.44	5.46	5.48	5.49	5.51	5.53	5.55	5.56	5.58	5.58
2033	4.84	4.99	5.06	5.12	5.19	5.24	5.29	5.34	5.39	5.44	5.46	5.48	5.49	5.51	5.53	5.55	5.56	5.58	5.58
2034	4.84	4.99	5.06	5.12	5.19	5.24	5.29	5.34	5.39	5.44	5.46	5.48	5.49	5.51	5.53	5.55	5.56	5.58	5.58
2035	4.84	4.99	5.06	5.12	5.19	5.24	5.29	5.34	5.39	5.44	5.46	5.48	5.49	5.51	5.53	5.55	5.56	5.58	5.58
2036	4.84	4.99	5.06	5.12	5.19	5.24	5.29	5.34	5.39	5.44	5.46	5.48	5.49	5.51	5.53	5.55	5.56	5.58	5.58
2037	4.84	4.99	5.06	5.12	5.19	5.24	5.29	5.34	5.39	5.44	5.46	5.48	5.49	5.51	5.53	5.55	5.56	5.58	5.58
2038	4.84	4.99	5.06	5.12	5.19	5.24	5.29	5.34	5.39	5.44	5.46	5.48	5.49	5.51	5.53	5.55	5.56	5.58	5.58
2039	4.84	4.99	5.06	5.12	5.19	5.24	5.29	5.34	5.39	5.44	5.46	5.48	5.49	5.51	5.53	5.55	5.56	5.58	5.58

1/ Global Insight CY 2008, Q4 long-term outlook. The U.S. Economy: 30-Year Focus, November 2008 Forecast, Base Case

2/ FY 2009 Appropriation rates are determined in accordance with BPA Appropriations Refinancing Act, 16 U.S.C. 8381 enacted on April 26, 1996, and are independent of the Global Insight Treasury Yield forecasts.

19 Year	20 Year	21 Year	22 Year	23 Year	24 Year	25 Year	26 Year	27 Year	28 Year	29 Year	30 Year	50 Year	Year
4.38	4.38	4.38	4.38	4.38	4.38	4.38	4.38	4.38	4.38	4.38	4.38	4.38	2009 2/
4.01	4.03	4.05	4.07	4.09	4.11	4.13	4.16	4.18	4.20	4.22	4.24	4.24	2010
4.98	5.00	5.02	5.04	5.05	5.07	5.09	5.11	5.13	5.15	5.16	5.18	5.18	2011
5.52	5.54	5.55	5.57	5.59	5.61	5.62	5.64	5.66	5.68	5.69	5.71	5.71	2012
5.60	5.62	5.63	5.65	5.67	5.69	5.70	5.72	5.74	5.76	5.77	5.79	5.79	2013
5.60	5.62	5.63	5.65	5.67	5.69	5.70	5.72	5.74	5.76	5.77	5.79	5.79	2014
5.60	5.62	5.63	5.65	5.67	5.69	5.70	5.72	5.74	5.76	5.77	5.79	5.79	2015
5.60	5.62	5.63	5.65	5.67	5.69	5.70	5.72	5.74	5.76	5.77	5.79	5.79	2016
5.60	5.62	5.63	5.65	5.67	5.69	5.70	5.72	5.74	5.76	5.77	5.79	5.79	2017
5.60	5.62	5.63	5.65	5.67	5.69	5.70	5.72	5.74	5.76	5.77	5.79	5.79	2018
5.60	5.62	5.63	5.65	5.67	5.69	5.70	5.72	5.74	5.76	5.77	5.79	5.79	2019
5.60	5.62	5.63	5.65	5.67	5.69	5.70	5.72	5.74	5.76	5.77	5.79	5.79	2020
5.60	5.62	5.63	5.65	5.67	5.69	5.70	5.72	5.74	5.76	5.77	5.79	5.79	2021
5.60	5.62	5.63	5.65	5.67	5.69	5.70	5.72	5.74	5.76	5.77	5.79	5.79	2022
5.60	5.62	5.63	5.65	5.67	5.69	5.70	5.72	5.74	5.76	5.77	5.79	5.79	2023
5.60	5.62	5.63	5.65	5.67	5.69	5.70	5.72	5.74	5.76	5.77	5.79	5.79	2024
5.60	5.62	5.63	5.65	5.67	5.69	5.70	5.72	5.74	5.76	5.77	5.79	5.79	2025
5.60	5.62	5.63	5.65	5.67	5.69	5.70	5.72	5.74	5.76	5.77	5.79	5.79	2026
5.60	5.62	5.63	5.65	5.67	5.69	5.70	5.72	5.74	5.76	5.77	5.79	5.79	2027
5.60	5.62	5.63	5.65	5.67	5.69	5.70	5.72	5.74	5.76	5.77	5.79	5.79	2028
5.60	5.62	5.63	5.65	5.67	5.69	5.70	5.72	5.74	5.76	5.77	5.79	5.79	2029
5.60	5.62	5.63	5.65	5.67	5.69	5.70	5.72	5.74	5.76	5.77	5.79	5.79	2030
5.60	5.62	5.63	5.65	5.67	5.69	5.70	5.72	5.74	5.76	5.77	5.79	5.79	2031
5.60	5.62	5.63	5.65	5.67	5.69	5.70	5.72	5.74	5.76	5.77	5.79	5.79	2032
5.60	5.62	5.63	5.65	5.67	5.69	5.70	5.72	5.74	5.76	5.77	5.79	5.79	2033
5.60	5.62	5.63	5.65	5.67	5.69	5.70	5.72	5.74	5.76	5.77	5.79	5.79	2034
5.60	5.62	5.63	5.65	5.67	5.69	5.70	5.72	5.74	5.76	5.77	5.79	5.79	2035
5.60	5.62	5.63	5.65	5.67	5.69	5.70	5.72	5.74	5.76	5.77	5.79	5.79	2036
5.60	5.62	5.63	5.65	5.67	5.69	5.70	5.72	5.74	5.76	5.77	5.79	5.79	2037
5.60	5.62	5.63	5.65	5.67	5.69	5.70	5.72	5.74	5.76	5.77	5.79	5.79	2038
5.60	5.62	5.63	5.65	5.67	5.69	5.70	5.72	5.74	5.76	5.77	5.79	5.79	2039

Table 6  
**BPA FY 2009 JUNE REVISED FORECAST - BPA TREASURY BORROWING YIELD CURVE 1/**

BPA Fiscal Years 2009 - 2039

Year	MATURITY																	
	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
2009	2.00	2.59	2.94	3.28	3.62	3.80	3.97	4.15	4.32	4.49	4.58	4.68	4.77	4.86	4.95	5.04	5.13	5.23
2010	2.45	2.96	3.23	3.50	3.76	3.93	4.10	4.27	4.44	4.60	4.68	4.77	4.85	4.93	5.01	5.09	5.17	5.26
2011	4.11	4.56	4.71	4.85	5.00	5.11	5.21	5.32	5.43	5.53	5.60	5.68	5.75	5.83	5.90	5.98	6.05	6.13
2012	4.98	5.38	5.48	5.58	5.68	5.75	5.82	5.89	5.95	6.00	6.07	6.14	6.21	6.27	6.34	6.41	6.48	6.55
2013	5.08	5.43	5.53	5.62	5.72	5.78	5.85	5.91	5.97	6.01	6.07	6.14	6.20	6.27	6.33	6.39	6.46	6.52
2014	5.06	5.34	5.44	5.54	5.64	5.71	5.77	5.84	5.91	5.94	6.00	6.05	6.11	6.16	6.22	6.27	6.33	6.38
2015	5.04	5.29	5.39	5.49	5.59	5.66	5.72	5.79	5.86	5.89	5.94	5.99	6.04	6.09	6.14	6.19	6.24	6.29
2016	5.04	5.29	5.39	5.49	5.59	5.66	5.72	5.79	5.86	5.89	5.94	5.98	6.03	6.07	6.12	6.16	6.21	6.25
2017	5.04	5.29	5.39	5.49	5.59	5.66	5.72	5.79	5.86	5.89	5.94	5.98	6.03	6.07	6.12	6.16	6.21	6.25
2018	5.04	5.29	5.39	5.49	5.59	5.66	5.72	5.79	5.86	5.89	5.94	5.98	6.03	6.07	6.12	6.16	6.21	6.25
2019	5.04	5.29	5.39	5.49	5.59	5.66	5.72	5.79	5.86	5.89	5.94	5.98	6.03	6.07	6.12	6.16	6.21	6.25
2020	5.04	5.29	5.39	5.49	5.59	5.66	5.72	5.79	5.86	5.89	5.94	5.98	6.03	6.07	6.12	6.16	6.21	6.25
2021	5.04	5.29	5.39	5.49	5.59	5.66	5.72	5.79	5.86	5.89	5.94	5.98	6.03	6.07	6.12	6.16	6.21	6.25
2022	5.04	5.29	5.39	5.49	5.59	5.66	5.72	5.79	5.86	5.89	5.94	5.98	6.03	6.07	6.12	6.16	6.21	6.25
2023	5.04	5.29	5.39	5.49	5.59	5.66	5.72	5.79	5.86	5.89	5.94	5.98	6.03	6.07	6.12	6.16	6.21	6.25
2024	5.04	5.29	5.39	5.49	5.59	5.66	5.72	5.79	5.86	5.89	5.94	5.98	6.03	6.07	6.12	6.16	6.21	6.25
2025	5.04	5.29	5.39	5.49	5.59	5.66	5.72	5.79	5.86	5.89	5.94	5.98	6.03	6.07	6.12	6.16	6.21	6.25
2026	5.04	5.29	5.39	5.49	5.59	5.66	5.72	5.79	5.86	5.89	5.94	5.98	6.03	6.07	6.12	6.16	6.21	6.25
2027	5.04	5.29	5.39	5.49	5.59	5.66	5.72	5.79	5.86	5.89	5.94	5.98	6.03	6.07	6.12	6.16	6.21	6.25
2028	5.04	5.29	5.39	5.49	5.59	5.66	5.72	5.79	5.86	5.89	5.94	5.98	6.03	6.07	6.12	6.16	6.21	6.25
2029	5.04	5.29	5.39	5.49	5.59	5.66	5.72	5.79	5.86	5.89	5.94	5.98	6.03	6.07	6.12	6.16	6.21	6.25
2030	5.04	5.29	5.39	5.49	5.59	5.66	5.72	5.79	5.86	5.89	5.94	5.98	6.03	6.07	6.12	6.16	6.21	6.25
2031	5.04	5.29	5.39	5.49	5.59	5.66	5.72	5.79	5.86	5.89	5.94	5.98	6.03	6.07	6.12	6.16	6.21	6.25
2032	5.04	5.29	5.39	5.49	5.59	5.66	5.72	5.79	5.86	5.89	5.94	5.98	6.03	6.07	6.12	6.16	6.21	6.25
2033	5.04	5.29	5.39	5.49	5.59	5.66	5.72	5.79	5.86	5.89	5.94	5.98	6.03	6.07	6.12	6.16	6.21	6.25
2034	5.04	5.29	5.39	5.49	5.59	5.66	5.72	5.79	5.86	5.89	5.94	5.98	6.03	6.07	6.12	6.16	6.21	6.25
2035	5.04	5.29	5.39	5.49	5.59	5.66	5.72	5.79	5.86	5.89	5.94	5.98	6.03	6.07	6.12	6.16	6.21	6.25
2036	5.04	5.29	5.39	5.49	5.59	5.66	5.72	5.79	5.86	5.89	5.94	5.98	6.03	6.07	6.12	6.16	6.21	6.25
2037	5.04	5.29	5.39	5.49	5.59	5.66	5.72	5.79	5.86	5.89	5.94	5.98	6.03	6.07	6.12	6.16	6.21	6.25
2038	5.04	5.29	5.39	5.49	5.59	5.66	5.72	5.79	5.86	5.89	5.94	5.98	6.03	6.07	6.12	6.16	6.21	6.25
2039	5.04	5.29	5.39	5.49	5.59	5.66	5.72	5.79	5.86	5.89	5.93	5.98	6.03	6.07	6.12	6.16	6.21	6.25

1/ Global Insight CY 2008 Q4 long-term outlook. The U.S. Economy, 30-Year Focus, November 2008 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>
5.32	5.41	5.50	5.59	5.68	5.78	5.87	5.96	6.05	6.14	6.23	6.33	6.33	2009
5.34	5.42	5.50	5.58	5.67	5.75	5.83	5.91	5.99	6.08	6.16	6.24	6.24	2010
6.20	6.28	6.36	6.43	6.51	6.58	6.66	6.73	6.81	6.88	6.96	7.03	7.03	2011
6.61	6.68	6.75	6.82	6.89	6.95	7.02	7.09	7.16	7.23	7.29	7.36	7.36	2012
6.59	6.65	6.71	6.78	6.84	6.91	6.97	7.03	7.10	7.16	7.23	7.29	7.29	2013
6.44	6.49	6.55	6.60	6.66	6.71	6.77	6.82	6.88	6.93	6.99	7.04	7.04	2014
6.34	6.39	6.44	6.49	6.54	6.59	6.64	6.69	6.74	6.79	6.84	6.89	6.89	2015
6.30	6.34	6.39	6.43	6.48	6.52	6.57	6.61	6.66	6.70	6.75	6.79	6.79	2016
6.30	6.34	6.39	6.43	6.48	6.52	6.57	6.61	6.66	6.70	6.75	6.79	6.79	2017
6.30	6.34	6.39	6.43	6.48	6.52	6.57	6.61	6.66	6.70	6.75	6.79	6.79	2018
6.30	6.34	6.39	6.43	6.48	6.52	6.57	6.61	6.66	6.70	6.75	6.79	6.79	2019
6.30	6.34	6.39	6.43	6.48	6.52	6.57	6.61	6.66	6.70	6.75	6.79	6.79	2020
6.30	6.34	6.39	6.43	6.48	6.52	6.57	6.61	6.66	6.70	6.75	6.79	6.79	2021
6.30	6.34	6.39	6.43	6.48	6.52	6.57	6.61	6.66	6.70	6.75	6.79	6.79	2022
6.30	6.34	6.39	6.43	6.48	6.52	6.57	6.61	6.66	6.70	6.75	6.79	6.79	2023
6.30	6.34	6.39	6.43	6.48	6.52	6.57	6.61	6.66	6.70	6.75	6.79	6.79	2024
6.30	6.34	6.39	6.43	6.48	6.52	6.57	6.61	6.66	6.70	6.75	6.79	6.79	2025
6.30	6.34	6.39	6.43	6.48	6.52	6.57	6.61	6.66	6.70	6.75	6.79	6.79	2026
6.30	6.34	6.39	6.43	6.48	6.52	6.57	6.61	6.66	6.70	6.75	6.79	6.79	2027
6.30	6.34	6.39	6.43	6.48	6.52	6.57	6.61	6.66	6.70	6.75	6.79	6.79	2028
6.30	6.34	6.39	6.43	6.48	6.52	6.57	6.61	6.66	6.70	6.75	6.79	6.79	2029
6.30	6.34	6.39	6.43	6.48	6.52	6.57	6.61	6.66	6.70	6.75	6.79	6.79	2030
6.30	6.34	6.39	6.43	6.48	6.52	6.57	6.61	6.66	6.70	6.75	6.79	6.79	2031
6.30	6.34	6.39	6.43	6.48	6.52	6.57	6.61	6.66	6.70	6.75	6.79	6.79	2032
6.30	6.34	6.39	6.43	6.48	6.52	6.57	6.61	6.66	6.70	6.75	6.79	6.79	2033
6.30	6.34	6.39	6.43	6.48	6.52	6.57	6.61	6.66	6.70	6.75	6.79	6.79	2034
6.30	6.34	6.39	6.43	6.48	6.52	6.57	6.61	6.66	6.70	6.75	6.79	6.79	2035
6.30	6.34	6.39	6.43	6.48	6.52	6.57	6.61	6.66	6.70	6.75	6.79	6.79	2036
6.30	6.34	6.39	6.43	6.48	6.52	6.57	6.61	6.66	6.70	6.75	6.79	6.79	2037
6.30	6.34	6.39	6.43	6.48	6.52	6.57	6.61	6.66	6.70	6.75	6.79	6.79	2038
6.30	6.34	6.39	6.43	6.48	6.52	6.57	6.61	6.66	6.70	6.75	6.79	6.79	2039

Table 7  
**BPA FY 2009 JUNE REVISED FORECAST - THIRD-PARTY TAXABLE BORROWING RATE 1/**

BPA Fiscal Years 2009 - 2039

**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>
2009	1.93	2.23	2.62	3.01	3.39	3.60	3.81	4.02	4.23	4.44	4.47	4.50	4.53	4.56	4.59	4.62	4.65	4.68
2010	2.45	2.80	3.10	3.41	3.72	3.93	4.14	4.34	4.55	4.76	4.79	4.82	4.84	4.87	4.89	4.92	4.95	4.97
2011	4.29	4.73	4.91	5.09	5.26	5.40	5.54	5.67	5.81	5.95	5.97	6.00	6.02	6.04	6.07	6.09	6.12	6.14
2012	5.28	5.79	5.91	6.04	6.16	6.25	6.34	6.43	6.51	6.60	6.62	6.65	6.67	6.69	6.72	6.74	6.76	6.78
2013	5.43	5.94	6.06	6.18	6.30	6.38	6.46	6.54	6.62	6.69	6.72	6.74	6.76	6.79	6.81	6.83	6.85	6.88
2014	5.43	5.94	6.06	6.18	6.30	6.38	6.46	6.54	6.62	6.69	6.72	6.74	6.76	6.79	6.81	6.83	6.85	6.88
2015	5.43	5.94	6.06	6.18	6.30	6.38	6.46	6.54	6.62	6.69	6.72	6.74	6.76	6.79	6.81	6.83	6.85	6.88
2016	5.43	5.94	6.06	6.18	6.30	6.38	6.46	6.54	6.62	6.69	6.72	6.74	6.76	6.79	6.81	6.83	6.85	6.88
2017	5.43	5.94	6.06	6.18	6.30	6.38	6.46	6.54	6.62	6.69	6.72	6.74	6.76	6.79	6.81	6.83	6.85	6.88
2018	5.43	5.94	6.06	6.18	6.30	6.38	6.46	6.54	6.62	6.69	6.72	6.74	6.76	6.79	6.81	6.83	6.85	6.88
2019	5.43	5.95	6.06	6.18	6.30	6.38	6.46	6.54	6.62	6.69	6.72	6.74	6.76	6.79	6.81	6.83	6.85	6.88
2020	5.43	5.95	6.07	6.18	6.30	6.38	6.46	6.54	6.62	6.69	6.72	6.74	6.76	6.79	6.81	6.83	6.85	6.88
2021	5.43	5.95	6.07	6.18	6.30	6.38	6.46	6.54	6.62	6.69	6.72	6.74	6.76	6.79	6.81	6.83	6.85	6.88
2022	5.43	5.95	6.07	6.18	6.30	6.38	6.46	6.54	6.62	6.69	6.72	6.74	6.76	6.79	6.81	6.83	6.85	6.88
2023	5.43	5.95	6.07	6.18	6.30	6.38	6.46	6.54	6.62	6.69	6.72	6.74	6.76	6.79	6.81	6.83	6.85	6.88
2024	5.43	5.95	6.07	6.18	6.30	6.38	6.46	6.54	6.62	6.69	6.72	6.74	6.76	6.79	6.81	6.83	6.85	6.88
2025	5.43	5.95	6.07	6.18	6.30	6.38	6.46	6.54	6.62	6.69	6.72	6.74	6.76	6.79	6.81	6.83	6.85	6.88
2026	5.43	5.95	6.07	6.18	6.30	6.38	6.46	6.54	6.62	6.69	6.72	6.74	6.76	6.79	6.81	6.83	6.85	6.88
2027	5.43	5.95	6.07	6.18	6.30	6.38	6.46	6.54	6.62	6.69	6.72	6.74	6.76	6.79	6.81	6.83	6.85	6.88
2028	5.43	5.95	6.07	6.18	6.30	6.38	6.46	6.54	6.62	6.69	6.72	6.74	6.76	6.79	6.81	6.83	6.85	6.88
2029	5.43	5.95	6.07	6.18	6.30	6.38	6.46	6.54	6.62	6.69	6.72	6.74	6.76	6.79	6.81	6.83	6.85	6.88
2030	5.43	5.95	6.07	6.18	6.30	6.38	6.46	6.54	6.62	6.69	6.72	6.74	6.76	6.79	6.81	6.83	6.85	6.88
2031	5.43	5.95	6.07	6.18	6.30	6.38	6.46	6.54	6.62	6.69	6.72	6.74	6.76	6.79	6.81	6.83	6.85	6.88
2032	5.43	5.95	6.07	6.18	6.30	6.38	6.46	6.54	6.62	6.69	6.72	6.74	6.76	6.79	6.81	6.83	6.85	6.88
2033	5.43	5.95	6.07	6.18	6.30	6.38	6.46	6.54	6.62	6.69	6.72	6.74	6.76	6.79	6.81	6.83	6.85	6.88
2034	5.43	5.95	6.07	6.18	6.30	6.38	6.46	6.54	6.62	6.69	6.72	6.74	6.76	6.79	6.81	6.83	6.85	6.88
2035	5.43	5.95	6.07	6.18	6.30	6.38	6.46	6.54	6.62	6.69	6.72	6.74	6.76	6.79	6.81	6.83	6.85	6.88
2036	5.43	5.95	6.07	6.18	6.30	6.38	6.46	6.54	6.62	6.69	6.72	6.74	6.76	6.79	6.81	6.83	6.85	6.88
2037	5.43	5.95	6.07	6.18	6.30	6.38	6.46	6.54	6.62	6.69	6.72	6.74	6.76	6.79	6.81	6.83	6.85	6.88
2038	5.43	5.95	6.07	6.18	6.30	6.38	6.46	6.54	6.62	6.69	6.72	6.74	6.76	6.79	6.81	6.83	6.85	6.88
2039	5.43	5.95	6.07	6.18	6.30	6.38	6.46	6.54	6.62	6.69	6.72	6.74	6.76	6.79	6.81	6.83	6.85	6.88

1/ Global Insight CY 2008,Q4 long-term outlook. The U.S. Economy: 30-Year Focus, November 2008 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>
4.71	4.74	4.76	4.79	4.82	4.85	4.88	4.91	4.94	4.97	5.00	5.03	5.03	2009
5.00	5.03	5.05	5.08	5.11	5.13	5.16	5.18	5.21	5.24	5.26	5.29	5.29	2010
6.16	6.19	6.21	6.23	6.26	6.28	6.31	6.33	6.35	6.38	6.40	6.42	6.42	2011
6.81	6.83	6.85	6.88	6.90	6.92	6.94	6.97	6.99	7.01	7.04	7.06	7.06	2012
6.90	6.92	6.95	6.97	6.99	7.01	7.04	7.06	7.08	7.11	7.13	7.15	7.15	2013
6.90	6.92	6.95	6.97	6.99	7.01	7.04	7.06	7.08	7.11	7.13	7.15	7.15	2014
6.90	6.92	6.95	6.97	6.99	7.01	7.04	7.06	7.08	7.11	7.13	7.15	7.15	2015
6.90	6.92	6.95	6.97	6.99	7.01	7.04	7.06	7.08	7.11	7.13	7.15	7.15	2016
6.90	6.92	6.95	6.97	6.99	7.01	7.04	7.06	7.08	7.11	7.13	7.15	7.15	2017
6.90	6.92	6.95	6.97	6.99	7.01	7.04	7.06	7.08	7.11	7.13	7.15	7.15	2018
6.90	6.92	6.95	6.97	6.99	7.01	7.04	7.06	7.08	7.11	7.13	7.15	7.15	2019
6.90	6.92	6.95	6.97	6.99	7.01	7.04	7.06	7.08	7.11	7.13	7.15	7.15	2020
6.90	6.92	6.95	6.97	6.99	7.01	7.04	7.06	7.08	7.11	7.13	7.15	7.15	2021
6.90	6.92	6.95	6.97	6.99	7.01	7.04	7.06	7.08	7.11	7.13	7.15	7.15	2022
6.90	6.92	6.95	6.97	6.99	7.01	7.04	7.06	7.08	7.11	7.13	7.15	7.15	2023
6.90	6.92	6.95	6.97	6.99	7.01	7.04	7.06	7.08	7.11	7.13	7.15	7.15	2024
6.90	6.92	6.95	6.97	6.99	7.01	7.04	7.06	7.08	7.11	7.13	7.15	7.15	2025
6.90	6.92	6.95	6.97	6.99	7.01	7.04	7.06	7.08	7.11	7.13	7.15	7.15	2026
6.90	6.92	6.95	6.97	6.99	7.01	7.04	7.06	7.08	7.11	7.13	7.15	7.15	2027
6.90	6.92	6.95	6.97	6.99	7.01	7.04	7.06	7.08	7.11	7.13	7.15	7.15	2028
6.90	6.92	6.95	6.97	6.99	7.01	7.04	7.06	7.08	7.11	7.13	7.15	7.15	2029
6.90	6.92	6.95	6.97	6.99	7.01	7.04	7.06	7.08	7.11	7.13	7.15	7.15	2030
6.90	6.92	6.95	6.97	6.99	7.01	7.04	7.06	7.08	7.11	7.13	7.15	7.15	2031
6.90	6.92	6.95	6.97	6.99	7.01	7.04	7.06	7.08	7.11	7.13	7.15	7.15	2032
6.90	6.92	6.95	6.97	6.99	7.01	7.04	7.06	7.08	7.11	7.13	7.15	7.15	2033
6.90	6.92	6.95	6.97	6.99	7.01	7.04	7.06	7.08	7.11	7.13	7.15	7.15	2034
6.90	6.92	6.95	6.97	6.99	7.01	7.04	7.06	7.08	7.11	7.13	7.15	7.15	2035
6.90	6.92	6.95	6.97	6.99	7.01	7.04	7.06	7.08	7.11	7.13	7.15	7.15	2036
6.90	6.92	6.95	6.97	6.99	7.01	7.04	7.06	7.08	7.11	7.13	7.15	7.15	2037
6.90	6.92	6.95	6.97	6.99	7.01	7.04	7.06	7.08	7.11	7.13	7.15	7.15	2038
6.90	6.92	6.95	6.97	6.99	7.01	7.04	7.06	7.08	7.11	7.13	7.15	7.15	2039

Table 8  
**BPA FY 2009 JUNE REVISED FORECAST - THIRD-PARTY TAX-EXEMPT BORROWING RATE 1/**

BPA Fiscal Years 2009 - 2039

**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
2009	1.33	1.55	1.82	2.10	2.37	2.54	2.70	2.87	3.04	3.21	3.24	3.27	3.30	3.33	3.35	3.38	3.41	3.44
2010	1.67	1.93	2.16	2.39	2.62	2.79	2.97	3.15	3.33	3.51	3.54	3.57	3.60	3.63	3.67	3.70	3.73	3.76
2011	2.88	3.22	3.37	3.53	3.68	3.82	3.95	4.09	4.23	4.37	4.40	4.43	4.47	4.50	4.53	4.56	4.60	4.63
2012	3.52	3.92	4.05	4.17	4.30	4.40	4.51	4.62	4.73	4.84	4.87	4.91	4.94	4.97	5.01	5.04	5.08	5.11
2013	3.62	4.03	4.15	4.27	4.39	4.49	4.60	4.70	4.80	4.91	4.94	4.97	5.01	5.04	5.08	5.11	5.15	5.18
2014	3.62	4.03	4.15	4.27	4.39	4.49	4.60	4.70	4.80	4.91	4.94	4.97	5.01	5.04	5.08	5.11	5.15	5.18
2015	3.62	4.03	4.15	4.27	4.39	4.49	4.60	4.70	4.80	4.91	4.94	4.97	5.01	5.04	5.08	5.11	5.15	5.18
2016	3.62	4.03	4.15	4.27	4.39	4.49	4.60	4.70	4.80	4.91	4.94	4.97	5.01	5.04	5.08	5.11	5.15	5.18
2017	3.62	4.03	4.15	4.27	4.39	4.49	4.60	4.70	4.80	4.91	4.94	4.97	5.01	5.04	5.08	5.11	5.15	5.18
2018	3.62	4.03	4.15	4.27	4.39	4.49	4.60	4.70	4.80	4.91	4.94	4.97	5.01	5.04	5.08	5.11	5.15	5.18
2019	3.62	4.03	4.15	4.27	4.39	4.49	4.60	4.70	4.80	4.91	4.94	4.97	5.01	5.04	5.08	5.11	5.15	5.18
2020	3.62	4.03	4.15	4.27	4.39	4.49	4.60	4.70	4.80	4.91	4.94	4.97	5.01	5.04	5.08	5.11	5.15	5.18
2021	3.62	4.03	4.15	4.27	4.39	4.49	4.60	4.70	4.80	4.91	4.94	4.97	5.01	5.04	5.08	5.11	5.15	5.18
2022	3.62	4.03	4.15	4.27	4.39	4.49	4.60	4.70	4.80	4.91	4.94	4.97	5.01	5.04	5.08	5.11	5.15	5.18
2023	3.62	4.03	4.15	4.27	4.39	4.49	4.60	4.70	4.80	4.91	4.94	4.97	5.01	5.04	5.08	5.11	5.15	5.18
2024	3.62	4.03	4.15	4.27	4.39	4.49	4.60	4.70	4.80	4.91	4.94	4.97	5.01	5.04	5.08	5.11	5.15	5.18
2025	3.62	4.03	4.15	4.27	4.39	4.49	4.60	4.70	4.80	4.91	4.94	4.97	5.01	5.04	5.08	5.11	5.15	5.18
2026	3.62	4.03	4.15	4.27	4.39	4.49	4.60	4.70	4.80	4.91	4.94	4.97	5.01	5.04	5.08	5.11	5.15	5.18
2027	3.62	4.03	4.15	4.27	4.39	4.49	4.60	4.70	4.80	4.91	4.94	4.97	5.01	5.04	5.08	5.11	5.15	5.18
2028	3.62	4.03	4.15	4.27	4.39	4.49	4.60	4.70	4.80	4.91	4.94	4.97	5.01	5.04	5.08	5.11	5.15	5.18
2029	3.62	4.03	4.15	4.27	4.39	4.49	4.60	4.70	4.80	4.91	4.94	4.97	5.01	5.04	5.08	5.11	5.15	5.18
2030	3.62	4.03	4.15	4.27	4.39	4.49	4.60	4.70	4.80	4.91	4.94	4.97	5.01	5.04	5.08	5.11	5.15	5.18
2031	3.62	4.03	4.15	4.27	4.39	4.49	4.60	4.70	4.80	4.91	4.94	4.97	5.01	5.04	5.08	5.11	5.15	5.18
2032	3.62	4.03	4.15	4.27	4.39	4.49	4.60	4.70	4.80	4.91	4.94	4.97	5.01	5.04	5.08	5.11	5.15	5.18
2033	3.62	4.03	4.15	4.27	4.39	4.49	4.60	4.70	4.80	4.91	4.94	4.97	5.01	5.04	5.08	5.11	5.15	5.18
2034	3.62	4.03	4.15	4.27	4.39	4.49	4.60	4.70	4.80	4.91	4.94	4.97	5.01	5.04	5.08	5.11	5.15	5.18
2035	3.62	4.03	4.15	4.27	4.39	4.49	4.60	4.70	4.80	4.91	4.94	4.97	5.01	5.04	5.08	5.11	5.15	5.18
2036	3.62	4.03	4.15	4.27	4.39	4.49	4.60	4.70	4.80	4.91	4.94	4.97	5.01	5.04	5.08	5.11	5.15	5.18
2037	3.62	4.03	4.15	4.27	4.39	4.49	4.60	4.70	4.80	4.91	4.94	4.97	5.01	5.04	5.08	5.11	5.15	5.18
2038	3.62	4.03	4.15	4.27	4.39	4.49	4.60	4.70	4.80	4.91	4.94	4.97	5.01	5.04	5.08	5.11	5.15	5.18
2039	3.62	4.03	4.15	4.27	4.39	4.49	4.60	4.70	4.80	4.91	4.94	4.97	5.01	5.04	5.08	5.11	5.15	5.18

1/ Global Insight CY 2008 Q4 long-term outlook. The U.S. Economy: 30-Year Focus, November 2008 Forecast, Base Case

19 Year	20 Year	21 Year	22 Year	23 Year	24 Year	25 Year	26 Year	27 Year	28 Year	29 Year	30 Year	50 Year	Year
3.47	3.50	3.53	3.56	3.59	3.62	3.65	3.68	3.71	3.74	3.77	3.80	3.80	2009
3.79	3.83	3.86	3.89	3.92	3.96	3.99	4.02	4.05	4.08	4.12	4.15	4.15	2010
4.66	4.70	4.73	4.76	4.80	4.83	4.86	4.89	4.93	4.96	4.99	5.03	5.03	2011
5.14	5.18	5.21	5.25	5.28	5.32	5.35	5.38	5.42	5.45	5.49	5.52	5.52	2012
5.21	5.25	5.28	5.32	5.35	5.39	5.42	5.45	5.49	5.52	5.56	5.59	5.59	2013
5.21	5.25	5.28	5.32	5.35	5.39	5.42	5.45	5.49	5.52	5.56	5.59	5.59	2014
5.21	5.25	5.28	5.32	5.35	5.39	5.42	5.45	5.49	5.52	5.56	5.59	5.59	2015
5.21	5.25	5.28	5.32	5.35	5.39	5.42	5.45	5.49	5.52	5.56	5.59	5.59	2016
5.21	5.25	5.28	5.32	5.35	5.39	5.42	5.45	5.49	5.52	5.56	5.59	5.59	2017
5.21	5.25	5.28	5.32	5.35	5.39	5.42	5.46	5.49	5.52	5.56	5.59	5.59	2018
5.21	5.25	5.28	5.32	5.35	5.39	5.42	5.46	5.49	5.52	5.56	5.59	5.59	2019
5.21	5.25	5.28	5.32	5.35	5.39	5.42	5.46	5.49	5.52	5.56	5.59	5.59	2020
5.21	5.25	5.28	5.32	5.35	5.39	5.42	5.46	5.49	5.52	5.56	5.59	5.59	2021
5.21	5.25	5.28	5.32	5.35	5.39	5.42	5.46	5.49	5.52	5.56	5.59	5.59	2022
5.21	5.25	5.28	5.32	5.35	5.39	5.42	5.46	5.49	5.52	5.56	5.59	5.59	2023
5.21	5.25	5.28	5.32	5.35	5.39	5.42	5.46	5.49	5.52	5.56	5.59	5.59	2024
5.21	5.25	5.28	5.32	5.35	5.39	5.42	5.46	5.49	5.52	5.56	5.59	5.59	2025
5.21	5.25	5.28	5.32	5.35	5.39	5.42	5.46	5.49	5.52	5.56	5.59	5.59	2026
5.21	5.25	5.28	5.32	5.35	5.39	5.42	5.46	5.49	5.52	5.56	5.59	5.59	2027
5.21	5.25	5.28	5.32	5.35	5.39	5.42	5.46	5.49	5.52	5.56	5.59	5.59	2028
5.21	5.25	5.28	5.32	5.35	5.39	5.42	5.46	5.49	5.52	5.56	5.59	5.59	2029
5.21	5.25	5.28	5.32	5.35	5.39	5.42	5.46	5.49	5.52	5.56	5.59	5.59	2030
5.21	5.25	5.28	5.32	5.35	5.39	5.42	5.46	5.49	5.52	5.56	5.59	5.59	2031
5.21	5.25	5.28	5.32	5.35	5.39	5.42	5.45	5.49	5.52	5.56	5.59	5.59	2032
5.21	5.25	5.28	5.32	5.35	5.39	5.42	5.45	5.49	5.52	5.56	5.59	5.59	2033
5.21	5.25	5.28	5.32	5.35	5.39	5.42	5.45	5.49	5.52	5.56	5.59	5.59	2034
5.21	5.25	5.28	5.32	5.35	5.39	5.42	5.45	5.49	5.52	5.56	5.59	5.59	2035
5.21	5.25	5.28	5.32	5.35	5.39	5.42	5.45	5.49	5.52	5.56	5.59	5.59	2036
5.21	5.25	5.28	5.32	5.35	5.39	5.42	5.45	5.49	5.52	5.56	5.59	5.59	2037
5.21	5.25	5.28	5.32	5.35	5.39	5.42	5.45	5.49	5.52	5.56	5.59	5.59	2038
5.21	5.25	5.28	5.32	5.35	5.39	5.42	5.45	5.49	5.52	5.56	5.59	5.59	2039

Table 9  
**BPA FY 2009 JUNE REVISED FORECAST - FERC BORROWING RATE (Bank Prime) 1/**  
 Calendar/Fiscal Years 2009 - 2039

<u>YEAR</u>	(A)	(B)
	<u>FERC RATE</u> <u>Calendar Year</u>	<u>FERC RATE</u> <u>Fiscal Year</u>
2009	3.50	3.90
2010	4.22	4.04
2011	6.73	6.10
2012	7.75	7.50
2013	7.75	7.75
2014	7.75	7.75
2015	7.75	7.75
2016	7.75	7.75
2017	7.75	7.75
2018	7.75	7.75
2019	7.75	7.75
2020	7.75	7.75
2021	7.75	7.75
2022	7.75	7.75
2023	7.75	7.75
2024	7.75	7.75
2025	7.75	7.75
2026	7.75	7.75
2027	7.75	7.75
2028	7.75	7.75
2029	7.75	7.75
2030	7.75	7.75
2031	7.75	7.75
2032	7.75	7.75
2033	7.75	7.75
2034	7.75	7.75
2035	7.75	7.75
2036	7.75	7.75
2037	7.75	7.75
2038	7.75	7.75
2039	7.75	7.75

1/ BPA FY 2009 June Revised Forecast; Global Insight CY 2008.Q4 long-term outlook.  
 The U.S. Economy: 30-Year Focus, November 2008 Forecast, Base Case.

Table 10  
 BPA FY 2009 JUNE REVISED FORECAST - 3-MONTH LIBOR RATE 1/  
 Calendar/Fiscal Years 2009 - 2039

<u>YEAR</u>	(A)	(B)
	<u>3-Mo LIBOR Calendar Year</u>	<u>3-Mo LIBOR Fiscal Year</u>
2009	4.15	4.02
2010	3.96	4.01
2011	4.95	4.71
2012	5.26	5.18
2013	5.26	5.26
2014	5.26	5.26
2015	5.26	5.26
2016	5.26	5.26
2017	5.26	5.26
2018	5.26	5.26
2019	5.26	5.26
2020	5.26	5.26
2021	5.26	5.26
2022	5.26	5.26
2023	5.26	5.26
2024	5.26	5.26
2025	5.26	5.26
2026	5.26	5.26
2027	5.26	5.26
2028	5.26	5.26
2029	5.26	5.26
2030	5.26	5.26
2031	5.26	5.26
2032	5.26	5.26
2033	5.26	5.26
2034	5.26	5.26
2035	5.26	5.26
2036	5.26	5.26
2037	5.26	5.26
2038	5.26	5.26
2039	5.26	5.26

1/ BPA FY 2009 June Revised Forecast; Global Insight CY 2008.Q4 long-term outlook.  
 The U.S. Economy: 30-Year Focus, November 2008 Forecast, Base Case.

