



ELECTRIC COST OF SERVICE AND RATE DESIGN STUDY

Final Report

October 2016



REPORT OUTLINE

Cover Letter

Section 1 - Introduction

Section 2 – Projected Operating Results – Existing Rates

Section 3 – Cost of Service

Section 4 – Proposed Rates



October 17, 2016

Spanish Fork City Council
2160 N 175 E
Spanish Fork, UT 84660

Subject: Electric Rate Study

Council Members:

Dave Berg Consulting, LLC with the assistance of NewGen Strategies and Solutions, has undertaken a study of the retail rates Spanish Fork charges its customers for electric service. This report summarizes the analyses undertaken and the resulting recommendations for changes to the existing rates.

The recommended rate adjustments have been made based on overall revenue and cash reserve needs of the utility and the results of a cost-of-service analysis. As a result of the study undertaken, no overall rate increase has been recommended for the electric utility. However, rate adjustments in certain classes of customer have been recommended to address cost-of-service issues. The adjustments will not affect all customers equally and specific rate design recommendations are included for each retail rate class.

Thank you for the opportunity to be of service to Spanish Fork through the conduct of this study. We wish to express our appreciation for the valuable assistance we received from Spanish Fork staff relative to the execution of this study.

Sincerely,

Dave Berg Consulting, LLC

A handwritten signature in black ink, appearing to read 'David A. Berg', is written over a light gray rectangular background.

David A. Berg, PE
Principal

Dedicated to providing personal service to consumer-owned utilities

Dave Berg Consulting, LLC | 15213 Danbury Ave W, Rosemount, MN 55068 | 612-850-2305

www.davebergconsulting.com

Section 1

Introduction

Spanish Fork, Utah owns a municipal utility providing service to approximately 11,500 retail electric customers. The electric utility is operated by Spanish Fork Public Works department (Spanish Fork) and is under the direction of the Spanish Fork City Council. This report has been prepared by Dave Berg Consulting, LLC with assistance from NewGen Strategies and Solutions to examine the rates and charges for electric service in Spanish Fork. The study includes an examination of the allocated cost of service based on actual FY 2015 utility operations (Test Year). It also includes projected operating results for FY 2016-2020 (Study Period). As a result of the analyses undertaken and reported on herein, electric rate recommendations have been developed for implementation by Spanish Fork.

Section 2

Projected Operating Results Existing Rates

The rates charged for electric service by Spanish Fork, combined with other operating and non-operating revenues, must be sufficient to meet the cost of providing services to Spanish Fork's retail customers. This is necessary in order to ensure the long-term financial health of Spanish Fork. The cost of providing electric service consists of normal operating expenses such as purchased power, distribution functions, customer and administrative functions, system depreciation expenses, capital improvements, contributions to Spanish Fork City and other non-operating expenses.

An analysis of the operating results for Spanish Fork during the FY 2016-2020 Study Period has been performed assuming the current retail rates and charges remain in effect for the electric utility through the Study Period. This analysis has been done to determine the overall need, if any, for additional revenue through rates to meet projected revenue requirements. The analyses and assumptions utilized in these projections are explained below.

Estimated Revenues – Existing Rates

Retail Sales

Spanish Fork sells retail power and energy to residential and commercial. Spanish Fork has recently been experiencing moderate growth in total retail sales to its electric customers; total sales growth after 2015 has been assumed to be approximately 2.7% per year through the Study Period. Exhibit 2-A is a summarized listing of Spanish Fork's historical and projected electric operating results at existing rates. The historical and projected revenues from retail sales of power and energy to different groups of customers are included at the beginning of the exhibit under Operating Revenues.

Section 2

Other Operating Revenues

Spanish Fork also receives revenue from other normal operating procedures. These revenues are shown in Exhibit 2-A as Other Operating Revenues. These include construction labor and materials, equipment rentals, meter fees and pole attachment revenue. Spanish Fork also has other miscellaneous revenues.

Utility Revenues combined with Miscellaneous and Other Operating Revenues results in Spanish Fork's Total Operating Revenues.

Revenue Requirements

Purchased Power

Spanish Fork currently meets its wholesale power requirements through its membership in the Utah Municipal Power Agency (UMPA).

Spanish Fork's actual retail sales and wholesale requirements for the FY 2015 Test Year are shown in Table 2-1.

Table 2-1
Retail Sales
And Wholesale Requirements

Item	2015
Metered Retail Sales	237,136,393 kWh
Losses/Unmetered (% of sales)	6.8 %
Wholesale Energy	253,375,618 kWh
Wholesale Peak	63,610 kW

For 2016-2020, annual wholesale requirements are projected to increase 2.4% per year.

Other Operating Expenses

Spanish Fork incurs other operating expenses associated with local electric system operations. Distribution operating and maintenance expenses are related to the substations, overhead and underground lines and customer facilities located in Spanish Fork. Administrative and general expenses are required for utility management, employee benefits, training and other administrative costs and for other professional services. Non-wholesale power related expenses are based on 2015 values, the 2016 budget and are generally estimated to increase by 2.2% per year after 2016.

Depreciation

Spanish Fork has annual depreciation costs based on its system investments. Depreciation during the Study Period is based on budgeted Spanish Fork amounts and future capital improvements. Depreciation is a funded non-cash expense that generates monies available for annual capital improvements and reserves.

Non-operating Revenue (Expenses)

Spanish Fork's non-operating revenue is primarily associated with investment income and impact fees. Non-operating expenses are associated with scheduled interest payments on outstanding debt. The last payment on existing debt has been made in FY 2016.

City Transfer

Spanish Fork makes an annual operational transfer to the City's general fund and to other City funds. The transfer is 4.5% of operating revenues. Other transfers are based on 2016 budget and are expected to stay constant through the Study Period.

Section 2

Capital Improvements

Spanish Fork makes annual normal capital investments in its electric system. Annual electric capital improvements for the Study Period, as budgeted by Spanish Fork, are shown in Table 2-2 below.

Table 2-2
Capital Improvements

Capital Item	2016	2017	2018	2019	2020
Total Capital	\$1,872,154	\$1,633,552	\$2,225,747	\$1,701,039	\$1,506,791

Debt Service

Spanish Fork made its last principal and interest payment on existing debt in FY 2016.

Projected Operating Results – Existing Rates

Based on the assumptions outlined above, the resulting projected operating results assuming continued application of the existing retail rates are summarized in Table 2-3 for the electric utility. A summary presentation of the operating results is shown in Exhibit 2-A.

Projected Operating Results – Existing Rates

Table 2-3
 Projected Operating Results
 Existing Rates

Year	2016	2017	2018	2019	2020
Operating Revenues	\$24,077,382	\$24,501,111	\$25,434,340	\$26,439,872	\$27,391,216
Less Operating Expenses	(22,211,890)	(22,788,963)	(23,762,540)	(24,795,205)	(25,748,233)
Plus Non -Operating Revenues	768,166	779,786	779,786	779,786	779,786
Less City Transfers	<u>(536,398)</u>	<u>(1,789,748)</u>	<u>(1,831,743)</u>	<u>(1,876,992)</u>	<u>(1,919,803)</u>
Change in Net Position	\$3,962,752	\$2,414,335	\$2,291,643	\$2,192,128	\$2,145,948
Net Position as Percent of Revenues	16.5%	9.9%	9.0%	8.3%	7.8%

Cash Reserves

A summary of the impact of the projected operating results on Spanish Fork’s cash reserves for the Study Period is shown at the end of Exhibit 2-A and in Table 2-4 below.

As shown below, under existing retail rates and estimated revenue requirements over the Study Period, the cash reserves for the electric utility are projected to increase from approximately \$22.4 million at the end of 2015 to approximately \$31.2 million by the end of 2020. By the end of the Study Period, the reserves are projected to equal 114% of operating revenues. The reserves allocated to the electric department serve two purposes. One is to provide cash reserves for Spanish Fork City and all city functions, the other is to have cash available to the electric department for its capital and operating needs. Strong levels of reserves are an important fiscal asset for a city and utility. They provide a financial cushion for unexpected events such as emergency equipment or repairs, sudden cost increases, loss of a major customer and funding of additions without the need to incur additional debt.

