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SECTION 1 – INTRODUCTION

1.1 Section Summary

1. This Section includes an overview of the following:

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1.2 Company Background

2. Naka Power Utilities¹ is a long-standing partnership between Denendeh Investments Incorporated (DII), representing 27 Dene First Nations, and ATCO Ltd. For over 70 years, Naka Power Utilities has served customers across the Northwest Territories, and for over 30 years in the City of Yellowknife (City). To provide customers clarity on our northern operations, and to recognize our northern and indigenous ownership as 50/50 partners, the operating name Naka Power Utilities (formerly Northland Utilities) was launched in April of 2024.

3. The Yellowknife-based operating company has served the City and operated the Yellowknife electrical distribution system since 1993. Naka Power Utilities (Yellowknife) (Naka-YK) purchases electric power generated by the Northwest Territories Power Corporation (NTPC) from the Snare Hydro System and distributes the electricity across its 25 kV distribution system, serving approximately 7,700 Residential and 1,350 Commercial customers.

4. Over the past decade, utilities, including Naka-YK, have experienced a significant increase in the pace of changes in technology and volatile economic conditions, while facing various challenges such as the Covid-19 pandemic, wildfires, supply chain

¹ Northland Utilities (Yellowknife) Limited o/a Naka Power Utilities (Yellowknife) and its affiliate Northland Utilities (NWT) Limited o/a Naka Power Utilities (NWT).

disruptions, and increasing inflation. In this time, Naka-YK has continued to invest in the City's distribution system through capital investments and prudent maintenance that delivers value to customers by ensuring the power system Naka-YK operates is safe and reliable. Despite the challenges and rising inflationary pressures, Naka-YK has been able to deliver and provide safe reliable power and maintain stable distribution rates for over a decade.

5. Since the completion of the 25 kV distribution system conversion project in 2012, Naka-YK has invested in distribution improvements to prioritize electrical system reliability, operating efficiencies and safety. These capital improvements continue to deliver value to customers while allowing Naka-YK to fulfill its duties to utility customers. Improvements include the addition and replacement of streetlights, an ongoing program to replace end-of-life poles, the relocation of power lines away from difficult-to-access areas, construction of system connections that facilitate even distribution of electrical load, and the addition of system apparatus that eliminates outages caused by temporary system faults in select locations.

6. Wildfires in the Northwest Territories in the summer of 2023 resulted in the imposition of an evacuation order by the Government of the Northwest Territories for residents of the City and surrounding areas. Naka-YK crews remained in the community to keep the power on and to provide essential electric services. Naka-YK's employees went above and beyond their regular duties and provided emergency electricity services to ensure necessary power was available to all who remained in the City during this time.

7. As part of the emergency support provided to the City, Naka-YK installed fire protection on the main distribution lines on the west side of the City. The fire threat was the greatest on this west side, and through these efforts, Naka-YK was able to support emergency services fighting the blaze. Due to the significant efforts of responders, the fire was held at bay approximately 15 km from the City. Naka-YK's assets did not sustain damage as a result of the wildfire.

1.3 Overview of Application

8. Naka-YK is focused on continuing to provide safe and reliable utility service to customers in the City of Yellowknife and is pleased to submit this General Rate Application (Application or GRA) to the Public Utilities Board (Board).

9. Naka-YK's last approved Test Period was 2011-2013 which was settled through negotiation with customer representatives.² Since that time, Naka-YK's rates have not increased; the most recent rate change for Naka-YK was a rate reduction approved in Decision 17-2017 through a limited scope 2017 General Rate Review (GRR).

10. Naka-YK has not submitted a full GRA since 2011-2013 in part due to uncertainty surrounding the timing of Naka Power Utilities (NWT)'s (Naka-NWT) disposition of the Hay River franchise and the potential impact on Naka-YK's costs and operations. Naka-YK has managed its operations relative to its customer growth and within the previously approved revenue requirement. With requirements to invest in aging and/or obsolete technology, Naka-YK has prepared this GRA for the 2024-2025 Test Period.

11. Naka-YK is applying³ to the Board for approval of its GRA for the 2024-2025 Test Period, consisting of:

- (i) Revenue Requirements of \$54.8 million and \$57.1 million for 2024 and 2025, respectively;
- (ii) Rate increases, year-over-year (YoY), of 3.0 percent and 1.1 percent for 2024 and 2025, respectively; and
- (iii) Deferral accounts as discussed in Section 1.7 below.

12. Naka-YK has continued to construct new capital assets while performing necessary capital replacements in the intervening period since its 2011-2013 Phase I GRA, to ensure that it can continue to provide safe and reliable service to customers. Naka-YK is seeking Board approval of its 2024 opening rate base in addition to the 2024

² Negotiated Settlement was approved by the Board in Decision 13-2011.

³ Under Section 43(4) of the *Public Utilities Act*.

and 2025 forecast capital additions, as supported in the Business Cases included in Section 17 of the Application.

13. Key Business Cases in the Application include:

- The 2023 replacement of Naka-YK's customer billing system. Replacement was required due to the obsolescence of the legacy system. The new system enables enhanced customer experience and rate design while continuing to provide reliable on-going meter-to-cash billing services.
- Investment in Advanced Metering Infrastructure (AMI) which is a fundamental technology that enables grid modernization more broadly to support the achievement of government decarbonization objectives and ensures that the City's distribution system remains safe and reliable in response to the changes these objectives will introduce to the electrical grid.

14. Naka-YK continues to provide safe and reliable service to customers through prudent maintenance of the system, which includes a brushing program to remove vegetation and mitigate ongoing wildfire risk. As outlined in Section 5, Naka-YK has a reduction in operating costs in the 2025 Test Year, as compared to the 2024 Test Year, due to the removal of one-time costs that are forecast in 2024.

15. Naka-YK's requested Revenue Requirement in this Application also includes the purchase of power from NTPC which comprises approximately 78 percent of Naka-YK's total Revenue Requirement for the Test Period. Purchase power has proportionately increased by approximately five percent of total revenue requirement over the past 10-years.

16. With respect to return on rate base, as outlined in Section 7 of the Application, Naka-YK requests establishing an approved ROE for Naka-YK based on the Generic Cost of Capital (GCOC) for Alberta utilities approved by the Alberta Utilities Commission (AUC), with adjustments to reflect the characteristics and circumstances of Naka-YK as a northern jurisdiction utility.

17. Schedule 2.0 of the Application details Naka-YK's applied-for tariffs and Table 1.1 below summarizes Naka-YK's requested rate increases for the 2024-2025 Test Period:

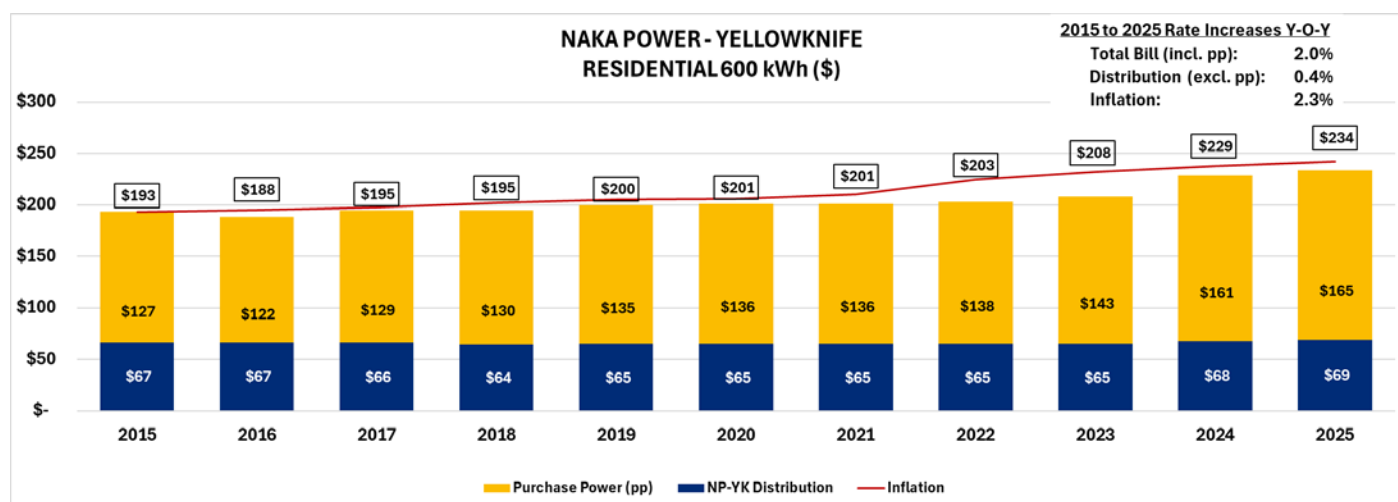
Table 1.1: Applied-For Tariffs¹
(\$000)

	2024	2025
Proposed Revenue Requirement (excl. other revenue)	\$54,314	\$56,601
Revenue on Existing Rates	\$52,747	\$54,349
Increase over Revenue on Existing Rates	\$1,567	\$2,252
Cumulative Rate Increase %	3.0%	4.1%
Year-Over-Year Rate Increase %	3.0%	1.1%

¹ Balances may not tie due to rounding.

18. The graph below represents an average Naka-YK Residential bill (based on typical usage of 600 kWh/month) over the 10-year period 2015 to 2025⁴ with the proposed rate increases. While Total Bill rate increases (including Purchase Power flow-thru costs)⁵ have averaged approximately 2.0 percent YoY, Naka-YK's Distribution rates (i.e. rates net of Purchase Power flow-thru costs) have increased approximately 0.4 percent YoY, and well below NWT CPI⁶ of 2.3 percent YoY, over the same 10-year period 2015 to 2025.

Figure 1.1: Average Residential Bill (2015-2025)



⁴ Residential bill impacts (600kWh/month) exclude franchise taxes and are based on actual rates for 2015-2023 and proposed rates per this Application for 2024-2025.

⁵ Purchase Power represents costs from NTPC which are 100% flow-thru to end use customers.

⁶ NWT CPI based on actuals for 2015-2023 and forecast for 2024-2025 based on historical trend relative to Canada CPI.

1.4 Changes in Accounting Practices and Procedures

19. Naka-YK is requesting to remove contributions related to work in progress from the computation of rate base beginning in 2024.

20. Historically, Naka-YK has included contribution work in progress within its rate base computations, which has resulted in a temporary reduction to rate base balances due to the exclusion of the corresponding in-progress capital spend. An offsetting amount of allowance for funds used during construction (AFUDC) is accumulated within the corresponding projects, to be later added to rate base and collected over the life of the asset in service. This treatment was appropriate because the implications of contributions has historically been negligible to Naka-YK's rate base and it was consistent with Naka-YK's affiliate companies, including ATCO Electric and ATCO Electric Yukon (AEY), which was administratively efficient.

21. However, since Naka-YK's last GRA, both ATCO Electric and AEY have both been directed by their regulators to exclude contribution work in progress from their rate bases.⁷ A driver for the change was the increased frequency of net zero capital expenditures eligible for significant government funding, which could potentially be available to Naka-YK in the future. If that were the case, the inclusion of contribution work in progress in Naka-YK's rate base could result in significant fluctuations in rate base balances and corresponding revenue requirement amounts.

22. Excluding contribution work in progress from rate base smooths out revenue requirement trends (over the long term), reduces AFUDC accumulated on related projects, and more accurately represents Naka-YK's annual returns and rate base balances. Also, this proposed change in accounting treatment is consistent with Naka-YK's affiliate companies with which it shares an accounting system, reducing administrative burden.

⁷ ATCO Electric in AUC Decision 20272-D01-2016, para. 88; ATCO Electric Yukon in YUB Decision 2024-01, Appendix A, para. 271.

1.5 Key Assumptions

23. Since Naka-YK's 2011-2013 Phase I GRA, and particularly in recent years, there have been many changes in the NWT economic landscape making key assumptions difficult to forecast. The period between 2020 to 2022 resulted in changes from historical trends with respect to inflation and changes in energy usage patterns for residential and commercial customers (due to Covid-19 pandemic-imposed work from home mandates), as well as an overall increase in the number of customers in Yellowknife.

24. Based on global events including supply chain constraints, Naka-YK has experienced upward pressure on materials and labour prices over the past number of years. Table 1.2 below sets out the inflation rates in the market that have impacted Naka-YK's costs in the years since Naka-YK's previous 2017 GRR:

Table 1.2: Yellowknife CPI Inflation Rates (%)

	2017	2018	2019	2020	2021	2022	2023
	Actual						
Inflation Rate	1.2	2.3	1.6	0.1	2.2	7.0	3.3

25. Table 1.3 below outlines the key assumptions made in the preparation of this Application. The assumptions used are derived from publicly available economic forecasts, historic trends, and information used in recent Alberta regulatory proceedings.

Table 1.3: Key Assumptions (%)

	2024	2025
Labour Inflation – In-Scope	3.0	3.5
Labour Inflation – Out-of-Scope	3.5	3.5
Other Inflation	2.5	2.5
Vacancy Rate	0.0	0.0
Long Term Debt Rate	4.76	N/A

26. With respect to In-Scope labour (meaning labour subject to a Collective Agreement) in the Test Period, the United Utility Workers' Association (UUWA) has a

Collective Agreement in place for the period January 1, 2022 to December 31, 2024.⁸ The 3.5 percent increase forecast for the 2025 Test Year is based on the 2025 increase awarded in August 2024 by an arbitrator to In-Scope employees of Naka-YK's affiliate company, AEY, which operates in similar Northern utility union market conditions.

27. Out-of-Scope (not subject to a Collective Agreement) labour increases are forecast at 3.5 percent in each of the 2024 and 2025 Test Years. Due to the timing of this Application, the escalation rate for 2024 is based on actual increases for 2024. For 2025, the forecast increase is the same as that forecast for In-Scope labour, which is required to prevent wage compression and to help ensure that Naka-YK can attract and retain personnel in a challenging and evolving labour market.

28. For non-labour costs, the forecast rate that has been applied to the Test Years is based on the Bank of Canada's (BoC) inflation rate of 2.5 percent, per its Monetary Policy Report dated April 2024.⁹

29. Regarding vacancy rates, Naka-YK has not forecast any vacancy rate for the Test Period since the forecast includes the minimum number of FTEs possible to operate the system safely and reliably, recognizing that vacancies, or leave time, must be filled with contractors or external resources.

30. With respect to long term debt requirements, Naka-YK is forecasting new long-term debt to be issued in 2024. Please refer to Section 7 for further details.

1.6 Rate Adjustment Rider (Rider R)

31. As explained in Section 15 of the Application, Naka-YK is requesting interim approval to update its Rate Adjustment Rider (Rider R) for implementation on November 1, 2024, to begin collecting the applied-for 2024 Revenue Requirement shortfall on a refundable basis.

⁸ Agreement between Naka Power Utilities (Yellowknife) and United Utility Workers' Association, January 1, 2022, to December 31, 2024, dated May 15, 2023.

⁹ <https://www.bankofcanada.ca/2024/04/mpr-2024-04-10/>, p. 5.

32. To implement the 2024 Rider R, effective November 1, 2024, Board approval is required on or before October 24, 2024. Any adjustments required to the 2024 Rider R following a Board Decision will be made in a subsequent Compliance Filing.

33. Naka-YK is also requesting interim approval to update Rider R for implementation on January 1, 2025, to begin collecting the applied-for 2025 Revenue Requirement shortfall on a refundable basis. Details related to this increase are also discussed in Section 15 of the Application.

34. To implement the 2025 Rider R, effective January 1, 2025, Board approval is required on or before December 20, 2024. Any adjustments required to the 2025 Rider R following a Board Decision will be made in a subsequent Compliance Filing.

1.7 Deferral Accounts

35. The previously accepted criteria for establishing a deferral account have not changed from Naka-YK's 2011-2013 Phase I GRA. The criteria are as follows:

- (a) not under the control of the company and not reasonably forecastable; or
- (b) an error in forecasting could produce a loss or gain of substantial magnitude.

36. Naka-YK is requesting approval to continue to use the following Deferral Accounts during the Test Period, as shown in Table 1.4.

Table 1.4: Deferral Accounts

Deferral Account	Section	Previously Approved
Purchase Power Flow Through	Section 3	13-2011
Defined Benefit Pension Plan	Section 5	13-2011
Income Tax Rate Variance	Section 8	13-2011

37. In addition to the deferral accounts listed above, Naka-YK is requesting approval to continue its deferral account approved in Decision 13-2011 used to record amounts associated with any Board Decisions, or changes to statutory or legislative provisions, that result in changes to the rules or parameters under which Naka-YK operates, including

such areas as the billing system, collection practices or the frequency of meter reading, and that impact Naka-YK's 2024-2025 Revenues and/or Revenue Requirements. For clarity, no such recorded amounts would be approved by the Board as part of this Application. Rather, the balance(s) would be brought forward by Naka-YK for consideration in a future Application to the Board.

38. Section 16 of this Application includes settlement of existing deferral accounts including true up of Naka-YK's 2017 GRR surplus. In Decision 6-2018 respecting Naka-YK's 2017 GRR, the Board approved the surplus amount to be refunded through Naka-YK's Temporary Refund/Surcharge Rider E. In preparation of this Application, it was found that when the surplus amount was refunded to customers, the refund rates inadvertently excluded the first three months of 2018. A refund adjustment respecting the 2017 GRR true-up, and settlement of Naka's other deferral account balances is further discussed in Naka-YK's applied for Deferral accounts and adjustments in Section 16 of the Application.

1.8 Summary of Approvals Requested from the Board

39. Naka-YK seeks the following approvals from the Board:

- (1) Approval of Naka-YK's revenue requirement and opening rate base for the 2024 and 2025 Test Years (two-year Test Period);
- (2) Approval of 2024 and 2025 interim and final Rate Adjustment Riders (Rider R, included in Section 15);
- (3) Approval for settlement of deferral account and true-up riders as described in Section 16;
- (4) Approval for continuation of existing deferral accounts listed above;
- (5) Approval to remove contributions related to work in progress from the computation of rate base beginning in 2024 listed above;
- (6) Approval for updated Maximum Investment Levels (MILs) discussed in Section 11.2;
- (7) Approval of updated depreciation parameters as supported by the Depreciation Study conducted by Concentric included as Attachment 1;

- (8) Approval to modify the amortization of reserve difference amounts in technical updates and complete depreciation studies discussed in Section 6; and
- (9) Such further and other relief as the Board may determine is appropriate until a subsequent Application.

SECTION 2 – SALES AND REVENUE

2.1 Overview

40. In 2023, Naka-YK provided electrical service to customers consisting of Residential, Commercial, Street Lights and Sentinel Lights (Lighting Customers). There was an average of 9,047 customers (excluding Lighting Customers) on the Yellowknife distribution system. The distribution system is supplying a total of approximately 149.9 GWh to Residential, Commercial and Lighting customers. This represents an increase of 0.5 percent in the number of customers and a 3.6 percent decrease in energy sales compared to 2022. Energy sales declined in 2023 primarily due to the warmer temperatures in Yellowknife, marking one of the warmest years in the past 20-years. Additionally, energy sales in 2023 were negatively impacted when the City was evacuated due to wildfires across the Northwest Territories.

41. With the drop in sales of 3.6 percent in 2023, the expectation is that energy sales will bounce back and increase approximately 2.0 percent in 2024, assuming temperatures return to normal and assuming no wildfire evacuations. As detailed below, the Commercial customer class is anticipated to grow, with the addition of new large customers expected to connect to the electric system in 2024.

42. Total sales are forecast to grow an additional 0.8 percent in 2025, mainly due to the overall increase in customer count compared to 2024. Table 2.1 provides the breakdown of energy sales by customer class.

Table 2.1: Naka Power Utilities (Yellowknife) Energy Sales by Customer Class (MWh)

Customer Class	2021	2022	2023	2024	2025	2017
	Actual			Test Period		Approved
Residential	54,887	54,137	51,269	52,020	52,263	53,776
Commercial	98,405	100,432	97,794	100,016	101,021	102,881
Streetlights	743	745	740	740	741	711
Sentinel Lights	72	71	61	68	68	95
Total Company	154,107	155,384	149,864	152,845	154,094	157,464

43. Detailed energy sales by customer class along with the corresponding revenues for 2021-2023 (Actuals) and 2024-2025 (Test Period) are provided in Schedule 2.0 Tariff Sales & Revenue.

2.2 Background

44. The Commercial sector accounts for 65 percent of Naka-YK's energy sales, which is largely dependent on the government and service sectors, as well as the activities of the mining industry in the region and related secondary industries. The Residential sector accounts for 34 percent of Naka-YK's sales, while sales to Light customers account for the remaining one percent.

45. The pandemic disrupted both the goods-producing and service-producing sectors during 2020, with both sectors experiencing a partial recovery in 2021. Since then, the service sector has returned to pre-pandemic levels while the goods sector has declined slightly. During 2023, the GDP for Northwest Territories was relatively flat, decreasing by 0.1 percent between 2022 and 2023.¹ The Conference Board of Canada is anticipating the short-term economic outlook for the Northwest Territories to be weak due to falling diamond production and a lack of private investment.² Additionally, the outlook for population growth in the Northwest Territories has been hampered by migration to other regions in Canada.³

2.3 Forecast Process

46. Similar to the previous methodology, the sales forecasts for 2024 and 2025 are prepared by customer class: Residential, Commercial, and Lighting. The forecast for 2024 includes actual data for January to March.

2.3.1 Residential

47. The Residential sales forecast has two key inputs: the net customer additions and the average energy Usage Per Customer (UPC). The energy sales forecast is calculated

¹ NWT Bureau of Statistics <https://www.statsnwt.ca/economy/gdp/>

² The Conference Board of Canada, Navigating Transition: Territorial Outlook to 2045. Published April 30, 2024, p. 2.

³ *Ibid*, p. 2.

by multiplying the forecast number of customers by the UPC forecast. The customer additions forecast includes all known Residential property developments and is based on discussions with developers in the community as well as consultation with City officials.

48. Residential energy consumption is typically very similar for most families. Temperature plays a significant role in Residential energy consumption, although other factors such as the size of the dwelling and the household and economic factors can also have an influence on the amount of Residential energy consumption. The average UPC for the Test Period is determined based on a single-equation regression model and using “Normal” temperature, which is defined as a 20-year (2004-2023) average Heating Degree Days (HDD) for Yellowknife. The regression model results, including the data, are provided in Section 2.3, Attachments 1 to 3.

2.3.2 Commercial

49. Naka-YK’s Commercial customers are a less homogenous group as compared to the Residential customers. The Commercial average UPC is also less influenced by temperature, as indicated by a low coefficient of determination in the regression of average UPC and HDD.

50. In preparation of the Commercial customer sales forecast, Naka-YK has taken into consideration each new large customer and determined the amount of load they will add to the system. Naka-YK relies heavily on information collected from its customers, the City and local developers as well as the energy use of existing customers that have a similar profile to the new customer forecast to be connected. The additional load for these new customers is then added to the actual energy sales in 2023 to arrive at the total load for the Commercial customer class in 2024. The 2025 energy forecast is obtained by adding the additions of new customers to the previous year’s energy forecast.

2.3.3 Lighting (Street and Sentinel Lighting)

51. The energy forecast for Lighting is obtained by multiplying the forecast number of customers by the average usage per light type. The Lighting additions forecast are also

collected based on discussions with developers in the community as well as consultation with City officials.

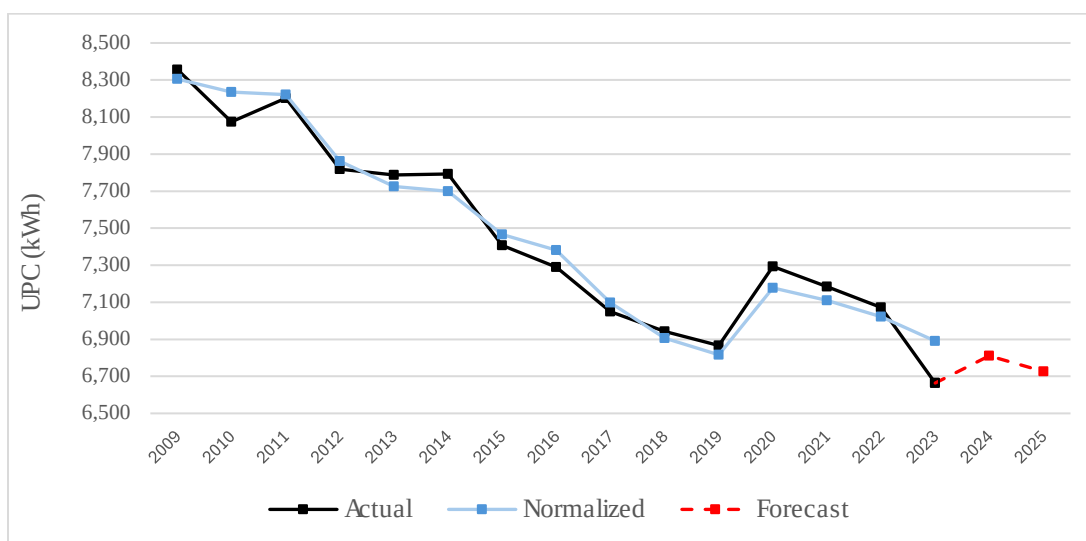
2.4 Current Forecast

2.4.1 Residential

52. For 2024, energy sales for Residential customers are forecast to increase by 1.5 percent, over 2023, due to both an increase in the number of customers and increase in UPC, assuming a return to normal temperatures and assuming no wildfire evacuations in 2024.

53. For 2025, energy sales for Residential customers are forecast to increase by 0.5 percent, over 2024, mainly due to the increase in the number of customers, as the UPC forecast for 2025 is relatively flat, compared to 2024. The average UPC follows an overall declining trend in Yellowknife since 2009, with a step change occurring during the first year of the pandemic in 2020 as shown in Figure 2.1.

Figure 2.1: Residential Average UPC (kWh)



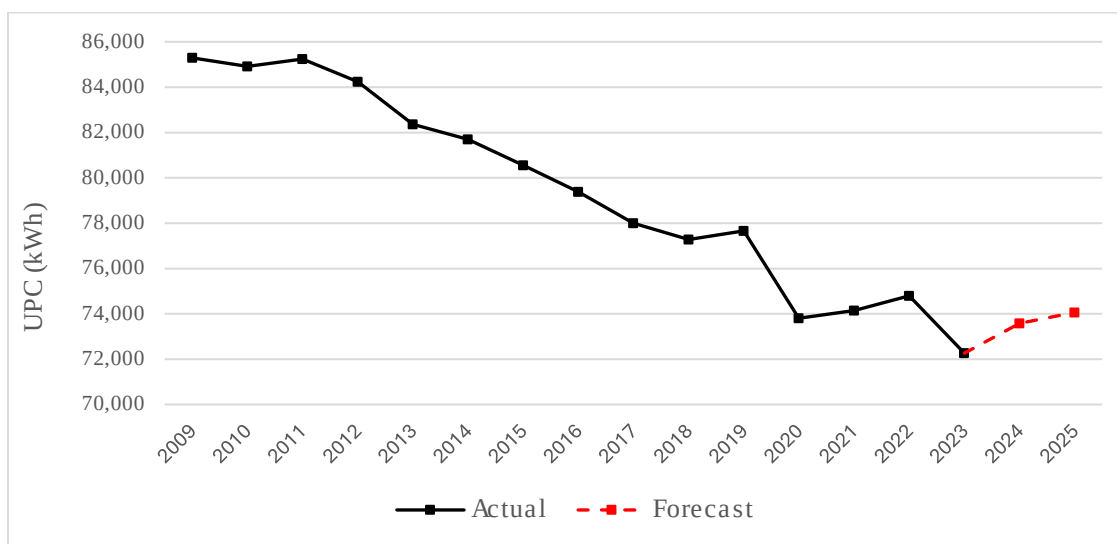
2.4.2 Commercial

54. Energy sales to Commercial customers are forecast to increase by 2.3 percent in 2024. The forecast includes the load additions relating to the new Department of National

Defense facility, the Avens Pavilion and the new Yellowknife Aquatic Centre. In 2025, sales are forecast to increase an additional 1.0 percent. This increase is primarily due to businesses added in the Engle Business District and Enterprise, as well as a new sewer lift station.

55. As shown in Figure 2.2, the Commercial average UPC has followed an overall declining trend in Yellowknife since 2011. The Commercial UPC decreased significantly in 2020, at the start of the pandemic, followed by levelling out in 2021 and through to the Test Period.

**Figure 2.2: Commercial Average UPC
(kWh)**



2.4.3 Street and Sentinel Lighting

56. Energy sales to Lighting customers, both Street and Sentinel combined, are forecast to increase 0.9 percent in 2024 and 0.2 percent in 2025, based on the forecast process and trend in historical data. There are no significant Lighting additions for the Test Period resulting in the relatively stable forecast.

2.5 Revenue

2.5.1 Base Rate Revenue

57. To forecast revenue on existing rates, the current rates in place effective January 1, 2012, were applied to the sales forecast. Details of revenue by rate class are provided in Schedule 2.0.

2.5.2 Other Revenue

**Table 2.2: Naka Power Utilities (Yellowknife) Other Revenue
(\$000)**

Other Revenue	2021	2022	2023	2024	2025	2017
	Actual			Test Period		Approved
Penalty Revenue	117	133	63	104	103	106
Reconnect Revenue	119	106	93	99	102	148
Joint Use Revenue	210	210	215	212	218	230
Services to Other Parties (flowthrough)	379	41	86	75	78	86
Total	824	490	456	491	501	570

58. Naka-YK's other revenues have been included with retail sales revenues as part of the revenue requirement. These amounts are detailed in Schedule 10.0.

59. Services to outside party revenues have been forecast based on a three-year historical average increase and align with the outside party expense found in Schedule 5.0. As these forecast revenue offsets increase or decrease over the Test Period, so do the related expenses, resulting in no impact on revenue requirement. Penalty, reconnect, and joint use revenues are based on three-year historical averages.

Naka Power Utilities (Yellowknife) (Naka-YK)
2024-2025 General Rate Application (GRA)
Proceeding ID 2024-013

Residential Data Used for Regression Analysis

Line No. WEATHER NORMAL

1		
2	Regression Statistics	
3	Multiple R	0.8654
4	R Square	0.7489
5	Adjusted R Square	0.7475
6	Standard Error	60.4406
7	Observations	180.0000

8					
9	ANOVA				
10		<i>df</i>	<i>SS</i>	<i>MS</i>	<i>Significance F</i>
11	Regression	1	1939603	1939603	531
12	Residual	178	650245	3653	0
13	Total	179	2589848		

14									
15		<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
16	Intercept	472.03	7.88	59.87	0.00	456.47	487.59	456.47	487.59
17	HDDs	0.23	0.01	23.04	0.00	0.21	0.24	0.21	0.24

18						
19	Year	Month	Actual UPC	HDDs	20 Yr Avg HDD	Normal UPC
20	2009	Jan	980.9	1352.9	1312.7	971.8
21	2009	Feb	777.2	1160.8	1164.3	778.0
22	2009	Mar	829.8	1187.9	1076.1	804.6
23	2009	Apr	672.4	691.0	712.7	677.3
24	2009	May	578.5	516.3	381.5	548.2
25	2009	Jun	631.3	174.8	128.8	621.0
26	2009	Jul	575.9	79.7	51.3	569.5
27	2009	Aug	547.8	101.7	111.7	550.1
28	2009	Sep	562.6	227.0	299.7	578.9
29	2009	Oct	629.2	603.0	567.8	621.3
30	2009	Nov	738.9	866.5	925.0	752.1
31	2009	Dec	831.8	1238.3	1241.6	832.6
32	2010	Jan	936.3	1307.3	1312.7	937.5
33	2010	Feb	717.7	960.1	1164.3	763.8
34	2010	Mar	714.3	866.0	1076.1	761.6
35	2010	Apr	649.1	514.9	712.7	693.7
36	2010	May	575.6	384.4	381.5	575.0
37	2010	Jun	604.8	109.0	128.8	609.3
38	2010	Jul	486.8	40.3	51.3	489.3
39	2010	Aug	570.3	89.8	111.7	575.3
40	2010	Sep	639.9	307.6	299.7	638.1
41	2010	Oct	570.5	544.3	567.8	575.8
42	2010	Nov	734.6	899.1	925.0	740.5
43	2010	Dec	874.3	1237.8	1241.6	875.2
44	2011	Jan	927.3	1394.2	1312.7	908.9
45	2011	Feb	790.2	1139.9	1164.3	795.7
46	2011	Mar	823.5	1109.0	1076.1	816.1
47	2011	Apr	638.3	816.5	712.7	614.9
48	2011	May	625.7	327.3	381.5	637.9
49	2011	Jun	577.0	148.0	128.8	572.7
50	2011	Jul	548.4	25.7	51.3	554.1
51	2011	Aug	519.9	88.2	111.7	525.2
52	2011	Sep	554.1	241.7	299.7	567.2
53	2011	Oct	633.1	514.3	567.8	645.2
54	2011	Nov	735.7	985.0	925.0	722.2
55	2011	Dec	829.7	1099.5	1241.6	861.7
56	2012	Jan	850.1	1251.6	1312.7	863.9
57	2012	Feb	731.7	1013.4	1164.3	765.7
58	2012	Mar	715.4	1059.1	1076.1	719.3

Naka Power Utilities (Yellowknife) (Naka-YK)
2024-2025 General Rate Application (GRA)
Proceeding ID 2024-013

Residential Data Used for Regression Analysis

Line No. WEATHER NORMAL

2

Regression Statistics	
Multiple R	0.8654
R Square	0.7489
Adjusted R Square	0.7475
Standard Error	60.4406
Observations	180.0000

8

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ANOVA					
	df	SS	MS	F	Significance F
Regression	1	1939603	1939603	531	0
Residual	178	650245	3653		
Total	179	2589848			

14

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	472.03	7.88	59.87	0.00	456.47	487.59	456.47	487.59
HDDs	0.23	0.01	23.04	0.00	0.21	0.24	0.21	0.24

18

Year	Month	Actual UPC	HDDs	20 Yr Avg HDD	Normal UPC
2012	Apr	624.7	723.4	712.7	622.3
2012	May	596.9	310.8	381.5	612.9
2012	Jun	549.3	79.2	128.8	560.5
2012	Jul	536.3	7.1	51.3	546.3
2012	Aug	517.2	63.9	111.7	528.0
2012	Sep	518.9	202.9	299.7	540.7
2012	Oct	619.9	600.6	567.8	612.5
2012	Nov	717.9	1065.8	925.0	686.2
2012	Dec	840.4	1401.9	1241.6	804.3
2013	Jan	910.3	1427.8	1312.7	884.4
2013	Feb	749.2	1035.4	1164.3	778.3
2013	Mar	721.1	1128.0	1076.1	709.4
2013	Apr	632.1	809.1	712.7	610.4
2013	May	595.3	353.2	381.5	601.7
2013	Jun	543.3	105.0	128.8	548.7
2013	Jul	522.8	80.1	51.3	516.3
2013	Aug	506.5	87.8	111.7	511.9
2013	Sep	522.4	244.9	299.7	534.8
2013	Oct	585.7	517.8	567.8	597.0
2013	Nov	680.2	962.8	925.0	671.7
2013	Dec	818.7	1500.9	1241.6	760.3
2014	Jan	947.1	1342.7	1312.7	940.3
2014	Feb	730.8	1233.9	1164.3	715.1
2014	Mar	757.6	1191.5	1076.1	731.6
2014	Apr	631.1	768.6	712.7	618.5
2014	May	584.2	408.2	381.5	578.2
2014	Jun	530.8	114.3	128.8	534.1
2014	Jul	552.4	40.2	51.3	554.9
2014	Aug	495.7	136.1	111.7	490.2
2014	Sep	516.7	346.4	299.7	506.2
2014	Oct	595.3	558.9	567.8	597.3
2014	Nov	665.9	1035.6	925.0	641.0
2014	Dec	785.4	1213.4	1241.6	791.7
2015	Jan	847.4	1340.3	1312.7	841.2
2015	Feb	738.5	1229.7	1164.3	723.8
2015	Mar	703.5	1038.9	1076.1	711.9
2015	Apr	606.3	660.7	712.7	618.0
2015	May	560.8	323.0	381.5	574.0
2015	Jun	525.5	114.3	128.8	528.8

Naka Power Utilities (Yellowknife) (Naka-YK)
2024-2025 General Rate Application (GRA)
Proceeding ID 2024-013

Residential Data Used for Regression Analysis

Line No. WEATHER NORMAL

1		
2	Regression Statistics	
3	Multiple R	0.8654
4	R Square	0.7489
5	Adjusted R Square	0.7475
6	Standard Error	60.4406
7	Observations	180.0000

8					
9	ANOVA				
10		<i>df</i>	<i>SS</i>	<i>MS</i>	<i>Significance F</i>
11	Regression	1	1939603	1939603	531
12	Residual	178	650245	3653	0
13	Total	179	2589848		

14									
15		<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
16	Intercept	472.03	7.88	59.87	0.00	456.47	487.59	456.47	487.59
17	HDDs	0.23	0.01	23.04	0.00	0.21	0.24	0.21	0.24

18						
19	Year	Month	Actual UPC	HDDs	20 Yr Avg HDD	Normal UPC
98	2015	Jul	516.8	63.5	51.3	514.0
99	2015	Aug	497.7	101.8	111.7	499.9
100	2015	Sep	501.7	301.7	299.7	501.2
101	2015	Oct	589.6	595.0	567.8	583.5
102	2015	Nov	624.0	841.1	925.0	642.9
103	2015	Dec	696.3	1106.0	1241.6	726.8
104	2016	Jan	794.3	1172.4	1312.7	825.9
105	2016	Feb	700.1	1198.6	1164.3	692.3
106	2016	Mar	698.2	985.3	1076.1	718.7
107	2016	Apr	594.5	753.6	712.7	585.3
108	2016	May	534.4	304.3	381.5	551.8
109	2016	Jun	526.0	89.7	128.8	534.8
110	2016	Jul	513.3	40.8	51.3	515.6
111	2016	Aug	518.8	87.1	111.7	524.4
112	2016	Sep	495.3	301.2	299.7	494.9
113	2016	Oct	560.7	614.8	567.8	550.1
114	2016	Nov	602.8	756.5	925.0	640.8
115	2016	Dec	752.1	1263.4	1241.6	747.2
116	2017	Jan	770.7	1194.6	1312.7	797.3
117	2017	Feb	649.1	1082.3	1164.3	667.6
118	2017	Mar	695.9	1131.0	1076.1	683.6
119	2017	Apr	564.9	725.6	712.7	562.0
120	2017	May	545.2	297.6	381.5	564.1
121	2017	Jun	489.0	143.5	128.8	485.7
122	2017	Jul	506.3	52.3	51.3	506.1
123	2017	Aug	481.9	65.1	111.7	492.4
124	2017	Sep	486.8	231.7	299.7	502.2
125	2017	Oct	550.8	591.1	567.8	545.6
126	2017	Nov	591.9	1026.2	925.0	569.1
127	2017	Dec	717.2	1217.7	1241.6	722.6
128	2018	Jan	772.4	1303.1	1312.7	774.5
129	2018	Feb	674.0	1154.0	1164.3	676.3
130	2018	Mar	661.6	1032.0	1076.1	671.5
131	2018	Apr	553.3	762.1	712.7	542.2
132	2018	May	516.2	369.4	381.5	518.9
133	2018	Jun	513.8	132.2	128.8	513.0
134	2018	Jul	489.4	63.5	51.3	486.6
135	2018	Aug	470.2	157.0	111.7	460.0
136	2018	Sep	489.6	464.0	299.7	452.6