TABLE 11

**COMPARISON OF INFLATION FORECAST COMPONENTS  
CALENDAR/FISCAL YEAR FORECASTS FY 2009 June Revised vs. FY 2009**

BPA Fiscal Years 2009 - 2039

	A		B		C		D		E		F		G	
	FY 2009 CALENDAR YEAR GDP PRICE DEFLATOR	June Revised 1/	FY 2009 FISCAL YEAR GDP PRICE DEFLATOR	June Revised 2/	FY 2009 FISCAL YEAR CUMULATIVE PRICE DEFATOR	(Base Year 2009)	FY 2009 LAST YEARS FY PRICE DEFATOR	FY 2009 LAST YEARS FY CUMULATIVE PRICE DEFATOR	(Base Year 2009)	CHANGE IN THE FY PRICE DEFATOR	CHANGE IN THE FY CUMULATIVE PRICE DEFATOR			
2009	1.81%	1.93%	1.93%	1.010	2.15%	1.011	-0.22%	-0.001						
2010	1.35%	1.46%	1.46%	1.024	2.03%	1.032	-0.56%	-0.007						
2011	1.65%	1.57%	1.57%	1.041	2.02%	1.053	-0.45%	-0.012						
2012	1.87%	1.82%	1.82%	1.059	2.12%	1.075	-0.30%	-0.015						
2013	2.02%	1.98%	1.98%	1.080	2.01%	1.097	-0.03%	-0.016						
2014	2.05%	2.04%	2.04%	1.103	2.03%	1.119	0.01%	-0.016						
2015	1.94%	1.97%	1.97%	1.124	2.00%	1.141	-0.04%	-0.017						
2016	1.90%	1.91%	1.91%	1.146	1.97%	1.164	-0.07%	-0.018						
2017	1.85%	1.86%	1.86%	1.167	1.97%	1.187	-0.11%	-0.020						
2018	1.85%	1.85%	1.85%	1.189	1.99%	1.210	-0.14%	-0.022						
2019	1.83%	1.84%	1.84%	1.210	2.01%	1.235	-0.17%	-0.024						
2020	1.89%	1.87%	1.87%	1.233	2.12%	1.260	-0.25%	-0.027						
2021	1.70%	1.75%	1.75%	1.255	2.02%	1.286	-0.27%	-0.032						
2022	1.78%	1.76%	1.76%	1.277	1.92%	1.311	-0.17%	-0.035						
2023	1.78%	1.78%	1.78%	1.299	1.91%	1.336	-0.13%	-0.037						
2024	1.75%	1.76%	1.76%	1.322	1.87%	1.361	-0.12%	-0.039						
2025	1.73%	1.73%	1.73%	1.345	1.83%	1.387	-0.09%	-0.042						
2026	1.74%	1.74%	1.74%	1.368	1.82%	1.412	-0.08%	-0.043						
2027	1.80%	1.76%	1.76%	1.393	1.86%	1.438	-0.08%	-0.045						
2028	1.81%	1.81%	1.81%	1.418	1.85%	1.465	-0.04%	-0.047						
2029	1.80%	1.80%	1.80%	1.443	1.82%	1.491	-0.02%	-0.048						
2030	1.82%	1.81%	1.81%	1.470	1.81%	1.518	0.01%	-0.049						
2031	1.84%	1.84%	1.84%	1.497	1.81%	1.546	0.02%	-0.049						
2032	1.79%	1.81%	1.81%	1.524	1.75%	1.573	0.05%	-0.049						
2033	1.74%	1.75%	1.75%	1.550	1.70%	1.600	0.05%	-0.050						
2034	1.75%	1.75%	1.75%	1.577	1.69%	1.627	0.06%	-0.050						
2035	1.76%	1.76%	1.76%	1.605	1.70%	1.655	0.06%	-0.050						
2036	1.76%	1.76%	1.76%	1.633	1.69%	1.683	0.06%	-0.049						
2037	1.79%	1.76%	1.76%	1.662	1.72%	1.712	0.07%	-0.049						
2038	1.82%	1.81%	1.81%	1.693	1.73%	1.741	0.09%	-0.048						
2039	1.82%	1.82%	1.82%	1.723										

1/ BPA FY 2009 June Revised Forecast, Global Insight CY 2008 Q4 long-term outlook.  
The U.S. Economy: 30-Year Focus, November 2008 Forecast, Base Case

2/ Fiscal Year Cumulative Price Deflator escalates to midyear dollars. The first year, 2009, is determined as follows:  $1.010 = [(1.93/100)^5] + 1$ . An example of subsequent year cumulative growth such as in 2010 is found as:  $1.024 = [1 + (1.46/100)]^{1.010}$

3/ BPA FY 2009 Forecast, Global Insight CY 2008 Q3 long-term outlook/  
The U.S. Economy: 30-Year Focus, August 2008 Forecast, Base Case

TABLE 12

**FY 2009 JUNE REVISED FORECAST - INFLATION FORECAST COMPARISONS 1/**  
**GROSS DOMESTIC PRODUCT PRICE DEFLATOR INDEXES**

BPA Fiscal Years 2008 - 2039

YEAR	(A) FY 2009.Q2.2/ CUMULATIVE PRICE DEFLATOR INDEX (Base Year 2009)	(B) FY 2009.Q1.3/ CUMULATIVE PRICE DEFLATOR INDEX (Base Year 2009)	(C) (A - B) DIFFERENCE
2009	1.010	1.011	-0.001
2010	1.024	1.032	-0.007
2011	1.041	1.053	-0.012
2012	1.059	1.075	-0.015
2013	1.080	1.097	-0.016
2014	1.103	1.119	-0.016
2015	1.124	1.141	-0.017
2016	1.146	1.164	-0.018
2017	1.167	1.187	-0.020
2018	1.189	1.210	-0.022
2019	1.210	1.235	-0.024
2020	1.233	1.260	-0.027
2021	1.255	1.286	-0.032
2022	1.277	1.311	-0.035
2023	1.299	1.336	-0.037
2024	1.322	1.361	-0.039
2025	1.345	1.387	-0.042
2026	1.368	1.412	-0.043
2027	1.393	1.438	-0.045
2028	1.418	1.465	-0.047
2029	1.443	1.491	-0.048
2030	1.470	1.518	-0.049
2031	1.497	1.546	-0.049
2032	1.524	1.573	-0.049
2033	1.550	1.600	-0.050
2034	1.577	1.627	-0.050
2035	1.605	1.655	-0.050
2036	1.633	1.683	-0.049
2037	1.662	1.712	-0.049

1/ Fiscal Year Cumulative Price Deflator escalates to midyear dollars. The first year, 2009, is determined as follows:  $1.010 = [(1.93/100)^5] + 1$ . An example of subsequent year cumulative growth such as in 2010 is for  $1.024 = [1 + (1.46/100)] * 1.010$

2/ BPA FY 2009 June Revised Forecast, Global Insight CY 2008.Q4 long-term outlook. The U.S. Economy: 30-Year Focus, November 2008 Forecast, Base Case

3/ BPA FY 2009 Forecast, Global Insight CY 2008.Q3 long-term outlook. The U.S. Economy: 30-Year Focus, August 2008 Forecast, Base Case

## **6. HISTORICAL AND PROJECTED NEW BONDS ISSUED TO TREASURY**

### **6.1 Purpose**

This chapter documents all the bonds that BPA has issued, and those it projects it will issue, to the U.S. Treasury to finance BPA capital investments.

### **6.2 Method**

New long-term debt consists of bonds issued by BPA to Treasury reflecting projected outlays for BPA Transmission construction and Environmental programs during the cost evaluation period (FY 2009-2011). All bonds projected for issuance are entered into the projected portions of the repayment study.

### **6.3 Application of Methodology**

New bonds projected to be issued for the cost evaluation period are based on Integrated Program Review capital program outlays.

	A	B	C	D	E	F	G	H	I	J	K	L
1	<b>Table 6-1: Projected Federal Borrowing for FY 2009 - 2011</b>											
2	<b>(\$000s)</b>											
3												
4	<b>Fiscal</b>											
5	<b>Year</b>	<b>Description</b>		<b>Interest Rate</b>		<b>Term</b>		<b>Total Borrowing</b>				
6	2009	Construction	<u>1/</u>	5.212%	<u>2/</u>	23	<u>3/</u>	175,000				
7		Environment		-		-		-				
8	2010	Construction		6.240%		35		439,390				
9		Environment		5.010%		15		4,567				
10												
11	2011	Construction		7.030%		35		449,836				
12		Environment		5.900%		15		4,739				
13												
14												
15												
16												
17												
18												

1/ Construction capital projections assume \$15,000 of reserve financing in all years.

2/ Average of 6 different bonds.

3/ Average of 6 different bonds.

## **7. NON-FEDERAL PAYMENT OBLIGATIONS**

### **7.1 Introduction**

There are two forms of non-Federal payment obligations associated with transmission assets in this rate filing. One is a lease-purchase arrangement for capitalized asset purchases. The other is the functional reassignment to transmission of debt service payment obligations associated with non-Federal, Energy Northwest (EN) bonds that are typically recovered in power rates.

### **7.2 Lease-Purchase Agreements**

BPA entered into a lease-purchase agreement with the Northwest Infrastructure Financing Corporation (NIFC) to provide for the construction of the 500 kV Schultz-Wautoma transmission line. Since the completion of that discrete project, BPA has entered into additional lease-purchase agreements with NIFC for other capital projects. The resulting payment streams are treated as debt service in the repayment study. Table 7-1 displays the consolidated payment stream.

**Table 7-1 Lease-Purchase Payment Stream**  
(\$000s)

		A	B	C	D	F
Fiscal Year		Principal	Interest	Expenses	CIF	Total
1	2009	\$0	\$20,182	\$693	(\$8,700)	\$12,175
2	2010	\$0	\$19,469	\$696	(\$3,451)	\$16,714
3	2011	\$0	\$19,477	\$682	(\$1,381)	\$18,778
4	2012	\$0	\$19,478	\$697	(\$622)	\$19,554
5	2013	\$0	\$19,477	\$713	(\$205)	\$19,986
6	2014	\$0	\$22,161	\$628	\$0	\$22,789
7	2015	\$0	\$26,405	\$332	\$0	\$26,736
8	2016	\$0	\$27,462	\$115	\$0	\$27,577
9	2017	\$0	\$27,559	\$59	\$0	\$27,618
10	2018	\$0	\$27,559	\$61	\$0	\$27,620
11	2019	\$0	\$27,559	\$63	\$0	\$27,622
12	2020	\$0	\$27,561	\$65	\$0	\$27,625
13	2021	\$0	\$27,559	\$67	\$0	\$27,626
14	2022	\$0	\$27,559	\$69	\$0	\$27,628
15	2023	\$0	\$27,559	\$71	\$0	\$27,630
16	2024	\$0	\$27,561	\$74	\$0	\$27,634
17	2025	\$0	\$27,559	\$76	\$0	\$27,636
18	2026	\$0	\$27,559	\$79	\$0	\$27,638
19	2027	\$0	\$27,559	\$81	\$0	\$27,640
20	2028	\$0	\$27,561	\$84	\$0	\$27,645
21	2029	\$0	\$27,559	\$87	\$0	\$27,647
22	2030	\$0	\$27,559	\$90	\$0	\$27,649
23	2031	\$0	\$27,559	\$93	\$0	\$27,652
24	2032	\$0	\$27,561	\$96	\$0	\$27,657
25	2033	\$29,896	\$26,755	\$100	\$0	\$56,752
26	2034	\$89,689	\$23,539	\$77	\$0	\$113,304
27	2035	\$0	\$21,126	\$0	\$0	\$21,126
28	2036	\$15,255	\$21,128	\$0	\$0	\$36,384
29	2037	\$134,997	\$17,195	\$0	\$0	\$152,192
30	2038	\$125,879	\$7,283	\$0	\$0	\$133,162
31	2039	<u>\$2,934</u>	<u>\$208</u>	<u>\$0</u>	<u>\$0</u>	<u>\$3,142</u>
32	<b>Total</b>	\$398,650	\$732,300	\$5,947	(\$14,359)	\$1,122,538

### **7.3 Debt Service Reassignment**

Debt Service Reassignment (DSR) is an accounting and ratemaking mechanism created to make full use of the Debt Optimization program (DO). When the cash flows from DO are applied to Transmission obligations, DSR ensures that Transmission revenues repay the full cost of the associated EN debt.

Under DO, the proceeds from EN refinancing bonds are used to pay principal on the currently maturing EN bonds in a given fiscal year. Since BPA Power rates were set to recover the originally-expected EN principal payments on the maturing bonds, and the associated debt service requirement was expected to go down in the EN budget (when the principal was paid from the proceeds of the newly-issued refinancing bonds), funds in the BPA Fund then became available for other purposes. The amount made available is equal to the principal of the amortized EN bonds. BPA uses these funds to amortize Federal obligations associated with Generation and Transmission assets ahead of schedule, thereby replenishing or creating future opportunities to replenish BPA's available Treasury borrowing authority.

DSR occurs when BPA uses the funds made available from DO to early-amortize Federal Transmission obligations. The stream of annual all-in costs from the DSR transaction is assigned to Transmission and recovered in Transmission rates. The all-in costs include debt service on tax-exempt and taxable bonds and other costs associated with the DSR transaction, which are described later. Conversely, the costs attached to these EN refinancing bonds are no longer assigned for recovery from Power revenues.

The next section is an explanation of how the debt service stream associated with DSR is calculated. The allocation of DO cash flows to Transmission and Generation can be different each fiscal year. For illustration purposes, the following explanation of the process for determining the Transmission payment obligation uses data from the 2008 EN bond issuance.

### **7.4 Calculation of Debt Service Reassignment**

Prior to calculating the Transmission DSR obligation, two sets of data are required. First, the final pricing data from the EN refunding forms the basis of all calculations. Second, the amount of debt service assigned to Transmission for repayment is determined based on the allocation of the Federal principal payment between Transmission and Generation.

Step 1: Determine the Total Base Debt Service. This is the sum of the debt service on the newly-issued EN bonds assigned to Transmission plus the transaction costs associated with the issuance of the bonds. *See Table 7-2.*

**Table 7-2: Base Debt Service for Transmission**

Fiscal Year	EN	A New EN Bonds		C Transaction Costs		E Principal	F Total		G Total
		Principal	Interest	Principal	Interest		F Total		
							Principal	Interest	
1	2010	-	8,033,890	-	107,845	-	8,141,735	8,141,735	
2	2011	-	6,633,488	-	89,046	-	6,722,534	6,722,534	
3	2012	-	6,633,488	-	89,046	-	6,722,534	6,722,534	
4	2013	-	6,633,488	-	89,046	-	6,722,534	6,722,534	
5	2014	41,650,000	6,633,488	1,940,000	89,046	43,590,000	6,722,534	50,312,534	
6	2015	79,175,000	4,908,088	-	-	79,175,000	4,908,088	84,083,088	
7	2016	10,000,000	1,098,950	-	-	10,000,000	1,098,950	11,098,950	
8	2017	5,000,000	662,200	-	-	5,000,000	662,200	5,662,200	
9	2018	10,000,000	412,200	-	-	10,000,000	412,200	10,412,200	
10	<b>Total</b>	<b>145,825,000</b>	<b>41,649,278</b>	<b>1,940,000</b>	<b>464,029</b>	<b>147,765,000</b>	<b>42,113,307</b>	<b>189,878,307</b>	

Step 2: Convert the Base Debt Service to BPA Fiscal Years. The debt service on the newly-issued EN bonds is based on the EN July-June fiscal year. The debt service stream is converted into BPA’s October-September fiscal year. See Table 7-3.

**Table 733: Convert to BPA Fiscal Year**

Fiscal Year	EN	BPA FY Conversion		
		A Principal	B Interest	C Total
1	2010	-	2,288,538	2,288,538
2	2011	-	1,234,621	1,234,621
3	2012	-	1,234,621	1,234,621
4	2013	1,912,118	1,234,621	3,146,739
5	2014	7,046,351	1,228,800	8,275,151
6	2015	6,429,992	1,183,240	7,613,233
7	2016	8,750,000	989,763	9,739,763
8	2017	6,250,000	599,700	6,849,700
9	2018	7,500,000	309,150	7,809,150
10	<b>Total</b>	<b>37,888,462</b>	<b>10,303,054</b>	<b>48,191,516</b>

Step 3: Calculate the “Carrying Charge” and “Taxable Note Charge.” The “carrying charge” and “taxable note charge” are necessary because the debt service expense on the newly-issued EN bonds begins on July 1, but the Transmission Federal principal payment is not made until September 30. It is on October 1, the day after the Federal payment has been made, that all debt service and other costs associated with DSR are assigned to Transmission. The carrying charge is the interest accrued and debt service payments made from July 1 to October 1. The interest accrued portion of the carrying charge is calculated by multiplying the sum of the Federal Transmission principal retired and the EN transaction costs by one-twelfth of BPA’s weighted average cost of capital, then compounding this monthly amount for three months. The carrying charge is treated like a bond with interest at BPA’s weighted average cost of capital and spread on a pro-rata basis through the final maturities of the newly-issued EN bonds. The taxable note charge represents the interest costs associated with a loan taken out by EN in order to facilitate the refinancing of EN debt on a tax-exempt basis. The taxable note charge is spread using the

same methodology as the carrying charge. The carrying charge and taxable note charge are reflected in Table 744

**Step 4: Calculate the Total Payment Obligation for Transmission.** The total payment obligation for Transmission is the sum of the base debt service converted from an EN FY to a BPA FY in Table 7-3, the carrying charge, and the taxable note charge. See Table 7-4

**Table 7-4: Total Payment Obligation**

EN Fiscal Year	A Carrying Charge		B Taxable Note Charge		C Total Payment Obligation		D Total
	Principal	Interest	Principal	Interest	Principal	Interest	
1 2010	-	30,636	-	-	-	2,319,174	2,319,174
2 2011	-	30,636	-	-	-	1,265,257	1,265,257
3 2012	-	30,636	-	-	-	1,265,257	1,265,257
4 2013	28,213	30,636	-	-	1,940,331	1,265,257	3,205,588
5 2014	103,969	29,090	-	-	7,150,320	1,257,890	8,408,210
6 2015	94,875	23,392	-	-	6,524,867	1,206,632	7,731,499
7 2016	129,107	18,193	-	-	8,879,107	1,007,955	9,887,062
8 2017	92,219	11,118	-	-	6,342,219	610,818	6,953,037
9 2018	110,663	6,064	-	-	7,610,663	315,214	7,925,877
10 Total	559,045	210,400	-	-	38,447,507	10,513,454	48,960,961

**Step 5: Reshape the Debt Service.** The total principal payment obligation is reshaped to equal the total Federal Transmission principal retired in advance due to DSR. The EN principal maturing can differ from the principal on the newly-issued EN bonds because municipal bonds are often sold at a premium or discount, based on the market conditions at the time of the sale. With premium bonds, a lower aggregate par amount is issued to pay off the maturing bonds. The opposite is true with discount bonds. BPA made a policy decision that requires the DSR-related Transmission principal obligation to equal the amount of Federal Transmission principal repaid due to DSR.

The calculation of the EN bonds increases or decreases the total principal payments with corresponding changes to interest. The principal is proportionately recalculated using the ratio of annual principal payments to the total, displayed previously in Table 7-4. The EN principal maturities that were issued at a premium or a discount are adjusted on a pro-rata basis to equal the total amount of Federal Transmission principal repaid. The Excel solver function is used to calculate the new interest stream for the adjusted principal. The total debt service does not change. See Table 7-5.

**Table 7-5: Calculate the Debt Service**

	EN Fiscal Year	A	B	C
		Principal	Transmission DSR Interest	Total
1	2010	-	1,304,780	1,304,780
2	2011	-	1,304,780	1,304,780
3	2012	-	1,304,780	1,304,780
4	2013	2,018,681	1,304,780	3,323,461
5	2014	7,439,047	1,238,932	8,677,979
6	2015	6,788,338	996,274	7,784,612
7	2016	9,237,641	774,841	10,012,482
8	2017	6,598,315	473,514	7,071,829
9	2018	7,917,978	258,280	8,176,258
10	<b>Total</b>	<b>40,000,000</b>	<b>8,960,961</b>	<b>48,960,961</b>

Transmission’s total DSR payment obligation and the related relief of Generation’s payment obligations are shown in Table 7-6. Transmission’s total principal obligation can be higher or lower than the total principal relief for Generation if premium or discount bonds are issued.

**Table 7-6: FY 2003 – 2009 Relief of Generation & Transmission’s DSR Obligation**

	BPA FY	A Relief of Generation Obligation			C Transmission DSR Payment Obligation		
		Principal	Interest	Total	Principal	Interest	Total
1	2004	-	16,418,815	16,418,815	-	15,227,105	15,227,105
2	2005	-	27,558,861	27,558,861	-	25,380,111	25,380,111
3	2006	-	35,834,302	35,834,302	-	32,802,639	32,802,639
4	2007	674,279	45,866,305	46,540,584	715,562	42,574,359	43,289,921
5	2008	4,270,748	57,123,915	61,394,663	4,510,058	51,137,080	55,647,138
6	2009	9,949,905	61,873,003	71,822,908	10,407,168	55,971,071	66,378,239
7	2010	11,769	62,518,250	62,530,019	11,965	56,780,635	56,792,600
8	2011	147,244	61,463,719	61,610,963	153,700	56,780,063	56,933,762
9	2012	39,444,233	61,456,201	100,900,433	41,117,683	56,773,331	97,891,013
10	2013	158,652,815	58,756,278	217,409,093	165,627,723	54,867,524	220,495,246
11	2014	167,009,788	48,948,410	215,958,197	175,093,490	47,262,515	222,356,006
12	2015	176,918,177	41,816,555	218,734,732	185,172,925	39,450,724	224,623,649
13	2016	177,568,938	33,814,911	211,383,849	185,370,455	31,196,301	216,566,756
14	2017	191,863,214	24,681,239	216,544,454	200,052,881	22,926,262	222,979,144
15	2018	184,717,874	14,776,844	199,494,718	191,648,503	13,897,547	205,546,050
16	2019	4,757,409	5,248,861	10,006,269	4,836,620	5,112,809	9,949,429
17	2020	19,267,636	5,011,368	24,279,004	19,588,444	4,881,472	24,469,916
18	2021	20,230,102	4,049,516	24,279,619	20,566,936	3,944,552	24,511,488
19	2022	21,238,338	3,039,618	24,277,956	21,591,959	2,960,830	24,552,789
20	2023	22,302,805	1,979,388	24,282,193	22,674,149	1,928,082	24,602,231
21	2024	17,347,934	866,019	18,213,953	17,636,779	843,571	18,480,350
21	<b>Total</b>	<b>1,216,373,207</b>	<b>673,102,377</b>	<b>1,889,475,584</b>	<b>1,266,777,000</b>	<b>622,698,583</b>	<b>1,889,475,583</b>

## **8. REPAYMENT PERIOD REPLACEMENTS**

### **8.1 Introduction**

Consistent with the requirements of RA 6120.2, each repayment study includes funding for replacements to the transmission system during the repayment period. The purpose of these investments is to maintain the existing revenue-generating capability of the system. This schedule is expressed in mid-year dollars for the study year and is assigned the interest rates of the projected study year long-term borrowing.

### **8.2 Transmission Replacements**

The Iowa Curve methodology was used to calculate replacements for the transmission system. The Iowa Curves are a set of curves with different shapes corresponding to how much of an initial asset survives as a function of time. They are described in the book "Statistical Analyses of Industrial Property Retirements" by Robley Winfrey, Bulletin 125 Revised, Engineering Research Institute, Iowa State University, April 1967. The specific curves are assigned to FERC Accounts in BPA's depreciation study.

BPA's total plant, by FERC account and in-service date, was analyzed and the various FERC accounts were assigned Iowa Curves as determined by the depreciation study. A table from Winfrey's book, TABLE 22 - TOTAL RENEWALS FOR TYPE CURVES, tells what fraction of plant represented by a given curve will have to be replaced each tenth-of-lifetime to maintain the initial plant. A data file with the contents of that table accurate to twelve lifetimes was created for use in calculating repayment period transmission replacements. For each of the Iowa Curves, Table 22 calls for replacements equal to about 50 percent of the initial plant in the first lifetime and approaching 100 percent of initial plant in later lifetimes. Table 22 gives replacement plant in the same physical units as the initial plant.

The net investment in plant of any historical year must first be converted to units of physical plant by dividing the investment by an appropriate historical cost per unit plant. BPA's plant cost was converted to quasi-physical units of plant by use of the Handy-Whitman Index. The Handy-Whitman Index provides cost trends for electric, gas, telephone, and water utilities in geographical regions of generally similar characteristics. The Handy-Whitman Index numbers are widely used in the industry to trend original cost records to estimate reproduction cost at prices prevailing at a later date. The cost trends for each of the utilities are further subdivided by type of plant. In particular, the cost trends for electrical utilities include trends for total transmission plant and trends for the major FERC accounts within transmission plant. The trends for individual FERC accounts were used when available. The trends for total transmission plant were used for those accounts for which no specific trend was included.

Surviving transmission plant investment by FERC account and in-service year was obtained from BPA's plant investment records. The plant investment of each year and account was divided by the corresponding Handy-Whitman number to obtain plant in quasi-physical units. The quasi-physical plant was then multiplied by factors obtained by interpolating in the appropriate column of Table 22 to obtain quasi-physical replacements for all years from the last year of the Handy-Whitman index through the last year of the repayment period. The resulting quasi-physical units were multiplied by the Handy-Whitman number for the last year of the index for the corresponding FERC account to yield replacement costs in the dollars of that last year. These replacement costs were accumulated by future year and FERC account.

Gross plant investment data for the cost evaluation period were first de-escalated to the dollars of the last year of the Handy-Whitman index and then distributed among the various FERC accounts in the same proportions as the total plant of BPA's summary of investment from plant balances. Some historical plant would be retired during the cost evaluation period and be replaced with plant funded from the Transmission System Replacements capital program. If future replacements were calculated for both, a double counting would occur. Therefore the projections for a cost evaluation period year were reduced by the amount calculated for replacements for the same year. Future replacements were then calculated for only the remaining net initial investment of that year.

The replacement costs of each future year and FERC account were then accumulated for all FERC accounts and inflated from the dollars of the most recent Handy-Whitman year to the dollars of the rate test period year. *See* Tables 8-1 and 8-2.

### **8.3 AC Intertie Replacements**

Repayment period replacements for the AC Intertie facilities were calculated separately so that the contributions made toward those replacements by Non-Federal Capacity Owners could be properly credited in the repayment studies. For historical plant, the plant investment in each of the lines and substations composing the AC Intertie System was apportioned among the years on the basis of the same line or substation data in a recent plant investment file. These investments by year were accumulated for all lines and substations to obtain historical plant investment by year. These annual investments were apportioned among land and the major FERC accounts on the same basis as the total lines and substations.

The cost-evaluation period data for the AC Intertie was then processed by the replacement methodology described above. Those listings that apply only to the AC Intertie follow those for the transmission system. The results are the future replacements for the total AC Intertie and have to be multiplied by the appropriate fraction, 21 percent, to obtain the future contributions required from capacity owners. These fractional parts, together with the amounts for the cost evaluation period, are included in the repayment studies as negative expenses. *See* Table 8-3.

	A	B	C	D
1	<b>Table 8-1: Future Replacements for FY 2010</b>			
2	(\$000s)			
3				
4	<b>FY</b>	<b>Amount</b>	<b>Rate</b>	<b>Due</b>
5	2011	145,191	6.240%	2046
6	2012	148,963	6.240%	2047
7	2013	152,734	6.240%	2048
8	2014	156,566	6.240%	2049
9	2015	160,313	6.240%	2050
10	2016	164,045	6.240%	2051
11	2017	167,759	6.240%	2052
12	2018	171,303	6.240%	2053
13	2019	174,891	6.240%	2054
14	2020	178,490	6.240%	2055
15	2021	181,955	6.240%	2056
16	2022	185,323	6.240%	2057
17	2023	188,717	6.240%	2058
18	2024	192,018	6.240%	2059
19	2025	195,061	6.240%	2060
20	2026	197,787	6.240%	2061
21	2027	200,150	6.240%	2062
22	2028	202,131	6.240%	2063
23	2029	203,568	6.240%	2064
24	2030	204,618	6.240%	2065
25	2031	205,213	6.240%	2066
26	2032	205,493	6.240%	2067
27	2033	205,504	6.240%	2068
28	2034	205,027	6.240%	2069
29	2035	204,432	6.240%	2070
30	2036	203,810	6.240%	2071
31	2037	203,009	6.240%	2072
32	2038	202,139	6.240%	2073
33	2039	201,332	6.240%	2074
34	2040	200,643	6.240%	2075
35	2041	200,138	6.240%	2076
36	2042	199,826	6.240%	2077
37	2043	199,785	6.240%	2078
38	2044	200,141	6.240%	2079
39	2045	200,818	6.240%	2080

	A	B	C	D
1	<b>Table 8-2: Future Replacements for FY 2011</b>			
2	(\$000s)			
3				
4	<b>FY</b>	<b>Amount</b>	<b>Rate</b>	<b>Due</b>
5	2012	152,244	7.030%	2047
6	2013	156,038	7.030%	2048
7	2014	159,853	7.030%	2049
8	2015	163,547	7.030%	2050
9	2016	167,165	7.030%	2051
10	2017	170,739	7.030%	2052
11	2018	174,139	7.030%	2053
12	2019	177,611	7.030%	2054
13	2020	181,138	7.030%	2055
14	2021	184,559	7.030%	2056
15	2022	187,871	7.030%	2057
16	2023	191,173	7.030%	2058
17	2024	194,392	7.030%	2059
18	2025	197,370	7.030%	2060
19	2026	200,060	7.030%	2061
20	2027	202,425	7.030%	2062
21	2028	204,416	7.030%	2063
22	2029	205,837	7.030%	2064
23	2030	206,825	7.030%	2065
24	2031	207,329	7.030%	2066
25	2032	207,481	7.030%	2067
26	2033	207,284	7.030%	2068
27	2034	206,590	7.030%	2069
28	2035	205,764	7.030%	2070
29	2036	204,878	7.030%	2071
30	2037	203,804	7.030%	2072
31	2038	202,682	7.030%	2073
32	2039	201,642	7.030%	2074
33	2040	200,717	7.030%	2075
34	2041	199,999	7.030%	2076
35	2042	199,488	7.030%	2077
36	2043	199,309	7.030%	2078
37	2044	199,529	7.030%	2079
38	2045	200,066	7.030%	2080
39	2046	201,060	7.030%	2081

	A	B	C
1	<b>Table 8-3: AC Credits</b>		
2	(\$000s)		
3			
4			
5		<b>2010 Study</b>	<b>2011 Study</b>
6	2011	(1,514)	(1,616)
7	2012	(1,578)	(1,682)
8	2013	(1,644)	(1,752)
9	2014	(1,713)	(1,822)
10	2015	(1,783)	(1,891)
11	2016	(1,850)	(1,962)
12	2017	(1,921)	(2,038)
13	2018	(1,995)	(2,117)
14	2019	(2,074)	(2,196)
15	2020	(2,151)	(2,279)
16	2021	(2,233)	(2,365)
17	2022	(2,318)	(2,444)
18	2023	(2,396)	(2,527)
19	2024	(2,478)	(2,606)
20	2025	(2,556)	(2,678)
21	2026	(2,628)	(2,742)
22	2027	(2,691)	(2,797)
23	2028	(2,746)	(2,839)
24	2029	(2,788)	(2,873)
25	2030	(2,823)	(2,889)
26	2031	(2,840)	(2,882)
27	2032	(2,834)	(2,868)
28	2033	(2,822)	(2,830)
29	2034	(2,787)	(2,779)
30	2035	(2,739)	(2,719)
31	2036	(2,683)	(2,650)
32	2037	(2,617)	(2,568)
33	2038	(2,540)	(2,490)
34	2039	(2,466)	(2,418)
35	2040	(2,397)	(2,350)
36	2041	(2,334)	(2,286)
37	2042	(2,275)	(2,229)
38	2043	(2,221)	(2,184)
39	2044	(2,178)	(2,147)
40	2045	(2,144)	(2,121)

## 9. FINANCIAL RISK AND MITIGATION

### 9.1 Background

BPA adopted a long-term policy in its 1993 Final Rate Proposal calling for setting rates that build and maintain financial reserves sufficient for the agency to achieve a 95 percent probability of meeting U.S. Treasury payments in full and on time for each two-year rate period. *See* 1993 Final Rate Proposal, Administrator's Record of Decision, WP-93-A-02 at 72.

In this rate proceeding, BPA has analyzed its transmission risks and has determined that the rate proposal achieves the 95 percent probability standard for the transmission function.

To achieve this Treasury payment probability, the following risk mitigation "tools" were considered in the rate proposal:

1. Starting financial reserves available for risk attributed to Transmission: Starting reserves include cash in the BPA Fund and the deferred borrowing balance attributed to the transmission function, excluding encumbered reserves that are generally deposits from other entities. Reserves available for risk attributed to Transmission were \$419 million at the beginning of FY2009.
2. Planned Net Revenues for Risk (PNRR). PNRR is a component of the revenue requirement that is added to annual expenses. PNRR adds to cash flows so that financial reserves mitigate short-run cost and revenue risk and achieve the TPP goal. No PNRR was required in the revenue requirement to achieve the TPP standard under the rate proposal.
3. Two-Year Rate Period. BPA is proposing to set rates for a two-year period. The ability to revise rates after two years, or more frequently if need be, serves as an important risk mitigation tool for BPA's transmission function. By using a two-year rate period TS limits the amount of risk that must be covered by financial reserves and PNRR.

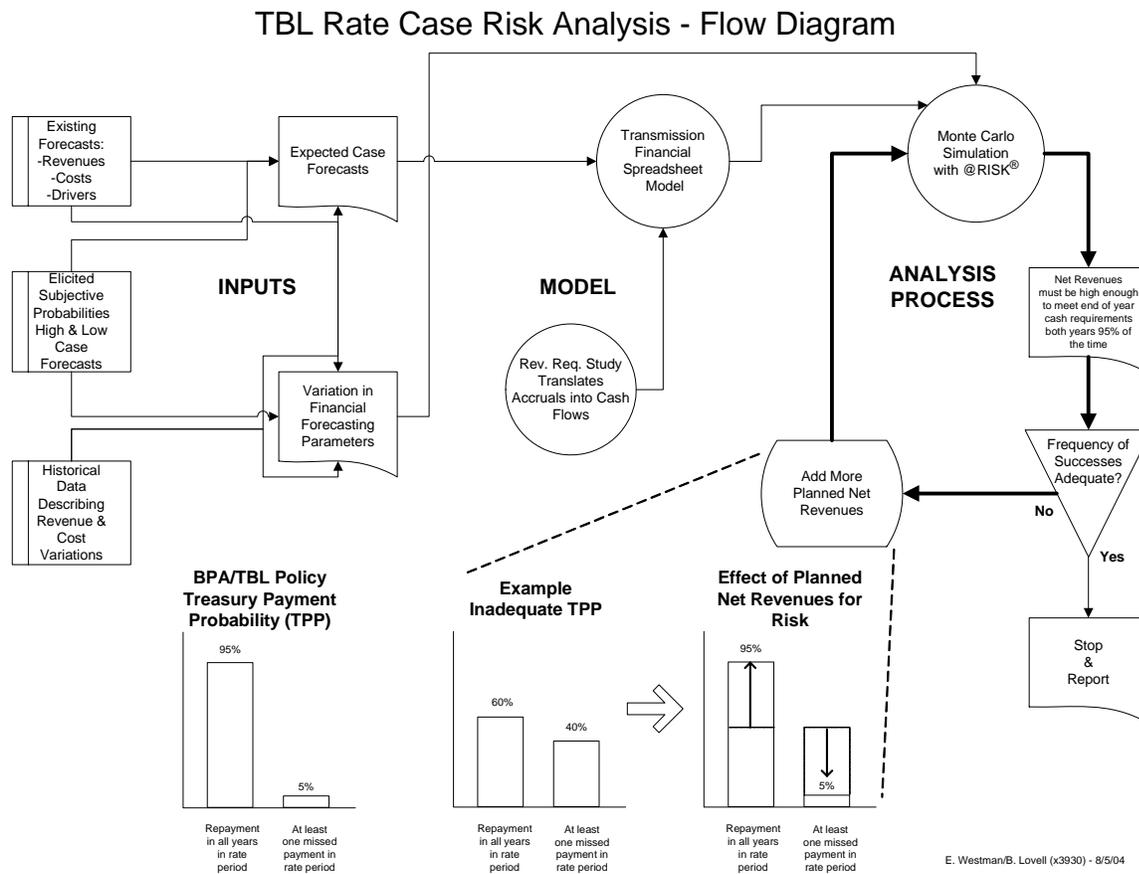
### 9.2 Transmission Risk Analysis

To quantify the effects of risk on the finances of BPA's transmission function, BPA analyzes the effects of uncertainty in expenses and revenues on transmission cash flows using a Monte Carlo simulation method. *See* Figure 9-1. The analysis is used to estimate the probability of successful Treasury payment on time and in full during the rate period, FYs 2010 and 2011. Successful Treasury payment is assumed to occur when the end-of-year cash reserve for the transmission function is at least sufficient to cover the TS' working capital requirement of \$20 million per year. The working capital requirement was estimated based on historical monthly net cash flow

patterns and monthly cash requirements for the TS. The value of \$20 million was used in the 2002, 2004, 2006, and 2008 Transmission rate cases.

The risk analysis is part of the Study. It uses inputs that come from the Study and transmission sales, revenue, and expense forecasts. *See* Revenue Requirement Study, TR-10-FS-BPA-01, Appendix A and Documentation, TR-10-FS-BPA-01A, Chapter 14. The risk analysis simulates the financial reserves available at the beginning of FY 2009 and calculates the probability that financial reserves will be sufficient in both years of the rate period to make the scheduled Treasury payments in full and on time. If this probability is below BPA’s two-year TPP standard of 95%, the risk analysis calculates the amount of PNRR needed to raise the TPP to 95%. Initial input values for point estimates of expenses and revenues come from the applicable forecasts and when combined with inputs describing uncertainty in expenses and revenues, provide the basis for the initial estimate of PNRR. The PNRR is in turn provided, if appropriate, as an expense input to the RRS, changing the transmission revenue requirement and ultimately transmission rates.

**Figure 9-1 TS Rate Case Risk Analysis – Flow Diagram**



The transmission rates are used to simulate revenues during the rate period. These simulated revenues are combined with the revenue and expense uncertainties and are used to update the

risk analysis. A primary output of the risk analysis is a calculation of TPP. If TPP is below 95%, an amount of PNRR is added and TPP is retested. This iterative analysis process is continued until estimates of PNRR converge on a particular amount of PNRR yielding 95% TPP. The calculated amount of PNRR is used to set the PNRR expense for the RRS.

The risk analysis covers the period of FYs 2009 through 2011. The analysis begins with start-of-year FY2009 values. The change in revenues, expenses, and accrual to cash adjustments that are may occur by the end of the next rate period are simulated. The amount of reserves available for risk attributed to Transmission at the start of the next rate period has a direct effect on the amount of financial reserves and PNRR needed to achieve BPA's TPP standard. The risk analysis uses actual data on the starting cash balance attributed to TS at the beginning of the 3-year time horizon (start-of-year FY2009). All other data in FY 2009, FYs 2010 and 2011 are forecasts or projections.

### **9.3 Transmission Risk Analysis Model**

The foundation of the risk analysis is a transmission financial spreadsheet model. This spreadsheet, the Transmission Risk Analysis Model, was developed in Microsoft Excel to estimate the effects of risk and risk mitigation on end-of-year financial reserves and likelihood of successful Treasury payment during the rate period. Cash reserve levels at the end of a FY determine whether BPA is able to meet its Treasury payment obligation. The model is organized as a "workbook" with individual work sheets including: an input matrix of revenues and expenses, an income statement, a cash flow statement, and individual work sheets for the risks analyzed using the model.

The calculation of end-of-year financial reserves starts with historical data on end-of-year financial reserves for the end of FY2008, and equivalently, the beginning of FY 2009. *See* Table 9-2, line 27. The structure of the income statement and cash flow statement used in the risk analysis is similar to those contained in the RRS, but does not match precisely. The tables contained in the risk analysis are for the purpose of forecasting net cash flow instead of determining the revenue requirement, and the values found are most probable values (mode of distribution) instead of point estimates. The net cash flow provides an estimate of the annual change in cash balance which, when added to the start-of-year cash balance, yields the year-end cash balance. The year-end cash balance, when combined with deferred borrowing, provides an estimate of end-of-year financial reserves. This flow of computations is repeated sequentially for each year from FYs 2009 through 2011.

Simulating transmission cash flows in this manner permits forecasting start-of-year reserves at the beginning of the rate period instead of defining FY 2010 start-of-year reserves as an uncertain input variable. The model forecasts the start-of-year FY 2010 financial reserves based on transmission function historical cash flows, current forecasts of expenses and revenues, and uncertainty in expenses and revenues explicitly modeled for FY 2009. Table 9-1 shows the most likely value forecasts of expenses and revenues used in the RRS and the most likely revenue forecast. *See* generally this volume. The "most likely" forecasts are equal to the "mode" or peak of the underlying probability distribution for all uncertain variables. The most likely (mode or

peak) forecast will also be equal to the mean or “expected” value when the underlying distribution is symmetric or the value is a single point estimate. However, in a few cases the “most likely” forecast is greater or less than the “expected” (or mean) value if the underlying uncertainty distribution is not symmetric.

#### **9.4 Risk Analysis Computer Software**

The model used to perform the risk analysis was developed with Microsoft® Office Excel Professional Edition 2003 and @RISK, Professional version 5.0 (©Palisade Corporation). Microsoft Excel is a basic spreadsheet computer program and @RISK is an Excel add-in computer program available from Palisade Corporation. The @RISK software allows the user to develop models incorporating uncertainty in a spreadsheet computer program environment. Uncertainty is incorporated by specifying model variables as probability distributions that reflect the variability in an input variable of interest. With model input variables specified as probability distributions instead of as point estimates, @RISK samples values from the probability distributions and then carries out the spreadsheet computations. Randomly sampled sets of input values are drawn for each game in a Monte Carlo simulation process that involves computing results of large numbers of games in order to describe a probability distribution of outcomes, such as net revenues or financial reserves. The values sampled from the probability distributions are drawn with probability based on their relative likelihood of occurrence as specified in the input probability distributions. While @RISK provides tools that enable users to turn spreadsheet models into Monte Carlo simulation models, the user still has the burden of determining the input probability distributions for uncertain variables in the model. This is done in analyses external to the @RISK computer program.

#### **9.5 Risk Factors**

Transmission risk factors used in the risk analysis include:

- (1) Network long-term firm NT revenues
- (2) Network long-term firm Take or Pay (PTP, IR, FPT) revenues, including wind PTP revenues
- (3) Network short-term firm PTP
- (4) Southern Intertie long-term firm PTP revenues
- (5) Southern Intertie short-term firm PTP
- (6) Regulation & frequency response revenues
- (7) Total transmission expense annual variation, excluding between business line expenses paid to Power Services and Corporate expense

The ancillary service “Scheduling, System control & Dispatch” was embedded in the above revenue forecasts (and associated distributions) and therefore not treated separately. Operating Reserves (spinning and supplemental) and Imbalance Services were treated as point estimate forecasts, since the pass through of actual costs provided in the formula rate means that this item entails little risk. Revenue from leasing fiber; delivery segment revenues, and a variety of “other revenues” are also treated as point forecasts for this analysis due to their small size and the low level of additional uncertainty these are expected to contribute.

