

**Jefferson County PUD**  
**Pole Attachment Rate Model**  
**Assumptions**

**Exhibit A**

Utility:           Jefferson PUD  
Date Prepared:   December 3, 2014  
Prepared By:     EES Consulting

**Assumptions**

---

Expense Allocation Basis

FCC Telecom Rate	Net Plant
APPA Rate	Gross Plant

Depreciation Rate for Gross Pole Investment   3.37%

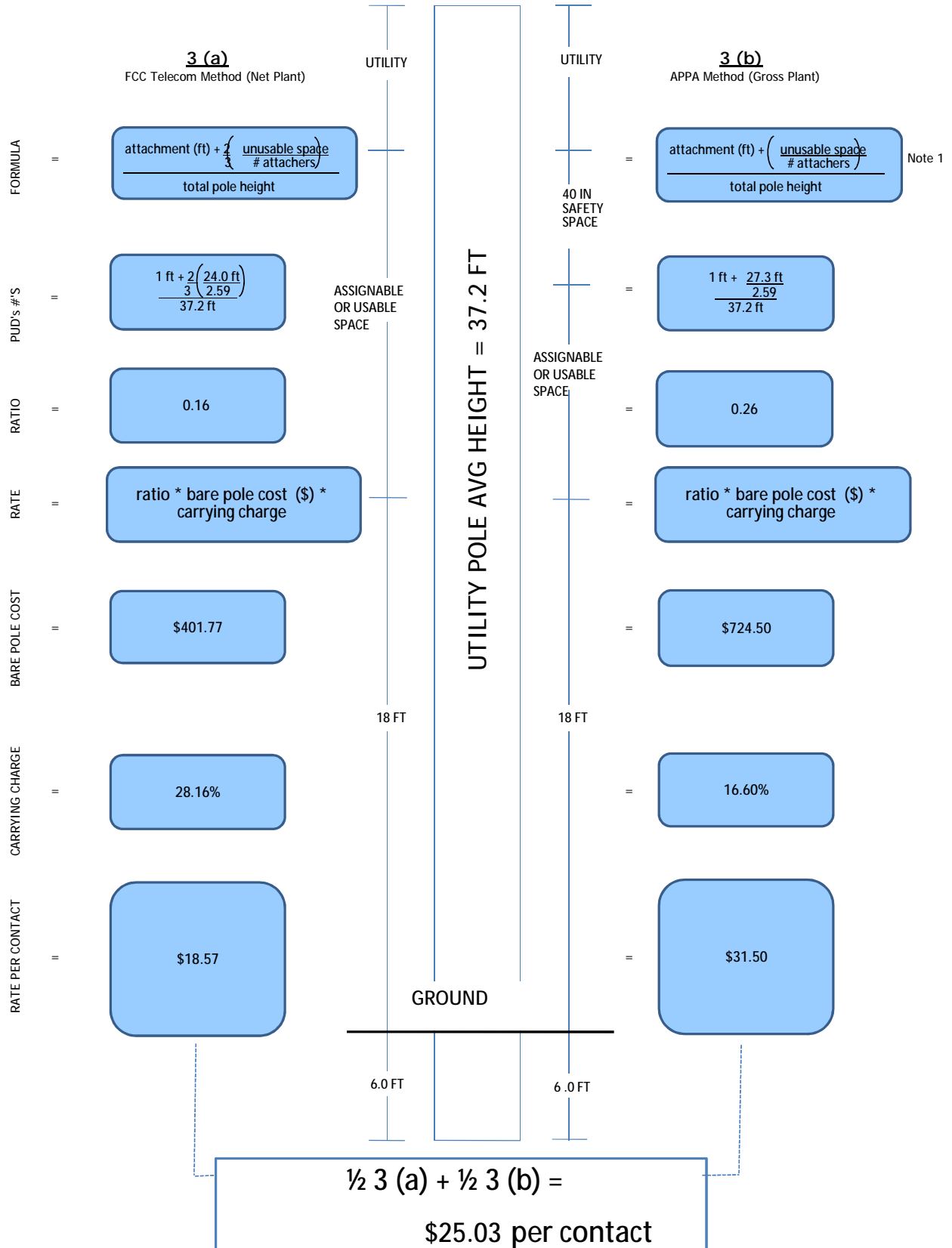
Space Occupied by One Attachment           1.0 ft

Include Transmission Poles                   Yes

Contacts per Pole                               3.00

Rate of Return                                  4.29%

## Exhibit B Jefferson PUD Rate Calculations per RCW 54.04.045



Note 1: APPA formula rearranged, based on standard order of operations, to follow similar calculation format as FCC, achieving the same result.

