City of Ashland Electric

Electric Cost of Service Study and Financial Projection

Nov 2025

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Nov 2025

Tom McBartlett
Director of Electric
City of Ashland Electric
Ashland
Oregon

Dear Mr. McBartlett:

We are pleased to present the Draft Report for the electric cost of service study and financial projection for the City of Ashland Electric (Ashland). This report was prepared to provide the Ashland with a comprehensive examination of its existing rate structure by an outside party.

The specific purposes of this rate study are:

- Determine electric utility's revenue requirements for fiscal year 2026
- Identify cross-subsidies that may exist between rate classes
- Recommend rate adjustments needed to meet targeted revenue requirements
- Identify the appropriate monthly customer charge for each customer class

This report includes results of the electric cost of service study and financial projection and recommendations on future rate designs.

This report is intended for information and use by the utility and management for the purposes stated above and is not intended to be used by anyone except the specified parties.

Sincerely,

Utility Financial Solutions, LLC
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185 Sun Meadow Ct
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1. Introduction

This report was prepared to provide the City of Ashland Electric (Ashland) with an electric cost of service study and financial projection, and a comprehensive examination of its existing rate structure by an outside party.

The specific purposes of the study are identified below:

1) ***Determine electric utility's revenue requirements for fiscal year 2026*.** Ashland's revenue requirements were projected for the period from 2026 – 2030 and included adjustments for the following:
    a. Projected power costs
    b. Projected changes in staffing levels
    c. Capital improvement plan projected over next five years

2) ***Identify if cross-subsidies exist between rate classes.*** Cross-subsidies exist when certain customer classes subsidize the electric costs of other customers. The rate study identifies if cross-subsidies exist and practical ways to reduce the subsidies. The cost of service study was completed using 2026 projected revenues and expenses. The financial projections are for the period from 2026 – 2030.

3) ***Identify cost-based power supply and distribution rates.*** The cost of providing electricity to customers consists of several components, including power generation, distribution, customer services, transmission, and transfers to the general fund. Electric unbundling identifies the cost of each component to assist the utility in preparing for electric restructuring and understanding its cost structure.

4) ***Identify the appropriate monthly customer charge for each customer class.*** The monthly customer charge consists of fixed costs to service customers that do not vary based on the amount of electricity used.

5) ***Recommend rate adjustments needed to meet targeted revenue requirements.*** The primary purpose of this study is to identify appropriate revenue requirements and the rate adjustments needed to meet targeted revenue requirements. The report includes a long-term rate track for Ashland to help ensure the financial stability of the utility in future years.

2. Cost of Service Summary

Utility Rate Process

Ashland retained Utility Financial Solutions, LLC to review utility rates and cost of service and make recommendations on the appropriate course of action. This report includes results of the electric cost of service and unbundling study and recommendations on future rate designs.

Utility Revenue Requirements

To determine revenue requirements, the revenues and expenses for fiscal years 2022 and 2025, 2026 budget were analyzed, with adjustments made to reflect projected operating characteristics. ***The projected financial statements are for cost of service purposes only.***

Table 1 is the projected financial statement for the Electric Department from 2026-2030.

The following pages review cash flow, debt coverage ratio, and rate of return which are important indicators of financial health.

Table 1 – Financial Statements (without rate adjustments)

Description	Projected 2026	Projected 2027	Projected 2028	Projected 2029	Projected 2030
Operating Revenues:					
Electric Sales					
Residential	$ 9,644,522	$ 10,040,700	$ 10,453,152	$ 10,882,547	$ 11,329,580
Seasonal Residential	70,324	73,213	76,221	79,352	82,611
Outdoor Area Lighting	13,078	13,616	14,175	14,757	15,364
Commercial/Telecommunications 1ϕ	1,665,243	1,733,648	1,804,863	1,879,003	1,956,189
Commercial/Telecommunications 3ϕ	3,847,577	4,005,628	4,170,171	4,341,473	4,519,812
Municipal/Government 1ϕ	244,299	254,335	264,782	275,659	286,982
Municipal/Government 3ϕ	1,153,186	1,200,557	1,249,873	1,301,215	1,354,667
Government Large w/Base	675,237	702,974	731,851	761,914	793,212
Government Large wo/Base	384,340	400,128	416,564	433,676	451,490
Charges for Services	-	-	-	-	-
Other Charges for Services Revenue	322,298	335,538	349,321	363,670	378,609
Miscellaneous	50,686	52,768	54,936	57,192	59,542
Part year rate increase	(334,355)	-	-	-	-
Total Operating Revenues	**$ 17,736,437**	**$ 18,813,104**	**$ 19,585,908**	**$ 20,390,458**	**$ 21,228,057**
Operating Expenses:					
Purchases					
Purchased Power (Cost of Sales and Service)	$ 7,400,631	$ 7,413,485	$ 7,407,412	$ 7,496,449	$ 7,736,786
Power Supply Transmission	1,172,925	$ 1,175,271	$ 1,177,801	$ 1,191,958	$ 1,230,173
Total Purchases Expense	$ 8,573,556	$ 8,588,756	$ 8,585,214	$ 8,688,408	$ 8,966,958
Distribution					
Electric - Distribution	$ 5,807,208	$ 6,044,371	$ 6,231,746	$ 6,424,930	$ 6,624,103
Total Distribution Expense	$ 5,807,208	$ 6,044,371	$ 6,231,746	$ 6,424,930	$ 6,624,103
Other Operating Expenses (Revenues)					
Admin Conservation	$ 982,562	$ 1,013,022	$ 1,044,425	$ 1,076,803	$ 1,110,184
Electric - Supply (non BPA)	65,000	67,015	69,092	71,234	73,443
Franchise Fee	1,814,004	1,870,238	1,928,215	1,987,990	2,049,618
Allocations:					
Central Service - Distribution	851,715	878,118	905,340	933,405	962,341
Use of Facilities Charge - Distribution	149,951	154,600	159,392	164,334	169,428
Depreciation Expense	385,309	405,309	445,309	485,309	525,309
Depreciation Expense Contributions	(80,000)	(80,000)	(80,000)	(80,000)	(80,000)
Total Other Operating Expenses	$ 4,168,542	$ 4,308,302	$ 4,471,775	$ 4,639,075	$ 4,810,322
Total Operating Expenses	$ 18,549,306	$ 18,941,429	$ 19,288,735	$ 19,752,414	$ 20,401,384
Operating Income	$ (812,869)	$ (128,325)	$ 297,173	$ 638,044	$ 826,674