The risk variables analyzed were those judged to represent a significant impact on net revenues and cash flows, and that reasonably bear on estimating the amount of required PNRR during the next rate period. Other long-run risks such as variation in capital investment patterns; changes in generation and load patterns that may change transmission expenses and capacity availability; the price-elasticity effects of TS transmission rate increases on load; the effect of secondary transmission markets on transmission revenues; and potential changes in transmission industry structure are more speculative and not included in the analysis. Such risks are mitigated by the combination of financial reserves at the beginning of the rate period and the option of future rate increases if the unforeseen events occur. In other words, these long-run risks are considered exogenous risks mitigated by the TS' ability to change rate levels in response to fundamental changes in business environment and long-term changes in cost structure.

BPA relied on two approaches to forecasting the uncertainty in risk variables modeled. When historical data were present on which to base the estimation of uncertainty in a risk variable, BPA estimated the uncertainty in the historical data as the basis for forecasting the uncertainty in the variable. The underlying rationale for this approach is that the variation in the recent past is a reasonable basis for forecasting the short-run future (5 years or less). When historical data were not reasonably available, or when the future is expected to be different from the past, BPA relied on the judgment of technical staff familiar with specific areas of transmission risk as the basis for forecasting the uncertainty in those risks. The bottom-up analysis of risk by individual revenue and expense components was compared to a top-down analysis of Transmission's historic net revenues as a check on accuracy. Historically, TS net revenues have had an annual standard deviation of approximately \$50 million per year. The net revenues in this analysis range from about \$76.7 million in FY 2009 to \$3.8 million in FY 2011, which is reasonably consistent with historical patterns.

## **9.6 Network and Intertie Transmission Revenue Uncertainties**

Although the Network and Intertie rates are fixed during the rate period, the amount of revenue earned can be expected to vary due to uncertainty surrounding the quantity of service purchased by transmission customers. This is generally referred to as volumetric risk. Various underlying factors can affect the quantity of transmission service purchased. Some of these factors are related to weather such as the effect of temperature upon electric load and precipitation upon stream flows that determine the amount of generation output at hydro facilities in the Northwest. Influences outside the Northwest (e.g., the price of natural gas and relative hydro levels) can influence regional prices at Mid-Columbia, California-Oregon Border, and Palo Verde hubs and the amount of transmission purchased to move power between regions. Factors such as growth rates in the regional economy and the competitiveness of electricity-intensive industries (e.g., DSIs) also influence the quantity of electricity usage and the amount of transmission needed to serve the demand for electricity. The existence of a growing secondary transmission market which competes with TS on price, and the arbitrage between short-term and long-term transmission services, also introduce risk. Technical factors such as outages and de-ratings can affect revenues. A combination of these factors has caused substantial swings in TS revenues in the past since the California power crisis of 2000-1, and could cause them again. It is important,

therefore, to be sure that either transmission financial reserves provide a high enough cushion against reasonable adverse events or, if not, PNRR is set high enough to meet BPA's TPP standard. To model network revenue uncertainty appropriately in the current transmission environment, which is also affected by the deepening national recession, TS believes there is a higher likelihood that network revenues will be below its "most likely" (or mode) values more often than at or above such values for Network long term and Point-to-Point long term. These probability distributions are skewed toward lower revenues for a robust risk analysis that adequately weights these adverse outcomes. For the intertie, which is believed will have continued pent-up demand, the uncertainties around long term revenue are considered normal and symmetric. For short-term network and intertie revenues, the distributions primarily reflect water conditions and weather, and are assumed to continue to exhibit a positive skew (average above the mode or most likely).

### **9.7 Transmission Operations and Maintenance Expense**

For this risk analysis, BPA retained the same expense distribution as in the TR-08 rate case. Based on this analysis, BPA developed a risk distribution that allows O&M to be up to 10% higher or 10% lower than the forecast value. As in the case of transmission revenues, the objective is to describe short-run volatility and not long-run variability or variation in trend that may be due to factors such as changes in the structure of the transmission industry in the Northwest. Such long-term effects are mitigated by the TS' ability to change rate levels as frequently as every two years. *See*, 2008 Final Transmission Revenue Requirement Documentation, TR-08-FS-BPA-01A, Chapter 9.

Except for the cost of operating reserves purchased from Power Services, inter-business line expenses are treated as a point-estimate forecast. The specific "most likely" input values for Transmission O&M Expense are shown in Table 9-3.

### **9.8 Ancillary Services Revenue**

As in the previous rate case, in this risk analysis, only Regulation and Frequency Response Service and services provided to wind generators are modeled explicitly with uncertainty. The remaining three ancillary services revenues were treated as risks borne by BPA's power marketing function (PBL) either because the transmission function only buys what it sells or the amount of revenue expected to be earned from the sale of the service was too small to warrant modeling revenue uncertainty.

Scheduling, System Control and Dispatch is an additional charge associated with the provision of transmission services and transmission customers are not permitted to self-supply this service. There is no price risk since the rate for this service is set in the rates process. The volumetric risk is assumed to vary in a manner directly proportional to the uncertainty in the total of transmission revenue. Therefore, the Scheduling, System Control and Dispatch revenues are included in the forecast of Network and Intertie revenues, and the uncertainty is included implicitly in the uncertainty around the Network and Intertie revenues.

Regulation and Frequency Response service is a load-based service that only is applied to load in BPA's control area. The amount of revenue earned from this service is dependent on the amount of load that exists within BPA's control area and the rate of load growth. The risk analysis adopted the triangular distribution as a means of approximating the uncertainty that is expected to be associated with revenues earned from this service in the same manner as described in 2008 Final Transmission Proposal, Documentation for Revenue Requirement Study, TR-08-FS-BPA-01A. *See* Table 9-6.

### **9.9 Revenue from Sales of Services to Wind Generators**

In FY 2010 and 2011, TS will provide services to wind generators in the BPA balancing area. TS is proposing to charge these customers on the basis of the installed MW of capacity. TS will obtain from PS the generation inputs needed to support these services, and will pay PS for the generation inputs. PS has estimated the costs of providing the forecast quantity of generation inputs to TS to meet the needs of wind generation on the BPA system. The costs can be characterized as having two components, embedded costs and variable costs.

Since the quantity of wind generation in BPA's balancing area is not known with certainty, there is a financial risk due to the possibility that the quantity will differ from the forecast, and TS will receive either more or less revenue for wind services sales than forecast. TS and PS are proposing that TS and PS each bear half of this risk.

The variable cost calculations made by PS reflect deoptimization of the power system due to setting aside some system capability to support installed wind capacity. If less wind generation than forecast is actually installed, BPA (TS) will receive less revenue for such services, but BPA (PS) will be able to generate greater net secondary revenues than forecast, and, the incremental net secondary revenue will be, within BPA's ability to calculate such factors, equal to and offsetting the decrease in TS revenues. TS will pass to PS all actual revenue from sales of services to wind generators that is designed to recover the variable costs of generation inputs provided by PS; in this way, TS faces no risk due to variation in the total quantity of wind associated with the recovery of the variable costs of generation inputs. PS bears the entire risk of deviations in the recovery of the variable cost component, but this risk is offset by the corresponding impact on PS net secondary revenue, so PS faces no significant financial risk. Therefore, BPA does not face significant risk for the recovery of the variable costs of generation inputs.

The recovery of embedded costs, however, is subject to risk, and this risk will be shared equally by the two business lines as follows. If the amount of installed wind capacity is lower than the rate case forecast in a year in the rate period, BPA staff will calculate the portion of the decrease in revenue TS receives that was intended to recover the embedded costs of generation inputs. TS payments to PS for the embedded costs of generation inputs will then be equal to the forecast amount minus half of the decrease in the embedded-cost portion of the revenue received from TS wind customers. Similarly, if the amount of installed wind capacity exceeds the rate case forecast for a year in the rate period, TS payments to PS for the embedded costs of generation

inputs for that year will be equal to the rate case forecast for that year plus half of the increase in the embedded-cost portion of the revenue received from TS wind customers.

Equivalently: If the amount of installed wind capacity under-runs the rate case forecast in a year in the rate period, BPA staff will calculate the portion of the decrease in revenue TS receives that was intended to recover the embedded costs of generation inputs. TS payments to PS for the total costs of generation inputs for that year will be equal to the actual amount received by TS plus half of the amount of the decrease in the embedded-cost portion of the revenue received from TS wind customers. Similarly, if the amount of installed wind capacity exceeds the rate case forecast for a year in the rate period, TS payments to PS for the total costs of generation inputs for that year will be equal to the actual amount received by TS less half of the amount of the increase in the embedded-cost portion of the revenue received from TS wind customers.

BPA risk staff modeled this risk using estimates of low, most likely, and high quantities of installed wind capacity for FY 2010 and 2011. The low and high estimates were interpreted to represent the 2.5th and 97.5th percentiles. Distributions were fitted that matched those parameters. In each of the games in the risk analysis, a random draw of installed wind capacity was made from the distributions. If this random result was lower (higher) than the most likely forecast, then a negative (positive) financial result was calculated by multiplying the difference in capacity by the annual cost per installed MW for embedded costs of generation inputs. Fifty percent of the financial result was then applied to the net revenues for both TS and PS in their respective risk analyses.

### **9.10 Interest Rate Risk**

Annual volatility in Treasury borrowing rates can affect short-run interest expense for new debt required to finance transmission capital program additions. In the previous rate case, the interest rate risk analysis yielded a relatively insignificant standard deviation of \$3.9 million on a mean interest expense level of \$125 million and a mean assumed interest rate of around 6%. Interest rates have dropped substantially and the U.S. economy has worsened markedly since BPA's last internal interest rate forecast (Nov. 8, 2008). Due to a concern that previous modeling of interest rate risk is not applicable in the current economic environment, and lacking a more appropriate modeling approach, interest rate risk is treated as a point estimate in this rate case. The effect of this simplification on overall Transmission risk is considered minor.

### **9.11 Risk Correlations**

The risk analysis models revenue and expense risks as diversified risks. The chances of outcomes for individual risk factors are therefore independent of each other. The result is that the chance of consistently good luck or consistently bad luck across all of the risks is very low. More frequently in any individual simulation game the chances are that some risks will harm the TS' financial reserves while others will benefit or increase financial reserves. However, the TPP standard is focused on the downside risk or the chances of the TS not being able to meet its Treasury payment obligations.

If there were significant correlations between risk factors the assumption of diversified risks could serve to either bias the risk analysis in the direction of excessive risk mitigation or insufficient risk mitigation depending on the direction of the correlation. Risks can either be positively correlated or negatively correlated. Where data were available BPA analyzed risk factor correlation and found no compelling basis for explicitly modeling the effects of correlations among revenue and expense risks. *See* 2002 Final Transmission Revenue Requirement Documentation, TR-02-FS-BPA-01A, Chapter 8.

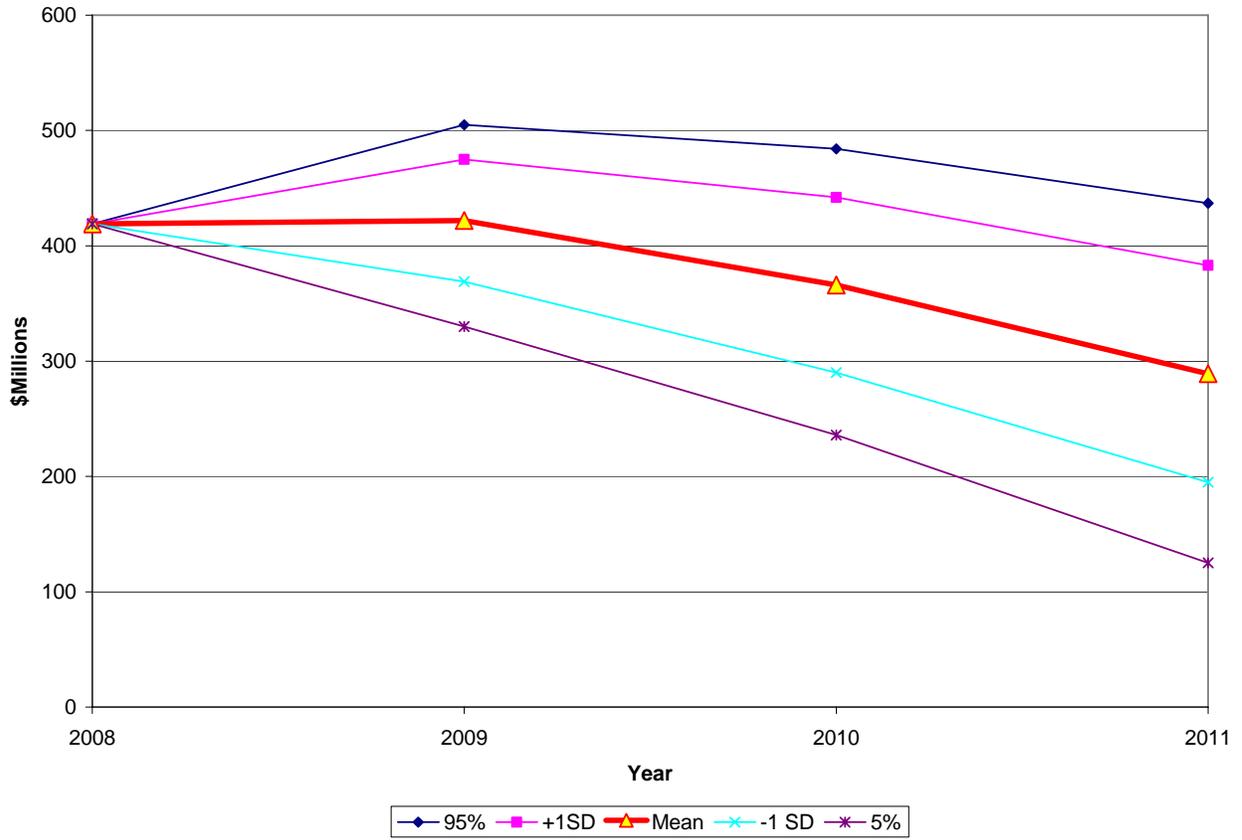
### **9.12 Risk Analysis Results**

The transmission risk analysis simulation resulted in 3,483 games out of 3500 in which end-of-year financial reserves were sufficient to pay Treasury on time and in full in the FY 2010 through 2011 rate period. This represents a 99.5% TPP for the rate period. These results were obtained with a pseudo random number seed value of “77” and the @RISK sampling option set for Latin Hypercube sampling.

### **9.13 Financial Reserves and PNRR**

The expected value year-end financial reserves for FYs 2010 and 2011 are estimated to be \$365.7 million and \$289.4 million, respectively. *See* Figure 9-2. The range of possible financial reserves at the end of the current rate period and each year of the next rate period is also shown in Figure 9-2. Since the 5th percentile of year-end reserves stays above \$20 million, assuming \$419.3 million start-of-year reserves in 2009 and the proposed rate levels, no PNRR were necessary to achieve the 95% TPP.

Figure 9-2: End of Year Reserves, FYs 2008 – 2011



**Table 9-1: Statement of Revenues and Expenses  
(\$000s)**

	<b>A</b>	<b>B</b>	<b>C</b>
	<b>2009</b>	<b>2010</b>	<b>2011</b>
<b>Operating Revenues (Most Likely)</b>			
1	Transmission Revenues	584,218	596,740
2	Ancillary Services Revenues	142,231	163,741
3	Delivery Segment Revenues	4,783	4,429
4	Fiber & PCS Revenues	12,921	13,402
5	TBL Services Revenues	1,644	-
6	Other Revenues & Credits	36,081	37,512
7	<b>Total Operating Revenues</b>	<b>781,878</b>	<b>840,981</b>
<b>Operating Expenses</b>			
9	Transmission G&A	45,668	67,312
10	CSRS Pension Expense	15,277	-
11	Transmission Marketing	45,163	19,086
12	Transmission Scheduling	6,604	9,668
13	Transmission System Operations	54,228	56,544
14	Transmission System Maintenance	123,789	121,810
15	Transmission System Development	21,320	23,540
16	Wheeling/Leases	-	-
17	Environment	3,566	5,497
18	Other Expenses & Adjustments	87,568	103,328
19	TBL Services Expenses	9,500	32,174
20	Between Business Line Expenses	-	-
21	<b>Corporate Expenses</b>	-	-
22	Non-Federal Projects Debt Service	9,501	-
23	<b>Re-imbursable Expense</b>	9,500	-
24	<b>Total Transmission Operating Expense</b>	<b>426,101</b>	<b>442,563</b>
25			
26	<b>Net Operating Margin</b>	<b>355,777</b>	<b>372,653</b>
27			
28	Federal Projects Depreciation	179,440	189,702
29			
30	<b>Total Operating Expense &amp; Depreciation</b>	<b>605,541</b>	<b>632,265</b>
31			
32	<b>Net Operating Revenue</b>	<b>176</b>	<b>176</b>
33			
34	Interest Expense		
35	Interest on Appropriated Funds	35,356	32,979
36	Debt Service Re-assignment Interest	55,971	56,781
37	Interest on Long-Term Debt Issued to Treasury	76,030	90,812
38	Interest Credit on Cash Reserves	(30,081)	(24,655)
39	Amortization of Capitalized Bond Premiums	1,051	758
40	Capitalization Adjustment	(18,968)	(18,968)
41	<b>Shultz-Wautoma Int. Expense</b>	-	-
42	AFUDC	(19,796)	(16,501)
43	<b>Non-Federal Interest</b>	-	<b>32,814</b>
44	Net Interest Expense	99,563	172,107
45	<b>Total Operating &amp; Net Interest Expenses</b>	<b>705,104</b>	<b>837,185</b>
46			
47	<b>Net Revenues</b>	<b>77</b>	<b>29</b>

**Table 9-2: Statement of Cash Flows  
(\$000s)**

	<b>A</b>	<b>B</b>	<b>C</b>
	<b>2009</b>	<b>2010</b>	<b>2011</b>
<b>Cash Provided by Current Operations</b>			
1 <b>Net Revenues</b>	<b>95,274</b>	<b>64,913</b>	<b>41,340</b>
2 <b>Expenses not Requiring Cash</b>			
3       Depreciation/Amortization	179,440	189,702	201,536
4       Amort of Capitalized Bond Premiums	1,051	758	692
5       Capitalization Adjustment	(18,968)	(18,968)	(18,968)
6       Revenue Recognition (Third AC)	(3,065)	(3,065)	(3,065)
7       Revenue Recognition (Fiberoptics)	(897)	(777)	(737)
8       Cash Flow from NOS/COI and Other	(207)	-	-
9       Inter Business Line Transfers	-	-	-
10       3rd Party Lease net of accruals	-	-	-
11       Fiber Lease Contract Pre Pay	(2,781)	(4,152)	(4,152)
12       LGIA Interest Exp Accrual, Bad Debt Exp, Other	8,824	10,696	13,057
13       LGIA Revenue Credits	(22,301)	(33,600)	(39,200)
14       LGIA Cash Flow (net of draws)	-	-	-
15       Other Accrual to Cash Adjustments	(12,400)	-	-
16       Cash Provided by Current Operations	205,470	169,525	152,959
17 <b>Cash Used for Capital Investments</b>			
18       Investment in Gross Utility Plant and CWIP	(172,659)	(264,626)	(279,982)
19       Cash Used for Capital Investments	(172,659)	(264,626)	(279,982)
20 <b>Cash From Borrowing and Appropriations</b>			
21       Cash from Borrowing & Appropriations	157,659	249,626	264,982
22       Adjust DSR Accruals to Actual Cash Flows	(15,195)	(4,575)	(4,459)
23       Repayment of Long-term Debt	(162,770)	(190,251)	(115,000)
24       Advanced Payment of LT Debt from Debt Opt	(40,000)	-	-
25       Net Cash Inflow from COI/GI type projects	-	-	-
26       Loan to PBL Reserves/yr	-	-	-
27       Transfer of cash from PS for advanced amort payment	40,000	-	-
28       Repayment of Capital Appropriations	(9,889)	(15,873)	(94,872)
29       Subtotal Cash from Borrowing & Approp	(30,195)	38,927	50,651
30 <b>Annual Change in Cash Balance</b>	<b>2,616</b>	<b>(56,174)</b>	<b>(76,372)</b>
31       Plus Beginning Cash Balance	419,295	421,912	365,738
32       Year End Cash Balance	421,912	365,738	289,366
33       Deferred Borrowing	1	1	1
34       Total Reserves	421,912	365,738	289,366

**Table 9-3: Transmission Expense Risk  
(\$000s)**

	<b>A</b>	<b>B</b>	<b>C</b>
	<b>2009</b>	<b>2010</b>	<b>2011</b>
<b>Operating Expenses</b>			
1 Trans O&M Expense difference from expected	3,917	3,605	3,689
2			
3 Total Trans O&M Expense (With Uncertainty)	368,557	339,235	347,120
4 Min Transmission O&M Expense (90% of most likely)	295,358	271,861	278,179
5 <b>Max Transmission O&amp;M Expense (110% of most likely)</b>	445,671	410,215	419,749
6			
7 Transmission O&M Expenses (With Uncertainty)			
8 Transmission G&A	45,668	67,312	67,715
9 CSRS Pension Expense	15,277	0	0
10 Transmission Marketing and Scheduling	45,163	19,086	19,896
11 Transmission Scheduling	6,604	9,668	10,122
12 Transmission System Operations	54,228	56,544	57,468
13 Transmission System Maintenance	123,789	121,810	126,578
14 Transmission System Development	21,320	23,540	23,675
15 Wheeling/Leases	0	0	0
16 Environment	3,566	5,497	5,769
17 Other Expenses & Adjustments	30,024	32,174	32,209
18			
19 TBL Services (Reimbursable)	9,500	0	0
20			
21 Total Trans O&M Expense (Without Uncertainty)	364,640	335,630	343,431
22			
23 TBL Corp & Shared Serv Expense (Mean Value)	0	0	0
24 TBL Corp & Shared Serv. Expenses (Most Likely or Mode)	0	0	0
25 Min Corp & Shared Serv Exp (95% of most likely)	0	0	0
26 Max Corp & Shared Serv Exp (110% Of most likely)	0	0	0
27			
28 Between Business Line Expenses	0	0	0
29			
30 O&M Expense Standard Deviations			
31 Transmission G&A	0	0	0
32 Transmission Marketing	0	0	0
33 Transmission Scheduling	0	0	0
34 Transmission System Operations	0	0	0
35 Transmission System Maintenance	0	0	0
36 Transmission System Development	0	0	0
37 Support Services	0	0	0
38 Environment	0	0	0
39			
40 Total TBL Expenses (Most Likely) - PIR Check	345,639	335,630	343,431

**Table 9-4: Network Transmission Revenue Risk  
(\$000s)**

Operating Revenues		<b>A</b>	<b>B</b>	<b>C</b>
		<b>2009</b>	<b>2010</b>	<b>2011</b>
<b>Long Term Firm (Take or Pay)</b>				
1	Network LT Firm (Mean) with Wind Risk	358,445	364,274	369,593
2	Network LT Firm (Most Likely or Mode) w/o Wind Risk	393,771	401,166	409,151
7	Min	317,932	328,915	336,983
8	Max	518,112	536,010	549,157
9	Network LT Firm--Wind Risk	-	(346)	(2,116)
<b>Long Term Firm (NT Load)</b>				
11	Network NT Service (Mean)	110,177	116,560	120,625
12	Network NT Service (Most Likely or Mode)	115,570	122,266	126,530
13	Min	93,612	99,035	102,489
14	Max	121,349	128,379	132,856
<b>Short Term Firm</b>				
16	Network ST Firm (Mean)	25,559	26,052	26,052
17	Network ST Firm (Most Likely or Mode)	20,780	21,181	21,181
18	Min	15,585	15,885	15,885
19	Max	40,313	41,090	41,090

**Table 9-5: Intertie Transmission Revenue Risk  
(\$000s)**

	<b>A</b>	<b>B</b>	<b>C</b>
<b>Operating Revenues</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>
<b>Long Term Firm</b>			
1 IS LT Firm (Mean)	84,457	84,212	83,730
2 IS LT Firm (Most Likely or mode)	84,457	84,212	83,730
3 Standard Deviation	6,317	6,299	6,263
4 Sd as pct of mean	7.5%	7.5%	7.5%
7 Min	78,545	78,317	77,869
8 Max	90,369	90,107	89,592
<b>Short Term Firm</b>			
7 IS ST Firm (Mean)	5,580	5,651	5,651
8 IS ST Firm (Mode)	4,383	4,438	4,438
9 Min	3,287	3,328	3,328
10 Max	9,072	9,186	9,186

**Table 9-6: Ancillary Services Revenue Risk  
(\$000s)**

<b>Operating Revenues</b>		<b>A</b>	<b>B</b>	<b>C</b>
		<b>2009</b>	<b>2010</b>	<b>2011</b>
1	<b>Scheduling, System Control, &amp; Dispatch (Mean)</b>	77,240	86,116	90,082
2	Most Likely (Mode)	77,240	86,116	90,082
3	Standard Deviation	0	0	0
4	<b>Generation Supplied Reactive (Point Estimate)</b>	0	0	0
5	Most Likely (Point Estimate)	0	0	0
8	Regulation and Frequency Response Service (Mean)	14,086	7,735	7,946
9	Most Likely (Mode)	14,086	7,735	7,946
10	Min	10,966	4,615	4,826
11	Max	16,086	9,735	9,946
12	<b>Operating Reserve - Spinning Reserve Service</b>	17,546	15,722	13,173
13	<b>Operating Reserve - Supplemental Reserve Serv.</b>	17,546	15,722	13,173
14	<b>Energy Imbalance Service</b>	0	0	0
15	<b>Generation Imbalance Service</b>	15,813	38,447	56,063
16	<b>Total Ancillary Services (Most Likely or Mode)</b>	142,231	163,741	180,437

**10. REPAYMENT STUDY INPUT DATA CURRENT STUDY**

Table 10-1: Historical Investments (\$000s) (FY 2010)

	A	B	C	D	E	F	G	H	I	J	K
1											
2		<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>	<b>G</b>	<b>H</b>	<b>I</b>	<b>J</b>
3		<b>Project</b>	<b>Original Principal</b>	<b>Current Principal</b>	<b>Interest Rate</b>	<b>Due Date</b>	<b>Replace ment?</b>	<b>Service Date</b>	<b>Month</b>	<b>Rollover Date</b>	<b>Rollover Rate</b>
4	1	BONNEVILLE POWER ADMINISTRATION	6,812	-	2.500%	1985	No	1940	-	-	-
5	2	BONNEVILLE POWER ADMINISTRATION	18,906	-	2.500%	1986	No	1941	-	-	-
6	3	BONNEVILLE POWER ADMINISTRATION	461	-	2.500%	1986	No	1941	-	-	-
7	4	BONNEVILLE POWER ADMINISTRATION	8,446	-	2.500%	1987	No	1942	-	-	-
8	5	BONNEVILLE POWER ADMINISTRATION	1,052	-	2.500%	1987	No	1942	-	-	-
9	6	BONNEVILLE POWER ADMINISTRATION	16,083	-	2.500%	1988	No	1943	-	-	-
10	7	BONNEVILLE POWER ADMINISTRATION	4,538	-	2.500%	1988	No	1943	-	-	-
11	8	BONNEVILLE POWER ADMINISTRATION	583	-	2.500%	1989	No	1944	-	-	-
12	9	BONNEVILLE POWER ADMINISTRATION	249	-	2.500%	1989	No	1944	-	-	-
13	10	BONNEVILLE POWER ADMINISTRATION	3,366	-	2.500%	1990	No	1945	-	-	-
14	11	BONNEVILLE POWER ADMINISTRATION	1,306	-	2.500%	1990	No	1945	-	-	-
15	12	BONNEVILLE POWER ADMINISTRATION	2,488	-	2.500%	1991	No	1946	-	-	-
16	13	BONNEVILLE POWER ADMINISTRATION	732	-	2.500%	1991	No	1946	-	-	-
17	14	BONNEVILLE POWER ADMINISTRATION	1,773	-	2.500%	1992	No	1947	-	-	-
18	15	BONNEVILLE POWER ADMINISTRATION	1,330	-	2.500%	1992	No	1947	-	-	-
19	16	BONNEVILLE POWER ADMINISTRATION	7,468	-	2.500%	1993	No	1948	-	-	-
20	17	BONNEVILLE POWER ADMINISTRATION	2,290	-	2.500%	1993	No	1948	-	-	-
21	18	BONNEVILLE POWER ADMINISTRATION	6,809	-	2.500%	1994	No	1949	-	-	-
22	19	BONNEVILLE POWER ADMINISTRATION	2,719	-	2.500%	1994	No	1949	-	-	-
23	20	BONNEVILLE POWER ADMINISTRATION	24,111	-	2.500%	1995	No	1950	-	-	-
24	21	BONNEVILLE POWER ADMINISTRATION	6,124	-	2.500%	1995	No	1950	-	-	-
25	22	BONNEVILLE POWER ADMINISTRATION	13,266	-	2.500%	1996	No	1951	-	-	-
26	23	BONNEVILLE POWER ADMINISTRATION	7,040	-	2.500%	1996	No	1951	-	-	-
27	24	BONNEVILLE POWER ADMINISTRATION	18,610	-	2.500%	1997	No	1952	-	-	-
28	25	BONNEVILLE POWER ADMINISTRATION	8,979	-	2.500%	1997	No	1952	-	-	-
29	26	BONNEVILLE POWER ADMINISTRATION	23,550	-	6.330%	1998	No	1953	-	-	-
30	27	BONNEVILLE POWER ADMINISTRATION	11,605	-	6.330%	1998	No	1953	-	-	-
31	28	BONNEVILLE POWER ADMINISTRATION	23,614	-	6.510%	1999	No	1954	-	-	-
32	29	BONNEVILLE POWER ADMINISTRATION	17,370	-	6.510%	1999	No	1954	-	-	-
33	30	BONNEVILLE POWER ADMINISTRATION	11,827	-	6.620%	2000	No	1955	-	-	-
34	31	BONNEVILLE POWER ADMINISTRATION	10,283	-	6.620%	2000	No	1955	-	-	-
35	32	BONNEVILLE POWER ADMINISTRATION	32,221	-	6.710%	2001	No	1956	-	-	-
36	33	BONNEVILLE POWER ADMINISTRATION	14,573	-	6.710%	2001	No	1956	-	-	-
37	34	BONNEVILLE POWER ADMINISTRATION	15,980	-	6.790%	2002	No	1957	-	-	-
38	35	BONNEVILLE POWER ADMINISTRATION	7,933	-	6.790%	2002	No	1957	-	-	-
39	36	BONNEVILLE POWER ADMINISTRATION	15,593	-	6.840%	2003	No	1958	-	-	-
40	37	BONNEVILLE POWER ADMINISTRATION	10,654	-	6.840%	2003	No	1958	-	-	-
41	38	BONNEVILLE POWER ADMINISTRATION	8,863	-	6.880%	2004	No	1959	-	-	-
42	39	BONNEVILLE POWER ADMINISTRATION	8,157	-	6.880%	2004	No	1959	-	-	-
43	40	BONNEVILLE POWER ADMINISTRATION	4,218	-	6.910%	2005	No	1960	-	-	-
44	41	BONNEVILLE POWER ADMINISTRATION	3,598	-	6.910%	2005	No	1960	-	-	-
45	42	BONNEVILLE POWER ADMINISTRATION	11,271	-	6.950%	2006	No	1961	-	-	-
46	43	BONNEVILLE POWER ADMINISTRATION	4,468	-	6.950%	2006	No	1961	-	-	-
47	44	BONNEVILLE POWER ADMINISTRATION	19,597	-	6.980%	2007	No	1962	-	-	-
48	45	BONNEVILLE POWER ADMINISTRATION	4,877	-	6.980%	2007	No	1962	-	-	-
49	46	BONNEVILLE POWER ADMINISTRATION	4,876	-	7.020%	2008	No	1963	-	-	-
50	47	BONNEVILLE POWER ADMINISTRATION	4,330	-	7.020%	2008	No	1963	-	-	-
51	48	BONNEVILLE POWER ADMINISTRATION	904	-	7.020%	2008	No	1963	-	-	-
52	49	BONNEVILLE POWER ADMINISTRATION	803	-	7.020%	2008	No	1963	-	-	-
53	50	BONNEVILLE POWER ADMINISTRATION	5,738	5,738	7.060%	2009	No	1964	-	-	-
54	51	BONNEVILLE POWER ADMINISTRATION	4,151	4,151	7.060%	2009	No	1964	-	-	-
55	52	BONNEVILLE POWER ADMINISTRATION	10,171	-	7.090%	2010	No	1965	-	-	-
56	53	BONNEVILLE POWER ADMINISTRATION	7,248	78	7.090%	2010	No	1965	-	-	-
57	54	BONNEVILLE POWER ADMINISTRATION	5,202	-	7.090%	2010	No	1965	-	-	-
58	55	BONNEVILLE POWER ADMINISTRATION	3,706	3,706	7.090%	2010	No	1965	-	-	-
59	56	BONNEVILLE POWER ADMINISTRATION	11,830	11,830	7.130%	2011	No	1966	-	-	-
60	57	BONNEVILLE POWER ADMINISTRATION	6,647	6,353	7.130%	2011	No	1966	-	-	-
61	58	BONNEVILLE POWER ADMINISTRATION	3,049	3,049	7.130%	2011	No	1966	3,049	-	-
62	59	BONNEVILLE POWER ADMINISTRATION	1,714	-	7.130%	2011	No	1966	-	-	-
63	60	BONNEVILLE POWER ADMINISTRATION	19,003	19,003	7.160%	2012	No	1967	-	-	-
64	61	BONNEVILLE POWER ADMINISTRATION	14,300	-	7.160%	2012	No	1967	-	-	-
65	62	BONNEVILLE POWER ADMINISTRATION	4,566	355	7.160%	2012	No	1967	-	-	-
66	63	BONNEVILLE POWER ADMINISTRATION	3,436	-	7.160%	2012	No	1967	-	-	-
67	64	BONNEVILLE POWER ADMINISTRATION	41,070	18,250	7.200%	2013	No	1968	-	-	-
68	65	BONNEVILLE POWER ADMINISTRATION	23,202	-	7.200%	2013	No	1968	-	-	-
69	66	BONNEVILLE POWER ADMINISTRATION	8,076	-	7.200%	2013	No	1968	-	-	-
70	67	BONNEVILLE POWER ADMINISTRATION	4,562	-	7.200%	2013	No	1968	-	-	-
71	68	BONNEVILLE POWER ADMINISTRATION	42,237	19,198	7.230%	2014	No	1969	-	-	-
72	69	BONNEVILLE POWER ADMINISTRATION	22,537	-	7.230%	2014	No	1969	-	-	-
73	70	BONNEVILLE POWER ADMINISTRATION	384	-	7.230%	2014	No	1969	-	-	-
74	71	BONNEVILLE POWER ADMINISTRATION	205	-	7.230%	2014	No	1969	-	-	-
75	72	BONNEVILLE POWER ADMINISTRATION	64,977	64,977	7.270%	2015	No	1970	-	-	-
76	73	BONNEVILLE POWER ADMINISTRATION	24,412	23,551	7.270%	2015	No	1970	-	-	-
77	74	BONNEVILLE POWER ADMINISTRATION	7,995	7,995	7.270%	2015	No	1970	-	-	-
78	75	BONNEVILLE POWER ADMINISTRATION	3,003	-	7.270%	2015	No	1970	-	-	-

Table 10-1: Historical Investments (\$000s) (FY 2010)

	A	B	C	D	E	F	G	H	I	J	K
2	A										
3	Project	Original Principal	Current Principal	Interest Rate	Due Date	Replace ment?	Service In Date	Month	Rollover Date	Rollover Rate	
79	76	BONNEVILLE POWER ADMINISTRATION	17,805	-	7.290%	2016	No	1971	-	-	-
80	77	BONNEVILLE POWER ADMINISTRATION	17,766	-	7.290%	2016	No	1971	-	-	-
81	78	BONNEVILLE POWER ADMINISTRATION	12,051	-	7.290%	2016	No	1971	-	-	-
82	79	BONNEVILLE POWER ADMINISTRATION	12,025	-	7.290%	2016	No	1971	-	-	-
83	80	BONNEVILLE POWER ADMINISTRATION	29,326	-	7.290%	2017	No	1972	-	-	-
84	81	BONNEVILLE POWER ADMINISTRATION	21,170	-	7.290%	2017	No	1972	-	-	-
85	82	BONNEVILLE POWER ADMINISTRATION	3,980	-	7.290%	2017	No	1972	-	-	-
86	83	BONNEVILLE POWER ADMINISTRATION	2,873	-	7.290%	2017	No	1972	-	-	-
87	84	BONNEVILLE POWER ADMINISTRATION	33,788	33,788	7.280%	2018	No	1973	-	-	-
88	85	BONNEVILLE POWER ADMINISTRATION	21,656	5,041	7.280%	2018	No	1973	-	-	-
89	86	BONNEVILLE POWER ADMINISTRATION	16,368	-	7.280%	2018	No	1973	-	-	-
90	87	BONNEVILLE POWER ADMINISTRATION	10,491	-	7.280%	2018	No	1973	-	-	-
91	88	BONNEVILLE POWER ADMINISTRATION	21,826	21,826	7.270%	2019	No	1974	-	-	-
92	89	BONNEVILLE POWER ADMINISTRATION	20,984	20,984	7.270%	2019	No	1974	-	-	-
93	90	BONNEVILLE POWER ADMINISTRATION	12,563	12,563	7.270%	2019	No	1974	-	-	-
94	91	BONNEVILLE POWER ADMINISTRATION	12,079	12,079	7.270%	2019	No	1974	-	-	-
95	92	BONNEVILLE POWER ADMINISTRATION	32,026	32,026	7.250%	2020	No	1975	-	-	-
96	93	BONNEVILLE POWER ADMINISTRATION	21,916	21,916	7.250%	2020	No	1975	-	-	-
97	94	BONNEVILLE POWER ADMINISTRATION	17,158	17,158	7.250%	2020	No	1975	-	-	-
98	95	BONNEVILLE POWER ADMINISTRATION	11,742	11,742	7.250%	2020	No	1975	-	-	-
99	96	BONNEVILLE POWER ADMINISTRATION	61,025	61,025	7.230%	2021	No	1976	-	-	-
100	97	BONNEVILLE POWER ADMINISTRATION	2,212	2,212	7.230%	2021	No	1976	-	-	-
101	98	BONNEVILLE POWER ADMINISTRATION	33,702	33,702	7.210%	2022	No	1977	-	-	-
102	99	BONNEVILLE POWER ADMINISTRATION	5,380	5,380	7.210%	2022	No	1977	-	-	-
103	100	BONNEVILLE POWER ADMINISTRATION	4,981	4,981	7.210%	2022	No	1977	-	-	-
104	101	BONNEVILLE POWER ADMINISTRATION	3,948	3,948	7.210%	2022	No	1977	-	-	-
105	102	BPA PROGRAM	24,222	-	8.950%	2013	No	1978	9	-	-
106	103	BPA PROGRAM	17,770	-	8.950%	2013	No	1978	9	-	-
107	104	BPA PROGRAM	4,619	-	8.950%	2013	No	1978	9	-	-
108	105	BPA PROGRAM	3,389	-	8.950%	2013	No	1978	9	-	-
109	106	BPA PROGRAM	21,228	-	9.900%	2014	No	1979	9	-	-
110	107	BPA PROGRAM	14,340	-	9.900%	2014	No	1979	9	-	-
111	108	BPA PROGRAM	10,610	-	9.900%	2014	No	1979	9	-	-
112	109	BPA PROGRAM	2,888	-	9.900%	2014	No	1979	9	-	-
113	110	BPA PROGRAM	605	-	9.900%	2014	No	1979	9	-	-
114	111	BPA PROGRAM	165	-	9.900%	2014	No	1979	9	-	-
115	112	BPA PROGRAM	98	-	9.900%	2014	No	1979	9	-	-
116	113	BPA PROGRAM	66	-	9.900%	2014	No	1979	9	-	-
117	114	BPA PROGRAM	26,690	-	9.450%	2014	No	1979	6	-	-
118	115	BPA PROGRAM	21,977	-	9.450%	2014	No	1979	6	-	-
119	116	BPA PROGRAM	9,804	-	9.450%	2014	No	1979	6	-	-
120	117	BPA PROGRAM	7,010	-	9.450%	2014	No	1979	6	-	-
121	118	BPA PROGRAM	6,026	-	9.450%	2014	No	1979	6	-	-
122	119	BPA PROGRAM	1,870	-	9.450%	2014	No	1979	6	-	-
123	120	BPA PROGRAM	1,371	-	9.450%	2014	No	1979	6	-	-
124	121	BPA PROGRAM	150	-	9.450%	2014	No	1979	6	-	-
125	122	BPA PROGRAM	102	-	9.450%	2014	No	1979	6	-	-
126	123	BPA PROGRAM	44,811	-	13.000%	2015	No	1980	9	-	-
127	124	BPA PROGRAM	39,696	-	13.000%	2015	No	1980	9	-	-
128	125	BPA PROGRAM	10,806	-	13.000%	2015	No	1980	9	-	-
129	126	BPA PROGRAM	9,292	-	13.000%	2015	No	1980	9	-	-
130	127	BPA PROGRAM	4,253	-	13.000%	2015	No	1980	9	-	-
131	128	BPA PROGRAM	2,263	-	13.000%	2015	No	1980	9	-	-
132	129	BPA PROGRAM	1,707	-	13.000%	2015	No	1980	9	-	-
133	130	BPA PROGRAM	1,469	-	13.000%	2015	No	1980	9	-	-
134	131	BPA PROGRAM	616	-	13.000%	2015	No	1980	9	-	-
135	132	BPA PROGRAM	56	-	13.000%	2015	No	1980	9	-	-
136	133	BPA PROGRAM	21	-	13.000%	2015	No	1980	9	-	-
137	134	BPA PROGRAM	10	-	13.000%	2015	No	1980	9	-	-
138	135	BPA PROGRAM	119,775	-	16.600%	2016	No	1981	9	-	-
139	136	BPA PROGRAM	54,821	-	16.600%	2016	No	1981	9	-	-
140	137	BPA PROGRAM	277	-	16.600%	2016	No	1981	9	-	-
141	138	BPA PROGRAM	127	-	16.600%	2016	No	1981	9	-	-
142	139	BPA PROGRAM	46,980	-	14.400%	2017	No	1982	4	-	-
143	140	BPA PROGRAM	37,455	-	14.400%	2017	No	1982	4	-	-
144	141	BPA PROGRAM	34,221	-	14.400%	2017	No	1982	12	-	-
145	142	BPA PROGRAM	15,663	-	14.400%	2017	No	1982	12	-	-
146	143	BPA PROGRAM	9,975	-	14.400%	2017	No	1982	4	-	-
147	144	BPA PROGRAM	4,566	-	14.400%	2017	No	1982	4	-	-
148	145	BPA PROGRAM	551	-	14.400%	2017	No	1982	4	-	-
149	146	BPA PROGRAM	439	-	14.400%	2017	No	1982	4	-	-
150	147	BPA PROGRAM	80	-	14.400%	2017	No	1982	12	-	-
151	148	BPA PROGRAM	36	-	14.400%	2017	No	1982	12	-	-
152	149	BPA PROGRAM	23	-	14.400%	2017	No	1982	4	-	-
153	150	BPA PROGRAM	11	-	14.400%	2017	No	1982	4	-	-
154	151	BPA PROGRAM	77,807	-	14.150%	2017	No	1982	7	-	-