Section 2

Table 2-4
Projected Cash Reserves
Existing Rates

Year	2016	2017	2018	2019	2020
Beginning Balance	\$22,449,291	\$24,684,440	\$26,509,227	\$27,693,317	\$29,359,302
Plus Change in Net Position	3,962,752	2,414,335	2,291,643	2,192,128	2,145,948
Less Capital Improvements	(1,872,154)	(1,633,552)	(2,225,747)	(1,701,039)	(1,506,791)
Less Debt Principal	(845,000)				
Plus Depreciation	<u>989,552</u>	<u>1,044,004</u>	<u>1,118,195</u>	<u>1,174,896</u>	<u>1,225,123</u>
Ending Balance	\$24,684,440	\$26,509,227	\$27,693,317	\$29,359,302	\$31,223,583
Reserves as % of Revenue	103%	108%	109%	111%	114%



Projected Operating Results

	2014	2015	Escalation Factor	2016	2017	2018	2019	2020
Operating Revenues								
Residential	8,780,510	8,828,868	Manual	8,994,199	9,120,101	9,489,503	9,888,514	10,267,559
Commercial	11,232,328	11,625,442	Manual	12,097,361	12,329,500	12,826,194	13,364,104	13,866,284
Miscellaneous Revenue	1,294,801	932,952	General Inflation	773,750	790,773	808,169	825,949	844,120
Other Operating Revenues	1,852,321	1,646,618	General Inflation	2,212,072	2,260,738	2,310,474	2,361,304	2,413,253
Total Operating Revenues	23,159,959	23,033,880		24,077,382	24,501,111	25,434,340	26,439,872	27,391,216
Operating Expenses								
Salaries, Wages, Benefits	1,775,940	1,954,675	Salaries	2,112,776	2,176,159	2,241,444	2,308,687	2,377,948
Materials and Supplies	1,008,457	1,433,977	General Inflation	1,948,568	1,991,436	2,035,248	2,080,024	2,125,784
Repairs and Maintenance	9,721	8,613	General Inflation	12,700	12,979	13,265	13,557	13,855
Professional Services	926,107	906,559	General Inflation	915,677	935,822	956,410	977,451	998,955
Motorpool Charges	210,351	293,265	General Inflation	267,361	273,243	279,254	285,398	291,677
Utilities	31,082	33,118	General Inflation	35,000	35,770	36,557	37,361	38,183
Insurance	19,898	26,889	General Inflation	25,195	25,749	26,316	26,895	27,486
Depreciation & Amortization	861,223	927,147	Manual	989,552	1,044,004	1,118,195	1,174,896	1,225,123
Indirect Services	479,287	509,171	General Inflation	584,603	597,464	610,608	624,042	637,771
Plant Assessment	68,142	68,142	General Inflation	68,142	69,641	71,173	72,739	74,339
Sundry Charges	66,966	62,691	General Inflation	65,500	66,941	68,414	69,919	71,457
Production & Purchased Power Exp	14,019,653	14,393,114	Manual	15,186,816	15,559,753	16,305,656	17,124,236	17,865,655
Total Operating Expenses	19,476,826	20,617,360		22,211,890	22,788,963	23,762,540	24,795,205	25,748,233
Operating Income (Loss)	3,683,133	2,416,520		1,865,492	1,712,149	1,671,800	1,644,667	1,642,982
Non-Operating Revenues (Expenses)								
Interest Revenue	130,528	165,816	None	192,397	192,397	192,397	192,397	192,397
Impact Fees	404,270	435,103	None	587,389	587,389	587,389	587,389	587,389
Contributions from Private Contractors	355,635	706,113	None	-	-	-	-	-
Pension Benefit Expense	228,421	228,421	None	-	-	-	-	-
Pension Expense	(144,379)	(144,379)	None	-	-	-	-	-
Interest Expense	(50,520)	(28,056)	Manual	(11,620)	-	-	-	-
Total Non-Operating Revenues (Expenses)	923,955	1,363,018		768,166	779,786	779,786	779,786	779,786
Income (Loss) Before Contributions and Transfer:	4,607,088	3,779,537		2,633,658	2,491,934	2,451,586	2,424,453	2,422,768
Contributions and Transfers								
Transfer from Reserves/Earnings	-	-	Manual	1,102,030	-	-	-	-
Transfer to General Fund	(956,978)	(664,950)	Manual	(951,230)	(1,102,550)	(1,144,545)	(1,189,794)	(1,232,605)
Transfer to Other City Funds	(1,394,398)	(703,273)	None	(687,198)	(687,198)	(687,198)	(687,198)	(687,198)
Total Contributions and Transfers	(2,351,376)	(1,368,223)		(536,398)	(1,789,748)	(1,831,743)	(1,876,992)	(1,919,803)
Change in Net Position		4,827,834		3,962,752	2,414,335	2,291,643	2,192,128	2,145,948
Cash Balances								
Beginning of Year Reserves				22,449,291	24,684,440	26,509,227	27,693,317	29,359,302
Change in Net Position				3,962,752	2,414,335	2,291,643	2,192,128	2,145,948
Capital Expenditures				(1,872,154)	(1,633,552)	(2,225,747)	(1,701,039)	(1,506,791)
Debt Principal Payments				(845,000)				
Depreciation				989,552	1,044,004	1,118,195	1,174,896	1,225,123
End of Year Reserves				24,684,440	26,509,227	27,693,317	29,359,302	31,223,583

Section 3

Cost-of-Service

A cost-of-service analysis was performed to determine the allocated cost to serve each of Spanish Fork's customer classes within the electric utility. Customer classes exist, in part, because the cost to serve different kinds of customers varies. The cost-of-service analysis has been performed on a FY 2015 'Test Year' based on actual 2015 financials, operations and sales. The results of the cost-of-service study give an indication of the degree of revenue recovery warranted for each class of customers. A comparison of the allocated cost to serve a class of customers and the actual revenues received from that class is taken into consideration during rate design.

Functionalization of Costs

Spanish Fork's Test Year electric revenue requirements have been divided into four functional categories. These categories are described below.

Power Supply – the power supply function is related to the cost of Spanish Fork transmission and purchases of wholesale power through UMPA.

Distribution – distribution expenses are related to the Spanish Fork owned system for delivering power and energy to Spanish Fork customers. They include local substation and distribution system costs.

Customer – these costs are fixed costs associated with the service facilities utilized to deliver electric power and energy directly to customers. They also include items such as meter reading, billing, collections and dealing with customers by customer service representatives.

Revenue – revenue related costs include transfers to the City and City related fees, other operating and non-operating income and utility margin.

Section 3

Table 3-1 below summarizes the functional electric costs for the 2015 Test Year. The detailed cost functions are shown in Exhibit 3-A.

Table 3-1
Functional Electric Costs
2015 Test Year

Component	Revenue Requirement
Power Supply	\$15,088,279
Distribution	1,923,897
Customer	1,045,631
Revenue	<u>2,368,446</u>
Total	\$20,426,253

Classification of Costs

Within each function, the revenue requirements have been divided into distinct cost classifications. These cost classifications are described below.

Demand Related – demand related costs are fixed costs that do not vary with hourly consumption. Demand related costs are required to meet the overall demand of the system as expressed in kW.

Energy Related – energy related costs vary based on hourly consumption in kWh

Customer Related – costs related to serving, metering and billing of individual customers.

Revenue Related – revenue related costs vary by the amount of revenue received by the utility.

Exhibits 3-B through 3-D show the detailed classification of revenue requirements within the functions.

Allocation of Costs

Based on an analysis of customer class service characteristics, the classified costs summarized above were allocated to the major Spanish Fork customer classes. Allocation of costs was performed on a fully-distributed, embedded cost allocation basis. Specific allocation factors were utilized in each of the cost classification categories as described below. Exhibit 3-E contains a summary of the development of the various allocation factors.

Demand Allocations

Customer class demands on a system can be reflected in various ways. Two primary demand allocation types were utilized in this analysis. A common industry allocator known as Coincident Peak Demand (CP) allocator is utilized to allocate demand related costs based on each class' contribution to the system peak demand each month. A 12 CP demand allocator was utilized for power supply related demand costs. A Non-coincident Peak Demand (NCP) reflects a class maximum demand regardless of when it occurs. A 1 NCP method, an estimate of each class' maximum annual demand on the system, was utilized for allocating local system demand related costs.

Energy Allocations

Each class' share of energy requirements was used to allocate energy related costs. The predominant energy related costs are the energy portions of the purchased power expenses. These costs were allocated based on each class' estimated share of wholesale energy purchases, this is referred to as the Net Energy for Load (NEFL) allocator.

Section 3

Customer Allocations

Two separate customer allocators were utilized. The customer distribution allocator was used to allocate costs associated with the physical facilities required to serve individual customers. The customer service allocator is for allocation of costs associated with customer service – meter reading, billing, collections and customer inquiries. For both the customer distribution and customer service allocators, a weighted customer allocation factor is developed. Weighting factors are developed to represent the difference in service configurations between customer classifications. For instance, a larger customer facility is required for a single large power customer than for a single residential customer, or a single large power customer requires more customer service than a single residential customer.

Revenue Allocations

Revenue related costs were allocated based on each class' share of total demand, energy, customer distribution, customer service and direct costs.

Cost of Service Results

Based on the classifications and allocations described above, the estimated cost to serve each major class of customers for the 2015 Adjusted Test Year was determined. Exhibit 3-F presents this analysis in detail. Table 3-2 below summarizes the total allocated electric costs for each class compared to the total electric revenues received from the class during 2015.

Table 3-2
Electric Cost of Service Results
Comparison of Cost and Revenues
2015 Test Year

Customer Classification	Allocated Cost to Serve	Revenues
Residential	\$8,947,519	\$8,828,868
General Service	7,603,847	8,121,880
Large Power Service	3,866,767	3,498,313
Lighting	<u>8,121</u>	<u>5,249</u>
Total	\$20,426,253	\$20,454,309

The revenue requirements and revenues as allocated to each class and summarized above are shown on a total dollars basis. Table 3-3 below makes the comparison based on percentages of total cost to serve and total revenues. The percentage increase/(decrease) in each class' revenue shown below is the adjustment necessary to produce revenues from each class in accordance with the allocated cost to serve. The percentage adjustments do not represent the recommended change in each class' rates. The cost-of-service results are one item for consideration in rate design. It is important to note also that the adjustments shown in the table below would not change the total revenue received by the utility and are not indicative of overall revenue needs of the utility going forward. Recommendations regarding rate design are included in Section 4 of this report.

