



Annual Town Hall Meeting

George Cress, Light & Power Director
Light & Power Department

January 31, 2015



History

- City of Forest Grove's Light & Power Department has been providing electric power for its customers since 1895.
- 1939 the City of Forest Grove signs one of the first power contracts with the newly formed Bonneville Power Administration (BPA).
- 1956 City of Forest Grove signs an agreement with Grant County PUD #2 to purchase power from Priest Rapids and Wanapum dams located in Eastern Washington.
- Thatcher Junction Substation constructed in 1959
- Forest Grove Substation constructed in 1968
- Filbert Substation constructed in 1983



Department Overview- What we do

The purposes of this department are to:

- Provide reliable low-cost electrical service to customers within our service area
- Provide lighting for those streets, parks, and parking areas under the jurisdiction of city government
- Support the City's efforts in promoting economic development
- Provide customer and community service programs designed to reduce the retail cost and enhance the quality of electric service provided to our customers
- Enhance the quality of life in the Forest Grove community
- Promote the wise and efficient use of electric energy and renewable resources

Light & Power Department

- 25 Full Time Employees
- Operations- IBEW Union lineman, utility workers, and meter readers
- Administrative- AFSCME Union staff
- Electric system consists of three substations, four electric substation transformers, 2897 smaller service transformers, 3000 power poles, 63 miles of underground power cables and 72 miles of overhead power lines.

2015 Customers:

- Residential- 8,550
- General Service- 832
- Industrial Service- 138



Equipment

- Aerial Manlifts
- Bucket Truck
- Bucket Chipper Truck
- Dump Truck
- Digger Derrick Truck
- Pickup Trucks
- Backhoe, Loader & Trailer
- Boring Machine
- Brush Chipper
- Forklift
- Portable Generator
- Rotary Hammer
- Lawn Tractor