Description	Projected 2026	Projected 2027	Projected 2028	Projected 2029	Projected 2030
Other Income & Expense					
Intergovernmental	130,000	130,000	130,000	130,000	130,000
Interest and Other Income	213,485	178,563	54,576	53,047	27,656
Non Operating Income/Expense	**$ 343,485**	**$ 308,563**	**$ 184,576**	**$ 183,047**	**$ 157,656**
Net Income	**$ (469,384)**	**$ 180,238**	**$ 481,750**	**$ 821,092**	**$ 984,329**
Adjusted Operating Income	**$ (812,869)**	**$ (128,325)**	**$ 297,173**	**$ 638,044**	**$ 826,674**

Projected Cash Flow

Table 2 is the projected cash flow for 2026-2030, including projections of capital improvements as provided by Ashland. Changes in the capital improvement plan can greatly affect the cash balance and recommended minimum cash reserve target. The cash balance for 2026 is projected at $5.6M and $(4.5M) in 2030. The recommended minimum cash reserve level for 2026 is $4.5M and $4.9M for 2030.

Table 2 – Projected Cash Flows (without rate adjustments)

Description	Projected 2026	Projected 2027	Projected 2028	Projected 2029	Projected 2030
Projected Cash Flows					
Net Income	$ (799,336)	$ (1,201,466)	$ (1,645,094)	$ (2,096,619)	$ (2,725,228)
Depreciation Expense/Amortization	305,309	325,309	365,309	405,309	445,309
Cash Available from Operations	$ (494,026)	$ (876,157)	$ (1,279,785)	$ (1,691,309)	$ (2,279,919)
Estimated Annual Capital Additions	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
Net Cash From Operations	$ (1,494,026)	$ (1,876,157)	$ (2,279,785)	$ (2,691,309)	$ (3,279,919)
Beginning Cash Balance	$ 7,116,174	$ 5,622,148	$ 3,745,991	$ 1,466,206	$ (1,225,103)
Ending Cash Balance	$ 5,622,148	$ 3,745,991	$ 1,466,206	$ (1,225,103)	$ (4,505,022)
Total Cash Available	**$ 5,622,148**	**$ 3,745,991**	**$ 1,466,206**	**$ (1,225,103)**	**$ (4,505,022)**
Recommended Minimum	**$ 4,478,794**	**$ 4,570,550**	**$ 4,646,324**	**$ 4,750,793**	**$ 4,900,950**

Cash balances are decreasing throughout the projection and fall below the recommended minim in 2027.

Minimum Cash Reserve

Table 3 details the minimum level of cash reserves required to help ensure timely replacement of assets and to provide financial stability of the utility. The methodology used to establish this target is based on an assessment of working capital needs to fund operating expenses, capital improvements, annual debt service payments, and utility's exposure to risks related to catastrophic events, exposure to market risks, changes in fuel costs, loss of major customers, and utility's ability to timely recover changes in power supply expenses. Based on these assumptions, Ashland should maintain a minimum of $4.5M in cash reserves for 2026 and $4.9M in 2030.

Table 3 – Minimum Cash Reserves (without rate adjustments)

Description	Projected 2026	Projected 2027	Projected 2028	Projected 2029	Projected 2030
Minimum Cash Reserve Levels Determinants					
Operation & Maintenance Less Depreciation Expense	$ 9,590,441	$ 9,947,364	$ 10,258,212	$ 10,578,696	$ 10,909,116
Purchase Power Expense	8,573,556	8,588,756	8,585,214	8,688,408	8,966,958
Historical Rate Base	19,642,257	20,642,257	21,642,257	22,642,257	23,642,257
Current Portion of Debt Service Payment	-	-	-	-	-
Five Year Capital Improvements - Net of bond proceeds	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000
Minimum Cash Reserve Allocation					
Operation & Maintenance Less Depreciation Expense	12.3%	12.3%	12.3%	12.3%	12.3%
Purchase Power Expense	10.1%	10.1%	10.1%	10.1%	10.1%
Historical Rate Base	3%	3%	3%	3%	3%
Current Portion of Debt Service Payment	83%	83%	83%	83%	83%
Five Year Capital Improvements - Net of bond proceeds	20%	20%	20%	20%	20%
% Plant Depreciated	58%	58%	57%	57%	56%
Calculated Minimum Cash Level					
Operation & Maintenance Less Depreciation Expense	$ 1,182,383	$ 1,226,387	$ 1,264,711	$ 1,304,223	$ 1,344,959
Purchase Power Expense	869,753	871,295	870,936	881,404	909,662
Historical Rate Base	589,268	619,268	649,268	679,268	709,268
Current Portion of Debt Service Reserve	-	-	-	-	-
Five Year Capital Improvements - Net of bond proceeds	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
Maintain 90 Days Cash	837,390	853,600	861,410	885,898	937,060
Minimum Cash Reserve Levels	**$ 4,478,794**	**$ 4,570,550**	**$ 4,646,324**	**$ 4,750,793**	**$ 4,900,950**
Projected Cash Reserves	**$ 5,622,148**	**$ 3,745,991**	**$ 1,466,206**	**$ (1,225,103)**	**$ (4,505,022)**

Projected cash balances fall below the recommended minimums during the projection period.