Table 10-1: Historical Investments (\$000s) (FY 2010)

	A	B	C	D	E	F	G	H	I	J	K
2	A	B	C	D	E	F	G	H	I	J	K
3	Project	Original Principal	Current Principal	Interest Rate	Due Date	Replace ment?	Service Date	Month	Rollover Date	Rollover Rate	
155	152 BPA PROGRAM	3,677	-	14.150%	2017	No	1982	7	-	-	-
156	153 BPA PROGRAM	2,932	-	14.150%	2017	No	1982	7	-	-	-
157	154 BPA PROGRAM	402	-	14.150%	2017	No	1982	7	-	-	-
158	155 BPA PROGRAM	105	-	14.150%	2017	No	1982	7	-	-	-
159	156 BPA PROGRAM	43	-	14.150%	2017	No	1982	7	-	-	-
160	157 BPA PROGRAM	34	-	14.150%	2017	No	1982	7	-	-	-
161	158 BPA PROGRAM	37,235	-	12.250%	2018	No	1983	9	-	-	-
162	159 BPA PROGRAM	6,708	-	12.250%	2018	No	1983	9	-	-	-
163	160 BPA PROGRAM	814	-	12.250%	2018	No	1983	9	-	-	-
164	161 BPA PROGRAM	203	-	12.250%	2018	No	1983	9	-	-	-
165	162 BPA PROGRAM	35	-	12.250%	2018	No	1983	9	-	-	-
166	163 BPA PROGRAM	4	-	12.250%	2018	No	1983	9	-	-	-
167	164 BPA PROGRAM	1	-	12.250%	2018	No	1983	9	-	-	-
168	165 BPA PROGRAM	29,806	-	11.700%	2018	No	1983	6	-	-	-
169	166 BPA PROGRAM	154	-	11.700%	2018	No	1983	6	-	-	-
170	167 BPA PROGRAM	40	-	11.700%	2018	No	1983	6	-	-	-
171	168 BPA PROGRAM	39,741	-	10.850%	2018	No	1983	11	-	-	-
172	169 BPA PROGRAM	205	-	10.850%	2018	No	1983	11	-	-	-
173	170 BPA PROGRAM	54	-	10.850%	2018	No	1983	11	-	-	-
174	171 BPA PROGRAM	50,567	-	13.050%	2019	No	1984	9	-	-	-
175	172 BPA PROGRAM	9,109	-	13.050%	2019	No	1984	9	-	-	-
176	173 BPA PROGRAM	276	-	13.050%	2019	No	1984	9	-	-	-
177	174 BPA PROGRAM	48	-	13.050%	2019	No	1984	9	-	-	-
178	175 BPA PROGRAM	25,283	-	12.300%	2019	No	1984	11	-	-	-
179	176 BPA PROGRAM	4,555	-	12.300%	2019	No	1984	11	-	-	-
180	177 BPA PROGRAM	138	-	12.300%	2019	No	1984	11	-	-	-
181	178 BPA PROGRAM	24	-	12.300%	2019	No	1984	11	-	-	-
182	179 BPA PROGRAM	15,182	-	11.250%	2029	No	1985	6	-	-	-
183	180 BPA PROGRAM	460	-	11.250%	2029	No	1985	6	-	-	-
184	181 BPA PROGRAM	80	-	11.250%	2029	No	1985	6	-	-	-
185	182 BPA PROGRAM	84,278	-	11.250%	2030	No	1985	6	-	-	-
186	183 BPA PROGRAM	68,194	-	8.150%	1996	No	1986	3	-	-	-
187	184 BPA PROGRAM	30,161	-	8.150%	1996	No	1986	3	-	-	-
188	185 BPA PROGRAM	870	-	8.150%	1996	No	1986	3	-	-	-
189	186 BPA PROGRAM	443	-	8.150%	1996	No	1986	3	-	-	-
190	187 BPA PROGRAM	169	-	8.150%	1996	No	1986	3	-	-	-
191	188 BPA PROGRAM	157	-	8.150%	1996	No	1986	3	-	-	-
192	189 BPA PROGRAM	5	-	8.150%	1996	No	1986	3	-	-	-
193	190 BPA PROGRAM	1	-	8.150%	1996	No	1986	3	-	-	-
194	191 BPA PROGRAM	180,054	-	8.950%	2031	No	1986	6	-	-	-
195	192 BPA PROGRAM	57,354	-	8.950%	2031	No	1986	6	-	-	-
196	193 BPA PROGRAM	40,000	-	8.950%	2031	No	1986	6	-	-	-
197	194 BPA PROGRAM	11,668	-	8.950%	2031	No	1986	6	-	-	-
198	195 BPA PROGRAM	5,161	-	8.950%	2031	No	1986	6	-	-	-
199	196 BPA PROGRAM	3,117	-	8.950%	2031	No	1986	6	-	-	-
200	197 BPA PROGRAM	1,819	-	8.950%	2031	No	1986	6	-	-	-
201	198 BPA PROGRAM	722	-	8.950%	2031	No	1986	6	-	-	-
202	199 BPA PROGRAM	76	-	8.950%	2031	No	1986	6	-	-	-
203	200 BPA PROGRAM	29	-	8.950%	2031	No	1986	6	-	-	-
204	201 BPA PROGRAM	96,519	-	8.350%	1992	No	1987	6	-	-	-
205	202 BPA PROGRAM	2,498	-	8.350%	1992	No	1987	6	-	-	-
206	203 BPA PROGRAM	983	-	8.350%	1992	No	1987	6	-	-	-
207	204 BPA PROGRAM	86,958	-	9.550%	2017	No	1987	7	-	-	-
208	205 BPA PROGRAM	4,113	-	9.550%	2017	No	1987	7	-	-	-
209	206 BPA PROGRAM	3,274	-	9.550%	2017	No	1987	7	-	-	-
210	207 BPA PROGRAM	569	-	9.550%	2017	No	1987	7	-	-	-
211	208 BPA PROGRAM	48	-	9.550%	2017	No	1987	7	-	-	-
212	209 BPA PROGRAM	38	-	9.550%	2017	No	1987	7	-	-	-
213	210 BPA PROGRAM	37,342	-	9.550%	2032	No	1987	7	-	-	-
214	211 BPA PROGRAM	7,903	-	9.550%	2032	No	1987	7	-	-	-
215	212 BPA PROGRAM	3,109	-	9.550%	2032	No	1987	7	-	-	-
216	213 BPA PROGRAM	631	-	9.550%	2032	No	1987	7	-	-	-
217	214 BPA PROGRAM	618	-	9.550%	2032	No	1987	7	-	-	-
218	215 BPA PROGRAM	285	-	9.550%	2032	No	1987	7	-	-	-
219	216 BPA PROGRAM	112	-	9.550%	2032	No	1987	7	-	-	-
220	217 BPA PROGRAM	54,409	-	9.300%	2032	No	1987	4	-	-	-
221	218 BPA PROGRAM	43,236	-	9.300%	2032	No	1987	4	-	-	-
222	219 BPA PROGRAM	1,409	-	9.300%	2032	No	1987	4	-	-	-
223	220 BPA PROGRAM	554	-	9.300%	2032	No	1987	4	-	-	-
224	221 BPA PROGRAM	281	-	9.300%	2032	No	1987	4	-	-	-
225	222 BPA PROGRAM	111	-	9.300%	2032	No	1987	4	-	-	-
226	223 BPA PROGRAM	43,417	-	9.500%	2018	No	1988	2	-	-	-
227	224 BPA PROGRAM	283	-	9.500%	2018	No	1988	2	-	-	-
228	225 BPA PROGRAM	30,004	-	9.900%	2033	No	1988	6	-	-	-
229	226 BPA PROGRAM	9,018	-	9.900%	2033	No	1988	6	-	-	-
230	227 BPA PROGRAM	752	-	9.900%	2033	No	1988	6	-	-	-

Table 10-1: Historical Investments (\$000s) (FY 2010)

	A	B	C	D	E	F	G	H	I	J	K
2	A	B	C	D	E	F	G	H	I	J	K
3	Project	Original Principal	Current Principal	Interest Rate	Due Date	Replace ment?	Service Date	Month	Rollover Date	Rollover Rate	
231	228 BPA PROGRAM	226	-	9.900%	2033	No	1988	6	-	-	-
232	229 BPA PROGRAM	45,870	-	9.500%	2033	No	1988	2	-	-	-
233	230 BPA PROGRAM	28,513	-	9.500%	2033	No	1988	2	-	-	-
234	231 BPA PROGRAM	27,887	-	9.500%	2033	No	1988	2	-	-	-
235	232 BPA PROGRAM	22,923	-	9.500%	2033	No	1988	2	-	-	-
236	233 BPA PROGRAM	20,677	-	9.500%	2033	No	1988	2	-	-	-
237	234 BPA PROGRAM	1,725	-	9.500%	2033	No	1988	2	-	-	-
238	235 BPA PROGRAM	954	-	9.500%	2033	No	1988	2	-	-	-
239	236 BPA PROGRAM	933	-	9.500%	2033	No	1988	2	-	-	-
240	237 BPA PROGRAM	518	-	9.500%	2033	No	1988	2	-	-	-
241	238 BPA PROGRAM	56,257	-	8.950%	1999	No	1989	5	-	-	-
242	239 BPA PROGRAM	16,909	-	8.950%	1999	No	1989	5	-	-	-
243	240 BPA PROGRAM	1,410	-	8.950%	1999	No	1989	5	-	-	-
244	241 BPA PROGRAM	424	-	8.950%	1999	No	1989	5	-	-	-
245	242 BPA PROGRAM	41,894	-	9.250%	2030	No	1990	1	-	-	-
246	243 BPA PROGRAM	3,824	-	9.250%	2030	No	1990	1	-	-	-
247	244 BPA PROGRAM	3,008	-	9.250%	2030	No	1990	1	-	-	-
248	245 BPA PROGRAM	1,149	-	9.250%	2030	No	1990	1	-	-	-
249	246 BPA PROGRAM	96	-	9.250%	2030	No	1990	1	-	-	-
250	247 BPA PROGRAM	29	-	9.250%	2030	No	1990	1	-	-	-
251	248 BPA PROGRAM	54,145	-	7.550%	1995	No	1991	2	-	-	-
252	249 BPA PROGRAM	5,855	-	7.550%	1995	No	1991	2	-	-	-
253	250 BPA PROGRAM	80,000	-	6.200%	1995	No	1992	4	-	-	-
254	251 BPA PROGRAM	50,000	-	7.000%	1997	No	1992	4	-	-	-
255	252 BPA PROGRAM	28,300	-	7.000%	1997	No	1992	4	-	-	-
256	253 BPA PROGRAM	107,800	-	6.600%	2000	No	1992	8	-	-	-
257	254 BPA PROGRAM	107,700	-	7.250%	2007	No	1992	8	-	-	-
258	255 BPA PROGRAM	147,521	-	8.800%	2032	No	1992	4	-	-	-
259	256 BPA PROGRAM	2,479	-	8.800%	2032	No	1992	4	-	-	-
260	257 BPA PROGRAM	150,000	-	8.130%	2032	No	1992	7	-	-	-
261	258 BPA PROGRAM	50,000	-	6.050%	1998	No	1993	10	-	-	-
262	259 BPA PROGRAM	99,962	-	8.350%	2033	No	1993	10	-	-	-
263	260 BPA PROGRAM	130,000	-	7.800%	2033	No	1993	2	-	-	-
264	261 BPA PROGRAM	100,000	-	7.500%	2033	No	1993	4	-	-	-
265	262 BPA PROGRAM	110,000	-	6.950%	2033	No	1993	8	-	-	-
266	263 BPA PROGRAM	49,489	-	7.100%	1998	No	1994	5	-	-	-
267	264 BPA PROGRAM	43,155	-	7.100%	1998	No	1994	5	-	-	-
268	265 BPA PROGRAM	4,456	-	7.100%	1998	No	1994	5	-	-	-
269	266 BPA PROGRAM	55,000	-	7.650%	1999	No	1994	9	-	-	-
270	267 BPA PROGRAM	50,000	-	8.200%	2034	No	1994	5	-	-	-
271	268 BPA PROGRAM	50,000	-	7.050%	2034	No	1994	1	-	-	-
272	269 BPA PROGRAM	108,400	-	6.850%	2034	No	1994	10	-	-	-
273	270 BPA PROGRAM	50,000	-	6.850%	2034	No	1994	10	-	-	-
274	271 BPA PROGRAM	55,000	-	8.350%	2001	No	1995	1	-	-	-
275	272 BPA PROGRAM	65,000	-	7.700%	2025	No	1995	8	-	-	-
276	273 BPA PROGRAM	49,933	-	7.700%	2025	No	1995	7	-	-	-
277	274 BPA PROGRAM	54,378	-	5.900%	2003	No	1996	1	-	-	-
278	275 BPA PROGRAM	70,000	-	7.050%	2006	No	1996	8	-	-	-
279	276 BPA PROGRAM	22,600	-	6.800%	2004	No	1997	1	-	-	-
280	277 BPA PROGRAM	80,000	-	6.900%	2005	No	1997	5	-	-	-
281	278 BPA PROGRAM	111,254	-	6.650%	2007	No	1997	8	-	-	-
282	279 BPA PROGRAM	75,300	-	6.000%	2008	No	1998	4	-	-	-
283	280 BPA PROGRAM	36,819	-	5.750%	2008	No	1998	8	-	-	-
284	281 BPA PROGRAM	72,700	72,700	6.000%	2009	No	1998	5	-	-	-
285	282 BPA PROGRAM	40,000	40,000	6.200%	2011	No	1998	5	-	-	-
286	283 BPA PROGRAM	50,000	50,000	6.650%	2028	No	1998	4	-	-	-
287	284 BPA PROGRAM	112,300	112,300	5.850%	2028	No	1998	8	-	-	-
288	285 BPA PROGRAM	106,500	106,500	5.850%	2028	No	1998	8	2031	5.510%	-
289	286 BPA PROGRAM	98,900	98,900	6.700%	2032	No	1998	5	-	-	-
290	287 BPA PROGRAM	40,000	-	6.200%	2002	No	1999	9	-	-	-
291	288 BPA PROGRAM	26,200	-	5.950%	2004	No	1999	5	-	-	-
292	289 BPA PROGRAM	59,050	59,050	5.900%	2014	No	1999	2	2025	6.100%	-
293	290 BPA PROGRAM	15,300	-	6.850%	2003	No	2000	8	-	-	-
294	291 BPA PROGRAM	40,000	-	6.400%	2003	No	2000	11	-	-	-
295	292 BPA PROGRAM	39,052	-	7.000%	2004	No	2000	7	-	-	-
296	293 BPA PROGRAM	53,500	-	7.150%	2005	No	2000	1	-	-	-
297	294 BPA PROGRAM	40,000	-	6.750%	2006	No	2000	9	-	-	-
298	295 BPA PROGRAM	20,000	-	5.650%	2005	No	2001	1	-	-	-
299	296 BPA PROGRAM	59,932	59,932	6.050%	2010	No	2001	1	-	-	-
300	297 BPA PROGRAM	25,000	25,000	5.950%	2011	No	2001	6	-	-	-
301	298 BPA PROGRAM	50,000	50,000	5.750%	2011	No	2001	8	2026	5.410%	-
302	299 BPA PROGRAM	108,010	-	4.600%	2005	No	2002	3	-	-	-
303	300 BPA PROGRAM	60,000	-	3.750%	2005	No	2002	6	-	-	-
304	301 BPA PROGRAM	100,000	-	3.050%	2006	No	2002	9	-	-	-
305	302 BPA PROGRAM	4,938	-	3.000%	2006	No	2003	10	-	-	-
306	303 BPA PROGRAM	40,000	-	2.800%	2006	No	2003	11	-	-	-

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	A	B	C	D	E	F	G	H	I	J	K
2											
3	A	B	C	D	E	F	G	H	I	J	K
3	Project	Original Principal	Current Principal	Interest Rate	Due Date	Replacement?	In Service Date	Month	Rollover Date	Rollover Rate	
307	304	BPA PROGRAM	20,000	-	2.500%	2006	No	2003	9	-	-
308	305	BPA PROGRAM	75,000	-	2.300%	2006	No	2003	7	-	-
309	306	BPA PROGRAM	25,000	-	2.950%	2007	No	2003	7	-	-
310	307	BPA PROGRAM	40,000	-	2.900%	2007	No	2003	4	-	-
311	308	BPA PROGRAM	40,000	40,000	5.550%	2033	No	2003	4	-	-
312	309	BPA PROGRAM	50,000	-	3.450%	2007	No	2004	7	-	-
313	310	BPA PROGRAM	30,000	-	3.100%	2007	No	2004	9	-	-
314	311	BPA PROGRAM	65,000	-	2.950%	2007	No	2004	4	-	-
315	312	BPA PROGRAM	46,643	-	2.500%	2007	No	2004	1	-	-
316	313	BPA PROGRAM	25,000	-	3.800%	2008	No	2004	7	-	-
317	314	BPA PROGRAM	65,000	-	2.950%	2008	No	2004	1	-	-
318	315	BPA PROGRAM	40,000	40,000	5.600%	2034	No	2004	9	-	-
319	316	BPA PROGRAM	40,000	40,000	4.000%	2009	No	2005	6	-	-
320	317	BPA PROGRAM	27,010	27,010	3.750%	2009	No	2005	11	-	-
321	318	BPA PROGRAM	40,000	40,000	5.500%	2035	No	2005	4	-	-
322	319	BPA PROGRAM	40,000	40,000	5.400%	2035	No	2005	1	-	-
323	320	BPA PROGRAM	45,000	45,000	5.250%	2035	No	2005	9	-	-
324	321	BPA PROGRAM	70,000	70,000	5.350%	2009	No	2006	7	2040	5.520%
325	322	BPA PROGRAM	20,000	20,000	5.050%	2009	No	2006	3	-	-
326	323	BPA PROGRAM	20,000	20,000	4.950%	2010	No	2006	9	-	-
327	324	BPA PROGRAM	5,319	5,319	4.950%	2010	No	2006	9	-	-
328	325	BPA PROGRAM	50,000	50,000	5.200%	2010	No	2007	7	2032	4.980%
329	326	BPA PROGRAM	25,000	25,000	5.100%	2010	No	2007	1	-	-
330	327	BPA PROGRAM	40,000	40,000	4.850%	2012	No	2007	3	2026	6.010%
331	328	BPA PROGRAM	35,000	35,000	6.400%	2037	No	2007	6	2040	5.510%
332	329	BPA PROGRAM	40,000	40,000	3.358%	2011	No	2008	5	2022	5.230%
333	330	BPA PROGRAM	25,000	25,000	3.151%	2011	No	2008	9	-	-
334	331	BPA PROGRAM	30,000	30,000	3.913%	2012	No	2008	7	2026	6.010%
335	332	BPA PROGRAM	25,000	25,000	3.444%	2012	No	2008	9	-	-
336	333	BPA PROGRAM	30,000	30,000	3.200%	2012	No	2008	1	2030	6.180%
337	334	ENVIRONMENT	40,000	-	6.950%	2012	No	1997	11	-	-
338	335	ENVIRONMENT	30,000	30,000	6.050%	2010	No	2001	1	-	-
339	336	ENVIRONMENT	30,000	-	3.050%	2006	No	2002	9	-	-
340	337	ENVIRONMENT	20,000	20,000	5.050%	2009	No	2006	3	-	-
341	338	ENVIRONMENT	10,000	10,000	3.151%	2011	No	2008	9	-	-

Table 10-2: Projected Federal Investments (\$000s)(FY 2010)

	A	B	C	D	E	F	G	H	I
1	Table 10-2								
2	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>	<b>G</b>	<b>H</b>	<b>I</b>
3		<b>Project</b>	<b>Original Principal</b>	<b>Current Principal</b>	<b>Interest Rate</b>	<b>Due Date</b>	<b>Replace ment?</b>	<b>Service Date</b>	<b>Month</b>
4	1	BPA PROGRAM	50,000	50,000	3.830%	2020	No	2009	1
5	2	BPA PROGRAM	35,000	35,000	4.253%	2022	No	2009	4
6	3	BPA PROGRAM	20,000	20,000	4.200%	2022	No	2009	1
7	4	BPA PROGRAM	30,000	30,000	6.330%	2044	No	2009	6
8	5	BPA PROGRAM	30,000	30,000	6.330%	2044	No	2009	9
9	6	BPA PROGRAM	10,000	10,000	6.330%	2044	No	2009	9
10	7	BPA PROGRAM	439,390	439,390	6.240%	2045	No	2010	3
11	8	ENVIRONMENT	4,567	4,567	5.010%	2025	No	2010	3

Table 10-3: Historical Federal Investments (\$000s)(FY 2011)

	A	B	C	D	E	F	G	H	I	J	K
1	Table 10-3										
2		<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>	<b>G</b>	<b>H</b>	<b>I</b>	<b>J</b>
3		<b>Project</b>	<b>Original Principal</b>	<b>Current Principal</b>	<b>Interest Rate</b>	<b>Due Date</b>	<b>Replacem ent?</b>	<b>In Service Date</b>	<b>Month</b>	<b>Rollover Date</b>	<b>Rollover Rate</b>
4	1	BONNEVILLE POWER ADMINISTRATION	6,812	-	2.500%	1985	No	1940	-	-	-
5	2	BONNEVILLE POWER ADMINISTRATION	18,906	-	2.500%	1986	No	1941	-	-	-
6	3	BONNEVILLE POWER ADMINISTRATION	461	-	2.500%	1986	No	1941	-	-	-
7	4	BONNEVILLE POWER ADMINISTRATION	8,446	-	2.500%	1987	No	1942	-	-	-
8	5	BONNEVILLE POWER ADMINISTRATION	1,052	-	2.500%	1987	No	1942	-	-	-
9	6	BONNEVILLE POWER ADMINISTRATION	16,083	-	2.500%	1988	No	1943	-	-	-
10	7	BONNEVILLE POWER ADMINISTRATION	4,538	-	2.500%	1988	No	1943	-	-	-
11	8	BONNEVILLE POWER ADMINISTRATION	583	-	2.500%	1989	No	1944	-	-	-
12	9	BONNEVILLE POWER ADMINISTRATION	249	-	2.500%	1989	No	1944	-	-	-
13	10	BONNEVILLE POWER ADMINISTRATION	3,366	-	2.500%	1990	No	1945	-	-	-
14	11	BONNEVILLE POWER ADMINISTRATION	1,306	-	2.500%	1990	No	1945	-	-	-
15	12	BONNEVILLE POWER ADMINISTRATION	2,488	-	2.500%	1991	No	1946	-	-	-
16	13	BONNEVILLE POWER ADMINISTRATION	732	-	2.500%	1991	No	1946	-	-	-
17	14	BONNEVILLE POWER ADMINISTRATION	1,773	-	2.500%	1992	No	1947	-	-	-
18	15	BONNEVILLE POWER ADMINISTRATION	1,330	-	2.500%	1992	No	1947	-	-	-
19	16	BONNEVILLE POWER ADMINISTRATION	7,468	-	2.500%	1993	No	1948	-	-	-
20	17	BONNEVILLE POWER ADMINISTRATION	2,290	-	2.500%	1993	No	1948	-	-	-
21	18	BONNEVILLE POWER ADMINISTRATION	6,809	-	2.500%	1994	No	1949	-	-	-
22	19	BONNEVILLE POWER ADMINISTRATION	2,719	-	2.500%	1994	No	1949	-	-	-
23	20	BONNEVILLE POWER ADMINISTRATION	24,111	-	2.500%	1995	No	1950	-	-	-
24	21	BONNEVILLE POWER ADMINISTRATION	6,124	-	2.500%	1995	No	1950	-	-	-
25	22	BONNEVILLE POWER ADMINISTRATION	13,266	-	2.500%	1996	No	1951	-	-	-
26	23	BONNEVILLE POWER ADMINISTRATION	7,040	-	2.500%	1996	No	1951	-	-	-
27	24	BONNEVILLE POWER ADMINISTRATION	18,610	-	2.500%	1997	No	1952	-	-	-
28	25	BONNEVILLE POWER ADMINISTRATION	8,979	-	2.500%	1997	No	1952	-	-	-
29	26	BONNEVILLE POWER ADMINISTRATION	23,550	-	6.330%	1998	No	1953	-	-	-
30	27	BONNEVILLE POWER ADMINISTRATION	11,605	-	6.330%	1998	No	1953	-	-	-
31	28	BONNEVILLE POWER ADMINISTRATION	23,614	-	6.510%	1999	No	1954	-	-	-
32	29	BONNEVILLE POWER ADMINISTRATION	17,370	-	6.510%	1999	No	1954	-	-	-
33	30	BONNEVILLE POWER ADMINISTRATION	11,827	-	6.620%	2000	No	1955	-	-	-
34	31	BONNEVILLE POWER ADMINISTRATION	10,283	-	6.620%	2000	No	1955	-	-	-
35	32	BONNEVILLE POWER ADMINISTRATION	32,221	-	6.710%	2001	No	1956	-	-	-
36	33	BONNEVILLE POWER ADMINISTRATION	14,573	-	6.710%	2001	No	1956	-	-	-
37	34	BONNEVILLE POWER ADMINISTRATION	15,980	-	6.790%	2002	No	1957	-	-	-
38	35	BONNEVILLE POWER ADMINISTRATION	7,933	-	6.790%	2002	No	1957	-	-	-
39	36	BONNEVILLE POWER ADMINISTRATION	15,593	-	6.840%	2003	No	1958	-	-	-
40	37	BONNEVILLE POWER ADMINISTRATION	10,654	-	6.840%	2003	No	1958	-	-	-
41	38	BONNEVILLE POWER ADMINISTRATION	8,863	-	6.880%	2004	No	1959	-	-	-
42	39	BONNEVILLE POWER ADMINISTRATION	8,157	-	6.880%	2004	No	1959	-	-	-
43	40	BONNEVILLE POWER ADMINISTRATION	4,218	-	6.910%	2005	No	1960	-	-	-
44	41	BONNEVILLE POWER ADMINISTRATION	3,598	-	6.910%	2005	No	1960	-	-	-
45	42	BONNEVILLE POWER ADMINISTRATION	11,271	-	6.950%	2006	No	1961	-	-	-
46	43	BONNEVILLE POWER ADMINISTRATION	4,468	-	6.950%	2006	No	1961	-	-	-
47	44	BONNEVILLE POWER ADMINISTRATION	19,597	-	6.980%	2007	No	1962	-	-	-
48	45	BONNEVILLE POWER ADMINISTRATION	4,877	-	6.980%	2007	No	1962	-	-	-
49	46	BONNEVILLE POWER ADMINISTRATION	4,876	-	7.020%	2008	No	1963	-	-	-
50	47	BONNEVILLE POWER ADMINISTRATION	4,330	-	7.020%	2008	No	1963	-	-	-
51	48	BONNEVILLE POWER ADMINISTRATION	904	-	7.020%	2008	No	1963	-	-	-
52	49	BONNEVILLE POWER ADMINISTRATION	803	-	7.020%	2008	No	1963	-	-	-
53	50	BONNEVILLE POWER ADMINISTRATION	5,738	5,738	7.060%	2009	No	1964	-	-	-
54	51	BONNEVILLE POWER ADMINISTRATION	4,151	4,151	7.060%	2009	No	1964	-	-	-
55	52	BONNEVILLE POWER ADMINISTRATION	10,171	-	7.090%	2010	No	1965	-	-	-
56	53	BONNEVILLE POWER ADMINISTRATION	7,248	78	7.090%	2010	No	1965	-	-	-
57	54	BONNEVILLE POWER ADMINISTRATION	5,202	-	7.090%	2010	No	1965	-	-	-
58	55	BONNEVILLE POWER ADMINISTRATION	3,706	3,706	7.090%	2010	No	1965	-	-	-
59	56	BONNEVILLE POWER ADMINISTRATION	11,830	11,830	7.130%	2011	No	1966	-	-	-
60	57	BONNEVILLE POWER ADMINISTRATION	6,647	6,353	7.130%	2011	No	1966	-	-	-
61	58	BONNEVILLE POWER ADMINISTRATION	3,049	3,049	7.130%	2011	No	1966	-	-	-
62	59	BONNEVILLE POWER ADMINISTRATION	1,714	-	7.130%	2011	No	1966	-	-	-
63	60	BONNEVILLE POWER ADMINISTRATION	19,003	19,003	7.160%	2012	No	1967	-	-	-
64	61	BONNEVILLE POWER ADMINISTRATION	14,300	-	7.160%	2012	No	1967	-	-	-
65	62	BONNEVILLE POWER ADMINISTRATION	4,566	355	7.160%	2012	No	1967	-	-	-
66	63	BONNEVILLE POWER ADMINISTRATION	3,436	-	7.160%	2012	No	1967	-	-	-
67	64	BONNEVILLE POWER ADMINISTRATION	41,070	18,250	7.200%	2013	No	1968	-	-	-

Table 10-3: Historical Federal Investments (\$000s)(FY 2011)

	A	B	C	D	E	F	G	H	I	J	K
2		A	B	C	D	E	F	G	H	I	J
3		Project	Original Principal	Current Principal	Interest Rate	Due Date	Replacem ent?	In Service Date	Month	Rollover Date	Rollover Rate
68	65	BONNEVILLE POWER ADMINISTRATION	23,202	-	7.200%	2013	No	1968	-	-	-
69	66	BONNEVILLE POWER ADMINISTRATION	8,076	-	7.200%	2013	No	1968	-	-	-
70	67	BONNEVILLE POWER ADMINISTRATION	4,562	-	7.200%	2013	No	1968	-	-	-
71	68	BONNEVILLE POWER ADMINISTRATION	42,237	19,198	7.230%	2014	No	1969	-	-	-
72	69	BONNEVILLE POWER ADMINISTRATION	22,537	-	7.230%	2014	No	1969	-	-	-
73	70	BONNEVILLE POWER ADMINISTRATION	384	-	7.230%	2014	No	1969	-	-	-
74	71	BONNEVILLE POWER ADMINISTRATION	205	-	7.230%	2014	No	1969	-	-	-
75	72	BONNEVILLE POWER ADMINISTRATION	64,977	64,977	7.270%	2015	No	1970	-	-	-
76	73	BONNEVILLE POWER ADMINISTRATION	24,412	23,551	7.270%	2015	No	1970	-	-	-
77	74	BONNEVILLE POWER ADMINISTRATION	7,995	7,995	7.270%	2015	No	1970	-	-	-
78	75	BONNEVILLE POWER ADMINISTRATION	3,003	-	7.270%	2015	No	1970	-	-	-
79	76	BONNEVILLE POWER ADMINISTRATION	17,805	-	7.290%	2016	No	1971	-	-	-
80	77	BONNEVILLE POWER ADMINISTRATION	17,766	-	7.290%	2016	No	1971	-	-	-
81	78	BONNEVILLE POWER ADMINISTRATION	12,051	-	7.290%	2016	No	1971	-	-	-
82	79	BONNEVILLE POWER ADMINISTRATION	12,025	-	7.290%	2016	No	1971	-	-	-
83	80	BONNEVILLE POWER ADMINISTRATION	29,326	-	7.290%	2017	No	1972	-	-	-
84	81	BONNEVILLE POWER ADMINISTRATION	21,170	-	7.290%	2017	No	1972	-	-	-
85	82	BONNEVILLE POWER ADMINISTRATION	3,980	-	7.290%	2017	No	1972	-	-	-
86	83	BONNEVILLE POWER ADMINISTRATION	2,873	-	7.290%	2017	No	1972	-	-	-
87	84	BONNEVILLE POWER ADMINISTRATION	33,788	33,788	7.280%	2018	No	1973	-	-	-
88	85	BONNEVILLE POWER ADMINISTRATION	21,656	5,041	7.280%	2018	No	1973	-	-	-
89	86	BONNEVILLE POWER ADMINISTRATION	16,368	-	7.280%	2018	No	1973	-	-	-
90	87	BONNEVILLE POWER ADMINISTRATION	10,491	-	7.280%	2018	No	1973	-	-	-
91	88	BONNEVILLE POWER ADMINISTRATION	21,826	21,826	7.270%	2019	No	1974	-	-	-
92	89	BONNEVILLE POWER ADMINISTRATION	20,984	20,984	7.270%	2019	No	1974	-	-	-
93	90	BONNEVILLE POWER ADMINISTRATION	12,563	12,563	7.270%	2019	No	1974	-	-	-
94	91	BONNEVILLE POWER ADMINISTRATION	12,079	12,079	7.270%	2019	No	1974	-	-	-
95	92	BONNEVILLE POWER ADMINISTRATION	32,026	32,026	7.250%	2020	No	1975	-	-	-
96	93	BONNEVILLE POWER ADMINISTRATION	21,916	21,916	7.250%	2020	No	1975	-	-	-
97	94	BONNEVILLE POWER ADMINISTRATION	17,158	17,158	7.250%	2020	No	1975	-	-	-
98	95	BONNEVILLE POWER ADMINISTRATION	11,742	11,742	7.250%	2020	No	1975	-	-	-
99	96	BONNEVILLE POWER ADMINISTRATION	61,025	61,025	7.230%	2021	No	1976	-	-	-
100	97	BONNEVILLE POWER ADMINISTRATION	2,212	2,212	7.230%	2021	No	1976	-	-	-
101	98	BONNEVILLE POWER ADMINISTRATION	33,702	33,702	7.210%	2022	No	1977	-	-	-
102	99	BONNEVILLE POWER ADMINISTRATION	5,380	5,380	7.210%	2022	No	1977	-	-	-
103	100	BONNEVILLE POWER ADMINISTRATION	4,981	4,981	7.210%	2022	No	1977	-	-	-
104	101	BONNEVILLE POWER ADMINISTRATION	3,948	3,948	7.210%	2022	No	1977	-	-	-
105	102	BPA PROGRAM	24,222	-	8.950%	2013	No	1978	9	-	-
106	103	BPA PROGRAM	17,770	-	8.950%	2013	No	1978	9	-	-
107	104	BPA PROGRAM	4,619	-	8.950%	2013	No	1978	9	-	-
108	105	BPA PROGRAM	3,389	-	8.950%	2013	No	1978	9	-	-
109	106	BPA PROGRAM	21,228	-	9.900%	2014	No	1979	9	-	-
110	107	BPA PROGRAM	14,340	-	9.900%	2014	No	1979	9	-	-
111	108	BPA PROGRAM	10,610	-	9.900%	2014	No	1979	9	-	-
112	109	BPA PROGRAM	2,888	-	9.900%	2014	No	1979	9	-	-
113	110	BPA PROGRAM	605	-	9.900%	2014	No	1979	9	-	-
114	111	BPA PROGRAM	165	-	9.900%	2014	No	1979	9	-	-
115	112	BPA PROGRAM	98	-	9.900%	2014	No	1979	9	-	-
116	113	BPA PROGRAM	66	-	9.900%	2014	No	1979	9	-	-
117	114	BPA PROGRAM	26,690	-	9.450%	2014	No	1979	6	-	-
118	115	BPA PROGRAM	21,977	-	9.450%	2014	No	1979	6	-	-
119	116	BPA PROGRAM	9,804	-	9.450%	2014	No	1979	6	-	-
120	117	BPA PROGRAM	7,010	-	9.450%	2014	No	1979	6	-	-
121	118	BPA PROGRAM	6,026	-	9.450%	2014	No	1979	6	-	-
122	119	BPA PROGRAM	1,870	-	9.450%	2014	No	1979	6	-	-
123	120	BPA PROGRAM	1,371	-	9.450%	2014	No	1979	6	-	-
124	121	BPA PROGRAM	150	-	9.450%	2014	No	1979	6	-	-
125	122	BPA PROGRAM	102	-	9.450%	2014	No	1979	6	-	-
126	123	BPA PROGRAM	44,811	-	13.000%	2015	No	1980	9	-	-
127	124	BPA PROGRAM	39,696	-	13.000%	2015	No	1980	9	-	-
128	125	BPA PROGRAM	10,806	-	13.000%	2015	No	1980	9	-	-
129	126	BPA PROGRAM	9,292	-	13.000%	2015	No	1980	9	-	-
130	127	BPA PROGRAM	4,253	-	13.000%	2015	No	1980	9	-	-
131	128	BPA PROGRAM	2,263	-	13.000%	2015	No	1980	9	-	-
132	129	BPA PROGRAM	1,707	-	13.000%	2015	No	1980	9	-	-
133	130	BPA PROGRAM	1,469	-	13.000%	2015	No	1980	9	-	-

Table 10-3: Historical Federal Investments (\$000s)(FY 2011)

	A	B	C	D	E	F	G	H	I	J	K
2	A		B	C	D	E	F	G	H	I	J
3	Project		Original Principal	Current Principal	Interest Rate	Due Date	Replacem ent?	Service Date	Month	Rollover Date	Rollover Rate
134	131	BPA PROGRAM	616	-	13.000%	2015	No	1980	9	-	-
135	132	BPA PROGRAM	56	-	13.000%	2015	No	1980	9	-	-
136	133	BPA PROGRAM	21	-	13.000%	2015	No	1980	9	-	-
137	134	BPA PROGRAM	10	-	13.000%	2015	No	1980	9	-	-
138	135	BPA PROGRAM	119,775	-	16.600%	2016	No	1981	9	-	-
139	136	BPA PROGRAM	54,821	-	16.600%	2016	No	1981	9	-	-
140	137	BPA PROGRAM	277	-	16.600%	2016	No	1981	9	-	-
141	138	BPA PROGRAM	127	-	16.600%	2016	No	1981	9	-	-
142	139	BPA PROGRAM	46,980	-	14.400%	2017	No	1982	4	-	-
143	140	BPA PROGRAM	37,455	-	14.400%	2017	No	1982	4	-	-
144	141	BPA PROGRAM	34,221	-	14.400%	2017	No	1982	12	-	-
145	142	BPA PROGRAM	15,663	-	14.400%	2017	No	1982	12	-	-
146	143	BPA PROGRAM	9,975	-	14.400%	2017	No	1982	4	-	-
147	144	BPA PROGRAM	4,566	-	14.400%	2017	No	1982	4	-	-
148	145	BPA PROGRAM	551	-	14.400%	2017	No	1982	4	-	-
149	146	BPA PROGRAM	439	-	14.400%	2017	No	1982	4	-	-
150	147	BPA PROGRAM	80	-	14.400%	2017	No	1982	12	-	-
151	148	BPA PROGRAM	36	-	14.400%	2017	No	1982	12	-	-
152	149	BPA PROGRAM	23	-	14.400%	2017	No	1982	4	-	-
153	150	BPA PROGRAM	11	-	14.400%	2017	No	1982	4	-	-
154	151	BPA PROGRAM	77,807	-	14.150%	2017	No	1982	7	-	-
155	152	BPA PROGRAM	3,677	-	14.150%	2017	No	1982	7	-	-
156	153	BPA PROGRAM	2,932	-	14.150%	2017	No	1982	7	-	-
157	154	BPA PROGRAM	402	-	14.150%	2017	No	1982	7	-	-
158	155	BPA PROGRAM	105	-	14.150%	2017	No	1982	7	-	-
159	156	BPA PROGRAM	43	-	14.150%	2017	No	1982	7	-	-
160	157	BPA PROGRAM	34	-	14.150%	2017	No	1982	7	-	-
161	158	BPA PROGRAM	37,235	-	12.250%	2018	No	1983	9	-	-
162	159	BPA PROGRAM	6,708	-	12.250%	2018	No	1983	9	-	-
163	160	BPA PROGRAM	814	-	12.250%	2018	No	1983	9	-	-
164	161	BPA PROGRAM	203	-	12.250%	2018	No	1983	9	-	-
165	162	BPA PROGRAM	35	-	12.250%	2018	No	1983	9	-	-
166	163	BPA PROGRAM	4	-	12.250%	2018	No	1983	9	-	-
167	164	BPA PROGRAM	1	-	12.250%	2018	No	1983	9	-	-
168	165	BPA PROGRAM	29,806	-	11.700%	2018	No	1983	6	-	-
169	166	BPA PROGRAM	154	-	11.700%	2018	No	1983	6	-	-
170	167	BPA PROGRAM	40	-	11.700%	2018	No	1983	6	-	-
171	168	BPA PROGRAM	39,741	-	10.850%	2018	No	1983	11	-	-
172	169	BPA PROGRAM	205	-	10.850%	2018	No	1983	11	-	-
173	170	BPA PROGRAM	54	-	10.850%	2018	No	1983	11	-	-
174	171	BPA PROGRAM	50,567	-	13.050%	2019	No	1984	9	-	-
175	172	BPA PROGRAM	9,109	-	13.050%	2019	No	1984	9	-	-
176	173	BPA PROGRAM	276	-	13.050%	2019	No	1984	9	-	-
177	174	BPA PROGRAM	48	-	13.050%	2019	No	1984	9	-	-
178	175	BPA PROGRAM	25,283	-	12.300%	2019	No	1984	11	-	-
179	176	BPA PROGRAM	4,555	-	12.300%	2019	No	1984	11	-	-
180	177	BPA PROGRAM	138	-	12.300%	2019	No	1984	11	-	-
181	178	BPA PROGRAM	24	-	12.300%	2019	No	1984	11	-	-
182	179	BPA PROGRAM	15,182	-	11.250%	2029	No	1985	6	-	-
183	180	BPA PROGRAM	460	-	11.250%	2029	No	1985	6	-	-
184	181	BPA PROGRAM	80	-	11.250%	2029	No	1985	6	-	-
185	182	BPA PROGRAM	84,278	-	11.250%	2030	No	1985	6	-	-
186	183	BPA PROGRAM	68,194	-	8.150%	1996	No	1986	3	-	-
187	184	BPA PROGRAM	30,161	-	8.150%	1996	No	1986	3	-	-
188	185	BPA PROGRAM	870	-	8.150%	1996	No	1986	3	-	-
189	186	BPA PROGRAM	443	-	8.150%	1996	No	1986	3	-	-
190	187	BPA PROGRAM	169	-	8.150%	1996	No	1986	3	-	-
191	188	BPA PROGRAM	157	-	8.150%	1996	No	1986	3	-	-
192	189	BPA PROGRAM	5	-	8.150%	1996	No	1986	3	-	-
193	190	BPA PROGRAM	1	-	8.150%	1996	No	1986	3	-	-
194	191	BPA PROGRAM	180,054	-	8.950%	2031	No	1986	6	-	-
195	192	BPA PROGRAM	57,354	-	8.950%	2031	No	1986	6	-	-
196	193	BPA PROGRAM	40,000	-	8.950%	2031	No	1986	6	-	-
197	194	BPA PROGRAM	11,668	-	8.950%	2031	No	1986	6	-	-
198	195	BPA PROGRAM	5,161	-	8.950%	2031	No	1986	6	-	-
199	196	BPA PROGRAM	3,117	-	8.950%	2031	No	1986	6	-	-