Naka Power Utilities (Yellowknife) (Naka-YK)
2024-2025 General Rate Application (GRA)
Proceeding ID 2024-013

Residential Data Used for Regression Analysis

Line No. WEATHER NORMAL

1		
2	Regression Statistics	
3	Multiple R	0.8654
4	R Square	0.7489
5	Adjusted R Square	0.7475
6	Standard Error	60.4406
7	Observations	180.0000

8					
9	ANOVA				
10		<i>df</i>	<i>SS</i>	<i>MS</i>	<i>Significance F</i>
11	Regression	1	1939603	1939603	531
12	Residual	178	650245	3653	0
13	Total	179	2589848		

14									
15		<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
16	Intercept	472.03	7.88	59.87	0.00	456.47	487.59	456.47	487.59
17	HDDs	0.23	0.01	23.04	0.00	0.21	0.24	0.21	0.24

18						
19	Year	Month	Actual UPC	HDDs	20 Yr Avg HDD	Normal UPC
137	2018	Oct	551.6	623.1	567.8	539.1
138	2018	Nov	597.2	940.3	925.0	593.7
139	2018	Dec	653.8	1135.2	1241.6	677.8
140	2019	Jan	767.3	1354.0	1312.7	758.0
141	2019	Feb	697.6	1233.3	1164.3	682.0
142	2019	Mar	624.1	862.2	1076.1	672.3
143	2019	Apr	526.8	680.5	712.7	534.0
144	2019	May	521.7	448.9	381.5	506.5
145	2019	Jun	494.6	173.5	128.8	484.5
146	2019	Jul	475.9	106.2	51.3	463.6
147	2019	Aug	454.9	162.9	111.7	443.4
148	2019	Sep	465.8	302.0	299.7	465.3
149	2019	Oct	532.5	571.5	567.8	531.7
150	2019	Nov	595.4	927.1	925.0	594.9
151	2019	Dec	710.3	1375.2	1241.6	680.2
152	2020	Jan	827.6	1362.4	1312.7	816.4
153	2020	Feb	681.2	1216.1	1164.3	669.5
154	2020	Mar	671.4	1163.0	1076.1	651.8
155	2020	Apr	586.9	788.9	712.7	569.7
156	2020	May	577.0	465.6	381.5	558.1
157	2020	Jun	529.1	158.9	128.8	522.3
158	2020	Jul	527.6	58.4	51.3	526.0
159	2020	Aug	494.4	104.3	111.7	496.1
160	2020	Sep	492.4	331.5	299.7	485.2
161	2020	Oct	566.5	615.3	567.8	555.8
162	2020	Nov	622.2	1002.8	925.0	604.7
163	2020	Dec	716.7	1218.5	1241.6	721.9
164	2021	Jan	793.8	1232.5	1312.7	811.9
165	2021	Feb	728.3	1302.1	1164.3	697.3
166	2021	Mar	694.7	1109.0	1076.1	687.3
167	2021	Apr	586.6	799.4	712.7	567.1
168	2021	May	536.4	457.0	381.5	519.4
169	2021	Jun	521.4	132.9	128.8	520.5
170	2021	Jul	514.2	76.0	51.3	508.7
171	2021	Aug	461.9	149.5	111.7	453.4
172	2021	Sep	473.5	280.5	299.7	477.8
173	2021	Oct	545.5	478.5	567.8	565.6
174	2021	Nov	584.6	873.1	925.0	596.3
175	2021	Dec	742.8	1408.0	1241.6	705.3

Naka Power Utilities (Yellowknife) (Naka-YK)
2024-2025 General Rate Application (GRA)
Proceeding ID 2024-013

Residential Data Used for Regression Analysis

Line No. WEATHER NORMAL

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Regression Statistics	
Multiple R	0.8654
R Square	0.7489
Adjusted R Square	0.7475
Standard Error	60.4406
Observations	180.0000

ANOVA					
	df	SS	MS	F	Significance F
Regression	1	1939603	1939603	531	0
Residual	178	650245	3653		
Total	179	2589848			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	472.03	7.88	59.87	0.00	456.47	487.59	456.47	487.59
HDDs	0.23	0.01	23.04	0.00	0.21	0.24	0.21	0.24

Year	Month	Actual UPC	HDDs	20 Yr Avg HDD	Normal UPC
2022	Jan	852.8	1431.7	1312.7	826.0
2022	Feb	756.6	1303.8	1164.3	725.2
2022	Mar	719.7	1104.6	1076.1	713.3
2022	Apr	631.6	775.3	712.7	617.5
2022	May	533.5	380.2	381.5	533.8
2022	Jun	500.7	67.3	128.8	514.5
2022	Jul	488.8	32.2	51.3	493.1
2022	Aug	476.6	72.5	111.7	485.4
2022	Sep	472.0	250.3	299.7	483.2
2022	Oct	474.2	535.7	567.8	481.5
2022	Nov	549.5	893.6	925.0	556.6
2022	Dec	615.3	1343.9	1241.6	592.2
2023	Jan	778.0	1115.2	1312.7	822.5
2023	Feb	647.6	1247.6	1164.3	628.9
2023	Mar	703.8	1116.4	1076.1	694.7
2023	Apr	601.2	583.4	712.7	630.3
2023	May	506.2	192.0	381.5	548.9
2023	Jun	492.5	117.7	128.8	495.0
2023	Jul	447.1	14.7	51.3	455.3
2023	Aug	421.5	54.1	111.7	434.5
2023	Sep	439.7	217.6	299.7	458.2
2023	Oct	452.8	503.0	567.8	467.4
2023	Nov	556.2	827.7	925.0	578.2
2023	Dec	617.2	980.4	1241.6	676.1
2024	Jan	708.0	1409.2	1312.7	686.3
2024	Feb	686.4	1122.3	1164.3	695.9
2024	Mar	625.8	1073.2	1076.1	626.4

Naka Power Utilities (Yellowknife) (Naka-YK)
2024-2025 General Rate Application (GRA)
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Historical Heating Degree Days - 2004 to 2023

Yellowknife
Heating Degree Day (HDD)
Degree Days Below 18.0 °C

20-year
"Normal"
HDD

Line No.	HDD	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	(2004-2023)
1	Jan	1,470.0	1,376.2	1,239.0	1,220.9	1,364.8	1,352.9	1,307.3	1,394.2	1,251.6	1,427.8	1,342.7	1,340.3	1,172.4	1,194.6	1,303.1	1,354.0	1,362.4	1,232.5	1,431.7	1,115.2	1,312.7
2	Feb	1,139.2	1,140.3	993.7	1,205.4	1,297.2	1,160.8	960.1	1,139.9	1,013.4	1,035.4	1,233.9	1,229.7	1,198.6	1,082.3	1,154.0	1,233.3	1,216.1	1,302.1	1,303.8	1,247.6	1,164.3
3	Mar	1,151.2	1,027.3	895.9	1,180.2	1,183.6	1,187.9	866.0	1,109.0	1,059.1	1,128.0	1,191.5	1,038.9	985.3	1,131.0	1,032.0	862.2	1,163.0	1,109.0	1,104.6	1,116.4	1,076.1
4	Apr	801.1	612.5	597.2	629.2	760.5	691.0	514.9	816.5	723.4	809.1	768.6	660.7	753.6	725.6	762.1	680.5	788.9	799.4	775.3	583.4	712.7
5	May	605.9	459.1	306.8	385.9	334.9	516.3	384.4	327.3	310.8	353.2	408.2	323.0	304.3	297.6	369.4	448.9	465.6	457.0	380.2	192.0	381.5
6	Jun	188.8	165.1	80.6	149.0	132.6	174.8	109.0	148.0	79.2	105.0	114.3	114.3	89.7	143.5	132.2	173.5	158.9	132.9	67.3	117.7	128.8
7	Jul	49.5	84.1	59.3	20.2	32.8	79.7	40.3	25.7	7.1	80.1	40.2	63.5	40.8	52.3	63.5	106.2	58.4	76.0	32.2	14.7	51.3
8	Aug	177.9	154.5	84.8	180.9	114.6	101.7	89.8	88.2	63.9	87.8	136.1	101.8	87.1	65.1	157.0	162.9	104.3	149.5	72.5	54.1	111.7
9	Sep	373.3	363.8	243.9	392.0	369.3	227.0	307.6	241.7	202.9	244.9	346.4	301.7	301.2	231.7	464.0	302.0	331.5	280.5	250.3	217.6	299.7
10	Oct	681.0	546.9	581.8	561.8	518.0	603.0	544.3	514.3	600.6	517.8	558.9	595.0	614.8	591.1	623.1	571.5	615.3	478.5	535.7	503.0	567.8
11	Nov	988.6	811.5	1,063.0	907.7	826.9	866.5	899.1	985.0	1,065.8	962.8	1,035.6	841.1	756.5	1,026.2	940.3	927.1	1,002.8	873.1	893.6	827.7	925.0
12	Dec	1,383.3	966.7	1,015.1	1,305.9	1,420.4	1,238.3	1,237.8	1,099.5	1,401.9	1,500.9	1,213.4	1,106.0	1,263.4	1,217.7	1,135.2	1,375.2	1,218.5	1,408.0	1,343.9	980.4	1,241.6
13	Total	9,009.8	7,708.0	7,161.1	8,139.1	8,355.6	8,199.9	7,260.6	7,889.3	7,779.7	8,252.8	8,389.8	7,716.0	7,567.7	7,758.7	8,135.9	8,197.3	8,485.7	8,298.5	8,191.1	6,969.8	7,973.3

Naka Power Utilities (Yellowknife) (Naka-YK)
2024-2025 General Rate Application (GRA)
Proceeding ID 2024-013

Residential Use Per Customer (UPC) Forecast

Line No.

1 Yellowknife - Residential Regression Model

2 The definition of the variables used in the regression equation

3 Name	Definition
4 M1	Dummy Variable for January
5 HDD	Monthly Heating Degree Days
6 MRUPC	Monthly Residential Average Use Per Customer (UPC)
7 N_HDD	"Normal" (20-yr Average) HDD
8 TIME	Trend Variable
9 N_UPC(-12)	Normalized Residential Average Use Per Customer 12 months lagged

10

11 SUMMARY OUTPUT

12

Regression Statistics	
14 Multiple R	0.962
15 R Square	0.925
16 Adjusted R Square	0.922
17 Standard Error	30.501
18 Observations	120.000

19

20 ANOVA

	df	SS	MS	F	Significance F
22 Regression	4	1316439	329110	354	0
23 Residual	115	106986	930		
24 Total	119	1423425			

25

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
27 Intercept	276.81	47.46	5.83	0.00000	182.80	370.82	182.80	370.82
28 HDD	0.10	0.02	6.38	0.00000	0.07	0.13	0.07	0.13
29 M1	51.71	14.49	3.57	0.00052	23.02	80.40	23.02	80.40
30 TIME	-0.24	0.09	-2.65	0.00927	-0.43	-0.06	-0.43	-0.06
31 N_UPC(-12)	0.49	0.08	6.28	0.00000	0.33	0.64	0.33	0.64

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Naka Power Utilities (Yellowknife) (Naka-YK)
2024-2025 General Rate Application (GRA)
Proceeding ID 2024-013

Residential Use Per Customer (UPC) Forecast

Line No.	Year	Month	Actual UPC	HDD	M1	N_HDD	TIME	N_UPC(-12)	Forecast UPC
33									
34	2024	Jan	708.0	1409.2	1	1312.7	240.5	822.5	799.5
35	2024	Feb	686.4	1122.3	0	1164.3	240.5	628.9	638.9
36	2024	Mar	625.8	1073.2	0	1076.1	240.5	694.7	662.3
37	2024	Apr			0	712.7	240.5	630.3	595.4
38	2024	May			0	381.5	240.5	548.9	523.2
39	2024	Jun			0	128.8	240.5	495.0	472.2
40	2024	Jul			0	51.3	240.5	455.3	445.3
41	2024	Aug			0	111.7	240.5	434.5	441.1
42	2024	Sep			0	299.7	240.5	458.2	471.0
43	2024	Oct			0	567.8	240.5	467.4	501.7
44	2024	Nov			0	925.0	240.5	578.2	590.7
45	2024	Dec			0	1241.6	240.5	676.1	669.4
46	2025	Jan			1	1312.7	241.0	686.3	732.9
47	2025	Feb			0	1164.3	241.0	695.9	671.4
48	2025	Mar			0	1076.1	241.0	626.4	628.9
49	2025	Apr			0	712.7	241.0	595.4	578.2
50	2025	May			0	381.5	241.0	523.2	510.6
51	2025	Jun			0	128.8	241.0	472.2	461.0
52	2025	Jul			0	51.3	241.0	445.3	440.3
53	2025	Aug			0	111.7	241.0	441.1	444.2
54	2025	Sep			0	299.7	241.0	471.0	477.1
55	2025	Oct			0	567.8	241.0	501.7	518.4
56	2025	Nov			0	925.0	241.0	590.7	596.7
57	2025	Dec			0	1241.6	241.0	669.4	666.1

SECTION 3 – PURCHASE POWER

3.1 Overview

60. The Purchase Power included in this Application is outlined in Schedule 4.3 and is set out in Table 3.1 below. Naka-YK purchases power from NTPC, which comprises approximately 78 percent of Naka-YK's total revenue requirement over the Test Period. Naka-YK has a Purchase Power Cost Adjustment Rider (Rider F) in place, which is an interim-refundable flow-through rider designed to reflect changes in purchase power prices charged to Naka-YK by NTPC, adjusted for system losses.

61. In Decision 16-2011, the Board approved Naka-YK's base rates effective January 1, 2012. Naka-YK's base rates were designed to recover Purchase Power costs of \$0.1497 per kWh, which was the rate charged by NTPC to Naka-YK at the time of its 2011-2013 Phase I and Phase II GRA. The Board has approved subsequent Rider F changes resulting from the flow-through of approved adjustments to NTPC's wholesale rate, most recently in Decision 10-2024.

**Table 3.1: Purchase Power
(\$000)**

	2021	2022	2023	2024	2025	2017
	Actual			Test Period		Approved
Energy Sales	154,107	155,384	149,864	152,845	154,094	157,464
Losses (MWh)	5,238	5,281	5,094	5,468	5,517	5,324
Total	159,345	160,665	154,958	158,312	159,611	162,787
Purchase Power Rates (\$ per kWh)						
Energy	0.2127	0.2162	0.2239	0.2266	0.2266	0.1497
Rate	0.0069	0.0069	0.0069	0.0096	0.0109	-
2022/23 GRA	-	-	0.0011	0.0007	-	-
Snare Zone	-	-	-	0.0153	0.0229	-
Shortfall, Interim, Stabilization						0.0480
Demand	8.10	8.10	8.10	8.10	8.10	8.10
Total	37,822	38,553	38,537	42,775	44,450	34,938

62. The increase in Purchase Power for 2022 is mainly due to a two percent increase in rates from \$0.2127 per kWh in 2021 to \$0.2162 per kWh. Purchase Power for 2023 remains fairly flat as the rate increase to \$0.2239 per kWh is offset by lower Energy Sales, as outlined in Section 2. The increase in purchase power forecast amounts for 2024 and 2025 are mainly due to higher Energy Sales, as outlined in Section 2, and higher rates, with increases of nine percent in 2024 and three percent in 2025. The rate increases are the result of the Snare Zone Drought O&M Rider and the Rate Stabilization Fund Rider, outlined in NTPC's Territorial Fuel Supply and O&M Deferral Account Proceeding 2024-008, offset by the removal of the 2022-2023 GRA Shortfall Rider in May 2024.

3.2 Deferral Account

63. Naka-YK is requesting continued approval of the existing Purchase Power deferral.

64. Consistent with the previously approved methodology, the purchase price is based on NTPC's approved rates that were in effect as of June 1, 2024. Subsequent increases or decreases to these rates approved by the Board for 2024, and subsequent years, will be flowed through to Naka-YK's customers using the existing Purchase Power Cost Adjustment Rider F, as approved by the Board.

3.3 Forecast Process

65. NTPC charges Naka-YK monthly for energy (kWh) and a demand charge. Each of these components of the total purchase power cost is forecast separately.

66. The energy component of the purchase power cost is determined by applying NTPC's rates to the total forecast energy (kWh) purchases, as shown on Schedule 4.3. Total forecast purchases are determined by applying line loss percentages to Naka-YK's sales load forecast. Line losses are determined based on the five-year average of metered sales volumes compared to the same period of purchased power volumes to determine the average losses, as outlined in the following table:

**Table 3.2: Line Losses (kWh)
(\$000)**

Line Loss	Five-Year Average
Billed Sales	153,387
Purchase Power	158,874
Line Loss %	3.6

67. The demand charge component of purchase power cost is forecast by applying a 12-month average of demand charges.

SECTION 4 – DIESEL FUEL COSTS

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SECTION 5 – OPERATIONS AND MAINTENANCE (O&M) EXPENSES

5.1 Overview

68. Total O&M expenses included in this Application, as outlined and explained in detail in Schedules 5.0 and 5.2, are as follows:

**Table 5.1: Operations and Maintenance (O&M) Expenses
(\$000)**

Operations and Maintenance (O&M)	2021	2022	2023	2024	2025	2017
	Actual			Test Period		Approved
Distribution	1,034	934	1,191	1,275	1,180	886
General	204	214	195	206	212	189
Public Information	142	168	134	454	157	149
Customer Accounting	830	790	768	1,172	1,363	1,094
Administration and General	1,408	1,497	1,763	1,895	1,814	1,442
Other Taxes	1,162	1,185	1,173	1,275	1,329	1,095
Less Donations	(14)	(14)	(6)	(6)	(6)	(20)
Total	4,766	4,773	5,218	6,270	6,049	4,833

5.2 Forecast Process

69. Development of Naka-YK's O&M forecast for the Test Period involved a detailed review of the business requirements to continue the provision of a safe and reliable electricity service. Functional areas within Naka-YK perform an annual assessment of resources to ensure that activities performed are relevant and required to fulfill legislative and regulatory obligations, provide ongoing safe and reliable distribution services to customers, and meet business needs during the Test Period. Separate forecasts were developed for labour and non-labour costs.

70. Total forecast labour costs are calculated by multiplying the number of staff per job class by the standard rate of pay for each job class. These labour costs are then distributed to O&M accounts or capital accounts depending on the nature of work being performed by the staff in that job class.

71. Non-labour costs are forecast in two parts: (i) Ongoing operational and administrative activities, based on historic spending requirements; and ii) adjustments for known changes to work to be completed in the Test Years.

72. Naka-YK's YoY variances between actual and forecast costs during the 2021 to 2025 period are outlined below by category.

5.3 Distribution

73. The Distribution function includes costs to perform routine preventative (scheduled) and restorative (unscheduled) maintenance on the various components within the distribution infrastructure, including maintenance, brushing, meter requirements, and streetlight maintenance. Some of those expenses are detailed in Table 5.2 as follows:

**Table 5.2: Distribution Expenses
(\$000)**

Distribution	2021	2022	2023	2024	2025	2017
	Actual			Test Period		Approved
Meter Reading	42	80	85	94	99	76
Substation Structures	81	96	106	117	123	108
Supervision	138	186	183	202	213	110
Brushing	72	167	251	234	85	40
Vehicle Depreciation	(69)	(54)	(83)	(92)	(97)	(58)
Maintenance	290	321	418	463	488	370
Service to Outside Parties	378	35	70	77	81	99
Underground Line Maintenance	36	35	68	76	80	53
Meter and Meter Testing	25	15	20	22	23	31
Transformer Repair and Replacement	0	-	-	-	-	-
Street Light Maintenance	41	52	72	80	84	57
Total	1,034	934	1,191	1,275	1,180	886

74. Naka-YK explains and provides further detail on variances based on approved amounts below. However, overall, the increase in 2023 in Meter Reading, Substation Structure, Supervision, Maintenance, Underground Line Maintenance and Street Light Maintenance is primarily due to increased employee turnover, which was higher than in previous years. This led to a higher number of vacant positions in 2021 and 2022, resulting in increased costs in 2023 as these vacancies were filled. External factors such

as persistent inflation resulting from the COVID-19 pandemic have also contributed to the increased costs. Naka-YK is forecasting costs in these categories to remain flat during the Test Period as compared to 2023 actuals. Please refer to Section 5.8 - Labour Costs for details on Full-time Equivalent Employees (FTE) changes.

5.3.1 Brushing

75. Brushing work decreased in 2021 due to contractor availability during the COVID-19 Pandemic, which resulted in a backlog of brushing work. In 2022, a contractor was brought in to assess the brushing required by Naka-YK and to identify the full scope of work required. Naka-YK is committed to supplying safe and reliable power, which includes taking steps such as brushing to mitigate the risk of wildfires, such that brushing had to be fully assessed and completed to ensure these obligations were met. Assessments are completed to gather information that allows for the development of appropriate brushing schedules and treatments. The contractor was coordinated through ATCO Electric's Forestry group and provided Naka-YK with the following reports:

- Patrol Reports;
- Work Plans; and
- Landowner Notification of Vegetation Control.

76. These reports identified the type of brushing activities required, when the brushing activities should be completed, and what customer permissions were needed. The contractor completed the assessment in 2022 and produced the reports for Naka-YK to carry out its brushing program throughout Yellowknife. The program is planned to be executed starting in 2023 and carrying forward into 2024. As a result of the assessment, Naka-YK increased brushing over the 2022-2024 period to address the findings in the brushing assessment and in 2025, brushing returns to typical maintenance levels.

5.3.2 Services to Outside Parties

77. Services to Outside Parties were high in 2021 compared to the remaining years in the 2021 to 2025 period mainly due to Naka-YK's provision of labour support to ATCO Ltd.'s project to rebuild Puerto Rico's Electrical Grid (LUMA Energy). Incremental costs within services to outside parties and affiliate services are fully recoverable (no

element of profit is received); therefore, there is no impact on revenue requirement. During the Covid-19 Pandemic there was a temporary decrease in capital and operations and maintenance work in the City, which allowed Naka-YK to provide support to LUMA without affecting its operations in the City at that time. As pandemic-related restrictions started to lift in 2022, the FTEs that had provided support to LUMA Energy returned to supporting Naka-YK.

5.4 General

78. The General Costs function includes costs related to internal communication systems and maintenance activities for company owned properties and warehouses. Naka-YK is forecasting costs in these categories to remain flat during the Test Period with increases in 2024 largely due to inflation.

**Table 5.3: General Expenses
(\$000)**

General	2021	2022	2023	2024	2025	2017
	Actual			Test Period		Approved
Communication	2	2	2	2	2	13
Maintenance Company Owned Houses	4	10	11	12	12	35
Maintenance Warehouse and Office	198	202	180	190	196	136
Material Management	0	0	2	2	2	5
Total	204	214	195	206	212	189

5.5 Public Information

79. The public information function includes labour costs for the communications advisor and costs related to external public information activities.

**Table 5.4: Public Information Expenses
(\$000)**

Public Information	2021	2022	2023	2024	2025	2017
	Actual			Test Period		Approved
Public Information Administration	28	59	24	80	28	31
General Public Information	115	109	111	374	129	118
Total	142	168	134	454	157	149

80. In addition to inflationary increases, Public Information costs are \$0.3 million higher in 2024 due to transitioning public facing signage and materials (billings, website etc.) to Naka Power Utilities (Yellowknife) and raising public awareness of the operating name change. These costs are one-time costs that are not included in the 2025 Test Year.

81. The incremental costs in 2024 are shared costs between Naka-YK and Naka-NWT allocated based on number of customers. The costs include, but are not limited to:

- Design fees for creating a new logo, color scheme, typography, and other visual elements.
- Printing costs for new business cards, letterheads, brochures, signage, and other physical marketing materials featuring the new brand identity.
- Expenses related to redesigning the company website to reflect the new brand, including web development, graphic design, and content creation.
- Costs for updating digital assets such as social media profiles, email templates, digital advertisements, and online banners to align with the new brand identity.
- Expenses for trademark searches, filing for new trademarks or copyrights related to the rebranded assets, and updating legal documents and contracts.

5.6 Customer Accounting

82. The Customer Accounting function includes costs related to work on customer applications, contracts, orders, credit investigations, billing and accounting, meter reading, collections and complaints.

**Table 5.5: Customer Accounting Expenses
(\$000)**

Customer Accounting	2021	2022	2023	2024	2025	2017
	Actual			Test Period		Approved
Supervision	31	29	30	38	51	97
Customer Applications & Service Orders	271	208	190	237	318	237
Customer Billing and Accounting	211	217	183	489	454	313
Revenue Collections	187	207	196	244	327	323
Collection of Delinquent Accounts	133	120	116	144	193	110
Uncollectible Accounts	(3)	8	54	19	20	15
Total	830	790	768	1,172	1,363	1,094

83. In addition to inflationary increases, Customer Accounting costs are forecast to increase by \$0.3 million in 2024 due to an increase in costs related to the annual subscription fees required to operate the new Oracle Customer Cloud Service Solution (CCS) billing software, which was implemented in August 2023. The new CCS system replaced the old ATCO CIS.

84. Naka-YK previously utilized on-premises business application which Naka-YK purchased and capitalized licenses. These licenses were capitalized and amortized over a period of time. As technology advances, more and more systems are cloud-based, like CCS, and are licensed on an annual subscription fee basis, which cannot be capitalized under accounting standards. For additional details on the lifecycle replacement of ATCO CIS with CCS, please refer to Business Case #06: ATCO CIS Replacement. Please refer to Sections 5.8 and 5.11 below for details on the FTE changes with respect to Customer Accounting costs.

5.7 Administrative and General

85. The Administrative and General functions include costs that are forecast in connection with the general administration of Naka-YK's operations or costs that are not specifically assignable to a particular operating function. These costs include both Naka-YK's internal administrative costs and costs related to administrative services provided by ATCO Electric (i.e., Financial Reporting, Regulatory Support, Governance).

**Table 5.6: Administrative and General Expenses
(\$000)**

Administrative and General	2021	2022	2023	2024	2025	2017
	Actual			Test Period		Approved
Administrative	545	666	565	610	705	510
Head Office Fees	335	362	583	577	439	332
Insurance	38	48	61	50	51	19
Employee Expenses	125	160	135	138	142	205
Training and Safety	120	198	286	293	300	208
Relocation and Recruitment Costs	190	4	101	102	105	100
Audit/Legal Fees & Special Studies	54	60	33	125	73	69
Total	1,408	1,497	1,763	1,895	1,814	1,442

5.7.1 Administrative

86. Administrative costs include costs related to administrative labour and expenses as well as information technology expenses. The increase in 2022 administrative costs is mainly due to severance costs related to Naka-YK's Covid-19 Vaccination policy. The decrease in 2023 was mainly due to a reversal of costs over-accrued prior to 2021 on Naka-YK's balance sheet. In addition to the accrual adjustment in 2023, the increase in costs in administrative costs in 2024 and 2025 is filling vacant positions in 2024. The full year's impact is included in the 2025 forecast in addition to inflationary increases. Please refer to Section 5.8 - Labour Costs for details on FTE changes.

5.7.2 Head Office Fees

87. Head Office costs relate to administrative services provided by ATCO Electric (i.e., Financial Reporting, Regulatory Support, Governance). These costs are explained further in Section 5.11 - Related Party Transactions.

5.7.3 Insurance

88. Insurance is higher in 2023 due to a prior period adjustment. Naka-YK is forecasting insurance to remain flat during the Test Period compared to 2023 actuals, excluding the adjustment, with inflationary increases only.

5.7.4 Employee Expenses

89. Naka-YK is forecasting employee expenses to remain flat during the Test Period compared to 2023 actuals, with inflationary increases only.

5.7.5 Training and Safety

90. The increase in training and safety expenses from 2021 to 2022 is primarily due to the easing of health restrictions following the COVID-19 pandemic and a return to activity closer to pre-pandemic in-person levels. Naka-YK is forecasting training and safety costs to remain flat during the Test Period compared to 2023 actuals, with inflationary increases only.

5.7.6 Relocation and Recruitment Costs

91. Naka-YK is forecasting relocation and recruitment costs to remain flat during the Test Period compared to 2023 actuals, with inflationary increases only.

5.7.7 Audit/Legal Fees & Special Studies

92. This category includes expenses for audit and accounting fees, legal fees, and other external consultants. The decrease in 2023 is due to a write-off (credit) of costs accrued prior to 2021. The increase in 2024 is due to additional audit fees related to the 2023 year-end audit that were expensed in 2024.

5.8 Labour Costs

93. Labour costs are calculated based on the rate of pay for each required job class. These labour costs are then distributed to O&M accounts or capital accounts, depending on the nature of the work being performed by staff in that job class.

94. To continue to provide safe and reliable service to customers, Naka-YK will require 20.65 FTEs in 2024 and 21.19 FTEs in 2025. This complement ensures that Naka-YK has the right skillsets available at all times of the year; however, this is the minimum number of FTEs possible to operate the system safely and reliably, recognizing that vacancies or leave time must be filled with contractors or external resources going

forward. The term FTE refers to the number of FTE at the end of a fiscal year. Please refer to Table 5.7 below and Section 5.8, Attachment 1 for the 2024 and 2025 Organization Chart.

95. In addition, Naka-YK will receive services from ATCO Electric, equating to 4.18 FTEs in 2024 and 3.18 FTEs in 2025, further discussed in Section 5.11 - Related Party Transactions.

Table 5.7: Naka-YK FTE

Position Name ¹	2021	2022	2023	2024	2025
	Actual			Test Period	
Vice President, Northern Development	0.21	0.21	0.21	0.21	0.21
Administrative Assistant	0.21	0.21	0.21	0.21	0.21
Senior Manager, Government Relations & Initiatives	-	-	0.33	0.30	0.30
Marketing & Communications	0.25	0.25	0.25	-	-
Director, Operations	-	-	-	0.30	0.30
Manager, Yellowknife	1.00	1.00	1.00	0.75	0.75
Engineer	0.77	0.76	0.61	0.70	0.87
Supervisor, Customer Service & Administration	-	0.80	0.80	0.75	0.75
Customer Billings Support	0.30	0.13	0.13	0.13	0.13
Billing / Accounts Payable Clerks	6.00	6.00	5.00	6.00	6.00
Supervisor, Operations	1.00	1.00	1.00	0.70	0.87
PLT Lead / PLTs	6.00	5.00	6.00	7.00	7.00
Journeyman Electrician	-	1.00	1.00	1.00	1.00
Electrical Technologist	0.70	0.67	0.60	0.60	0.80
Stockkeeper	1.00	1.00	1.00	1.00	1.00
Engineering Assistant	1.00	1.00	1.00	1.00	1.00
Construction Lineman	1.00	-	-	-	-
Total	19.44	19.02	19.14	20.65	21.19

5.8.1 FTE Changes

5.8.1.1 Senior Manager, Government Relations & Initiatives

96. The Senior Manager, Government Relations & Initiatives position was added in 2023 and is a shared position between ATCO Electric Yukon (AEY), Naka-YK and Naka-NWT. This position is required for building relationships with customers and

¹ Refer to Section 5.8, Attachment 1.0 for FTEs that are ATCO Electric Yukon based.

customer representatives, participating in and prioritizing cross-functional policy discussions, and providing support for businesses, as required. Coordinated government relations activities are important in ensuring impacts to Naka-YK and its customers are broadly considered and understood by policymakers, as various levels of government develop policies and regulations that affect the reliability, affordability, and sustainability of electricity. This position ensures that Naka-YK is aware of and increases engagement with GNWT regarding the evolving policies around Energy Transformation to shape the Territories' energy future.

5.8.1.2 Marketing & Communications

97. In 2024, Marketing & Communications support transitioned from Naka-YK to ATCO Electric. Please refer to Section 5.11 – Related Party Transactions for more information.

5.8.1.3 Director, Operations

98. The Director, Operations is a shared position between AEY, Naka-YK, and Naka-NWT and was added in 2024 to support each company's customer service strategy, streamline operations, optimize processes, and improve overall efficiency. Furthermore, this position provides a dedicated senior leader to oversee day-to-day operations, enabling executive management to focus on strategic initiatives.

5.8.1.4 Manager, Yellowknife & Supervisor, Operations

99. The Manager, Yellowknife, and Supervisor, Operations FTEs decrease by 0.25 and 0.3, respectively, for 2024 and 2025 as these positions now support both Naka-YK and Naka-NWT, following the retirement of the Naka-NWT manager and the Hay River Disposition.

5.8.1.5 Engineer

100. The Engineer position is shared with Naka-NWT and is primarily a capital-based FTE. The FTE is expected to fluctuate YoY based on the level of work required in each company. The Test Period forecast assumes 70 percent and 87 percent of the position's

time will be spent on Naka-YK for 2024 and 2025, respectively, based on the current projected workload in that company.

5.8.1.6 Billing / Accounts Payable Clerks

101. In 2024, the number of Billing and Accounts Payable FTEs will return to 6.00 after a vacancy from 2023 is filled in 2024.

5.8.1.7 Power Line Technician Lead and Power Line Technicians (PLTs)

102. The FTEs for PLTs fluctuate YoY due to vacancies. As outlined above, the number of FTEs is based on the number of employees at the end of a fiscal year and does not incorporate changes throughout the year or temporary employees.

5.8.1.8 Electrical Technologist

103. The Electrical Technologist FTEs increase in 2025 by 0.20, due to less support required following the Hay River Disposition and the reallocation of FTE's to support Naka-YK. This increase is offset by the removal of an Engineering Co-op term position in September 2024, which is not included in Table 5.7 above.

5.9 Pension Plan Contributions and Defined Benefit Pension Plan Cash Contribution Deferral Account

104. As a result of actuarial valuations of assets and liabilities, Naka-YK's defined benefit pension funding requirements fluctuate from year to year. The required contributions for 2021-2023 are shown in Table 5.8 below. Consistent with Naka-YK's most recent GRA, the forecast pension expense for the 2024-2025 Test Period is based on the cash basis. Please refer to Schedule 16.1 for additional details.

**Table 5.8: Actual Defined Benefit Pension Cash Contributions
(\$000)**

Year	Defined Benefit (Annual Lump Sum)
2021	4
2022	0
2023	0

105. The forecast for the 2024-2025 Test Period assumes the same defined benefit cash contributions as 2023 of \$nil. Although there are no Naka-YK employees that are currently part of the defined benefit plan or are forecast to be part of the defined benefit plan in the Test Period, an employee could transfer from an affiliate company, such as ATCO Electric, resulting in a requirement for Naka-YK to make cash contributions to the defined benefit plan in 2024 or 2025. Therefore, Naka-YK is seeking approval to continue its existing deferral account to flow through increases or decreases in required cash contributions to the defined benefit pension plan.

106. Naka-YK also has a defined contribution pension plan that applies to employees that were hired after January 1, 1997. The company's contribution rate to the defined contribution plan is six percent and is embedded in the employee's standard labour rates.

5.10 Non-Labour Costs

107. Non-labour costs are forecast in two parts: (i) ongoing operational and administrative activities; and (ii) new programs or projects.

108. In the Test Years, ongoing operational and administrative costs were forecast based on activities required to provide safe and reliable service. Cost drivers were examined and used. For example, costs that closely follow the FTE count (training and staff expenses, etc.) were based on the FTE count. Other drivers used include number of customers and energy consumption. There were also Administrative and General costs that are fixed, regardless of the size of the company (e.g., Audit Fees, Financial Services, etc.).

5.11 Related Party Transaction Costs

109. Naka-YK continues to outsource certain administrative functions to related companies, such as ATCO Electric, to take advantage of the economies of scale associated with obtaining services from a larger utility. The costs for these services are detailed in Schedule 12.0 and are based on a fully allocated cost methodology that does not contain any element of profit or return.

**Table 5.9: Related Party Transaction Costs
(\$000)**

	2021	2022	2023	2024	2025
Related Party Transaction Costs	Actual			Test Period	
Operations & Maintenance					
Powerline Technician	-	23	1	-	-
Brushing Services	-	5	31	-	-
Metering Services	15	14	15	16	16
After Hours Support	6	5	7	9	9
Public Information	28	-	-	35	36
Customer Billing Support	17	17	31	113	115
Various – ATCO North Companies	99	129	139	200	230
Administrative					
Health, Safety & Environment	-	-	-	35	36
Aircraft usage	-	72	63	23	23
Head Office					
Finance & Regulatory Support	286	311	528	529	380
Human Resources	38	40	44	35	46
Governance	12	12	12	12	13
Total	501	628	871	1,006	905

5.11.1 Operations and Maintenance

110. Naka-YK purchases labour support from ATCO Electric for various services, including metering services, after-hours assistance, public information and customer billing support.

111. Public Information support was not received from ATCO Electric in 2022 and 2023 so there were no related party transaction costs associated with public information support in those years. Naka-YK will utilize ATCO Electric support for this work in 2024 and 2025 to ensure coordination with ATCO's corporate marketing and communication plan. As outlined above, Related Party costs are based on a fully allocated cost methodology that does not contain any element of profit or return; therefore, the overall costs of the Communications Specialist do not increase when provided by ATCO Electric.

112. Customer Billing Support costs increase in 2024 due to the implementation of the CCS billing software in August 2023, as outlined in the Customer Billing section above and Business Case #06: ATCO CIS Replacement. Naka-YK requires ongoing support for the system during the project's implementation phase.

5.11.2 Administration

113. Health, Safety and Environment (HSE) costs increase in 2024 for HSE support from ATCO Electric. This support will ensure that Naka-YK focuses on ensuring continued compliance with HSE laws, regulations, and compliance with Occupational Health and Safety (OHS) legislation, including internal and external audits related to OHS management system conformity, National Safety Codes (NSC) and Corporate Stewardship and Sustainability performance reporting compliance. Furthermore, the HSE team provides programs such as Safety Excellence for Supervisors and Managers (SEFSAM), SafeStart, Move Safe, and driver's training.