Debt Coverage Ratio

Table 4 is the projected debt coverage ratios with capital additions as provided by Ashland. Ashland electric does not currently have debt and this section is for educational purposes. Debt coverage ratio is a measurement of debt affordability and measures the cash flow from operations in that fiscal year. A ratio of 1, indicates there was enough cash flow from operations to pay the debt payment one time. The minimum recommended debt coverage ratio for prudent financial planning purposes is 1.40.

Maintaining a 1.40 debt coverage ratio is good business practice and helps to achieve the following:

a. Helps to ensure debt coverage ratios are met in years when sales are low due to cold or wet summers or loss of a major customer(s).

b. When debt coverage ratios are consistently met, it may help obtain a higher bond rating if revenue bonds are sold in the future, to lower interest cost.

Table 4 – Projected Debt Coverage Ratios (without rate adjustments)

Description	Projected 2026	Projected 2027	Projected 2028	Projected 2029	Projected 2030
Debt Coverage Ratio					
Net Income	$ (799,336)	$ (1,201,466)	$ (1,645,094)	$ (2,096,619)	$ (2,725,228)
Add Depreciation/Amortization Expense	305,309	325,309	365,309	405,309	445,309
Add Interest Expense	-	-	-	-	-
Cash Generated from Operations	$ (494,026)	$ (876,157)	$ (1,279,785)	$ (1,691,309)	$ (2,279,919)
Debt Principal and Interest	$ -	$ -	$ -	$ -	$ -
Projected Debt Coverage Ratio (Covenants)	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**
Minimum Debt Coverage Ratio	**1.4**	**1.4**	**1.4**	**1.4**	**1.4**

Ashland’s electric department current has not debt issuances.

Rate of Return

The optimal target for setting rates is the establishment of a target operating income to help ensure the following:

A. Funding of interest expense on the outstanding principal on debt. Interest expense is below the operating income line and needs to be recouped through the operating income balance.

B. Funding of the inflationary increase on the assets invested in the system. The inflation on the replacement of assets invested in the utility should be recouped through the Operating Income.

C. Funding of depreciation expense.

D. Adequate rate of return on investment to help ensure current customers are paying their fair share of the use of the infrastructure and not deferring the charge to future generations.

E. The rate of return identifies the target operating income and is used to identify the appropriate funding for replacement of existing infrastructure to recover in rates charged to customers.

As improvements are made to the system, the optimal operating income target will increase unless annual depreciation expense is greater than yearly capital improvements. The revenue requirements for the study are set on the utility basis. Table 5 identifies the utility basis target established for 2026 is $1.0M and increases to $1.25M in 2030.

Table 5 – Rate of Return Calculation

Description	Projected 2026	Projected 2027	Projected 2028	Projected 2029	Projected 2030
Optimal Operating Income Determinants					
Net Book Value/Working Capital	$ 8,166,900	$ 8,761,591	$ 9,316,281	$ 9,830,972	$ 10,305,662
Contributed Capital Estimated NBV	670,000	590,000	510,000	430,000	350,000
System Equity	$ 7,496,900	$ 8,171,591	$ 8,806,281	$ 9,400,972	$ 9,955,662
Debt:Equity Ratio	0%	0%	0%	0%	0%
Optimal Operating Income Allocation					
Interest on Debt	0.00%	0.00%	0.00%	0.00%	0.00%
Contributed Capital Estimated	11.42%	12.97%	15.00%	17.79%	21.86%
System Equity	12.27%	12.02%	11.85%	11.75%	11.70%
Optimal Operating Income					
Interest on Debt	$ -	$ -	$ -	$ -	$ -
Contributed Capital Estimated	76,500	76,500	76,500	76,500	76,500
System Equity	$ 919,573	$ 981,863	$ 1,043,332	$ 1,104,247	$ 1,164,805
Optimal Operating Income	**$ 996,073**	**$ 1,058,363**	**$ 1,119,832**	**$ 1,180,747**	**$ 1,241,305**
Projected Operating Income	**$ (1,142,821)**	**$ (1,500,131)**	**$ (1,812,554)**	**$ (2,241,281)**	**$ (2,855,228)**
Rate of Return in %	**12.2%**	**12.1%**	**12.0%**	**12.0%**	**12.0%**

Operating income is projected to fall below the optimal operating income for each year.

Projected Rate Track

Adjusting system revenue requires balancing the financial health of the utility with the financial impact on customers and cost of service results. Table 6 is the summary financial projection without any rate changes. Cash balances, operating income and the debt coverage ratio fall to critical levels.

Table 6 – Summary of Financials without Rate Adjustment

Fiscal Year	Projected Rate Adjustments	Debt Coverage Ratio	Adjusted Operating Income	Optimal Operating Income	Projected Cash Balances	Recommended Minimum Cash
2026	0.0%	N/A	$ (1,142,821)	$ 996,073	$ 5,622,148	$ 4,478,794
2027	0.0%	N/A	$ (1,500,131)	1,058,363	$ 3,745,991	4,570,550
2028	0.0%	N/A	$ (1,812,554)	1,119,832	$ 1,466,206	4,646,324
2029	0.0%	N/A	$ (2,241,281)	1,180,747	$ (1,225,103)	4,750,793
2030	0.0%	N/A	$ (2,855,228)	1,241,305	$ (4,505,022)	4,900,950

The study identifies increasing current revenues to maintain financial targets. Table 7 is a summary of the financial results detailing the projected revenue adjustments.