Table 10-3: Historical Federal Investments (\$000s)(FY 2011)

	A	B	C	D	E	F	G	H	I	J	K
2	A		B	C	D	E	F	G	H	I	J
3	Project		Original Principal	Current Principal	Interest Rate	Due Date	Replacem ent?	In Service Date	Month	Rollover Date	Rollover Rate
200	197	BPA PROGRAM	1,819	-	8.950%	2031	No	1986	6	-	-
201	198	BPA PROGRAM	722	-	8.950%	2031	No	1986	6	-	-
202	199	BPA PROGRAM	76	-	8.950%	2031	No	1986	6	-	-
203	200	BPA PROGRAM	29	-	8.950%	2031	No	1986	6	-	-
204	201	BPA PROGRAM	96,519	-	8.350%	1992	No	1987	6	-	-
205	202	BPA PROGRAM	2,498	-	8.350%	1992	No	1987	6	-	-
206	203	BPA PROGRAM	983	-	8.350%	1992	No	1987	6	-	-
207	204	BPA PROGRAM	86,958	-	9.550%	2017	No	1987	7	-	-
208	205	BPA PROGRAM	4,113	-	9.550%	2017	No	1987	7	-	-
209	206	BPA PROGRAM	3,274	-	9.550%	2017	No	1987	7	-	-
210	207	BPA PROGRAM	569	-	9.550%	2017	No	1987	7	-	-
211	208	BPA PROGRAM	48	-	9.550%	2017	No	1987	7	-	-
212	209	BPA PROGRAM	38	-	9.550%	2017	No	1987	7	-	-
213	210	BPA PROGRAM	37,342	-	9.550%	2032	No	1987	7	-	-
214	211	BPA PROGRAM	7,903	-	9.550%	2032	No	1987	7	-	-
215	212	BPA PROGRAM	3,109	-	9.550%	2032	No	1987	7	-	-
216	213	BPA PROGRAM	631	-	9.550%	2032	No	1987	7	-	-
217	214	BPA PROGRAM	618	-	9.550%	2032	No	1987	7	-	-
218	215	BPA PROGRAM	285	-	9.550%	2032	No	1987	7	-	-
219	216	BPA PROGRAM	112	-	9.550%	2032	No	1987	7	-	-
220	217	BPA PROGRAM	54,409	-	9.300%	2032	No	1987	4	-	-
221	218	BPA PROGRAM	43,236	-	9.300%	2032	No	1987	4	-	-
222	219	BPA PROGRAM	1,409	-	9.300%	2032	No	1987	4	-	-
223	220	BPA PROGRAM	554	-	9.300%	2032	No	1987	4	-	-
224	221	BPA PROGRAM	281	-	9.300%	2032	No	1987	4	-	-
225	222	BPA PROGRAM	111	-	9.300%	2032	No	1987	4	-	-
226	223	BPA PROGRAM	43,417	-	9.500%	2018	No	1988	2	-	-
227	224	BPA PROGRAM	283	-	9.500%	2018	No	1988	2	-	-
228	225	BPA PROGRAM	30,004	-	9.900%	2033	No	1988	6	-	-
229	226	BPA PROGRAM	9,018	-	9.900%	2033	No	1988	6	-	-
230	227	BPA PROGRAM	752	-	9.900%	2033	No	1988	6	-	-
231	228	BPA PROGRAM	226	-	9.900%	2033	No	1988	6	-	-
232	229	BPA PROGRAM	45,870	-	9.500%	2033	No	1988	2	-	-
233	230	BPA PROGRAM	28,513	-	9.500%	2033	No	1988	2	-	-
234	231	BPA PROGRAM	27,887	-	9.500%	2033	No	1988	2	-	-
235	232	BPA PROGRAM	22,923	-	9.500%	2033	No	1988	2	-	-
236	233	BPA PROGRAM	20,677	-	9.500%	2033	No	1988	2	-	-
237	234	BPA PROGRAM	1,725	-	9.500%	2033	No	1988	2	-	-
238	235	BPA PROGRAM	954	-	9.500%	2033	No	1988	2	-	-
239	236	BPA PROGRAM	933	-	9.500%	2033	No	1988	2	-	-
240	237	BPA PROGRAM	518	-	9.500%	2033	No	1988	2	-	-
241	238	BPA PROGRAM	56,257	-	8.950%	1999	No	1989	5	-	-
242	239	BPA PROGRAM	16,909	-	8.950%	1999	No	1989	5	-	-
243	240	BPA PROGRAM	1,410	-	8.950%	1999	No	1989	5	-	-
244	241	BPA PROGRAM	424	-	8.950%	1999	No	1989	5	-	-
245	242	BPA PROGRAM	41,894	-	9.250%	2030	No	1990	1	-	-
246	243	BPA PROGRAM	3,824	-	9.250%	2030	No	1990	1	-	-
247	244	BPA PROGRAM	3,008	-	9.250%	2030	No	1990	1	-	-
248	245	BPA PROGRAM	1,149	-	9.250%	2030	No	1990	1	-	-
249	246	BPA PROGRAM	96	-	9.250%	2030	No	1990	1	-	-
250	247	BPA PROGRAM	29	-	9.250%	2030	No	1990	1	-	-
251	248	BPA PROGRAM	54,145	-	7.550%	1995	No	1991	2	-	-
252	249	BPA PROGRAM	5,855	-	7.550%	1995	No	1991	2	-	-
253	250	BPA PROGRAM	80,000	-	6.200%	1995	No	1992	4	-	-
254	251	BPA PROGRAM	50,000	-	7.000%	1997	No	1992	4	-	-
255	252	BPA PROGRAM	28,300	-	7.000%	1997	No	1992	4	-	-
256	253	BPA PROGRAM	107,800	-	6.600%	2000	No	1992	8	-	-
257	254	BPA PROGRAM	107,700	-	7.250%	2007	No	1992	8	-	-
258	255	BPA PROGRAM	147,521	-	8.800%	2032	No	1992	4	-	-
259	256	BPA PROGRAM	2,479	-	8.800%	2032	No	1992	4	-	-
260	257	BPA PROGRAM	150,000	-	8.130%	2032	No	1992	7	-	-
261	258	BPA PROGRAM	50,000	-	6.050%	1998	No	1993	10	-	-
262	259	BPA PROGRAM	99,962	-	8.350%	2033	No	1993	10	-	-
263	260	BPA PROGRAM	130,000	-	7.800%	2033	No	1993	2	-	-
264	261	BPA PROGRAM	100,000	-	7.500%	2033	No	1993	4	-	-
265	262	BPA PROGRAM	110,000	-	6.950%	2033	No	1993	8	-	-

Table 10-3: Historical Federal Investments (\$000s)(FY 2011)

	A	B	C	D	E	F	G	H	I	J	K
2	A		B	C	D	E	F	G	H	I	J
3	Project	Original Principal	Current Principal	Interest Rate	Due Date	Replace ment?	In Service Date	Month	Rollover Date	Rollover Rate	
266	263	BPA PROGRAM	49,489	-	7.100%	1998	No	1994	5	-	-
267	264	BPA PROGRAM	43,155	-	7.100%	1998	No	1994	5	-	-
268	265	BPA PROGRAM	4,456	-	7.100%	1998	No	1994	5	-	-
269	266	BPA PROGRAM	55,000	-	7.650%	1999	No	1994	9	-	-
270	267	BPA PROGRAM	50,000	-	8.200%	2034	No	1994	5	-	-
271	268	BPA PROGRAM	50,000	-	7.050%	2034	No	1994	1	-	-
272	269	BPA PROGRAM	108,400	-	6.850%	2034	No	1994	10	-	-
273	270	BPA PROGRAM	50,000	-	6.850%	2034	No	1994	10	-	-
274	271	BPA PROGRAM	55,000	-	8.350%	2001	No	1995	1	-	-
275	272	BPA PROGRAM	65,000	-	7.700%	2025	No	1995	8	-	-
276	273	BPA PROGRAM	49,933	-	7.700%	2025	No	1995	7	-	-
277	274	BPA PROGRAM	54,378	-	5.900%	2003	No	1996	1	-	-
278	275	BPA PROGRAM	70,000	-	7.050%	2006	No	1996	8	-	-
279	276	BPA PROGRAM	22,600	-	6.800%	2004	No	1997	1	-	-
280	277	BPA PROGRAM	80,000	-	6.900%	2005	No	1997	5	-	-
281	278	BPA PROGRAM	111,254	-	6.650%	2007	No	1997	8	-	-
282	279	BPA PROGRAM	75,300	-	6.000%	2008	No	1998	4	-	-
283	280	BPA PROGRAM	36,819	-	5.750%	2008	No	1998	8	-	-
284	281	BPA PROGRAM	72,700	72,700	6.000%	2009	No	1998	5	-	-
285	282	BPA PROGRAM	40,000	40,000	6.200%	2011	No	1998	5	-	-
286	283	BPA PROGRAM	50,000	50,000	6.650%	2028	No	1998	4	-	-
287	284	BPA PROGRAM	112,300	112,300	5.850%	2028	No	1998	8	-	-
288	285	BPA PROGRAM	106,500	106,500	5.850%	2028	No	1998	8	2031	5.510%
289	286	BPA PROGRAM	98,900	98,900	6.700%	2032	No	1998	5	-	-
290	287	BPA PROGRAM	40,000	-	6.200%	2002	No	1999	9	-	-
291	288	BPA PROGRAM	26,200	-	5.950%	2004	No	1999	5	-	-
292	289	BPA PROGRAM	59,050	59,050	5.900%	2014	No	1999	2	2025	6.100%
293	290	BPA PROGRAM	15,300	-	6.850%	2003	No	2000	8	-	-
294	291	BPA PROGRAM	40,000	-	6.400%	2003	No	2000	11	-	-
295	292	BPA PROGRAM	39,052	-	7.000%	2004	No	2000	7	-	-
296	293	BPA PROGRAM	53,500	-	7.150%	2005	No	2000	1	-	-
297	294	BPA PROGRAM	40,000	-	6.750%	2006	No	2000	9	-	-
298	295	BPA PROGRAM	20,000	-	5.650%	2005	No	2001	1	-	-
299	296	BPA PROGRAM	59,932	59,932	6.050%	2010	No	2001	1	-	-
300	297	BPA PROGRAM	25,000	25,000	5.950%	2011	No	2001	6	-	-
301	298	BPA PROGRAM	50,000	50,000	5.750%	2011	No	2001	8	2026	5.410%
302	299	BPA PROGRAM	108,010	-	4.600%	2005	No	2002	3	-	-
303	300	BPA PROGRAM	60,000	-	3.750%	2005	No	2002	6	-	-
304	301	BPA PROGRAM	100,000	-	3.050%	2006	No	2002	9	-	-
305	302	BPA PROGRAM	4,938	-	3.000%	2006	No	2003	10	-	-
306	303	BPA PROGRAM	40,000	-	2.800%	2006	No	2003	11	-	-
307	304	BPA PROGRAM	20,000	-	2.500%	2006	No	2003	9	-	-
308	305	BPA PROGRAM	75,000	-	2.300%	2006	No	2003	7	-	-
309	306	BPA PROGRAM	25,000	-	2.950%	2007	No	2003	7	-	-
310	307	BPA PROGRAM	40,000	-	2.900%	2007	No	2003	4	-	-
311	308	BPA PROGRAM	40,000	40,000	5.550%	2033	No	2003	4	-	-
312	309	BPA PROGRAM	50,000	-	3.450%	2007	No	2004	7	-	-
313	310	BPA PROGRAM	30,000	-	3.100%	2007	No	2004	9	-	-
314	311	BPA PROGRAM	65,000	-	2.950%	2007	No	2004	4	-	-
315	312	BPA PROGRAM	46,643	-	2.500%	2007	No	2004	1	-	-
316	313	BPA PROGRAM	25,000	-	3.800%	2008	No	2004	7	-	-
317	314	BPA PROGRAM	65,000	-	2.950%	2008	No	2004	1	-	-
318	315	BPA PROGRAM	40,000	40,000	5.600%	2034	No	2004	9	-	-
319	316	BPA PROGRAM	40,000	40,000	4.000%	2009	No	2005	6	-	-
320	317	BPA PROGRAM	27,010	27,010	3.750%	2009	No	2005	11	-	-
321	318	BPA PROGRAM	40,000	40,000	5.500%	2035	No	2005	4	-	-
322	319	BPA PROGRAM	40,000	40,000	5.400%	2035	No	2005	1	-	-
323	320	BPA PROGRAM	45,000	45,000	5.250%	2035	No	2005	9	-	-
324	321	BPA PROGRAM	70,000	70,000	5.350%	2009	No	2006	7	2040	5.520%
325	322	BPA PROGRAM	20,000	20,000	5.050%	2009	No	2006	3	-	-
326	323	BPA PROGRAM	20,000	20,000	4.950%	2010	No	2006	9	-	-
327	324	BPA PROGRAM	5,319	5,319	4.950%	2010	No	2006	9	-	-
328	325	BPA PROGRAM	50,000	50,000	5.200%	2010	No	2007	7	2032	4.980%
329	326	BPA PROGRAM	25,000	25,000	5.100%	2010	No	2007	1	-	-
330	327	BPA PROGRAM	40,000	40,000	4.850%	2012	No	2007	3	2026	6.010%
331	328	BPA PROGRAM	35,000	35,000	6.400%	2037	No	2007	6	2040	5.510%

Table 10-3: Historical Federal Investments (\$000s)(FY 2011)

	A	B	C	D	E	F	G	H	I	J	K
2	A		B	C	D	E	F	G	H	I	J
3	Project		Original Principal	Current Principal	Interest Rate	Due Date	Replacem ent?	In Service Date	Month	Rollover Date	Rollover Rate
332	329	BPA PROGRAM	40,000	40,000	3.358%	2011	No	2008	5	2022	5.230%
333	330	BPA PROGRAM	25,000	25,000	3.151%	2011	No	2008	9	-	-
334	331	BPA PROGRAM	30,000	30,000	3.913%	2012	No	2008	7	2026	6.010%
335	332	BPA PROGRAM	25,000	25,000	3.444%	2012	No	2008	9	-	-
336	333	BPA PROGRAM	30,000	30,000	3.200%	2012	No	2008	1	2030	6.180%
337	334	ENVIRONMENT	40,000	-	6.950%	2012	No	1997	11	-	-
338	335	ENVIRONMENT	30,000	30,000	6.050%	2010	No	2001	1	-	-
339	336	ENVIRONMENT	30,000	-	3.050%	2006	No	2002	9	-	-
340	337	ENVIRONMENT	20,000	20,000	5.050%	2009	No	2006	3	-	-
341	338	ENVIRONMENT	10,000	10,000	3.151%	2011	No	2008	9	-	-

Table 10-4: Projected Federal Investments (\$000s)(FY 2011)

	A	B	C	D	E	F	G	H	I
1									
2		<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>	<b>G</b>	<b>H</b>
3		<b>Project</b>	<b>Original Principal</b>	<b>Current Principal</b>	<b>Interest Rate</b>	<b>Due Date</b>	<b>Replace ment?</b>	<b>Service Date</b>	<b>Month</b>
4	1	BPA PROGRAM	50,000	50,000	3.830%	2020	No	2009	1
5	2	BPA PROGRAM	35,000	35,000	4.253%	2022	No	2009	4
6	3	BPA PROGRAM	20,000	20,000	4.200%	2022	No	2009	1
7	4	BPA PROGRAM	30,000	30,000	6.330%	2044	No	2009	6
8	5	BPA PROGRAM	30,000	30,000	6.330%	2044	No	2009	9
9	6	BPA PROGRAM	10,000	10,000	6.330%	2044	No	2009	9
10	7	BPA PROGRAM	439,390	439,390	6.240%	2045	No	2010	3
11	8	ENVIRONMENT	4,567	4,567	5.010%	2025	No	2010	3
12	9	BPA PROGRAM	449,836	449,836	7.030%	2046	No	2011	3
13	10	ENVIRONMENT	4,739	4,739	5.900%	2026	No	2011	3

**11. REPAYMENT STUDY RESULTS CURRENT STUDY**

Table 11-1: Summary of Interest (\$000s) (FY 2010)

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Project	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
2	BONNEVILLE POWER ADMINISTRATION	35,356	32,979	27,538	19,653	9,234	6,152	3,722	2,416	1,272	1,272	752	-
3													
4	TOTAL APPROPRIATIONS	35,356	32,979	27,538	19,653	9,234	6,152	3,722	2,416	1,272	1,272	752	-
5													
6	BPA BORROWING:												
7													
8	BPA PROGRAM	76,982	88,568	100,542	105,544	116,083	125,733	135,737	145,857	156,210	166,788	177,590	176,555
9	ENVIRONMENT	3,140	2,245	544	229	229	229	229	229	229	229	229	229
10	PREMIUMS	-	-	-	-	-	-	-	-	-	-	4,797	5,627
11	(LESS INTEREST INCOME)	-6,618	-6,899	-6,615	-5,572	-2,555	-2,387	-2,091	-2,126	-1,855	-2,143	-6,615	-6,288
12	TOTAL BPA BORROWING	73,503	83,914	94,472	100,201	113,756	123,575	133,876	143,960	154,583	164,874	176,000	176,122
13													
14	TOTALS	108,859	116,892	122,010	119,854	122,990	129,726	137,597	146,376	155,855	166,146	176,752	176,122

Table 11-1: Summary of Interest (\$000s) (FY 2010)

	A	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA
1	Project	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
2	BONNEVILLE POWER ADMINISTRATION	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3															
4	TOTAL APPROPRIATIONS	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5															
6	BPA BORROWING:														
7															
8	BPA PROGRAM	177,803	178,319	180,330	181,383	182,320	182,571	183,045	183,389	183,667	184,220	184,808	186,036	187,326	190,135
9	ENVIRONMENT	229	229	229	229	229	-	-	-	-	-	-	-	-	-
10	PREMIUMS	7,504	3,442	6,894	7,150	5,406	3,161	7,731	3,425	7,591	6,492	3,580	5,528	4,680	2,475
11	(LESS INTEREST INCOME)	-6,275	-6,271	-6,248	-6,382	-6,808	-6,810	-6,806	-6,804	-6,802	-6,796	-6,790	-6,775	-6,076	-4,713
12	TOTAL BPA BORROWING	179,260	175,719	181,204	182,380	181,147	178,922	183,969	180,011	184,456	183,916	181,598	184,789	185,931	187,898
13															
14	TOTALS	179,260	175,719	181,204	182,380	181,147	178,922	183,969	180,011	184,456	183,916	181,598	184,789	185,931	187,898

Table 11-1: Summary of Interest (\$000s) (FY 2010)

	A	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM
1	Project	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	Total
2	BONNEVILLE POWER ADMINISTRATION	-	-	-	-	-	-	-	-	-	-	-	140,345
3													
4	TOTAL APPROPRIATIONS	-	-	-	-	-	-	-	-	-	-	-	140,345
5													
6	BPA BORROWING:												
7													
8	BPA PROGRAM	196,545	198,257	200,161	209,451	218,112	220,509	221,687	222,545	223,448	224,417	225,480	6,498,153
9	ENVIRONMENT	-	-	-	-	-	-	-	-	-	-	-	9,132
10	PREMIUMS	2,458	6,100	1,834	2,132	5,304	3,838	5,940	5,901	5,854	5,799	5,736	136,378
11	(LESS INTEREST INCOME)	-6,802	-6,422	-3,609	-3,934	-6,395	-7,009	-6,993	-6,982	-6,970	-6,957	-6,944	-211,137
12	TOTAL BPA BORROWING	192,201	197,935	198,386	207,648	217,021	217,339	220,634	221,464	222,332	223,259	224,271	6,432,525
13													
14	TOTALS	192,201	197,935	198,386	207,648	217,021	217,339	220,634	221,464	222,332	223,259	224,271	6,572,870

Table 11-2: Interest Calculation Summary (\$000s) (FY 2010)

	A	B	C	D	E	F	G	H
1	Date	Project	TYPE	Principal	Rate	Interest	Premium	Total
2	FY 2009	BONNEVILLE POWER ADMINISTRATION	HISTORICAL	488,605	7.236%	35,356	-	35,356
3	FY 2009	BPA PROGRAM	HISTORICAL	1,361,711	5.438%	74,050	-	74,050
4	FY 2009	BPA PROGRAM	NEW	135,000	2.172%	2,932	-	2,932
5	FY 2009	ENVIRONMENT	HISTORICAL	60,000	5.234%	3,140	-	3,140
6	FY 2009	Float	HISTORICAL	-	-	-6,618	-	-6,618
7	<b>Subtotal</b>			<b>\$2,045,316</b>	-	<b>\$108,859</b>	-	<b>\$108,859</b>
8								
9	FY 2010	BONNEVILLE POWER ADMINISTRATION	HISTORICAL	455,656	7.238%	32,979	-	32,979
10	FY 2010	BPA PROGRAM	HISTORICAL	1,377,001	5.436%	74,859	-	74,859
11	FY 2010	BPA PROGRAM	NEW	439,390	3.120%	13,709	-	13,709
12	FY 2010	ENVIRONMENT	HISTORICAL	40,000	5.325%	2,130	-	2,130
13	FY 2010	ENVIRONMENT	NEW	4,567	2.505%	114	-	114
14	FY 2010	Float	HISTORICAL	-	-	-6,899	-	-6,899
15	<b>Subtotal</b>			<b>\$2,316,614</b>	-	<b>\$116,892</b>	-	<b>\$116,892</b>
16								
17	FY 2011	BONNEVILLE POWER ADMINISTRATION	HISTORICAL	380,751	7.233%	27,538	-	27,538
18	FY 2011	BPA PROGRAM	HISTORICAL	1,706,140	5.627%	96,012	-	96,012
19	FY 2011	ENVIRONMENT	HISTORICAL	14,567	3.734%	544	-	544
20	FY 2011	BPA PROGRAM	NEW	145,191	3.120%	4,530	-	4,530
21	FY 2011	Float	HISTORICAL	-	-	-6,615	-	-6,615
22	<b>Subtotal</b>			<b>\$2,246,649</b>	-	<b>\$122,010</b>	-	<b>\$122,010</b>
23								
24	FY 2012	BONNEVILLE POWER ADMINISTRATION	HISTORICAL	271,879	7.229%	19,653	-	19,653
25	FY 2012	BPA PROGRAM	HISTORICAL	1,616,140	5.682%	91,836	-	91,836
26	FY 2012	ENVIRONMENT	HISTORICAL	4,567	5.010%	229	-	229
27	FY 2012	BPA PROGRAM	HISTORICAL	145,191	6.240%	9,060	-	9,060
28	FY 2012	BPA PROGRAM	NEW	148,963	3.120%	4,648	-	4,648
29	FY 2012	Float	HISTORICAL	-	-	-5,572	-	-5,572
30	<b>Subtotal</b>			<b>\$2,186,740</b>	-	<b>\$119,854</b>	-	<b>\$119,854</b>
31								
32	FY 2013	BONNEVILLE POWER ADMINISTRATION	HISTORICAL	127,923	7.218%	9,234	-	9,234
33	FY 2013	BPA PROGRAM	HISTORICAL	1,591,140	5.842%	92,962	-	92,962
34	FY 2013	ENVIRONMENT	HISTORICAL	4,567	5.010%	229	-	229
35	FY 2013	BPA PROGRAM	HISTORICAL	294,154	6.240%	18,355	-	18,355
36	FY 2013	BPA PROGRAM	NEW	152,734	3.120%	4,765	-	4,765
37	FY 2013	Float	HISTORICAL	-	-	-2,555	-	-2,555
38	<b>Subtotal</b>			<b>\$2,170,518</b>	-	<b>\$122,990</b>	-	<b>\$122,990</b>
39								
40	FY 2014	BONNEVILLE POWER ADMINISTRATION	HISTORICAL	85,217	7.219%	6,152	-	6,152
41	FY 2014	BPA PROGRAM	HISTORICAL	1,591,140	5.842%	92,962	-	92,962
42	FY 2014	ENVIRONMENT	HISTORICAL	4,567	5.010%	229	-	229
43	FY 2014	BPA PROGRAM	HISTORICAL	446,888	6.240%	27,886	-	27,886
44	FY 2014	BPA PROGRAM	NEW	156,566	3.120%	4,885	-	4,885
45	FY 2014	Float	HISTORICAL	-	-	-2,387	-	-2,387
46	<b>Subtotal</b>			<b>\$2,284,378</b>	-	<b>\$129,726</b>	-	<b>\$129,726</b>
47								
48	FY 2015	BONNEVILLE POWER ADMINISTRATION	HISTORICAL	51,609	7.211%	3,722	-	3,722
49	FY 2015	BPA PROGRAM	HISTORICAL	1,591,140	5.850%	93,080	-	93,080
50	FY 2015	ENVIRONMENT	HISTORICAL	4,567	5.010%	229	-	229
51	FY 2015	BPA PROGRAM	HISTORICAL	603,454	6.240%	37,656	-	37,656
52	FY 2015	BPA PROGRAM	NEW	160,313	3.120%	5,002	-	5,002
53	FY 2015	Float	HISTORICAL	-	-	-2,091	-	-2,091
54	<b>Subtotal</b>			<b>\$2,411,083</b>	-	<b>\$137,597</b>	-	<b>\$137,597</b>
55								
56	FY 2016	BONNEVILLE POWER ADMINISTRATION	HISTORICAL	33,506	7.210%	2,416	-	2,416
57	FY 2016	BPA PROGRAM	HISTORICAL	1,591,140	5.850%	93,080	-	93,080
58	FY 2016	ENVIRONMENT	HISTORICAL	4,567	5.010%	229	-	229
59	FY 2016	BPA PROGRAM	HISTORICAL	763,767	6.240%	47,659	-	47,659
60	FY 2016	BPA PROGRAM	NEW	164,045	3.120%	5,118	-	5,118
61	FY 2016	Float	HISTORICAL	-	-	-2,126	-	-2,126
62	<b>Subtotal</b>			<b>\$2,557,025</b>	-	<b>\$146,376</b>	-	<b>\$146,376</b>
63								
64	FY 2017	BONNEVILLE POWER ADMINISTRATION	HISTORICAL	17,643	7.210%	1,272	-	1,272

Table 11-2: Interest Calculation Summary (\$000s) (FY 2010)

1	A	B	C	D	E	F	G	H
	Date	Project	TYPE	Principal	Rate	Interest	Premium	Total
65	FY 2017	BPA PROGRAM	HISTORICAL	1,591,140	5.850%	93,080	-	93,080
66	FY 2017	ENVIRONMENT	HISTORICAL	4,567	5.010%	229	-	229
67	FY 2017	BPA PROGRAM	HISTORICAL	927,812	6.240%	57,895	-	57,895
68	FY 2017	BPA PROGRAM	NEW	167,759	3.120%	5,234	-	5,234
69	FY 2017	Float	HISTORICAL	-	-	-1,855	-	-1,855
70	<b>Subtotal</b>			<b>\$2,708,921</b>	-	<b>\$155,855</b>	-	<b>\$155,855</b>
71								
72	FY 2018	BONNEVILLE POWER ADMINISTRATION	HISTORICAL	17,641	7.210%	1,272	-	1,272
73	FY 2018	BPA PROGRAM	HISTORICAL	1,591,140	5.850%	93,080	-	93,080
74	FY 2018	ENVIRONMENT	HISTORICAL	4,567	5.010%	229	-	229
75	FY 2018	BPA PROGRAM	HISTORICAL	1,095,571	6.240%	68,364	-	68,364
76	FY 2018	BPA PROGRAM	NEW	171,303	3.120%	5,345	-	5,345
77	FY 2018	Float	HISTORICAL	-	-	-2,143	-	-2,143
78	<b>Subtotal</b>			<b>\$2,880,222</b>	-	<b>\$166,146</b>	-	<b>\$166,146</b>
79								
80	FY 2019	BONNEVILLE POWER ADMINISTRATION	HISTORICAL	10,425	7.210%	752	-	752
81	FY 2019	BPA PROGRAM	HISTORICAL	1,591,140	5.850%	93,080	4,797	97,877
82	FY 2019	ENVIRONMENT	HISTORICAL	4,567	5.010%	229	-	229
83	FY 2019	BPA PROGRAM	HISTORICAL	1,266,874	6.240%	79,053	-	79,053
84	FY 2019	BPA PROGRAM	NEW	174,891	3.120%	5,457	-	5,457
85	FY 2019	Float	HISTORICAL	-	-	-6,615	-	-6,615
86	<b>Subtotal</b>			<b>\$3,047,897</b>	-	<b>\$171,955</b>	<b>\$4,797</b>	<b>\$176,752</b>
87								
88	FY 2020	BPA PROGRAM	HISTORICAL	1,409,281	5.749%	81,019	5,627	86,647
89	FY 2020	ENVIRONMENT	HISTORICAL	4,567	5.010%	229	-	229
90	FY 2020	BPA PROGRAM	HISTORICAL	1,441,765	6.240%	89,966	-	89,966
91	FY 2020	BPA PROGRAM	NEW	178,490	3.120%	5,569	-	5,569
92	FY 2020	Float	HISTORICAL	-	-	-6,288	-	-6,288
93	<b>Subtotal</b>			<b>\$3,034,103</b>	-	<b>\$170,495</b>	<b>\$5,627</b>	<b>\$176,122</b>
94								
95	FY 2021	BPA PROGRAM	HISTORICAL	1,230,815	5.770%	71,022	7,504	78,526
96	FY 2021	ENVIRONMENT	HISTORICAL	4,567	5.010%	229	-	229
97	FY 2021	BPA PROGRAM	HISTORICAL	1,620,255	6.240%	101,104	-	101,104
98	FY 2021	BPA PROGRAM	NEW	181,955	3.120%	5,677	-	5,677
99	FY 2021	Float	HISTORICAL	-	-	-6,275	-	-6,275
100	<b>Subtotal</b>			<b>\$3,037,592</b>	-	<b>\$171,756</b>	<b>\$7,504</b>	<b>\$179,260</b>
101								
102	FY 2022	BPA PROGRAM	HISTORICAL	1,055,447	5.692%	60,079	3,442	63,521
103	FY 2022	ENVIRONMENT	HISTORICAL	4,567	5.010%	229	-	229
104	FY 2022	BPA PROGRAM	HISTORICAL	1,802,210	6.240%	112,458	-	112,458
105	FY 2022	BPA PROGRAM	NEW	185,323	3.120%	5,782	-	5,782
106	FY 2022	Float	HISTORICAL	-	-	-6,271	-	-6,271
107	<b>Subtotal</b>			<b>\$3,047,547</b>	-	<b>\$172,277</b>	<b>\$3,442</b>	<b>\$175,719</b>
108								
109	FY 2023	BPA PROGRAM	HISTORICAL	876,496	5.752%	50,420	4,850	55,270
110	FY 2023	ENVIRONMENT	HISTORICAL	4,567	5.010%	229	-	229
111	FY 2023	BPA PROGRAM	HISTORICAL	1,987,533	6.240%	124,022	2,044	126,066
112	FY 2023	BPA PROGRAM	NEW	188,717	3.120%	5,888	-	5,888
113	FY 2023	Float	HISTORICAL	-	-	-6,248	-	-6,248
114	<b>Subtotal</b>			<b>\$3,057,313</b>	-	<b>\$174,310</b>	<b>\$6,894</b>	<b>\$181,204</b>
115								
116	FY 2024	BPA PROGRAM	HISTORICAL	752,850	5.672%	42,704	-	42,704
117	FY 2024	ENVIRONMENT	HISTORICAL	4,567	5.010%	229	-	229
118	FY 2024	BPA PROGRAM	HISTORICAL	2,126,404	6.240%	132,688	7,150	139,838
119	FY 2024	BPA PROGRAM	NEW	192,018	3.120%	5,991	-	5,991
120	FY 2024	Float	HISTORICAL	-	-	-6,382	-	-6,382
121	<b>Subtotal</b>			<b>\$3,075,839</b>	-	<b>\$175,229</b>	<b>\$7,150</b>	<b>\$182,380</b>
122								
123	FY 2025	BPA PROGRAM	HISTORICAL	752,850	5.672%	42,704	-	42,704
124	FY 2025	ENVIRONMENT	HISTORICAL	4,567	5.010%	229	-	229
125	FY 2025	BPA PROGRAM	HISTORICAL	2,139,905	6.240%	133,530	5,406	138,936

Table 11-2: Interest Calculation Summary (\$000s) (FY 2010)

1	A	B	C	D	E	F	G	H
	Date	Project	TYPE	Principal	Rate	Interest	Premium	Total
126	FY 2025	BPA PROGRAM	NEW	195,061	3.120%	6,086	-	6,086
127	FY 2025	Float	HISTORICAL	-	-	-6,808	-	-6,808
128	<b>Subtotal</b>			<b>\$3,092,383</b>	<b>-</b>	<b>\$175,741</b>	<b>\$5,406</b>	<b>\$181,147</b>
129								
130	FY 2026	BPA PROGRAM	HISTORICAL	693,800	5.636%	39,102	-	39,102
131	FY 2026	BPA PROGRAM	HISTORICAL	2,200,277	6.240%	137,297	3,161	140,459
132	FY 2026	BPA PROGRAM	NEW	197,787	3.120%	6,171	-	6,171
133	FY 2026	Float	HISTORICAL	-	-	-6,810	-	-6,810
134	<b>Subtotal</b>			<b>\$3,091,864</b>	<b>-</b>	<b>\$175,761</b>	<b>\$3,161</b>	<b>\$178,922</b>
135								
136	FY 2027	BPA PROGRAM	HISTORICAL	573,800	5.610%	32,190	-	32,190
137	FY 2027	BPA PROGRAM	HISTORICAL	2,317,462	6.240%	144,610	7,731	152,340
138	FY 2027	BPA PROGRAM	NEW	200,150	3.120%	6,245	-	6,245
139	FY 2027	Float	HISTORICAL	-	-	-6,806	-	-6,806
140	<b>Subtotal</b>			<b>\$3,091,412</b>	<b>-</b>	<b>\$176,239</b>	<b>\$7,731</b>	<b>\$183,969</b>
141								
142	FY 2028	BPA PROGRAM	HISTORICAL	573,800	5.610%	32,190	-	32,190
143	FY 2028	BPA PROGRAM	HISTORICAL	2,321,998	6.240%	144,893	3,425	148,318
144	FY 2028	BPA PROGRAM	NEW	202,131	3.120%	6,306	-	6,306
145	FY 2028	Float	HISTORICAL	-	-	-6,804	-	-6,804
146	<b>Subtotal</b>			<b>\$3,097,929</b>	<b>-</b>	<b>\$176,586</b>	<b>\$3,425</b>	<b>\$180,011</b>
147								
148	FY 2029	BPA PROGRAM	HISTORICAL	461,500	5.473%	25,259	-	25,259
149	FY 2029	BPA PROGRAM	HISTORICAL	2,436,806	6.240%	152,057	7,591	159,647
150	FY 2029	BPA PROGRAM	NEW	203,568	3.120%	6,351	-	6,351
151	FY 2029	Float	HISTORICAL	-	-	-6,802	-	-6,802
152	<b>Subtotal</b>			<b>\$3,101,874</b>	<b>-</b>	<b>\$176,865</b>	<b>\$7,591</b>	<b>\$184,456</b>
153								
154	FY 2030	BPA PROGRAM	HISTORICAL	461,500	5.473%	25,259	-	25,259
155	FY 2030	BPA PROGRAM	HISTORICAL	2,445,155	6.240%	152,578	6,492	159,070
156	FY 2030	BPA PROGRAM	NEW	204,618	3.120%	6,384	-	6,384
157	FY 2030	Float	HISTORICAL	-	-	-6,796	-	-6,796
158	<b>Subtotal</b>			<b>\$3,111,273</b>	<b>-</b>	<b>\$177,424</b>	<b>\$6,492</b>	<b>\$183,916</b>
159								
160	FY 2031	BPA PROGRAM	HISTORICAL	431,500	5.424%	23,405	-	23,405
161	FY 2031	BPA PROGRAM	HISTORICAL	2,483,983	6.240%	155,001	3,580	158,580
162	FY 2031	BPA PROGRAM	NEW	205,213	3.120%	6,403	-	6,403
163	FY 2031	Float	HISTORICAL	-	-	-6,790	-	-6,790
164	<b>Subtotal</b>			<b>\$3,120,696</b>	<b>-</b>	<b>\$178,018</b>	<b>\$3,580</b>	<b>\$181,598</b>
165								
166	FY 2032	BPA PROGRAM	HISTORICAL	325,000	5.396%	17,537	-	17,537
167	FY 2032	BPA PROGRAM	HISTORICAL	2,597,572	6.240%	162,089	5,528	167,616
168	FY 2032	BPA PROGRAM	NEW	205,493	3.120%	6,411	-	6,411
169	FY 2032	Float	HISTORICAL	-	-	-6,775	-	-6,775
170	<b>Subtotal</b>			<b>\$3,128,065</b>	<b>-</b>	<b>\$179,261</b>	<b>\$5,528</b>	<b>\$184,789</b>
171								
172	FY 2033	BPA PROGRAM	HISTORICAL	275,000	5.471%	15,047	-	15,047
173	FY 2033	BPA PROGRAM	HISTORICAL	2,658,145	6.240%	165,868	4,680	170,549
174	FY 2033	BPA PROGRAM	NEW	205,504	3.120%	6,412	-	6,412
175	FY 2033	Float	HISTORICAL	-	-	-6,076	-	-6,076
176	<b>Subtotal</b>			<b>\$3,138,649</b>	<b>-</b>	<b>\$181,251</b>	<b>\$4,680</b>	<b>\$185,931</b>
177								
178	FY 2034	BPA PROGRAM	HISTORICAL	235,000	5.458%	12,827	-	12,827
179	FY 2034	BPA PROGRAM	HISTORICAL	2,738,976	6.240%	170,912	2,475	173,388
180	FY 2034	BPA PROGRAM	NEW	205,027	3.120%	6,397	-	6,397
181	FY 2034	Float	HISTORICAL	-	-	-4,713	-	-4,713
182	<b>Subtotal</b>			<b>\$3,179,003</b>	<b>-</b>	<b>\$185,423</b>	<b>\$2,475</b>	<b>\$187,898</b>
183								
184	FY 2035	BPA PROGRAM	HISTORICAL	195,000	5.429%	10,587	-	10,587
185	FY 2035	BPA PROGRAM	HISTORICAL	2,877,886	6.240%	179,580	2,458	182,038

Table 11-2: Interest Calculation Summary (\$000s) (FY 2010)