Section 3

Table 3-3
Electric Cost of Service Results
Comparison of % Cost and Revenues
2015 Test Year

Customer Classification	Allocated Cost to Serve	Revenues	Increase/ (Decrease)
Residential	43.8%	43.2%	1.5%
General Service	37.2%	39.7%	-6.2%
Large Power Service	18.9%	17.1%	10.7%
Lighting	<u>0.04%</u>	<u>0.03%</u>	<u>54.9%</u>
Total	100.0%	100.0%	0.0%

As indicated above, Spanish Fork's existing class revenues do not exactly match the allocated cost to serve each class. Cost based rates are one of several goals in establishing rates. The relationship between allocated costs and revenues for each class should be considered, in addition to other rate related goals, in developing recommended rates. Small classes of customers often do not lend themselves well to an overall COS analysis, the comparison shown above for the small lighting class should not be considered to be entirely indicative of the appropriate rate levels for that class.

Per Unit Costs

Based on the cost-of-service results shown above, the costs have been summarized on a per unit basis by customer class and class billing data. These per unit costs resemble rates and represent another piece of information for use in rate design. The resulting per unit costs by rate class are shown in Table 3-4

Table 3-4
Per Unit Electric Costs
2015 Test Year

Customer Classification	Total		
	Dmd (\$/kW)	Energy (\$/kWh)	Cust (\$/mo)
Residential	\$6.51	\$0.03479	\$10.87
General Service	\$13.40	\$0.03479	\$32.60
Large Power Service	\$16.74	\$0.03427	\$630.97



Functional Unbundling

Line	Item	2015	Adjustments	Test Year	Allocation	Power Supply	Distribution	Customer	Revenue	Total
1	Operating Expenses									
2	SALARIES AND WAGES (FULL-TIME)	1,244,048		1,244,048	O&M x/PP	4,717	1,001,337	237,993	-	1,244,048
3	SALARIES AND WAGES (PART-TIME)	54,994		54,994	O&M x/PP	209	44,265	10,521	-	54,994
4	EMPLOYEES BENEFITS	649,305		649,305	O&M x/PP	2,462	522,627	124,216	-	649,305
5	OVERTIME WAGES	6,328		6,328	O&M x/PP	24	5,094	1,211	-	6,328
6	TRAIN&TRAV-MILEAGE REIMBURSE	211		211	O&M x/PP	1	170	40	-	211
7	TRAIN&TRAV-CDL	210		210	Distribution	-	210	-	-	210
8	TRAIN&TRAV-MISC. TRAINING	2,800		2,800	Distribution	-	2,800	-	-	2,800
9	TRAIN&TRAV-HOTLINE SCHOOL IPSA	5,869		5,869	Distribution	-	5,869	-	-	5,869
10	TRAIN&TRAV-IPSA WORKSHOPS	297		297	Distribution	-	297	-	-	297
11	TRAIN&TRAV-LINEMAN TRAINING	5,620		5,620	Distribution	-	5,620	-	-	5,620
12	TRAIN&TRAV-UMPA STRATEGY	304		304	Production	304	-	-	-	304
13	TRAIN&TRAV-IPSA SAFETY MEETING	1,786		1,786	Distribution	-	1,786	-	-	1,786
14	APPA NATIONAL CONFERENCE	2,731		2,731	O&M x/PP	10	2,198	522	-	2,731
15	SCADA TRAINING	5,000		5,000	Distribution	-	5,000	-	-	5,000
16	BOOKS&MEMBERS-CODE BOOKS	153		153	O&M x/PP	1	123	29	-	153
17	SUPP-METERS & SUPPLES	46		46	Distribution	-	46	-	-	46
18	BOOKS&MEMBERS-INSTANT OSHA SUB	1,840		1,840	O&M x/PP	7	1,481	352	-	1,840
19	BOOKS&MEMBERS-UMPA/APPA	9,768		9,768	Production	9,768	-	-	-	9,768
20	BOOKS&MEMBERS-UMPA/CREDA	1,502		1,502	Production	1,502	-	-	-	1,502
21	BOOKS&MEMBERS- SAM'S/COSTCO	126		126	O&M x/PP	0	101	24	-	126
22	SUPP-AWARDS/PRIZES	12		12	O&M x/PP	0	10	2	-	12
23	SUPP-BATTERIES	308		308	O&M x/PP	1	248	59	-	308
24	SUPP-CLEANING SUPPLIES	489		489	O&M x/PP	2	394	94	-	489
25	SUPP-FIRST AID	472		472	O&M x/PP	2	380	90	-	472
26	SUPP-FOOD/MEALS	1,186		1,186	O&M x/PP	4	955	227	-	1,186
27	SUPP-MISC. SUPPLIES	4,436		4,436	O&M x/PP	17	3,571	849	-	4,436
28	SUPP-OFFICE SUPPLIES	3,800		3,800	O&M x/PP	14	3,059	727	-	3,800
29	SUPP-PERSONAL PROTECTIVE EQUIP	354		354	O&M x/PP	1	285	68	-	354
30	SUPP-UNIFORMS	15,708		15,708	Distribution	-	15,708	-	-	15,708
31	SUPP- RADIOS	500		500	Distribution	-	500	-	-	500
32	SUPP-DIVISION TOOLS & SAFETY	21,422		21,422	Distribution	-	21,422	-	-	21,422
33	SUPPLIES- SERVICE WORK O&M	3,457		3,457	Distribution	-	3,457	-	-	3,457
34	SUPPLIES- SUBSTATION O&M	14,446		14,446	Distribution	-	14,446	-	-	14,446
35	SUPPLIES- STREET LIGHTING O&M	5,686		5,686	Distribution	-	5,686	-	-	5,686
36	SUPPLIES-METERING	40,550		40,550	Distribution	-	40,550	-	-	40,550
37	SUPP- SERVICE & SUB CREW TOOLS	2,875		2,875	Distribution	-	2,875	-	-	2,875
38	SUPPLIES- SUBS. WEED CONT SUPP	5,002		5,002	Distribution	-	5,002	-	-	5,002
39	SUPPLIES- TRAFFIC SIGNALS	127		127	Distribution	-	127	-	-	127
40	SUP.- CHRISTMAS STRET LIGHTING	165		165	Distribution	-	165	-	-	165



Functional Unbundling

Line	Item	2015	Adjustments	Test Year	Allocation	Power Supply	Distribution	Customer	Revenue	Total
41	SUPPLIES- UG DISTRIBUTION O&M	21,557		21,557	Distribution	-	21,557	-	-	21,557
42	SUPPLIES- UG TRANSFORMER O&M	2,544		2,544	Distribution	-	2,544	-	-	2,544
43	SUPPLIES- UG CREW TOOLS	2,894		2,894	Distribution	-	2,894	-	-	2,894
44	SUPPLIES- OVERHEAD DIST. O&M	20,766		20,766	Distribution	-	20,766	-	-	20,766
45	SUPP- OVERHEADTRANSMISSION O&M	983		983	Distribution	-	983	-	-	983
46	SUPP- OVERHD TRANSFORMER O&M	-		-	Distribution	-	-	-	-	-
47	SUPP- OVERHD TOOLS &SAFETY EQ.	1,715		1,715	Distribution	-	1,715	-	-	1,715
48	SUP-OVERHD HIGH VOLT LINE TOOL	4,241		4,241	Distribution	-	4,241	-	-	4,241
49	EQ. MAINT-CAR WASHES	147		147	O&M x/PP	1	118	28	-	147
50	EQ. MAINT-COPY MACHINE	71		71	O&M x/PP	0	57	14	-	71
51	EQ. MAINT-EQUIPMENT REPAIR	2,788		2,788	O&M x/PP	11	2,244	533	-	2,788
52	MOTOR POOL	100,210		100,210	O&M x/PP	380	80,660	19,171	-	100,210
53	GASOLINE AND OIL	27,676		27,676	O&M x/PP	105	22,276	5,295	-	27,676
54	TELEPHONE	9,382		9,382	O&M x/PP	36	7,552	1,795	-	9,382
55	UTILITIES	23,736		23,736	O&M x/PP	90	19,105	4,541	-	23,736
56	BLDG&GROUND-HEAT/VENT/AC	461		461	O&M x/PP	2	371	88	-	461
57	BLDG&GROUND-FIRE EXTINGUISHER	328		328	O&M x/PP	1	264	63	-	328
58	BLDG&GROUND-MISC BLDG REPAIR	4,818		4,818	O&M x/PP	18	3,878	922	-	4,818
59	DATA-COMPUTER MAINTENANCE	8,843		8,843	O&M x/PP	34	7,117	1,692	-	8,843
60	DATA-CASELLE MAINTENANCE	8,495		8,495	O&M x/PP	32	6,838	1,625	-	8,495
61	DATA-CITIZENLINK	1,637		1,637	O&M x/PP	6	1,318	313	-	1,637
62	DATA-INVENSYS SYSTEMS MAINT	2,271		2,271	O&M x/PP	9	1,828	434	-	2,271
63	DATA-ARC INFO SOFTWARE MAINT	3,298		3,298	O&M x/PP	13	2,654	631	-	3,298
64	DATA-AUTOCADD MAINT	4,800		4,800	Distribution	-	4,800	-	-	4,800
65	DATA-POWER FACTOR TESTER	717		717	Distribution	-	717	-	-	717
66	DATA-SCADA MAINT.	18,340		18,340	Distribution	-	18,340	-	-	18,340
67	DATA- GPS	12,600		12,600	Distribution	-	12,600	-	-	12,600
68	ACCOUNTING & AUDITING	2,500		2,500	O&M x/PP	9	2,012	478	-	2,500
69	PROF&TECH-BLUE STAKES	868		868	Distribution	-	868	-	-	868
70	PROF&TECH-CLEANING SERVICES	476		476	O&M x/PP	2	383	91	-	476
71	PROF&TECH-SUBDIVISION INSPECT	33,691		33,691	Distribution	-	33,691	-	-	33,691
72	PROF&TECH-TREE TRIMMING	23,351		23,351	Distribution	-	23,351	-	-	23,351
73	PROF&TECH-TESTING&INSPECTION	790		790	Distribution	-	790	-	-	790
74	PROF&TECH-IMPACT FEE STUDY	2,789		2,789	Distribution	-	2,789	-	-	2,789
75	PROF&TEC-ENGINEER-MISC STUDIES	10,440		10,440	Distribution	-	10,440	-	-	10,440
76	PROF&T-SUBSTATION OIL TESTING	3,489		3,489	Distribution	-	3,489	-	-	3,489
77	OTHER SERV-UTILITY BILLING	12,005		12,005	Customer	-	-	12,005	-	12,005
78	OTHER SERV-MAILING & POSTAGE	1,043		1,043	Customer	-	-	1,043	-	1,043
79	OTHER SERV-MERCHANT FEES	67,450		67,450	O&M x/PP	256	54,291	12,904	-	67,450
80	OTHER SERV-SUVPS O&M COSTS	179,691		179,691	Production	179,691	-	-	-	179,691