Table 7 – Projected Revenue Adjustments

Fiscal Year	Projected Rate Adjustments	Debt Coverage Ratio	Adjusted Operating Income	Optimal Operating Income	Projected Cash Balances	Recommended Minimum Cash
2026	3.9%	N/A	$ (812,869)	$ 996,073	$ 5,952,099	$ 4,478,794
2027	3.9%	N/A	$ (128,325)	1,058,363	$ 5,457,647	4,570,550
2028	3.9%	N/A	$ 297,173	1,119,832	$ 5,304,706	4,646,324
2029	3.9%	N/A	$ 638,044	1,180,747	$ 5,531,107	4,750,793
2030	3.9%	N/A	$ 826,674	1,241,305	$ 5,960,746	4,900,950

This rate track ensures operating income remains healthy and the projected cash balance remains steady through 2030. Due to cost changes, inflationary factors, and growth, financial projections should be reviewed on an annual basis. Depending on the system improvement timetable, additional changes may be needed throughout the projection period.

Age of Infrastructure

Ashland is currently 58% depreciated. Average infrastructure is approximately 50% to 55% depreciated, indicating Ashland needs to consistently fund replacement of infrastructure. Replacement of infrastructure tends to indicate the utility's ability to consistently provide a reliable system to customers, its ability to withstand catastrophic weather events, and unexpected replacement of system infrastructure. Table 8 identifies the depreciated plant.

Table 8 – Age of Infrastructure

Description	Projected 2026	Projected 2027	Projected 2028	Projected 2029	Projected 2030
Asset Investment	$ 19,642,257	$ 20,642,257	$ 21,642,257	$ 22,642,257	$ 23,642,257
Net Book Value	8,166,900	8,761,591	9,316,281	9,830,972	10,305,662
% Depreciated	58%	58%	57%	57%	56%

Cost of Service Summary Results

A cost of service study was completed to determine the cost of providing service to each class of customers and to assist in design of electric rates for customers. A cost of service study consists of the following general steps:

1) Determine utility revenue requirement for test year 2026.
2) Classify utility expenses into common cost pools.
3) Allocate costs to customer classes based on the classes' contribution to utility expenses.
4) Compare revenues received from each class to the cost of service.

The cost of service summary is included as Table 9 which compares the projected cost to serve each class with the revenue received from each class. The "% change" column is the revenue adjustment necessary to meet projected cost of service requirements. The cost of service summary uses the current rates, including any adjustment factors.

No utility charges 100% cost of service-based rates because retail rates are based on customers usage patterns that are largely driven by variations in weather. Due to these variations, it is recommended that rates move toward cost of service slowly with a general tolerance of a 10% variation between projected revenue and cost of service. The cost of service summary "% change" column indicates all major customer classes fall within this variation.

Table 9 – Cost of Service Summary

Customer Class	Cost of Service	Projected Revenues	Effective % Change
Residential	$ 10,510,559	$ 9,282,505	13.2%
Seasonal Residential	74,631	67,685	10.3%
Outdoor Area Lighting	15,640	12,588	24.3%
Commercial/Telecommunications 1ϕ	1,789,424	1,602,736	11.6%
Commercial/Telecommunications 3ϕ	4,295,413	3,703,154	16.0%
Municipal/Government 1ϕ	244,696	235,129	4.1%
Municipal/Government 3ϕ	1,094,317	1,109,900	-1.4%
Government Large w/Base	731,377	649,891	12.5%
Government Large wo/Base	416,337	369,913	12.5%
Total	$ 19,172,394	$ 17,033,501	12.6%

Cost of Service Results

Table 10 shows the average cost of service per kWh and compares the cost to the average revenue per kWh for each customer class. This table is for information purposes only and is not used in the setting of rates. Average cost per kWh varies due to fixed cost recoveries such as meter costs and infrastructure needs of the customer. In general customer classes that use energy consistently have a lower average kWh cost to serve compared with customer classes that use energy only part of the day or year.

Table 10 – Average Cost per kWh vs. Average Revenue per kWh

Customer Class	COS Customer Charge	Current Average Customer Charge
Residential	$ 17.05	$ 16.25
Seasonal Residential	24.55	16.25
Outdoor Area Lighting	2.33	-
Commercial/Telecommunications 1ϕ	38.02	25.21
Commercial/Telecommunications 3ϕ	75.97	52.50
Municipal/Government 1ϕ	38.57	25.56
Municipal/Government 3ϕ	119.02	53.31
Government Large w/Base	1,754.17	2,639.36
Government Large wo/Base	1,958.88	-

Cost differences result from usage patterns of customers and how efficiently each class of customer use facilities based on load data provided by Ashland.

Distribution Costs

Separation of distribution cost helps identify distribution charges for each customer class and the fixed monthly customer charge. Distribution rates include separation of the following costs:

- Operation and maintenance of distribution & transmission system
- Contributions to general fund
- Customer service
- Customer accounting
- Meter reading
- Billing
- Meter operation & maintenance
- Administrative expenses

The distribution rates consist of two components:

- Monthly customer charge to recover the costs of meter reading, billing, customer service, and a portion of maintenance and operations of the distribution system.
- Distribution rate based on billing parameters (kW or kWh) to recover the cost to operate and maintain the distribution system. Table 11 identifies the cost-based distribution rates for customer classes.