1	A	B	C	D	E	F	G	H
	Date	Project	TYPE	Principal	Rate	Interest	Premium	Total
186	FY 2035	BPA PROGRAM	NEW	204,432	3.120%	6,378	-	6,378
187	FY 2035	Float	HISTORICAL	-	-	-6,802	-	-6,802
188	<b>Subtotal</b>			<b>\$3,277,318</b>	<b>-</b>	<b>\$189,742</b>	<b>\$2,458</b>	<b>\$192,201</b>
189								
190	FY 2036	BPA PROGRAM	HISTORICAL	70,000	5.520%	3,864	-	3,864
191	FY 2036	BPA PROGRAM	HISTORICAL	3,013,373	6.240%	188,034	6,100	194,135
192	FY 2036	BPA PROGRAM	NEW	203,810	3.120%	6,359	-	6,359
193	FY 2036	Float	HISTORICAL	-	-	-6,422	-	-6,422
194	<b>Subtotal</b>			<b>\$3,287,183</b>	<b>-</b>	<b>\$191,835</b>	<b>\$6,100</b>	<b>\$197,935</b>
195								
196	FY 2037	BPA PROGRAM	HISTORICAL	70,000	5.520%	3,864	-	3,864
197	FY 2037	BPA PROGRAM	HISTORICAL	3,044,286	6.240%	189,963	1,834	191,797
198	FY 2037	BPA PROGRAM	NEW	203,009	3.120%	6,334	-	6,334
199	FY 2037	Float	HISTORICAL	-	-	-3,609	-	-3,609
200	<b>Subtotal</b>			<b>\$3,317,295</b>	<b>-</b>	<b>\$196,552</b>	<b>\$1,834</b>	<b>\$198,386</b>
201								
202	FY 2038	BPA PROGRAM	HISTORICAL	70,000	5.520%	3,864	-	3,864
203	FY 2038	BPA PROGRAM	HISTORICAL	3,193,588	6.240%	199,280	2,132	201,411
204	FY 2038	BPA PROGRAM	NEW	202,139	3.120%	6,307	-	6,307
205	FY 2038	Float	HISTORICAL	-	-	-3,934	-	-3,934
206	<b>Subtotal</b>			<b>\$3,465,727</b>	<b>-</b>	<b>\$205,516</b>	<b>\$2,132</b>	<b>\$207,648</b>
207								
208	FY 2039	BPA PROGRAM	HISTORICAL	70,000	5.520%	3,864	-	3,864
209	FY 2039	BPA PROGRAM	HISTORICAL	3,332,803	6.240%	207,967	5,304	213,271
210	FY 2039	BPA PROGRAM	NEW	201,332	3.120%	6,282	-	6,282
211	FY 2039	Float	HISTORICAL	-	-	-6,395	-	-6,395
212	<b>Subtotal</b>			<b>\$3,604,135</b>	<b>-</b>	<b>\$211,718</b>	<b>\$5,304</b>	<b>\$217,021</b>
213								
214	FY 2040	BPA PROGRAM	HISTORICAL	70,000	5.520%	3,864	-	3,864
215	FY 2040	BPA PROGRAM	HISTORICAL	3,371,560	6.240%	210,385	3,838	214,223
216	FY 2040	BPA PROGRAM	NEW	200,643	3.120%	6,260	-	6,260
217	FY 2040	Float	HISTORICAL	-	-	-7,009	-	-7,009
218	<b>Subtotal</b>			<b>\$3,642,203</b>	<b>-</b>	<b>\$213,501</b>	<b>\$3,838</b>	<b>\$217,339</b>
219								
220	FY 2041	BPA PROGRAM	HISTORICAL	3,452,611	6.240%	215,443	5,940	221,383
221	FY 2041	BPA PROGRAM	NEW	200,138	3.120%	6,244	-	6,244
222	FY 2041	Float	HISTORICAL	-	-	-6,993	-	-6,993
223	<b>Subtotal</b>			<b>\$3,652,749</b>	<b>-</b>	<b>\$214,694</b>	<b>\$5,940</b>	<b>\$220,634</b>
224								
225	FY 2042	BPA PROGRAM	HISTORICAL	3,466,516	6.240%	216,311	5,901	222,211
226	FY 2042	BPA PROGRAM	NEW	199,826	3.120%	6,235	-	6,235
227	FY 2042	Float	HISTORICAL	-	-	-6,982	-	-6,982
228	<b>Subtotal</b>			<b>\$3,666,342</b>	<b>-</b>	<b>\$215,563</b>	<b>\$5,901</b>	<b>\$221,464</b>
229								
230	FY 2043	BPA PROGRAM	HISTORICAL	3,480,998	6.240%	217,214	5,854	223,068
231	FY 2043	BPA PROGRAM	NEW	199,785	3.120%	6,233	-	6,233
232	FY 2043	Float	HISTORICAL	-	-	-6,970	-	-6,970
233	<b>Subtotal</b>			<b>\$3,680,783</b>	<b>-</b>	<b>\$216,478</b>	<b>\$5,854</b>	<b>\$222,332</b>
234								
235	FY 2044	BPA PROGRAM	HISTORICAL	3,496,361	6.240%	218,173	5,799	223,972
236	FY 2044	BPA PROGRAM	NEW	200,141	3.120%	6,244	-	6,244
237	FY 2044	Float	HISTORICAL	-	-	-6,957	-	-6,957
238	<b>Subtotal</b>			<b>\$3,696,502</b>	<b>-</b>	<b>\$217,460</b>	<b>\$5,799</b>	<b>\$223,259</b>
239								
240	FY 2045	BPA PROGRAM	HISTORICAL	3,513,049	6.240%	219,214	5,736	224,950
241	FY 2045	BPA PROGRAM	NEW	200,818	3.120%	6,266	-	6,266
242	FY 2045	Float	HISTORICAL	-	-	-6,944	-	-6,944
243	<b>Subtotal</b>			<b>\$3,713,867</b>	<b>-</b>	<b>\$218,535</b>	<b>\$5,736</b>	<b>\$224,271</b>
244								
245	<b>Grand Total</b>			<b>\$112,265,008</b>	<b>-</b>	<b>\$6,436,492</b>	<b>\$136,378</b>	<b>\$6,572,870</b>

Table 11-3: Summary of Amortization (\$000s) (FY 2010)

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Project	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
2	BONNEVILLE POWER ADMINISTRATION	32,949	74,905	108,872	143,956	42,706	33,608	18,103	15,863	1	7,216	10,425	-	-
3		-	-	-	-	-	-	-	-	-	-	-	-	-
4	TOTAL APPROPRIATIONS	32,949	74,905	108,872	143,956	42,706	33,608	18,103	15,863	1	7,216	10,425	-	-
5														
6	BPA BORROWING:													
7														
8	BPA PROGRAM	159,710	110,251	90,000	25,000	-	-	-	-	-	-	181,859	178,466	175,368
9	ENVIRONMENT	20,000	30,000	10,000	-	-	-	-	-	-	-	-	-	-
10		-	-	-	-	-	-	-	-	-	-	-	-	-
11	TOTAL BPA BORROWING	179,710	140,251	100,000	25,000	-	-	-	-	-	-	181,859	178,466	175,368
12		-	-	-	-	-	-	-	-	-	-	-	-	-
13	TOTALS	212,659	215,156	208,872	168,956	42,706	33,608	18,103	15,863	1	7,216	192,284	178,466	175,368

Table 11-3: Summary of Amortization (\$000s) (FY 2010)

	A	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE
1	Project	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
2	BONNEVILLE POWER ADMINISTRATION	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	TOTAL APPROPRIATIONS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5																		
6	BPA BORROWING:																	
7																		
8	BPA PROGRAM	178,951	173,492	178,517	193,739	200,601	195,614	199,623	195,219	195,791	198,123	194,921	164,672	106,118	193,945	172,897	53,707	62,924
9	ENVIRONMENT	-	-	-	4,567	-	-	-	-	-	-	-	-	-	-	-	-	-
10		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	TOTAL BPA BORROWING	178,951	173,492	178,517	198,306	200,601	195,614	199,623	195,219	195,791	198,123	194,921	164,672	106,118	193,945	172,897	53,707	62,924
12		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	TOTALS	178,951	173,492	178,517	198,306	200,601	195,614	199,623	195,219	195,791	198,123	194,921	164,672	106,118	193,945	172,897	53,707	62,924

Table 11-3: Summary of Amortization (\$000s) (FY 2010)

	A	AF	AG	AH	AI	AJ	AK	AL	AM
1	Project	2039	2040	2041	2042	2043	2044	2045	Total
2	BONNEVILLE POWER ADMINISTRATION	-	-	-	-	-	-	-	488,605
3		-	-	-	-	-	-	-	-
4	TOTAL APPROPRIATIONS	-	-	-	-	-	-	-	488,605
5									
6	BPA BORROWING:								
7									
8	BPA PROGRAM	162,575	189,591	186,233	185,344	184,422	183,452	182,406	5,053,533
9	ENVIRONMENT	-	-	-	-	-	-	-	64,567
10		-	-	-	-	-	-	-	-
11	TOTAL BPA BORROWING	162,575	189,591	186,233	185,344	184,422	183,452	182,406	5,118,100
12		-	-	-	-	-	-	-	-
13	TOTALS	162,575	189,591	186,233	185,344	184,422	183,452	182,406	5,606,705

Table 11-4: Application of Amortization (\$000s) (FY 2010)

	A	B	C	D	E	F	G	H	I	J
1	Date	Project	In Service	Due	Original Balance	Amount Available	Rate	Replace ment?	Rollover?	Amount Amortized
2	FY 2009	BONNEVILLE POWER ADMINISTRATION	1964	2009	4,151	4,151	7.060%	No	No	4,151
3	FY 2009	BONNEVILLE POWER ADMINISTRATION	1964	2009	5,738	5,738	7.060%	No	No	5,738
4	FY 2009	BPA PROGRAM	1998	2009	72,700	72,700	6.000%	No	No	72,700
5	FY 2009	ENVIRONMENT	2006	2009	20,000	20,000	5.050%	No	No	20,000
6	FY 2009	BPA PROGRAM	2006	2009	20,000	20,000	5.050%	No	No	20,000
7	FY 2009	BPA PROGRAM	2005	2009	40,000	40,000	4.000%	No	No	40,000
8	FY 2009	BPA PROGRAM	2005	2009	27,010	27,010	3.750%	No	No	27,010
9	FY 2009	BONNEVILLE POWER ADMINISTRATION	1973	2018	33,788	33,788	7.280%	No	No	18,019
10	FY 2009	BONNEVILLE POWER ADMINISTRATION	1973	2018	21,656	5,041	7.280%	No	No	5,041
11	<b>Subtotal</b>		-	-	<b>\$245,043</b>	<b>\$228,428</b>	-	<b>No</b>	<b>No</b>	<b>\$212,659</b>
12										
13	FY 2010	BONNEVILLE POWER ADMINISTRATION	1965	2010	3,706	3,706	7.090%	No	No	3,706
14	FY 2010	BONNEVILLE POWER ADMINISTRATION	1965	2010	7,248	78	7.090%	No	No	78
15	FY 2010	ENVIRONMENT	2001	2010	30,000	30,000	6.050%	No	No	30,000
16	FY 2010	BPA PROGRAM	2001	2010	59,932	59,932	6.050%	No	No	59,932
17	FY 2010	BPA PROGRAM	2007	2010	25,000	25,000	5.100%	No	No	25,000
18	FY 2010	BPA PROGRAM	2006	2010	5,319	5,319	4.950%	No	No	5,319
19	FY 2010	BPA PROGRAM	2006	2010	20,000	20,000	4.950%	No	No	20,000
20	FY 2010	BONNEVILLE POWER ADMINISTRATION	1970	2015	64,977	64,977	7.270%	No	No	23,806
21	FY 2010	BONNEVILLE POWER ADMINISTRATION	1970	2015	7,995	7,995	7.270%	No	No	7,995
22	FY 2010	BONNEVILLE POWER ADMINISTRATION	1970	2015	24,412	23,551	7.270%	No	No	23,551
23	FY 2010	BONNEVILLE POWER ADMINISTRATION	1973	2018	33,788	15,769	7.280%	No	No	15,769
24	<b>Subtotal</b>		-	-	<b>\$282,377</b>	<b>\$256,327</b>	-	<b>No</b>	<b>No</b>	<b>\$215,156</b>
25										
26	FY 2011	BONNEVILLE POWER ADMINISTRATION	1966	2011	11,830	11,830	7.130%	No	No	11,830
27	FY 2011	BONNEVILLE POWER ADMINISTRATION	1966	2011	3,049	3,049	7.130%	No	No	3,049
28	FY 2011	BONNEVILLE POWER ADMINISTRATION	1966	2011	6,647	6,353	7.130%	No	No	6,353
29	FY 2011	BPA PROGRAM	1998	2011	40,000	40,000	6.200%	No	No	40,000
30	FY 2011	BPA PROGRAM	2001	2011	25,000	25,000	5.950%	No	No	25,000
31	FY 2011	ENVIRONMENT	2008	2011	10,000	10,000	3.151%	No	No	10,000
32	FY 2011	BPA PROGRAM	2008	2011	25,000	25,000	3.151%	No	No	25,000
33	FY 2011	BONNEVILLE POWER ADMINISTRATION	1970	2015	64,977	41,171	7.270%	No	No	41,171
34	FY 2011	BONNEVILLE POWER ADMINISTRATION	1974	2019	20,984	20,984	7.270%	No	No	12,080
35	FY 2011	BONNEVILLE POWER ADMINISTRATION	1974	2019	12,563	12,563	7.270%	No	No	12,563
36	FY 2011	BONNEVILLE POWER ADMINISTRATION	1974	2019	21,826	21,826	7.270%	No	No	21,826
37	<b>Subtotal</b>		-	-	<b>\$241,876</b>	<b>\$217,776</b>	-	<b>No</b>	<b>No</b>	<b>\$208,872</b>
38										
39	FY 2012	BONNEVILLE POWER ADMINISTRATION	1967	2012	19,003	19,003	7.160%	No	No	19,003
40	FY 2012	BONNEVILLE POWER ADMINISTRATION	1967	2012	4,566	355	7.160%	No	No	355
41	FY 2012	BPA PROGRAM	2008	2012	25,000	25,000	3.444%	No	No	25,000
42	FY 2012	BONNEVILLE POWER ADMINISTRATION	1969	2014	42,237	19,198	7.230%	No	No	19,198
43	FY 2012	BONNEVILLE POWER ADMINISTRATION	1974	2019	12,079	12,079	7.270%	No	No	12,079
44	FY 2012	BONNEVILLE POWER ADMINISTRATION	1974	2019	20,984	8,904	7.270%	No	No	8,904
45	FY 2012	BONNEVILLE POWER ADMINISTRATION	1975	2020	32,026	32,026	7.250%	No	No	32,026
46	FY 2012	BONNEVILLE POWER ADMINISTRATION	1975	2020	21,916	21,916	7.250%	No	No	21,916
47	FY 2012	BONNEVILLE POWER ADMINISTRATION	1975	2020	17,158	17,158	7.250%	No	No	17,158
48	FY 2012	BONNEVILLE POWER ADMINISTRATION	1975	2020	11,742	11,742	7.250%	No	No	11,742
49	FY 2012	BONNEVILLE POWER ADMINISTRATION	1976	2021	2,212	2,212	7.230%	No	No	1,576
50	<b>Subtotal</b>		-	-	<b>\$208,923</b>	<b>\$169,593</b>	-	<b>No</b>	<b>No</b>	<b>\$168,956</b>
51										
52	FY 2013	BONNEVILLE POWER ADMINISTRATION	1968	2013	41,070	18,250	7.200%	No	No	18,250
53	FY 2013	BONNEVILLE POWER ADMINISTRATION	1976	2021	61,025	61,025	7.230%	No	No	23,819
54	FY 2013	BONNEVILLE POWER ADMINISTRATION	1976	2021	2,212	637	7.230%	No	No	637
55	<b>Subtotal</b>		-	-	<b>\$104,307</b>	<b>\$79,912</b>	-	<b>No</b>	<b>No</b>	<b>\$42,706</b>
56										
57	FY 2014	BONNEVILLE POWER ADMINISTRATION	1976	2021	61,025	37,206	7.230%	No	No	33,608
58	<b>Subtotal</b>		-	-	<b>\$61,025</b>	<b>\$37,206</b>	-	<b>No</b>	<b>No</b>	<b>\$33,608</b>
59										
60	FY 2015	BONNEVILLE POWER ADMINISTRATION	1976	2021	61,025	3,598	7.230%	No	No	3,598
61	FY 2015	BONNEVILLE POWER ADMINISTRATION	1977	2022	33,702	33,702	7.210%	No	No	9,524
62	FY 2015	BONNEVILLE POWER ADMINISTRATION	1977	2022	4,981	4,981	7.210%	No	No	4,981
63	<b>Subtotal</b>		-	-	<b>\$99,708</b>	<b>\$42,281</b>	-	<b>No</b>	<b>No</b>	<b>\$18,103</b>
64										
65	FY 2016	BONNEVILLE POWER ADMINISTRATION	1977	2022	33,702	24,178	7.210%	No	No	15,863
66	<b>Subtotal</b>		-	-	<b>\$33,702</b>	<b>\$24,178</b>	-	<b>No</b>	<b>No</b>	<b>\$15,863</b>
67										
68	FY 2017	BONNEVILLE POWER ADMINISTRATION	1977	2022	33,702	8,315	7.210%	No	No	1
69	<b>Subtotal</b>		-	-	<b>\$33,702</b>	<b>\$8,315</b>	-	<b>No</b>	<b>No</b>	<b>\$1</b>

Table 11-4: Application of Amortization (\$000s) (FY 2010)

	A	B	C	D	E	F	G	H	I	J
1	Date	Project	In Service	Due	Original Balance	Amount Available	Rate	Replace ment?	Rollover?	Amount Amortized
70										
71	FY 2018	BONNEVILLE POWER ADMINISTRATION	1977	2022	33,702	8,313	7.210%	No	No	7,216
72	<b>Subtotal</b>		-	-	<b>\$33,702</b>	<b>\$8,313</b>	-	<b>No</b>	<b>No</b>	<b>\$7,216</b>
73										
74	FY 2019	BONNEVILLE POWER ADMINISTRATION	1977	2022	3,948	3,948	7.210%	No	No	3,948
75	FY 2019	BONNEVILLE POWER ADMINISTRATION	1977	2022	5,380	5,380	7.210%	No	No	5,380
76	FY 2019	BONNEVILLE POWER ADMINISTRATION	1977	2022	33,702	1,097	7.210%	No	No	1,097
77	FY 2019	BPA PROGRAM	1998	2028	50,000	50,000	6.650%	No	No	50,000
78	FY 2019	BPA PROGRAM	1998	2032	98,900	98,900	6.700%	No	No	98,900
79	FY 2019	BPA PROGRAM	2007	2037	35,000	35,000	6.400%	No	No	32,959
80	<b>Subtotal</b>		-	-	<b>\$226,930</b>	<b>\$194,325</b>	-	<b>No</b>	<b>No</b>	<b>\$192,284</b>
81										
82	FY 2020	BPA PROGRAM	2009	2020	50,000	50,000	3.830%	No	No	50,000
83	FY 2020	BPA PROGRAM	2007	2037	35,000	2,041	6.400%	No	No	2,041
84	FY 2020	BPA PROGRAM	2009	2044	30,000	30,000	6.330%	No	No	30,000
85	FY 2020	BPA PROGRAM	2009	2044	30,000	30,000	6.330%	No	No	30,000
86	FY 2020	BPA PROGRAM	2009	2044	10,000	10,000	6.330%	No	No	10,000
87	FY 2020	BPA PROGRAM	2010	2045	439,390	439,390	6.240%	No	No	56,425
88	<b>Subtotal</b>		-	-	<b>\$594,390</b>	<b>\$561,431</b>	-	<b>No</b>	<b>No</b>	<b>\$178,466</b>
89										
90	FY 2021	BONNEVILLE POWER ADMINISTRATION	1976	2021	61,025	-0	7.230%	No	No	-0
91	FY 2021	BPA PROGRAM	2010	2045	439,390	382,965	6.240%	No	No	175,368
92	<b>Subtotal</b>		-	-	<b>\$500,415</b>	<b>\$382,965</b>	-	<b>No</b>	<b>No</b>	<b>\$175,368</b>
93										
94	FY 2022	BONNEVILLE POWER ADMINISTRATION	1977	2022	33,702	0	7.210%	No	No	0
95	FY 2022	BPA PROGRAM	2008	2022	40,000	40,000	5.230%	No	Yes	40,000
96	FY 2022	BPA PROGRAM	2009	2022	35,000	35,000	4.253%	No	No	35,000
97	FY 2022	BPA PROGRAM	2009	2022	20,000	20,000	4.200%	No	No	20,000
98	FY 2022	BPA PROGRAM	2010	2045	439,390	207,597	6.240%	No	No	83,951
99	<b>Subtotal</b>		-	-	<b>\$568,092</b>	<b>\$302,597</b>	-	<b>No</b>	<b>Yes</b>	<b>\$178,951</b>
100										
101	FY 2023	BPA PROGRAM	2010	2045	439,390	123,646	6.240%	No	No	123,646
102	FY 2023	BPA PROGRAM	2011	2046	145,191	145,191	6.240%	Yes	No	49,846
103	<b>Subtotal</b>		-	-	<b>\$584,581</b>	<b>\$268,837</b>	-	<b>Yes</b>	<b>No</b>	<b>\$173,492</b>
104										
105	FY 2024	BPA PROGRAM	2011	2046	145,191	95,345	6.240%	Yes	No	95,345
106	FY 2024	BPA PROGRAM	2012	2047	148,963	148,963	6.240%	Yes	No	83,172
107	<b>Subtotal</b>		-	-	<b>\$294,154</b>	<b>\$244,308</b>	-	<b>Yes</b>	<b>No</b>	<b>\$178,517</b>
108										
109	FY 2025	BPA PROGRAM	1999	2025	59,050	59,050	6.100%	No	Yes	59,050
110	FY 2025	ENVIRONMENT	2010	2025	4,567	4,567	5.010%	No	No	4,567
111	FY 2025	BPA PROGRAM	2012	2047	148,963	65,791	6.240%	Yes	No	65,791
112	FY 2025	BPA PROGRAM	2013	2048	152,734	152,734	6.240%	Yes	No	68,898
113	<b>Subtotal</b>		-	-	<b>\$365,314</b>	<b>\$282,142</b>	-	<b>Yes</b>	<b>Yes</b>	<b>\$198,306</b>
114										
115	FY 2026	BPA PROGRAM	2007	2026	40,000	40,000	6.010%	No	Yes	40,000
116	FY 2026	BPA PROGRAM	2008	2026	30,000	30,000	6.010%	No	Yes	30,000
117	FY 2026	BPA PROGRAM	2001	2026	50,000	50,000	5.410%	No	Yes	50,000
118	FY 2026	BPA PROGRAM	2013	2048	152,734	83,836	6.240%	Yes	No	80,601
119	<b>Subtotal</b>		-	-	<b>\$272,734</b>	<b>\$203,836</b>	-	<b>Yes</b>	<b>Yes</b>	<b>\$200,601</b>
120										
121	FY 2027	BPA PROGRAM	2013	2048	152,734	3,234	6.240%	Yes	No	3,234
122	FY 2027	BPA PROGRAM	2014	2049	156,566	156,566	6.240%	Yes	No	156,566
123	FY 2027	BPA PROGRAM	2015	2050	160,313	160,313	6.240%	Yes	No	35,814
124	<b>Subtotal</b>		-	-	<b>\$469,613</b>	<b>\$320,113</b>	-	<b>Yes</b>	<b>No</b>	<b>\$195,614</b>
125										
126	FY 2028	BPA PROGRAM	1998	2028	112,300	112,300	5.850%	No	No	112,300
127	FY 2028	BPA PROGRAM	2015	2050	160,313	124,499	6.240%	Yes	No	87,323
128	<b>Subtotal</b>		-	-	<b>\$272,613</b>	<b>\$236,799</b>	-	<b>Yes</b>	<b>No</b>	<b>\$199,623</b>
129										
130	FY 2029	BPA PROGRAM	2015	2050	160,313	37,176	6.240%	Yes	No	37,176
131	FY 2029	BPA PROGRAM	2016	2051	164,045	164,045	6.240%	Yes	No	158,043
132	<b>Subtotal</b>		-	-	<b>\$324,358</b>	<b>\$201,221</b>	-	<b>Yes</b>	<b>No</b>	<b>\$195,219</b>
133										
134	FY 2030	BPA PROGRAM	2008	2030	30,000	30,000	6.180%	No	Yes	30,000
135	FY 2030	BPA PROGRAM	2016	2051	164,045	6,002	6.240%	Yes	No	6,002
136	FY 2030	BPA PROGRAM	2017	2052	167,759	167,759	6.240%	Yes	No	159,788
137	<b>Subtotal</b>		-	-	<b>\$361,804</b>	<b>\$203,761</b>	-	<b>Yes</b>	<b>Yes</b>	<b>\$195,791</b>
138										
139	FY 2031	BPA PROGRAM	1998	2031	106,500	106,500	5.510%	No	Yes	106,500
140	FY 2031	BPA PROGRAM	2017	2052	167,759	7,971	6.240%	Yes	No	7,971
141	FY 2031	BPA PROGRAM	2018	2053	171,303	171,303	6.240%	Yes	No	83,653
142	<b>Subtotal</b>		-	-	<b>\$445,562</b>	<b>\$285,774</b>	-	<b>Yes</b>	<b>Yes</b>	<b>\$198,123</b>
143										
144	FY 2032	BPA PROGRAM	2007	2032	50,000	50,000	4.980%	No	Yes	50,000
145	FY 2032	BPA PROGRAM	2018	2053	171,303	87,650	6.240%	Yes	No	87,650
146	FY 2032	BPA PROGRAM	2019	2054	174,891	174,891	6.240%	Yes	No	57,270
147	<b>Subtotal</b>		-	-	<b>\$396,194</b>	<b>\$312,541</b>	-	<b>Yes</b>	<b>Yes</b>	<b>\$194,921</b>

Table 11-4: Application of Amortization (\$000s) (FY 2010)

	A	B	C	D	E	F	G	H	I	J
1	Date	Project	In Service	Due	Original Balance	Amount Available	Rate	Replace ment?	Rollover?	Amount Amortized
148										
149	FY 2033	BPA PROGRAM	2003	2033	40,000	40,000	5.550%	No	No	40,000
150	FY 2033	BPA PROGRAM	2019	2054	174,891	117,621	6.240%	Yes	No	117,621
151	FY 2033	BPA PROGRAM	2020	2055	178,490	178,490	6.240%	Yes	No	7,052
152	<b>Subtotal</b>		-	-	<b>\$393,381</b>	<b>\$336,111</b>	-	<b>Yes</b>	<b>No</b>	<b>\$164,672</b>
153										
154	FY 2034	BPA PROGRAM	2004	2034	40,000	40,000	5.600%	No	No	40,000
155	FY 2034	BPA PROGRAM	2020	2055	178,490	171,438	6.240%	Yes	No	66,118
156	<b>Subtotal</b>		-	-	<b>\$218,490</b>	<b>\$211,438</b>	-	<b>Yes</b>	<b>No</b>	<b>\$106,118</b>
157										
158	FY 2035	BPA PROGRAM	2005	2035	40,000	40,000	5.500%	No	No	40,000
159	FY 2035	BPA PROGRAM	2005	2035	40,000	40,000	5.400%	No	No	40,000
160	FY 2035	BPA PROGRAM	2005	2035	45,000	45,000	5.250%	No	No	45,000
161	FY 2035	BPA PROGRAM	2020	2055	178,490	105,321	6.240%	Yes	No	68,945
162	<b>Subtotal</b>		-	-	<b>\$303,490</b>	<b>\$230,321</b>	-	<b>Yes</b>	<b>No</b>	<b>\$193,945</b>
163										
164	FY 2036	BPA PROGRAM	2020	2055	178,490	36,376	6.240%	Yes	No	36,376
165	FY 2036	BPA PROGRAM	2021	2056	181,955	181,955	6.240%	Yes	No	136,521
166	<b>Subtotal</b>		-	-	<b>\$360,445</b>	<b>\$218,331</b>	-	<b>Yes</b>	<b>No</b>	<b>\$172,897</b>
167										
168	FY 2037	BPA PROGRAM	2021	2056	181,955	45,434	6.240%	Yes	No	45,434
169	FY 2037	BPA PROGRAM	2022	2057	185,323	185,323	6.240%	Yes	No	8,273
170	<b>Subtotal</b>		-	-	<b>\$367,278</b>	<b>\$230,757</b>	-	<b>Yes</b>	<b>No</b>	<b>\$53,707</b>
171										
172	FY 2038	BPA PROGRAM	2022	2057	185,323	177,050	6.240%	Yes	No	62,924
173	<b>Subtotal</b>		-	-	<b>\$185,323</b>	<b>\$177,050</b>	-	<b>Yes</b>	<b>No</b>	<b>\$62,924</b>
174										
175	FY 2039	BPA PROGRAM	2022	2057	185,323	114,126	6.240%	Yes	No	114,126
176	FY 2039	BPA PROGRAM	2023	2058	188,717	188,717	6.240%	Yes	No	48,449
177	<b>Subtotal</b>		-	-	<b>\$374,040</b>	<b>\$302,843</b>	-	<b>Yes</b>	<b>No</b>	<b>\$162,575</b>
178										
179	FY 2040	BPA PROGRAM	2006	2040	70,000	70,000	5.520%	No	Yes	70,000
180	FY 2040	BPA PROGRAM	2007	2040	35,000	-0	5.510%	No	Yes	-0
181	FY 2040	BPA PROGRAM	2023	2058	188,717	140,268	6.240%	Yes	No	119,591
182	<b>Subtotal</b>		-	-	<b>\$293,717</b>	<b>\$210,268</b>	-	<b>Yes</b>	<b>Yes</b>	<b>\$189,591</b>
183										
184	FY 2041	BPA PROGRAM	2023	2058	188,717	20,676	6.240%	Yes	No	20,676
185	FY 2041	BPA PROGRAM	2024	2059	192,018	192,018	6.240%	Yes	No	165,557
186	<b>Subtotal</b>		-	-	<b>\$380,735</b>	<b>\$212,694</b>	-	<b>Yes</b>	<b>No</b>	<b>\$186,233</b>
187										
188	FY 2042	BPA PROGRAM	2024	2059	192,018	26,461	6.240%	Yes	No	26,461
189	FY 2042	BPA PROGRAM	2025	2060	195,061	195,061	6.240%	Yes	No	158,883
190	<b>Subtotal</b>		-	-	<b>\$387,079</b>	<b>\$221,522</b>	-	<b>Yes</b>	<b>No</b>	<b>\$185,344</b>
191										
192	FY 2043	BPA PROGRAM	2025	2060	195,061	36,178	6.240%	Yes	No	36,178
193	FY 2043	BPA PROGRAM	2026	2061	197,787	197,787	6.240%	Yes	No	148,244
194	<b>Subtotal</b>		-	-	<b>\$392,848</b>	<b>\$233,965</b>	-	<b>Yes</b>	<b>No</b>	<b>\$184,422</b>
195										
196	FY 2044	BPA PROGRAM	2026	2061	197,787	49,543	6.240%	Yes	No	49,543
197	FY 2044	BPA PROGRAM	2027	2062	200,150	200,150	6.240%	Yes	No	133,910
198	<b>Subtotal</b>		-	-	<b>\$397,937</b>	<b>\$249,693</b>	-	<b>Yes</b>	<b>No</b>	<b>\$183,452</b>
199										
200	FY 2045	BPA PROGRAM	2010	2045	439,390	0	6.240%	No	No	0
201	FY 2045	BPA PROGRAM	2027	2062	200,150	66,240	6.240%	Yes	No	66,240
202	FY 2045	BPA PROGRAM	2028	2063	202,131	202,131	6.240%	Yes	No	116,166
203	<b>Subtotal</b>		-	-	<b>\$841,671</b>	<b>\$268,371</b>	-	<b>Yes</b>	<b>No</b>	<b>\$182,406</b>
204										
205	<b>Grand Total</b>		-	-	<b>\$11,917,553</b>	<b>\$8,176,342</b>	-	<b>Yes</b>	<b>Yes</b>	<b>\$5,606,705</b>

Table 11-5: Summary of Interest (\$000s) (FY 2011)

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Project	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
2	BONNEVILLE POWER ADMINISTRATION	35,356	32,979	27,538	18,502	7,644	4,190	1,473	-	-	-	-	-	-
3		-	-	-	-	-	-	-	-	-	-	-	-	-
4	TOTAL APPROPRIATIONS	35,356	32,979	27,538	18,502	7,644	4,190	1,473	-	-	-	-	-	-
5														
6	BPA BORROWING:													
7														
8	BPA PROGRAM	76,982	88,568	111,824	128,811	140,773	151,877	163,362	174,953	185,678	197,800	209,788	209,475	211,773
9	ENVIRONMENT	3,140	2,245	684	508	508	508	508	508	508	508	508	508	508
10	PREMIUMS	-	-	-	-	-	-	17	988	0	301	9,969	6,419	8,556
11	(LESS INTEREST INCOME)	-6,618	-6,899	-7,266	-5,961	-2,928	-2,743	-2,429	-2,447	-2,172	-2,442	-6,900	-6,565	-6,539
12	TOTAL BPA BORROWING	73,503	83,914	105,241	123,359	138,354	149,642	161,458	174,002	184,015	196,168	213,366	209,837	214,298
13		-	-	-	-	-	-	-	-	-	-	-	-	-
14	TOTALS	108,859	116,892	132,780	141,861	145,998	153,832	162,931	174,002	184,015	196,168	213,366	209,837	214,298

Table 11-5: Summary of Interest (\$000s) (FY 2011)

	A	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD
1	Project	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
2	BONNEVILLE POWER ADMINISTRATION	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	TOTAL APPROPRIATIONS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5																	
6	BPA BORROWING:																
7																	
8	BPA PROGRAM	213,019	216,511	218,524	220,468	222,128	224,835	226,403	228,818	230,835	233,198	236,865	240,379	245,664	255,136	260,081	264,621
9	ENVIRONMENT	508	508	508	508	280	-	-	-	-	-	-	-	-	-	-	-
10	PREMIUMS	3,865	8,186	8,408	6,196	3,132	8,785	1,199	8,325	6,859	3,315	1,246	4,334	1,669	1,581	5,518	704
11	(LESS INTEREST INCOME)	-6,526	-6,487	-6,610	-7,023	-7,009	-6,982	-6,965	-6,938	-6,915	-6,888	-6,845	-6,119	-4,727	-6,781	-6,363	-3,519
12	TOTAL BPA BORROWING	210,866	218,718	220,830	220,149	218,531	226,638	220,636	230,205	230,779	229,625	231,267	238,594	242,606	249,937	259,236	261,806
13		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	TOTALS	210,866	218,718	220,830	220,149	218,531	226,638	220,636	230,205	230,779	229,625	231,267	238,594	242,606	249,937	259,236	261,806

Table 11-5: Summary of Interest (\$000s) (FY 2011)

	A	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN
1	Project	2038	2039	2040	2041	2042	2043	2044	2045	2046	Total
2	BONNEVILLE POWER ADMINISTRATION	-	-	-	-	-	-	-	-	-	127,682
3		-	-	-	-	-	-	-	-	-	-
4	TOTAL APPROPRIATIONS	-	-	-	-	-	-	-	-	-	127,682
5											
6	BPA BORROWING:										
7											
8	BPA PROGRAM	277,302	289,802	295,515	300,997	305,469	310,967	316,871	323,162	329,892	8,539,124
9	ENVIRONMENT	-	-	-	-	-	-	-	-	-	13,466
10	PREMIUMS	880	4,235	1,365	4,456	606	464	222	-	2,619	114,418
11	(LESS INTEREST INCOME)	-3,803	-6,218	-6,793	-6,727	-6,673	-6,607	-6,537	-6,462	-6,382	-220,808
12	TOTAL BPA BORROWING	274,378	287,819	290,087	298,726	299,402	304,824	310,556	316,700	326,129	8,446,200
13		-	-	-	-	-	-	-	-	-	-
14	TOTALS	274,378	287,819	290,087	298,726	299,402	304,824	310,556	316,700	326,129	8,573,882

Table 11-6: Interest Calculation Summary (\$000s) (FY 2011)

	A	B	C	D	E	F	G	H
1	Date	Project	TYPE	Principal	Rate	Interest	Premium	Total
2	FY 2009	BONNEVILLE POWER ADMINISTRATION	HISTORICAL	488,605	7.236%	35,356	-	35,356
3	FY 2009	BPA PROGRAM	HISTORICAL	1,361,711	5.438%	74,050	-	74,050
4	FY 2009	BPA PROGRAM	NEW	135,000	2.172%	2,932	-	2,932
5	FY 2009	ENVIRONMENT	HISTORICAL	60,000	5.234%	3,140	-	3,140
6	FY 2009	Float	HISTORICAL	-	-	-6,618	-	-6,618
7	<b>Subtotal</b>			<b>\$2,045,316</b>	<b>-</b>	<b>\$108,859</b>	<b>-</b>	<b>\$108,859</b>
8								
9	FY 2010	BONNEVILLE POWER ADMINISTRATION	HISTORICAL	455,656	7.238%	32,979	-	32,979
10	FY 2010	BPA PROGRAM	HISTORICAL	1,377,001	5.436%	74,859	-	74,859
11	FY 2010	BPA PROGRAM	NEW	439,390	3.120%	13,709	-	13,709
12	FY 2010	ENVIRONMENT	HISTORICAL	40,000	5.325%	2,130	-	2,130
13	FY 2010	ENVIRONMENT	NEW	4,567	2.505%	114	-	114
14	FY 2010	Float	HISTORICAL	-	-	-6,899	-	-6,899
15	<b>Subtotal</b>			<b>\$2,316,614</b>	<b>-</b>	<b>\$116,892</b>	<b>-</b>	<b>\$116,892</b>
16								
17	FY 2011	BONNEVILLE POWER ADMINISTRATION	HISTORICAL	380,751	7.233%	27,538	-	27,538
18	FY 2011	BPA PROGRAM	HISTORICAL	1,706,140	5.627%	96,012	-	96,012
19	FY 2011	BPA PROGRAM	NEW	449,836	3.515%	15,812	-	15,812
20	FY 2011	ENVIRONMENT	HISTORICAL	14,567	3.734%	544	-	544
21	FY 2011	ENVIRONMENT	NEW	4,739	2.950%	140	-	140
22	FY 2011	Float	HISTORICAL	-	-	-7,266	-	-7,266
23	<b>Subtotal</b>			<b>\$2,556,033</b>	<b>-</b>	<b>\$132,780</b>	<b>-</b>	<b>\$132,780</b>
24								
25	FY 2012	BONNEVILLE POWER ADMINISTRATION	HISTORICAL	256,045	7.226%	18,502	-	18,502
26	FY 2012	BPA PROGRAM	HISTORICAL	2,065,976	5.976%	123,459	-	123,459
27	FY 2012	ENVIRONMENT	HISTORICAL	9,306	5.463%	508	-	508
28	FY 2012	BPA PROGRAM	NEW	152,244	3.515%	5,351	-	5,351
29	FY 2012	Float	HISTORICAL	-	-	-5,961	-	-5,961
30	<b>Subtotal</b>			<b>\$2,483,571</b>	<b>-</b>	<b>\$141,861</b>	<b>-</b>	<b>\$141,861</b>
31								
32	FY 2013	BONNEVILLE POWER ADMINISTRATION	HISTORICAL	105,939	7.216%	7,644	-	7,644
33	FY 2013	BPA PROGRAM	HISTORICAL	2,040,976	6.104%	124,586	-	124,586
34	FY 2013	ENVIRONMENT	HISTORICAL	9,306	5.463%	508	-	508
35	FY 2013	BPA PROGRAM	HISTORICAL	152,244	7.030%	10,703	-	10,703
36	FY 2013	BPA PROGRAM	NEW	156,038	3.515%	5,485	-	5,485
37	FY 2013	Float	HISTORICAL	-	-	-2,928	-	-2,928
38	<b>Subtotal</b>			<b>\$2,464,503</b>	<b>-</b>	<b>\$145,998</b>	<b>-</b>	<b>\$145,998</b>
39								
40	FY 2014	BONNEVILLE POWER ADMINISTRATION	HISTORICAL	58,085	7.213%	4,190	-	4,190
41	FY 2014	BPA PROGRAM	HISTORICAL	2,040,976	6.104%	124,586	-	124,586
42	FY 2014	ENVIRONMENT	HISTORICAL	9,306	5.463%	508	-	508
43	FY 2014	BPA PROGRAM	HISTORICAL	308,282	7.030%	21,672	-	21,672
44	FY 2014	BPA PROGRAM	NEW	159,853	3.515%	5,619	-	5,619
45	FY 2014	Float	HISTORICAL	-	-	-2,743	-	-2,743
46	<b>Subtotal</b>			<b>\$2,576,502</b>	<b>-</b>	<b>\$153,832</b>	<b>-</b>	<b>\$153,832</b>
47								
48	FY 2015	BONNEVILLE POWER ADMINISTRATION	HISTORICAL	20,427	7.210%	1,473	-	1,473
49	FY 2015	BPA PROGRAM	HISTORICAL	2,040,976	6.110%	124,704	17	124,720
50	FY 2015	ENVIRONMENT	HISTORICAL	9,306	5.463%	508	-	508
51	FY 2015	BPA PROGRAM	HISTORICAL	468,135	7.030%	32,910	-	32,910
52	FY 2015	BPA PROGRAM	NEW	163,547	3.515%	5,749	-	5,749
53	FY 2015	Float	HISTORICAL	-	-	-2,429	-	-2,429
54	<b>Subtotal</b>			<b>\$2,702,391</b>	<b>-</b>	<b>\$162,914</b>	<b>\$17</b>	<b>\$162,931</b>
55								
56	FY 2016	BPA PROGRAM	HISTORICAL	2,040,477	6.110%	124,670	988	125,658
57	FY 2016	ENVIRONMENT	HISTORICAL	9,306	5.463%	508	-	508
58	FY 2016	BPA PROGRAM	HISTORICAL	631,682	7.030%	44,407	-	44,407
59	FY 2016	BPA PROGRAM	NEW	167,165	3.515%	5,876	-	5,876
60	FY 2016	Float	HISTORICAL	-	-	-2,447	-	-2,447
61	<b>Subtotal</b>			<b>\$2,848,630</b>	<b>-</b>	<b>\$173,014</b>	<b>\$988</b>	<b>\$174,002</b>
62								
63	FY 2017	BPA PROGRAM	HISTORICAL	2,024,081	6.102%	123,518	0	123,518
64	FY 2017	ENVIRONMENT	HISTORICAL	9,306	5.463%	508	-	508
65	FY 2017	BPA PROGRAM	HISTORICAL	798,847	7.030%	56,159	-	56,159
66	FY 2017	BPA PROGRAM	NEW	170,739	3.515%	6,001	-	6,001
67	FY 2017	Float	HISTORICAL	-	-	-2,172	-	-2,172
68	<b>Subtotal</b>			<b>\$3,002,973</b>	<b>-</b>	<b>\$184,014</b>	<b>\$0</b>	<b>\$184,015</b>
69								
70	FY 2018	BPA PROGRAM	HISTORICAL	2,024,080	6.102%	123,517	301	123,819
71	FY 2018	ENVIRONMENT	HISTORICAL	9,306	5.463%	508	-	508
72	FY 2018	BPA PROGRAM	HISTORICAL	969,586	7.030%	68,162	-	68,162
73	FY 2018	BPA PROGRAM	NEW	174,139	3.515%	6,121	-	6,121
74	FY 2018	Float	HISTORICAL	-	-	-2,442	-	-2,442
75	<b>Subtotal</b>			<b>\$3,177,111</b>	<b>-</b>	<b>\$195,867</b>	<b>\$301</b>	<b>\$196,168</b>