5.11.3 Head Office

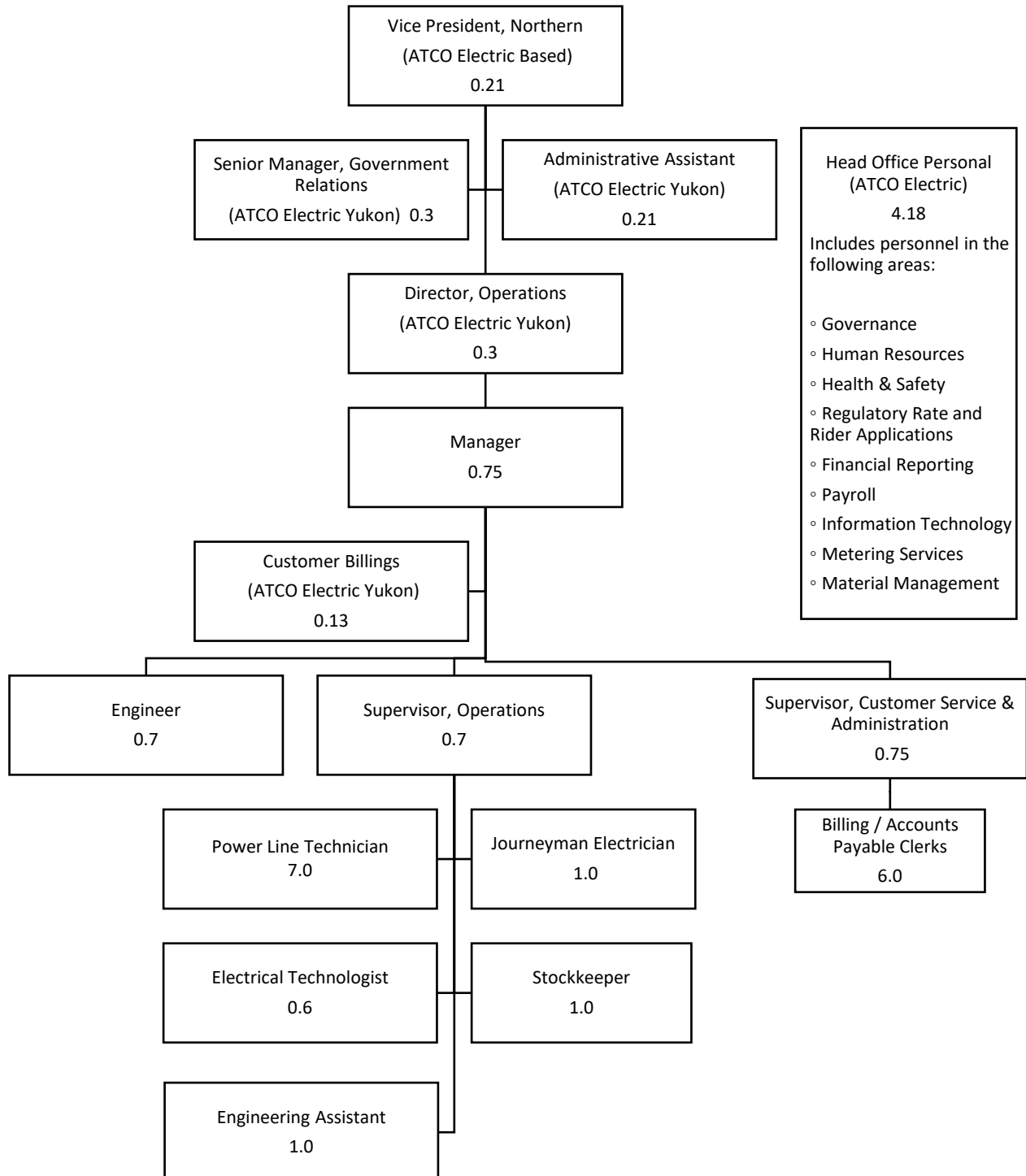
114. Head Office increases in 2023 and 2024 are mainly due to an increase in Financial Reporting and Regulatory support costs. Head office costs in 2021 and 2022 were lower mainly due to vacancies that were filled in 2022. Due to the incremental requirements of the Hay River matters for Naka-NWT, resources that were previously shared have been fully dedicated to each company in 2023 and 2024.

115. These incremental resources supported various ad hoc requirements such as the required changes to reconciliations and reporting related to the new billing system and

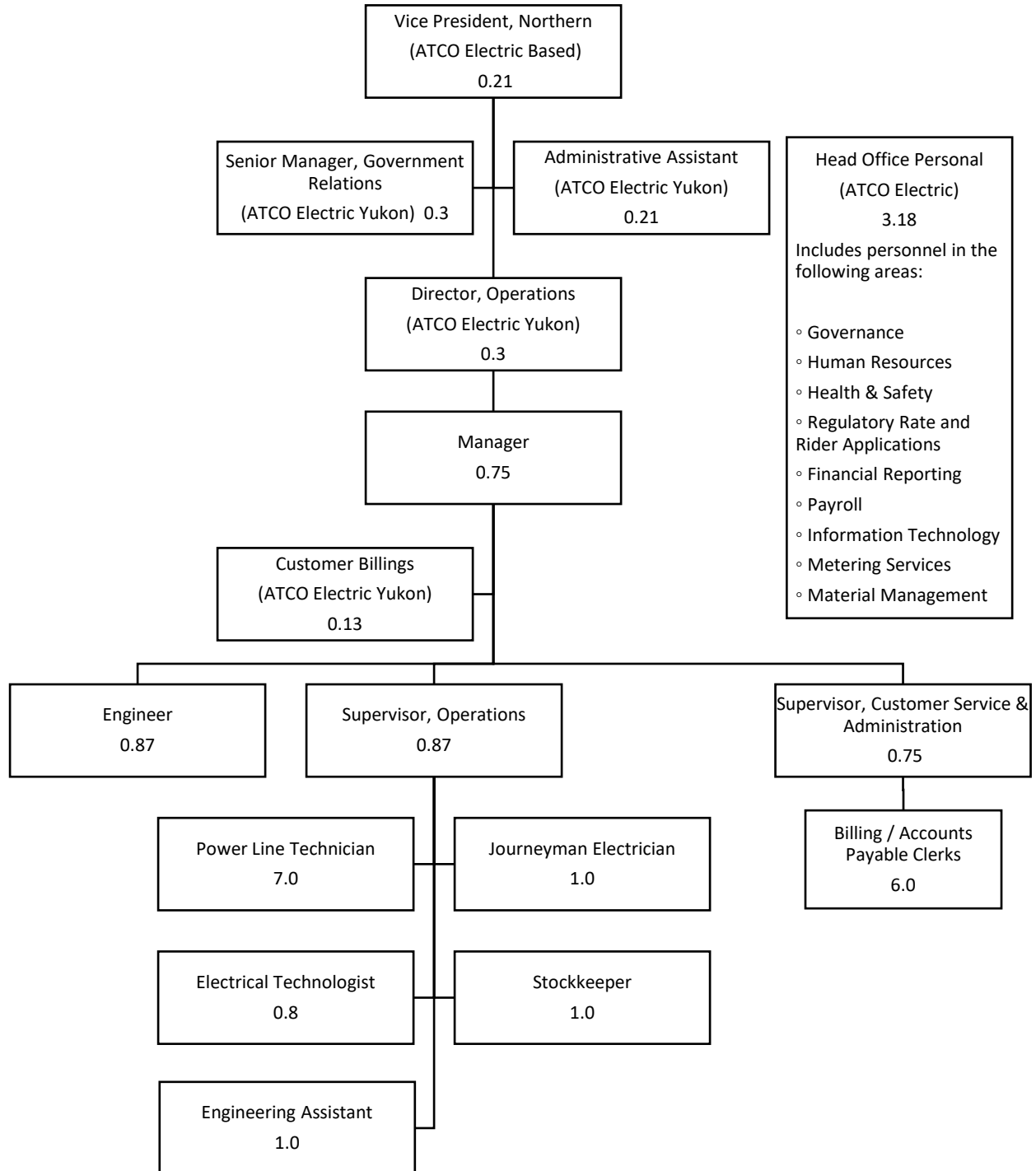
preparations for the Application. In 2025 Head Office support returns to normal levels assuming that the Hay River Disposition matter is closed. Finance and Regulatory support in 2025 is more than 15 percent lower than support included in the 2011-2013 GRA despite inflationary impacts.

116. Please refer to Schedule 12.0 for Related Party Costs in O&M.

Organizational Chart
Naka Power Utilities (Yellowknife) (Naka-YK)
2024



**Organizational Chart
Naka Power Utilities (Yellowknife) (Naka-YK)
2025**



SECTION 6 – DEPRECIATION

6.1 Overview

117. The Depreciation expense included in this Application is outlined in Schedules 6.0 through 6.4 and is summarized below in Table 6.1. Depreciation expense increased in 2023 due to higher depreciable base, with the implementation of new customer billing software (CCS) to replace the obsolete former customer billing software (CIS), offset in 2024 by a decrease in depreciation rates on distribution assets. The Distribution depreciation rate decrease is mainly due to longer average service lives for Poles, Towers and Fixtures (50-years) and Overhead Conductor (45-years).

**Table 6.1: Depreciation Expense
(Schedules 6.0 to 6.4)
(\$000)**

	2021	2022	2023	2024	2025	2017
	Actual			Test Period		Approved
Depreciation Expense	2,675	2,704	2,974	2,785	2,901	2,956

118. The depreciation rates used to calculate actual 2021 through 2023 Depreciation expense were determined using the Board approved depreciation parameters from Naka-YK's 2011-2013 GRA. Given the extended timeframe since Naka-YK has undertaken a Depreciation Study, in preparing this Application, Naka-YK engaged Concentric Advisors, ULC (Concentric) to complete a full Depreciation Study and recommend updated depreciation parameters for the 2024-2025 Test Period based on the asset plant balances as of December 31, 2022 (Concentric Depreciation Study). Naka-YK has calculated the depreciation expense for 2024 and 2025, based on depreciation rates developed using the proposed depreciation parameters as per the recommendations of the Concentric Depreciation Study (please refer to Section 6.1 Attachment 1).

119. In Decision 24-2008 regarding Naka-YK's 2008-2010 GRA, the PUB approved the conversion of Naka-YK's manual meter reading system to an Automatic Meter Reading (AMR) system, known as TWACS (Two-Way Automatic Communication System) in 2010.

The conversion to AMR meters from conventional meters resulted in an under-recovery of the capital costs of the old meters of approximately \$580,000. In the 2011-2013 GRA, Naka-YK proposed to recover the undepreciated amount of \$580,000 over a 10-year period, beginning in 2011, to mitigate the impact on customers, which was approved by the PUB in Decision 13-2011. For the purposes of the Depreciation Study, it was assumed retirement of old conventional meters occurred in 2011.

120. Similarly, in Decision 12-2004 the Board approved Naka-YK's Project Permit Application respecting the conversion of the Yellowknife distribution system to 25 kV over an eight-year period beginning in 2005. The conversion to a 25 kV system resulted in the under-recovery of the capital cost of the old substations and transformers of approximately \$4,030,000. In the 2005-2006 GRA, Naka-YK proposed to recover the undepreciated amount of \$4,030,000 over an extended 15-year period beginning in 2005 to mitigate the impact on customers, which was approved by the PUB in Decision 15-2006. For the purposes of the Depreciation Study, it was assumed the old substations and transformers were retired in 2011 and 2012.

121. The outcome of the Concentric Depreciation Study resulted in a slight reduction in the overall composite depreciation rate (life and net salvage) from 3.95 percent to 3.34 percent and recalculation of the amortization of reserve differences.

122. Naka-YK's current practice is to recalculate the amortization of reserve difference true up amounts only when a full Depreciation Study is completed. Naka-YK is requesting approval in this Application to modify the amortization of reserve difference amounts in both technical updates and full depreciation studies. This change aims to reduce fluctuations in refunded or collected amounts in the future. This change is consistent with direction from the regulator of Naka-YK's affiliate AEY in Board Order 2024-01.



2022 DEPRECIATION STUDY

CALCULATED ANNUAL DEPRECIATION ACCRUAL RATES
APPLICABLE TO ELECTRIC DISTRIBUTION PLANT IN SERVICE

Prepared for Naka Power Utilities (Yellowknife)
September 2024

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September 24, 2024

Naka Power Utilities (Yellowknife)
10035 105th Street
Edmonton, AB, Canada

Attention: Beth Rogers
Director, Regulatory
North of 60

Dear Ms. Rogers.

Pursuant to your request, we have conducted a depreciation study related to the electric distribution system of Naka Power Utilities (Yellowknife) as of December 31, 2022. Our report presents a description of the methods used in the estimation of depreciation and net salvage, the statistical analysis of service life and the summary and detailed tabulations of annual and accrued depreciation.

We gratefully acknowledge the assistance of NAKA-YK personnel in the completion of the review.

Should you have any questions or concerns, please do not hesitate to contact me directly at 587.997.6488.

Yours truly,

Concentric Advisors, ULC

A handwritten signature in blue ink that reads "Amanda Nori".

Amanda Nori
Senior Project Manager

A handwritten signature in blue ink that reads "Donna Bourne".

Donna Bourne
Project Manager

Project: 100505



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SECTION 1

1 STUDY HIGHLIGHTS

Pursuant to Naka Power Utilities (“NAKA-YK” or the “Company”) request, Concentric Advisors, ULC (“Concentric”) conducted a depreciation study related to the NAKA-YK electric distribution and general plant accounts, as of December 31, 2022. The purpose of the study is to determine the annual depreciation accrual rates and amounts applicable to the original cost of electric utility plant, as of December 31, 2022.

The depreciation rates are based on the Straight-Line method using the Equal Life Group procedure and were applied on a Whole Life basis. The calculations were based on attained ages and estimated average service life and forecasted net salvage characteristics for each depreciable group of assets. Variances between the calculated accrued depreciation and the book accumulated depreciation, as at December 31, 2022, are

amortized over the composite remaining life of each account.

Concentric recommends the calculated annual depreciation accrual rates set forth herein apply specifically to electric plant in service, as of December 31, 2022, summarized in Tables 1 and 2, and in Section 5 of this report by account detail. Supporting data and calculations are provided as well.

Finally, this study results in an annual depreciation expense accrual related to the recovery of original cost and net salvage requirement of \$2.76 million, when applied to depreciable plant study balances, as of December 31, 2022, of \$82.6 million (not including the true up related to the amortization of reserve differences). The study results are summarized at an aggregate functional group level as follows:

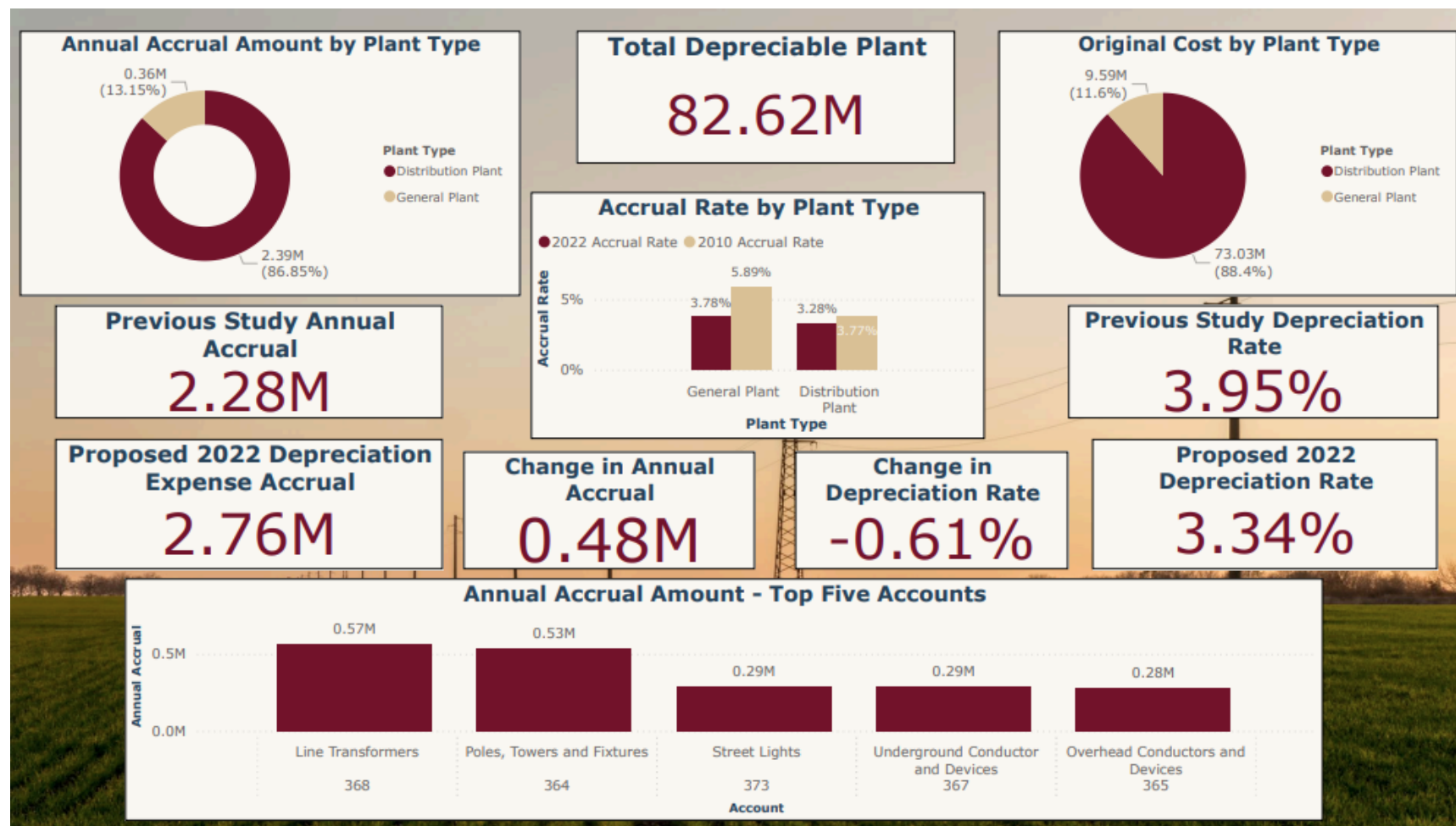
SUMMARY OF ORIGINAL COST, ACCRUAL PERCENTAGES AND AMOUNTS

Plant Group / Accounts	Original Cost	Annual Accrual Rate	Annual Accrual Amount
Distribution Plant	\$73,034,033	3.28%	\$2,394,226
General Plant	\$9,588,118	3.78%	\$362,615
TOTAL DEPRECIABLE PLANT STUDY BALANCE	\$82,622,152	3.34%	\$2,756,842



Naka Power Utilities (Yellowknife)
2022 Depreciation Study

1.1 Executive Summary





SECTION 2

2 BASIS OF THE STUDY

2.1 Scope

Concentric has been retained by NAKA-YK to develop reasonable and appropriate depreciation amounts based on plant in service as of December 31, 2022, and applied specifically to plant in service as of December 31, 2022, as summarized by Tables 1, 1A, 1B, 2, 2A, and 2B. This report also describes the concepts, methods and judgments that underlie the recommended annual depreciation accrual rates. The rates and amounts are based on the Straight-Line method of depreciation, incorporating the ELG procedure applied on a Whole Life basis.

Continued monitoring and maintenance of the accumulated depreciation reserve at the account level is recommended. Concentric has determined an amortization amount to correct the present booked accumulated depreciation variance with the calculated accrued depreciation (“theoretical reserve”) over the composite remaining life of each account. Tables 2, 2A and 2B, presented in Section 5 of the report, sets forth the amortization of the reserve variance at the account level, as of December 31, 2022. This adjustment mechanism, whether determined separately as an amortization amount or incorporated in the calculation of remaining life accruals, is widely accepted throughout North America. Concentric recommends that NAKA-YK continue the use of an amortization account to correct any book accumulated depreciation variance. An explanation of the monitoring of the accumulated depreciation reserve and the calculation of the true-up provision is presented on page 5-2 of this report.

The Straight-Line method, ELG procedure, as described in Section 3.1, is a commonly used depreciation calculation procedure that has been widely accepted in jurisdictions throughout North America and has been approved for use by NAKA-YK by the Northwest Territories Public Utilities Board (“PUB”). Concentric recommends its continued use.

Amortization accounting is used for certain accounts because of the disproportionate plant accounting effort required to process retirements in these accounts. Many regulated utilities in North America have received approval to adopt amortization accounting for these types of accounts.



2.2 Plan of Study

This study is presented in the following order:

Section 1:	Study Highlights, presents a brief summary of the depreciation study and results
Section 2:	Contains statements with respect to the plan and the Basis of the Study
Section 3:	Development of the Required Depreciation Rates, presents descriptions of the methods used and factors considered in the service life study
Section 4:	Calculation of Annual and Accrued Depreciation, presents the methods and procedures used in the calculation of depreciation
Section 5:	Results of Study, presents summaries by depreciable group of annual and accrued depreciation in Tables 1, 1A, 1B, 2, 2A, and 2B.
Section 6:	Retirement Rate Analysis, presents the results of the Retirement Rate Statistics
Section 7:	Net Salvage, presents the results of the Net Salvage Study
Section 8:	Detailed Depreciation Calculations, presents the results of the Detailed Depreciation Calculations
Section 9:	Estimation of Survivor Curves, is an overview of Iowa curves and the Retirement Rate Analysis
Section 10:	Estimation of Net Salvage discusses the methodology used in calculating net salvages

2.3 Depreciation

A full and comprehensive depreciation study includes the following components:

1. supported recommendations regarding Average Service Life estimates for each account;
2. supported recommendations regarding estimated Net Salvage requirements for each account;
3. selection of an appropriate grouping procedure;
4. detailed calculation of the depreciation rate utilizing the estimated Average Service Life and Net Salvage requirements; and
5. a report explaining the procedures followed and justifying the results in a format suitable for submission to senior management and regulatory authorities.

2.4 Information Provided by NAKA-YK

NAKA-YK has provided Concentric with the required information, as of December 31, 2022. This information has been compiled from the plant accounting records and includes the following:

- Current balances by vintage year for each account (aged balances) through December 31, 2022. The balances provide the amount of investment sorted by installation year. This file is only inclusive of plant in service and does not include any retirement information;



- retirement transactions for all accounts through December 31, 2022. The transactions include information regarding the transaction year of the retirement, the installation year of the asset being retired, and the original cost of the asset being retired; and
- cost of removal and gross salvage transactions for all accounts requiring the recovery of net salvage through December 31, 2022. The transactions include information regarding the transaction year of the retirement, the costs associated with the retirement, and any gross salvage proceeds from the sale or reuse of the property.
- NAKA-YK's service territory can be seen below:

Service Areas and Facilities

- Naka Power (NWT)
- Naka Power (Yellowknife)
- Nasittuq Radar Sites
- ATCO Structures Project Sites
- NTPC Power Plants
- 115 kV Lines
- 72 kV Lines
- Distribution Lines





2.5 Data Reconciliation

The above data was reviewed and reconciled to Company control schedules to ensure accuracy and reasonableness in use of the calculations developed in this study. These checks include:

- that the surviving investment by account equals (or can be reconciled to) the Company's gross plant in service and accumulated depreciation ledger balances;
- that the surviving investment in each vintage is not negative. In other words, this check confirms that the sum of retirements from any given vintage have not exceeded the amount of plant additions to the vintage; and
- that any adjusting transactions are properly accounted for within the databases.

The following table provides a comparison of account numbers used in the previous study to the account numbers used in this study.

Previous Account	Previous Title	New Account	New Title
471.00	Land Rights	360.10	Land Rights
477.10	Distribution Substation Equipment	362.00	Station Equipment
486.00	Communication Structures and Equipment	362.10	System Communication & Control
473.00	Poles, Towers and Fixtures	364.00	Poles, Towers and Fixture's
474.00	Overhead Conductor	365.00	Overhead Conductors and Devices
474.10	Services - Overhead	365.10	Overhead Services
475.00	Underground Conductor	367.00	Underground Conductor and Devices
475.10	Services - Underground	367.10	Underground Services
479.10	Transformers	368.00	Line Transformers
476.10	Meters	370.00	Conventional Meters
476.30	AMR Meters	371.00	Automated Meters
478.10	Street Lights	373.00	Street Lights
478.20	Sentinel Lights	373.10	Sentinel Lights
482.00	Structures and Improvements	390.00	Structures and Improvements
483.00	Office Furniture and Equipment	391.00	Office Furniture and Equipment
483.20	Computer Equipment	391.10	Computer Hardware & Voice and Data Network Equipment
496.02	Software – ATCO CIS	391.22	Computer Software and Applications Major (10 YR)
484.01	Vehicles Category 1	392.20	Transportation Equipment, Fleet Vehicles Category 2
484.03	Vehicles Category 3	392.30	Transportation Equipment, Fleet Vehicles Category 3
485.00	Tools and Work Equipment	394.00	Tools, Shop, Garage, Stores and Laboratory Equipment



SECTION 3

3 DEVELOPMENT OF THE REQUIRED DEPRECIATION RATES

3.1 Depreciation

The development of the depreciation calculations requires the input of an average service life, a retirement dispersion curve (i.e., Iowa curve) and net salvage recommendations (i.e., collectively, the depreciation parameters). Additionally, to complete the depreciation calculations, the calculation methods must be established. Specifically, the selection of the depreciation method must establish three types of additional input:

1. the choice of a depreciation method;
2. a basis upon which to apply the method, and
3. in the case of group assets, a procedure to use in grouping the assets.

In this study, the depreciation rates for NAKA-YK have been calculated in accordance with the Straight-Line method, the ELG procedure and applied using the Whole Life technique, with any accumulated depreciation variances trued-up over the composite remaining life of each account.

Depreciation, as applied to depreciable plant, means the loss in service value not restored by current maintenance, incurred in connection with the consumption or prospective retirement of electric plant in the course of service from causes which are known to be in current operation and against which the utility is not protected by insurance. Among the causes to be given consideration are wear and tear, decay, action of the elements, inadequacy, obsolescence, changes in the art and changes in demand and requirements of public authorities.¹

When considering the action of the elements, the average service life and net salvage calculations have considered large catastrophic events that have occurred and impacted the life estimates of utilities across North America. The average service life of utilities has been influenced by events including:

- forest fires;
- earthquakes;
- tornadoes;
- ice storms;
- wind-storms;
- large scale flooding;
- fires;
- lightning;
- intentional actions of third parties;
- hoar frost; and
- other natural forces of nature.

¹ The National Association of Railroad and Utilities Commissioners, Uniform System of Accounts for Class A and B Electric Utilities. The Definition used by the Federal Energy Regulatory Commission for Electric is essentially the same.



Depreciation, as used in accounting, is a method of distributing fixed capital costs, less net salvage, over a period of time by allocating annual amounts to expense. Each annual amount of such depreciation expense is part of that year's total cost of providing electric distribution utility service. Normally, the period of time over which the fixed capital cost is allocated to the cost of service is equal to the period of time over which an item renders service - that is, the item's service life. The most prevalent method of allocation is to distribute an equal amount of cost to each year of service life. This method is known as the Straight-Line method of depreciation.

The calculation of annual and accrued depreciation based on the Straight-Line method requires the estimation of survivor curves and is described in the following sections of this report. The development of the proposed depreciation rates also requires the selection of group depreciation procedures, as discussed below.

3.1.1 Study Depreciation Methods and Procedures

When more than a single item of property is under consideration, a group procedure for depreciation is appropriate because normally all of the items within a group do not have identical service lives but have lives that are dispersed over a range of time. There are two primary group procedures, namely, the Average Life Group ("ALG") and Equal Life Group ("ELG") procedures.

In the ALG Procedure, the rate of annual depreciation is based on the average service life of the group. This rate is applied to the surviving balances of the group's cost. A characteristic of this procedure is that the cost of plant retired prior to average life is not fully recouped at the time of retirement, whereas the cost of plant retired subsequent to the average life is more than fully recouped. Over the entire life cycle, the portion of cost not recouped prior to average life is balanced by the cost recouped subsequent to average life.

In the ELG Procedure, also known as the Unit Summation Procedure, the property group is subdivided according to service life. That is, each equal life group includes that portion of the property which experiences the life of that specific group. The relative size of each equal life group is determined from the property's life dispersion curve. The calculated depreciation for the property group is the summation of the calculated depreciation based on the service life of each equal life unit.

For most accounts, the annual and accrued depreciation were calculated by the Straight-Line Method using the ELG Procedure with an ALG procedure remaining life true-up. For certain General plant accounts, the annual and accrued depreciation are based on amortization accounting. Both types of calculations were based on original cost, attained ages and an estimate of service lives.

The ELG Procedure provides an enhanced matching of depreciation expense to the consumption of service value, and is a commonly used depreciation calculation that has been widely accepted in jurisdictions throughout North America including for NAKA-YK in prior studies. Concentric recommends its continued use.

Amortization accounting is used for certain general plant accounts because of the disproportionate plant accounting effort required in these accounts. Many regulated utilities in North America have received approval to adopt amortization accounting for these accounts.



Continued monitoring and maintenance of the accumulated depreciation reserve at the account level is recommended. Concentric has determined an amortization amount to correct the present variance with the calculated accrued depreciation (theoretical reserve) over the composite remaining life of each account.

The depreciation rates calculated in this study were calculated on the same manner as used in the prior full depreciation study (i.e., using the straight-line method, the ELG Procedure applied on a whole life basis, with an ALG procedure remaining life calculation for the provision for true-up). The vintaged remaining life approach weighs the calculations of remaining life on an allocation of the actual book accumulated depreciation account by the Calculated Accumulated Depreciation (“CAD”) factor determined for each vintage of plant in service. This method is described as a CAD weighted calculation in the Depreciation Systems textbook by Frank K. Wolf and W. Chester Fitch, published by the Iowa State University in 1994 under the title “Adjustments” within the Broad Group Model.

When depreciation rates are calculated utilizing a remaining life technique, the depreciation rate is established by dividing the undepreciated value of each group of assets (after consideration to the net salvage requirements) by the composite remaining life of the group of assets. This calculation is made for each vintage surviving investment as of the date of the study (December 31, 2022), and then composited into a calculation for the account or group as a whole. This calculation requires two estimates:

1. The allocation of actual booked accumulated depreciation for each vintage within each account.

NAKA-YK does not track the booked accumulated depreciation reserve by vintage within each account. Rather, the depreciation expense is calculated at an account level and booked to accumulated depreciation at the same account level. Concentric notes that this is the practice employed by virtually all regulated utilities. As such, the accumulated depreciation by account is allocated within the account to each vintage, on the basis of the calculated accumulated depreciation by vintage. The calculated accumulated depreciation is a function of the estimated survivor curve, the average service life estimate, the net salvage estimates and the achieved age of each vintage.

2. The remaining life of each vintage with each account.

The estimated remaining life of each vintage is a direct function of the achieved age of each vintage, the estimated survivor curve and the average service life estimate.

Once the above two estimates are determined (the allocated booked reserve by vintage and the average remaining life of each vintage), an annual accrual requirement for each vintage is determined by dividing the net book value for each vintage (considering the estimated future salvage requirements) by the average remaining life of the vintage. The annual requirement for each vintage is summed at the account level and divided into the sum of the accounts original cost surviving as of December 31, 2022.



This process results in each vintage's calculated net book value to be depreciated over an appropriate remaining life. This vintage weighting on CAD approach to the remaining life calculations is widely considered to be the most accurate. Concentric agrees and views this methodology as the correct and most appropriate calculation.

3.1.2 Truncation Cuts

It is commonly accepted within depreciation texts that some data points, particularly towards the end of the Iowa curve, may be less reliable due to the lower amount of exposures that the retirements are calculated on. It is widespread practice to place lesser weighting on these data points through the use of a Truncation Cut (or "T-Cut"). This practice is described in detail in the text "Public Utility Depreciation Practices" compiled and edited by the Staff Subcommittee on Depreciation of the Finance and Technology Committee of the National Association of Regulatory Utility Commissioners on page 122 where it is stated:

A T-cut is used to mathematically perform a function that is automatic in visual fitting (i.e., setting a point beyond which the observed data are considered irrelevant or unreliable and are, therefore, ignored).

Careful selection of a T-cut can greatly enhance the reliability of the resulting analysis. Conversely, since the use of a T-cut involves truncating the observed data, careless selection can impair the reliability of subsequent work.

Concentric has utilized T-cuts throughout the Iowa curve selection where necessary. Where a T-cut has been utilized, Concentric has indicated such in Section 3.2.2 below.

3.2 Estimation of Survivor Curves and Net Salvage

3.2.1 Survivor Curves

The use of an average service life or a property group implies that the various units in the group have different lives. Thus, the average life may be obtained by determining the separate lives of each of the units, or by constructing a survivor curve plotting the number of units which survive at successive ages using the retirement rate method of analysis.

The range of survivor characteristics usually experienced by utility and industrial properties is encompassed by a system of generalized survivor curves known as the Iowa type curves. The Iowa curves "...were sorted into three groups according to whether the mode was to the left, approximately coincident with, or to the right of the average-life ordinate. The curves in each of these three groups were then sub-classified in accordance with the height of the mode, taking also into consideration the distance of the mode to the left or right of the average life."² The Iowa curves are described as L-type (i.e., left-moded), R-type (i.e., right-moded), and S-type (i.e., symmetrical). Further development resulted in the introduction of O-type (i.e., origin-moded curves) where the greatest frequency of

² Robley Winfrey, Statistical Analyses of Industrial Property Retirements, Bulletin 125 revised (Engineering Research Institute, Iowa State University, 1935) 65



retirement occurs at the origin, or immediately after age zero. Individual type curves are further depicted with numerical subscripts which represent the relative heights of the modes of the frequency curves within each family.

The program that is used by Concentric for statistical smooth curve fitting utilizes an internal “goodness-of-fit” criterion known as the Residual Measure. This Residual Measure is based on a least squares solution of the differences between the stub curve (or original data points) and smooth survivor curve which also requires a balancing of the differences above and below the stub curve.

The criterion of goodness-of-fit is the mean square of the differences between the points on the stub and fitted smooth survivor curves. The residual measure, or standard error of estimate, shown in the output format is the square root of this mean square. As such, the lower the Residual Measure the better the statistical fit between the analyzed Iowa curve and the observed data points. Concentric follows the widely used practice of fitting Iowa curves up to one percent of the maximum exposures. This standard practice is utilized to minimize the influence of typically small retirements applied to similarly small exposures which may unduly affect the Iowa curve fitting process. However, Concentric will recognize the observed data points beyond the one percent of maximum exposures if it is determined that the additional data is a valid consideration for life recommendation.

A discussion of the general concept of survivor curves and retirement rate method is presented in Section 9.

3.2.2 Survivor Curve and Net Salvage Judgments

The service life and net salvage estimates used in the depreciation and amortization calculations were based on informed professional judgment which incorporated a review of management’s plans, policies and outlook as obtained through interviews with management and subject matter experts, a general knowledge of the electric utility industry, and comparisons of the service life and net salvage estimates from Concentric’s studies of other electric utilities. A detailed peer review is compiled to establish a range of reasonableness for the Iowa curve and net salvage estimate for each account. While the peer review is considered an appropriate test of the estimates, it should never be viewed as definitive. Differences in characteristics such as the account structure, climate conditions, regulatory environment, and area of service must always be considered when reviewing a peer study.

The following utilities with similar characteristics to NAKA-YK were considered in the peer review:

- ATCO Electric Distribution (“ATCO”) – Selected for peer review as ATCO has an extensive distribution network in large municipalities powering north and east central Alberta and is subject to similar forces of retirement and cost of removal. Additionally, the most recent depreciation study was completed by Concentric.
- ATCO Electric Yukon (“AEY”) - Selected for peer review as AEY has distribution networks located throughout the territory and is subject to similar forces of retirement and cost of removal. Additionally, the most recent depreciation study was completed by Concentric.
- BC Hydro – Selected for peer review as BC Hydro has an extensive electric distribution network located throughout the province of British Columbia and is subject to similar forces



of retirement and cost of removal. Additionally, the most recent depreciation study was completed by Concentric.

- ENMAX Power Corporation (“ENMAX”) – Selected for peer review as ENMAX has an extensive distribution network throughout the metro area of the city of Calgary and is subject to similar forces of retirement and cost of removal. Additionally, the most recent depreciation study was completed by Concentric.
- FortisBC Electric – Selected for peer review as FortisBC has a distribution network located in both urban and metro areas of British Columbia and is subject to similar forces of retirement and cost of removal. Additionally, the most recent depreciation study was done by Concentric.
- Manitoba Hydro – Selected for peer review as Manitoba Hydro has a distribution network located in both urban and metro areas of Manitoba and is subject to similar forces of retirement and cost of removal. Additionally, the most recent depreciation study was done by Concentric.
- New Brunswick Power (Distribution) – Selected for peer review as New Brunswick Power has a distribution network located throughout the province of New Brunswick and is subject to similar forces of retirement and cost of removal. Additionally, the most recent depreciation study was done by Concentric.
- Newfoundland and Labrador Hydro – Selected for peer review as Newfoundland and Labrador Hydro have a distribution network located throughout the province of Newfoundland and Labrador and is subject to similar forces of retirement and cost of removal. Additionally, the most recent depreciation study was done by Concentric.
- Northwest Territories Power Corp. (“NTPC”) – Selected for peer review as NTPC has an extensive distribution network in the Northwest Territories and is subject to similar forces of retirement and removal. Additionally, the most recent depreciation study was done by Concentric.

The use of survivor curves, to reflect the expected dispersion of retirement, provides a consistent method of estimating depreciation for electric plant. Iowa type survivor curves were used to depict the estimated survivor curves for the plant accounts not subject to amortization accounting.

The procedure for estimating service lives consisted of compiling historical data for the plant accounts or depreciable groups, analyzing this history through the use of widely accepted techniques, and forecasting the survivor characteristics for each depreciable group on the basis of interpretations of the historical data and the probable future. The forecasting of the probable future included management and operational staff interviews. The combination of the historical experience and the probable future yielded estimated survivor curves from which the average service lives were derived. The recommended depreciation rates are summarized in the applicable tables of this study (Section 5).



The depreciation rates should be reviewed periodically to reflect the changes that result from plant and reserve account activity. A depreciation reserve deficiency or surplus will develop if future capital expenditures vary significantly from those anticipated in this study.

The estimates of net salvage for the mass property accounts were based in part on historical data related to actual retirement activity for the years 1982 through 2022, for most accounts. Gross salvage and cost of removal as recorded to the depreciation reserve account and related to experienced retirements were used. Percentages of the cost of plant retired were calculated for each component of net salvage on an annual, three-year, five-year, and on a cumulative moving average basis.

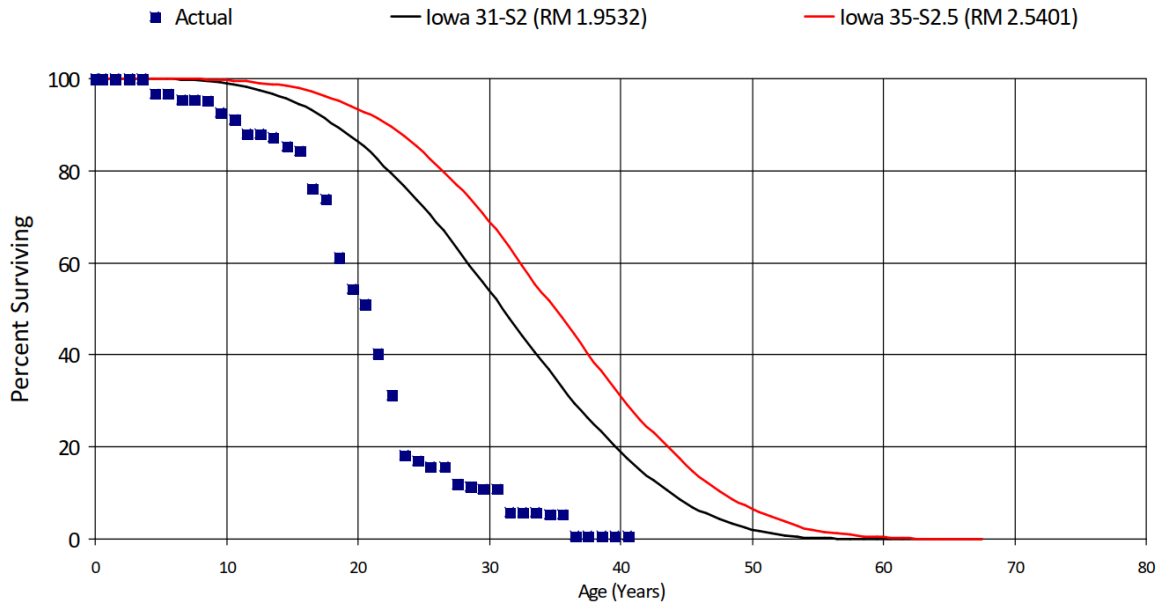
The following discussion presents an overview of the factors considered by Concentric in the determination of the average service life and net salvage estimates for the major accounts studied.