**Mason County PUD No. 3**  
**Pole Attachment Rate Model**  
**Rate Computation**

Exhibit C

<b>POLE &amp; ATTACHMENT DATA</b>		
(1)	Number of Poles	11,182
(2)	Average Number of Attachments (Contacts/Pole) <sup>1</sup>	3.00
(3)	Space Occupied by One Attachment <sup>2</sup>	1.0 ft
(4)	Total Space Occupied by Attachments	3.0 ft
(5)	Average Gross Cost of Bare Pole <sup>3</sup>	\$ 724.50
(6)	Carrying Charge <sup>4</sup>	16.60%
<b>ASSIGNABLE &amp; COMMON SPACE PER POLE</b>		
(7)	<b>Average Pole Height</b>	<b>38.6 ft</b>
	Underground Pole	6.0 ft
	Ground Clearance	18.0 ft
	Safety Space	3.3 ft
(8)	<b>Total Common Space</b>	<b>27.3 ft</b>
(9)	<b>Total Assignable Space</b>	<b>11.3 ft</b>
<b>POLE ATTACHMENT RATE</b>		
(10)	Assignable Space Component <sup>5</sup>	\$ 3.12
	Plus:	+
(11)	<u>Common Space Component<sup>6</sup></u>	<u>\$ 28.39</u>
	<b>Maximum Pole Attachment Rate<sup>7</sup></b>	<b>\$ 31.50 per contact</b>
<p>1. Based on FCC Rural Presumption of 3.0 Attachments per Pole</p> <p>2. See Exhibit A</p> <p>3. (Gross Investment in Poles) / (Total No. of Poles), see Exhibit F</p> <p>4. See Exhibit E</p> <p>5. [(3) / (9)] * [(9) / (7)] * (5) * (6)</p> <p>6. [(8) / (7)] * [(5) / (2)] * (6)</p> <p>7. (10) + (11)</p>		

# Mason County PUD No. 3

## Pole Attachment Rate Model

### Rate Computation

Exhibit D

<b>POLE &amp; ATTACHMENT DATA</b>		
(1)	Number of Poles	11,182
(2)	Average Number of Attachments (Contacts/Pole) <sup>1</sup>	3.00
(3)	Space Occupied by One Attachment <sup>2</sup>	1.00 ft
(4)	Total Space Occupied by Attachments	3.00 ft
(5)	Average Net Cost of Bare Pole <sup>3</sup>	\$ 401.77
(6)	Carrying Charge <sup>4</sup>	28.16%
<b>ASSIGNABLE &amp; COMMON SPACE PER POLE</b>		
(7)	<b>Average Pole Height</b>	<b>38.6 ft</b>
	Underground Pole	6.0 ft
	Ground Clearance	18.0 ft
(8)	<b>Total Common (Unusable) Space</b>	<b>24.0 ft</b>
(9)	<b>Total Assignable (Usable) Space</b>	<b>14.6 ft</b>
<b>POLE ATTACHMENT RATE</b>		
(10)	Space Factor (cable TV) <sup>5</sup>	0.07
(11)	<u>Space Factor (other telecommunications)<sup>6</sup></u>	<u>0.16</u>
	<b>Maximum Cable TV Pole Attachment Rate<sup>7</sup></b>	<b>\$ 7.75 per contact</b>
	<b>Maximum Other Pole Attachment Rate<sup>8</sup></b>	<b>\$ 18.57 per contact</b>
1. Based on FCC Rural Presumption of 3.0 Attachments per Pole 2. See Exhibit A 3. (Net Investment in Poles) / (Total No. of Poles), see Exhibit F 4. See Exhibit E 5. (3) / (9) 6. [(3) + 2/3 * (8) / (2)] / (7) 7. (10) * (5) * (6) 8. (11) * (5) * (6)		