Functional Unbundling

Line	Item	2015	Adjustments	Test Year	Allocation	Power Supply	Distribution	Customer	Revenue	Total
81	OT SERV- 80% IF SUVPS PROJECTS	494,748		494,748	Production	494,748	-	-	-	494,748
82	POWER PURCHASE	14,393,114		14,393,114	Production	14,393,114	-	-	-	14,393,114
83	INSURANCE	26,889		26,889	Distribution	-	26,889	-	-	26,889
84	SUNDRY	18		18	O&M x/PP	0	14	3	-	18
85	DEPRECIATION	927,147		927,147	Distribution	-	927,147	-	-	927,147
86	VEHICLE LEASE FROM MOTOR POOL	193,055		193,055	O&M x/PP	732	155,390	36,932	-	193,055
87	DEV. CONSTRUCTION MATERIAL	1,204,571		1,204,571	Distribution	-	1,204,571	-	-	1,204,571
88	BAD DEBTS	61,690		61,690	Customer	-	-	61,690	-	61,690
89	LIABILITY CLAIMS-DEDUCTIBLE	983		983	O&M x/PP	4	791	188	-	983
90	INDIRECT SERVICE	509,171		509,171	Customer	-	-	509,171	-	509,171
91	PLANT ASSESSMENT - BROADBAND	68,142		68,142	O&M x/PP	258	54,848	13,036	-	68,142
92	Total Operating Expenses	20,617,360	-	20,617,360		15,088,598	4,467,053	1,061,709	-	20,617,360
93	Check	-								
94	Non-Operating Expenses (Revenues)									
95	INTEREST EARNINGS	(163,633)		(163,633)	Revenue	-	-	-	(163,633)	(163,633)
96	ELEC. IMPACT FEES INTEREST	(29)		(29)	Distribution	-	(29)	-	-	(29)
97	SF ELEC REV 2000 BOND INT	(2,184)		(2,184)	Revenue	-	-	-	(2,184)	(2,184)
98	ELECTRIC CONSTRUCTION LABOR	(85,058)		(85,058)	Distribution	-	(85,058)	-	-	(85,058)
99	ELECTRIC CONSTRUCTION MATERIAL	(1,091,913)		(1,091,913)	Distribution	-	(1,091,913)	-	-	(1,091,913)
100	ELEC. CONST. EQUIP. RENTAL	(27,615)		(27,615)	Distribution	-	(27,615)	-	-	(27,615)
101	ELECTRIC METER FEE	(38,870)		(38,870)	Distribution	-	(38,870)	-	-	(38,870)
102	MISCELLANEOUS REVENUE	(932,952)		(932,952)	Revenue	-	-	-	(932,952)	(932,952)
103	POLE ATTACHMENTS REVENUE	(90,840)		(90,840)	Distribution	-	(90,840)	-	-	(90,840)
104	FORFEITED DISCOUNT	(292,563)		(292,563)	Revenue	-	-	-	(292,563)	(292,563)
105	CONTRIBUTIONS BY DEVELOPERS	(706,113)		(706,113)	Distribution	-	(706,113)	-	-	(706,113)
106	IMPACT FEES USED(NON-OPERATING	(435,074)		(435,074)	Distribution	-	(435,074)	-	-	(435,074)
107	PENSION EXPENSE	144,379		144,379	O&M x/PP	547	116,211	27,620	-	144,379
108	PENSION BENEFIT EXPENSE	(228,421)		(228,421)	O&M x/PP	(866)	(183,856)	(43,698)	-	(228,421)
109	DEBT SERVICE - INTEREST	28,056	(28,056)	-	NA	-	-	-	-	-
110	Total nonoperating expenses (revenues)	(3,922,828)	(28,056)	(3,950,884)		(319)	(2,543,156)	(16,078)	(1,391,332)	(3,950,884)
111	Check	(0)								
112										
113	TRANSFER/DIVIDEND (TO)GEN FUND	664,950		664,950	Revenue	-	-	-	664,950	664,950
114	TRANSFER FROM (TO) DEBT SER ST	703,273		703,273	Revenue	-	-	-	703,273	703,273
115	CUSTOMER ADJUSTMENTS	(19,760)		(19,760)	Revenue	-	-	-	(19,760)	(19,760)
116	UTILITY MARGIN	2,411,314		2,411,314	Revenue	-	-	-	2,411,314	2,411,314
117	Total other expenses	3,759,778	-	3,759,778		-	-	-	3,759,778	3,759,778
118	Check	-								
119	Revenue Requirement from Rates	20,454,309	(28,056)	20,426,253		15,088,279	1,923,897	1,045,631	2,368,446	20,426,253



Power Supply

Row	Item	Test Year	Allocation	Demand	Energy	Total
1	Operating Expenses					
2	SALARIES AND WAGES (FULL-TIME)	4,717	Demand	4,717	-	4,717
3	SALARIES AND WAGES (PART-TIME)	209	Demand	209	-	209
4	EMPLOYEES BENEFITS	2,462	Demand	2,462	-	2,462
5	OVERTIME WAGES	24	Demand	24	-	24
6	TRAIN&TRAV-MILEAGE REIMBURSE	1	Demand	1	-	1
7	TRAIN&TRAV-CDL	-	Demand	-	-	-
8	TRAIN&TRAV-MISC. TRAINING	-	Demand	-	-	-
9	TRAIN&TRAV-HOTLINE SCHOOL IPSA	-	Demand	-	-	-
10	TRAIN&TRAV-IPSA WORKSHOPS	-	Demand	-	-	-
11	TRAIN&TRAV-LINEMAN TRAINING	-	Demand	-	-	-
12	TRAIN&TRAV-UMPA STRATEGY	304	Demand	304	-	304
13	TRAIN&TRAV-IPSA SAFETY MEETING	-	Demand	-	-	-
14	APPA NATIONAL CONFERENCE	10	Demand	10	-	10
15	SCADA TRAINING	-	Demand	-	-	-
16	BOOKS&MEMBERS-CODE BOOKS	1	Demand	1	-	1
17	SUPP-METERS & SUPPLES	-	Demand	-	-	-
18	BOOKS&MEMBERS-INSTANT OSHA SUB	7	Demand	7	-	7
19	BOOKS&MEMBERS-UMPA/APPA	9,768	Demand	9,768	-	9,768
20	BOOKS&MEMBERS-UMPA/CREDA	1,502	Demand	1,502	-	1,502
21	BOOKS&MEMBERS- SAM'S/COSTCO	0	Demand	0	-	0
22	SUPP-AWARDS/PRIZES	0	Demand	0	-	0
23	SUPP-BATTERIES	1	Demand	1	-	1
24	SUPP-CLEANING SUPPLIES	2	Demand	2	-	2
25	SUPP-FIRST AID	2	Demand	2	-	2
26	SUPP-FOOD/MEALS	4	Demand	4	-	4
27	SUPP-MISC. SUPPLIES	17	Demand	17	-	17
28	SUPP-OFFICE SUPPLIES	14	Demand	14	-	14
29	SUPP-PERSONAL PROTECTIVE EQUIP	1	Demand	1	-	1
30	SUPP-UNIFORMS	-	Demand	-	-	-