ACCOUNT 362 – STATION EQUIPMENT

Investment \$	Investment %	Previously Approved Curve	Concentric Recommended Curve	Previously Approved Salvage	Concentric Recommended Salvage
\$5,709,144	6.91%	31-S2	35-S2.5	0%	-5%

The investment in Station Equipment is approximately \$5.7 million, representing just under seven percent of the total depreciable plant studied. This account primarily includes substation transformers and other related equipment. The retirements, additions, and other plant transactions, for the period 1949 through 2022, were analyzed by the retirement rate method. This account did not utilize a T-Cut and retirements of \$4,678,616 were recorded for the period 1988 through 2022.

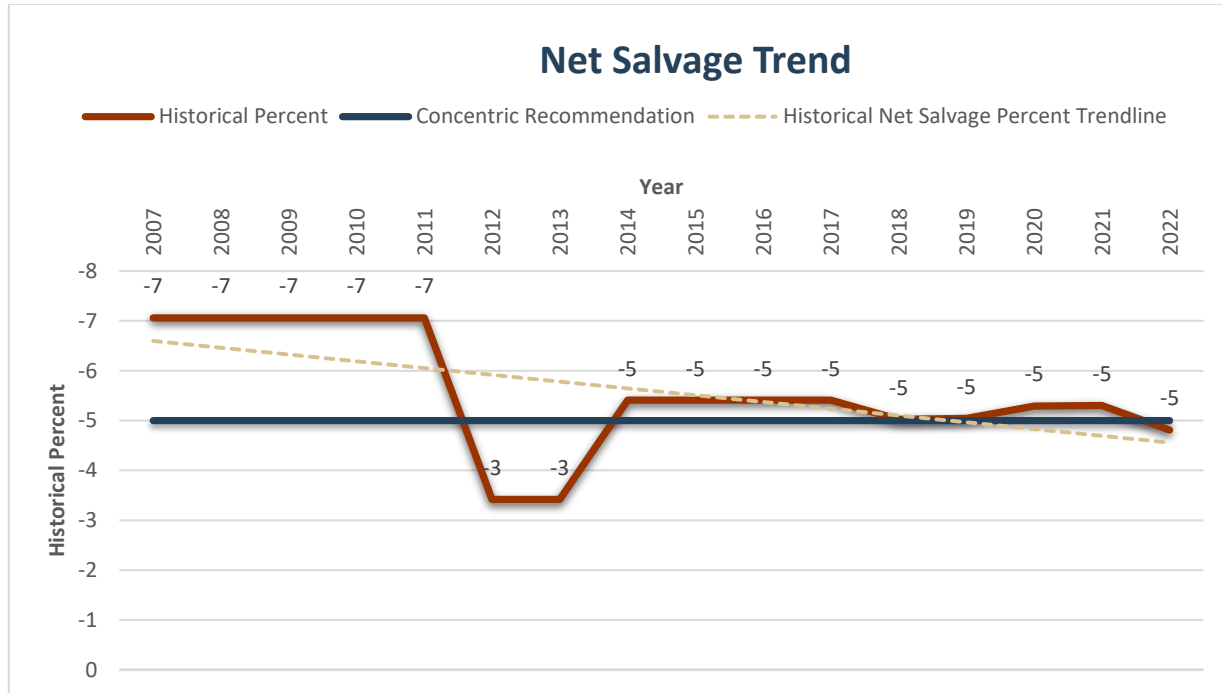


The currently approved Iowa 31-S2 produced a fit with a related residual measure of 1.9532. An Iowa 35-S2.5 produced a fit with a related residual measure of 2.5401, as depicted above and on page 6-2. The fit to the mathematical data with the proposed curve is not as strong as the previously approved curve, however it must be taken into context. The visual pattern of the retirements aligns with the shape of the S2.5 curve and management and operational staff from NAKA-YK indicated that a life extension is reasonable at this time as the assets within this account are generally younger than the average service life. Further, the previous generation of assets were retired earlier than anticipated due to the failure of a number of transformers. Consequently, the actuarial analysis results in a fit that is shorter than the expected life of the assets in service today.

The previous study weighted average age of retirement was 23.67 years and the current weighted average age of retirement is 17.73 years. These numbers do not reflect any of the retirement history of the newer transformers that were installed as part of the conversion from 5 to 25KV. As mentioned



above, conversations with management and operational staff were given more weight for this account than the historical data, and as such, Concentric recommends an Iowa 35-S2.5 to represent the future investment in this account. A review of peer Canadian electric distribution utilities indicates a life of between 25 and 55 years, with a mean average service life recommendation of 43 years. Based on the above discussion and considerations, and on Concentric's experience, an Iowa 35-S2.5 is a reasonable expectation for the investment in this account.



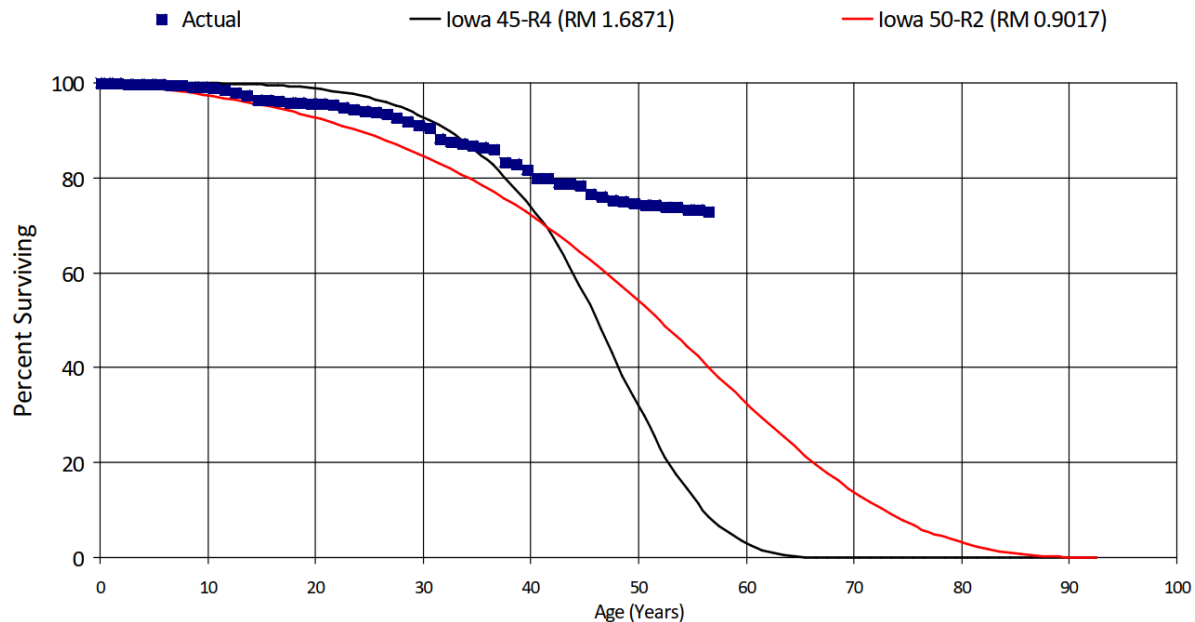
The historical net salvage activity for this account shows a range from negative three to negative seven. The three-year rolling band produces a range from negative two percent to over negative 1,000 percent and the five-year rolling band shows a range from negative two percent to over negative 1,000 percent. The full depth band shows an amount of negative five percent. The previously approved net salvage for this account was zero percent. As seen above, the historical net salvage percentage has been approximately negative five percent since 2014, a period of nine years. Due to the above discussion, Concentric proposes to include a negative five percent net salvage rate in the depreciation calculations for this account.



ACCOUNT 364 – POLES, TOWERS, AND FIXTURES

Investment \$	Investment %	Previously Approved Curve	Concentric Recommended Curve	Previously Approved Salvage	Concentric Recommended Salvage
\$16,826,083	20.37%	45-R4	50-R2	-40%	-45%

The investment in Poles, Towers, and Fixtures is approximately \$16.8 million, representing just over twenty percent of the total depreciable plant studied. This account includes all poles, towers, and fixtures within the NAKA-YK system. NAKA-YK has primarily rock-mounted poles that are not buried beneath the surface due to their unique geographical landscape. The poles within the NAKA-YK system are now primarily CCA-treated wood poles that are fire wrapped. NAKA-YK is using the last of its inventory of penta-treated poles as per government registration decision RD2023-13 they are being phased out. The retirements, additions, and other plant transactions for the period 1945 through 2022 were analyzed by the retirement rate method. Retirements that occurred between 1987 and 2022 were utilized in the development of the depreciation parameters. In conducting the retirement rate analysis, this account included the use of a T-Cut at age 57. As such, retirements of \$1,022,700 were recorded for this period.

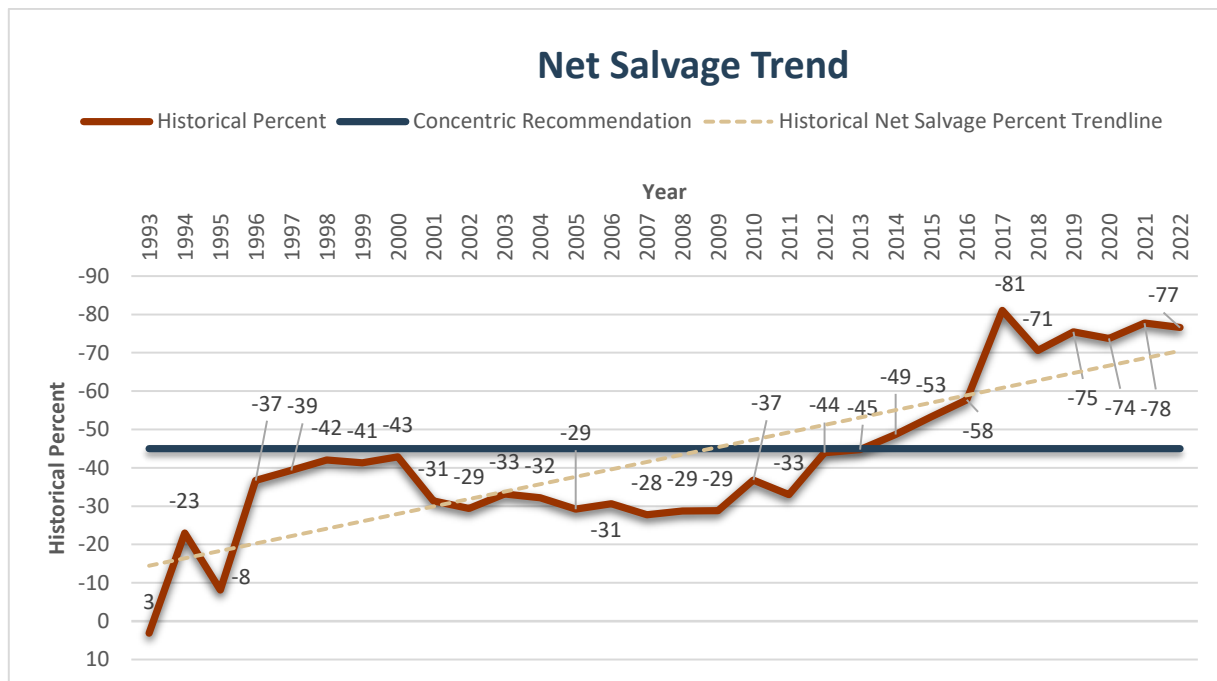


The currently approved Iowa 45-R4 produced a fit with a related residual measure of 1.6871. An Iowa 50-R2 produced a better mathematical fit with a related residual measure of 0.9017, as depicted above and on page 6-8. From approximately age 10 through age 36, \$1,120,328 is retired, which makes up over 78% of the total retirements considered for the analysis, noted above. Through this section of the survivor curve, the Iowa 50-R2 shows a good fit to data.



The previous study weighted average age of retirement was 23.37 years and the current weighted average age of retirement is 22.59 years. Although there is a slight decrease in the weighted average age of retirement since the date of the last study, the additional ten years of retirement data bears a resemblance to the gradual nature of retirements displayed by the R2 Iowa curve. Concentric anticipates that this trend will remain as older vintage assets continue to retire. The average age of retirement has ebbed and flowed although has ultimately trended upwards, since the time of the last study, moving from 32.25 years in 2011 to 36.35 years in 2022.

Conversations with NAKA-YK management and operations staff indicated that the recommended 50-year life for this account is a good representation of the historical life and future expectations. A review of peer Canadian electric distribution utilities indicates a life of between 45 and 60 years, with a mean average service life recommendation of 50 years. Based on the above discussion and considerations, and on Concentric's experience, an Iowa 50-R2 is a reasonable expectation for the investment in this account. As such, Concentric recommends an Iowa 50-R2 to represent the future expectations for the investment in this account.



The historical net salvage activity for this account shows a range from positive three to negative 81 percent. The three-year rolling band produces a range from four percent to negative 503 percent and the five-year rolling band shows a range from four percent to negative 422 percent. The full depth band shows an amount of negative 77 percent. The previously approved net salvage for this account was negative 40 percent. Since the previous study, the historical percentages have shown over the negative 40 percent previously used in the depreciation calculations in all years except 2015 and 2016, with the most recent years exceeding the current recommendation of negative 45 percent.



Costs associated with the removal of these assets may differ from NAKA-YK's peer group as there are some areas that are harder to get to, based on the time of year.

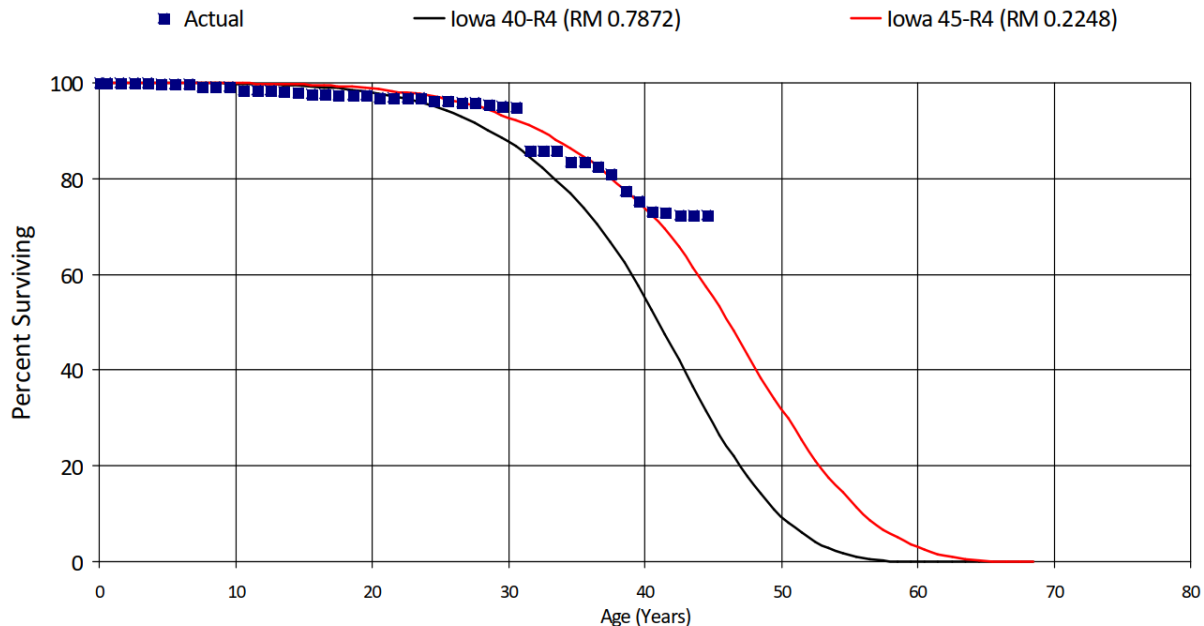
Discussions with management and operations staff indicated that there are situations where helicopters or thawing equipment are required to remove the assets from service. This results in potential higher costs of removal than peers that have easier access to their assets, or a more temperate climate. The peers for this account are between negative five and negative 65 percent. Due to the above discussion, and on Concentric's experience, a change to a negative 45 percent net salvage rate is proposed for this account.



ACCOUNT 365 – OVERHEAD CONDUCTORS AND DEVICES

Investment \$	Investment %	Previously Approved Curve	Concentric Recommended Curve	Previously Approved Salvage	Concentric Recommended Salvage
\$8,668,021	10.49%	40-R4	45-R4	-35%	-40%

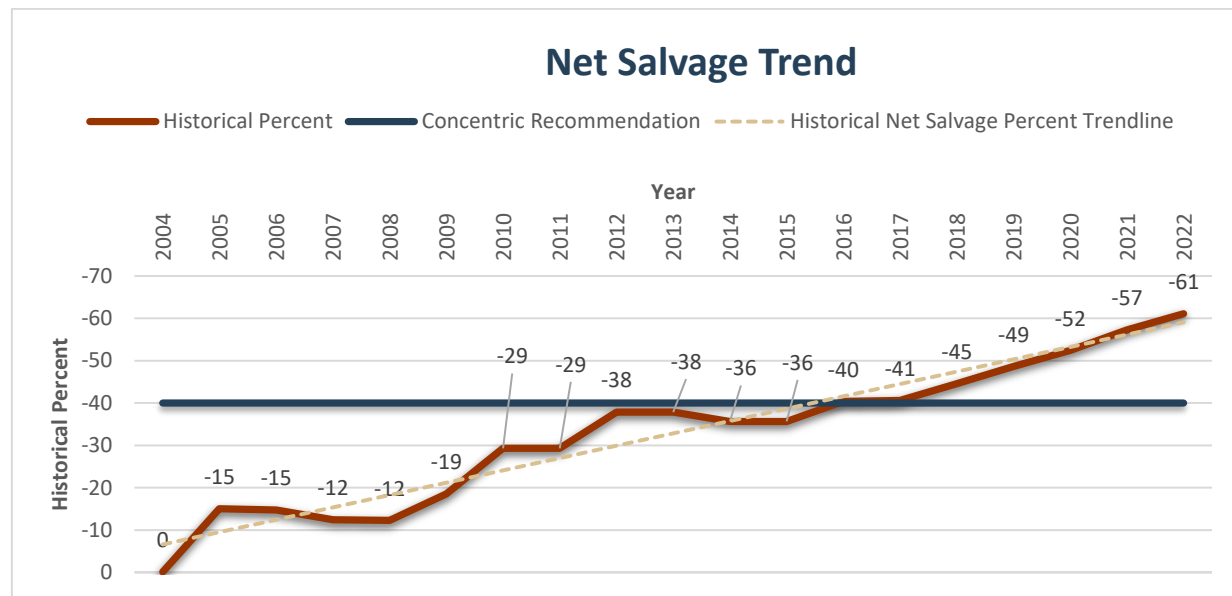
The investment in Overhead Conductors and Devices is approximately \$8.7 million, representing 10.5 percent of the total depreciable plant studied. This account includes all overhead conductor in the NAKA-YK system and also contains switches and reclosers. The retirements, additions, and other plant transactions for the period 1950 through 2022 were analyzed by the retirement rate method. Retirements that occurred between 1990 and 2022 were utilized in the development of the depreciation parameters. In conducting the retirement rate analysis, this account included the use of a T-Cut at age 45. As such, retirements of \$379,360 were recorded for this period.



The currently approved Iowa 40-R4 produced a related residual measure of 0.7872, whereas the proposed Iowa 45-R4 produced a stronger mathematical fit with a related residual measure of 0.2248, as depicted above and on page 6-11. Both curves present strong visual fits to the data through the age 25 interval, however after that point, the Iowa 45-R4 starts to present a better alignment with the experienced retirements. The previous study weighted average age of retirement was 23.66 years compared to the current study weighted average age of retirement of 21.91 years. It is noted that when NAKA-YK converted its system from 5KV to 25KV, the conductor size was increased to align with the larger voltage. This has resulted in less time with peak load flowing through the conductor, leading to a stabilization of the life expectancy compared to the old 5KV conductor running more frequently at peak load. As such, it is reasonable to increase the average service life of this account from the currently approved 40 years.



Conversations with NAKA-YK operational and management staff indicated that the recommended 45-year life for this account is a good representation of the historical life and future expectations. A review of peer Canadian electric distribution utilities indicates a life of between 40 and 65 years, with a mean average service life recommendation of 54 years. Based on the above discussion and considerations, and on Concentric's experience, an Iowa 45-R4 is a reasonable expectation for the investment in this account. As such, Concentric recommends an Iowa 45-R4 to continue to represent the future expectations for the investment in this account.



The currently approved net salvage percentage for this account is negative 35 percent. The historical net salvage activity for this account shows a range from zero to negative 61. The three-year rolling band produces a range from negative one percent to over negative 1,000 percent and the five-year rolling band shows a range from negative one percent to over negative 1,000 percent. The full depth band shows an amount of negative 61 percent. The highest cost of removal recorded occurred in the most recent transaction year, driving the increase from negative 57 to negative 61 percent. As seen above, the historical trend of recorded net salvage activity has been steadily climbing since 2008, with only two anomalous years in the period between 2008 and 2022. In the last five years, the average costs of removal are roughly 28 percent higher than the most recent five-year span of costs of removal at the time of the last study. This aligns with the recommendation to move from a negative 35 to a negative 40 percent net salvage rate as part of the depreciation calculations. There have been minimal records of gross salvage for this account, which is expected for the type of assets in this account and their typical scrap or resale value.

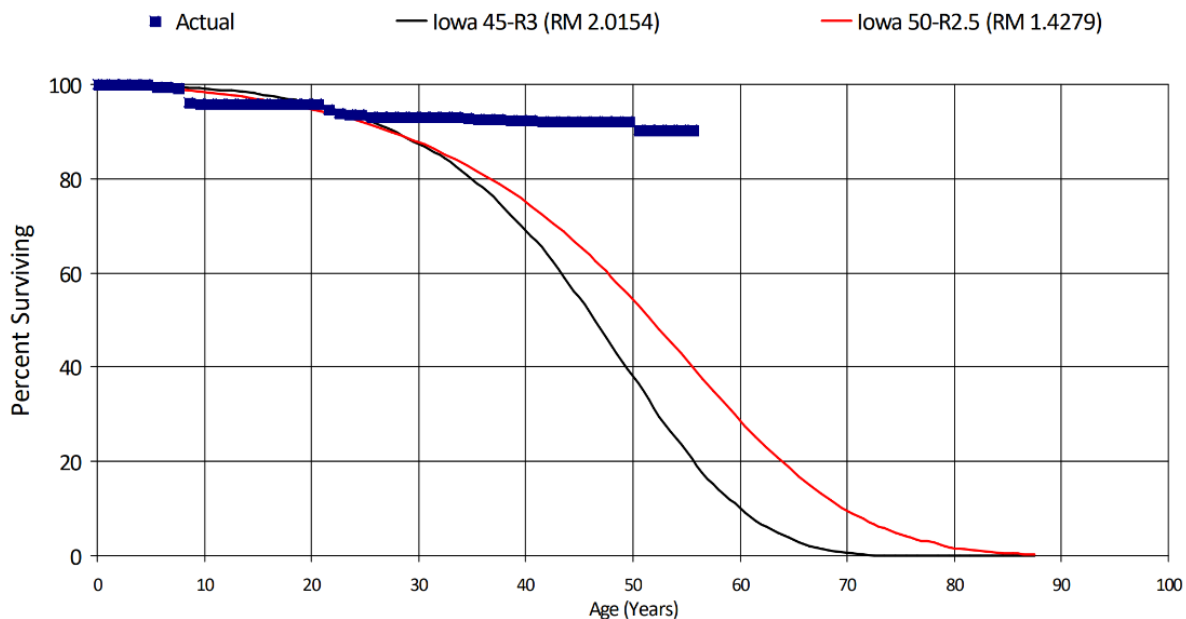
The peer group for this account has net salvage recommendations between negative five and negative 65 percent, placing NAKA-YK reasonably within that range. Due to the above discussion and Concentric's experience, a change to a negative 40 percent net salvage rate is proposed for this account.



ACCOUNT 365.10 – OVERHEAD SERVICES

Investment \$	Investment %	Previously Approved Curve	Concentric Recommended Curve	Previously Approved Salvage	Concentric Recommended Salvage
\$1,970,298	2.38%	45-R3	50-R2.5	0%	-5%

The investment in Overhead Services is approximately \$2.0 million, representing 2.4 percent of the total depreciable plant studied. Currently, the split between overhead and underground services within the NAKA-YK system is approximately 70 percent overhead and 30 percent underground. This split is not expected to continue in the same ratio, as the services going into new subdivisions in Yellowknife are typically underground where possible. The retirements, additions, and other plant transactions, for the period 1945 through 2022, were analyzed by the retirement rate method. Retirements that occurred between 2001 and 2022 were utilized in the development of the depreciation parameters. In conducting the retirement rate analysis, this account included the use of a T-Cut at age 56. As such, retirements of \$84,060 were recorded for this period.

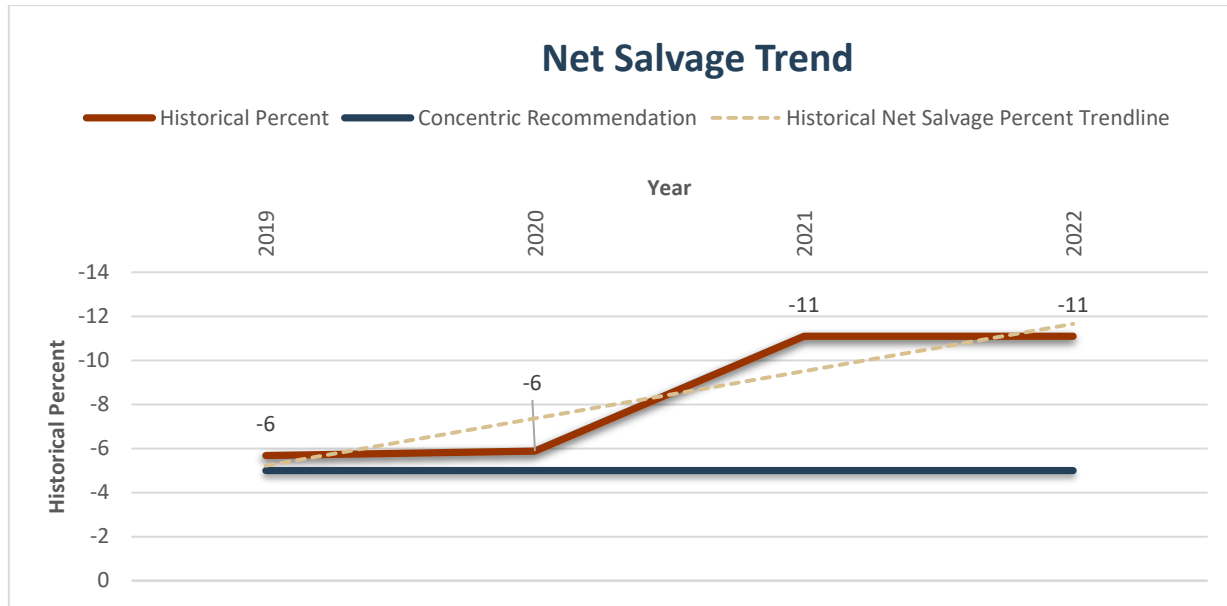


The currently approved Iowa 45-R3 produced a related residual measure of 2.0154. The proposed Iowa 50-R2.5 produced a better mathematical fit with a related residual measure of 1.4279, as depicted above and on page 6-14. The previous study weighted average age of retirement was 18.83 years and the current weighted average age of retirement in this account is 11.29 years. The reduction in average age at retirement must be considered relative to the minimal dollars that have retired to date in order to avoid overreacting to the decrease in average age at retirement.

Conversations with NAKA-YK operational and management staff indicated that the recommended 50-year life for this account is a good representation of the historical life and future expectations. A review of peer Canadian electric distribution utilities indicates a life of between 45 and 55 years, with



a mean average service life recommendation of 50 years. Based on the above discussion and considerations, and on Concentric's experience, an Iowa 50-R2.5 is a reasonable expectation for the investment in this account. As such, Concentric recommends an Iowa 50-R2.5 to represent the future expectations for the investment in this account.



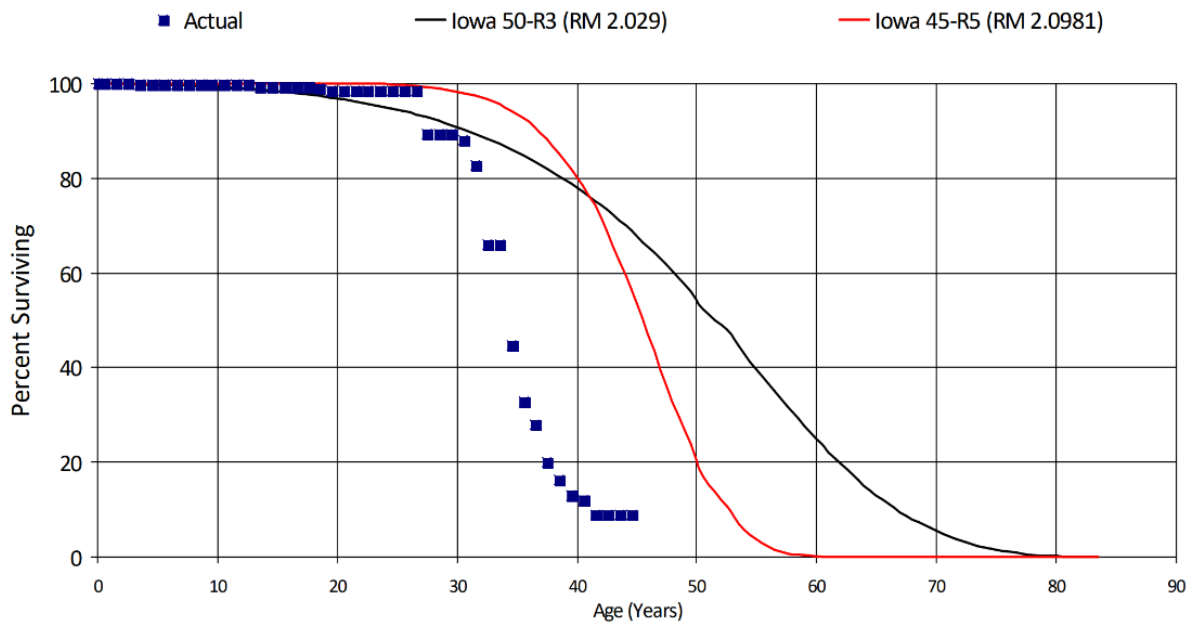
This account currently has an approved net salvage of zero percent. At the time of the last study, there were only retirements recorded to this account, and no costs of removal. Since 2019, there have now been costs of removal in three of the four transaction years. This account has shown a range in the historical net salvage activity of negative six to negative 11 percent since 2019, as seen above. The three-year band has ranged from negative nine percent to negative 122 percent. The five-year band has ranged from negative eight percent to negative 16 percent. The full depth band indicates negative 11 percent. A review of peer Canadian electric distribution utilities indicates a range of zero to negative eight percent. As such, Concentric recommends that a negative 5 percent net salvage estimate be used in the depreciation calculations within this study.



ACCOUNT 367 – UNDERGROUND CONDUCTOR AND DEVICES

Investment \$	Investment %	Previously Approved Curve	Concentric Recommended Curve	Previously Approved Salvage	Concentric Recommended Salvage
\$11,172,967	13.52%	50-R3	45-R5	-5%	-15%

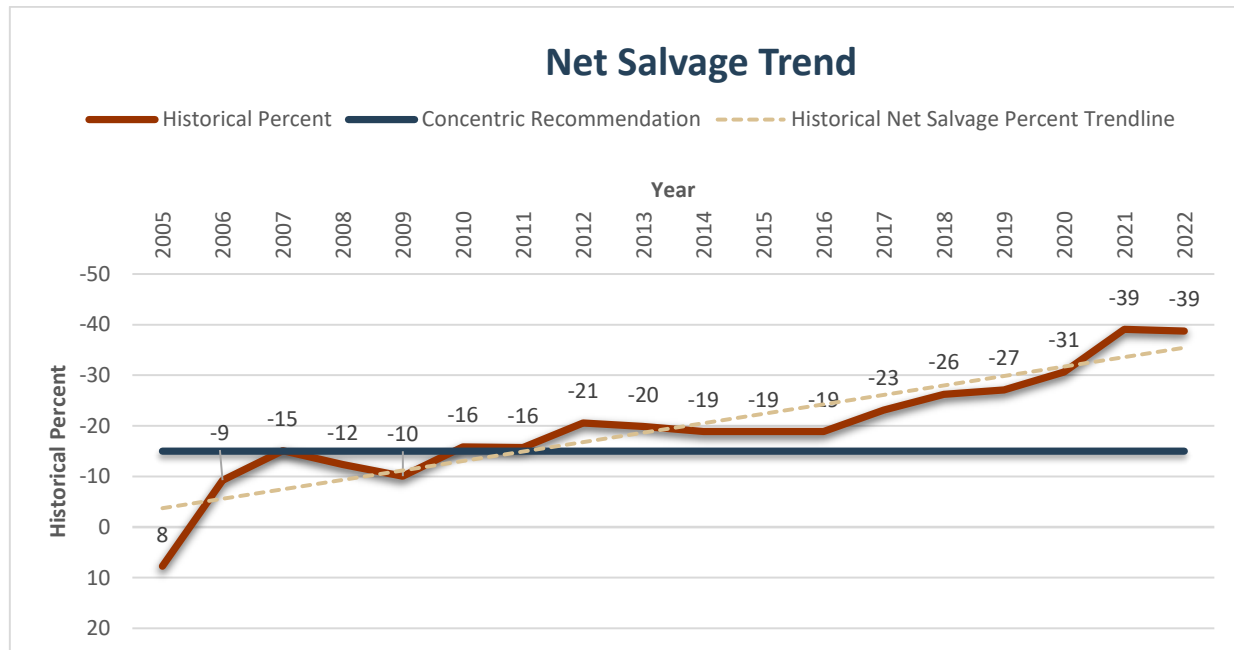
The investment in Underground Conductor and Devices is approximately \$11.2 million, representing 13.5 percent of the total depreciable plant studied. This account includes the underground conductor within the NAKA-YK system, as well as all associated devices. NAKA-YK runs all their underground conductor through conduit to protect the conductor, which is also in this account. The retirements, additions, and other plant transactions, for the period 1971 through 2022, were analyzed by the retirement rate method. Retirements that occurred between 1992 and 2022 were utilized in the development of the depreciation parameters. In conducting the retirement rate analysis, this account included the use of a T-Cut at age 45. As such, retirements of \$230,314 were recorded for this period.



The currently approved Iowa 50-R3 produced a fit with a related residual measure of 2.0290. An Iowa 45-R5 produced a fit with a related residual measure of 2.0981, as depicted above and on page 6-17. The mathematical fit to the data favours the currently approved curve, however the visual fit to the Iowa 50-R3 no longer fits the survivor curve as well as it did at the time of the last study. Knowing that the retirement experience in this account now shows large retirement ratios between ages 30 and 40, Concentric has adjusted the recommendation to accommodate this. This pattern of experienced retirements aligns with the retirement pattern that the R5 mode curve forecasts, more so than the R3 curve. Although the recommended 45-year life is not a good fit to the historical data, Concentric recommends a policy of moderation and gradualism in the selection of the average service life for this account. As such, Concentric recommends a reduction of 5 years at this time.



Discussions with NAKA-YK management and operations staff indicated that the 45-year average service life recommendation is a good representation of the historical life and future expectations. A review of peer Canadian electric distribution utilities indicates a range of between 30 to 58 years, with a mean average service life recommendation of 46 years. Based on the above discussion and considerations, and on Concentric's experience, an Iowa 45-R5 is a reasonable expectation for the investment in this account. As such, Concentric recommends an Iowa 45-R5 to represent the future expectations for the investment in this account.



This account has a currently approved net salvage of negative five percent. This account has shown a range in the historical net salvage activity of positive eight percent to negative 39 percent since 2005, as seen above. The three-year band has ranged from positive eight percent to negative 243 percent. The five-year band has ranged from positive eight percent to negative 136 percent. The full depth band indicates negative 39 percent. A review of peer Canadian electric distribution utilities indicates a range of negative 10 percent to negative 30 percent. There have been consistent costs of removal recorded in most years dating back to 2005, which is driving the increases seen in the graph above, up to the current negative 39 percent.

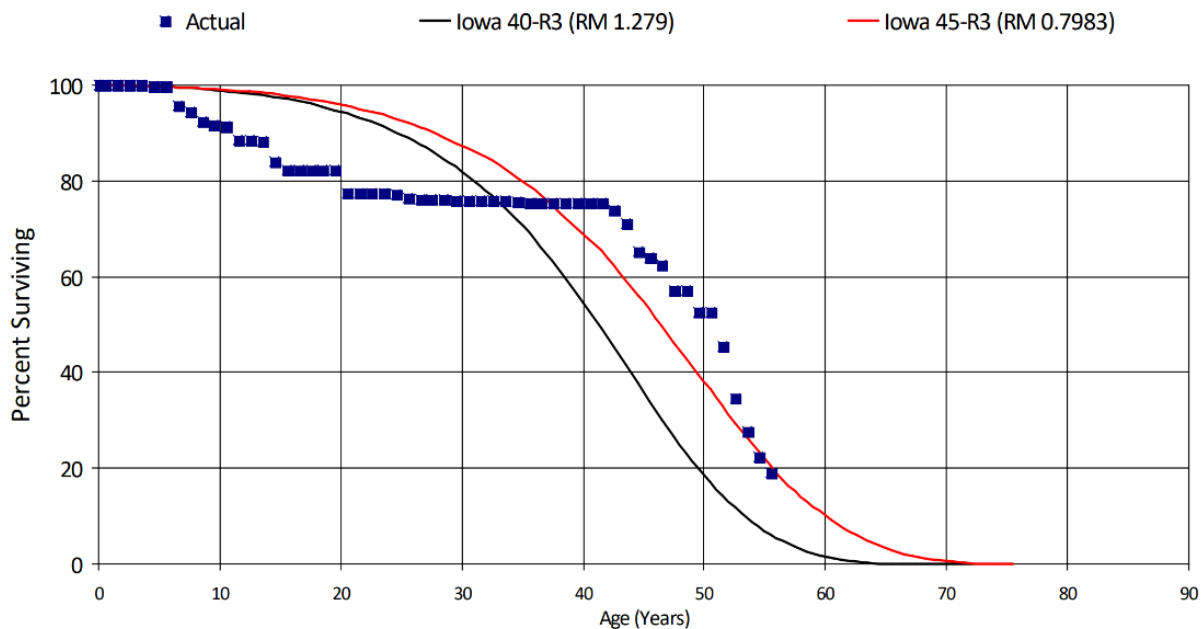
It is typically more expensive to remove assets in this account than some of NAKA-YK's peers. It is the policy of NAKA-YK to remove conduit and conductor whenever possible, which may not be the norm at some peer utilities. As such, Concentric recommends that a negative 15 percent net salvage estimate be used in the depreciation calculations within this study, noting that a further increase may be necessary in the future.