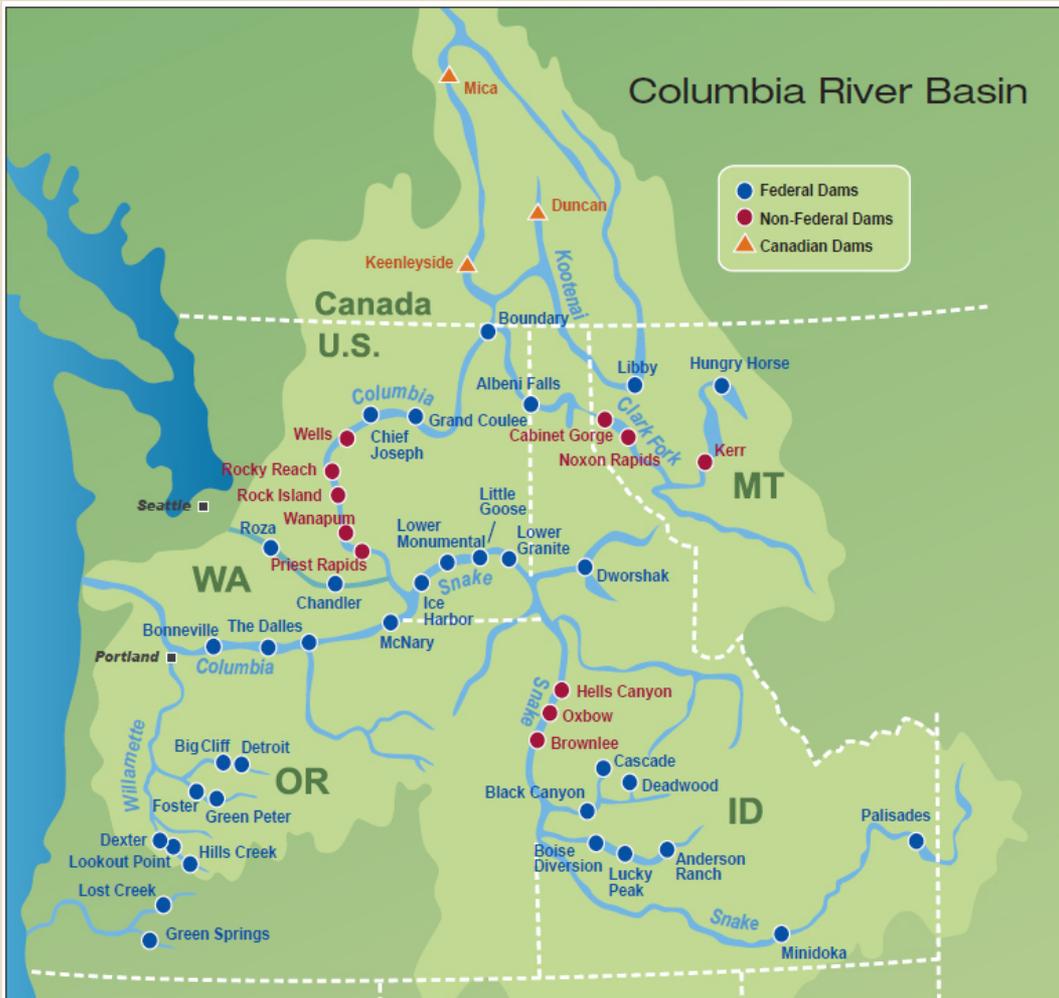


Substations

- Thatcher-Junction
- Forest Grove
- Filbert
- 2013 Electric System Master Plan- Guideline for a staged replacement for aging major power equipment while providing capacity for reasonable load growth to accommodate future City service expansion