**Mason County PUD No. 3**  
**Pole Attachment Rate Model**  
**Pole Cost Computation**  
**(Calendar Year 2011)**

**Exhibit E.1**

<b>OPERATING AND MAINTENANCE EXPENSES</b>		
Pole Operation and Maintenance Expenses (FERC Account # 571, 593)	1,207,548.00	
Pole Operating and Maintenance Expenses (FERC Account # 563, 571, 583, 593)	1,207,548.00	
Divide by: Gross overhead-related plant		
Transmission Poles and fixtures (FERC Account # 355)	2,601,851.00	
Trans. Overhead cond. and devices (FERC Account # 356)	4,224,135.00	
Poles, towers and fixtures (FERC Account # 364)	9,543,855.00	
Overhead cond. and devices (FERC Account # 365)	10,215,062.00	
Services (FERC Account # 369)	5,758,429.00	
	32,343,332.00	
Gross overhead-related plant	32,343,332.00	
<b><i>Maintenance Expense Percentage</i></b>		<b>3.73%</b>
<b><i>Operating and Maintenance Expense Percentage</i></b>		<b>3.73%</b>
<b>ADMINISTRATIVE AND GENERAL EXPENSES</b>		
Total administrative and general expenses	1,809,580.00	
Divide by: Total Rate Base* Plus CWIP	78,770,763.00	
<b><i>Administrative and General Expense Percentage</i></b>		<b>2.30%</b>
<b>DEPRECIATION EXPENSES</b>		
Gross Pole Investment (including Anchors, Guys, Grounding)	8,101,368.70	
Multiplied by: Depreciation Rate	3.37%	
Divided by Gross Pole Investment	8,101,368.70	
<b><i>Depreciation Expense Percentage</i></b>		<b>3.37%</b>
<b>TAX EXPENSES</b>		
Taxes	2,743,500.00	
Divided by: Total Rate Base* Plus CWIP	78,770,763.00	
<b><i>Tax Expense Percentage</i></b>		<b>3.48%</b>
<b>COST OF CAPITAL</b>		
Interest Expense	2,928,890.00	
Patronage Capital and Operating Margins	2,928,890.00	
Rate of Return	2,928,890.00	
Divided by: Total Rate Base* Plus CWIP	78,770,763.00	
<b><i>Return on Investment Percentage</i></b>		<b>3.72%</b>
* Gross Plant		
<b>TOTAL ANNUAL CARRYING CHARGE RATE (FCC Method)</b>		<b>16.60%</b>
<b>INCLUDING OPERATING EXPENSE (APPA Method)</b>		<b>16.60%</b>

**Mason County PUD No. 3**  
**Pole Attachment Rate Model**  
**Carrying Charge Rate Computation**  
**(Calendar Year 2011)**

**Exhibit E.2**

<b>MAINTENANCE EXPENSES</b>		
Pole Maintenance Expenses (FERC Account # 571, 593)	1,207,548.00	
Pole Operating and Maintenance Expenses (FERC Account # 563, 571, 583, 593)	1,207,548.00	
Divide by: Net overhead-related plant		
Transmission Poles and fixtures (FERC Account # 355)	2,601,851.00	
Trans. Overhead cond. and devices (FERC Account # 356)	4,224,135.00	
Poles, towers and fixtures (FERC Account # 364)	9,543,855.00	
Overhead cond. and devices (FERC Account # 365)	10,215,062.00	
Services (FERC Account # 369)	5,758,429.00	
	<u>32,343,332.00</u>	
Accumulated Depreciation (FERC # 355, 356, 364, 365, 369)	13,075,344.43	
Net overhead-related plant	<u>19,267,987.57</u>	
<b><i>Maintenance Expense Percentage</i></b>		<b>6.27%</b>
<b><i>Operating and Maintenance Expense Percentage</i></b>		<b>6.27%</b>
<b>ADMINISTRATIVE AND GENERAL EXPENSES</b>		
Total administrative and general expenses	1,809,580.00	
Divide by: Total Rate Base* plus CWIP	<u>47,304,095.00</u>	
<b><i>Administrative and General Expense Percentage</i></b>		<b>3.83%</b>
<b>DEPRECIATION EXPENSES</b>		
Gross Pole Investment (including Anchors, Guys, Grounding)	8,101,368.70	
Multiplied by: Depreciation Rate	3.37%	
Divided by Net Pole Investment	<u>4,492,536.70</u>	
<b><i>Depreciation Expense Percentage</i></b>		<b>6.07%</b>
<b>TAX EXPENSES</b>		
Taxes	2,743,500.00	
Divided by: Total Rate Base* plus CWIP	<u>47,304,095.00</u>	
<b><i>Tax Expense Percentage</i></b>		<b>5.80%</b>
<b>COST OF CAPITAL</b>		
Interest Expense	2,928,890.00	
Patronage Capital / Operating Margins	-	
Rate of Return	<u>2,928,890.00</u>	
Divided by: Total Rate Base* plus CWIP	<u>47,304,095.00</u>	
<b><i>Return on Investment Percentage</i></b>		<b>6.19%</b>
* Net Plant		
<b>TOTAL ANNUAL CARRYING CHARGE RATE (FCC Method)</b>		<b>28.16%</b>
<b>INCLUDING OPERATING EXPENSE (APPA Method)</b>		<b>28.16%</b>