Table 11-6: Interest Calculation Summary (\$000s) (FY 2011)

1	A	B	C	D	E	F	G	H
	Date	Project	TYPE	Principal	Rate	Interest	Premium	Total
76								
77	FY 2019	BPA PROGRAM	HISTORICAL	2,018,725	6.100%	123,141	9,969	133,110
78	FY 2019	ENVIRONMENT	HISTORICAL	9,306	5.463%	508	-	508
79	FY 2019	BPA PROGRAM	HISTORICAL	1,143,725	7.030%	80,404	-	80,404
80	FY 2019	BPA PROGRAM	NEW	177,611	3.515%	6,243	-	6,243
81	FY 2019	Float	HISTORICAL	-	-	-6,900	-	-6,900
82		<b>Subtotal</b>		<b>\$3,349,367</b>	-	<b>\$203,396</b>	<b>\$9,969</b>	<b>\$213,366</b>
83								
84	FY 2020	BPA PROGRAM	HISTORICAL	1,834,894	6.007%	110,218	6,419	116,637
85	FY 2020	ENVIRONMENT	HISTORICAL	9,306	5.463%	508	-	508
86	FY 2020	BPA PROGRAM	HISTORICAL	1,321,336	7.030%	92,890	-	92,890
87	FY 2020	BPA PROGRAM	NEW	181,138	3.515%	6,367	-	6,367
88	FY 2020	Float	HISTORICAL	-	-	-6,565	-	-6,565
89		<b>Subtotal</b>		<b>\$3,346,674</b>	-	<b>\$203,418</b>	<b>\$6,419</b>	<b>\$209,837</b>
90								
91	FY 2021	BPA PROGRAM	HISTORICAL	1,661,979	5.997%	99,662	6,093	105,755
92	FY 2021	ENVIRONMENT	HISTORICAL	9,306	5.463%	508	-	508
93	FY 2021	BPA PROGRAM	HISTORICAL	1,502,474	7.030%	105,624	2,463	108,087
94	FY 2021	BPA PROGRAM	NEW	184,559	3.515%	6,487	-	6,487
95	FY 2021	Float	HISTORICAL	-	-	-6,539	-	-6,539
96		<b>Subtotal</b>		<b>\$3,358,318</b>	-	<b>\$205,742</b>	<b>\$8,556</b>	<b>\$214,298</b>
97								
98	FY 2022	BPA PROGRAM	HISTORICAL	1,540,641	5.915%	91,132	-	91,132
99	FY 2022	ENVIRONMENT	HISTORICAL	9,306	5.463%	508	-	508
100	FY 2022	BPA PROGRAM	HISTORICAL	1,639,877	7.030%	115,283	3,865	119,148
101	FY 2022	BPA PROGRAM	NEW	187,871	3.515%	6,604	-	6,604
102	FY 2022	Float	HISTORICAL	-	-	-6,526	-	-6,526
103		<b>Subtotal</b>		<b>\$3,377,695</b>	-	<b>\$207,001</b>	<b>\$3,865</b>	<b>\$210,866</b>
104								
105	FY 2023	BPA PROGRAM	HISTORICAL	1,445,641	5.998%	86,711	-	86,711
106	FY 2023	ENVIRONMENT	HISTORICAL	9,306	5.463%	508	-	508
107	FY 2023	BPA PROGRAM	HISTORICAL	1,750,779	7.030%	123,080	8,186	131,266
108	FY 2023	BPA PROGRAM	NEW	191,173	3.515%	6,720	-	6,720
109	FY 2023	Float	HISTORICAL	-	-	-6,487	-	-6,487
110		<b>Subtotal</b>		<b>\$3,396,898</b>	-	<b>\$210,532</b>	<b>\$8,186</b>	<b>\$218,718</b>
111								
112	FY 2024	BPA PROGRAM	HISTORICAL	1,445,641	5.998%	86,711	-	86,711
113	FY 2024	ENVIRONMENT	HISTORICAL	9,306	5.463%	508	-	508
114	FY 2024	BPA PROGRAM	HISTORICAL	1,777,807	7.030%	124,980	8,408	133,387
115	FY 2024	BPA PROGRAM	NEW	194,392	3.515%	6,833	-	6,833
116	FY 2024	Float	HISTORICAL	-	-	-6,610	-	-6,610
117		<b>Subtotal</b>		<b>\$3,427,146</b>	-	<b>\$212,423</b>	<b>\$8,408</b>	<b>\$220,830</b>
118								
119	FY 2025	BPA PROGRAM	HISTORICAL	1,445,641	5.998%	86,711	-	86,711
120	FY 2025	ENVIRONMENT	HISTORICAL	9,306	5.463%	508	-	508
121	FY 2025	BPA PROGRAM	HISTORICAL	1,803,966	7.030%	126,819	6,196	133,015
122	FY 2025	BPA PROGRAM	NEW	197,370	3.515%	6,938	-	6,938
123	FY 2025	Float	HISTORICAL	-	-	-7,023	-	-7,023
124		<b>Subtotal</b>		<b>\$3,456,283</b>	-	<b>\$213,953</b>	<b>\$6,196</b>	<b>\$220,149</b>
125								
126	FY 2026	BPA PROGRAM	HISTORICAL	1,386,591	5.994%	83,109	-	83,109
127	FY 2026	ENVIRONMENT	HISTORICAL	4,739	5.900%	280	-	280
128	FY 2026	BPA PROGRAM	HISTORICAL	1,877,480	7.030%	131,987	3,132	135,119
129	FY 2026	BPA PROGRAM	NEW	200,060	3.515%	7,032	-	7,032
130	FY 2026	Float	HISTORICAL	-	-	-7,009	-	-7,009
131		<b>Subtotal</b>		<b>\$3,468,870</b>	-	<b>\$215,399</b>	<b>\$3,132</b>	<b>\$218,531</b>
132								
133	FY 2027	BPA PROGRAM	HISTORICAL	1,266,591	6.016%	76,197	-	76,197
134	FY 2027	BPA PROGRAM	HISTORICAL	2,013,119	7.030%	141,522	8,785	150,307
135	FY 2027	BPA PROGRAM	NEW	202,425	3.515%	7,115	-	7,115
136	FY 2027	Float	HISTORICAL	-	-	-6,982	-	-6,982
137		<b>Subtotal</b>		<b>\$3,482,134</b>	-	<b>\$217,852</b>	<b>\$8,785</b>	<b>\$226,638</b>
138								
139	FY 2028	BPA PROGRAM	HISTORICAL	1,266,591	6.016%	76,197	-	76,197
140	FY 2028	BPA PROGRAM	HISTORICAL	2,034,429	7.030%	143,020	1,199	144,219
141	FY 2028	BPA PROGRAM	NEW	204,416	3.515%	7,185	-	7,185
142	FY 2028	Float	HISTORICAL	-	-	-6,965	-	-6,965
143		<b>Subtotal</b>		<b>\$3,505,435</b>	-	<b>\$219,437</b>	<b>\$1,199</b>	<b>\$220,636</b>

Table 11-6: Interest Calculation Summary (\$000s) (FY 2011)

1	A	B	C	D	E	F	G	H
	Date	Project	TYPE	Principal	Rate	Interest	Premium	Total
144								
145	FY 2029	BPA PROGRAM	HISTORICAL	1,104,291	5.971%	65,940	-	65,940
146	FY 2029	BPA PROGRAM	HISTORICAL	2,213,977	7.030%	155,643	8,325	163,967
147	FY 2029	BPA PROGRAM	NEW	205,837	3.515%	7,235	-	7,235
148	FY 2029	Float	HISTORICAL	-	-	-6,938	-	-6,938
149		<b>Subtotal</b>		<b>\$3,524,105</b>	<b>-</b>	<b>\$221,880</b>	<b>\$8,325</b>	<b>\$230,205</b>
150								
151	FY 2030	BPA PROGRAM	HISTORICAL	1,104,291	5.971%	65,940	-	65,940
152	FY 2030	BPA PROGRAM	HISTORICAL	2,242,176	7.030%	157,625	6,859	164,484
153	FY 2030	BPA PROGRAM	NEW	206,825	3.515%	7,270	-	7,270
154	FY 2030	Float	HISTORICAL	-	-	-6,915	-	-6,915
155		<b>Subtotal</b>		<b>\$3,553,291</b>	<b>-</b>	<b>\$223,920</b>	<b>\$6,859</b>	<b>\$230,779</b>
156								
157	FY 2031	BPA PROGRAM	HISTORICAL	1,074,291	5.965%	64,086	-	64,086
158	FY 2031	BPA PROGRAM	HISTORICAL	2,301,905	7.030%	161,824	3,315	165,139
159	FY 2031	BPA PROGRAM	NEW	207,329	3.515%	7,288	-	7,288
160	FY 2031	Float	HISTORICAL	-	-	-6,888	-	-6,888
161		<b>Subtotal</b>		<b>\$3,583,524</b>	<b>-</b>	<b>\$226,310</b>	<b>\$3,315</b>	<b>\$229,625</b>
162								
163	FY 2032	BPA PROGRAM	HISTORICAL	967,791	6.016%	58,218	-	58,218
164	FY 2032	BPA PROGRAM	HISTORICAL	2,437,471	7.030%	171,354	1,246	172,601
165	FY 2032	BPA PROGRAM	NEW	207,481	3.515%	7,293	-	7,293
166	FY 2032	Float	HISTORICAL	-	-	-6,845	-	-6,845
167		<b>Subtotal</b>		<b>\$3,612,742</b>	<b>-</b>	<b>\$230,021</b>	<b>\$1,246</b>	<b>\$231,267</b>
168								
169	FY 2033	BPA PROGRAM	HISTORICAL	819,390	5.997%	49,135	-	49,135
170	FY 2033	BPA PROGRAM	HISTORICAL	2,616,744	7.030%	183,957	4,334	188,291
171	FY 2033	BPA PROGRAM	NEW	207,284	3.515%	7,286	-	7,286
172	FY 2033	Float	HISTORICAL	-	-	-6,119	-	-6,119
173		<b>Subtotal</b>		<b>\$3,643,418</b>	<b>-</b>	<b>\$234,259</b>	<b>\$4,334</b>	<b>\$238,594</b>
174								
175	FY 2034	BPA PROGRAM	HISTORICAL	779,390	6.020%	46,915	-	46,915
176	FY 2034	BPA PROGRAM	HISTORICAL	2,723,854	7.030%	191,487	1,669	193,156
177	FY 2034	BPA PROGRAM	NEW	206,590	3.515%	7,262	-	7,262
178	FY 2034	Float	HISTORICAL	-	-	-4,727	-	-4,727
179		<b>Subtotal</b>		<b>\$3,709,834</b>	<b>-</b>	<b>\$240,937</b>	<b>\$1,669</b>	<b>\$242,606</b>
180								
181	FY 2035	BPA PROGRAM	HISTORICAL	739,390	6.042%	44,675	-	44,675
182	FY 2035	BPA PROGRAM	HISTORICAL	2,890,873	7.030%	203,228	1,581	204,810
183	FY 2035	BPA PROGRAM	NEW	205,764	3.515%	7,233	-	7,233
184	FY 2035	Float	HISTORICAL	-	-	-6,781	-	-6,781
185		<b>Subtotal</b>		<b>\$3,836,027</b>	<b>-</b>	<b>\$248,356</b>	<b>\$1,581</b>	<b>\$249,937</b>
186								
187	FY 2036	BPA PROGRAM	HISTORICAL	614,390	6.177%	37,953	-	37,953
188	FY 2036	BPA PROGRAM	HISTORICAL	3,057,270	7.030%	214,926	5,518	220,444
189	FY 2036	BPA PROGRAM	NEW	204,878	3.515%	7,201	-	7,201
190	FY 2036	Float	HISTORICAL	-	-	-6,363	-	-6,363
191		<b>Subtotal</b>		<b>\$3,876,538</b>	<b>-</b>	<b>\$253,718</b>	<b>\$5,518</b>	<b>\$259,236</b>
192								

Table 11-6: Interest Calculation Summary (\$000s) (FY 2011)

1	A	B	C	D	E	F	G	H
	Date	Project	TYPE	Principal	Rate	Interest	Premium	Total
193	FY 2037	BPA PROGRAM	HISTORICAL	614,390	6.177%	37,953	-	37,953
194	FY 2037	BPA PROGRAM	HISTORICAL	3,122,398	7.030%	219,505	704	220,208
195	FY 2037	BPA PROGRAM	NEW	203,804	3.515%	7,164	-	7,164
196	FY 2037	Float	HISTORICAL	-	-	-3,519	-	-3,519
197	<b>Subtotal</b>			<b>\$3,940,592</b>	<b>-</b>	<b>\$261,103</b>	<b>\$704</b>	<b>\$261,806</b>
198								
199	FY 2038	BPA PROGRAM	HISTORICAL	614,390	6.127%	37,641	-	37,641
200	FY 2038	BPA PROGRAM	HISTORICAL	3,307,765	7.030%	232,536	880	233,416
201	FY 2038	BPA PROGRAM	NEW	202,682	3.515%	7,124	-	7,124
202	FY 2038	Float	HISTORICAL	-	-	-3,803	-	-3,803
203	<b>Subtotal</b>			<b>\$4,124,837</b>	<b>-</b>	<b>\$273,498</b>	<b>\$880</b>	<b>\$274,378</b>
204								
205	FY 2039	BPA PROGRAM	HISTORICAL	614,390	6.127%	37,641	-	37,641
206	FY 2039	BPA PROGRAM	HISTORICAL	3,486,107	7.030%	245,073	4,235	249,309
207	FY 2039	BPA PROGRAM	NEW	201,642	3.515%	7,088	-	7,088
208	FY 2039	Float	HISTORICAL	-	-	-6,218	-	-6,218
209	<b>Subtotal</b>			<b>\$4,302,139</b>	<b>-</b>	<b>\$283,584</b>	<b>\$4,235</b>	<b>\$287,819</b>
210								
211	FY 2040	BPA PROGRAM	HISTORICAL	614,390	6.127%	37,641	-	37,641
212	FY 2040	BPA PROGRAM	HISTORICAL	3,567,830	7.030%	250,818	1,365	252,184
213	FY 2040	BPA PROGRAM	NEW	200,717	3.515%	7,055	-	7,055
214	FY 2040	Float	HISTORICAL	-	-	-6,793	-	-6,793
215	<b>Subtotal</b>			<b>\$4,382,937</b>	<b>-</b>	<b>\$288,722</b>	<b>\$1,365</b>	<b>\$290,087</b>
216								
217	FY 2041	BPA PROGRAM	HISTORICAL	509,390	6.252%	31,849	8	31,857
218	FY 2041	BPA PROGRAM	HISTORICAL	3,728,565	7.030%	262,118	4,448	266,566
219	FY 2041	BPA PROGRAM	NEW	199,999	3.515%	7,030	-	7,030
220	FY 2041	Float	HISTORICAL	-	-	-6,727	-	-6,727
221	<b>Subtotal</b>			<b>\$4,437,954</b>	<b>-</b>	<b>\$294,270</b>	<b>\$4,456</b>	<b>\$298,726</b>
222								
223	FY 2042	BPA PROGRAM	HISTORICAL	507,963	6.252%	31,759	606	32,365
224	FY 2042	BPA PROGRAM	HISTORICAL	3,793,716	7.030%	266,698	-	266,698
225	FY 2042	BPA PROGRAM	NEW	199,488	3.515%	7,012	-	7,012
226	FY 2042	Float	HISTORICAL	-	-	-6,673	-	-6,673
227	<b>Subtotal</b>			<b>\$4,501,166</b>	<b>-</b>	<b>\$298,796</b>	<b>\$606</b>	<b>\$299,402</b>
228								
229	FY 2043	BPA PROGRAM	HISTORICAL	372,428	6.240%	23,239	464	23,703
230	FY 2043	BPA PROGRAM	HISTORICAL	3,993,204	7.030%	280,722	-	280,722
231	FY 2043	BPA PROGRAM	NEW	199,309	3.515%	7,006	-	7,006
232	FY 2043	Float	HISTORICAL	-	-	-6,607	-	-6,607
233	<b>Subtotal</b>			<b>\$4,564,940</b>	<b>-</b>	<b>\$304,360</b>	<b>\$464</b>	<b>\$304,824</b>
234								
235	FY 2044	BPA PROGRAM	HISTORICAL	242,372	6.240%	15,124	222	15,346
236	FY 2044	BPA PROGRAM	HISTORICAL	4,192,513	7.030%	294,734	-	294,734
237	FY 2044	BPA PROGRAM	NEW	199,529	3.515%	7,013	-	7,013
238	FY 2044	Float	HISTORICAL	-	-	-6,537	-	-6,537
239	<b>Subtotal</b>			<b>\$4,634,414</b>	<b>-</b>	<b>\$310,335</b>	<b>\$222</b>	<b>\$310,556</b>
240								
241	FY 2045	BPA PROGRAM	HISTORICAL	118,093	6.240%	7,369	-	7,369
242	FY 2045	BPA PROGRAM	HISTORICAL	4,392,042	7.030%	308,761	-	308,761
243	FY 2045	BPA PROGRAM	NEW	200,066	3.515%	7,032	-	7,032
244	FY 2045	Float	HISTORICAL	-	-	-6,462	-	-6,462
245	<b>Subtotal</b>			<b>\$4,710,201</b>	<b>-</b>	<b>\$316,700</b>	<b>-</b>	<b>\$316,700</b>
246								
247	FY 2046	BPA PROGRAM	HISTORICAL	4,592,108	7.030%	322,825	2,619	325,444
248	FY 2046	BPA PROGRAM	NEW	201,060	3.515%	7,067	-	7,067
249	FY 2046	Float	HISTORICAL	-	-	-6,382	-	-6,382
250	<b>Subtotal</b>			<b>\$4,793,168</b>	<b>-</b>	<b>\$323,510</b>	<b>\$2,619</b>	<b>\$326,129</b>
251								
252	<b>Grand Total</b>			<b>\$134,074,290</b>	<b>-</b>	<b>\$8,459,464</b>	<b>\$114,418</b>	<b>\$8,573,882</b>

Table 11-7: Summary of Amortization (\$000s) (FY 2011)

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Project	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
2	BONNEVILLE POWER ADMINISTRATION	32,949	74,905	124,707	150,106	47,854	37,658	20,427	-	-	-	-	-	-
3		-	-	-	-	-	-	-	-	-	-	-	-	-
4	TOTAL APPROPRIATIONS	32,949	74,905	124,707	150,106	47,854	37,658	20,427	-	-	-	-	-	-
5														
6	BPA BORROWING:													
7														
8	BPA PROGRAM	159,710	110,251	90,000	25,000	-	-	499	16,396	1	5,355	183,831	172,915	168,495
9	ENVIRONMENT	20,000	30,000	10,000	-	-	-	-	-	-	-	-	-	-
10		-	-	-	-	-	-	-	-	-	-	-	-	-
11	TOTAL BPA BORROWING	179,710	140,251	100,000	25,000	-	-	499	16,396	1	5,355	183,831	172,915	168,495
12														
13	TOTALS	212,659	215,156	224,707	175,106	47,854	37,658	20,926	16,396	1	5,355	183,831	172,915	168,495

Table 11-7: Summary of Amortization (\$000s) (FY 2011)

	A	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA
1	Project	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
2	BONNEVILLE POWER ADMINISTRATION	-	-	-	-	-	-	-	-	-	-	-	-	-
3		-	-	-	-	-	-	-	-	-	-	-	-	-
4	TOTAL APPROPRIATIONS	-	-	-	-	-	-	-	-	-	-	-	-	-
5														
6	BPA BORROWING:													
7														
8	BPA PROGRAM	171,970	164,144	168,233	182,906	184,422	181,115	187,167	177,639	177,096	178,263	176,609	140,174	79,571
9	ENVIRONMENT	-	-	-	4,567	4,739	-	-	-	-	-	-	-	-
10		-	-	-	-	-	-	-	-	-	-	-	-	-
11	TOTAL BPA BORROWING	171,970	164,144	168,233	187,473	189,161	181,115	187,167	177,639	177,096	178,263	176,609	140,174	79,571
12														
13	TOTALS	171,970	164,144	168,233	187,473	189,161	181,115	187,167	177,639	177,096	178,263	176,609	140,174	79,571

Table 11-7: Summary of Amortization (\$000s) (FY 2011)

	A	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN
1	Project	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	Total
2	BONNEVILLE POWER ADMINISTRATION	-	-	-	-	-	-	-	-	-	-	-	-	488,605
3		-	-	-	-	-	-	-	-	-	-	-	-	-
4	TOTAL APPROPRIATIONS	-	-	-	-	-	-	-	-	-	-	-	-	488,605
5														
6	BPA BORROWING:													
7														
8	BPA PROGRAM	164,367	139,751	18,437	24,340	119,919	144,982	136,275	135,535	130,056	124,279	118,093	108,643	4,466,437
9	ENVIRONMENT	-	-	-	-	-	-	-	-	-	-	-	-	69,306
10		-	-	-	-	-	-	-	-	-	-	-	-	-
11	TOTAL BPA BORROWING	164,367	139,751	18,437	24,340	119,919	144,982	136,275	135,535	130,056	124,279	118,093	108,643	4,535,743
12														
13	TOTALS	164,367	139,751	18,437	24,340	119,919	144,982	136,275	135,535	130,056	124,279	118,093	108,643	5,024,348

Table 11-8: Application of Amortization (\$000s) (FY 2011)

	A	B	C	D	E	F	G	H	I	J
1	Date	Project	In Service	Due	Original Balance	Amount Available	Rate	Replace ment?	Rollover?	Amount Amortized
2	FY 2009	BONNEVILLE POWER ADMINISTRATION	1964	2009	4,151	4,151	7.060%	No	No	4,151
3	FY 2009	BONNEVILLE POWER ADMINISTRATION	1964	2009	5,738	5,738	7.060%	No	No	5,738
4	FY 2009	BPA PROGRAM	1998	2009	72,700	72,700	6.000%	No	No	72,700
5	FY 2009	ENVIRONMENT	2006	2009	20,000	20,000	5.050%	No	No	20,000
6	FY 2009	BPA PROGRAM	2006	2009	20,000	20,000	5.050%	No	No	20,000
7	FY 2009	BPA PROGRAM	2005	2009	40,000	40,000	4.000%	No	No	40,000
8	FY 2009	BPA PROGRAM	2005	2009	27,010	27,010	3.750%	No	No	27,010
9	FY 2009	BONNEVILLE POWER ADMINISTRATION	1973	2018	33,788	33,788	7.280%	No	No	18,019
10	FY 2009	BONNEVILLE POWER ADMINISTRATION	1973	2018	21,656	5,041	7.280%	No	No	15,041
11	<b>Subtotal</b>		-	-	<b>\$245,043</b>	<b>\$228,428</b>	-	<b>No</b>	<b>No</b>	<b>\$212,659</b>
12										
13	FY 2010	BONNEVILLE POWER ADMINISTRATION	1965	2010	3,706	3,706	7.090%	No	No	3,706
14	FY 2010	BONNEVILLE POWER ADMINISTRATION	1965	2010	7,248	78	7.090%	No	No	78
15	FY 2010	ENVIRONMENT	2001	2010	30,000	30,000	6.050%	No	No	30,000
16	FY 2010	BPA PROGRAM	2001	2010	59,932	59,932	6.050%	No	No	59,932
17	FY 2010	BPA PROGRAM	2007	2010	25,000	25,000	5.100%	No	No	25,000
18	FY 2010	BPA PROGRAM	2006	2010	5,319	5,319	4.950%	No	No	5,319
19	FY 2010	BPA PROGRAM	2006	2010	20,000	20,000	4.950%	No	No	20,000
20	FY 2010	BONNEVILLE POWER ADMINISTRATION	1970	2015	64,977	64,977	7.270%	No	No	23,806
21	FY 2010	BONNEVILLE POWER ADMINISTRATION	1970	2015	7,995	7,995	7.270%	No	No	7,995
22	FY 2010	BONNEVILLE POWER ADMINISTRATION	1970	2015	24,412	23,551	7.270%	No	No	23,551
23	FY 2010	BONNEVILLE POWER ADMINISTRATION	1973	2018	33,788	15,769	7.280%	No	No	15,769
24	<b>Subtotal</b>		-	-	<b>\$282,377</b>	<b>\$256,327</b>	-	<b>No</b>	<b>No</b>	<b>\$215,156</b>
25										
26	FY 2011	BONNEVILLE POWER ADMINISTRATION	1966	2011	11,830	11,830	7.130%	No	No	11,830
27	FY 2011	BONNEVILLE POWER ADMINISTRATION	1966	2011	3,049	3,049	7.130%	No	No	3,049
28	FY 2011	BONNEVILLE POWER ADMINISTRATION	1966	2011	6,647	6,353	7.130%	No	No	6,353
29	FY 2011	BPA PROGRAM	1998	2011	40,000	40,000	6.200%	No	No	40,000
30	FY 2011	BPA PROGRAM	2001	2011	25,000	25,000	5.950%	No	No	25,000
31	FY 2011	ENVIRONMENT	2008	2011	10,000	10,000	3.151%	No	No	10,000
32	FY 2011	BPA PROGRAM	2008	2011	25,000	25,000	3.151%	No	No	25,000
33	FY 2011	BONNEVILLE POWER ADMINISTRATION	1970	2015	64,977	41,171	7.270%	No	No	41,171
34	FY 2011	BONNEVILLE POWER ADMINISTRATION	1974	2019	12,079	12,079	7.270%	No	No	6,930
35	FY 2011	BONNEVILLE POWER ADMINISTRATION	1974	2019	20,984	20,984	7.270%	No	No	20,984
36	FY 2011	BONNEVILLE POWER ADMINISTRATION	1974	2019	12,563	12,563	7.270%	No	No	12,563
37	FY 2011	BONNEVILLE POWER ADMINISTRATION	1974	2019	21,826	21,826	7.270%	No	No	21,826
38	<b>Subtotal</b>		-	-	<b>\$253,955</b>	<b>\$229,855</b>	-	<b>No</b>	<b>No</b>	<b>\$224,707</b>
39										
40	FY 2012	BONNEVILLE POWER ADMINISTRATION	1967	2012	19,003	19,003	7.160%	No	No	19,003
41	FY 2012	BONNEVILLE POWER ADMINISTRATION	1967	2012	4,566	355	7.160%	No	No	355
42	FY 2012	BPA PROGRAM	2008	2012	25,000	25,000	3.444%	No	No	25,000
43	FY 2012	BONNEVILLE POWER ADMINISTRATION	1969	2014	42,237	19,198	7.230%	No	No	19,198
44	FY 2012	BONNEVILLE POWER ADMINISTRATION	1974	2019	12,079	5,149	7.270%	No	No	5,149
45	FY 2012	BONNEVILLE POWER ADMINISTRATION	1975	2020	32,026	32,026	7.250%	No	No	32,026
46	FY 2012	BONNEVILLE POWER ADMINISTRATION	1975	2020	21,916	21,916	7.250%	No	No	21,916
47	FY 2012	BONNEVILLE POWER ADMINISTRATION	1975	2020	17,158	17,158	7.250%	No	No	17,158
48	FY 2012	BONNEVILLE POWER ADMINISTRATION	1975	2020	11,742	11,742	7.250%	No	No	11,742
49	FY 2012	BONNEVILLE POWER ADMINISTRATION	1976	2021	61,025	61,025	7.230%	No	No	21,347
50	FY 2012	BONNEVILLE POWER ADMINISTRATION	1976	2021	2,212	2,212	7.230%	No	No	2,212
51	<b>Subtotal</b>		-	-	<b>\$248,964</b>	<b>\$214,784</b>	-	<b>No</b>	<b>No</b>	<b>\$175,106</b>
52										
53	FY 2013	BONNEVILLE POWER ADMINISTRATION	1968	2013	41,070	18,250	7.200%	No	No	18,250
54	FY 2013	BONNEVILLE POWER ADMINISTRATION	1976	2021	61,025	39,678	7.230%	No	No	29,604
55	<b>Subtotal</b>		-	-	<b>\$102,095</b>	<b>\$57,928</b>	-	<b>No</b>	<b>No</b>	<b>\$47,854</b>
56										
57	FY 2014	BONNEVILLE POWER ADMINISTRATION	1976	2021	61,025	10,074	7.230%	No	No	10,074
58	FY 2014	BONNEVILLE POWER ADMINISTRATION	1977	2022	33,702	33,702	7.210%	No	No	22,603
59	FY 2014	BONNEVILLE POWER ADMINISTRATION	1977	2022	4981	4981	7.21	0	0	4981
60	<b>Subtotal</b>		-	-	<b>\$99,708</b>	<b>\$48,757</b>	-	<b>No</b>	<b>No</b>	<b>\$37,658</b>
61										
62	FY 2015	BONNEVILLE POWER ADMINISTRATION	1977	2022	3,948	3,948	7.210%	No	No	3,948
63	FY 2015	BONNEVILLE POWER ADMINISTRATION	1977	2022	5,380	5,380	7.210%	No	No	5,380
64	FY 2015	BONNEVILLE POWER ADMINISTRATION	1977	2022	33,702	11,098.78	7.21	0	0	11,098.78
65	FY 2015	BPA PROGRAM	1998	2032	98,900	98,900	6.700%	No	No	499
66	<b>Subtotal</b>		-	-	<b>\$141,930</b>	<b>\$119,327</b>	-	<b>No</b>	<b>No</b>	<b>\$20,926</b>
67										
68	FY 2016	BPA PROGRAM	2011	2046	449,836	449,836	7.030%	No	No	16,396
69	<b>Subtotal</b>		-	-	<b>\$449,836</b>	<b>\$449,836</b>	-	<b>No</b>	<b>No</b>	<b>\$16,396</b>
70										
71	FY 2017	BPA PROGRAM	2011	2046	449,836	433,440	7.030%	No	No	1
72	<b>Subtotal</b>		-	-	<b>\$449,836</b>	<b>\$433,440</b>	-	<b>No</b>	<b>No</b>	<b>\$1</b>
73										
74	FY 2018	BPA PROGRAM	2011	2046	449,836	433,439	7.030%	No	No	5,355
75	<b>Subtotal</b>		-	-	<b>\$449,836</b>	<b>\$433,439</b>	-	<b>No</b>	<b>No</b>	<b>\$5,355</b>
76										

Table 11-8: Application of Amortization (\$000s) (FY 2011)

	A	B	C	D	E	F	G	H	I	J
77	FY 2019	BPA PROGRAM	2011	2046	449,836	428,084	7.030%	No	No	183,831
78		<b>Subtotal</b>	-	-	<b>\$449,836</b>	<b>\$428,084</b>	-	<b>No</b>	<b>No</b>	<b>\$183,831</b>
79										
80	FY 2020	BPA PROGRAM	2009	2020	50,000	50,000	3.830%	No	No	50,000
81	FY 2020	BPA PROGRAM	2011	2046	449,836	244,253.41	7.03	0	0	122,914.51
82		<b>Subtotal</b>	-	-	<b>\$499,836</b>	<b>\$294,253</b>	-	<b>No</b>	<b>No</b>	<b>\$172,915</b>
83										
84	FY 2021	BONNEVILLE POWER ADMINISTRATION	1976	2021	61,025	0	7.230%	No	No	0
85	FY 2021	BPA PROGRAM	2011	2046	449,836	121,339	7.030%	No	No	121,339
86	FY 2021	BPA PROGRAM	2012	2047	152,244	152,244	7.030%	Yes	No	47,156
87		<b>Subtotal</b>	-	-	<b>\$663,105</b>	<b>\$273,583</b>	-	<b>Yes</b>	<b>No</b>	<b>\$168,495</b>
88										
89	FY 2022	BONNEVILLE POWER ADMINISTRATION	1977	2022	33,702	-1.8E-12	7.21	0	0	-1.8E-12
90	FY 2022	BPA PROGRAM	2008	2022	40,000	40,000	5.230%	No	Yes	40,000
91	FY 2022	BPA PROGRAM	2009	2022	35,000	35,000	4.253%	No	No	35,000
92	FY 2022	BPA PROGRAM	2009	2022	20,000	20,000	4.200%	No	No	20,000
93	FY 2022	BPA PROGRAM	2012	2047	152,244	105,088.26	7.03	1	0	76,969.62
94		<b>Subtotal</b>	-	-	<b>\$280,946</b>	<b>\$200,088</b>	-	<b>Yes</b>	<b>Yes</b>	<b>\$171,970</b>
95										
96	FY 2023	BPA PROGRAM	2012	2047	152,244	28,119	7.030%	Yes	No	28,119
97	FY 2023	BPA PROGRAM	2013	2048	156,038	156,038	7.030%	Yes	No	136,026
98		<b>Subtotal</b>	-	-	<b>\$308,282</b>	<b>\$184,157</b>	-	<b>Yes</b>	<b>No</b>	<b>\$164,144</b>
99										
100	FY 2024	BPA PROGRAM	2013	2048	156,038	20012.28	7.03	1	0	20012.28
101	FY 2024	BPA PROGRAM	2014	2049	159,853	159,853	7.030%	Yes	No	148,221
102		<b>Subtotal</b>	-	-	<b>\$315,891</b>	<b>\$179,865</b>	-	<b>Yes</b>	<b>No</b>	<b>\$168,233</b>
103										
104	FY 2025	BPA PROGRAM	1999	2025	59,050	59,050	6.1	0	1	59,050
105	FY 2025	ENVIRONMENT	2010	2025	4,567	4,567	5.010%	No	No	4,567
106	FY 2025	BPA PROGRAM	2014	2049	159,853	11,632	7.030%	Yes	No	11,632
107	FY 2025	BPA PROGRAM	2015	2050	163,547	163,547	7.030%	Yes	No	112,224
108		<b>Subtotal</b>	-	-	<b>\$387,017</b>	<b>\$238,796</b>	-	<b>Yes</b>	<b>Yes</b>	<b>\$187,473</b>
109										
110	FY 2026	BPA PROGRAM	2007	2026	40,000	40,000	6.010%	No	Yes	40,000
111	FY 2026	BPA PROGRAM	2008	2026	30,000	30,000	6.010%	No	Yes	30,000
112	FY 2026	ENVIRONMENT	2011	2026	4,739	4,739	5.900%	No	No	4,739
113	FY 2026	BPA PROGRAM	2001	2026	50,000	50,000	5.410%	No	Yes	50,000
114	FY 2026	BPA PROGRAM	2015	2050	163,547	51,323.43	7.03	1	0	51,323.43
115	FY 2026	BPA PROGRAM	2016	2051	167,165	167,165	7.030%	Yes	No	13,098
116		<b>Subtotal</b>	-	-	<b>\$455,451</b>	<b>\$343,227</b>	-	<b>Yes</b>	<b>Yes</b>	<b>\$189,161</b>
117										
118	FY 2027	BPA PROGRAM	2016	2051	167,165	154,067	7.030%	Yes	No	154,067
119	FY 2027	BPA PROGRAM	2017	2052	170,739	170,739	7.030%	Yes	No	27,048
120		<b>Subtotal</b>	-	-	<b>\$337,904</b>	<b>\$324,806</b>	-	<b>Yes</b>	<b>No</b>	<b>\$181,115</b>
121										
122	FY 2028	BPA PROGRAM	1998	2028	50,000	50,000	6.650%	No	No	50,000
123	FY 2028	BPA PROGRAM	1998	2028	112,300	112,300	5.850%	No	No	112,300
124	FY 2028	BPA PROGRAM	2017	2052	170,739	143,691	7.030%	Yes	No	24,867
125		<b>Subtotal</b>	-	-	<b>\$333,039</b>	<b>\$305,991</b>	-	<b>Yes</b>	<b>No</b>	<b>\$187,167</b>
126										
127	FY 2029	BPA PROGRAM	2017	2052	170,739	118,823	7.030%	Yes	No	118,823
128	FY 2029	BPA PROGRAM	2018	2053	174,139	174,139	7.030%	Yes	No	58,815
129		<b>Subtotal</b>	-	-	<b>\$344,878</b>	<b>\$292,962</b>	-	<b>Yes</b>	<b>No</b>	<b>\$177,639</b>
130										
131	FY 2030	BPA PROGRAM	2008	2030	30,000	30,000	6.180%	No	Yes	30,000
132	FY 2030	BPA PROGRAM	2018	2053	174,139	115,324	7.030%	Yes	No	115,324
133	FY 2030	BPA PROGRAM	2019	2054	177,611	177,611	7.03	1	0	31,772.33
134		<b>Subtotal</b>	-	-	<b>\$381,750</b>	<b>\$322,935</b>	-	<b>Yes</b>	<b>Yes</b>	<b>\$177,096</b>
135										
136	FY 2031	BPA PROGRAM	1998	2031	106,500	106,500	5.510%	No	Yes	106,500
137	FY 2031	BPA PROGRAM	2019	2054	177,611	145,839	7.030%	Yes	No	71,763
138		<b>Subtotal</b>	-	-	<b>\$284,111</b>	<b>\$252,339</b>	-	<b>Yes</b>	<b>Yes</b>	<b>\$178,263</b>
139										
140	FY 2032	BPA PROGRAM	1998	2032	98,900	98,401	6.700%	No	No	98,401
141	FY 2032	BPA PROGRAM	2007	2032	50,000	50,000	4.980%	No	Yes	50,000
142	FY 2032	BPA PROGRAM	2019	2054	177,611	74,076	7.030%	Yes	No	28,208
143		<b>Subtotal</b>	-	-	<b>\$326,511</b>	<b>\$222,476</b>	-	<b>Yes</b>	<b>Yes</b>	<b>\$176,609</b>
144										
145	FY 2033	BPA PROGRAM	2003	2033	40,000	40,000	5.550%	No	No	40,000
146	FY 2033	BPA PROGRAM	2019	2054	177,611	45,868	7.030%	Yes	No	45,868
147	FY 2033	BPA PROGRAM	2020	2055	181,138	181,138	7.030%	Yes	No	54,306
148		<b>Subtotal</b>	-	-	<b>\$398,749</b>	<b>\$267,006</b>	-	<b>Yes</b>	<b>No</b>	<b>\$140,174</b>
149										

Table 11-8: Application of Amortization (\$000s) (FY 2011)

	A	B	C	D	E	F	G	H	I	J
150	FY 2034	BPA PROGRAM	2004	2034	40,000	40,000	5.600%	No	No	40,000
151	FY 2034	BPA PROGRAM	2020	2055	181,138	126,832	7.030%	Yes	No	39,571
152		<b>Subtotal</b>	-	-	<b>\$221,138</b>	<b>\$166,832</b>	-	<b>Yes</b>	<b>No</b>	<b>\$79,571</b>
153										
154	FY 2035	BPA PROGRAM	2005	2035	40,000	40,000	5.500%	No	No	40,000
155	FY 2035	BPA PROGRAM	2005	2035	40,000	40,000	5.400%	No	No	40,000
156	FY 2035	BPA PROGRAM	2005	2035	45,000	45,000	5.250%	No	No	45,000
157	FY 2035	BPA PROGRAM	2020	2055	181138	87260.89	7.03	1	0	39366.5
158		<b>Subtotal</b>	-	-	<b>306,138</b>	<b>212,261</b>	-	<b>Yes</b>	<b>No</b>	<b>164,367</b>
159										
160	FY 2036	BPA PROGRAM	2020	2055	181,138	47,894	7.030%	Yes	No	47,894
161	FY 2036	BPA PROGRAM	2021	2056	184,559	184,559	7.030%	Yes	No	91,856
162		<b>Subtotal</b>	-	-	<b>\$365,697</b>	<b>\$232,453</b>	-	<b>Yes</b>	<b>No</b>	<b>\$139,751</b>
163										
164	FY 2037	BPA PROGRAM	2021	2056	184,559	92,703	7.030%	Yes	No	18,437
165		<b>Subtotal</b>	-	-	<b>\$184,559</b>	<b>\$92,703</b>	-	<b>Yes</b>	<b>No</b>	<b>\$18,437</b>
166										
167	FY 2038	BPA PROGRAM	2021	2056	184559	74265.57	7.03	1	0	24339.8
168		<b>Subtotal</b>	-	-	<b>\$184,559</b>	<b>\$74,266</b>	-	<b>Yes</b>	<b>No</b>	<b>\$24,340</b>
169										
170	FY 2039	BPA PROGRAM	2021	2056	184,559	49,926	7.030%	Yes	No	49,926
171	FY 2039	BPA PROGRAM	2022	2057	187,871	187,871	7.030%	Yes	No	69,993
172		<b>Subtotal</b>	-	-	<b>\$372,430</b>	<b>\$237,797</b>	-	<b>Yes</b>	<b>No</b>	<b>\$119,919</b>
173										
174	FY 2040	BPA PROGRAM	2006	2040	70,000	70,000	5.520%	No	Yes	70,000
175	FY 2040	BPA PROGRAM	2007	2040	35,000	35,000	5.510%	No	Yes	35,000
176	FY 2040	BPA PROGRAM	2022	2057	187,871	117,878	7.030%	Yes	No	39,982
177		<b>Subtotal</b>	-	-	<b>\$292,871</b>	<b>\$222,878</b>	-	<b>Yes</b>	<b>Yes</b>	<b>\$144,982</b>
178										
179	FY 2041	BPA PROGRAM	2009	2044	10,000	10,000	6.330%	No	No	1,427
180	FY 2041	BPA PROGRAM	2022	2057	187,871	77,896	7.030%	Yes	No	77,896
181	FY 2041	BPA PROGRAM	2023	2058	191,173	191,173	7.030%	Yes	No	56,952
182		<b>Subtotal</b>	-	-	<b>\$389,044</b>	<b>\$279,069</b>	-	<b>Yes</b>	<b>No</b>	<b>\$136,275</b>
183										
184	FY 2042	BPA PROGRAM	2009	2044	30,000	30,000	6.330%	No	No	30,000
185	FY 2042	BPA PROGRAM	2009	2044	30,000	30,000	6.330%	No	No	30,000
186	FY 2042	BPA PROGRAM	2009	2044	10,000	8,573	6.330%	No	No	8,573
187	FY 2042	BPA PROGRAM	2010	2045	439,390	439,390	6.240%	No	No	66,962
188		<b>Subtotal</b>	-	-	<b>\$509,390</b>	<b>\$507,963</b>	-	<b>No</b>	<b>No</b>	<b>\$135,535</b>
189										
190	FY 2043	BPA PROGRAM	2010	2045	439,390	372,428	6.240%	No	No	130,056
191		<b>Subtotal</b>	-	-	<b>\$439,390</b>	<b>\$372,428</b>	-	<b>No</b>	<b>No</b>	<b>\$130,056</b>
192										
193	FY 2044	BPA PROGRAM	2010	2045	439,390	242,372	6.240%	No	No	124,279
194		<b>Subtotal</b>	-	-	<b>\$439,390</b>	<b>\$242,372</b>	-	<b>No</b>	<b>No</b>	<b>\$124,279</b>
195										
196	FY 2045	BPA PROGRAM	2010	2045	439,390	118,093	6.240%	No	No	118,093
197		<b>Subtotal</b>	-	-	<b>\$439,390</b>	<b>\$118,093</b>	-	<b>No</b>	<b>No</b>	<b>\$118,093</b>
198										
199	FY 2046	BPA PROGRAM	2011	2046	449836	0	0.0703	No	No	0
200	FY 2046	BPA PROGRAM	2023	2058	191,173	134,221	0.070%			108,643
201		<b>Subtotal</b>	-	-	<b>\$641,009</b>	<b>\$134,221</b>	-			<b>\$108,643</b>
202										
203		<b>Grand Total</b>	-	-	<b>\$13,275,891</b>	<b>\$9,496,025</b>	-	<b>Yes</b>	<b>Yes</b>	<b>\$5,024,347</b>

## 12. REPAYMENT THEORY OF OPERATION

### 12.1 Introduction

The BPA is required to collect revenues sufficient to meet BPA's annual transmission expenses and cover the long-term obligations of the Federal Columbia River transmission system (FCRTS).