Power Supply

Row	Item	Test Year	Allocation	Demand	Energy	Total
31	SUPP- RADIOS	-	Demand	-	-	-
32	SUPP-DIVISION TOOLS & SAFETY	-	Demand	-	-	-
33	SUPPLIES- SERVICE WORK O&M	-	NA	-	-	-
34	SUPPLIES- SUBSTATION O&M	-	NA	-	-	-
35	SUPPLIES- STREET LIGHTING O&M	-	NA	-	-	-
36	SUPPLIES-METERING	-	NA	-	-	-
37	SUPP- SERVICE & SUB CREW TOOLS	-	NA	-	-	-
38	SUPPLIES- SUBS. WEED CONT SUPP	-	NA	-	-	-
39	SUPPLIES- TRAFFIC SIGNALS	-	NA	-	-	-
40	SUP.- CHRISTMAS STRET LIGHTING	-	NA	-	-	-
41	SUPPLIES- UG DISTRIBUTION O&M	-	NA	-	-	-
42	SUPPLIES- UG TRANSFORMER O&M	-	NA	-	-	-
43	SUPPLIES- UG CREW TOOLS	-	NA	-	-	-
44	SUPPLIES- OVERHEAD DIST. O&M	-	NA	-	-	-
45	SUPP- OVERHEADTRANSMISSION O&M	-	NA	-	-	-
46	SUPP- OVERHD TRANSFORMER O&M	-	NA	-	-	-
47	SUPP- OVERHD TOOLS &SAFETY EQ.	-	NA	-	-	-
48	SUP-OVERHD HIGH VOLT LINE TOOL	-	NA	-	-	-
49	EQ. MAINT-CAR WASHES	1	Demand	1	-	1
50	EQ. MAINT-COPY MACHINE	0	Demand	0	-	0
51	EQ. MAINT-EQUIPMENT REPAIR	11	Demand	11	-	11
52	MOTOR POOL	380	Demand	380	-	380
53	GASOLINE AND OIL	105	Demand	105	-	105
54	TELEPHONE	36	Demand	36	-	36
55	UTILITIES	90	Demand	90	-	90
56	BLDG&GROUND-HEAT/VENT/AC	2	Demand	2	-	2
57	BLDG&GROUND-FIRE EXTINGUISHER	1	Demand	1	-	1
58	BLDG&GROUND-MISC BLDG REPAIR	18	Demand	18	-	18
59	DATA-COMPUTER MAINTENANCE	34	Demand	34	-	34
60	DATA-CASELLE MAINTENANCE	32	Demand	32	-	32



Power Supply

Row	Item	Test Year	Allocation	Demand	Energy	Total
61	DATA-CITIZENLINK	6	Demand	6	-	6
62	DATA-INVENSYS SYSTEMS MAINT	9	Demand	9	-	9
63	DATA-ARC INFO SOFTWARE MAINT	13	Demand	13	-	13
64	DATA-AUTOCADD MAINT	-	NA	-	-	-
65	DATA-POWER FACTOR TESTER	-	NA	-	-	-
66	DATA-SCADA MAINT.	-	NA	-	-	-
67	DATA- GPS	-	NA	-	-	-
68	ACCOUNTING & AUDITING	9	Demand	9	-	9
69	PROF&TECH-BLUE STAKES	-	Demand	-	-	-
70	PROF&TECH-CLEANING SERVICES	2	Demand	2	-	2
71	PROF&TECH-SUBDIVISION INSPECT	-	NA	-	-	-
72	PROF&TECH-TREE TRIMMING	-	NA	-	-	-
73	PROF&TECH-TESTING&INSPECTION	-	NA	-	-	-
74	PROF&TECH-IMPACT FEE STUDY	-	NA	-	-	-
75	PROF&TEC-ENGINEER-MISC STUDIES	-	NA	-	-	-
76	PROF&T-SUBSTATION OIL TESTING	-	NA	-	-	-
77	OTHER SERV-UTILITY BILLING	-	NA	-	-	-
78	OTHER SERV-MAILING & POSTAGE	-	NA	-	-	-
79	OTHER SERV-MERCHANT FEES	256	Demand	256	-	256
80	OTHER SERV-SUVPS O&M COSTS	179,691	Demand	179,691	-	179,691
81	OT SERV- 80% IF SUVPS PROJECTS	494,748	Demand	494,748	-	494,748
82	POWER PURCHASE	14,393,114	UMPA	6,950,014	7,443,100	14,393,114
83	INSURANCE	-	NA	-	-	-
84	SUNDRY	0	Demand	0	-	0
85	DEPRECIATION	-	NA	-	-	-
86	VEHICLE LEASE FROM MOTOR POOL	732	Demand	732	-	732
87	DEV. CONSTRUCTION MATERIAL	-	NA	-	-	-
88	BAD DEBTS	-	NA	-	-	-
89	LIABILITY CLAIMS-DEDUCTIBLE	4	Demand	4	-	4
90	INDIRECT SERVICE	-	NA	-	-	-



Power Supply

Row	Item	Test Year	Allocation	Demand	Energy	Total
91	PLANT ASSESSMENT - BROADBAND	258	Demand	258	-	258
92	Total Operating Expenses	15,088,598		7,645,498	7,443,100	15,088,598
93						
94	<u>Non-Operating Expenses (Revenues)</u>					
95	INTEREST EARNINGS	-	NA	-	-	-
96	ELEC. IMPACT FEES INTEREST	-	NA	-	-	-
97	SF ELEC REV 2000 BOND INT	-	NA	-	-	-
98	ELECTRIC CONSTRUCTION LABOR	-	NA	-	-	-
99	ELECTRIC CONSTRUCTION MATERIAL	-	NA	-	-	-
100	ELEC. CONST. EQUIP. RENTAL	-	NA	-	-	-
101	ELECTRIC METER FEE	-	NA	-	-	-
102	MISCELLANEOUS REVENUE	-	NA	-	-	-
103	POLE ATTACHMENTS REVENUE	-	NA	-	-	-
104	FORFEITED DISCOUNT	-	NA	-	-	-
105	CONTRIBUTIONS BY DEVELOPERS	-	NA	-	-	-
106	IMPACT FEES USED(NON-OPERATING	-	NA	-	-	-
107	PENSION EXPENSE	547	Demand	547	-	547
108	PENSION BENEFIT EXPENSE	(866)	Demand	(866)	-	(866)
109	DEBT SERVICE - INTEREST	-	NA	-	-	-
110	Total nonoperating expenses (revenues)	(319)		(319)	-	(319)
111						
112						
113	TRANSFER/DIVIDEND (TO)GEN FUND	-	NA	-	-	-
114	TRANSFER FROM (TO) DEBT SER ST	-	NA	-	-	-
115	CUSTOMER ADJUSTMENTS	-	NA	-	-	-
116	UTILITY MARGIN	-	NA	-	-	-
116	Total Transfers	-		-	-	-
117						
118	Revenue Requirement from Rates	15,088,279		7,645,179	7,443,100	15,088,279



Distribution

Row	Item	Test Year	Allocation	Demand	Customer	Direct	Total
1	Operating Expenses						
2	SALARIES AND WAGES (FULL-TIME)	1,001,337	O&M	685,895	315,442	-	1,001,337
3	SALARIES AND WAGES (PART-TIME)	44,265	O&M	30,320	13,944	-	44,265
4	EMPLOYEES BENEFITS	522,627	O&M	357,989	164,639	-	522,627
5	OVERTIME WAGES	5,094	O&M	3,489	1,605	-	5,094
6	TRAIN&TRAV-MILEAGE REIMBURSE	170	O&M	117	54	-	170
7	TRAIN&TRAV-CDL	210	O&M	144	66	-	210
8	TRAIN&TRAV-MISC. TRAINING	2,800	O&M	1,918	882	-	2,800
9	TRAIN&TRAV-HOTLINE SCHOOL IPSA	5,869	O&M	4,020	1,849	-	5,869
10	TRAIN&TRAV-IPSA WORKSHOPS	297	O&M	203	94	-	297
11	TRAIN&TRAV-LINEMAN TRAINING	5,620	O&M	3,850	1,771	-	5,620
12	TRAIN&TRAV-UMPA STRATEGY	-	NA	-	-	-	-
13	TRAIN&TRAV-IPSA SAFETY MEETING	1,786	O&M	1,223	563	-	1,786
14	APPA NATIONAL CONFERENCE	2,198	O&M	1,506	692	-	2,198
15	SCADA TRAINING	5,000	O&M	3,425	1,575	-	5,000
16	BOOKS&MEMBERS-CODE BOOKS	123	O&M	84	39	-	123
17	SUPP-METERS & SUPPLES	46	Customer	-	46	-	46
18	BOOKS&MEMBERS-INSTANT OSHA SUB	1,481	O&M	1,014	467	-	1,481
19	BOOKS&MEMBERS-UMPA/APPA	-	NA	-	-	-	-
20	BOOKS&MEMBERS-UMPA/CREDA	-	NA	-	-	-	-
21	BOOKS&MEMBERS- SAM'S/COSTCO	101	O&M	69	32	-	101
22	SUPP-AWARDS/PRIZES	10	O&M	7	3	-	10
23	SUPP-BATTERIES	248	O&M	170	78	-	248
24	SUPP-CLEANING SUPPLIES	394	O&M	270	124	-	394
25	SUPP-FIRST AID	380	O&M	260	120	-	380
26	SUPP-FOOD/MEALS	955	O&M	654	301	-	955
27	SUPP-MISC. SUPPLIES	3,571	O&M	2,446	1,125	-	3,571
28	SUPP-OFFICE SUPPLIES	3,059	O&M	2,095	964	-	3,059
29	SUPP-PERSONAL PROTECTIVE EQUIP	285	O&M	195	90	-	285
30	SUPP-UNIFORMS	15,708	O&M	10,759	4,948	-	15,708