ACCOUNT 367.10 – UNDERGROUND SERVICES

Investment \$	Investment %	Previously Approved Curve	Concentric Recommended Curve	Previously Approved Salvage	Concentric Recommended Salvage
\$1,163,643	1.41%	40-R3	45-R3	0%	-10%

The investment in Underground Services is approximately \$1.2 million, representing 1.4 percent of the total depreciable plant studied. This account contains all underground services within the NAKA-YK system. As mentioned in the writeup for Account 365.10, all new subdivisions within Yellowknife will have underground services that will cause this account to grow in the future. The retirements, additions, and other plant transactions, for the period 1945 through 2022, were analyzed by the retirement rate method. Retirements that occurred between 2001 and 2022 were utilized in the development of the depreciation parameters. In conducting the retirement rate analysis, this account included the use of a T-Cut at age 56. As such, retirements of \$111,219 were recorded for this period.

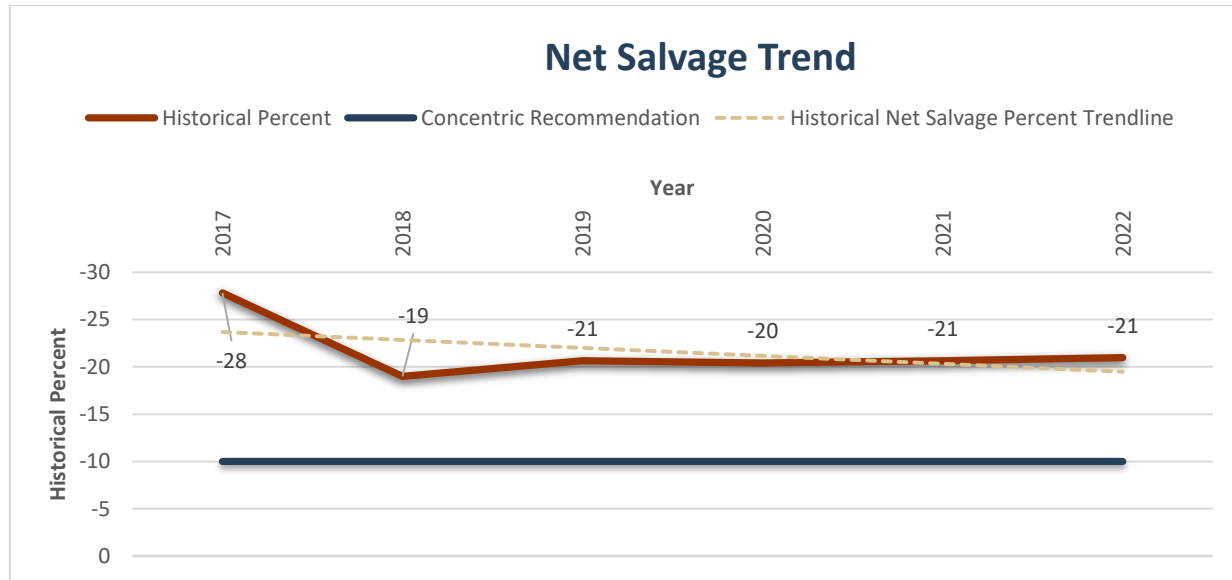


The currently approved life parameter for this account is an Iowa 40-R3 with a fit producing a residual measure of 1.2790. The recommended Iowa 45-R3 produces a better mathematical fit with a residual measure of 0.7983 as seen above and on page 6-20. The visual fit to data is stronger in the Iowa 45-R3 as well, particularly through the section from roughly 80 percent of plant surviving past 20 percent surviving. The previous study weighted average age of retirement was 17.95 years and the current weighted average age of retirement is 26.12 years.

Discussions with NAKA-YK management and operations staff indicated that the 45-year average service life recommendation is a good representation of the historical life and future expectations. A review of peer Canadian electric distribution utilities indicates a range of between 40 to 55 years,



with a mean average service life recommendation of 47 years. Based on the above discussion and considerations, and on Concentric's experience, an Iowa 45-R3 is a reasonable expectation for the investment in this account. As such, Concentric recommends an Iowa 45-R3 to represent the future expectations for the investment in this account.



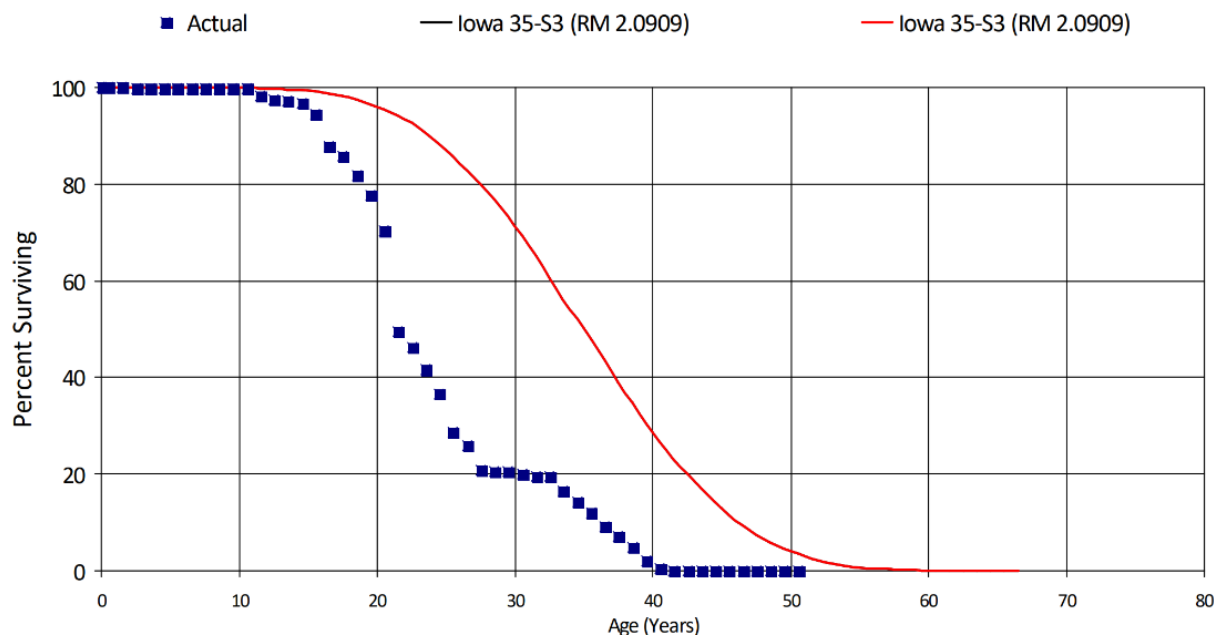
This account currently has an approved net salvage of zero percent. As seen in the graph above, this account has shown a narrow range in the historical net salvage activity since 2004. The range has been from negative 19 percent to negative 28 percent. As seen on page 7-7 of this report, the three-year band has ranged from negative eight percent to negative 41 percent and the five-year band has ranged from negative 10 percent to negative 36 percent. The full depth band indicates negative 21 percent. A review of the peer Canadian electric distribution utility that has this account indicates negative eight percent. As such, Concentric recommends that a negative 10 percent net salvage estimate be used in the depreciation calculations within this study.



ACCOUNT 368 – LINE TRANSFORMERS

Investment \$	Investment %	Previously Approved Curve	Concentric Recommended Curve	Previously Approved Salvage	Concentric Recommended Salvage
\$16,198,083	19.61%	35-S3	35-S3	-30%	-15%

The investment in Line Transformers is approximately \$16.2 million, representing just under twenty percent of the total depreciable plant studied. The assets in this account relate to line transformers within the NAKA-YK system responsible for stepping the voltage down to each house. There was a retirement program performed in the early 2010's to convert the voltage on the NAKA-YK system from 5KV to 25KV. Currently, no further voltage conversion is expected in the future. The retirements, additions, and other plant transactions, for the period 1941 through 2022, were analyzed by the retirement rate method. This account did not utilize a T-Cut and retirements of \$3,097,824 were recorded for the period 1990 through 2022.

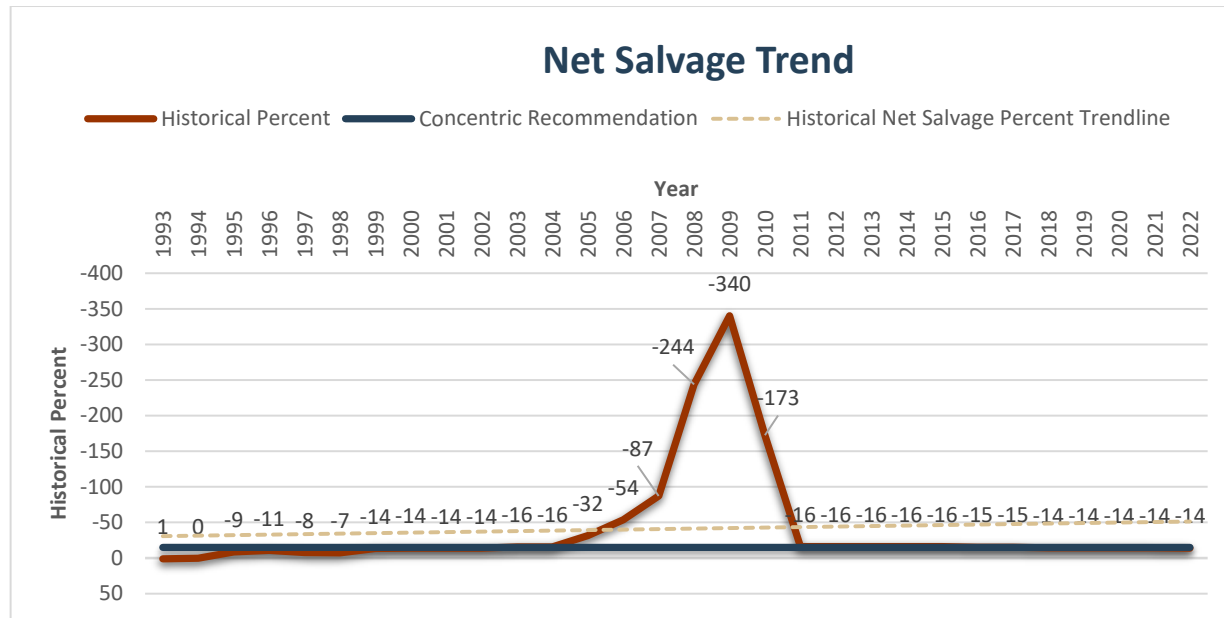


The currently approved and proposed life parameter for this account is an Iowa 35-S3, which provides a fit to the observed data with a residual measure of 2.0909 as depicted above and on page 6-23. While the actuarial analysis indicates that a life shorter than the recommended 35-S3 may be appropriate, this is primarily due to the voltage conversion, and some earlier age transformers being retired. It is anticipated that the assets currently in service will have a life longer than that experienced by the previous generation of assets. The previous study weighted average age of retirement was 21.28 years and the current weighted average age of retirement is 21.17 years.

Discussions with NAKA-YK management and operations staff indicated that the 35-year average service life recommendation is still a good representation of the historical life and future



expectations. A review of peer Canadian electric distribution utilities indicates a range of between 28 to 50 years, with a mean average service life recommendation of 40 years. Based on the above discussion and considerations, and on Concentric's experience, an Iowa 35-S3 is a reasonable expectation for the investment in this account. As such, Concentric recommends an Iowa 35-S3 to continue to represent the future expectations for the investment in this account.



This account currently has an approved net salvage of negative 30 percent. This account has shown a wide range in the historical net salvage activity since 1993. As seen in the graph above, the range has been from one percent to negative 340 percent. As shown on page 7-8 of this report, the three-year band has ranged from positive 101 percent to negative 414 percent. Also shown on page 7-8 of this report, the five-year band has ranged from positive 113 percent to negative 120 percent. The full depth band indicates negative 14 percent.

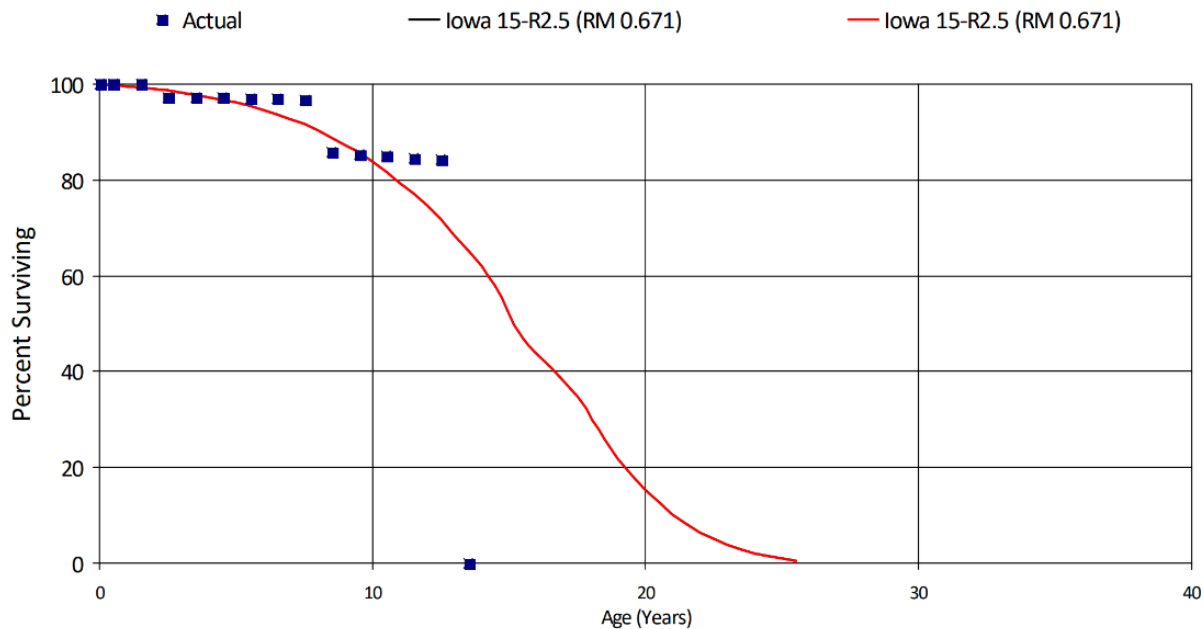
The data listed above provides an overarching look at this account's history, however, looking at the data since the voltage conversion and incorporating the comments from management and operations staff as part of Concentric's judgement process, a reduction in the negative net salvage seems appropriate at this time. In the period since the last study, there has been an increase in the gross salvage recorded to this account, and a reduction of the costs associated with removal. Looking at the last three- and five-year bands, they are both showing positive net salvage due to the gross salvage recorded in 2018. This is also not a trend Concentric expects to continue. A review of peer Canadian electric distribution utilities indicates a range of positive 5 percent to negative 50 percent. Considering the above results and conversations with NAKA-YK staff, Concentric considers a decrease to negative 15 percent reasonable. Concentric views that negative 15 percent is an appropriate net salvage recommendation to implement within the depreciation calculations in this study.



ACCOUNT 371 – AUTOMATED METERS

Investment \$	Investment %	Previously Approved Curve	Concentric Recommended Curve	Previously Approved Salvage	Concentric Recommended Salvage
\$2,443,029	2.96%	15-R2.5	15-R2.5	0%	0%

The investment in Automated Meters is approximately \$2.4 million, representing just under three percent of the total depreciable plant studied. NAKA-YK switched to AMR digital meters in 2012, from conventional analog meters. These meters are read through the power line once a month. They are also pulled for testing at 10 years to comply with CSA standards. The retirements, additions, and other plant transactions, for the period 2006 through 2022, were analyzed by the retirement rate method. This account did not utilize a T-Cut and retirements of \$390,936 were recorded for the period 2012 through 2022.



The currently approved and proposed life parameter for this account is an Iowa 15-R2.5 which provides a strong fit to the observed data with a residual measure of 0.6710, as seen above and on page 6-26. Concentric expects that this account will behave in a similar fashion to other peer electric distribution utilities that have AMR digital meters in use. The weighted average age of retirement in this study is 6.95 years. It is reasonable to expect that there may be retirements frequently occurring in this account over the next five years, as the largest investment in this account is currently 12 years old. As such, a more robust indication of the average service life of these assets may be known at the next depreciation study. Consequently, Concentric recommends maintaining the currently approved average service life at this time.



Discussions with NAKA-YK management and operations staff indicated that the 15-year average service life recommendation is still a good representation of the historical life and future expectations. The Iowa 15-R2.5 is well within the band of Canadian electric utility peers used for comparison, where the average service life ranges from 15 to 18 years, with a mean average service life recommendation of 16 years. Based on the above, Concentric recommends the Iowa 15-R2.5 to represent the future expectations for the investment in this account.

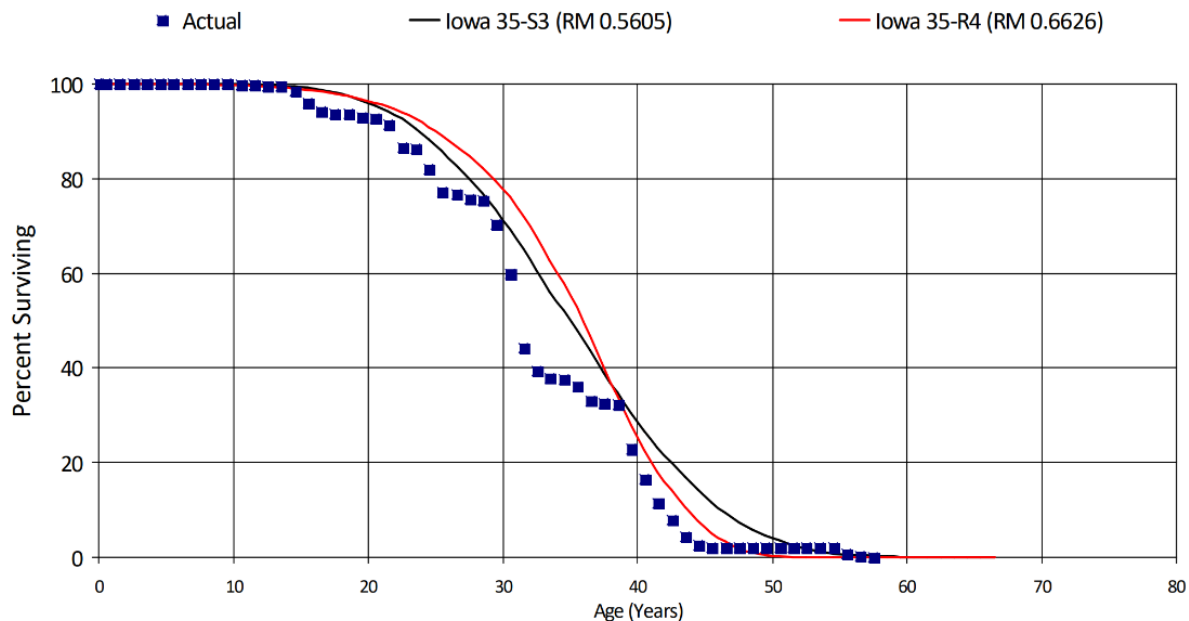
This account currently has an approved net salvage percentage of zero percent. Based on conversations with NAKA-YK staff about the cost of removal and gross salvage expectations, Concentric finds it unnecessary to implement a net salvage percentage for use in the depreciation calculations at this time.



ACCOUNT 373 – STREET LIGHTS

Investment \$	Investment %	Previously Approved Curve	Concentric Recommended Curve	Previously Approved Salvage	Concentric Recommended Salvage
\$7,817,288	9.46%	35-S3	35-R4	-10%	-25%

The investment in Street Lights is approximately \$7.8 million, representing just over nine percent of the total depreciable plant studied. The street light poles in the NAKA-YK system are wooden, and a conversion to LED lamps concluded in 2016. The retirements, additions, and other plant transactions, for the period 1955 through 2022, were analyzed by the retirement rate method. This account did not utilize a T-Cut and retirements of \$1,353,643 were recorded for the period 1990 through 2022.

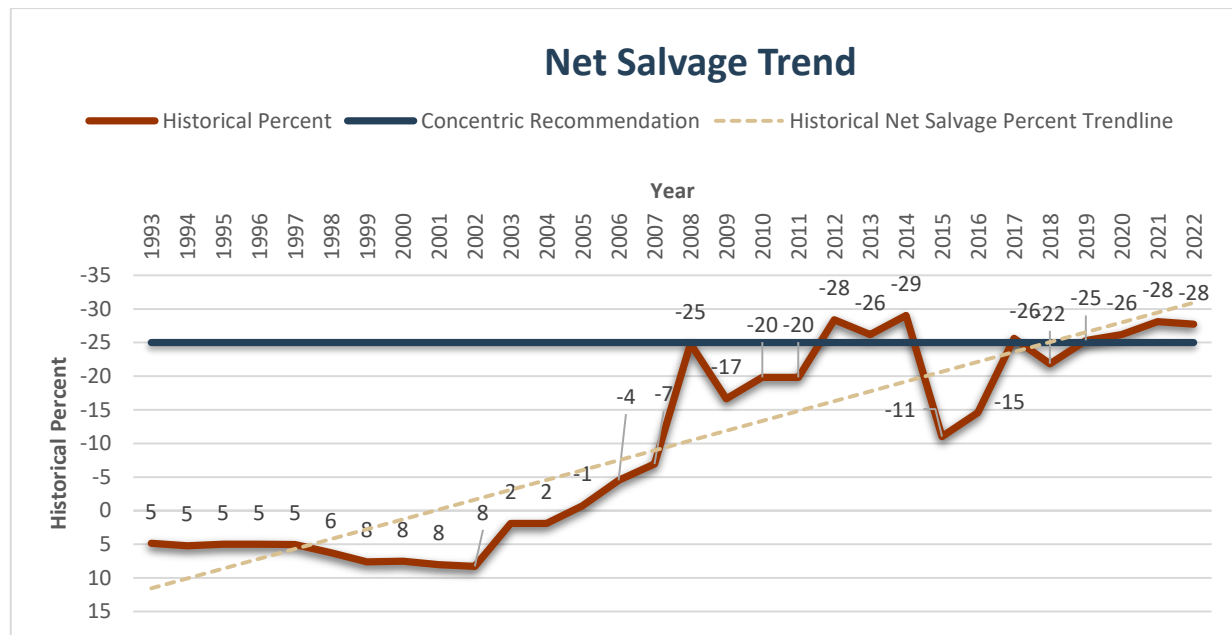


The currently approved life parameter for this account is an Iowa 35-S3 with a residual measure of 0.5605. The Iowa 35-R4 provides a residual measure of 0.6626 as seen above and on page 6-28. The Iowa R4 visual fit to the data however is stronger, especially in the section between approximately 90 to 70 percent of plant surviving. This period is where the first two large retirements occur, with approximately 15 percent and 27 percent of beginning plant exposures retiring in back-to-back age intervals, at ages 30 and 31 respectively. Adjusting the mode of the curve from the S3 to the R4 allows the steeper retirement pattern of the R4 to adequately capture these retirements in a way that the S3 does not. This can be seen above in the graph above. The next large retirement ratios occur at approximately ages 39 and 40, where the R4 mode curve captures this retirement experience stronger than the S3 mode curve does. Because of these two sections, Concentric believes the recommendation to keep the average service life the same but adjust the mode of the curve used to be appropriate.



The previous study weighted average age of retirement was 26.08 years in this account, and the current weighted average age of retirement is 28.28 years. Although the weighted average age of the retirements has increased by five years, based on the visual fit to data, mathematical fit to data, and conversations with company personnel, Concentric does not see a need to extend or shorten the average service life for this account.

Discussions with NAKA-YK management and operations staff indicated that the 35-year average service life recommendation is still a good representation of the historical life and future expectations. A review of peer Canadian electric distribution utilities indicates a range of between 20 to 50 years, with a mean average service life recommendation of 37 years. Based on the above discussion and considerations, and on Concentric's experience, an Iowa 35-R4 is a reasonable expectation for the investment in this account. As such, Concentric recommends the Iowa 35-R4 to represent the future expectations for the investment in this account.



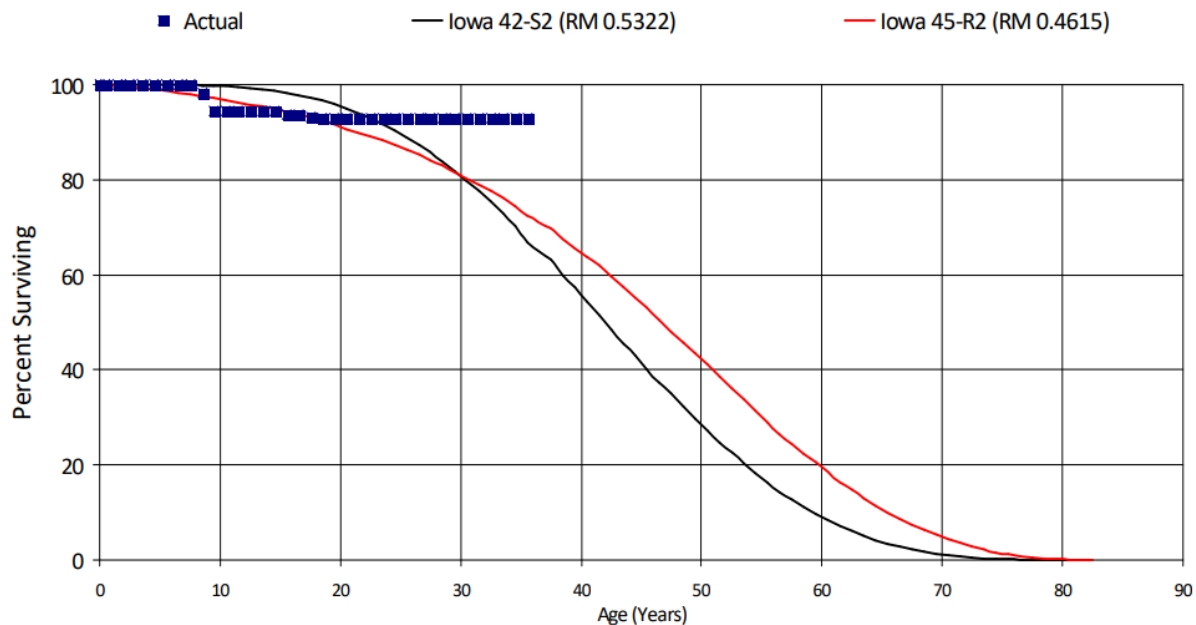
This account currently has an approved net salvage of negative 10 percent. This account has shown a wide range in the historical net salvage activity since 1993. As seen in the graph above, the range has been from positive eight percent to negative 29 percent. As shown on page 7-9 of this report, the three-year band has ranged from over positive 1,000 percent to negative 167 percent, with the most recent three-year band showing negative 41 percent. Also shown on page 7-9 of this report, the five-year band has ranged from positive 100 percent to negative 119 percent, and the most recent five-year band shows negative 30 percent. The full depth band indicates negative 28 percent. A Canadian peer comparison for electric distribution utilities of net salvage values indicates a range between negative eight and negative 35 percent. At this time, based on the historical data, Concentric views that an increase to negative 25 percent net salvage is an appropriate recommendation in this study.



ACCOUNT 390 – STRUCTURES AND IMPROVEMENTS

Investment \$	Investment %	Previously Approved Curve	Concentric Recommended Curve	Previously Approved Salvage	Concentric Recommended Salvage
\$6,465,388	7.83%	42-S2	45-R2	0%	0%

The investment in Structures and Improvements is approximately \$6.5 million representing 7.8 percent of the total depreciable plant studied. The retirements, additions, and other plant transactions, for the period 1986 through 2022, were analyzed by the retirement rate method. This account did not utilize a T-Cut and retirements of \$207,186 were recorded for the period 1987 through 2022.



The currently approved life parameter for this account is an Iowa 42-S2 with a residual measure of 0.5322. The Iowa 45-R2 provides a better mathematical fit with a residual measure of 0.4615 as seen above and on page 6-35. As such, Concentric believes that an average service life recommendation of 45 years is accurate at this time.

The previous study weighted average age of retirement was 13.12 years in this account, and the current weighted average age of retirement is 9.34 years. Although the weighted average age of the retirements has decreased by roughly four years, based on the visual fit to data, mathematical fit to data, and conversations with NAKA-YK management and operations staff, Concentric believes the three-year life extension to a 45-year average service life to be appropriate.

The discussions with NAKA-YK staff indicated that the 45-year average service life recommendation is a good representation of the historical life and future expectations. A review of peer Canadian electric distribution utilities indicates a range of between 25 to 65 years, with a mean average service



life recommendation of 48 years. Based on the above discussion and considerations, and on Concentric's experience, an Iowa 45-R2 is a reasonable expectation for the investment in this account. As such, Concentric recommends the Iowa 45-R2 to represent the future expectations for the investment in this account.

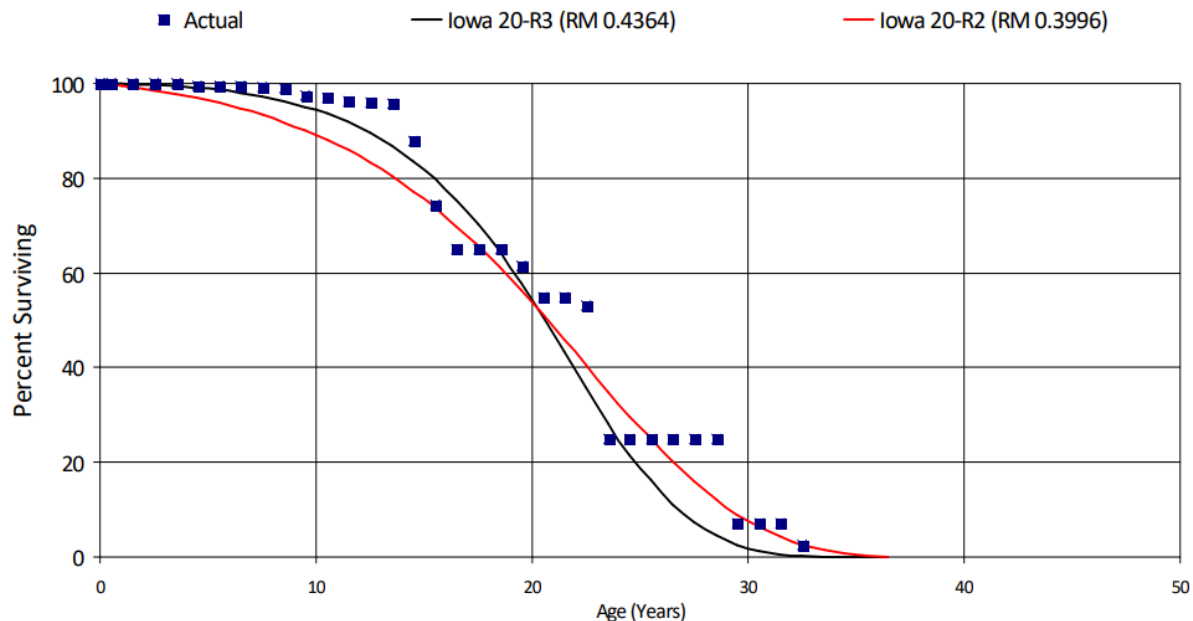
This account currently has an approved net salvage percentage of zero percent. Based on conversations with NAKA-YK staff about future cost of removal and gross salvage expectations, Concentric finds it unnecessary to implement a net salvage percentage for use in the depreciation calculations at this time.



ACCOUNT 392.30 – TRANSPORTATION EQUIPMENT, FLEET VEHICLES, CATEGORY 3

Investment \$	Investment %	Previously Approved Curves	Concentric Recommended Curves	Previously Approved Salvage	Concentric Recommended Salvage
\$1,630,844	1.97%	20-R3	20-R2	20%	20%

The investment in Transportation Equipment, Fleet Vehicles, Category 3 is approximately \$1.63 million, representing just under two percent of the total depreciable plant studied. This account includes heavy machinery used by NAKA-YK, such as a tandem axle digger truck, a single axle bucket truck, and a caterpillar backhoe. The retirements, additions, and other plant transactions, for the period 1976 through 2022, were analyzed by the retirement rate method. This account did not utilize a T-Cut and retirements of \$716,258 were recorded for the period 1995 through 2022.

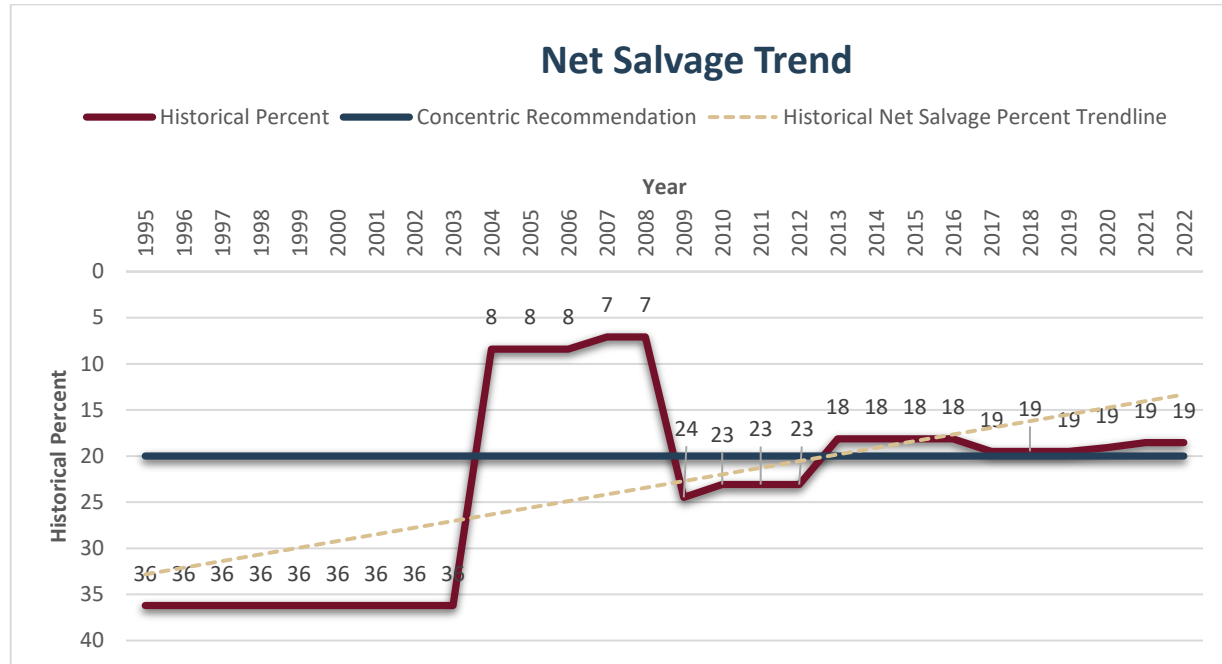


The currently approved Iowa 20-R3 has a residual measure of 0.4364 and the proposed Iowa 20-R3 has a residual measure of 0.4364, as seen above and on page 6-38. The visual and mathematical fits seen in the Iowa 20-R2 against the survivor curve are robust, capturing the crux of the retirement experience from just over 80 percent of plant surviving through 20 percent surviving. The R2 curve captures this retirement experience stronger than the R3, although the residual measures are quite similar. The previous study weighted average age of retirement was 16.93 years and the current study weighted average age of retirement is 18.28 years. The assets within this account typically do not get many kilometers on them and are mainly retired due to hours utilized. There are only approximately six vehicles in this account, so a single retirement can result in a large change in the data. Due to this information and fit to data, Concentric sees no reason to change the currently approved average service life.

Discussions with NAKA-YK management and operations staff indicated that the 20-year average service life recommendation is still a good representation of the historical life and future



expectations. A review of peer Canadian electric distribution utilities indicates a range of between 9 to 20 years, with a mean average service life recommendation of 15 years. Based on the above, Concentric recommends the Iowa 20-R3 to represent the future expectations for the investment in this account.



This account currently has an approved net salvage of positive 20 percent. This account has shown a small range in the historical net salvage activity since 1995. As seen in the graph above, the range has been from positive 36 percent to positive seven percent. As shown on page 7-11 of this report, the three-year band has ranged from positive 37 percent to negative 14 percent, with the most recent three-year band showing negative 14 percent. Also shown on page 7-11 of this report, the five-year band has ranged from positive 37 percent to negative 14 percent, and the most recent five-year band also showing negative 14 percent. The full depth band indicates positive 19 percent. A Canadian peer comparison for electric distribution utilities of net salvage values indicates a range between positive five and positive 20 percent. Typically, NAKA-YK transports vehicles to Edmonton, Alberta to sell them, with the rough expectation that these assets will continue to be sold at anywhere from 10 to 25 percent of their original cost. At this time, based on the historical data and indications from management and operations staff, Concentric views that holding the net salvage at positive 20 percent for use in the depreciation calculations is an appropriate recommendation in this study.

Other Accounts

The above analysis provides the consideration relating to over 96 percent of the depreciable plant. Many of the accounts related to the remaining four percent of the depreciable plant studied as of December 31, 2022, are subjected to amortization accounting. This is proposed for a number of accounts that represent numerous units of property, but very small portions of depreciable electric plant in service.



SECTION 4

4 CALCULATION OF ANNUAL AND ACCRUED DEPRECIATION

4.1 Group Depreciation Procedures

When more than a single item of property is under consideration, a group procedure for depreciation is appropriate because, usually all of the items within a group do not have identical service lives but have lives that are dispersed over a range of time. There are two primary group procedures: Average Life Group ("ALG") and Equal Life Group ("ELG").

In the ELG procedure, the property group is subdivided according to service life. That is, each ELG includes that portion of the property which experiences the life of that specific group. The relative size of each ELG is determined from the property's life dispersion curve. The calculated depreciation for the property group is the summation of the calculated depreciation based on the service life of each ELG.

The table on the following page presents an illustration of the calculation of ELG depreciation in a mass property account using the Iowa 13-R2 survivor curve, zero percent net salvage and a December 31, 2022 calculation date. Each ELG, in the table, is defined by the age interval shown in columns 1 and 2. These are the ages at which the first and last retirement of each group occurs, and the group's equal life, shown in column 3, is the midpoint of the interval. For purposes of the calculation, each vintage is divided into ELGs arranged so that the midpoint of each one-year age interval coincides with the calculation date, e.g., in this case December 31. This enables the calculation of annual accruals for a twelve-month period centered on the date of calculation.

The retirement during the age interval, shown in column 4, is the size of each ELG derived from the Iowa 13-R2 survivor curve and zero percent net salvage. It is the difference between the percentage surviving at the beginning and end of the age interval. Each ELG's annual accrual, shown in column 5, equals the group's size (column 4) divided by its life (column 3), except in the circumstance of age 0.5 due to the use of the mid-year convention.

Columns 7 through 10, show the derivation of the annual and accrued factors for each vintage based on the information developed in the first five columns. The year installed is shown in column 6. For all vintages other than 2022, the summation of annual accruals for each year installed, shown in column 7, is calculated by adding one-half of the group annual accrual (column 5) for that vintage's current age interval plus the group annual accruals for all succeeding age intervals. For example, the figure 9.36279122771 for 2014, equals one-half of 0.69931333333 plus all of the succeeding figures in column 5. Only one-half of the annual accrual for the vintage's current age interval group is included in the summation because the ELG for that interval has reached the year during which it is expected to be retired.