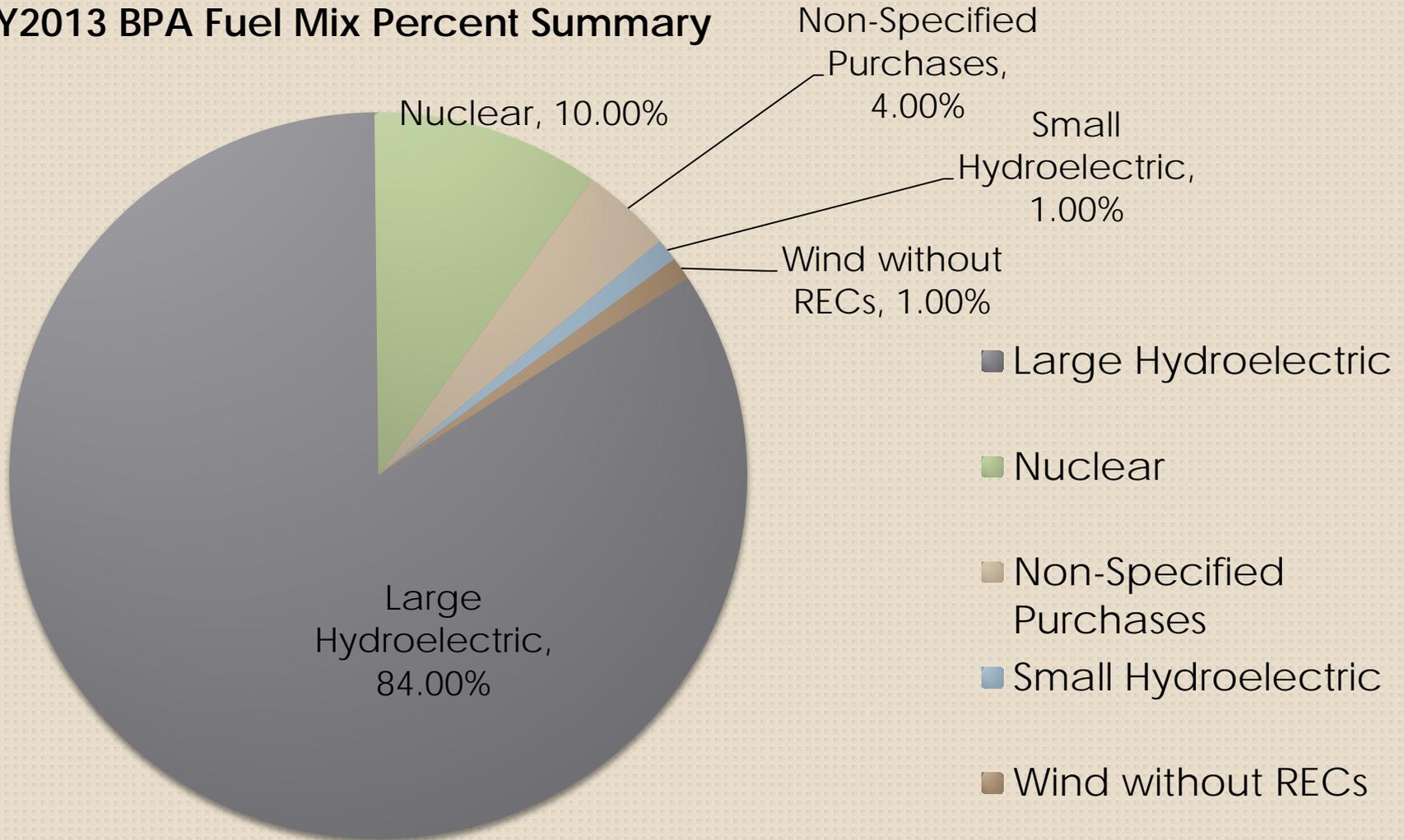


Bonneville Power Administration



Fuel Mix Summary

CY2013 BPA Fuel Mix Percent Summary



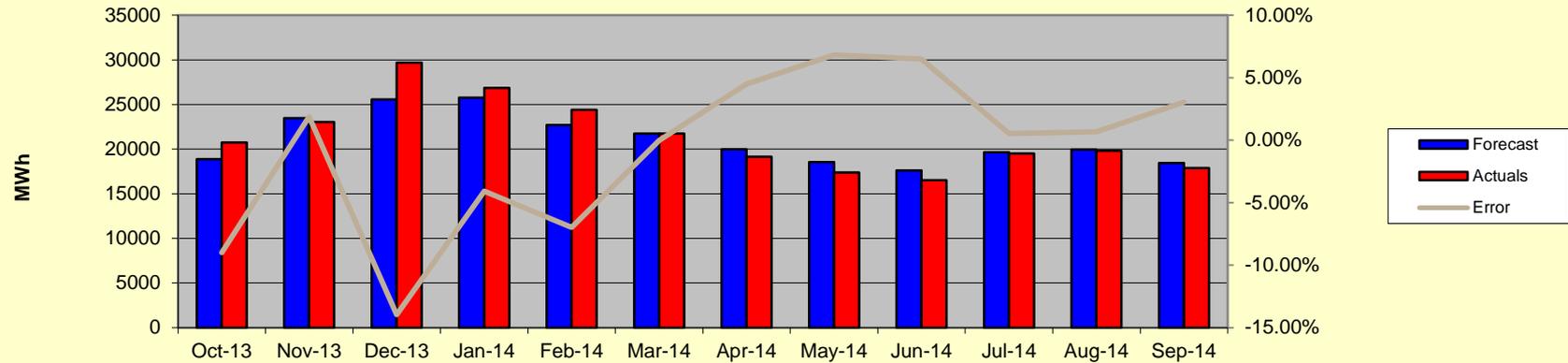
BPA Load Forecast

City of Forest Grove Total Retail Load Forecast Energy 2015-2035			
Fiscal Year	MWh	aMW	Growth
2009	247,939	28.30	-
2010	237,397	27.10	-4.3%
2011	242,200	27.65	2.0%
2012	244,827	27.87	0.8%
2013	247,573	28.26	1.4%
2014	256,755	29.31	3.7%
2015	257,792	29.43	0.4%
2016	260,710	29.68	0.9%
2017	262,175	29.93	0.8%
2018	264,389	30.18	0.8%
2019	266,620	30.44	0.8%
2020	269,616	30.69	0.8%
2021	271,129	30.95	0.8%
2022	273,407	31.21	0.8%
2023	275,702	31.47	0.8%
2024	278,776	31.74	0.8%
2025	280,340	32.00	0.8%
2026	282,683	32.27	0.8%
2027	285,043	32.54	0.8%
2028	288,199	32.81	0.8%
2029	289,814	33.08	0.8%
2030	292,224	33.36	0.8%
2031	294,652	33.64	0.8%
2032	297,890	33.91	0.8%
2033	299,558	34.20	0.8%
2034	302,037	34.48	0.8%
2035	304,533	34.76	0.8%
AAGR 5 Year (2007-2012)			0.7%
AAGR 5 Year (2013-2018)			0.8%
AAGR 10 Year (2013-2023)			0.8%
AAGR 20 Year (2013-2033)			0.8%
AAGR: Average Annual Growth Rate			
Forecasts include losses			