Distribution

Row	Item	Test Year	Allocation	Demand	Customer	Direct	Total
31	SUPP- RADIOS	500	O&M	342	158	-	500
32	SUPP-DIVISION TOOLS & SAFETY	21,422	O&M	14,674	6,748	-	21,422
33	SUPPLIES- SERVICE WORK O&M	3,457	Customer	-	3,457	-	3,457
34	SUPPLIES- SUBSTATION O&M	14,446	Demand	14,446	-	-	14,446
35	SUPPLIES- STREET LIGHTING O&M	5,686	Direct	-	-	5,686	5,686
36	SUPPLIES-METERING	40,550	Customer	-	40,550	-	40,550
37	SUPP- SERVICE & SUB CREW TOOLS	2,875	Demand	2,875	-	-	2,875
38	SUPPLIES- SUBS. WEED CONT SUPP	5,002	Demand	5,002	-	-	5,002
39	SUPPLIES- TRAFFIC SIGNALS	127	O&M	87	40	-	127
40	SUP.- CHRISTMAS STRET LIGHTING	165	O&M	113	52	-	165
41	SUPPLIES- UG DISTRIBUTION O&M	21,557	Demand	21,557	-	-	21,557
42	SUPPLIES- UG TRANSFORMER O&M	2,544	Customer	-	2,544	-	2,544
43	SUPPLIES- UG CREW TOOLS	2,894	Demand	2,894	-	-	2,894
44	SUPPLIES- OVERHEAD DIST. O&M	20,766	Demand	20,766	-	-	20,766
45	SUPP- OVERHEADTRANSMISSION O&M	983	Demand	983	-	-	983
46	SUPP- OVERHD TRANSFORMER O&M	-	NA	-	-	-	-
47	SUPP- OVERHD TOOLS &SAFETY EQ.	1,715	Demand	1,715	-	-	1,715
48	SUP-OVERHD HIGH VOLT LINE TOOL	4,241	Demand	4,241	-	-	4,241
49	EQ. MAINT-CAR WASHES	118	O&M	81	37	-	118
50	EQ. MAINT-COPY MACHINE	57	O&M	39	18	-	57
51	EQ. MAINT-EQUIPMENT REPAIR	2,244	O&M	1,537	707	-	2,244
52	MOTOR POOL	80,660	O&M	55,250	25,409	-	80,660
53	GASOLINE AND OIL	22,276	O&M	15,259	7,018	-	22,276
54	TELEPHONE	7,552	O&M	5,173	2,379	-	7,552
55	UTILITIES	19,105	O&M	13,087	6,018	-	19,105
56	BLDG&GROUND-HEAT/VENT/AC	371	O&M	254	117	-	371
57	BLDG&GROUND-FIRE EXTINGUISHER	264	O&M	181	83	-	264
58	BLDG&GROUND-MISC BLDG REPAIR	3,878	O&M	2,656	1,222	-	3,878
59	DATA-COMPUTER MAINTENANCE	7,117	O&M	4,875	2,242	-	7,117
60	DATA-CASELLE MAINTENANCE	6,838	O&M	4,684	2,154	-	6,838



Distribution

Row	Item	Test Year	Allocation	Demand	Customer	Direct	Total
61	DATA-CITIZENLINK	1,318	O&M	903	415	-	1,318
62	DATA-INVENSYS SYSTEMS MAINT	1,828	O&M	1,252	576	-	1,828
63	DATA-ARC INFO SOFTWARE MAINT	2,654	O&M	1,818	836	-	2,654
64	DATA-AUTOCADD MAINT	4,800	O&M	3,288	1,512	-	4,800
65	DATA-POWER FACTOR TESTER	717	O&M	491	226	-	717
66	DATA-SCADA MAINT.	18,340	O&M	12,563	5,777	-	18,340
67	DATA- GPS	12,600	O&M	8,631	3,969	-	12,600
68	ACCOUNTING & AUDITING	2,012	O&M	1,378	634	-	2,012
69	PROF&TECH-BLUE STAKES	868	O&M	595	273	-	868
70	PROF&TECH-CLEANING SERVICES	383	O&M	262	121	-	383
71	PROF&TECH-SUBDIVISION INSPECT	33,691	O&M	23,077	10,613	-	33,691
72	PROF&TECH-TREE TRIMMING	23,351	Demand	23,351	-	-	23,351
73	PROF&TECH-TESTING&INSPECTION	790	O&M	541	249	-	790
74	PROF&TECH-IMPACT FEE STUDY	2,789	O&M	1,911	879	-	2,789
75	PROF&TEC-ENGINEER-MISC STUDIES	10,440	O&M	7,151	3,289	-	10,440
76	PROF&T-SUBSTATION OIL TESTING	3,489	Demand	3,489	-	-	3,489
77	OTHER SERV-UTILITY BILLING	-	NA	-	-	-	-
78	OTHER SERV-MAILING & POSTAGE	-	NA	-	-	-	-
79	OTHER SERV-MERCHANT FEES	54,291	O&M	37,188	17,103	-	54,291
80	OTHER SERV-SUVPS O&M COSTS	-	NA	-	-	-	-
81	OT SERV- 80% IF SUVPS PROJECTS	-	O&M	-	-	-	-
82	POWER PURCHASE	-	NA	-	-	-	-
83	INSURANCE	26,889	O&M	18,418	8,470	-	26,889
84	SUNDRY	14	O&M	10	5	-	14
85	DEPRECIATION	927,147	O&M	635,076	292,071	-	927,147
86	VEHICLE LEASE FROM MOTOR POOL	155,390	O&M	106,439	48,951	-	155,390
87	DEV. CONSTRUCTION MATERIAL	1,204,571	O&M	825,106	379,465	-	1,204,571
88	BAD DEBTS	-	NA	-	-	-	-
89	LIABILITY CLAIMS-DEDUCTIBLE	791	O&M	542	249	-	791
90	INDIRECT SERVICE	-	NA	-	-	-	-



Distribution

Row	Item	Test Year	Allocation	Demand	Customer	Direct	Total
91	PLANT ASSESSMENT - BROADBAND	54,848	O&M	37,569	17,278	-	54,848
92	Total Operating Expenses	4,467,053		3,055,943	1,405,425	5,686	4,467,053



Row	Item	Test Year	Allocation	Customer	Total
1	Operating Expenses				
2	SALARIES AND WAGES (FULL-TIME)	237,993	Customer	237,993	237,993
3	SALARIES AND WAGES (PART-TIME)	10,521	Customer	10,521	10,521
4	EMPLOYEES BENEFITS	124,216	Customer	124,216	124,216
5	OVERTIME WAGES	1,211	Customer	1,211	1,211
6	TRAIN&TRAV-MILEAGE REIMBURSE	40	Customer	40	40
7	TRAIN&TRAV-CDL	-	Customer	-	-
8	TRAIN&TRAV-MISC. TRAINING	-	Customer	-	-
9	TRAIN&TRAV-HOTLINE SCHOOL IPSA	-	Customer	-	-
10	TRAIN&TRAV-IPSA WORKSHOPS	-	Customer	-	-
11	TRAIN&TRAV-LINEMAN TRAINING	-	NA	-	-
12	TRAIN&TRAV-UMPA STRATEGY	-	NA	-	-
13	TRAIN&TRAV-IPSA SAFETY MEETING	-	Customer	-	-
14	APPA NATIONAL CONFERENCE	522	Customer	522	522
15	SCADA TRAINING	-	NA	-	-
16	BOOKS&MEMBERS-CODE BOOKS	29	Customer	29	29
17	SUPP-METERS & SUPPLES	-	Customer	-	-
18	BOOKS&MEMBERS-INSTANT OSHA SUB	352	Customer	352	352
19	BOOKS&MEMBERS-UMPA/APPA	-	NA	-	-
20	BOOKS&MEMBERS-UMPA/CREDA	-	NA	-	-
21	BOOKS&MEMBERS- SAM'S/COSTCO	24	Customer	24	24
22	SUPP-AWARDS/PRIZES	2	Customer	2	2
23	SUPP-BATTERIES	59	Customer	59	59
24	SUPP-CLEANING SUPPLIES	94	Customer	94	94
25	SUPP-FIRST AID	90	Customer	90	90
26	SUPP-FOOD/MEALS	227	Customer	227	227
27	SUPP-MISC. SUPPLIES	849	Customer	849	849
28	SUPP-OFFICE SUPPLIES	727	Customer	727	727
29	SUPP-PERSONAL PROTECTIVE EQUIP	68	Customer	68	68
30	SUPP-UNIFORMS	-	Customer	-	-