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DETAILED COMPUTATION OF ANNUAL AND ACCRUED FACTORS USING THE EQUAL LIFE GROUP PROCEDURE

Input Parameters:			Calculation Date = 12-21-2022				Survivor Curve = 13-R2			
Age Interval		Life	Retirements During		Year Inst.	Summation of	Average	Annual Factor	Accrued	
Beg.	End		Age Interval	Group Annual Accrual						Annual Accruals
(1)	(2)	(3)	(4)	(5) = (4)/(3)	(6)	(7)	(8)	(9) = (7)/(8)	(10) = (9)*(3)	
0.000	1.000	0.500	0.81843	0.81843000000	2022	10.53087789437	99.607343	0.1057	0.0529	
1.000	2.000	1.500	1.04897	0.69931333333	2021	9.36279122770	98.657081	0.0949	0.1424	
2.000	3.000	2.500	1.32665	0.53066000000	2020	8.74780456104	97.469276	0.0897	0.2244	
3.000	4.000	3.500	1.65967	0.47419142857	2019	8.24537884675	95.976118	0.0859	0.3007	
4.000	5.000	4.500	2.05317	0.45626000000	2018	7.78015313246	94.119697	0.0827	0.3720	
5.000	6.000	5.500	2.51363	0.45702363636	2017	7.32351131428	91.836296	0.0797	0.4386	
6.000	7.000	6.500	3.05106	0.46939384615	2016	6.86030257302	89.053950	0.0770	0.5007	
7.000	8.000	7.500	3.66989	0.48931866667	2015	6.38094631661	85.693474	0.0745	0.5585	
8.000	9.000	8.500	4.36997	0.51411411765	2014	5.87922992446	81.673542	0.0720	0.6119	
9.000	10.000	9.500	5.14410	0.54148421053	2013	5.35143076037	76.916510	0.0696	0.6610	
10.000	11.000	10.500	5.97129	0.56869428571	2012	4.79634151225	71.358816	0.0672	0.7058	
11.000	12.000	11.500	6.79860	0.59118260870	2011	4.21640306504	64.973866	0.0649	0.7463	
12.000	13.000	12.500	7.54947	0.60395760000	2010	3.61883296070	57.799833	0.0626	0.7826	
13.000	14.000	13.500	8.12298	0.60170222222	2009	3.01600304959	49.963612	0.0604	0.8149	
14.000	15.000	14.500	8.39246	0.57879034483	2008	2.42575676606	41.705891	0.0582	0.8434	
15.000	16.000	15.500	8.25458	0.53255354839	2007	1.87008481945	33.382372	0.0560	0.8683	
16.000	17.000	16.500	7.66186	0.46435515152	2006	1.37163046950	25.424151	0.0539	0.8902	
17.000	18.000	17.500	6.66225	0.38070000000	2005	0.94910289374	18.262094	0.0520	0.9095	
18.000	19.000	18.500	5.40212	0.29200648649	2004	0.61274965050	12.229909	0.0501	0.9269	
19.000	20.000	19.500	4.06774	0.20860205128	2003	0.36244538162	7.494980	0.0484	0.9430	
20.000	21.000	20.500	2.81382	0.13725951220	2002	0.18951459988	4.054203	0.0467	0.9583	
21.000	22.000	21.500	1.70757	0.07942186047	2001	0.08117391355	1.793508	0.0453	0.9731	
22.000	23.000	22.500	0.78015	0.03467333333	2000	0.02412631665	0.549647	0.0439	0.9876	
23.000	24.000	23.500	0.15903	0.00676723404	1999	0.00340603296	0.080054	0.0425	0.9998	
24.000	24.180	24.090	0.00054	0.00002241594	1998	0.00000201743	0.000049	0.0412	1.0000	
TOTAL			100.00000							

Column 4 represents the retirements at each of the Age Intervals listed in Column 3, for the Iowa survivor curve chosen

Column 7 is derived by calculating, for all Life Intervals except the first and last, by dividing the Group Annual Accrual in Column 5 by 2, and adding this result to the Group Annual Accrual amounts from all older Life Intervals

(e.g. Summation of Annual Accruals at Life 21.500 = [0.07942186047/2] + 0.03467333333 + 0.00676723404 + 0.00002241594)

Column 8 is derived from the Iowa 13-R2 survivor curve, with zero percent net salvage

The summation of annual accruals (column 7) for installations during 2015 is calculated on the basis of an in-service date at the midpoint of the year, i.e., June 30. In as much as the overall calculation is centered on December 31, 2022, the first figure in column 7, for vintage 2022, equals all of the group annual accrual for the first equal life group plus the accruals for all of the subsequent equal life groups.

The average percent surviving derived from the Iowa 13-R2 survivor curve and zero percent net salvage, is shown in column 8 for each age interval. The annual factor, shown in column 9, is the result of dividing the summation of annual accruals (column 7) by the average percent surviving



(column 8). The accrued factor, shown in column 10, equals the annual factor multiplied by the age of the group at December 31, 2022.

4.2 Calculation of Annual and Accrued Amortization

Amortization is the gradual extinguishment of an amount in an account by distributing such amount over a fixed period, over the life of the asset or liability to which it applies, or over the period during which it is anticipated the benefit will be realized. Normally, the distribution of the amount is in equal amounts to each year of the amortization period.

The calculation of annual and accrued amortization requires the selection of an amortization period. The amortization periods used in this report were based on judgment which incorporated a consideration of the period during which the assets will render most of their service, the amortization period and service lives used by other utilities, and the service life estimates previously used for the asset under depreciation accounting.

Amortization accounting is proposed for a number of accounts that represent numerous units of property, but a very small portion of depreciable electric plant in service. The accounts, their amortization periods, and the mean of the average service life (ASL) recommendations amongst the peer group are as follows:

Account	Title	Investment	Previously Approved	Recommended Amortization Period in Years	Mean ASL of Peer Group Studied
391.00	Office Furniture and Equipment	\$253,153	15-SQ	15	16
391.10	Computer Hardware & Voice and Data Network Equipment	\$40,238	5-SQ	5	5
391.22	Computer Software and Applications Major (10 YR)	\$336,467	10-SQ	10	10
394.00	Tools, Shop, Garage, Stores and Laboratory Equipment	\$320,500	10-SQ	10	14

For the purpose of calculating annual amortization amounts, as of December 31, 2022, the book depreciation reserve for each plant account (or sub-account) is assigned or allocated to vintages. The book reserve assigned to vintages with an age greater than the amortization period is equal to the vintage's original cost. The remaining book reserve is allocated among vintages with an age less than the amortization period in proportion to the calculated accrued amortization. The calculated accrued amortization is equal to the original cost multiplied by the ratio of the vintage's age to its amortization period. The annual amortization amount is determined by dividing the future amortizations (original cost less allocated book reserve) by the remaining period of amortization for the vintage.

4.3 Monitoring of Book Accumulated Depreciation

The calculated accrued depreciation or amortization represents that portion of the depreciable cost which will not be allocated to expense through future depreciation accruals, if current forecasts of



service life characteristics materialize and are used as a basis for depreciation accounting. Thus, the calculated accrued depreciation provides a measure of the book accumulated depreciation. The use of this measure is recommended in the amortization of book accumulated depreciation variances to insure complete recovery of capital over the life of the property.

The recommended amortization of the variance between the book accumulated depreciation and the calculated accrued depreciation is based on an amortization period equal to the composite remaining life for each property group where the variance exceeds five percent of the calculated accrued depreciation.

The composite remaining life for use in the calculation of accumulated depreciation variances is derived by developing the composite sum of the individual remaining lives in accordance with the following equation:

$$\text{Composite Remaining Life} = \frac{\sum \left(\frac{\text{Book Cost}}{\text{Life}} \times \text{Remaining Life} \right)}{\sum \frac{\text{Book Cost}}{\text{Life}}} \quad (1)$$

The book costs and lives of the several vintages, which are summed in the foregoing equation, are defined by the estimated future survivor curve. In as much as book cost divided by life equals the Whole Life annual accrual, the foregoing equation reduces to the following form:

$$\text{Composite Remaining Life} = \frac{\sum \text{Whole Life Future Accruals}}{\sum \text{Whole Life Annual Accrual}} \quad (2)$$

or

$$\text{Composite Remaining Life} = \frac{\sum \text{Book Cost} - \text{Calc, Reserve}}{\sum \text{Whole Life Annual Accrual}} \quad (3)$$

This approach was applied to the calculation of probable remaining life and annual provision for true-up in Tables 2A and 2B of this study.



SECTION 5

5 RESULTS OF THE STUDY

5.1 Qualification of Results

The calculated annual and accrued depreciation are the principal results of the study and are shown in Tables 1, 1A, 1B, 2, 2A, and 2B, related to investment as of December 31, 2022. Continued surveillance and periodic revisions are normally required to maintain continued use of appropriate annual depreciation accrual rates. An assumption that accrual rates can remain unchanged over a long period of time implies a disregard for the inherent variability in service lives and salvage and for the change of the composition of property in service. The annual accrual rates and the accrued depreciation were calculated in accordance with the Straight-Line method, using the ELG procedure, based on estimates which reflect considerations of current historical evidence and expected future conditions.

5.2 Description of Detailed Tabulations

The following tables provides summaries by account of the original cost of investment, calculated and booked accumulated depreciation amounts, the required amount of annual depreciation expense, the required depreciation rate to be applied against the original cost of the account and the estimated composite remaining life of the surviving plant in service.

The detailed calculations of annual depreciation applicable to depreciable assets, as of December 31, 2022, are presented in account sequence starting in Section 5 – Page 5-2. The tables indicate the estimated average survivor curves used in the calculations. The tables set forth (for each installation year) the original cost, calculated accrued depreciation and the calculated annual accrual.

NAKA POWER UTILITIES (YELLOWKNIFE)

TABLE 1. SUMMARY OF SERVICE LIFE AND NET SALVAGE ESTIMATES AND CALCULATED ANNUAL AND ACCRUED DEPRECIATION RELATED TO THE RECOVERY OF AVERAGE ORIGINAL COST IN ELECTRIC PLANT BASED ON ORIGINAL COSTS AS OF DECEMBER 31, 2022

"TOTAL"

Account	Description	Estimated Survivor Curve	Net Salvage Percent	Investment Percentage	Surviving Original Cost as of 12/31/2022	Calculated Accrued Depreciation	Annual Accrual Amount	Annual Accrual Rate
PLANT IN SERVICE								
DISTRIBUTION PLANT								
360.10	Land Rights	75-R3	0	0.96%	789,412	198,500	11,548	1.46%
362.00	Station Equipment	35-S2.5	-5	6.91% *	5,709,144	2,600,622	182,914	3.20%
362.10	System Communication & Control	20-R1.5	0	0.26%	218,123	110,881	10,471	4.80%
364.00	Poles, Towers and Fixtures	50-R2	-45	20.37% *	16,826,083	8,881,108	532,447	3.16%
365.00	Overhead Conductors and Devices	45-R4	-40	10.49% *	8,668,021	4,700,327	278,672	3.21%
365.10	Overhead Services	50-R2.5	-5	2.38% *	1,970,298	739,955	44,584	2.26%
367.00	Underground Conductor and Devices	45-R5	-15	13.52% *	11,172,967	4,468,722	291,266	2.61%
367.10	Underground Services	45-R3	-10	1.41% *	1,163,643	244,630	31,511	2.71%
368.00	Line Transformers	35-S3	-15	19.61% *	16,198,083	7,234,756	566,211	3.50%
371.00	Automated Meters	15-R2.5	0	2.96% *	2,443,029	1,617,564	150,848	6.17%
373.00	Street Lights	35-R4	-25	9.46% *	7,817,288	2,868,226	292,100	3.74%
373.10	Sentinel Lights	35-R3	0	0.07%	57,943	30,743	1,655	2.86%
TOTAL DISTRIBUTION PLANT					73,034,033	33,696,033	2,394,226	3.28%
GENERAL PLANT								
390.00	Structures and Improvements	45-R2	0	7.83% *	6,465,388	1,916,291	162,603	2.51%
391.00	Office Furniture and Equipment	15-SQ	0	0.31%	253,153	137,152	16,877	6.67%
391.10	Computer Hardware & Voice and Data Network Equipmen	5-SQ	0	0.05%	40,238	13,308	8,048	20.00%
391.22	Computer Software and Applications Major (10 YR)	10-SQ	0	0.41%	336,467	185,299	33,647	10.00%
392.20	Transportation Equipment, Fleet Vehicles, Category 2	10-R3	15	0.66%	541,529	210,927	46,860	8.65%
392.30	Transportation Equipment, Fleet Vehicles, Category 3	20-R2	20	1.97% *	1,630,844	734,616	62,531	3.83%
394.00	Tools, Shop, Garage, Stores and Laboratory Equipment	10-SQ	0	0.39%	320,500	158,830	32,050	10.00%
TOTAL GENERAL PLANT					9,588,118	3,356,422	362,615	3.78%
TOTAL PLANT STUDIED					82,622,152	37,052,455	2,756,842	3.34%
PLANT NOT STUDIED								
369	Land				110,226			
389	Land				200,952			
TOTAL PLANT NOT STUDIED					311,178			
TOTAL PLANT IN SERVICE					82,933,330	37,052,455		

NAKA POWER UTILITIES (YELLOWKNIFE)

TABLE 1A. SUMMARY OF SERVICE LIFE AND NET SALVAGE ESTIMATES AND CALCULATED ANNUAL AND ACCRUED DEPRECIATION RELATED TO THE RECOVERY OF AVERAGE ORIGINAL COST IN ELECTRIC PLANT BASED ON ORIGINAL COSTS AS OF DECEMBER 31, 2022

"LIFE"

Account	Description	Estimated Survivor Curve	Net Salvage Percent	Surviving Original Cost as of 12/31/2022	Calculated Accrued Depreciation	Annual Accrual Amount	Annual Accrual Rate
PLANT IN SERVICE							
DISTRIBUTION PLANT							
360.10	Land Rights	75-R3	0	789,412	198,500	11,548	1.46%
362.00	Station Equipment	35-S2.5	0	5,709,144	2,476,783	174,204	3.05%
362.10	System Communication & Control	20-R1.5	0	218,123	110,881	10,471	4.80%
364.00	Poles, Towers and Fixtures	50-R2	0	16,826,083	6,124,902	367,205	2.18%
365.00	Overhead Conductors and Devices	45-R4	0	8,668,021	3,357,376	199,051	2.30%
365.10	Overhead Services	50-R2.5	0	1,970,298	704,719	42,461	2.16%
367.00	Underground Conductor and Devices	45-R5	0	11,172,967	3,885,845	253,274	2.27%
367.10	Underground Services	45-R3	0	1,163,643	222,391	28,646	2.46%
368.00	Line Transformers	35-S3	0	16,198,083	6,291,092	492,357	3.04%
371.00	Automated Meters	15-R2.5	0	2,443,029	1,617,564	150,848	6.17%
373.00	Street Lights	35-R4	0	7,817,288	2,294,581	233,680	2.99%
373.10	Sentinel Lights	35-R3	0	57,943	30,743	1,655	2.86%
TOTAL DISTRIBUTION PLANT				73,034,033	27,315,377	1,965,401	2.69%
GENERAL PLANT							
390.00	Structures and Improvements	45-R2	0	6,465,388	1,916,291	162,603	2.51%
391.00	Office Furniture and Equipment	15-SQ	0	253,153	137,152	16,877	6.67%
391.10	Computer Hardware & Voice and Data Network Equi	5-SQ	0	40,238	13,308	8,048	20.00%
391.22	Computer Software and Applications Major (10 YR)	10-SQ	0	336,467	185,299	33,647	10.00%
392.20	Transportation Equipment, Fleet Vehicles, Category 2	10-R3	0	541,529	248,149	55,129	10.18%
392.30	Transportation Equipment, Fleet Vehicles, Category 3	20-R2	0	1,630,844	918,270	78,164	4.79%
394.00	Tools, Shop, Garage, Stores and Laboratory Equipmer	10-SQ	0	320,500	158,830	32,050	10.00%
TOTAL GENERAL PLANT				9,588,118	3,577,299	386,517	4.03%
TOTAL PLANT STUDIED				82,622,152	30,892,675	2,351,918	2.85%
PLANT NOT STUDIED							
369	Land			110,226			
389	Land			200,952			
TOTAL PLANT NOT STUDIED				311,178			
TOTAL PLANT IN SERVICE				82,933,330	30,892,675		

NAKA POWER UTILITIES (YELLOWKNIFE)

TABLE 1B. SUMMARY OF SERVICE LIFE AND NET SALVAGE ESTIMATES AND CALCULATED ANNUAL AND ACCRUED DEPRECIATION RELATED TO THE RECOVERY OF AVERAGE ORIGINAL COST IN ELECTRIC PLANT BASED ON ORIGINAL COSTS AS OF DECEMBER 31, 2022

"NET SALVAGE"

Account	Description	Estimated Survivor Curve	Net Salvage Percent	Surviving Original Cost as of 12/31/2022	Calculated Accrued Depreciation	Annual Accrual Amount	Annual Accrual Rate
PLANT IN SERVICE							
DISTRIBUTION PLANT							
360.10	Land Rights	75-R3	0	789,412	-	-	0.00%
362.00	Station Equipment	35-S2.5	-5	5,709,144	123,839	8,710	0.15%
362.10	System Communication & Control	20-R1.5	0	218,123	-	-	0.00%
364.00	Poles, Towers and Fixtures	50-R2	-45	16,826,083	2,756,206	165,242	0.98%
365.00	Overhead Conductors and Devices	45-R4	-40	8,668,021	1,342,951	79,621	0.92%
365.10	Overhead Services	50-R2.5	-5	1,970,298	35,236	2,123	0.11%
367.00	Underground Conductor and Devices	45-R5	-15	11,172,967	582,877	37,991	0.34%
367.10	Underground Services	45-R3	-10	1,163,643	22,239	2,865	0.25%
368.00	Line Transformers	35-S3	-15	16,198,083	943,664	73,854	0.46%
371.00	Automated Meters	15-R2.5	0	2,443,029	-	-	0.00%
373.00	Street Lights	35-R4	-25	7,817,288	573,645	58,420	0.75%
373.10	Sentinel Lights	35-R3	0	57,943	-	-	0.00%
TOTAL DISTRIBUTION PLANT				73,034,033	6,380,656	428,825	0.59%
GENERAL PLANT							
390.00	Structures and Improvements	45-R2	0	6,465,388	-	-	0.00%
391.00	Office Furniture and Equipment	15-SQ	0	253,153	-	-	0.00%
391.10	Computer Hardware & Voice and Data Network Equipm	5-SQ	0	40,238	-	-	0.00%
391.22	Computer Software and Applications Major (10 YR)	10-SQ	0	336,467	-	-	0.00%
392.20	Transportation Equipment, Fleet Vehicles, Category 2	10-R3	15	541,529	(37,222)	(8,269)	-1.53%
392.30	Transportation Equipment, Fleet Vehicles, Category 3	20-R2	20	1,630,844	(183,654)	(15,633)	-0.96%
394.00	Tools, Shop, Garage, Stores and Laboratory Equipment	10-SQ	0	320,500	-	-	0.00%
TOTAL GENERAL PLANT				9,588,118	(220,876)	(23,902)	-0.25%
TOTAL PLANT STUDIED				82,622,152	6,159,780	404,923	0.49%
PLANT NOT STUDIED							
369	Land			110,226			
389	Land			200,952			
TOTAL PLANT NOT STUDIED				311,178			
TOTAL PLANT IN SERVICE				82,933,330	6,159,780		

NAKA POWER UTILITIES (YELLOWKNIFE)

TABLE 2. CALCULATED ACCRUED DEPRECIATION, BOOK ACCUMULATED DEPRECIATION AND DETERMINATION OF ANNUAL PROVISION FOR TRUE-UP RELATED TO ESTIMATED ORIGINAL COST AS OF DECEMBER 31, 2022

"TOTAL"

Account (1)	Description (2)	Surviving Original Cost as of 12/31/2022 (3)	Calculated Accrued Depreciation (4)	Book Accumulated Depreciation (5)	Accumulated Depreciation Variance Amount (6) = (4)-(5)	Accumulated Depreciation Variance Percent (7)=(6)/(4)	Probable Remaining Life (8)	Annual Provision for True-up (9)=(6)/(8)
PLANT IN SERVICE								
DISTRIBUTION PLANT								
360.10	Land Rights	789,412	198,500	204,215	(5,715)	-2.88%	58.4	0
362.00	Station Equipment	5,709,144	2,600,622	1,556,161	1,044,461	40.16%	21.2	49,309
362.10	System Communication & Control	218,123	110,881	126,266	(15,385)	-13.88%	11.2	(1,372)
364.00	Poles, Towers and Fixtures	16,826,083	8,881,108	9,753,362	(872,254)	-9.82%	35.0	(24,935)
365.00	Overhead Conductors and Devices	8,668,021	4,700,327	5,145,681	(445,354)	-9.47%	28.4	(15,657)
365.10	Overhead Services	1,970,298	739,955	815,575	(75,620)	-10.22%	34.6	(2,188)
367.00	Underground Conductor and Devices	11,172,967	4,468,722	3,694,786	773,936	17.32%	29.7	26,089
367.10	Underground Services	1,163,643	244,630	186,713	57,917	23.68%	37.3	1,551
368.00	Line Transformers	16,198,083	7,234,756	8,293,559	(1,058,803)	-14.63%	22.3	(47,442)
371.00	Automated Meters	2,443,029	1,617,564	1,718,948	(101,384)	-6.27%	6.0	(4,006)
373.00	Street Lights	7,817,288	2,868,226	2,254,942	613,284	21.38%	25.3	24,267
373.10	Sentinel Lights	57,943	30,743	9,841	20,902	67.99%	17.9	1,167
TOTAL DISTRIBUTION PLANT		73,034,033	33,696,033	33,760,049	(64,016)			6,784
GENERAL PLANT								
390.00	Structures and Improvements	6,465,388	1,916,291	2,528,512	(612,221)	-31.95%	34.3	(17,867)
391.00	Office Furniture and Equipment	253,153	137,152	121,064	16,088	11.73%	6.9	2,341
391.10	Computer Hardware & Voice and Data Network Equipment	40,238	13,308	(98,706)	112,014	841.72%	5.0	22,403
391.22	Computer Software and Applications Major (10 YR)	336,467	185,299	57,641	127,658	68.89%	5.0	25,532
392.20	Transportation Equipment, Fleet Vehicles, Category 2	541,529	210,927	83,828	127,098	60.26%	5.8	21,953
392.30	Transportation Equipment, Fleet Vehicles, Category 3	1,630,844	734,616	745,601	(10,986)	-1.50%	10.3	2,616
394.00	Tools, Shop, Garage, Stores and Laboratory Equipment	320,500	158,830	147,405	11,425	7.19%	5.0	2,265
TOTAL GENERAL PLANT		9,588,118	3,356,422	3,585,346	(228,923)			59,242
TOTAL PLANT STUDIED		82,622,152	37,052,455	37,345,395	(292,939)			66,026
PLANT NOT STUDIED								
369	Land	110,226		89,900				
389	Land	200,952						
TOTAL OTHER		311,178						
TOTAL PLANT IN SERVICE		82,933,330	37,052,455	37,435,295				

+ Remaining life is limited to be no less than 5 years.

* True-up is calculated only when the variance exceeds +/- 5%.

5
0.05

NAKA POWER UTILITIES (YELLOWKNIFE)

TABLE 2A. CALCULATED ACCRUED DEPRECIATION, BOOK ACCUMULATED DEPRECIATION AND DETERMINATION OF ANNUAL PROVISION FOR TRUE-UP RELATED TO ESTIMATED ORIGINAL COST AS OF DECEMBER 31, 2022

"LIFE"

Account	Description	Surviving Original Cost as of 12/31/2022	Calculated Accrued Depreciation	Book Accumulated Depreciation	Accumulated Depreciation Variance Amount	Accumulated Depreciation Variance Percent	Probable Remaining Life	Annual Provision for True-up
(1)	(2)	(3)	(4)	(5)	(6) = (4)-(5)	(7)=(6)/(4)	(8)	(9)=(6)/(8)
PLANT IN SERVICE								
DISTRIBUTION PLANT								
360.10	Land Rights	789,412	198,500	204,216	(5,715)	-2.88%	58.4	- *
362.00	Station Equipment	5,709,144	2,476,783	1,714,740	762,043	30.77%	21.2	35,976
362.10	System Communication & Control	218,123	110,881	129,141	(18,261)	-16.47%	11.2	(1,628)
364.00	Poles, Towers and Fixtures	16,826,083	6,124,902	7,135,432	(1,010,530)	-16.50%	35.0	(28,887)
365.00	Overhead Conductors and Devices	8,668,021	3,357,376	4,001,947	(644,571)	-19.20%	28.4	(22,661)
365.10	Overhead Services	1,970,298	704,719	794,347	(89,628)	-12.72%	34.6	(2,593)
367.00	Underground Conductor and Devices	11,172,967	3,885,845	3,655,717	230,129	5.92%	29.7	7,758
367.10	Underground Services	1,163,643	222,391	210,767	11,624	5.23%	37.3	311
368.00	Line Transformers	16,198,083	6,291,092	8,116,896	(1,825,804)	-29.02%	22.3	(81,808)
371.00	Automated Meters	2,443,029	1,617,564	1,694,833	(77,269)	-4.78%	6.0	- *
373.00	Street Lights	7,817,288	2,294,581	2,731,815	(437,234)	-19.06%	25.3	(17,301)
373.10	Sentinel Lights	57,943	30,743	24,326	6,417	20.87%	17.9	358
TOTAL DISTRIBUTION PLANT		73,034,033	27,315,377	30,414,176	(3,098,800)			(110,475)
GENERAL PLANT								
390.00	Structures and Improvements	6,465,388	1,916,291	2,417,352	(501,061)	-26.15%	34.3	(14,623)
391.00	Office Furniture and Equipment	253,153	137,152	116,017	21,135	15.41%	6.9	3,075
391.10	Computer Hardware & Voice and Data Network Equipmen	40,238	13,308	(97,145)	110,453	829.99%	5.0 +	22,091
391.22	Computer Software and Applications Major (10 YR)	336,467	185,299	57,641	127,658	68.89%	5.0 +	25,532
392.20	Transportation Equipment, Fleet Vehicles, Category 2	541,529	248,149	165,285	82,864	33.39%	5.8	14,313
392.30	Transportation Equipment, Fleet Vehicles, Category 3	1,630,844	918,270	956,233	(37,964)	-4.13%	10.3	- *
394.00	Tools, Shop, Garage, Stores and Laboratory Equipment	320,500	158,830	146,848	11,982	7.54%	5.0	2,375
TOTAL GENERAL PLANT		9,588,118	3,577,299	3,762,232	(184,933)			52,762
TOTAL PLANT STUDIED		82,622,152	30,892,675	34,176,408	(3,283,733)			(57,713)
PLANT NOT STUDIED								
369	Land	110,226		89,900				
389	Land	200,952						
TOTAL PLANT NOT STUDIED		311,178						
TOTAL PLANT IN SERVICE		82,933,330	30,892,675	34,266,308				

+ Remaining life is limited to be no less than 5 years.

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NAKA POWER UTILITIES (YELLOWKNIFE)

TABLE 2B. CALCULATED ACCRUED DEPRECIATION, BOOK ACCUMULATED DEPRECIATION AND DETERMINATION OF ANNUAL PROVISION FOR TRUE-UP RELATED TO ESTIMATED ORIGINAL COST AS OF DECEMBER 31, 2022

"NET SALVAGE"

Account	Description	Surviving Original Cost as of 12/31/2022	Calculated Accrued Depreciation	Book Accumulated Depreciation	Accumulated Depreciation Variance Amount	Accumulated Depreciation Variance Percent	Probable Remaining Life	Annual Provision for True-up
(1)	(2)	(3)	(4)	(5)	(6) = (4)-(5)	(7)=(6)/(4)	(8)	(9)=(6)/(8)
PLANT IN SERVICE								
DISTRIBUTION PLANT								
360.10	Land Rights	789,412	-	(1)	1	100%	58.4	0
362.00	Station Equipment	5,709,144	123,839	(158,579)	282,418	228%	21.2	13,333
362.10	System Communication & Control	218,123	-	(2,875)	2,875	100%	11.2	256
364.00	Poles, Towers and Fixtures	16,826,083	2,756,206	2,617,930	138,276	5%	35.0	3,953
365.00	Overhead Conductors and Devices	8,668,021	1,342,951	1,143,734	199,216	15%	28.4	7,004
365.10	Overhead Services	1,970,298	35,236	21,227	14,008	40%	34.6	405
367.00	Underground Conductor and Devices	11,172,967	582,877	39,070	543,807	93%	29.7	18,331
367.10	Underground Services	1,163,643	22,239	(24,054)	46,293	208%	37.3	1,240
368.00	Line Transformers	16,198,083	943,664	176,663	767,000	81%	22.3	34,367
371.00	Automated Meters	2,443,029	-	24,115	(24,115)	100%	6.0	(4,006)
373.00	Street Lights	7,817,288	573,645	(476,873)	1,050,518	183%	25.3	41,567
373.10	Sentinel Lights	57,943	-	(14,485)	14,485	100%	17.9	809
TOTAL DISTRIBUTION PLANT		73,034,033	6,380,656	3,345,873	3,034,784			117,259
GENERAL PLANT								
390.00	Structures and Improvements	6,465,388	-	111,160	(111,160)	100%	34.3	(3,244)
391.00	Office Furniture and Equipment	253,153	-	5,047	(5,047)	100%	6.9	(734)
391.10	Computer Hardware & Voice and Data Network Equipment	40,238	-	(1,561)	1,561	100%	5.0 +	312
391.22	Computer Software and Applications Major (10 YR)	336,467	-	-	-	100%	5.0 +	-
392.20	Transportation Equipment, Fleet Vehicles, Category 2	541,529	(37,222)	(81,457)	44,234	-119%	5.8	7,640
392.30	Transportation Equipment, Fleet Vehicles, Category 3	1,630,844	(183,654)	(210,632)	26,978	-15%	10.3	2,616
394.00	Tools, Shop, Garage, Stores and Laboratory Equipment	320,500	-	558	(558)	100%	5.0	(111)
TOTAL GENERAL PLANT		9,588,118	(220,876)	(176,886)	(43,990)			6,480
TOTAL PLANT STUDIED		82,622,152	6,159,780	3,168,987	2,990,793			123,739

+ Remaining life is limited to be no less than 5 years.

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SECTION 6

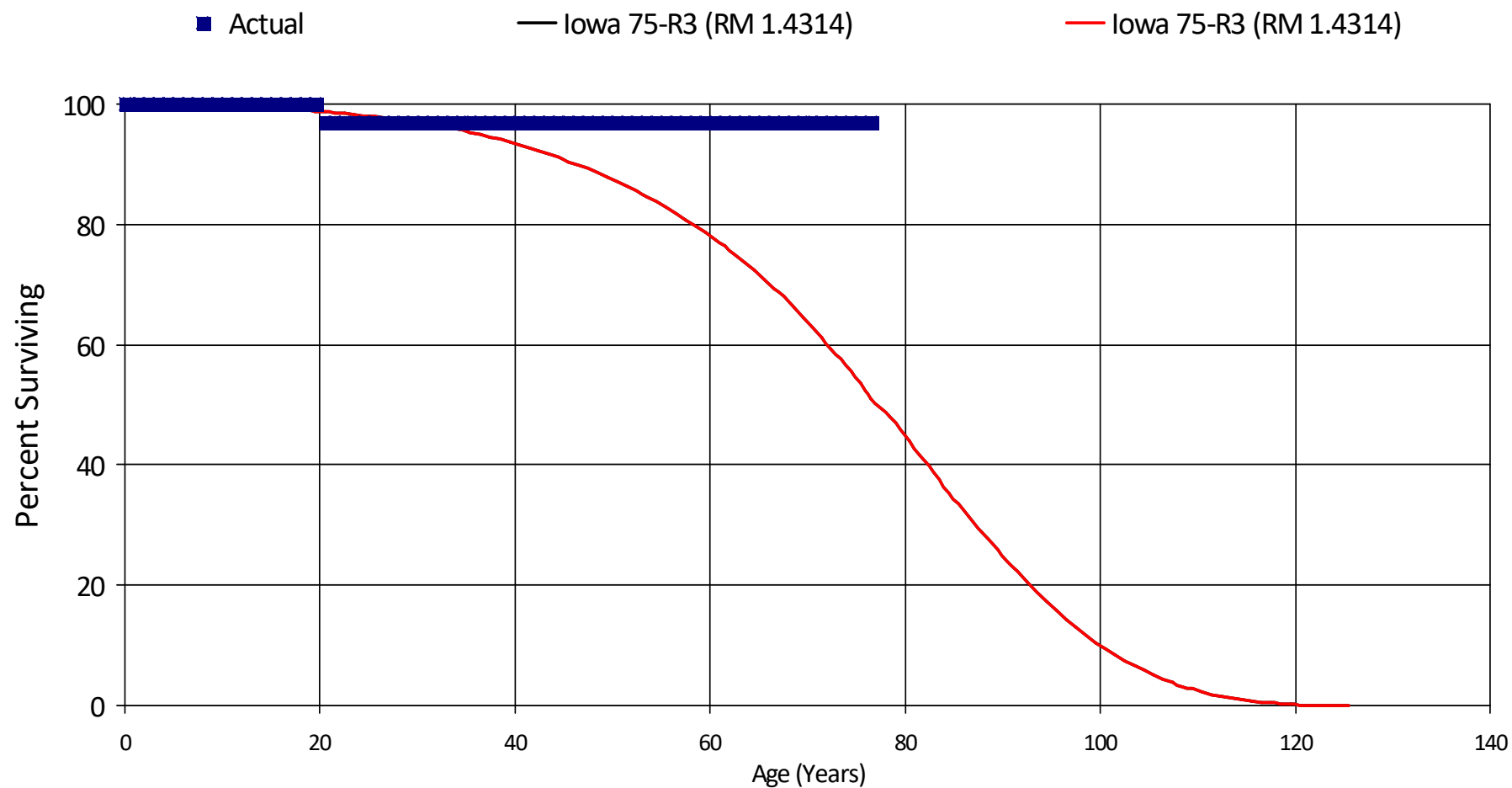
6 RETIREMENT RATE ANALYSIS

Naka Power Utilities (Yellowknife)

Account 360.10 - Land Rights

Placement Band - 1945 - 2022 Experience Band - 2009 - 2022

Actual and Smooth Survivor Curves



Naka Power Utilities (Yellowknife)

Account 360.10 - Land Rights

Placement Band - 1945 - 2022 Experience Band - 2009 - 2022

RETIREMENT RATE ANALYSIS

Age at Begin of Interval	Exposures at Beginning of Age Interval	Retirements During Age Interval	Retmt Ratio	Survivor Ratio	% Surviving
0	795,106	0	0.00000	1.00000	100.00
0.5	795,106	0	0.00000	1.00000	100.00
1.5	795,106	0	0.00000	1.00000	100.00
2.5	795,068	0	0.00000	1.00000	100.00
3.5	793,703	576	0.00073	0.99927	100.00
4.5	791,320	0	0.00000	1.00000	99.93
5.5	787,628	0	0.00000	1.00000	99.93
6.5	783,445	0	0.00000	1.00000	99.93
7.5	782,435	0	0.00000	1.00000	99.93
8.5	782,435	372	0.00048	0.99952	99.93
9.5	777,597	0	0.00000	1.00000	99.88
10.5	769,012	0	0.00000	1.00000	99.88
11.5	583,269	0	0.00000	1.00000	99.88
12.5	563,682	0	0.00000	1.00000	99.88
13.5	522,089	0	0.00000	1.00000	99.88
14.5	508,617	0	0.00000	1.00000	99.88
15.5	406,749	0	0.00000	1.00000	99.88
16.5	378,272	0	0.00000	1.00000	99.88
17.5	234,116	0	0.00000	1.00000	99.88
18.5	173,627	0	0.00000	1.00000	99.88
19.5	168,830	4,746	0.02811	0.97189	99.88
20.5	135,913	0	0.00000	1.00000	97.07
21.5	125,041	0	0.00000	1.00000	97.07
22.5	115,993	0	0.00000	1.00000	97.07
23.5	115,362	0	0.00000	1.00000	97.07
24.5	108,526	0	0.00000	1.00000	97.07
25.5	106,441	0	0.00000	1.00000	97.07
26.5	92,406	0	0.00000	1.00000	97.07

Naka Power Utilities (Yellowknife)

Account 360.10 - Land Rights

Placement Band - 1945 - 2022 Experience Band - 2009 - 2022

27.5	71,721	0	0.00000	1.00000	97.07
28.5	51,846	0	0.00000	1.00000	97.07
29.5	39,782	0	0.00000	1.00000	97.07
30.5	15,816	0	0.00000	1.00000	97.07
31.5	15,816	0	0.00000	1.00000	97.07
32.5	14,807	0	0.00000	1.00000	97.07
33.5	14,807	0	0.00000	1.00000	97.07
34.5	14,044	0	0.00000	1.00000	97.07
35.5	14,044	0	0.00000	1.00000	97.07
36.5	14,044	0	0.00000	1.00000	97.07
37.5	14,044	0	0.00000	1.00000	97.07
38.5	13,411	0	0.00000	1.00000	97.07
39.5	12,122	0	0.00000	1.00000	97.07
40.5	10,865	0	0.00000	1.00000	97.07
41.5	10,461	0	0.00000	1.00000	97.07
42.5	9,094	0	0.00000	1.00000	97.07
43.5	7,939	0	0.00000	1.00000	97.07
44.5	6,543	0	0.00000	1.00000	97.07
45.5	6,445	0	0.00000	1.00000	97.07
46.5	5,834	0	0.00000	1.00000	97.07
47.5	4,576	0	0.00000	1.00000	97.07
48.5	4,434	0	0.00000	1.00000	97.07
49.5	4,335	0	0.00000	1.00000	97.07
50.5	3,921	0	0.00000	1.00000	97.07
51.5	3,853	0	0.00000	1.00000	97.07
52.5	3,440	0	0.00000	1.00000	97.07
53.5	3,263	0	0.00000	1.00000	97.07
54.5	2,817	0	0.00000	1.00000	97.07
55.5	2,758	0	0.00000	1.00000	97.07
56.5	2,469	0	0.00000	1.00000	97.07
57.5	2,027	0	0.00000	1.00000	97.07

Naka Power Utilities (Yellowknife)