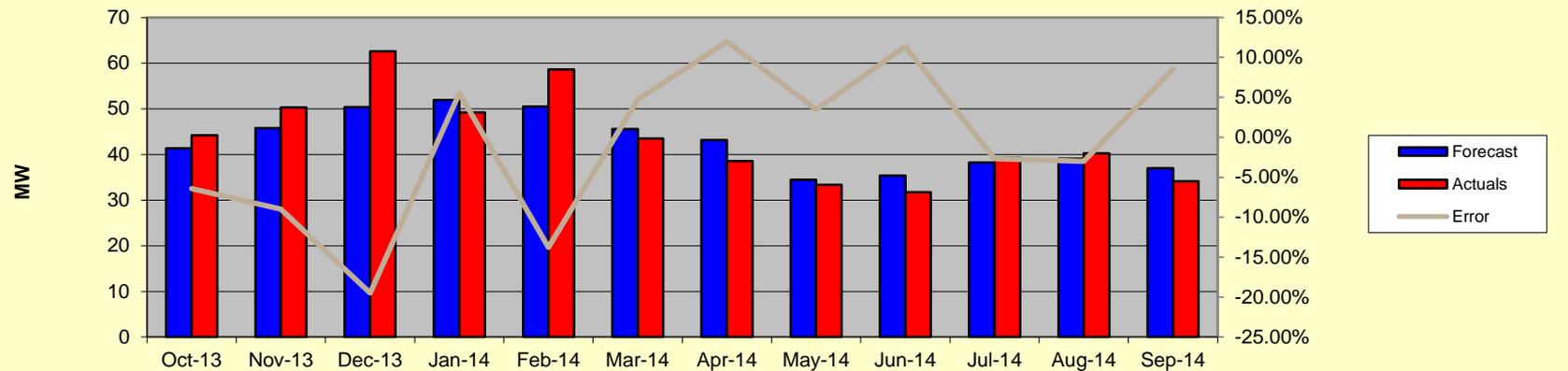
City of Forest Grove Total Retail Load Forecast Customer System Peak and Load Factor 2015-2035			
Fiscal Year	MW	LF	Growth
2009	55.6	51%	-
2010	60.2	45%	8.3%
2011	51.2	54%	-15.0%
2012	49.3	57%	-3.7%
2013	51.1	55%	3.6%
2014	62.6	47%	22.4%
2015	53.5	55%	-14.5%
2016	53.9	55%	0.8%
2017	54.3	55%	0.8%
2018	54.7	55%	0.8%
2019	55.1	55%	0.8%
2020	55.5	55%	0.8%
2021	56.0	55%	0.8%
2022	56.4	55%	0.8%
2023	56.8	55%	0.8%
2024	57.3	55%	0.8%
2025	57.7	55%	0.8%
2026	58.1	56%	0.8%
2027	58.6	56%	0.8%
2028	59.0	56%	0.8%
2029	59.5	56%	0.8%
2030	59.9	56%	0.8%
2031	60.4	56%	0.8%
2032	60.8	56%	0.8%
2033	61.3	56%	0.8%
2034	61.8	56%	0.8%
2035	62.2	56%	0.8%
AAGR 5 Year (2007-2012)			2.4%
AAGR 5 Year (2013-2018)			0.8%
AAGR 10 Year (2013-2023)			0.8%
AAGR 20 Year (2013-2033)			0.8%