**Mason County PUD No. 3**  
**Pole Attachment Rate Model**  
**Pole Cost Computation**

**Exhibit F**

<b>POLE DATA</b>			
Total Pole Height		431,600 ft	
Total Number of Poles		11,182	
Average Pole Height		38.6 ft	
<b>POLE ATTACHMENTS</b>		<b>NO. OF CONTACTS</b>	
Broadstripe/Wave		5,306	
Cellnet		87	
Century Link		5,724	
Clallum PUD		1	
Customer Contact		5	
Jefferson County Public Works		14	
Jefferson Healthcare		11	
US Fish & Wildlife		12	
WSDOT		1	
Noanet		519	
Jefferson PUD (total number of poles)		11,182	
<b>Total No. of Contacts</b>		<b>22,862</b>	
Average No. of Contacts, If Known (contacts/pole)		3.00	
<b>FERC</b>	<b>POLE HEIGHT</b>	<b>NO. IN SERVICE</b>	<b>TOTAL INVESTMENT</b>
	25 ft		
	30 ft	3,270	972,328
	35 ft	349	386,976
	40 ft	4,398	2,659,048
	45 ft	2,752	4,677,052
	50 ft	292	612,575
	55 ft	67	121,294
	60 ft	54	101,749
	60 ft		
	65 ft		
	65 ft		
	70 ft		
	75 ft		
	75 ft		
	80 ft		
<b>Pole Total</b>		<b>11,182</b>	<b>9,531,022</b>

**Mason County PUD No. 3**  
**Pole Attachment Rate Model**  
**Pole Cost Computation**

Exhibit F

<b>ANCHORS, GUYS, GROUNDING</b>	<b>NO. IN SERVICE</b>	<b>TOTAL INVESTMENT</b>
Grounding Equipment		
Anchors and Extensions		
Downguys and Attachments		
<b>Anchors, Guys, and Grounding Total</b>	-	\$ -
<b>GROSS POLE COST</b>		
Gross Pole Investment (after 15% excluded for cross-arms)		\$ 8,101,369
plus Anchors, Guys, Grounding		\$ -
<b>Gross Bare Pole Cost</b>		<b>\$ 8,101,369</b>
<b>Average Gross Cost of Bare Pole</b>		<b>\$ 724.50</b>
<b>ACCUMULATED DEPRECIATION</b>		
Transmission Accumulated Depreciation		-
Distribution Accumulated Depreciation		3,608,832
<b>Accumulated Depreciation on Poles Total</b>		<b>\$ 3,608,832</b>
<b>NET POLE COST</b>		
Gross Pole Investment (after 15% excluded for cross-arms)		\$ 8,101,369
plus Anchors, Guys, Grounding		\$ -
less Accumulated Depreciation		\$ 3,608,832
<b>Net Bare Pole Cost</b>		<b>\$ 4,492,537</b>
<b>Average Net Cost of Bare Pole</b>		<b>\$ 401.77</b>