Table 11 – Distribution Costs by Customer Class (COS)

Customer Class	Monthly Customer Charge	Distribution Rate	Billing Basis	Franchise Fee	Billing Basis
Residential	$ 17.05	$ 0.0311	kWh	$ 0.0111	kWh
Seasonal Residential	24.55	0.0313	kWh	0.0111	kWh
Outdoor Area Lighting	2.33	0.1234	kWh	0.0111	kWh
Commercial/Telecommunications 1ϕ	38.02	12.07	kW	0.0111	kWh
Commercial/Telecommunications 3ϕ	75.97	11.74	kW	0.0111	kWh
Municipal/Government 1ϕ	38.57	10.45	kW	0.0111	kWh
Municipal/Government 3ϕ	119.02	10.62	kW	0.0111	kWh
Government Large w/Base	1,754.17	12.51	kW	0.0111	kWh
Government Large wo/Base	1,958.88	10.44	kW	0.0111	kWh

Power Supply Costs

Table 12 identifies the average cost of providing power supply to customers of Ashland.

Table 12 – Power Supply Costs by Customer Class

Customer Class	Demand	Billing Basis	Energy	Billing Basis
Residential	$ 0.0114	kWh	$ 0.0414	kWh
Seasonal Residential	0.0116	kWh	0.0415	kWh
Outdoor Area Lighting	-	kWh	0.0415	kWh
Commercial/Telecommunications 1ϕ	4.53	KW	0.0415	kWh
Commercial/Telecommunications 3ϕ	4.48	KW	0.0415	kWh
Municipal/Government 1ϕ	4.23	KW	0.0415	kWh
Municipal/Government 3ϕ	4.25	KW	0.0415	kWh
Government Large w/Base	4.42	KW	0.0402	kWh
Government Large wo/Base	4.32	KW	0.0402	kWh

Demand recovers costs for power supply and transmission fixed demand related costs. Energy is cost recovery for variable power supply costs.

Combined Cost Summary

Table 13 identifies the cost of service rates for each customer class. Charging these rates would directly match the cost of providing service to customers identified in this study.

Table 13 – Total Costs by Customer Class

Customer Class	Current Average Customer Charge	COS Customer Charge	Demand	Energy
Residential	$ 16.25	$ 17.05	$ -	$ 0.0951
Seasonal Residential	16.25	24.55	-	0.0954
Outdoor Area Lighting	-	2.33	-	0.1760
Commercial/Telecommunications 1ϕ	25.21	38.02	16.60	0.0526
Commercial/Telecommunications 3ϕ	52.50	75.97	16.22	0.0526
Municipal/Government 1ϕ	25.56	38.57	14.69	0.0526
Municipal/Government 3ϕ	53.31	119.02	14.87	0.0526
Government Large w/Base	2,639.36	1,754.17	16.93	0.0513
Government Large wo/Base	-	1,958.88	14.76	0.0514

Residential Customer Charge

The customer charge consists of expenses related to, 1) providing a minimum amount of electricity to the residential customer, and 2) expenses related to servicing a meter on the customer's premises; together they reflect the cost to deliver a single kWh of electricity to the customer. The methodology used in this study is consistent with methodologies and practices used in the electric industry.

The customer charge includes two types of charges called minimum system charges and direct charges.

Minimum System Charges:

The cost to provide the minimum level of service. Ashland provides wires to connect the transmission system to customer homes and businesses. This wire is required to provide even the minimal amount of service to a customer. For cost of service purposes, the total cost of the distribution infrastructure is broken into two components: 1) the minimum system costs, in effect to provide a customer with a single kWh of electricity which should be recovered through the customer charge, and 2) demand related costs to recover the additional infrastructure costs for when a customer uses more than a single kWh, which should be recovered through the usage component. The distribution system is sized to handle the customers' peak demands and the cost above the minimum system is recovered through the usage component (for residential customers this is included in the kWh charge).

The first step in identifying the cost related to the minimum system is obtaining information on the number and current replacement costs of Ashland distribution system. For example: UFS used information on the number and size of all the poles and the cost to replace the poles. The minimum size pole was identified and the cost to construct Ashland's system at the minimum sizing was determined. This process was completed for all Ashland's distribution system, including overhead and underground conductors and devices, line transformers, etc. Based on this methodology, 39% of Ashland's total distribution costs should be recovered by the usage component and 61% recovered in the fixed customer charge component.

Direct Charges

Costs related to maintaining a customer's account. These costs include the cost to operate and maintain the meter, including meter installation, meter repair and replacement costs, the cost to read the meter, billings and collections, customer service personnel to assist with questions and maintain the account, and the cost of the "service drop" to connect the home to the distribution line. These costs are direct costs of serving a residential account.

3. Functionalization of Costs

Delivery of electricity consists of many components that bring electricity from the power supply facilities to the communities and eventually into customer facilities. The facilities consist of four major components: transmission, distribution, customer-related services, and administration. Following are general descriptions of each of these facilities and the sub-breakdowns within each category.

Transmission

The transmission system is comprised of four types of subsystems that operate together:

1) Backbone and inter-tie transmission facilities are the network of high voltage facilities through which a utility's major production sources are integrated.
2) Generation set-up facilities are the substations through which power is transformed from a utility's generation voltages to its various transmission voltages.
3) Sub-transmission plant consists of lower voltage facilities to transfer electric energy from convenient points on a utility's backbone system to its distribution system.
4) Radial transmission facilities are those that are not networked with other transmission lines but are used to serve specific loads directly.