Account 360.10 - Land Rights

Placement Band - 1945 - 2022 Experience Band - 2009 - 2022

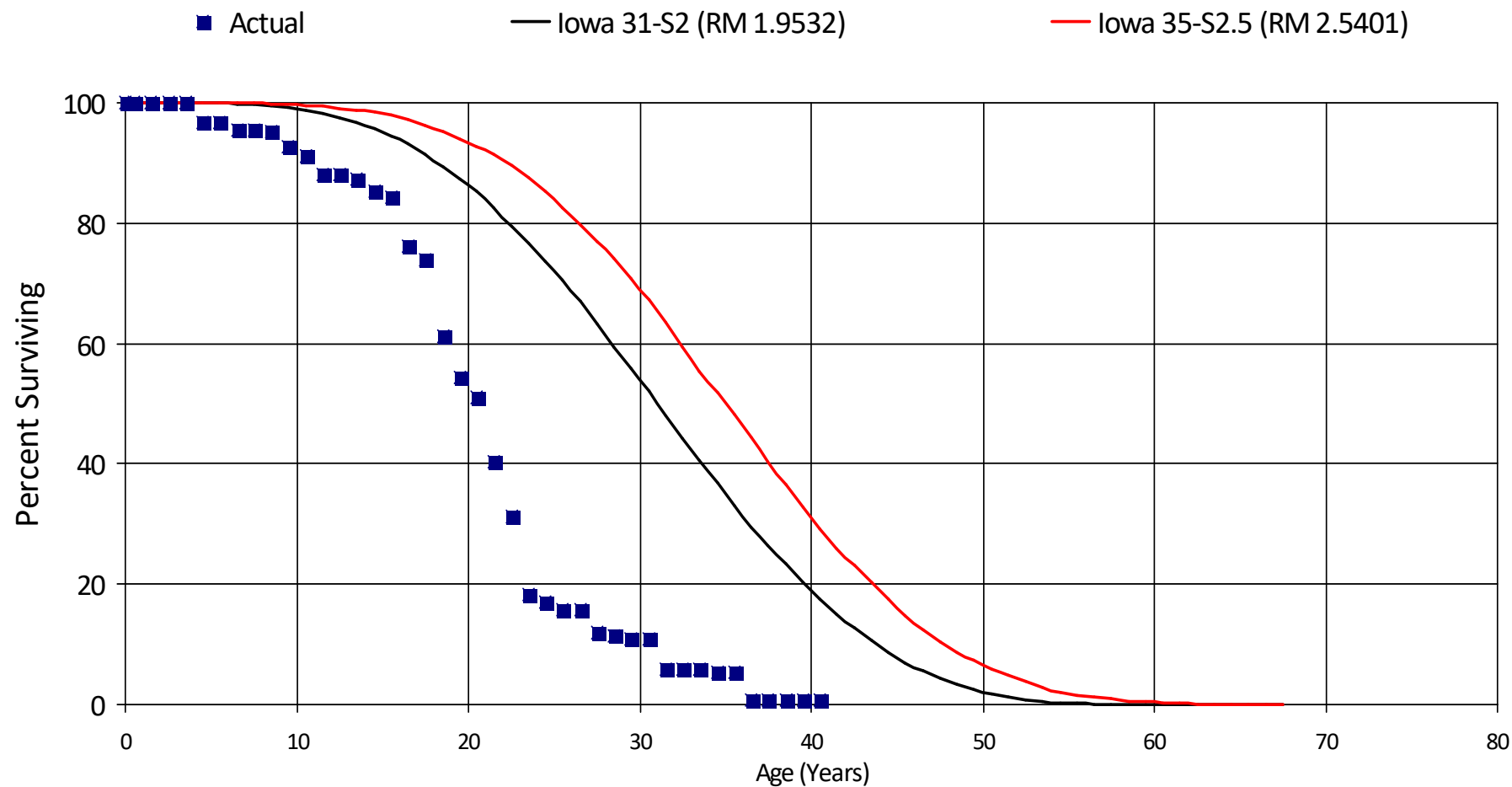
58.5	1,609	0	0.00000	1.00000	97.07
59.5	1,445	0	0.00000	1.00000	97.07
60.5	1,205	0	0.00000	1.00000	97.07
61.5	1,179	0	0.00000	1.00000	97.07
62.5	604	0	0.00000	1.00000	97.07
63.5	565	0	0.00000	1.00000	97.07
64.5	454	0	0.00000	1.00000	97.07
65.5	439	0	0.00000	1.00000	97.07
66.5	375	0	0.00000	1.00000	97.07
67.5	121	0	0.00000	1.00000	97.07
68.5	118	0	0.00000	1.00000	97.07
69.5	118	0	0.00000	1.00000	97.07
70.5	118	0	0.00000	1.00000	97.07
71.5	116	0	0.00000	1.00000	97.07
72.5	113	0	0.00000	1.00000	97.07
73.5	113	0	0.00000	1.00000	97.07
74.5	113	0	0.00000	1.00000	97.07
75.5	111	0	0.00000	1.00000	97.07
76.5	25	0	0.00000	1.00000	97.07
Totals:		5,694			

Naka Power Utilities (Yellowknife)

Account 362.00 - Station Equipment

Placement Band - 1949 - 2022 Experience Band - 1988 - 2022

Actual and Smooth Survivor Curves



Naka Power Utilities (Yellowknife)

Account 362.00 - Station Equipment

Placement Band - 1949 - 2022 Experience Band - 1988 - 2022

RETIREMENT RATE ANALYSIS

Age at Begin of Interval	Exposures at Beginning of Age Interval	Retirements During Age Interval	Retmt Ratio	Survivor Ratio	% Surviving
0	10,387,759	0	0.00000	1.00000	100.00
0.5	10,349,956	0	0.00000	1.00000	100.00
1.5	10,314,229	0	0.00000	1.00000	100.00
2.5	10,282,942	0	0.00000	1.00000	100.00
3.5	10,282,942	339,046	0.03297	0.96703	100.00
4.5	9,835,571	0	0.00000	1.00000	96.70
5.5	9,586,434	128,699	0.01343	0.98657	96.70
6.5	9,457,734	7,159	0.00076	0.99924	95.40
7.5	9,450,575	20,730	0.00219	0.99781	95.33
8.5	9,429,845	252,716	0.02680	0.97320	95.12
9.5	9,113,252	149,639	0.01642	0.98358	92.57
10.5	8,963,613	285,590	0.03186	0.96814	91.05
11.5	8,678,022	19,588	0.00226	0.99774	88.15
12.5	8,658,435	64,556	0.00746	0.99254	87.95
13.5	6,158,797	139,934	0.02272	0.97728	87.29
14.5	6,018,862	80,136	0.01331	0.98669	85.31
15.5	4,608,321	434,881	0.09437	0.90563	84.17
16.5	4,173,121	125,543	0.03008	0.96992	76.23
17.5	2,716,142	464,525	0.17102	0.82898	73.94
18.5	2,251,616	255,990	0.11369	0.88631	61.29
19.5	1,991,487	120,828	0.06067	0.93933	54.32
20.5	1,846,130	389,052	0.21074	0.78926	51.02
21.5	1,456,533	324,729	0.22295	0.77705	40.27
22.5	1,116,736	460,176	0.41207	0.58793	31.29
23.5	656,560	48,044	0.07318	0.92682	18.40
24.5	608,516	43,158	0.07092	0.92908	17.05
25.5	565,359	5,010	0.00886	0.99114	15.84
26.5	560,349	138,388	0.24697	0.75303	15.70

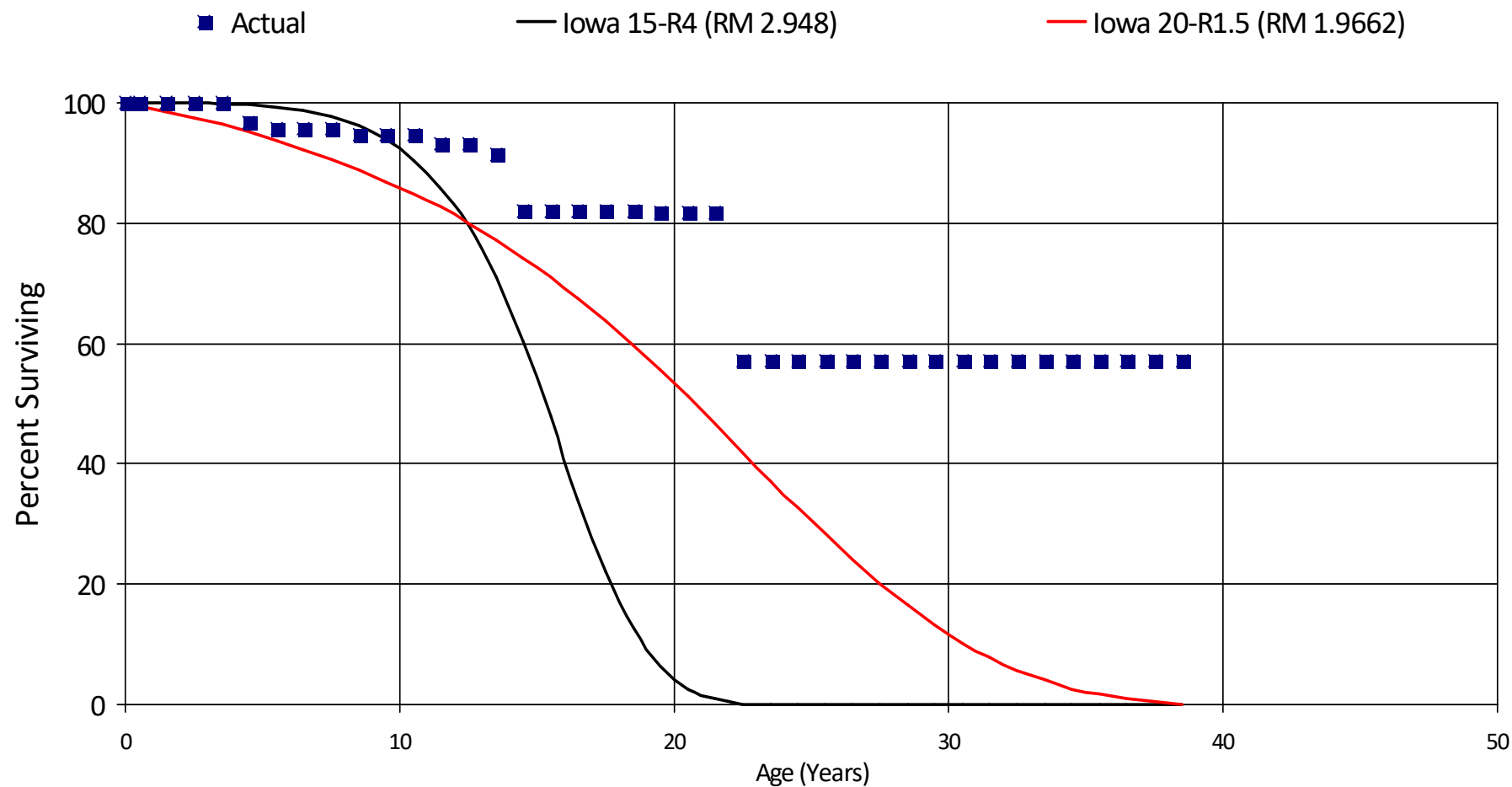
Naka Power Utilities (Yellowknife)

Account 362.00 - Station Equipment

Placement Band - 1949 - 2022 Experience Band - 1988 - 2022

27.5	421,961	10,765	0.02551	0.97449	11.82
28.5	369,734	23,365	0.06319	0.93681	11.52
29.5	346,370	0	0.00000	1.00000	10.79
30.5	346,370	158,212	0.45677	0.54323	10.79
31.5	188,157	0	0.00000	1.00000	5.86
32.5	188,157	0	0.00000	1.00000	5.86
33.5	188,157	20,719	0.11012	0.88988	5.86
34.5	167,438	0	0.00000	1.00000	5.21
35.5	167,438	139,867	0.83534	0.16466	5.21
36.5	27,571	0	0.00000	1.00000	0.86
37.5	27,571	0	0.00000	1.00000	0.86
38.5	27,571	2,518	0.09133	0.90867	0.86
39.5	25,053	0	0.00000	1.00000	0.78
40.5	25,053	25,053	1.00000		0.78
Totals:		4,678,616			

Naka Power Utilities (Yellowknife)
Account 362.10 - System Communication & Control
Placement Band - 1983 - 2022 Experience Band - 2002 - 2022
Actual and Smooth Survivor Curves



Naka Power Utilities (Yellowknife)
Account 362.10 - System Communication & Control
Placement Band - 1983 - 2022 Experience Band - 2002 - 2022

RETIREMENT RATE ANALYSIS

Age at Begin of Interval	Exposures at Beginning of Age Interval	Retirements During Age Interval	Retmt Ratio	Survivor Ratio	% Surviving
0	271,112	0	0.00000	1.00000	100.00
0.5	271,112	0	0.00000	1.00000	100.00
1.5	271,112	0	0.00000	1.00000	100.00
2.5	171,639	0	0.00000	1.00000	100.00
3.5	171,639	5,538	0.03227	0.96773	100.00
4.5	164,023	1,800	0.01097	0.98903	96.77
5.5	160,715	58	0.00036	0.99964	95.71
6.5	159,902	0	0.00000	1.00000	95.68
7.5	159,902	1,776	0.01111	0.98889	95.68
8.5	158,126	0	0.00000	1.00000	94.62
9.5	156,929	0	0.00000	1.00000	94.62
10.5	156,329	2,556	0.01635	0.98365	94.62
11.5	153,773	0	0.00000	1.00000	93.07
12.5	153,323	2,610	0.01702	0.98298	93.07
13.5	149,753	15,484	0.10340	0.89660	91.49
14.5	133,173	54	0.00041	0.99959	82.03
15.5	133,118	0	0.00000	1.00000	82.00
16.5	130,285	0	0.00000	1.00000	82.00
17.5	126,980	0	0.00000	1.00000	82.00
18.5	89,710	413	0.00460	0.99540	82.00
19.5	78,648	0	0.00000	1.00000	81.62
20.5	75,839	0	0.00000	1.00000	81.62
21.5	75,618	22,700	0.30019	0.69981	81.62
22.5	48,976	0	0.00000	1.00000	57.12
23.5	48,976	0	0.00000	1.00000	57.12
24.5	48,976	0	0.00000	1.00000	57.12
25.5	32,067	0	0.00000	1.00000	57.12
26.5	32,067	0	0.00000	1.00000	57.12

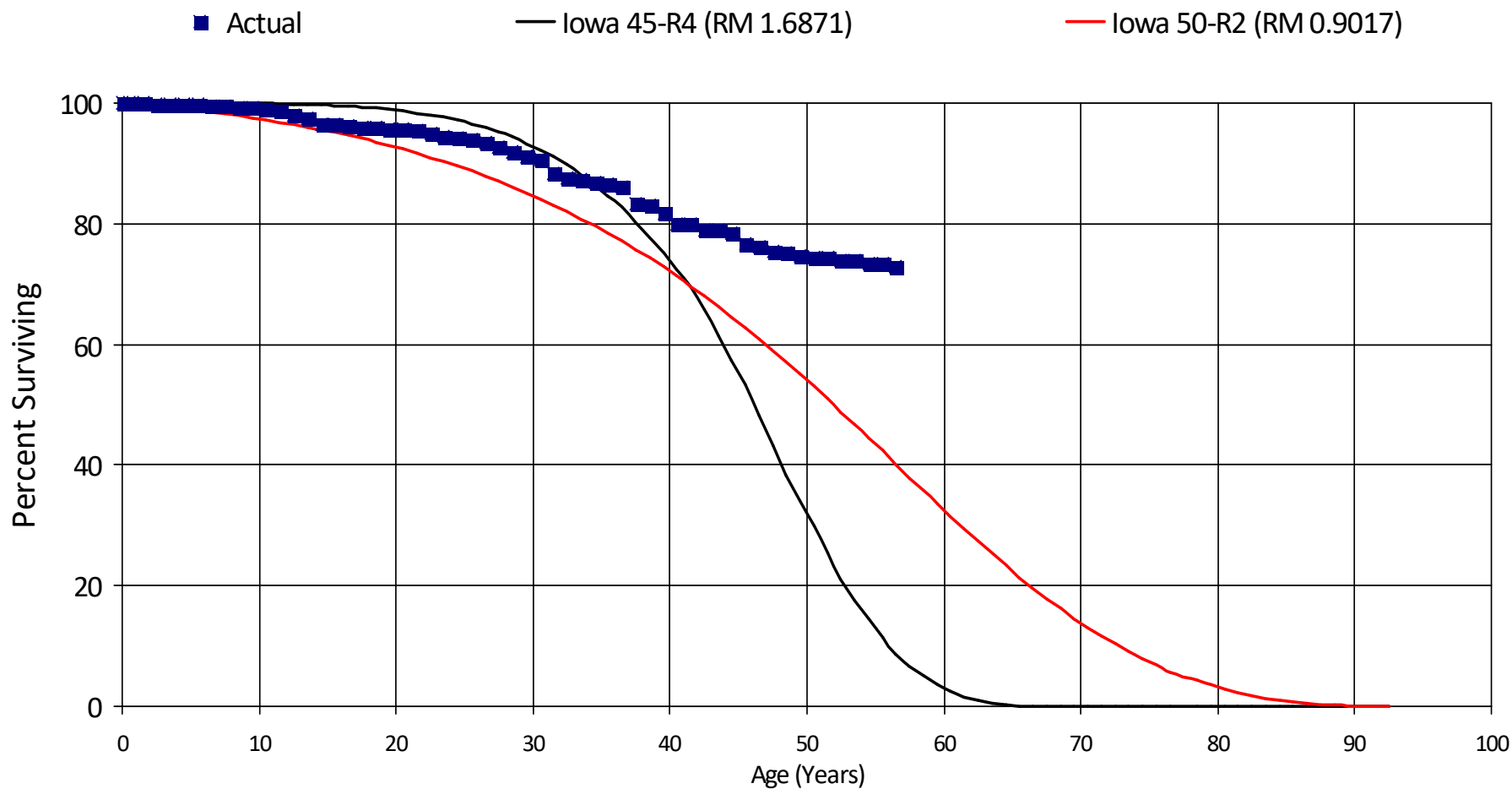
Naka Power Utilities (Yellowknife)

Account 362.10 - System Communication & Control

Placement Band - 1983 - 2022 Experience Band - 2002 - 2022

27.5	32,067	0	0.00000	1.00000	57.12
28.5	32,067	0	0.00000	1.00000	57.12
29.5	28,056	0	0.00000	1.00000	57.12
30.5	28,056	0	0.00000	1.00000	57.12
31.5	25,068	0	0.00000	1.00000	57.12
32.5	25,068	0	0.00000	1.00000	57.12
33.5	22,373	0	0.00000	1.00000	57.12
34.5	14,849	0	0.00000	1.00000	57.12
35.5	10,898	0	0.00000	1.00000	57.12
36.5	9,808	0	0.00000	1.00000	57.12
37.5	8,425	0	0.00000	1.00000	57.12
38.5	8,425	0	0.00000	1.00000	57.12
Totals:		52,989			

Naka Power Utilities (Yellowknife)
Account 364.00 - Poles, Towers and Fixtures
Placement Band - 1945 - 2022 Experience Band - 1987 - 2022
Actual and Smooth Survivor Curves



Naka Power Utilities (Yellowknife)

Account 364.00 - Poles, Towers and Fixtures

Placement Band - 1945 - 2022 Experience Band - 1987 - 2022

RETIREMENT RATE ANALYSIS

Age at Begin of Interval	Exposures at Beginning of Age Interval	Retirements During Age Interval	Retmt Ratio	Survivor Ratio	% Surviving
0	17,445,205	13,027	0.00075	0.99925	100.00
0.5	17,001,838	2,044	0.00012	0.99988	99.92
1.5	16,660,039	7,342	0.00044	0.99956	99.91
2.5	16,307,392	4,801	0.00029	0.99971	99.87
3.5	16,031,420	5,891	0.00037	0.99963	99.84
4.5	15,327,102	13,882	0.00091	0.99909	99.80
5.5	14,074,806	39,390	0.00280	0.99720	99.71
6.5	13,543,293	0	0.00000	1.00000	99.43
7.5	13,184,784	11,561	0.00088	0.99912	99.43
8.5	12,806,440	19,485	0.00152	0.99848	99.34
9.5	12,101,576	26,221	0.00217	0.99783	99.19
10.5	11,313,608	14,227	0.00126	0.99874	98.97
11.5	9,985,624	83,334	0.00835	0.99165	98.85
12.5	9,363,605	46,967	0.00502	0.99498	98.02
13.5	8,773,204	92,651	0.01056	0.98944	97.53
14.5	8,347,157	11,125	0.00133	0.99867	96.50
15.5	8,087,708	10,917	0.00135	0.99865	96.37
16.5	7,642,525	23,363	0.00306	0.99694	96.24
17.5	7,190,087	1,583	0.00022	0.99978	95.95
18.5	6,809,308	10,004	0.00147	0.99853	95.93
19.5	6,451,379	14,493	0.00225	0.99775	95.79
20.5	6,032,364	13,096	0.00217	0.99783	95.57
21.5	5,839,553	31,908	0.00546	0.99454	95.36
22.5	5,724,920	30,477	0.00532	0.99468	94.84
23.5	5,694,443	13,821	0.00243	0.99757	94.34
24.5	5,591,303	18,937	0.00339	0.99661	94.11
25.5	5,457,716	22,131	0.00405	0.99595	93.79
26.5	5,270,348	46,555	0.00883	0.99117	93.41

Naka Power Utilities (Yellowknife)

Account 364.00 - Poles, Towers and Fixtures

Placement Band - 1945 - 2022 Experience Band - 1987 - 2022

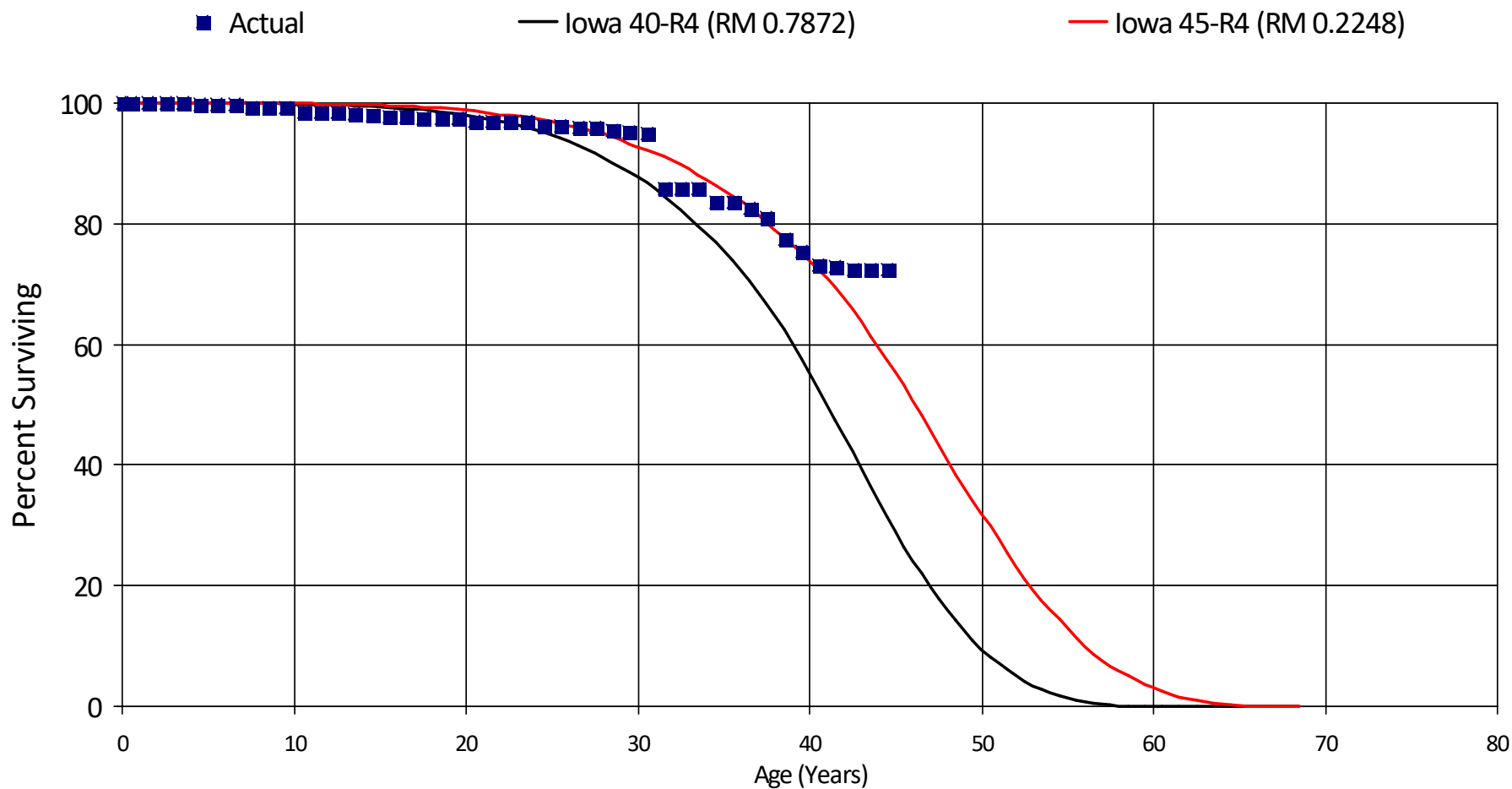
27.5	4,810,959	36,141	0.00751	0.99249	92.59
28.5	4,354,590	31,421	0.00722	0.99278	91.89
29.5	4,245,966	23,692	0.00558	0.99442	91.23
30.5	3,893,627	98,777	0.02537	0.97463	90.72
31.5	3,451,065	31,189	0.00904	0.99096	88.42
32.5	2,816,036	8,285	0.00294	0.99706	87.62
33.5	2,244,581	15,039	0.00670	0.99330	87.36
34.5	1,849,867	4,286	0.00232	0.99768	86.77
35.5	1,557,480	11,483	0.00737	0.99263	86.57
36.5	1,349,979	44,064	0.03264	0.96736	85.93
37.5	1,236,801	2,562	0.00207	0.99793	83.13
38.5	1,168,042	18,952	0.01623	0.98377	82.96
39.5	1,020,490	20,459	0.02005	0.97995	81.61
40.5	885,766	664	0.00075	0.99925	79.97
41.5	852,943	10,009	0.01173	0.98827	79.91
42.5	821,814	719	0.00087	0.99913	78.97
43.5	714,914	5,151	0.00721	0.99279	78.90
44.5	557,533	11,536	0.02069	0.97931	78.33
45.5	536,380	3,760	0.00701	0.99299	76.71
46.5	469,226	5,187	0.01105	0.98895	76.17
47.5	373,166	661	0.00177	0.99823	75.33
48.5	363,842	2,664	0.00732	0.99268	75.20
49.5	350,965	739	0.00211	0.99789	74.65
50.5	308,383	0	0.00000	1.00000	74.49
51.5	304,043	2,444	0.00804	0.99196	74.49
52.5	279,361	533	0.00191	0.99809	73.89
53.5	259,373	1,838	0.00709	0.99291	73.75
54.5	214,730	0	0.00000	1.00000	73.23
55.5	208,854	1,212	0.00580	0.99420	73.23
56.5	176,791	0	0.00000	1.00000	72.81
Totals:		1,022,700			

Naka Power Utilities (Yellowknife)

Account 365.00 - Overhead Conductors and Devices

Placement Band - 1950 - 2022 Experience Band - 1990 - 2022

Actual and Smooth Survivor Curves



Naka Power Utilities (Yellowknife)
Account 365.00 - Overhead Conductors and Devices
Placement Band - 1950 - 2022 Experience Band - 1990 - 2022

RETIREMENT RATE ANALYSIS

Age at Begin of Interval	Exposures at Beginning of Age Interval	Retirements During Age Interval	Retmt Ratio	Survivor Ratio	% Surviving
0	9,050,576	0	0.00000	1.00000	100.00
0.5	8,898,582	343	0.00004	0.99996	100.00
1.5	8,668,581	305	0.00004	0.99996	100.00
2.5	8,462,118	1,604	0.00019	0.99981	100.00
3.5	8,311,286	9,404	0.00113	0.99887	99.98
4.5	8,133,353	358	0.00004	0.99996	99.87
5.5	7,913,943	6,252	0.00079	0.99921	99.87
6.5	7,786,395	44,615	0.00573	0.99427	99.79
7.5	7,301,337	185	0.00003	0.99997	99.22
8.5	7,151,771	795	0.00011	0.99989	99.22
9.5	6,809,246	43,751	0.00643	0.99357	99.21
10.5	6,256,330	3,584	0.00057	0.99943	98.57
11.5	5,865,472	8,433	0.00144	0.99856	98.51
12.5	5,565,769	10,446	0.00188	0.99812	98.37
13.5	5,172,244	11,089	0.00214	0.99786	98.19
14.5	4,751,639	9,604	0.00202	0.99798	97.98
15.5	4,294,638	4,729	0.00110	0.99890	97.78
16.5	4,038,035	4,036	0.00100	0.99900	97.67
17.5	3,625,756	17	0.00000	1.00000	97.57
18.5	3,340,081	1,371	0.00041	0.99959	97.57
19.5	3,101,037	17,295	0.00558	0.99442	97.53
20.5	2,873,640	310	0.00011	0.99989	96.99
21.5	2,600,543	714	0.00027	0.99973	96.98
22.5	2,589,501	599	0.00023	0.99977	96.95
23.5	2,446,483	20,048	0.00819	0.99181	96.93
24.5	2,346,194	1,362	0.00058	0.99942	96.14
25.5	2,304,898	1,946	0.00084	0.99916	96.08
26.5	2,129,331	1,991	0.00094	0.99906	96.00

Naka Power Utilities (Yellowknife)

Account 365.00 - Overhead Conductors and Devices

Placement Band - 1950 - 2022 Experience Band - 1990 - 2022

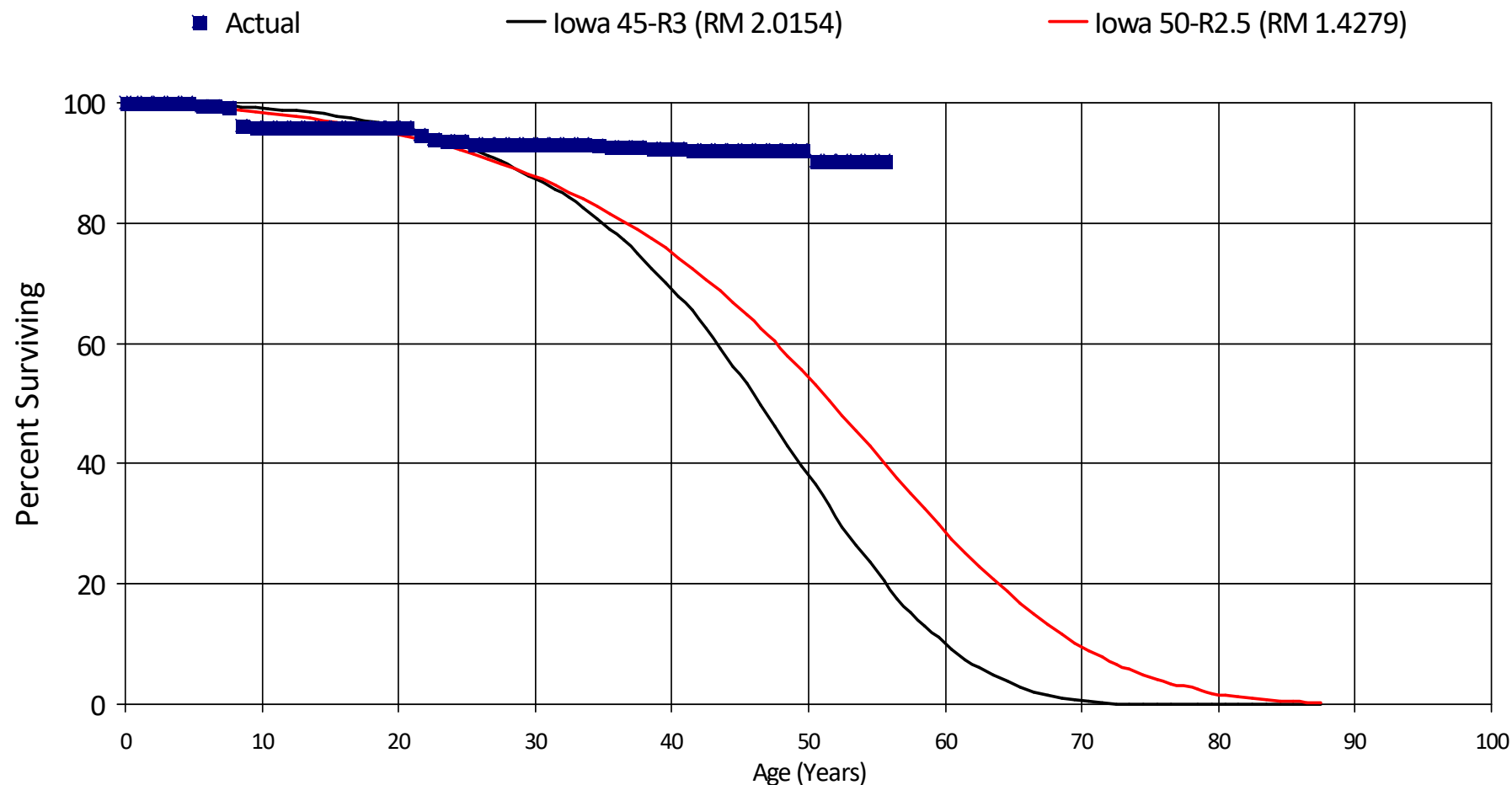
27.5	1,832,031	8,956	0.00489	0.99511	95.91
28.5	1,512,757	3,326	0.00220	0.99780	95.44
29.5	1,369,846	4,787	0.00349	0.99651	95.23
30.5	1,174,640	112,827	0.09605	0.90395	94.90
31.5	943,727	273	0.00029	0.99971	85.78
32.5	647,532	52	0.00008	0.99992	85.76
33.5	483,396	12,136	0.02511	0.97489	85.75
34.5	355,485	135	0.00038	0.99962	83.60
35.5	263,113	3,007	0.01143	0.98857	83.57
36.5	251,463	5,177	0.02059	0.97941	82.61
37.5	240,476	10,663	0.04434	0.95566	80.91
38.5	202,242	4,980	0.02462	0.97538	77.32
39.5	197,262	6,067	0.03076	0.96924	75.42
40.5	177,937	412	0.00232	0.99768	73.10
41.5	172,145	1,376	0.00799	0.99201	72.93
42.5	170,770	0	0.00000	1.00000	72.35
43.5	167,977	0	0.00000	1.00000	72.35
44.5	122,435	0	0.00000	1.00000	72.35
Totals:		379,360			

Naka Power Utilities (Yellowknife)

Account 365.10 - Overhead Services

Placement Band - 1945 - 2022 Experience Band - 2001 - 2022

Actual and Smooth Survivor Curves



Naka Power Utilities (Yellowknife)

Account 365.10 - Overhead Services

Placement Band - 1945 - 2022 Experience Band - 2001 - 2022

RETIREMENT RATE ANALYSIS

Age at Begin of Interval	Exposures at Beginning of Age Interval	Retirements During Age Interval	Retmt Ratio	Survivor Ratio	% Surviving
0	2,054,354	0	0.00000	1.00000	100.00
0.5	2,036,583	47	0.00002	0.99998	100.00
1.5	1,953,939	854	0.00044	0.99956	100.00
2.5	1,923,029	234	0.00012	0.99988	99.96
3.5	1,879,654	292	0.00016	0.99984	99.95
4.5	1,774,968	8,458	0.00477	0.99523	99.93
5.5	1,654,502	881	0.00053	0.99947	99.45
6.5	1,590,478	1,701	0.00107	0.99893	99.40
7.5	1,529,127	48,863	0.03195	0.96805	99.29
8.5	1,443,919	2,883	0.00200	0.99800	96.12
9.5	1,398,440	847	0.00061	0.99939	95.93
10.5	1,306,360	0	0.00000	1.00000	95.87
11.5	1,210,717	64	0.00005	0.99995	95.87
12.5	1,195,299	0	0.00000	1.00000	95.87
13.5	1,144,630	168	0.00015	0.99985	95.87
14.5	1,054,033	0	0.00000	1.00000	95.86
15.5	970,026	0	0.00000	1.00000	95.86
16.5	941,627	0	0.00000	1.00000	95.86
17.5	889,157	0	0.00000	1.00000	95.86
18.5	839,319	0	0.00000	1.00000	95.86
19.5	687,478	0	0.00000	1.00000	95.86
20.5	620,271	8,193	0.01321	0.98679	95.86
21.5	571,928	3,862	0.00675	0.99325	94.59
22.5	539,453	958	0.00178	0.99822	93.95
23.5	525,773	561	0.00107	0.99893	93.78
24.5	510,735	2,388	0.00468	0.99532	93.68
25.5	487,927	302	0.00062	0.99938	93.24
26.5	469,612	0	0.00000	1.00000	93.18

Naka Power Utilities (Yellowknife)

Account 365.10 - Overhead Services

Placement Band - 1945 - 2022 Experience Band - 2001 - 2022

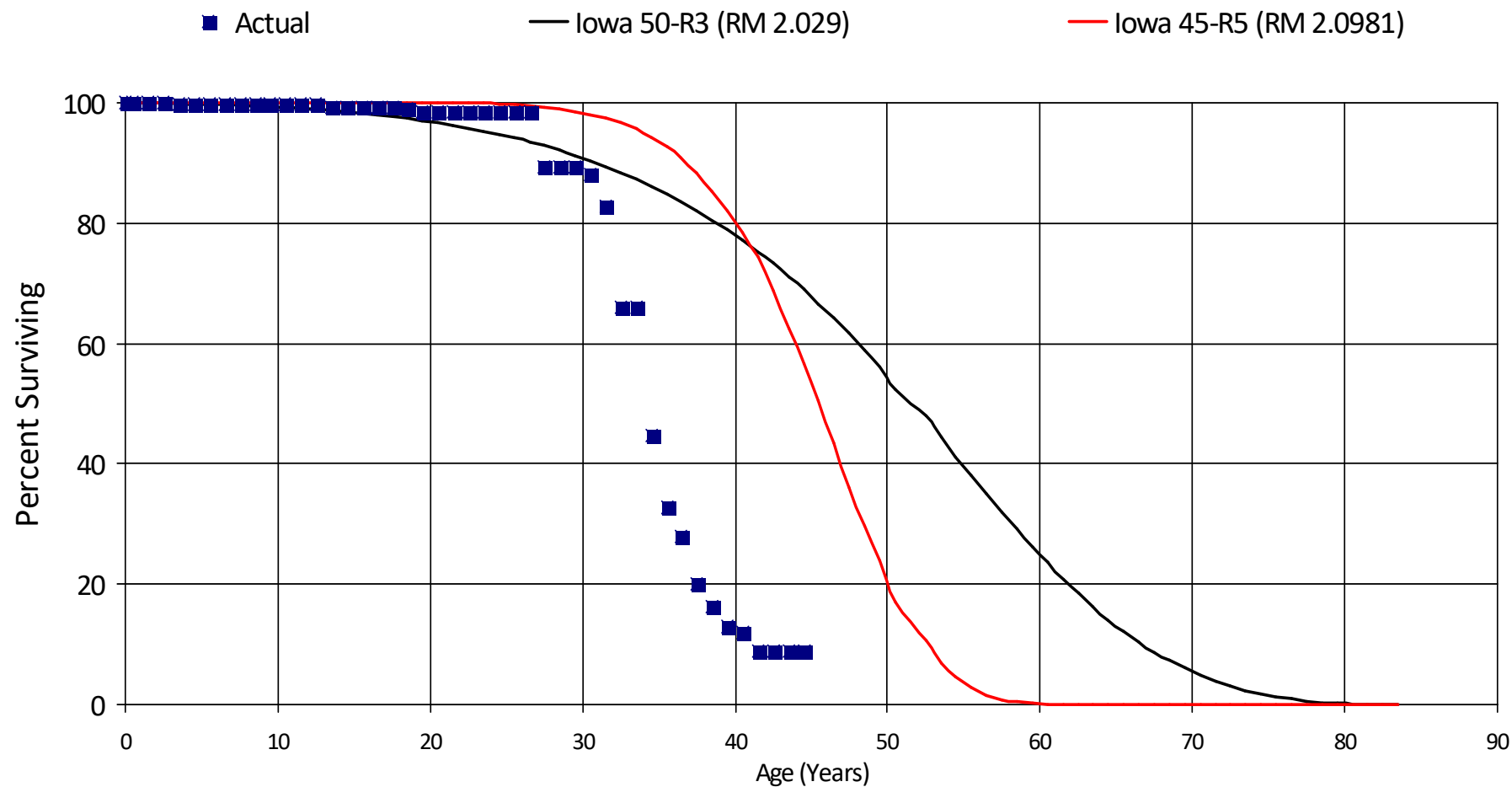
27.5	436,251	0	0.00000	1.00000	93.18
28.5	409,432	192	0.00047	0.99953	93.18
29.5	394,368	0	0.00000	1.00000	93.14
30.5	355,465	0	0.00000	1.00000	93.14
31.5	316,260	175	0.00055	0.99945	93.14
32.5	279,650	153	0.00055	0.99945	93.09
33.5	215,105	602	0.00280	0.99720	93.04
34.5	167,604	64	0.00038	0.99962	92.78
35.5	121,060	102	0.00084	0.99916	92.74
36.5	113,980	95	0.00083	0.99917	92.66
37.5	106,736	86	0.00081	0.99919	92.58
38.5	100,186	43	0.00043	0.99957	92.51
39.5	87,988	39	0.00044	0.99956	92.47
40.5	80,082	315	0.00393	0.99607	92.43
41.5	76,536	0	0.00000	1.00000	92.07
42.5	64,750	0	0.00000	1.00000	92.07
43.5	57,789	0	0.00000	1.00000	92.07
44.5	44,858	0	0.00000	1.00000	92.07
45.5	44,469	0	0.00000	1.00000	92.07
46.5	40,160	0	0.00000	1.00000	92.07
47.5	34,730	0	0.00000	1.00000	92.07
48.5	33,220	0	0.00000	1.00000	92.07
49.5	32,336	638	0.01973	0.98027	92.07
50.5	29,834	0	0.00000	1.00000	90.25
51.5	29,332	0	0.00000	1.00000	90.25
52.5	25,048	0	0.00000	1.00000	90.25
53.5	23,712	0	0.00000	1.00000	90.25
54.5	21,622	0	0.00000	1.00000	90.25
55.5	20,854	0	0.00000	1.00000	90.25
Totals:		84,060			