The Repayment Program is used to determine whether a given set of annual revenues is sufficient to meet a given set of annual expenses and cover a given set of long-term obligations when applied in accordance with the requirements of Department of Energy (DOE) Order RA 6120.2. The Program is also used to determine by the minimum factor future revenues can be multiplied by to obtain a new set of revenues which will be sufficient to recover amortization costs.

The revenues and the expenses of the cost evaluation year will be assigned to all future years. This will have the effect of assigning the net operating revenue of the cost evaluation year to all future years. This has the effect of levelizing the long-term obligations over all future years.

### 12.2 Repayment Program Logic

The diagrams on the following pages show the flow of logic in BPA's repayment program. The first diagram shows the logic of the binary search used to locate minimum sufficient revenues. A necessary part of this search is the test for sufficiency. The logic of the test for sufficiency is shown on the remaining two diagrams.

The equations which are referred to are:

Revenue Equation: Net revenues of each year are expended on interest and payments on the principles.

Investment equation: The payments on each investment are less than or equal to the principle of that investment (and equal to the principle of that investment after the investment is due).

Predictor equation: For each future year the accumulated revenues less the accumulated interest less the accumulated investments due is equal to the accumulated payments on high interest rate investments which are not due.

### 12.3 Bond Rollover Feature

Since the 2004 Transmission Rate Case, BPA has incorporated a new data manipulation feature associated with the repayment program. This does not change any methodology of the model. It allows the user to assume that short-term bond(s) associated with assets with average service

lives considerably longer than the bond maturity date are refinanced on the original maturity date, and recognizes replacement bonds with new maturity dates and corresponding interest rates. This feature reflects BPA's practice of rolling over a bond when it comes due if funds are not available to pay it at that time or if market conditions justify refinancing such bonds within the allowable repayment period of the associated assets. Reflecting this practice in the model allows a more realistic calculation of interest expense.

Figure 12-1

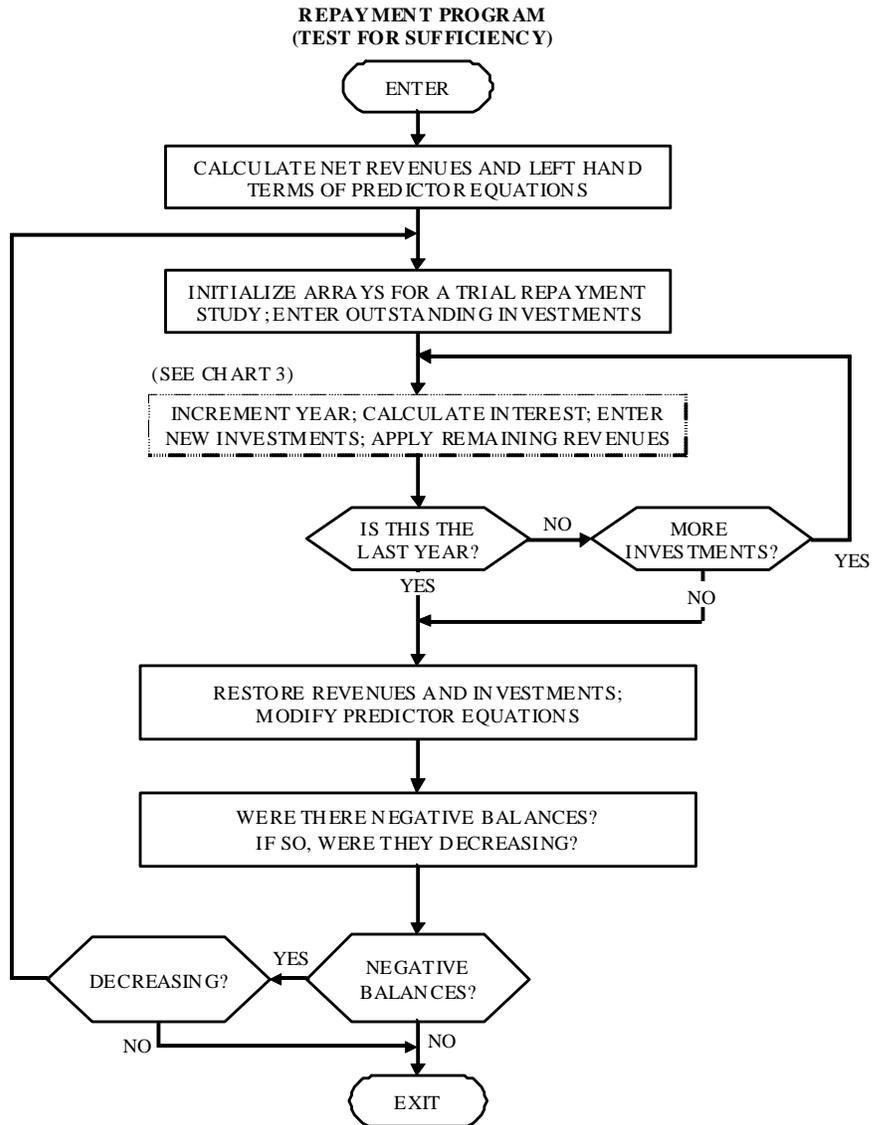
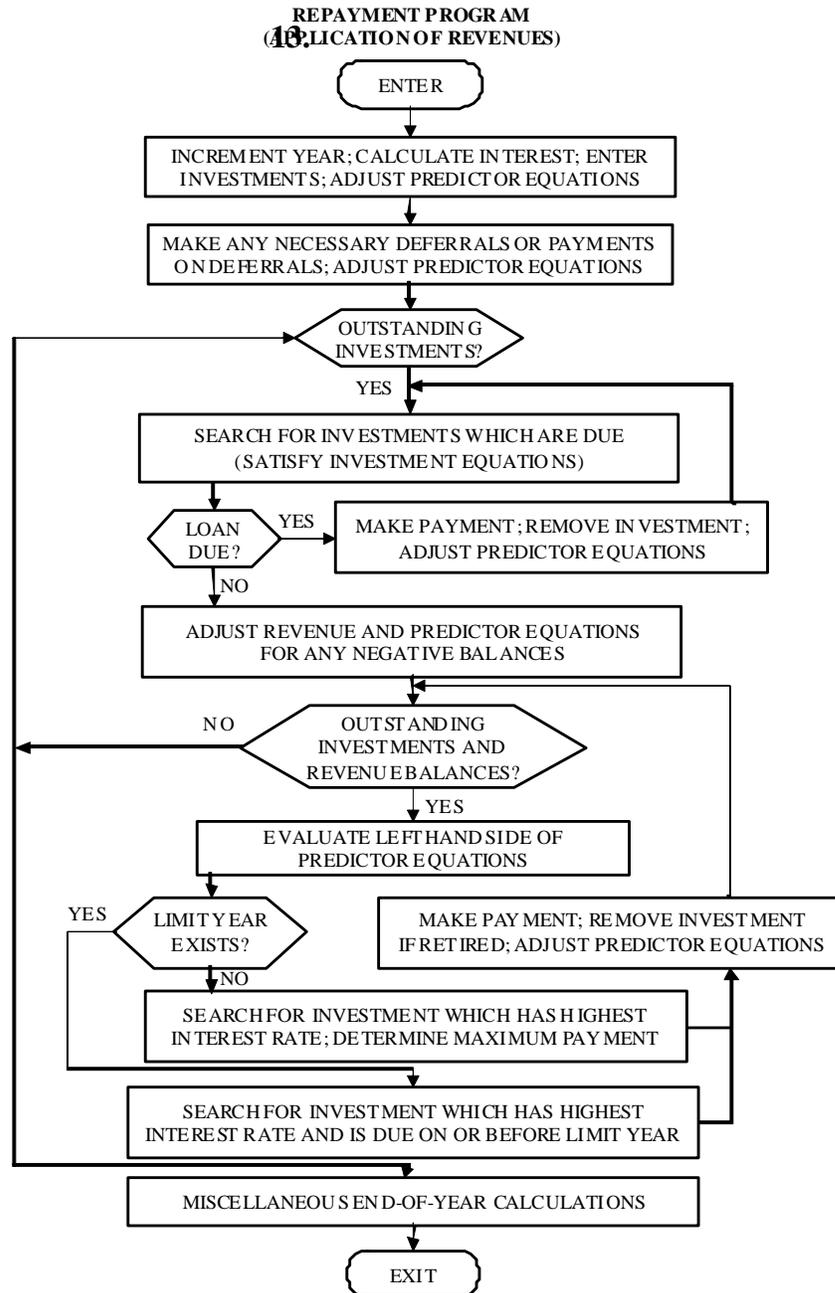


Figure 12-2



## **13. DEBT OPTIMIZATION DEMONSTRATION**

### **13.1 Background**

In FY 2001 BPA began carrying out the Debt Optimization Program (DOP) in conjunction with Energy Northwest (EN) as a means for BPA to replenish its Treasury borrowing authority. The basic mechanism of the DOP 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.

To expand the capability to restore Treasury borrowing authority, BPA instituted the Debt Service Reassignment (DSR) concept, whereby cash flows generated through DO are used to repay transmission-related Treasury obligations. Under the DSR concept, the transmission function is responsible for the recovery of any and all relevant costs associated with the swap of EN debt service for Federal obligations associated with transmission, and BPA's generation function is held harmless. For BPA's Power Services (PS), it is as if the refinancing transactions related to DSR never took place. That is, power rates were set to recover the maturing EN principal payment as it came due, and actual power revenues were available to do so. Therefore, PS's obligation to recover the maturing EN principal has been satisfied -- the generation function no longer has the repayment obligation for that portion of the debt service associated with refinanced EN debt assigned to transmission through DSR, and recovery of the associated debt service is no longer reflected in the costs of BPA's generation function.

### **13.2 DO Demonstration and Slice Settlement Agreement**

BPA has committed to manage DOP in a manner such that rates are no higher with DOP than they would be in the absence of DOP. BPA complies with this commitment by conducting annual DOP 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 DOP and DSR 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 DOP.

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 and that, for purposes of the 2010 Transmission Rate Case, the Initial Proposal would include this demonstration, among other things. This demonstration is contained in the tables described below.

### **13.3 The Demonstration Tables**

Table 13-1 is the comparison of the results of the two repayment studies. Column A is the total levelized debt service calculated in the transmission base repayment study, which matches Column A of Table 13-2. Column B is the total levelized debt service calculated in the transmission debt optimization repayment study, which matches Column A of Table 13-4. Column C shows the difference between columns A and B.

Table 13-2 summarizes the results of the transmission base repayment study. This study incorporates all debt management transactions, Federal and non-Federal, made on behalf of transmission through September 30, 2008. It does not include projections of future DOP actions. The study shows what the combined levelized debt service levels would be if no additional DO transactions occurred. Column A is the total levelized Federal and non Federal debt service. Column B is non-Federal debt service. Column C is gross Federal interest expense calculated in the repayment study. Column D is Federal principal amortization. Column E is the revenue surplus.

Table 13-3 shows the projected Federal investments used in the base study.

Table 13-4 contains the results of the transmission debt optimization repayment study. This study incorporates all elements from the base study noted above, plus the DOP/DSR projections for the current and upcoming fiscal years. Incorporating future DOP/DSR into this study is the only difference between this and the base study. The table is laid out in the same manner as Table 13-2, Summary of Base Repayment Study.

Table 13-5 shows the projected Federal investments used in the twenty-year study, which matches the projections shown in Table 13-3.

Table 13-6 shows the projected net debt service associated with the projected DOP bonds. The par amount of the projected bonds and the issuance year are shown in the bottom half of the table. The resulting net debt service stream is in the top half of the table.

### **13.4 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

	A	B	C	D	E
1	<b>Table 13-1: Comparison of Transmission Repayment Studies</b>				
2	(\$000s)				
3					
4		<b>A</b>	<b>B</b>		<b>C</b>
			<b>Debt Optimization Total</b>		
5		<b>Base Total Debt Service</b>	<b>Debt Service</b>		<b>Delta</b>
6	1	2009	362,541	361,595	(946)
7	2	2010	408,683	408,391	(292)
8	3	2011	429,952	429,658	(294)
9	4	2012	455,944	455,663	(281)
10	5	2013	478,246	477,977	(269)
11	6	2014	496,552	496,289	(263)
12	7	2015	510,618	510,357	(261)
13	8	2016	531,404	531,142	(262)
14	9	2017	548,236	547,963	(273)
15	10	2018	560,707	560,435	(272)
16	11	2019	572,527	572,253	(274)
17	12	2020	585,251	584,976	(275)
18	13	2021	598,592	598,318	(274)
19	14	2022	613,132	612,858	(274)
20	15	2023	628,991	628,716	(275)
21	16	2024	644,298	644,024	(274)
22	17	2025	661,201	660,928	(273)
23	18	2026	678,765	678,492	(273)
24	19	2027	696,473	696,199	(274)
25	20	2028	714,743	714,469	(274)
26	21	<b>Total</b>			<b>(6,153)</b>

	A	B	C	D	E	F	G
1	<b>Table 13-2: Summary of Base Repayment Study (\$000s)</b>						
2							
3			<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>
4		<b>Fiscal Year</b>	<b>Total Debt Service</b>	<b>3rd Party Debt Service</b>	<b>Federal Gross Interest</b>	<b>Federal Amortization</b>	<b>Rev. Surplus</b>
5	1	2009	362,541	75,645	114,237	172,659	-
6	2	2010	408,683	70,026	123,428	215,229	-
7	3	2011	429,952	71,861	139,240	218,851	-
8	4	2012	455,944	112,894	159,199	183,851	-
9	5	2013	478,246	233,761	184,844	59,641	-
10	6	2014	496,552	230,773	212,183	53,596	0
11	7	2015	510,618	236,208	237,103	37,307	0
12	8	2016	531,404	226,390	265,002	40,012	0
13	9	2017	548,236	235,745	290,902	21,589	-
14	10	2018	560,707	217,209	314,463	29,035	-
15	11	2019	572,527	29,791	339,773	202,964	0
16	12	2020	585,251	44,313	347,988	192,950	-
17	13	2021	598,592	44,357	355,301	198,934	0
18	14	2022	613,132	44,400	372,202	196,529	-
19	15	2023	628,991	44,452	384,120	200,419	0
20	16	2024	644,298	38,333	401,591	204,374	-
21	17	2025	661,201	19,855	415,153	226,193	0
22	18	2026	678,765	19,857	428,915	229,993	-
23	19	2027	696,473	19,860	450,369	226,244	0
24	20	2028	714,743	19,863	461,263	233,618	-
25	21	<b>Total</b>	<b>\$11,176,856</b>	<b>\$2,015,730</b>	<b>\$5,536,015</b>	<b>\$2,910,367</b>	<b>\$0</b>
26							

**Table 13-3: Projected Federal Investments in Base Study (\$000s)**

A	B	C	D	E	F	G	H	I	J	
Project	Original Principal	Current Principal	Interest Rate	Due Date	Replacement?	In Service Date	Month	Rollover Date	Rollover Rate	
1	BPA PROGRAM	277,265	277,265	5.350%	2044	-	2009	3	-	-
2	BPA PROGRAM	405,094	405,094	6.790%	2045	-	2010	3	-	-
3	BPA PROGRAM	414,465	414,465	6.930%	2046	-	2011	3	-	-
4	BPA PROGRAM	495,298	495,298	6.690%	2047	-	2012	3	-	-
5	BPA PROGRAM	475,761	475,761	6.690%	2048	-	2013	3	-	-
6	BPA PROGRAM	462,764	462,764	6.690%	2049	-	2014	3	-	-
7	BPA PROGRAM	375,823	375,823	6.690%	2050	-	2015	3	-	-
8	BPA PROGRAM	465,446	465,446	6.690%	2051	-	2016	3	-	-
9	BPA PROGRAM	405,352	405,352	6.690%	2052	-	2017	3	-	-
10	BPA PROGRAM	329,582	329,582	6.690%	2053	-	2018	3	-	-
11	BPA PROGRAM	327,100	327,100	6.690%	2054	-	2019	3	-	-
12	BPA PROGRAM	349,000	349,000	6.690%	2055	-	2020	3	-	-
13	BPA PROGRAM	365,800	365,800	6.690%	2056	-	2021	3	-	-
14	BPA PROGRAM	391,000	391,000	6.690%	2057	-	2022	3	-	-
15	BPA PROGRAM	418,000	418,000	6.690%	2058	-	2023	3	-	-
16	BPA PROGRAM	418,000	418,000	6.690%	2059	-	2024	3	-	-
17	BPA PROGRAM	446,475	446,475	6.690%	2060	-	2025	3	-	-
18	BPA PROGRAM	459,869	459,869	6.690%	2061	-	2026	3	-	-
19	BPA PROGRAM	464,467	464,467	6.690%	2062	-	2027	3	-	-
20	BPA PROGRAM	480,925	480,925	6.690%	2063	-	2028	3	-	-
21	ENVIRONMENT	4,402	4,402	4.720%	2024	-	2009	3	-	-
22	ENVIRONMENT	5,369	5,369	5.870%	2025	-	2010	3	-	-
23	ENVIRONMENT	5,581	5,581	6.220%	2026	-	2011	3	-	-
24	ENVIRONMENT	5,869	5,869	6.210%	2027	-	2012	3	-	-
25	ENVIRONMENT	5,984	5,984	6.210%	2028	-	2013	3	-	-
26	ENVIRONMENT	6,101	6,101	6.210%	2029	-	2014	3	-	-
27	ENVIRONMENT	8,082	8,082	6.210%	2030	-	2015	3	-	-
28	ENVIRONMENT	8,246	8,246	6.210%	2031	-	2016	3	-	-
29	ENVIRONMENT	8,412	8,412	6.210%	2032	-	2017	3	-	-
30	ENVIRONMENT	8,582	8,582	6.210%	2033	-	2018	3	-	-
31	ENVIRONMENT	10,200	10,200	6.210%	2034	-	2019	3	-	-
32	ENVIRONMENT	10,900	10,900	6.210%	2035	-	2020	3	-	-
33	ENVIRONMENT	11,700	11,700	6.210%	2036	-	2021	3	-	-
34	ENVIRONMENT	12,500	12,500	6.210%	2037	-	2022	3	-	-
35	ENVIRONMENT	13,400	13,400	6.210%	2038	-	2023	3	-	-
36	ENVIRONMENT	13,905	13,905	6.210%	2039	-	2024	3	-	-
37	ENVIRONMENT	14,322	14,322	6.210%	2040	-	2025	3	-	-
38	ENVIRONMENT	14,752	14,752	6.210%	2041	-	2026	3	-	-
39	ENVIRONMENT	15,195	15,195	6.210%	2042	-	2027	3	-	-
40	ENVIRONMENT	15,651	15,651	6.210%	2043	-	2028	3	-	-

**Table 13-4: Summary of Debt Optimization Repayment Study (\$000s)**

	A	B	C	D	E
Fiscal Year	Total Debt Service	3rd Party Debt Service	Federal Gross Interest	Federal Amortization	Rev. Surplus
2009	361,595	35,645	113,291	212,659	-
2010	408,391	71,929	120,572	215,890	-
2011	429,658	73,764	136,336	219,558	-
2012	455,663	114,797	156,246	184,620	-
2013	477,977	235,664	181,849	60,464	-
2014	496,289	242,676	209,365	44,248	-
2015	510,357	242,658	236,442	31,256	-
2016	531,142	237,607	262,827	30,708	0
2017	547,963	241,483	289,537	16,944	-
2018	560,435	227,701	313,272	19,462	1
2019	572,253	29,791	339,533	202,929	0
2020	584,976	44,313	347,818	192,845	-
2021	598,318	44,357	355,039	198,922	0
2022	612,858	44,400	371,941	196,517	-
2023	628,716	44,452	383,871	200,393	0
2024	644,024	38,333	401,336	204,355	-
2025	660,928	19,855	414,900	226,174	0
2026	678,492	19,857	428,670	229,965	0
2027	696,199	19,860	450,119	226,220	0
2028	714,469	19,863	461,013	233,593	-
<b>Total</b>	<b>11,170,703</b>	<b>2,049,005</b>	<b>5,973,975</b>	<b>3,147,723</b>	<b>1</b>

**Table 13-5: Projected Federal Investments in Debt Optimization Study (\$000s)**

A		B	C	D	E	F	G	H	I	J
Project		Original Principal	Current Principal	Interest Rate	Due Date	Replacement?	In Service Date	Month	Rollover Date	Rollover Rate
1	BPA PROGRAM	277,265	277,265	5.350%	2044	No	2009	3	-	-
2	BPA PROGRAM	405,094	405,094	6.790%	2045	No	2010	3	-	-
3	BPA PROGRAM	414,465	414,465	6.930%	2046	No	2011	3	-	-
4	BPA PROGRAM	495,298	495,298	6.690%	2047	No	2012	3	-	-
5	BPA PROGRAM	475,761	475,761	6.690%	2048	No	2013	3	-	-
6	BPA PROGRAM	462,764	462,764	6.690%	2049	No	2014	3	-	-
7	BPA PROGRAM	375,823	375,823	6.690%	2050	No	2015	3	-	-
8	BPA PROGRAM	465,446	465,446	6.690%	2051	No	2016	3	-	-
9	BPA PROGRAM	405,352	405,352	6.690%	2052	No	2017	3	-	-
10	BPA PROGRAM	329,582	329,582	6.690%	2053	No	2018	3	-	-
11	BPA PROGRAM	327,100	327,100	6.690%	2054	No	2019	3	-	-
12	BPA PROGRAM	349,000	349,000	6.690%	2055	No	2020	3	-	-
13	BPA PROGRAM	365,800	365,800	6.690%	2056	No	2021	3	-	-
14	BPA PROGRAM	391,000	391,000	6.690%	2057	No	2022	3	-	-
15	BPA PROGRAM	418,000	418,000	6.690%	2058	No	2023	3	-	-
16	BPA PROGRAM	418,000	418,000	6.690%	2059	No	2024	3	-	-
17	BPA PROGRAM	446,475	446,475	6.690%	2060	No	2025	3	-	-
18	BPA PROGRAM	459,869	459,869	6.690%	2061	No	2026	3	-	-
19	BPA PROGRAM	464,467	464,467	6.690%	2062	No	2027	3	-	-
20	BPA PROGRAM	480,925	480,925	6.690%	2063	No	2028	3	-	-
21	ENVIRONMENT	4,402	4,402	4.720%	2024	No	2009	3	-	-
22	ENVIRONMENT	5,369	5,369	5.870%	2025	No	2010	3	-	-
23	ENVIRONMENT	5,581	5,581	6.220%	2026	No	2011	3	-	-
24	ENVIRONMENT	5,869	5,869	6.210%	2027	No	2012	3	-	-
25	ENVIRONMENT	5,984	5,984	6.210%	2028	No	2013	3	-	-
26	ENVIRONMENT	6,101	6,101	6.210%	2029	No	2014	3	-	-
27	ENVIRONMENT	8,082	8,082	6.210%	2030	No	2015	3	-	-
28	ENVIRONMENT	8,246	8,246	6.210%	2031	No	2016	3	-	-
29	ENVIRONMENT	8,412	8,412	6.210%	2032	No	2017	3	-	-
30	ENVIRONMENT	8,582	8,582	6.210%	2033	No	2018	3	-	-
31	ENVIRONMENT	10,200	10,200	6.210%	2034	No	2019	3	-	-
32	ENVIRONMENT	10,900	10,900	6.210%	2035	No	2020	3	-	-
33	ENVIRONMENT	11,700	11,700	6.210%	2036	No	2021	3	-	-
34	ENVIRONMENT	12,500	12,500	6.210%	2037	No	2022	3	-	-
35	ENVIRONMENT	13,400	13,400	6.210%	2038	No	2023	3	-	-
36	ENVIRONMENT	13,905	13,905	6.210%	2039	No	2024	3	-	-
37	ENVIRONMENT	14,322	14,322	6.210%	2040	No	2025	3	-	-
38	ENVIRONMENT	14,752	14,752	6.210%	2041	No	2026	3	-	-
39	ENVIRONMENT	15,195	15,195	6.210%	2042	No	2027	3	-	-
40	ENVIRONMENT	15,651	15,651	6.210%	2043	No	2028	3	-	-

	A	B	C	D	E
1	<b>Table 13-6: Projected Energy Northwest Debt Service with Debt Optimization</b>				
2					
3		<b>A</b>	<b>B</b>	<b>C</b>	
4		<b>Fiscal Year</b>	<b>Principal</b>	<b>Interest</b>	<b>Net New D/S</b>
5	1	2009	-	-	-
6	2	2010	-	1,903,000	1,903,000
7	3	2011	-	1,903,000	1,903,000
8	4	2012	-	1,903,000	1,903,000
9	5	2013	-	1,903,000	1,903,000
10	6	2014	10,000,000	1,903,000	11,903,000
11	7	2015	5,000,000	1,450,000	6,450,000
12	8	2016	10,000,000	1,217,000	11,217,000
13	9	2017	5,000,000	738,000	5,738,000
14	10	2018	10,000,000	492,000	10,492,000
15	11	<b>Total</b>	<b>40,000,000</b>	<b>13,412,000</b>	<b>53,412,000</b>
16					
17					
18		<b>Par Amounts Of Selected Issues</b>			
19	12	NET2009-DUE14-18			40,000,000
20	13	<b>TOTAL</b>			<b>40,000,000</b>

**14. SALES AND REVENUE FORECAST**

	A	B	C	D	E	F
1	<b>Table 14-1: Transmission Sales Forecast, FY 2009 - FY 2011 (Megawatts)</b>					
2						
3				(A)	(B)	(C)
4						
5			<b>Rate Schedule</b>	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011</b>
6			<b>Network</b>			
7	1		Formula Power Transmission (FPT.1,3).....	1,887	1,524	1,497
8	2		Integration of Resources (IR).....	4,052	2,168	1,456
9	3		Network (NT) Base.....	5,985	6,063	6,276
10	4		Long-term Point to Point (PTP)			
11	5		CONFIRMED Sales.....	18,822	18,183	16,218
12	6		CONFIRMED Short Distance Discount (SDD).....	-357	-284	-159
13	7		STUDY Sales.....	26	338	588
14	8		Expected Sales.....	128	3,491	6,652
15	9		Expected SDD.....	81	-49	-261
16	10		Subtotal Long-term PTP.....	18,700	21,679	23,037
17	11		PTP Short Term.....	858	891	891
18	12		<b>Subtotal Network.....</b>	<b>31,482</b>	<b>32,325</b>	<b>33,157</b>
19						
20			<b>Southern Intertie</b>			
21			Long-term Intertie South (IS)			
22	13		CONFIRMED Sales.....	5,340	3,596	3,344
23	14		STUDY Sales.....	0	450	450
24	15		Expected Sales.....	87	1,365	1,586
25	16		Subtotal Long-term IS.....	5,427	5,411	5,380
26	17		IS Short Term.....	207	209	209
27	18		<b>Subtotal Intertie.....</b>	<b>5,634</b>	<b>5,620</b>	<b>5,589</b>
28						
29	19		NT Load Shaping.....	5,890	6,320	6,533
30	20		Utility Delivery Charge.....	198	198	181
31	21		Montana Intertie.....	16	16	16
32						
33			<b>Sales Receiving Transmission Credits</b>			
34	22		Long-Term PTP.....	504	1,442	1,743
35	23		NT/NT_LS.....	0	50	113
36	24		Long-Term IS.....	0	301	451
37						

	A	B	C	D	E	F
1	<b>Table 14-2: Transmission Revenues, Current Rates FY 2009 - FY 2011</b>					
2	<b>(\$000s)</b>					
3				(A)	(B)	(C)
4				<b>FY2009 /1</b>	<b>FY2010</b>	<b>FY2011</b>
5	<b>Long-Term</b>					
6	<b>Network</b>					
7	1		Formula Power Transmission.....	30,083	24,527	24,157
8	2		Integration of Resources.....	72,434	38,967	26,171
9	3		Point-to-Point Long Term.....	291,254	337,672	358,823
10	4		Network Integration.....	115,570	122,266	126,530
11	<b>Interties</b>					
12	5		Southern Intertie Long Term.....	84,205	83,960	83,479
13	6		Montana Intertie Long Term.....	252	252	252
14	<b>Short-Term</b>					
15	7		Point-to-Point Short Term.....	20,780	21,181	21,181
16	8		Southern Intertie Short Term .....	4,383	4,438	4,438
17	<b>Delivery</b>					
18	9		Utility Delivery Charges- Delivery.....	2,662	2,664	2,424
19	10		DSI Delivery.....	2,121	1,765	1,765
20	<b>Ancillary</b>					
21	11		Scheduling, System Control & Dispatch.....	77,240	86,116	90,082
22	12		Reactive Supply & Voltage from Gen.....	0	0	0
23	13		Operating Reserves - Spin & Supp.....	35,091	31,968	26,785
24	14		Regulation & Frequency Response.....	14,086	17,017	17,481
25	15		Within-Hour Balancing for Resources.....	15,813	20,267	29,553
26	16		Energy & Generation Imbalance.....	2,407	0	0
27	<b>Revenue Credits</b>					
28	17		Use of Facilities (UFT)	5,723	5,522	5,402
29	18		Townsend-Garrison Transmission.....	9,796	9,796	9,796
30	19		Operations & Maintenance.....	1,138	1,121	1,145
31	20		Reservation Fee- Other Revenue Sources.....	1,543	792	1,666
32	21		AC-PNW PSW Intertie.....	1,523	1,891	1,891
33	22		Power Factor Penalty.....	4,604	4,402	4,402
34	23		Wireless/PCS- Other Revenue .....	4,311	4,544	4,524
35	24		Wireless/PCS- Reimbursable Revenue.....	587	671	671
36	25		Fiber- Other Revenue .....	6,966	7,287	7,090
37	26		Fiber-Other Reimbursable Revenue.....	1,057	901	909
38	27		Land Leases and Sales.....	300	301	301
39	28		Other Leases/Misc Revenue Sources.....	157	164	160
40	29		COE/BOR Project Revenue.....	954	954	954
41	30		Remedial Action Scheme.....	51	51	51
42	31		Transmissions Share of Irrigation PP.....	383	382	382
43	32		NFP-Depr PNW PSW Intertie.....	3,065	3,065	3,065
44	33		Srvcs/FPS Loss/Int Exch/Arcrft.....	23	0	0
45	34		UNAUTH INCREASE- Other Revenue Sources.....	2	0	0
46	35		Gen-Integration-Other Revenue Source.....	6,816	8,462	8,296
47	36		<b>Subtotal Network.....</b>	<b>530,121</b>	<b>544,613</b>	<b>556,862</b>
48	37		<b>Subtotal Interties.....</b>	<b>88,840</b>	<b>88,650</b>	<b>88,168</b>
49	38		<b>Subtotal Delivery.....</b>	<b>4,783</b>	<b>4,429</b>	<b>4,189</b>
50	39		<b>Subtotal Ancillary.....</b>	<b>144,638</b>	<b>155,368</b>	<b>163,901</b>
51	40		<b>Subtotal Revenue Credits.....</b>	<b>49,002</b>	<b>50,306</b>	<b>50,705</b>
52	41		<b>Total TS.....</b>	<b>817,383</b>	<b>843,365</b>	<b>863,825</b>
53						
54	/1 FY 2009 based on 2nd quarter forecast					

	A	B	C	D	E
1	<b>Table 14-3: Transmission Revenues, Proposed Rates FY 2010 - FY 2011</b>				
2	<b>(\$000s)</b>				
3				<b>(A)</b>	<b>(B)</b>
4				<b>FY2010</b>	<b>FY2011</b>
5	<b>Long-Term</b>				
6	<b>Network</b>				
7	1		Formula Power Transmission.....	24,527	24,157
8	2		Integration of Resources.....	38,967	26,171
9	3		Point-to-Point Long Term.....	337,672	358,823
10	4		Network Integration.....	122,266	126,530
11	<b>Interties</b>				
12	5		Southern Intertie Long Term.....	83,960	83,479
13	6		Montana Intertie Long Term.....	252	252
14	<b>Short-Term</b>				
15	7		Point-to-Point Short Term.....	21,181	21,181
16	8		Southern Intertie Short Term .....	4,438	4,438
17	<b>Delivery</b>				
18	9		Utility Delivery Charges- Delivery.....	2,664	2,424
19	10		DSI Delivery.....	1,765	1,765
20	<b>Ancillary</b>				
21	11		Scheduling, System Control & Dispatch.....	86,116	90,082
22	12		Reactive Supply & Voltage from Gen.....	0	0
23	13		Operating Reserves - Spin & Supp.....	31,443	26,345
24	14		Regulation & Frequency Response.....	7,735	7,946
25	15		Within-Hour Balancing for Resources.....	38,447	56,063
26	16		Energy & Generation Imbalance.....	0	0
27	<b>Revenue Credits</b>				
28	17		Use of Facilities (UFT)	5,522	5,402
29	18		Townsend-Garrison Transmission.....	9,796	9,796
30	19		Operations & Maintenance.....	1,121	1,145
31	20		Reservation Fee- Other Revenue Sources.....	792	1,666
32	21		AC-PNW PSW Intertie.....	1,891	1,891
33	22		Power Factor Penalty.....	4,402	4,402
34	23		Wireless/PCS- Other Revenue .....	4,544	4,524
35	24		Wireless/PCS- Reimbursable Revenue.....	671	671
36	25		Fiber- Other Revenue .....	7,287	7,090
37	26		Fiber-Other Reimbursable Revenue.....	901	909
38	27		Land Leases and Sales.....	301	301
39	28		Other Leases/Misc Revenue Sources.....	164	160
40	29		COE/BOR Project Revenue.....	954	954
41	30		Remedial Action Scheme.....	51	51
42	31		Transmissions Share of Irrigation PP.....	382	382
43	32		NFP-Depr PNW PSW Intertie.....	3,065	3,065
44	33		Srvcs/FPS Loss/Int Exch/Arcrft.....	0	0
45	34		UNAUTH INCREASE- Other Revenue Sources.....	0	0
46	35		Gen-Integration-Other Revenue Source.....	8,462	8,296
47	36		<b>Subtotal Network.....</b>	<b>544,613</b>	<b>556,862</b>
48	37		<b>Subtotal Interties.....</b>	<b>88,650</b>	<b>88,168</b>
49	38		<b>Subtotal Delivery.....</b>	<b>4,429</b>	<b>4,189</b>
50	39		<b>Subtotal Ancillary.....</b>	<b>163,741</b>	<b>180,437</b>
51	40		<b>Subtotal Revenue Credits.....</b>	<b>50,306</b>	<b>50,705</b>
52	41		<b>Total TS.....</b>	<b>851,739</b>	<b>880,361</b>



	A	B	C	D	E	F	G	H
44								
45		<b>Table 14-5: LGIA Transmission Credits and Interest at Proposed Rates</b>						
46		(\$000s)						
47								
48			FY 2009		FY 2010		FY 2011	
49		Generation Project	Interest Expense	Transmission Credits Repaid	Interest Expense	Transmission Credits Repaid	Interest Expense	Transmission Credits Repaid
50	1	Generation Project A	93	1,089	49	1,089	1	181
51	2	Generation Project B	868	1,558	1,060	1,558	1,147	1,558
52	3	Generation Project C	615	6,230	388	6,230	46	3,115
53	4	Generation Project D	932	1,493	967	6,230	666	6,230
54	5	Generation Project E	671	935	838	935	931	935
55	6	Generation Project F	427	1,745	456	1,745	365	1,745
56	7	Generation Project G	324	1,558	492	1,558	952	1,558
57	8	Generation Project H	98	2,338	7	779	-	-
58	9	Generation Project I	414	1,573	352	1,573	284	1,573
59	10	Generation Project J	558	-	2,781	273	4,972	1,168
60	11	Generation Project K	169	62	223	62	262	62
61	12	Generation Project L	60	-	81	-	98	-
62	13	Generation Project M	278	1,184	290	1,184	254	1,184
63	14	Generation Project N	47	-	63	-	76	-
64	15	Generation Project O	238	1,465	149	3,115	6	779
65	16	Generation Project P	58	-	220	2,336	45	3,115
66	17	Generation Project Q	151	125	147	1,495	58	1,495
67	18	Generation Project R	7	389	-	-	-	-
68	19	Generation Project S	114	-	282	966	261	966
69	20	Generation Project T	697	-	940	-	1,013	3,894
70	21	Generation Project U	94	519	107	1,558	17	909
71	22	Generation Project V	526	-	3,036	-	5,032	1,298
72	23	Generation Project W	7	-	243	65	280	779
73	24	Generation Project X	-	-	1	-	0	592
74	25	Generation Project Y	3	-	18	51	4	255
75	26	Generation Project Z	5	-	91	-	143	857
76	27	Generation Project AA	5	-	310	52	663	623
77	28	Generation Project AB	10	-	122	52	166	623
78	29	Generation Project AC	5	-	272	195	501	2,336
79	30	Generation Project AD	5	-	272	-	599	260
80	31	Generation Project AE	445	-	1,311	-	2,259	260
81	32	Generation Project AF	184	-	518	-	878	260
82	33	Generation Project AG	-	-	-	50	-	-
83	34	Non-LGIA Project						
84	35	ANNUAL TOTALS	\$ 8,108	\$ 22,262	\$ 16,087	\$ 33,150	\$ 21,979	\$ 38,608

85								
86								
87		<b>Table 14-6: FERC Interest Rate Assumptions</b>						
88								
89			Fiscal Year	Assumed Annual Rate				
90			2009	5.40%				
91			2010	6.85%				
92			2011	7.64%				

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