# Mason County PUD No. 3

## Pole Attachment Rate Model

### Operating Expenses

(Calendar Year 2011) **Exhibit G**

<b>FERC</b>	
<b>ACCT. NO.</b>	<b>OPERATION &amp; MAINTENANCE EXPENSES</b>
<b>Hydraulic Power Generation</b>	
546.00	Op. Supervision & Engineering
547.00	Fuel
548.00	Generation
549.00	Miscellaneous Expenses
549.10	Environmental
550.00	Rents
550.10	Op. Supplies
551.00	Maint. Supervision & Engineering
552.00	Maint. of Structures
553.00	Maint. of Generating and Electric Plant
554.00	Maint. Misc. Other Generation Plant
554.10	Maint. of Other Production Plant
<b>Other Power Supply</b>	
555.00	PNGC/BPA/Other
557.00	Other Expenses
	<b>Total Purchased Power Expenses</b>
	<b>Total Production</b>
<b>Transmission</b>	
560.00	Operations and Engineering
562.00	Stations Expense
563.00	Overhead Line Expense
565.00	Transmission of Electricity
570.00	Maint. of Station Equip.
571.00	Maint. of Overhead Lines
	<b>Total Transmission Expenses</b>

# Mason County PUD No. 3

## Pole Attachment Rate Model

### Operating Expenses

(Calendar Year 2011) Exhibit G

FERC ACCT. NO.	OPERATION & MAINTENANCE EXPENSES	
	<b>Distribution</b>	
580.00	Op. Supervision & Engineering	\$2,556,873
581.00	Load Dispatching	
582.00	Station Expenses	\$4,936
583.00	Overhead Lines Expenses	
583.00 - F	Overhead Lines Expenses - Telecommunications	
583.10	PCB Expense	
583.20	Safety Meeting Expense	
583.50	OH Power Quality	
584.00	Underground Lines Expenses	
584.00	Underground Lines Expenses - Telecommunications	
584.50	UG Power Quality	
585.00	Street Light & Signal Expense	
586.00	Meters	\$41,261
587.00	Customer Installations	
588.00	Miscellaneous Distribution Expenses	\$104,373
588.10	Distribution Safety Expenses	
589.00	Rents	\$125,091
590.00	Maint. Supervision & Engineering	-\$10,263
591.00	Maint. of Structures	\$23,557
592.00	Maint. of Station Equipment	\$92,018
593.00	Maint. of Overhead Lines	\$204,754
593.10	Tree Clearing	
593.20	Contract Tree Trimming	
593.30	OH Outages	
593.40	OH Maintenance	
593.50	Outage Dispatch	
593.60	OH Special Equipment	
594.00	Maint. Of Underground Lines	\$50,693
594.01	Underground Outage	
594.02	Underground Maintenance	
595.00	Maint. of Line Transformers	\$526
596.00	Maint. of Street Lighting & Signal System	
597.00	Maint. of Meters	
598.00	Maint. of Misc. Distribution Plant	\$4,247
	<b>Total Distribution Expenses</b>	<b>\$3,198,066</b>
	<b>Total Operation &amp; Maintenance</b>	<b>\$19,380,998</b>

# Mason County PUD No. 3

## Pole Attachment Rate Model

### Operating Expenses

(Calendar Year 2011) Exhibit G

FERC ACCT. NO.	ADMINISTRATION & GENERAL	
920.00	Administrative and General Salaries	\$1,028,888
920.00 - F	Administrative and General Salaries - Telecommunications	
920.20	Employee Training & Education	
920.99	Payroll Normalized Pay Account	
921.00	Administrative Supplies	\$112,707
921.00 - F	Administrative Supplies - Telecommunications	
921.11	Telephone Expenses	
921.20	Data Processing Expenses	
921.50	Co-op Energy Labor	
922.00	Cap. Cr. Administrative Expense	
923.00	Outside Services Employed	\$397,803
923.00 - F	Outside Services Employed - Telecommunications	
924.00	Property Insurance	\$118,923
925.00	Injuries and Damages	
926.00	Employee Pension & Benefits	
926.00 - F	Employee Pension & Benefits - Telecommunications	
930.11	Directors Liability, Medical and Life Insurance	
930.20	Miscellaneous General Expenses	\$151,259
931.20	Miscellaneous General Expenses - Telecommunications	
930.22	Board Meetings	
930.25	Annual Meeting Expense	
930.26	Employee Recognition	
930.40	Misc. Expense Other	
931.00	Computer Lease	
932.10	Maint. of Structures and Equipment	
932.20	Maint. Furniture and Fixtures	
932.30	Maint. Shop Equip.	
932.40	Maint. Lab Equip.	
932.50	Maint. Tools and Work Equip.	
932.60	Maint. Communication Equip.	
932.70	Maint. Misc.	
999.00	Temporary	
<b>Total Administration &amp; General</b>		<b>\$1,809,580</b>