Operation of the transmission system also consists of providing certain services that ensure a stable supply of power. These services are typically referred to as ancillary services. The Federal Energy Regulatory Commission (FERC) has defined six ancillary service charges for the use of transmission facilities. For **Error! Reference source not found.**, these charges will be passed-through charges by the control area operator. Ancillary services consist of the following:

- **Mandatory Ancillary Service Charges:**
  Reactive Supply and Voltage Control
  Regulation and Frequency Response Service
  Energy Imbalance Charges
  Operating Reserves Spinning
  Operating Reserves Supplemental
  Reactive Power Supply
  Power losses from use of transmission system

Terminology of Cost of Service

FUNCTIONALIZATION – Cost data arranged by functional category (e.g., power supply, transmission, distribution

CLASSIFICATION – Assignment of functionalized costs to cost components (e.g., demand, energy and customer related).

ALLOCATION – Allocating classified costs to each class of service based on each class's contribution to that specific cost component.

DEMAND COSTS – Costs that vary with the maximum or peak usage. Measured in kilowatts (kW)

ENERGY COSTS – Costs that vary over an extended period of time. Measured in kilowatt-hours (kWh)

CUSTOMER COSTS – Costs that vary with the number of customers on the system (e.g. metering costs).

DIRECT ASSIGNMENT – Costs identified as belonging to a specific customer or group of customers.

Distribution

The distribution facilities connect the customer with the transmission grid to provide the customer with access to the electrical power that has been generated and transmitted. The distribution plant includes substations, primary and secondary conductors, poles, and line transformers that are jointly used and in the public right-of-way.

Substations typically separate the distribution plant from the transmission system. The substation power transformer “steps down” the voltage to a level that is more practical to install on and under city streets.

Distribution circuits are divided into primary and secondary voltages with the primary voltages usually ranging between 35 kV and 4 kV and the secondary below 4 kV.

Distribution Customer Types

Sub-transmission customers are served directly from the substation feeder and bypass both the secondary and primary distribution lines. The charges for this type of customer should reflect the cost of the substation and not include the cost of primary or secondary line charges.

Primary customers are typically referred to as customers who have purchased, owned, and maintained their own transformers that convert the voltage to the secondary voltage level. The rates for these customers should reflect the cost of substations and the cost of primary distribution lines and not include the cost of secondary line extensions.

Secondary customers have the services provided by the utilities directly into their facilities. The utility provides the customer with the transformer and the connection on the customers’ facilities.

Customer-Related Services

Certain administrative-type services are necessary to ensure customers are provided service connections and disconnections in a timely manner and the facilities are in place to read meters and bill for customer usages. These services typically consist of the following components:

- Customer Services – The cost of providing personnel to assist customers with questions and dispatch personnel to connect and disconnect meters.
- Billing and Collections – The cost of billing and collections personnel, postage, and supplies.
- Meter Reading – The cost of reading customers’ meters.
- Meter Operation and Maintenance – The cost of installing and maintaining customer meters.

Administrative Services

These costs are sometimes referred to as overhead costs and relate to functions that cannot be directly-attributed to any service. These costs are spread to the other services through an allocator such as labor, expenses, or total rate base. These costs may consist of City Commission expenses, property insurance, and wages for higher level management of the utility.

System Losses

As energy moves through each component of the transmission and distribution system, some of the power is lost and cannot be sold to customers. Losses vary based on time of day and season. Typically, as system usage increases or ambient temperature increases, the percentages of losses that occur also increase. These losses are recovered from distribution customers through an analysis of the peak losses that occur in the system. The average system losses and unaccounted for energy for Ashland are approximately 5.0%. (Typical municipal system losses are approximately 5.4%)

4. Unbundling Process

The cost of power supply, distribution, and customer services are identified as part of the unbundling process and are the first step in determining unbundled charges to customers. The total revenue requirements of $19.2M are separated into four categories identified in Table 14.

Table 14 – Breakdown of Ashland Cost Structure

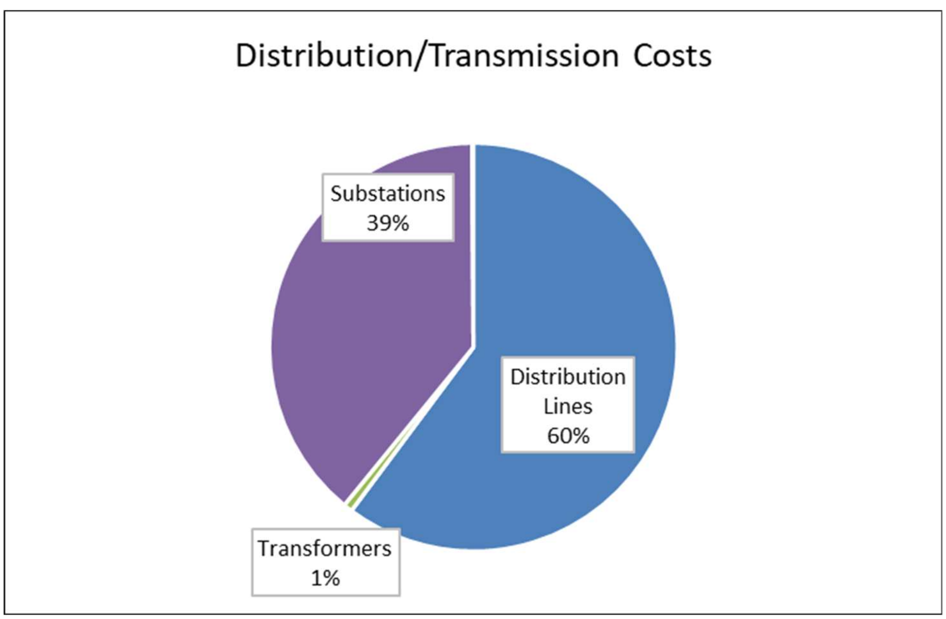
Utility Costs		
Power Supply	$	8,731,918
Distribution/Transmission	$	7,301,517
Franchise Fee	$	1,814,004
Customer	$	1,324,956
	$	19,172,394

Ashland is projected to expend 45.5% of its total costs toward power supply. Distribution/transmission-related costs are 38.1%; transfers to the city represent 9.5%, and customer service 6.9%. These components are broken down into each of the subcomponents and are identified in the following sections.