Row	Item	Test Year	Allocation	Customer	Total
31	SUPP- RADIOS	-	Customer	-	-
32	SUPP-DIVISION TOOLS & SAFETY	-	Customer	-	-
33	SUPPLIES- SERVICE WORK O&M	-	NA	-	-
34	SUPPLIES- SUBSTATION O&M	-	NA	-	-
35	SUPPLIES- STREET LIGHTING O&M	-	NA	-	-
36	SUPPLIES-METERING	-	NA	-	-
37	SUPP- SERVICE & SUB CREW TOOLS	-	NA	-	-
38	SUPPLIES- SUBS. WEED CONT SUPP	-	NA	-	-
39	SUPPLIES- TRAFFIC SIGNALS	-	NA	-	-
40	SUP.- CHRISTMAS STRET LIGHTING	-	NA	-	-
41	SUPPLIES- UG DISTRIBUTION O&M	-	NA	-	-
42	SUPPLIES- UG TRANSFORMER O&M	-	NA	-	-
43	SUPPLIES- UG CREW TOOLS	-	NA	-	-
44	SUPPLIES- OVERHEAD DIST. O&M	-	NA	-	-
45	SUPP- OVERHEADTRANSMISSION O&M	-	NA	-	-
46	SUPP- OVERHD TRANSFORMER O&M	-	NA	-	-
47	SUPP- OVERHD TOOLS &SAFETY EQ.	-	NA	-	-
48	SUP-OVERHD HIGH VOLT LINE TOOL	-	NA	-	-
49	EQ. MAINT-CAR WASHES	28	Customer	28	28
50	EQ. MAINT-COPY MACHINE	14	Customer	14	14
51	EQ. MAINT-EQUIPMENT REPAIR	533	Customer	533	533
52	MOTOR POOL	19,171	Customer	19,171	19,171
53	GASOLINE AND OIL	5,295	Customer	5,295	5,295
54	TELEPHONE	1,795	Customer	1,795	1,795
55	UTILITIES	4,541	Customer	4,541	4,541
56	BLDG&GROUND-HEAT/VENT/AC	88	Customer	88	88
57	BLDG&GROUND-FIRE EXTINGUISHER	63	Customer	63	63
58	BLDG&GROUND-MISC BLDG REPAIR	922	Customer	922	922
59	DATA-COMPUTER MAINTENANCE	1,692	Customer	1,692	1,692
60	DATA-CASELLE MAINTENANCE	1,625	Customer	1,625	1,625



Row	Item	Test Year	Allocation	Customer	Total
61	DATA-CITIZENLINK	313	Customer	313	313
62	DATA-INVENSYS SYSTEMS MAINT	434	Customer	434	434
63	DATA-ARC INFO SOFTWARE MAINT	631	Customer	631	631
64	DATA-AUTOCADD MAINT	-	NA	-	-
65	DATA-POWER FACTOR TESTER	-	NA	-	-
66	DATA-SCADA MAINT.	-	NA	-	-
67	DATA- GPS	-	NA	-	-
68	ACCOUNTING & AUDITING	478	Customer	478	478
69	PROF&TECH-BLUE STAKES	-	Customer	-	-
70	PROF&TECH-CLEANING SERVICES	91	Customer	91	91
71	PROF&TECH-SUBDIVISION INSPECT	-	NA	-	-
72	PROF&TECH-TREE TRIMMING	-	NA	-	-
73	PROF&TECH-TESTING&INSPECTION	-	NA	-	-
74	PROF&TECH-IMPACT FEE STUDY	-	NA	-	-
75	PROF&TEC-ENGINEER-MISC STUDIES	-	NA	-	-
76	PROF&T-SUBSTATION OIL TESTING	-	NA	-	-
77	OTHER SERV-UTILITY BILLING	12,005	Customer	12,005	12,005
78	OTHER SERV-MAILING & POSTAGE	1,043	Customer	1,043	1,043
79	OTHER SERV-MERCHANT FEES	12,904	Customer	12,904	12,904
80	OTHER SERV-SUVPS O&M COSTS	-	Customer	-	-
81	OT SERV- 80% IF SUVPS PROJECTS	-	Customer	-	-
82	POWER PURCHASE	-	NA	-	-
83	INSURANCE	-	NA	-	-
84	SUNDRY	3	Customer	3	3
85	DEPRECIATION	-	NA	-	-
86	VEHICLE LEASE FROM MOTOR POOL	36,932	Customer	36,932	36,932
87	DEV. CONSTRUCTION MATERIAL	-	NA	-	-
88	BAD DEBTS	61,690	Customer	61,690	61,690
89	LIABILITY CLAIMS-DEDUCTIBLE	188	Customer	188	188
90	INDIRECT SERVICE	509,171	Customer	509,171	509,171



Row	Item	Test Year	Allocation	Customer	Total
91	PLANT ASSESSMENT - BROADBAND	13,036	Customer	13,036	13,036
92	Total Operating Expenses	1,061,709		1,061,709	1,061,709
93	Check				
94	<u>Non-Operating Expenses (Revenues)</u>				
95	INTEREST EARNINGS	-	NA	-	-
96	ELEC. IMPACT FEES INTEREST	-	NA	-	-
97	SF ELEC REV 2000 BOND INT	-	NA	-	-
98	ELECTRIC CONSTRUCTION LABOR	-	NA	-	-
99	ELECTRIC CONSTRUCTION MATERIAL	-	NA	-	-
100	ELEC. CONST. EQUIP. RENTAL	-	NA	-	-
101	ELECTRIC METER FEE	-	NA	-	-
102	MISCELLANEOUS REVENUE	-	NA	-	-
103	POLE ATTACHMENTS REVENUE	-	NA	-	-
104	FORFEITED DISCOUNT	-	NA	-	-
105	CONTRIBUTIONS BY DEVELOPERS	-	NA	-	-
106	IMPACT FEES USED(NON-OPERATING	-	NA	-	-
107	PENSION EXPENSE	27,620	Customer	27,620	27,620
108	PENSION BENEFIT EXPENSE	(43,698)	Customer	(43,698)	(43,698)
109	DEBT SERVICE - INTEREST	-	NA	-	-
110	Total nonoperating expenses (revenues)	(16,078)		(16,078)	(16,078)
111	Check				
112					
113	TRANSFER/DIVIDEND (TO)GEN FUND	-	NA	-	-
114	TRANSFER FROM (TO) DEBT SER ST	-	NA	-	-
115	CUSTOMER ADJUSTMENTS	-	NA	-	-
116	UTILITY MARGIN	-	NA	-	-
116	Total Transfers	-		-	-
117	Check				
118	Revenue Requirement from Rates	1,045,631		1,045,631	1,045,631



Cost of Service

Row	Item	Test Year	Allocation	Residential	General Service	Large Power Service	Lighting	Total
38	Allocation Factors							
39								
40				189,838	179,309	85,742	-	454,889
41	12 Coincident Peak Demand		12CP	42%	39%	19%	0%	100%
42				33,473	25,811	8,427	9	67,720
43	1 Non-Coincident Peak Demand for Distribution		1NCP	49%	38%	12%	0%	100%
44				667,493	296,676	108,429	112	1,072,711
45	Sum of Maximum Demands		SMD	62%	28%	10%	0%	100%
46				94,128,882	91,048,161	57,651,915	39,454	242,868,412
47	kWh Sales		kWh Sales	39%	37%	24%	0%	100%
48				98,554,131	95,328,577	59,451,601	41,309	253,375,618
49	Net Energy for Load		NEFL	39%	38%	23%	0%	100%
50				122,416	14,165	121	21	136,723
51	Count of Meter Months		Meters	90%	10%	0%	0%	100%
52				122,416	42,494	19,416	10	184,336
53	Customers - Distribution Weighting		Cust. Distribution	66%	23%	11%	0%	100%
54				122,416	42,494	607	10	165,527
55	Customers - Customer Service Weighting		Cust. Service	74%	26%	0%	0%	100%
56				7,910,044	6,722,172	3,418,411	7,179	18,057,807
57	Revenue Requirement		RevReq	44%	37%	19%	0%	100%
58				-	-	-	1	1
59	Direct to Lighting		Lighting	0%	0%	0%	100%	100%



Cost of Service

Row	Item	Test Year	Allocation	Residential	General Service			Lighting	Total
					General Service	Large Power Service			
1	PRODUCTION								
2	Production Demand Expense	7,645,179	12CP	3,190,555	3,013,590	1,441,035	-	7,645,179	
3	Production Energy Expense	7,443,100	NEFL	2,895,102	2,800,349	1,746,436	1,213	7,443,100	
4	Total Production	15,088,279		6,085,657	5,813,939	3,187,470	1,213	15,088,279	
5	Check	-							
6	DISTRIBUTION								
7	Distribution Demand Expense	1,311,943	1NCP	648,473	500,039	163,250	181	1,311,943	
8	Distribution Customer Expense	606,268	Cust. Distribution	402,617	139,760	63,858	34	606,268	
9	Distribution Direct Lighting	5,686	Lighting	-	-	-	5,686	5,686	
10	Total Distribution	1,923,897		1,051,089	639,799	227,108	5,901	1,923,897	
11	Check	-							
12	CUSTOMER								
13	Customer Service Expense	1,045,631	Cust. Service	773,298	268,435	3,833	65	1,045,631	
14	Total Customer	1,045,631		773,298	268,435	3,833	65	1,045,631	
15	Check	-							
16									
17	REVENUE								
18	Revenue Expense	2,368,446	RevReq	1,037,474	881,674	448,356	942	2,368,446	
19	Total Revenue	2,368,446		1,037,474	881,674	448,356	942	2,368,446	
20	Check	-							
21	Total Cost of Service	20,426,253		8,947,519	7,603,847	3,866,767	8,121	20,426,253	
23									
24	Percent of Cost of Service	100%		43.8%	37.2%	18.9%	0.04%	100%	
25	Percent of Revenue	100%		43.2%	39.7%	17.1%	0.03%	100%	
26	Difference	0%		1.5%	-6.2%	10.7%	54.9%	0%	
27									
28	Classified Cost of Service								
29	Customer Cost	1,874,993		1,330,147	461,734	76,569	6,543	1,874,993	
30	Demand Cost	10,131,930		4,342,551	3,974,473	1,814,702	205	10,131,930	
31	Energy Cost	8,419,330		3,274,821	3,167,640	1,975,497	1,373	8,419,330	
32									
33	Classified Unit Cost of Service								
34	Customer Cost	13.71		10.87	32.60	630.97		13.71	
35	Demand Cost	9.45		6.51	13.40	16.74	1.83	9.45	
36	Energy Cost	0.03467		0.03479	0.03479	0.03427	0.03479	0.03467	

Section 4

Proposed Rates

Changes to rates are generally based on the overall need for revenues and results of the cost-of-service analyses. The projected operating results at existing rates as presented in Section 2 of this report outline the overall revenue needs of the electric utility. Section 3 summarizes the cost-of-service results. These factors have been considered in developing the proposed rates summarized in this section of the report.