# Mason County PUD No. 3

## Pole Attachment Rate Model

### Operating Expenses

(Calendar Year 2011) **Exhibit G**

<b>FERC ACCT. NO. DEPRECIATION</b>	
403.10 Depreciation Expenses	\$4,300,000
403.30 Hydro Production Plant Depreciation Expense	
403.50 Transmission Plant Depreciation Expense	
403.60 Distribution Plant Depreciation Expense	
403.70 General Plant Depreciation Expense	
403.90 Depreciation Expenses - Telecommuniation Equipment	
<b><i>Total Depreciation</i></b>	<b><i>\$4,300,000</i></b>
<b>TAXES</b>	
State Utility Tax	
State Privilege Tax	\$2,103,500
City of Port Townsend Utility Tax	\$640,000
Leasehold Tax	
Payroll Tax	
L&I, Employment Security	
Miscellaneous Taxes	
<b><i>Total Taxes</i></b>	<b><i>\$2,743,500</i></b>
<b>INTEREST EXPENSE</b>	
Interest Expense	\$2,928,890
<b><i>Total Interest Expense</i></b>	<b><i>\$2,928,890</i></b>

**Mason County PUD No. 3**  
**Pole Attachment Rate Model**  
**Plant in Service**  
**(As of December 31, 2011)**

**Exhibit H**

FERC ACCT. NO.	PLANT PRODUCTION	
301.00-346.00	<i>Total Production Plant</i>	
<b>TRANSMISSION AND DISTRIBUTION</b>		
<b>Transmission Plant</b>		
350.00	Land & Rights	\$46,489
351.00	Clearing Right of Way	\$689,314
352.00	Structures & Improvements	\$28,250
353.00	Station Equipment	\$1,623,359
354.00	Towers & Fixtures	
355.00	Poles & Fixtures	\$2,601,851
356.00	Overhead Conductors & Devices	\$4,224,135
357.00	Underground Conduit	
358.00	Underground Conductors & Devices	
359.00	Right-Of-Ways	\$5,750
<b>Total Transmission Plant</b>		\$9,219,148
<b>Distribution Plant</b>		
360.00	Land & Rights	\$389,382
361.00	Structures & Improvements	\$267,222
362.00	Station Equipment	\$7,691,401
363.00	Storage & Battery Equipment	
364.00	Poles, Towers, & Fixtures	\$9,543,855
365.00	Overhead Conductors & Devices	\$10,215,062
366.00	Underground Conduit	\$8,418,750
367.00	Underground Conductors & Devices	\$12,731,262
368.00	Line Transformers	\$9,484,018
369.00	Services	\$5,758,429
370.00	Meters	\$985,866
371.00	Installation on Customer Premises	\$0
372.00	Leased Property on Cust. Premises	\$74,086
373.00	Street Lights and Signal Systems	\$347,015
<b>Total Distribution Plant</b>		\$65,906,348
<b>Total Transmission &amp; Distribution</b>		<b>\$75,125,496</b>