Distribution Breakdown

Distribution rates consist of several different components. Total distribution-related costs of $7.3M for 2026 are broken down into the main components including substations, transformers, transmission, and distribution lines. Figure 1 shows the breakdown of distribution components identified in the study.

Figure 1 – Breakdown of Distribution Costs

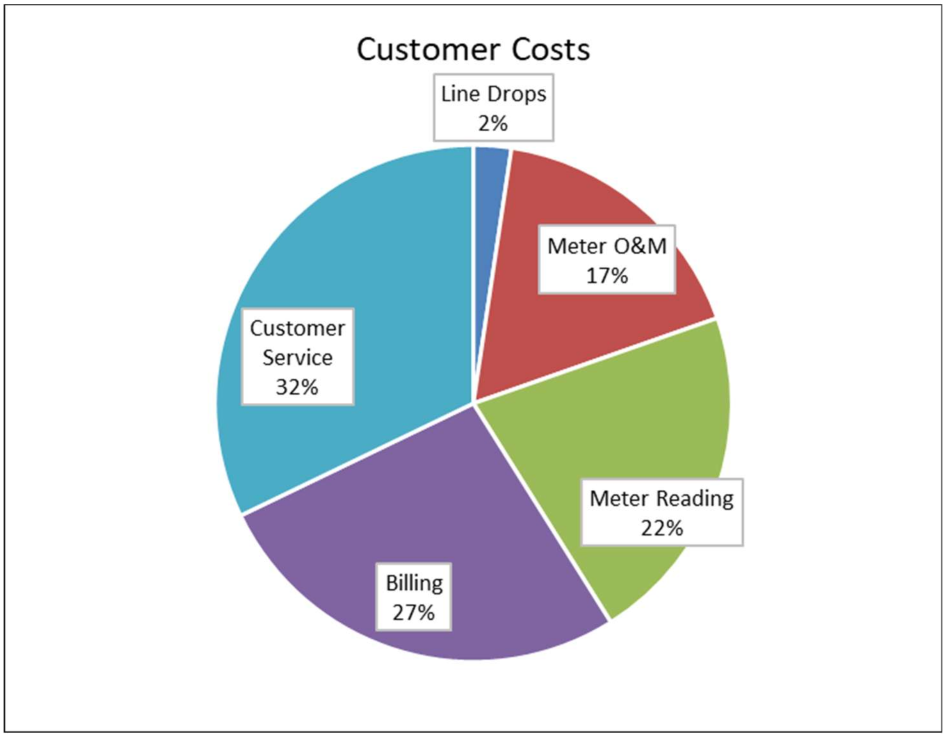


Each of these components is allocated to customer groups based on certain factors established in the study. These factors are based on the efficiency of each customer class and the time of day or the season the electricity is used. Other factors are also considered, such as the length of line extensions to reach certain customer classes.

Customer-Related Cost Breakdown

Error! Reference source not found. total expenses for customer-related costs are $5.9M for 2026. The cost is broken down into the components identified in Figure 2.

Figure 2 – Breakdown of Customer Costs



Power Supply Cost Breakdown

Power supply costs for 2026 were made up of purchased power.

5. Significant Assumptions

This section outlines the procedures used to develop the cost of service and unbundling study for Ashland and the related significant assumptions.

Forecasted Operating Expenses

Forecasted expenses were based on 2022 and 2025, 2026 budget adjusted for power supply costs and inflation. The table below is a summary of the expenses used in the analysis. The projected operating expenses include an adjustment for any city contributions.

Table 15 – Projected Operating Expenses for 2026– 2030

Description	Projected 2026	Projected 2027	Projected 2028	Projected 2029	Projected 2030
Operating Expenses:					
Purchases					
Purchased Power (Cost of Sales and Service)	$ 7,400,631	$ 7,413,485	$ 7,407,412	$ 7,496,449	$ 7,736,786
Power Supply Transmission	1,172,925	$ 1,175,271	$ 1,177,801	$ 1,191,958	$ 1,230,173
Total Purchases Expense	$ 8,573,556	$ 8,588,756	$ 8,585,214	$ 8,688,408	$ 8,966,958
Distribution					
Electric - Distribution	$ 5,807,208	$ 6,044,371	$ 6,231,746	$ 6,424,930	$ 6,624,103
Total Distribution Expense	$ 5,807,208	$ 6,044,371	$ 6,231,746	$ 6,424,930	$ 6,624,103
Other Operating Expenses (Revenues)					
Admin Conservation	$ 982,562	$ 1,013,022	$ 1,044,425	$ 1,076,803	$ 1,110,184
Electric - Supply (non BPA)	65,000	67,015	69,092	71,234	73,443
Franchise Fee	1,814,004	1,870,238	1,928,215	1,987,990	2,049,618
Allocations:					
Central Service - Distribution	851,715	878,118	905,340	933,405	962,341
Use of Facilities Charge - Distribution	149,951	154,600	159,392	164,334	169,428
Depreciation Expense	385,309	405,309	445,309	485,309	525,309
Depreciation Expense Contributions	(80,000)	(80,000)	(80,000)	(80,000)	(80,000)
Total Other Operating Expenses	$ 4,168,542	$ 4,308,302	$ 4,471,775	$ 4,639,075	$ 4,810,322
Total Operating Expenses	$ 18,549,306	$ 18,941,429	$ 19,288,735	$ 19,752,414	$ 20,401,384
Operating Income	$ (812,869)	$ (128,325)	$ 297,173	$ 638,044	$ 826,674