Load Forecast

2014 Energy Forecast

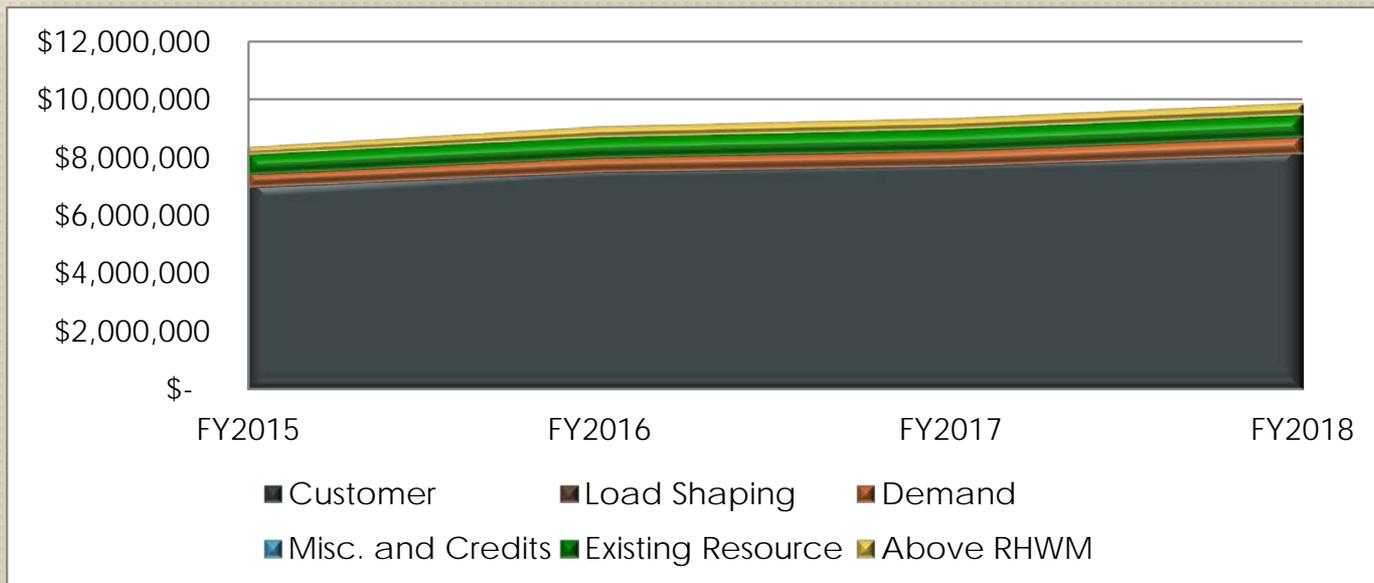


2014 Peak Load Forecast



Key Factors

- Estimated power costs for fiscal years (FY, July 1) 2015-2018
 - BPA sets rates every two years on a federal fiscal year (FFY, October 1)
 - Power cost increases: 8.7% FFY2016, 5.0% FFY2018
 - Transmission cost increase: 6.1% FFY2016, 5.0% FFY2018
- Power cost represent 57% of annual revenue requirement



Projects

- **Thatcher Junction Substation**
(2015)- Purchase and install one electric transformer, control house, circuit switcher and relays
- **Forest Grove Substation**
(2015-2016)- Purchase and install two electric transformers, control house, circuit switcher and relays



Capital Plan

Projects	FY2015	FY2016	FY2017	FY2018	Total
Major Tools and Equipment	\$ 50,000	\$ 20,563	\$ 21,141	\$ 21,736	\$ 113,440
Substation Upgrades	2,063,500	1,399,500	177,000	152,154	3,792,154
Property improvements & Office Building	183,000	10,281	10,571	10,868	214,720
L&P Vehicle Replacement Program	175,000	205,628	137,419	407,554	925,600
L&P Specialized Equipment	145,000	-	-	53,254	198,254
Distribution System Additions and Upgrades	125,000	51,407	52,853	54,341	283,601
Total	\$ 2,741,500	\$ 1,687,379	\$ 398,984	\$ 699,906	\$ 5,527,769