**Mason County PUD No. 3**  
**Pole Attachment Rate Model**  
**Plant in Service**  
**(As of December 31, 2011)**

**Exhibit H**

<b>FERC ACCT.</b>		
<b>NO.</b>	<b>GENERAL PLANT</b>	
	<b>General Plant</b>	
389.00	Land & Rights	\$2,544
390.00	Structures & Improvements	\$1,270,488
391.00	Office Furniture & Equipment	\$68,307
391.10	Furn/Fix Life = 5 Years or Less	
391.20	Furn/Fix Life = 6 to 15 Years	
391.30	Furn/Fix Life => 15 Years	
391.40	Data Proc. Equip.	
392.00	Transportation Equipment	
393.00	Stores Equipment	
394.00	Tools, Shop, & Garage Equipment	
395.00	Laboratory Equipment	\$18,100
396.00	Power Operated Equipment	
396.30	Heavy Equipment	
397.00	Communications Equipment	
397.50	Telephone Equipment	
398.00	Misc. Equipment	\$5,534
398.10	Misc. Equipment - Kitchen	
399.00	Communication Equipment	
	<b>Total General Plant</b>	\$1,364,973
	<b>Total Gross Plant in Service</b>	<b>\$76,490,469</b>
	<b>Less: Accumulated Depreciation</b>	
	Intangible Plant	
108.10	Steam Production Plant	
108.20	Nuclear Production Plant	
108.30	Hydraulic Production Plant	
108.40	Gas Turbine Production Plant	
108.50	Transmission Plant	\$3,857,256
108.60	Distribution Plant	\$26,513,509
108.70	General Plant	\$1,095,903
108.80	CWIP	
	<b>Total Accumulated Depreciation</b>	\$31,466,668
	<b>Total Net Plant</b>	<b>\$45,023,801</b>

**Mason County PUD No. 3**  
**Pole Attachment Rate Model**  
**Plant in Service**  
**(As of December 31, 2011)**

**Exhibit H**

<b>Working Capital</b>	
1/8 O&M	\$894,009
1/12 Purchased Power Supply Cost	\$1,236,542
1/12 Purchased Transmission Charges	\$149,743
<b>Total Working Capital</b>	<b>\$2,280,294</b>
<b>Less: Net Customer Contributions</b>	
Production Plant	
Transmission Plant	
Distribution Plant	
Street Lights	
General Plant	
<b>Total Contributions</b>	<b>\$0</b>
<b><i>TOTAL RATE BASE</i></b>	<b><i>\$47,304,095</i></b>
<b>CWIP</b>	
Production Plant	
Transmission Plant	
Distribution Plant	
Services	
General Plant	
Other	
<b>Total CWIP</b>	<b>\$0</b>
<b><i>TOTAL RATE BASE plus CWIP</i></b>	<b><i>\$47,304,095</i></b>

**Jefferson County PUD**  
**Pole Attachment Rate Model**  
**Revenue and Bill Impacts of Proposed PUD Pole Attachment Rate**

**Exhibit I**

<b>Vendor</b>	<b>(1) No. of Attachments</b>	<b>(2) Existing Rate/Attachment (\$ per attachment)</b>	<b>(3) Annual Revenues from Existing Rates (\$)</b>	<b>(4) Proposed Rate/Attachment (\$ per attachment)</b>	<b>(5) Annual Revenues from Proposed Rate (\$)</b>	<b>(6) Annual Revenue Impact on PUD (\$)</b>	<b>(7) Vendor Bill Impact (%)</b>
Broadstripe/Wave	5,306	\$12.00	\$63,672.00	\$25.03	\$132,831.43	\$69,159.43	109%
Cellnet	87	\$12.00	\$1,044.00	\$25.03	\$2,177.97	\$1,133.97	109%
Century Link	5,724	\$12.00	\$68,688.00	\$25.03	\$143,295.73	\$74,607.73	109%
Clallum PUD	1	\$12.00	\$12.00	\$25.03	\$25.03	\$13.03	109%
Customer Contact	5	\$12.00	\$60.00	\$25.03	\$125.17	\$65.17	109%
Jefferson County Public Works	14	\$12.00	\$168.00	\$25.03	\$350.48	\$182.48	109%
Jefferson Healthcare	11	\$12.00	\$132.00	\$25.03	\$275.38	\$143.38	109%
US Fish & Wildlife	12	\$12.00	\$144.00	\$25.03	\$300.41	\$156.41	109%
WSDOT	1	\$12.00	\$12.00	\$25.03	\$25.03	\$13.03	109%
Noanet	519	\$12.00	\$6,228.00	\$25.03	\$12,992.75	\$6,764.75	109%
<b>Total</b>	<b>11,680</b>		<b>\$140,160</b>		<b>\$292,399</b>	<b>\$152,239</b>	<b>109%</b>