Proposed Rates

Revenue Needs

In Section 2, it shows that Spanish Fork's projected annual change in net position remains positive through the Study Period. It decreases from 16.5% of revenues in 2016 to 7.8% of revenues in 2020. Additionally, Spanish Fork's projected cash reserves at current rates are expected to increase from \$22.4 million to \$31.2 million over the Study Period. Based on the projected results, no overall revenue increase through rates is recommended at this time.

Rate Design Adjustments

The cost of service analysis summarized in Section 3 shows that the General Service class is providing a subsidy to the Large Power Service class. The cost of service results indicate that the Residential class is paying very close to its cost of service. As such, we are providing a rate option that increases Large Power Service rates and decreases General Service rates. It results in an increase in Large Power revenues of approximately 3% and a 1.4% decrease in General Service revenues. The rate option presented also begins addressing the rate design disparity between these two classes. The Large Power Service rate has a much higher demand charge with a lower energy charge. The General Service rates have lower demand charges with higher energy

Section 4

charges. This design philosophy difference can cause customers to see a significant change in their bill simply by transitioning from one rate class to another. One goal of rates is to have relatively smooth transitions between classes. The cost to serve a customer does not change dramatically simply because it exceeds or drops below the 400 kW threshold between General Service and Large Power classes. The rates we have developed do not result in any change in total revenues for Spanish Fork. It is important to note that the proposed rate changes to the General Service and Large Power rates go together, either both should be done or neither should be done.

As Spanish Fork moves forward, rate changes to the General Service and Large Power rates should strive to keep the balance of demand and energy charges between these classes similar. Significant differences between rate classes such as the General Service and Large Power rate can result in significant rate shock to customers that naturally migrate from one rate to another. Once the rates are similar, cost of service results indicate that the demand rates of both classes should be raised as need for additional revenue arises.

We have also developed an alternative rate for the Residential class which increases the monthly customer charge and decreases the energy charge. The current customer charge of \$3.50 is well below the cost based customer charge of \$10.87 per residential customer per month as shown in Section 3. The proposed Residential rate does not change the overall revenues of the Residential class. The proposed Residential rate is not dependent on the proposed General Service or Large Power rates. The proposed rates discussed above are shown in Exhibit 4-A.

Projected Operating Results – Proposed Rates

The rates recommended above do not result in a change in overall projected revenues for Spanish Fork, the projected operating results and impact on reserves presented in Section 2 of this report would not change as a result of implementation of either option 1 or option 2 summarized above.

Net Metering

Based on the analyses contained in this study, we have identified several options for Spanish Fork's consideration relative to rate provisions applicable to net metering of small distributed generation facilities at customer locations, most notably solar power installations. Net metering is a billing mechanism where customers with distributed generation (like rooftop solar) are credited for electricity they deliver back to the distribution system. For example, if a residential customer has a solar system on the home's rooftop, it may generate more electricity than the home uses during daylight hours. If the home is net-metered, the utility pays the customer for the excess generation. The rate paid for the excess generation varies by state and utility.

The State of Utah net metering policy requires Rocky Mountain Power and all rural electric cooperatives to offer a net metering tariff to their customers. However, municipally owned utilities like Spanish Fork are not currently required to offer net metering, but they may if they desire. Spanish Fork's current net metering policy is similar to other utility net metering tariffs including Rocky Mountain Power. Under the current Spanish Fork net metering rate, a customer receives full retail price credit for energy it delivers to the utility during periods when the on-site generator is producing more energy than the customer requires. The customer can apply that payment/credit to its usage during times that the on-site generator is not producing energy.

Within the electric industry, there are numerous discussions about the economic and operational 'fairness' of net metering programs. Distributed generation advocates argue that net metering programs help promote this beneficial program. Others argue that net metering customers do not contribute sufficiently to the fixed cost of the electric grid, resulting in subsidies from non-net metering customers. There are several potential rate approaches addressing the need for net metering customers to make a contribution to the fixed costs of the grid, even if their net use of energy during a billing period may be zero. Based on the results of the cost-of-service study, we have examined the following rate scenarios and have designed cost based rates for your consideration.

Section 4

- Current net metering policy
- Higher monthly customer charge
- Retail demand charge rate structure
- Separate charge based on solar generating capacity
- Minimum bill provision
- Feed-in-tariff

These options are discussed below.

Current Net Metering Policy

Spanish Fork could opt to maintain its current net metering policy. It is similar to standard net metering policies in place at numerous utilities nationwide. It also reflects current Utah requirements on Rocky Mountain Power and cooperatives. The current policy does not address cost based concerns about potential subsidies from regular customers to net metering customers.

Higher monthly customer charge

Credits that net metering customers receive for power generated do not generally apply to the fixed monthly customer charge paid by customers. The fixed charge does not vary based on energy used by a customer. Customer charges are meant to recover fixed charges incurred by the utility simply by having a customer connected to the system. These can include meter reading, billing and customer services. They may also include fixed system costs such as portions of the distribution system, service transformers, service lines and meter installations. A higher customer charge can be designed to collect some or all of a customers allocated fixed costs of the local system. This rate design alternative could be applied to all customers or to just net metering customers.

Retail demand charge rate structure

Solar net metering customers purchase less net energy from the utility while still placing demands on the system during times when the solar units are not generating

(evenings/nights). This results in net metering customers having a much lower effective load factor for their service. Under a customer charge/energy charge rate structure, it is not possible to adjust rates to reflect wide disparities in load factor. Moving residential net metering customers to a demand and energy rate structure as is commonly done for non-residential customers can allow for contribution to fixed system charges by these customers despite their low energy use.

Separate charge based on solar generating capacity

Net metering customers access the distribution system to deliver energy to the utility during over generation periods and to receive energy during low generation periods. Based on the size of the solar generation installation, a separate distribution access fee can be charged to a customer. This charge is levied on a \$/kW basis to reflect the fixed expense of the distribution system. The charge can either be assessed on the total generation size or the generation size less the average demand of a typical residential customer. For Spanish Fork, the average residential customer is estimated to have an average monthly peak demand of 5.5 kW. As an example, a solar customer with a 7.5 kW system, they could be charged for the full 7.5 kW of demand or for 2 kW (7.5 kW generator capacity less the 5.5 kW average customer demand).

Minimum bill provision

Implementation of a simple minimum bill provision can ensure that net metering customers, as well as all customers, make a minimum contribution to system fixed costs.

Feed-in-tariff

Feed-in-tariffs are designed to pay for output of distributed generation at a 'value of solar' rate. There is often discussion regarding what the value of solar should include relative to generation, transmission, distribution, environmental externalities and other costs. For our analysis, we have assumed a value equal to the avoided average generation cost for Spanish Fork. Under this type of scenario, the output that is

Section 4

exported to the system by the generator is not paid the full retail rate in a net metering arrangement. The customer receives a credit for the excess generation based on the feed in tariff rate.

A proposed rate is shown in the following table for each of the rate arrangements discussed above. These are cost based rates based on the FY 2015 test year included in the rate study. The footnotes contain a brief explanation of the basis for the calculations.

Net Metering Alternatives

FY 2015 Test Year

Item	Rate
Current net metering policy ⁽¹⁾	Current rate
Higher monthly customer charge ⁽²⁾	\$23.39/mo. \$0.06465/kWh
Retail demand charge ⁽³⁾	\$10.87/mo cust \$6.51/kW-mo demand \$0.03479/kWh energy
Separate charge based on solar capacity ⁽⁴⁾	\$1.57/kW-mo
Minimum bill provision ⁽⁵⁾	\$23.39/mo.
Feed-in-tariff ⁽⁶⁾	\$0.06465/kWh

(1) No change in current rate policy

(2) Customer unit cost plus distribution fixed cost for average customer plus production costs in energy.

(3) Cost based three-part rate for all services.

(4) Distribution fixed cost per kW.

(5) Equals higher customer charge computation.

(6) Allocated residential production cost.



Current and Proposed Rates

Rate Schedule	Rates	
	Current	Proposed
Residential		
Customer Charge	\$3.50	\$6.00
Energy Charge	\$0.08984	\$0.08649
General Service (GS)		
Customer Charge	\$6.50	\$15.00
Energy Charge		
First 1000 kWh	\$0.12650	\$0.12650
Next 4000 kWh	\$0.08479	\$0.07237
all additional kWh	\$0.05647	\$0.04820
Power Charge per kW		
First 5 kW	\$0.00	\$0.00
all additional kW	\$6.00	\$8.00
General Service (GS2)		
Customer Charge	\$30.00	\$30.00
Energy Charge		
First 1000 kWh	\$0.12959	\$0.12959
Next 4000 kWh	\$0.08961	\$0.08299
all additional kWh	\$0.08629	\$0.07991
Power Charge per kW		
First 5 kW	\$0.00	
all additional kW	\$6.75	\$8.75
Large Power		
Customer Charge	\$50.00	\$50.00
Energy Charge	\$0.04050	\$0.04227
Capacity Charge per kW	\$10.00	\$10.00