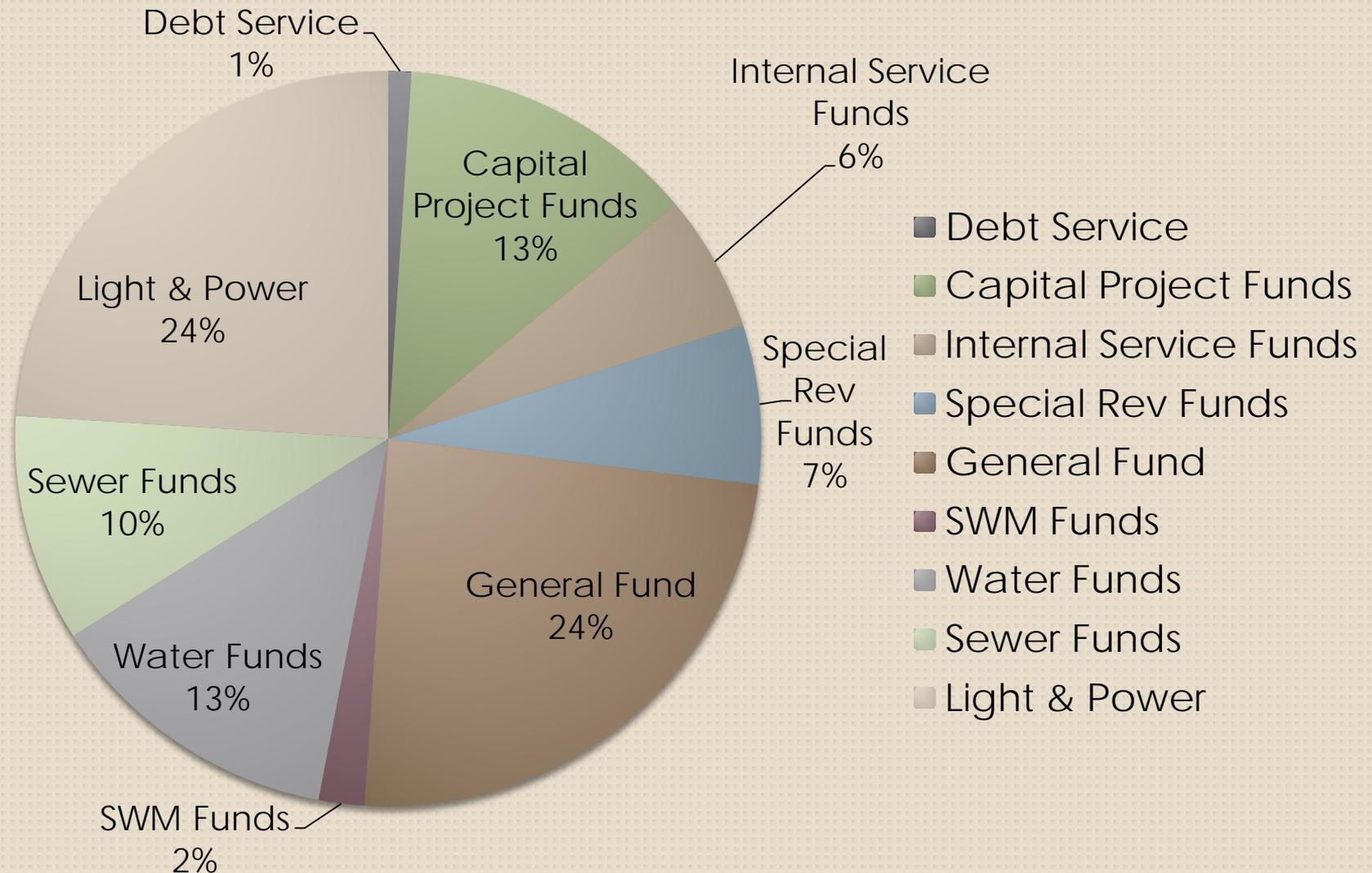
- Total capital costs of \$5.5 million through FY 2018
 - Costs inflated by ENR to year of construction

Conservation

- **Commercial & Industrial-** Efficiency upgrades and incentives
- **Residential-** Energy saving measures and appliance rebates
- Pure Power renewable energy purchase options



City Pie Chart



Number of Customers, Energy Sales, & Revenue

July - October 2014				
	Number of Customers	Energy Sales (kWh)	Percent of Total	Revenues
Residential	8,550	28,936,564	41%	\$1,709,630
General Services	832	6,473,964	9%	364,450
Industrial Service	126	34,562,518	49%	1,608,121
Public Street Lighting	1	258,980	1%	11,881
Irrigation	12	72,144	0%	4,061
Total	<u>9,521</u>	<u>70,304,170</u>		<u>\$3,698,143</u>
Other Revenues				<u>124,910</u>
Total Revenues				\$ 3,852,128.00

July 2013 - June 2014				
	Number of Customers	Energy Sales (kWh)	Percent of Total	Revenues
Residential	8,448	114,536,051.00	48%	7,953,723.00
General Services	838	20,000,318.00	8%	1,410,161.00
Industrial Services	126	105,095,244.00	44%	6,006,895.00
Public Street Lighting	1	1,277,686.00		77,522.00
Irrigation	12	21,271.00		2,372.00
Total	<u>9,425</u>	<u>240,930,570.00</u>		<u>15,450,673.00</u>
Other Revenues				<u>514,673.00</u>
Total Revenues				15,965,346.00

July 2012 - June 2013				
	Number of Customers	Energy Sales (kWh)	Percent of Total	Revenues
Residential	8254	106,663,033.00	47%	\$ 7,016,073.00
General Services	814	18,829,181.00	8%	\$ 1,244,220.00
Industrial Services	126	101,367,352.00	45%	\$ 5,433,639.00
Public Street Lighting	1	1,180,167.00		\$ 66,915.00
Irrigation	12	93,762.00		\$ 5,538.00
Total	<u>9207</u>	<u>228,133,495.00</u>		<u>\$ 13,766,385.00</u>
Other Revenues				<u>\$ 540,903.00</u>
Total Revenues				\$ 14,415,422.00

Factors that Affect Electric Rates

- Power Supply Costs
- Age of Distribution System
- Payments to General Fund
- Allocations of Common Goods