Power supply costs from 2026 – 2030 are based on Ashland's current charges adjusted for system growth factors and inflation.

Load Data

Load data is one of the most critical components of a cost of service study. Information from the billing statistics were used to determine the usage patterns of each customer class after reconciling revenues with financial statements to ensure a good basis for development of the study.

Annual Projection Assumptions

The kWh sales forecast is based on FY2024 actual adjusted for growth. Table 16 details growth, inflation of expenses, changes in purchase power costs, interest earned on investments.

Table 16 – Projection Annual Escalation Factors 2026– 2030

Fiscal Year	Inflation	Growth	Energy/Demand Change	Transmission Change	Investment Income	Utility Funded Capital
2026	3.1%	0.2%	-1.6%	17.6%	3.0%	1,000,000
2027	3.1%	0.2%	0.0%	0.0%	3.0%	1,000,000
2028	3.1%	0.2%	-0.3%	0.0%	1.0%	1,000,000
2029	3.1%	0.2%	1.0%	1.0%	1.0%	1,000,000
2030	3.1%	0.2%	3.0%	3.0%	0.5%	1,000,000

System Loss Factors

Losses occurring from the transmission and distribution of electricity can vary from year to year depending upon weather and system loading. The distribution loss factor used for the cost of service study was based on historic losses at 5.0%.

Revenue Forecast

The revenue forecast was based on FY2024 usages adjusted for growth rate assumptions.

6. Considerations and Additional Information

Ashland Financial Considerations

1. Ashland is projected to require increases in rates charged to customers and is not projected to meet or exceed all financial targets over the projection period. The rate track improves this position over the projection period.

Fiscal Year	Projected Rate Adjustments	Debt Coverage Ratio	Adjusted Operating Income	Optimal Operating Income	Projected Cash Balances	Recommended Minimum Cash
2026	3.9%	N/A	$ (812,869)	$ 996,073	$ 5,952,099	$ 4,478,794
2027	3.9%	N/A	$ (128,325)	1,058,363	$ 5,457,647	4,570,550
2028	3.9%	N/A	$ 297,173	1,119,832	$ 5,304,706	4,646,324
2029	3.9%	N/A	$ 638,044	1,180,747	$ 5,531,107	4,750,793
2030	3.9%	N/A	$ 826,674	1,241,305	$ 5,960,746	4,900,950

2. Cash balances are decreasing. Projected cash balances are below the recommended minimums during the projection period.
3. Debt Coverage Ratio is not applicable as the utility does not currently have debt.
4. Current rate related revenues are projected to result in operating income below the target operating income for each year. Meeting the operating income target indicates current rates are fully funding system revenue requirements and future replacement cost of current infrastructure.
5. Infrastructure of Ashland is older than the national average. The infrastructure in total is approximately 58% depreciated compared with the national average between 50% - 55%. This indicates will require higher than average investment in the system at some time in the future.
6. Ashland system losses are below average resulting in lower power supply cost for customers. The average system losses and unaccounted for energy for Ashland are approximately 5.0% compared to typical municipal system losses of approximately 5.4%.

Rate-Related Considerations

1. Revenue recovered by each major class of customers closely resembles the cost of providing service to the customer class.
2. Customer charges are under-recovering and energy rates are over-recovering for most customer classes. The table below compares the current customer charges with the cost-based customer

charge. It is recommended that movements toward the cost-based customer charge occur with the additional revenue used to lower the energy rates for customers in the class.

Customer Class	Current Average Customer Charge	COS Customer Charge
Residential	$ 16.25	$ 17.05
Seasonal Residential	16.25	24.55
Outdoor Area Lighting	-	2.33
Commercial/Telecommunications 1ϕ	25.21	38.02
Commercial/Telecommunications 3ϕ	52.50	75.97
Municipal/Government 1ϕ	25.56	38.57
Municipal/Government 3ϕ	53.31	119.02
Government Large w/Base	2,639.36	1,754.17
Government Large wo/Base	-	1,958.88

3. Ashland may consider movements toward cost of service. The cost of service study indicates a variance exists between revenues and costs for certain rate classes. The study results are listed below:

Customer Class	Cost of Service	Projected Revenues	Effective % Change
Residential	$ 10,510,559	$ 9,282,505	13.2%
Seasonal Residential	74,631	67,685	10.3%
Outdoor Area Lighting	15,640	12,588	24.3%
Commercial/Telecommunications 1ϕ	1,789,424	1,602,736	11.6%
Commercial/Telecommunications 3ϕ	4,295,413	3,703,154	16.0%
Municipal/Government 1ϕ	244,696	235,129	4.1%
Municipal/Government 3ϕ	1,094,317	1,109,900	-1.4%
Government Large w/Base	731,377	649,891	12.5%
Government Large wo/Base	416,337	369,913	12.5%
Total	$ 19,172,394	$ 17,033,501	12.6%