Naka Power Utilities (Yellowknife)

Account 367.00 - Underground Conductor and Devices

Placement Band - 1971 - 2022 Experience Band - 1992 - 2022

Actual and Smooth Survivor Curves



Naka Power Utilities (Yellowknife)
Account 367.00 - Underground Conductor and Devices
Placement Band - 1971 - 2022 Experience Band - 1992 - 2022

RETIREMENT RATE ANALYSIS

Age at Begin of Interval	Exposures at Beginning of Age Interval	Retirements During Age Interval	Retmt Ratio	Survivor Ratio	% Surviving
0	11,410,584	3,424	0.00030	0.99970	100.00
0.5	11,229,586	0	0.00000	1.00000	99.97
1.5	10,953,411	1,395	0.00013	0.99987	99.97
2.5	10,725,498	12,975	0.00121	0.99879	99.96
3.5	10,438,211	0	0.00000	1.00000	99.84
4.5	10,377,489	0	0.00000	1.00000	99.84
5.5	10,153,445	2,808	0.00028	0.99972	99.84
6.5	9,859,764	718	0.00007	0.99993	99.81
7.5	9,464,666	1,408	0.00015	0.99985	99.80
8.5	9,032,565	0	0.00000	1.00000	99.79
9.5	8,467,027	1,126	0.00013	0.99987	99.79
10.5	7,866,900	8,361	0.00106	0.99894	99.78
11.5	7,584,894	317	0.00004	0.99996	99.67
12.5	7,282,232	27,070	0.00372	0.99628	99.67
13.5	6,762,297	2,290	0.00034	0.99966	99.30
14.5	6,459,317	0	0.00000	1.00000	99.27
15.5	6,055,053	1,199	0.00020	0.99980	99.27
16.5	5,564,709	2,575	0.00046	0.99954	99.25
17.5	4,825,536	5,214	0.00108	0.99892	99.20
18.5	4,533,177	26,929	0.00594	0.99406	99.09
19.5	3,456,578	4,816	0.00139	0.99861	98.50
20.5	2,285,408	0	0.00000	1.00000	98.36
21.5	1,783,987	0	0.00000	1.00000	98.36
22.5	1,261,989	0	0.00000	1.00000	98.36
23.5	1,070,337	0	0.00000	1.00000	98.36
24.5	993,526	0	0.00000	1.00000	98.36
25.5	799,148	0	0.00000	1.00000	98.36
26.5	584,039	52,842	0.09048	0.90952	98.36

Naka Power Utilities (Yellowknife)

Account 367.00 - Underground Conductor and Devices

Placement Band - 1971 - 2022 Experience Band - 1992 - 2022

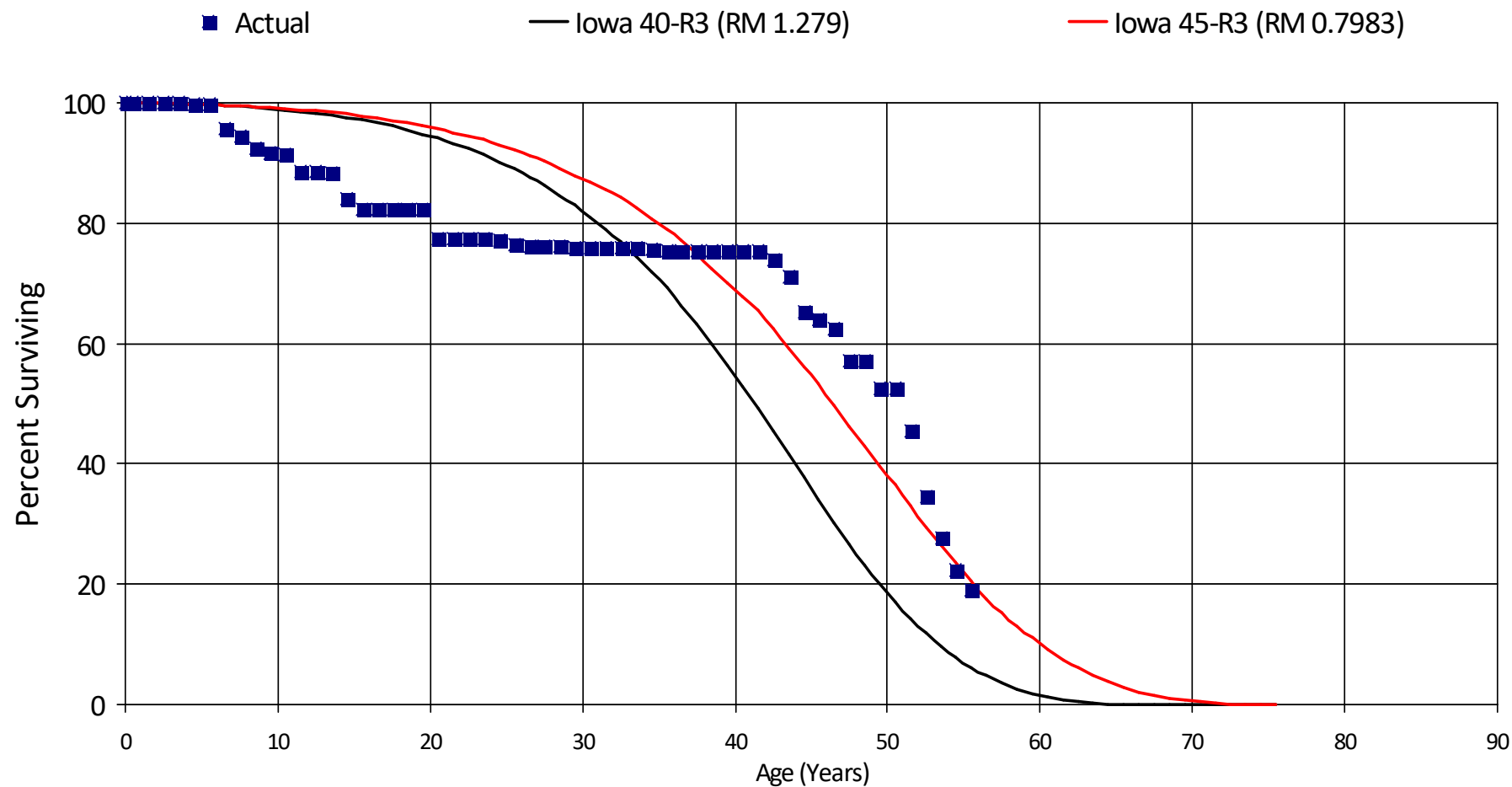
27.5	436,539	0	0.00000	1.00000	89.46
28.5	408,594	164	0.00040	0.99960	89.46
29.5	381,523	6,021	0.01578	0.98422	89.42
30.5	111,141	6,783	0.06103	0.93897	88.01
31.5	74,413	15,081	0.20267	0.79733	82.64
32.5	54,101	0	0.00000	1.00000	65.89
33.5	54,101	17,353	0.32075	0.67925	65.89
34.5	36,748	9,794	0.26652	0.73348	44.76
35.5	26,954	3,956	0.14677	0.85323	32.83
36.5	22,998	6,613	0.28755	0.71245	28.01
37.5	16,385	3,040	0.18554	0.81446	19.96
38.5	13,345	2,625	0.19670	0.80330	16.26
39.5	10,720	903	0.08424	0.91576	13.06
40.5	9,817	2,514	0.25609	0.74391	11.96
41.5	7,303	0	0.00000	1.00000	8.90
42.5	7,303	0	0.00000	1.00000	8.90
43.5	7,303	0	0.00000	1.00000	8.90
44.5	7,303	0	0.00000	1.00000	8.90
Totals:		230,314			

Naka Power Utilities (Yellowknife)

Account 367.10 - Underground Services

Placement Band - 1945 - 2022 Experience Band - 2001 - 2022

Actual and Smooth Survivor Curves



Naka Power Utilities (Yellowknife)

Account 367.10 - Underground Services

Placement Band - 1945 - 2022 Experience Band - 2001 - 2022

RETIREMENT RATE ANALYSIS

Age at Begin of Interval	Exposures at Beginning of Age Interval	Retirements During Age Interval	Retmt Ratio	Survivor Ratio	% Surviving
0	1,285,590	0	0.00000	1.00000	100.00
0.5	1,279,457	32	0.00003	0.99997	100.00
1.5	1,186,108	359	0.00030	0.99970	100.00
2.5	1,161,024	162	0.00014	0.99986	99.97
3.5	1,023,931	1,491	0.00146	0.99854	99.96
4.5	974,443	1,024	0.00105	0.99895	99.81
5.5	666,813	26,950	0.04042	0.95958	99.71
6.5	357,882	4,454	0.01245	0.98755	95.68
7.5	326,676	7,461	0.02284	0.97716	94.49
8.5	279,419	1,994	0.00714	0.99286	92.33
9.5	235,213	586	0.00249	0.99751	91.67
10.5	202,081	6,575	0.03254	0.96746	91.44
11.5	195,032	0	0.00000	1.00000	88.46
12.5	191,627	44	0.00023	0.99977	88.46
13.5	187,899	9,432	0.05020	0.94980	88.44
14.5	172,195	3,627	0.02106	0.97894	84.00
15.5	163,060	0	0.00000	1.00000	82.23
16.5	163,060	0	0.00000	1.00000	82.23
17.5	156,832	0	0.00000	1.00000	82.23
18.5	142,406	0	0.00000	1.00000	82.23
19.5	142,406	8,186	0.05748	0.94252	82.23
20.5	134,219	201	0.00150	0.99850	77.50
21.5	133,266	0	0.00000	1.00000	77.38
22.5	132,123	61	0.00046	0.99954	77.38
23.5	131,250	306	0.00233	0.99767	77.34
24.5	130,020	1,426	0.01097	0.98903	77.16
25.5	127,280	209	0.00164	0.99836	76.31
26.5	125,921	0	0.00000	1.00000	76.18

Naka Power Utilities (Yellowknife)

Account 367.10 - Underground Services

Placement Band - 1945 - 2022 Experience Band - 2001 - 2022

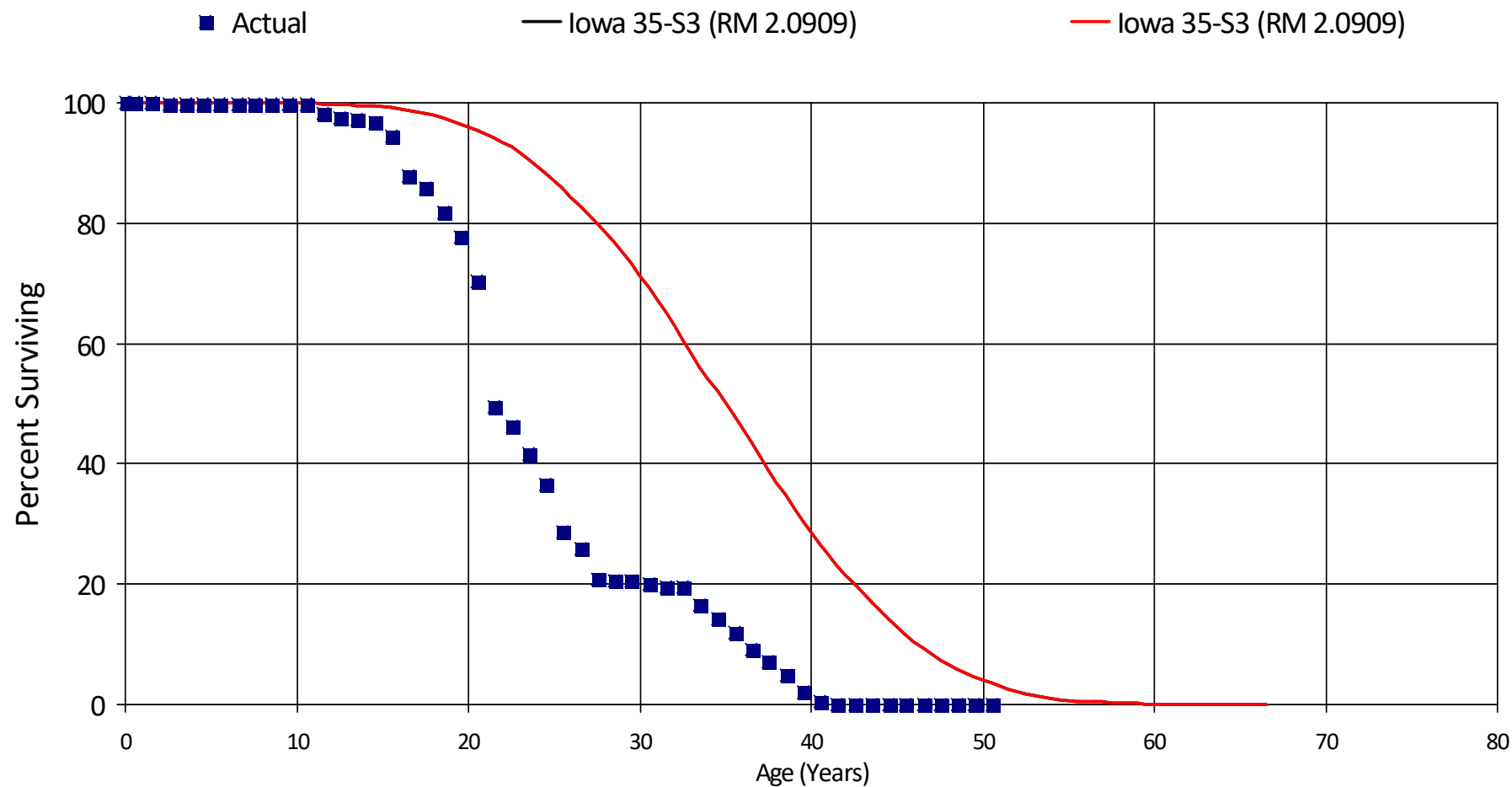
27.5	123,792	0	0.00000	1.00000	76.18
28.5	122,080	278	0.00228	0.99772	76.18
29.5	120,852	0	0.00000	1.00000	76.01
30.5	120,852	0	0.00000	1.00000	76.01
31.5	120,852	226	0.00187	0.99813	76.01
32.5	117,484	0	0.00000	1.00000	75.87
33.5	117,484	416	0.00354	0.99646	75.87
34.5	117,067	180	0.00154	0.99846	75.60
35.5	116,887	0	0.00000	1.00000	75.48
36.5	102,569	0	0.00000	1.00000	75.48
37.5	102,083	59	0.00058	0.99942	75.48
38.5	97,861	30	0.00031	0.99969	75.44
39.5	91,307	27	0.00030	0.99970	75.42
40.5	85,823	0	0.00000	1.00000	75.40
41.5	83,890	1,840	0.02193	0.97807	75.40
42.5	74,906	2,813	0.03755	0.96245	73.75
43.5	59,007	4,724	0.08006	0.91994	70.98
44.5	38,377	834	0.02173	0.97827	65.30
45.5	37,543	779	0.02075	0.97925	63.88
46.5	35,160	2,999	0.08529	0.91471	62.55
47.5	32,161	0	0.00000	1.00000	57.22
48.5	32,161	2,566	0.07979	0.92021	57.22
49.5	29,595	0	0.00000	1.00000	52.65
50.5	29,595	4,118	0.13915	0.86085	52.65
51.5	25,477	6,009	0.23586	0.76414	45.32
52.5	19,468	3,950	0.20290	0.79710	34.63
53.5	15,518	2,900	0.18688	0.81312	27.60
54.5	12,618	1,891	0.14987	0.85013	22.44
55.5	10,727	0	0.00000	1.00000	19.08
Totals:		111,219			

Naka Power Utilities (Yellowknife)

Account 368.00 - Line Transformers

Placement Band - 1941 - 2022 Experience Band - 1990 - 2022

Actual and Smooth Survivor Curves



Naka Power Utilities (Yellowknife)

Account 368.00 - Line Transformers

Placement Band - 1941 - 2022 Experience Band - 1990 - 2022

RETIREMENT RATE ANALYSIS

Age at Begin of Interval	Exposures at Beginning of Age Interval	Retirements During Age Interval	Retmt Ratio	Survivor Ratio	% Surviving
0	19,295,908	0	0.00000	1.00000	100.00
0.5	19,295,908	10,451	0.00054	0.99946	100.00
1.5	19,274,153	51,917	0.00269	0.99731	99.95
2.5	19,199,188	0	0.00000	1.00000	99.68
3.5	19,155,561	0	0.00000	1.00000	99.68
4.5	18,931,816	0	0.00000	1.00000	99.68
5.5	18,716,032	3,582	0.00019	0.99981	99.68
6.5	18,228,194	1,201	0.00007	0.99993	99.66
7.5	17,399,142	1,039	0.00006	0.99994	99.65
8.5	16,910,661	0	0.00000	1.00000	99.64
9.5	16,388,807	629	0.00004	0.99996	99.64
10.5	14,306,794	196,813	0.01376	0.98624	99.64
11.5	12,468,372	93,975	0.00754	0.99246	98.27
12.5	10,536,756	47,431	0.00450	0.99550	97.53
13.5	9,518,473	32,020	0.00336	0.99664	97.09
14.5	7,609,282	192,785	0.02534	0.97466	96.76
15.5	5,726,247	400,764	0.06999	0.93001	94.31
16.5	3,928,424	81,503	0.02075	0.97925	87.71
17.5	2,581,481	123,163	0.04771	0.95229	85.89
18.5	1,860,552	95,869	0.05153	0.94847	81.79
19.5	1,764,684	164,964	0.09348	0.90652	77.58
20.5	1,599,719	473,535	0.29601	0.70399	70.33
21.5	1,126,184	73,265	0.06506	0.93494	49.51
22.5	1,052,919	108,374	0.10293	0.89707	46.29
23.5	944,545	115,569	0.12235	0.87765	41.53
24.5	828,976	177,396	0.21399	0.78601	36.45
25.5	651,581	61,225	0.09396	0.90604	28.65
26.5	590,356	119,766	0.20287	0.79713	25.96

Naka Power Utilities (Yellowknife)

Account 368.00 - Line Transformers

Placement Band - 1941 - 2022 Experience Band - 1990 - 2022

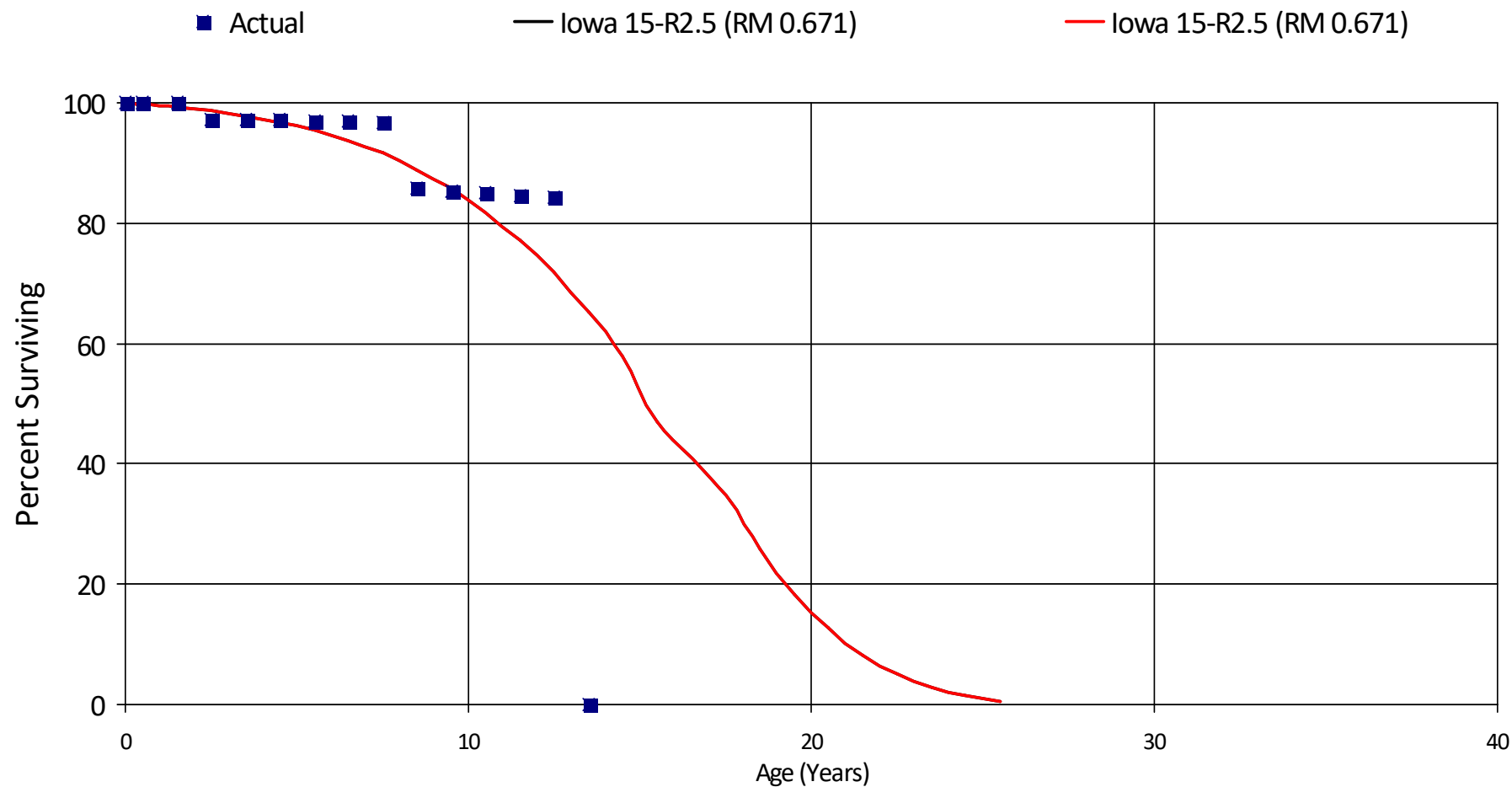
27.5	470,590	1,691	0.00359	0.99641	20.69
28.5	468,898	3,198	0.00682	0.99318	20.62
29.5	465,701	10,598	0.02276	0.97724	20.48
30.5	455,102	12,547	0.02757	0.97243	20.01
31.5	442,555	0	0.00000	1.00000	19.46
32.5	442,555	68,694	0.15522	0.84478	19.46
33.5	373,861	52,272	0.13982	0.86018	16.44
34.5	321,589	52,066	0.16190	0.83810	14.14
35.5	269,523	61,386	0.22776	0.77224	11.85
36.5	208,137	49,260	0.23667	0.76333	9.15
37.5	158,877	49,170	0.30948	0.69052	6.98
38.5	109,707	65,897	0.60066	0.39934	4.82
39.5	43,810	33,929	0.77446	0.22554	1.92
40.5	9,880	8,140	0.82386	0.17614	0.43
41.5	1,740	322	0.18506	0.81494	0.08
42.5	1,418	0	0.00000	1.00000	0.07
43.5	1,418	0	0.00000	1.00000	0.07
44.5	1,418	0	0.00000	1.00000	0.07
45.5	1,418	0	0.00000	1.00000	0.07
46.5	1,418	0	0.00000	1.00000	0.07
47.5	1,418	0	0.00000	1.00000	0.07
48.5	1,418	1,336	0.94237	0.05763	0.07
49.5	82	82	1.00490	-0.00490	0.00
50.5	0	0	0.00000	0.00000	0.00
Totals:		3,097,824			

Naka Power Utilities (Yellowknife)

Account 371.00 - Automated Meters

Placement Band - 2006 - 2022 Experience Band - 2012 - 2022

Actual and Smooth Survivor Curves



Naka Power Utilities (Yellowknife)

Account 371.00 - Automated Meters

Placement Band - 2006 - 2022 Experience Band - 2012 - 2022

RETIREMENT RATE ANALYSIS

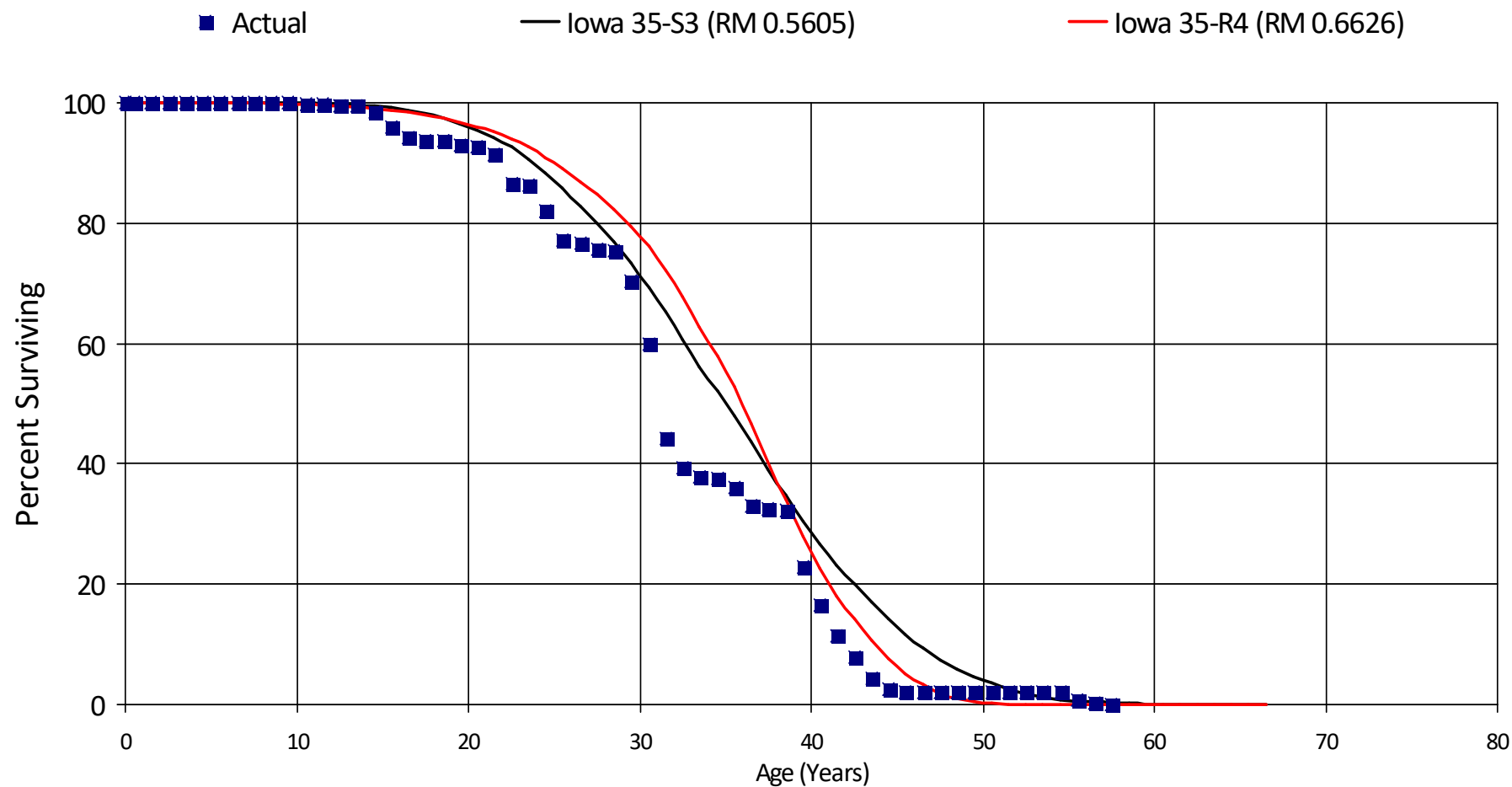
Age at Begin of Interval	Exposures at Beginning of Age Interval	Retirements During Age Interval	Retmt Ratio	Survivor Ratio	% Surviving
0	2,833,166	0	0.00000	1.00000	100.00
0.5	2,759,505	255	0.00009	0.99991	100.00
1.5	2,726,904	73,225	0.02685	0.97315	99.99
2.5	2,629,022	1,276	0.00049	0.99951	97.31
3.5	2,604,331	3,935	0.00151	0.99849	97.26
4.5	2,556,936	3,566	0.00139	0.99861	97.11
5.5	2,510,535	2,488	0.00099	0.99901	96.98
6.5	2,450,643	7,636	0.00312	0.99688	96.88
7.5	2,357,283	262,040	0.11116	0.88884	96.58
8.5	2,049,223	13,804	0.00674	0.99326	85.84
9.5	1,975,182	8,205	0.00415	0.99585	85.26
10.5	1,928,371	11,200	0.00581	0.99419	84.91
11.5	1,855,523	3,057	0.00165	0.99835	84.42
12.5	249	249	0.99856	0.00144	84.28
13.5	0	0	0.00000	0.00000	0.12
Totals:		390,936			

Naka Power Utilities (Yellowknife)

Account 373.00 - Street Lights

Placement Band - 1955 - 2022 Experience Band - 1990 - 2022

Actual and Smooth Survivor Curves



Naka Power Utilities (Yellowknife)

Account 373.00 - Street Lights

Placement Band - 1955 - 2022 Experience Band - 1990 - 2022

RETIREMENT RATE ANALYSIS

Age at Begin of Interval	Exposures at Beginning of Age Interval	Retirements During Age Interval	Retmt Ratio	Survivor Ratio	% Surviving
0	9,577,101	0	0.00000	1.00000	100.00
0.5	9,129,691	3,579	0.00039	0.99961	100.00
1.5	8,690,325	1,442	0.00017	0.99983	99.96
2.5	8,434,488	0	0.00000	1.00000	99.94
3.5	7,938,378	0	0.00000	1.00000	99.94
4.5	7,250,222	951	0.00013	0.99987	99.94
5.5	6,753,463	819	0.00012	0.99988	99.93
6.5	6,187,145	269	0.00004	0.99996	99.92
7.5	5,908,758	919	0.00016	0.99984	99.92
8.5	4,953,713	1,251	0.00025	0.99975	99.90
9.5	4,642,558	1,615	0.00035	0.99965	99.88
10.5	4,383,040	9,007	0.00205	0.99795	99.85
11.5	4,327,022	4,595	0.00106	0.99894	99.65
12.5	4,204,376	1,232	0.00029	0.99971	99.54
13.5	4,061,986	46,080	0.01134	0.98866	99.51
14.5	3,916,259	93,731	0.02393	0.97607	98.38
15.5	3,617,293	75,122	0.02077	0.97923	96.03
16.5	3,301,112	14,058	0.00426	0.99574	94.04
17.5	3,086,816	3,254	0.00105	0.99895	93.64
18.5	2,831,077	16,761	0.00592	0.99408	93.54
19.5	2,521,209	8,949	0.00355	0.99645	92.99
20.5	2,146,539	30,946	0.01442	0.98558	92.66
21.5	1,855,879	97,967	0.05279	0.94721	91.32
22.5	1,685,250	3,785	0.00225	0.99775	86.50
23.5	1,441,748	73,780	0.05117	0.94883	86.31
24.5	1,298,921	76,474	0.05888	0.94112	81.89
25.5	1,149,681	5,935	0.00516	0.99484	77.07
26.5	1,126,718	14,929	0.01325	0.98675	76.67

Naka Power Utilities (Yellowknife)

Account 373.00 - Street Lights

Placement Band - 1955 - 2022 Experience Band - 1990 - 2022

27.5	1,072,775	4,041	0.00377	0.99623	75.65
28.5	999,199	65,788	0.06584	0.93416	75.36
29.5	816,597	122,739	0.15031	0.84969	70.40
30.5	676,298	176,599	0.26113	0.73887	59.82
31.5	397,026	43,574	0.10975	0.89025	44.20
32.5	353,452	14,115	0.03993	0.96007	39.35
33.5	339,337	1,677	0.00494	0.99506	37.78
34.5	337,660	14,585	0.04319	0.95681	37.59
35.5	323,075	26,041	0.08060	0.91940	35.97
36.5	297,034	4,828	0.01625	0.98375	33.07
37.5	292,206	2,676	0.00916	0.99084	32.53
38.5	289,530	84,154	0.29066	0.70934	32.23
39.5	205,376	56,726	0.27621	0.72379	22.86
40.5	148,650	45,842	0.30839	0.69161	16.55
41.5	102,808	33,039	0.32137	0.67863	11.45
42.5	69,769	32,132	0.46055	0.53945	7.77
43.5	37,637	14,831	0.39405	0.60595	4.19
44.5	22,806	5,555	0.24357	0.75643	2.54
45.5	17,251	0	0.00000	1.00000	1.92
46.5	17,251	0	0.00000	1.00000	1.92
47.5	17,251	0	0.00000	1.00000	1.92
48.5	17,251	0	0.00000	1.00000	1.92
49.5	17,251	0	0.00000	1.00000	1.92
50.5	17,251	0	0.00000	1.00000	1.92
51.5	17,251	0	0.00000	1.00000	1.92
52.5	17,251	0	0.00000	1.00000	1.92
53.5	17,251	0	0.00000	1.00000	1.92
54.5	17,251	10,915	0.63270	0.36730	1.92
55.5	6,336	4,361	0.68824	0.31176	0.71
56.5	1,975	1,975	0.99979	0.00021	0.22
57.5	0	0	0.00000	0.00000	0.00

Naka Power Utilities (Yellowknife)

Account 373.00 - Street Lights

Placement Band - 1955 - 2022 Experience Band - 1990 - 2022

Totals:

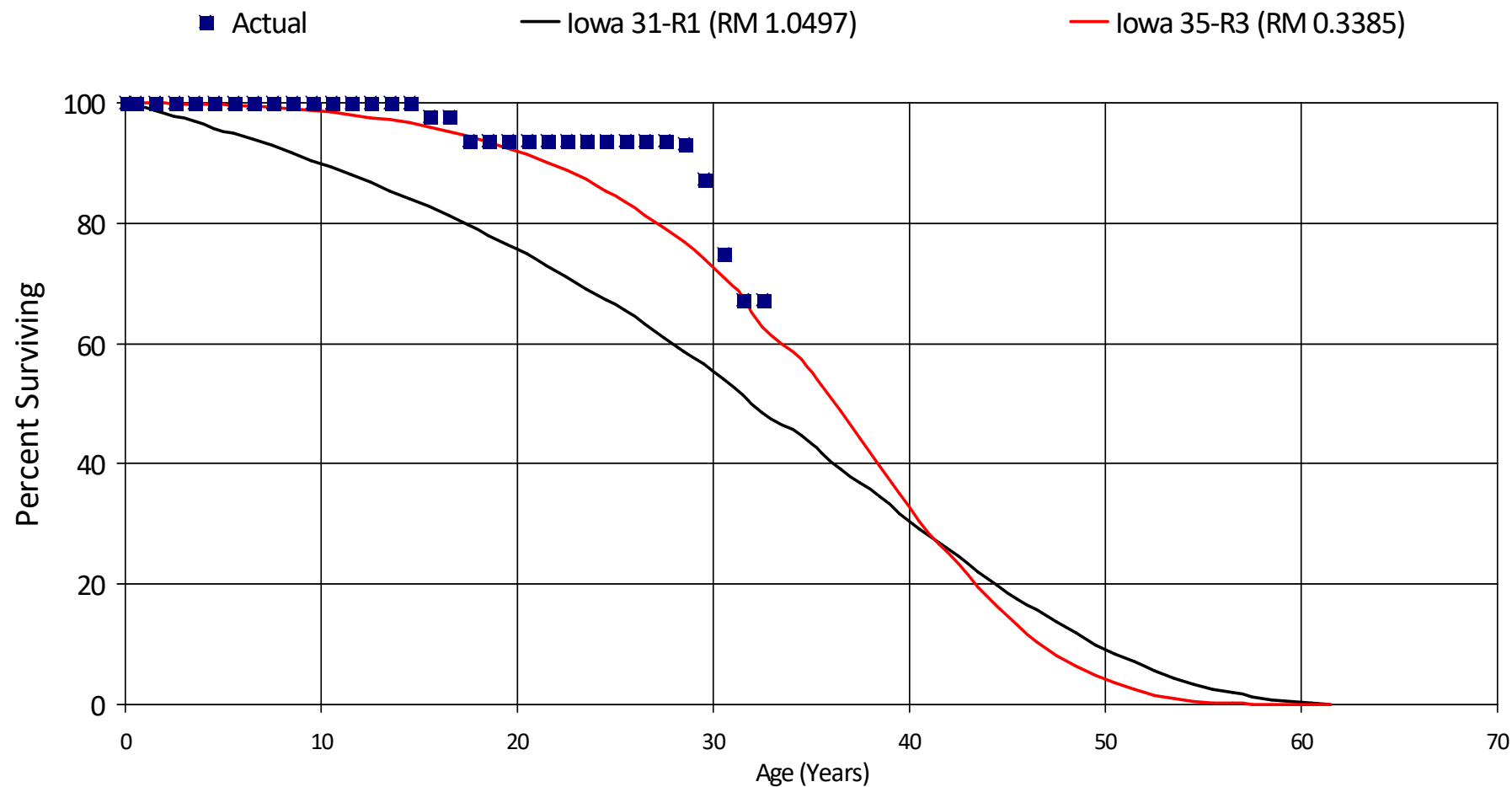
1,353,643

Naka Power Utilities (Yellowknife)

Account 373.10 - Sentinel Lights

Placement Band - 1989 - 2022 Experience Band - 2017 - 2022

Actual and Smooth Survivor Curves



Naka Power Utilities (Yellowknife)

Account 373.10 - Sentinel Lights

Placement Band - 1989 - 2022 Experience Band - 2017 - 2022

RETIREMENT RATE ANALYSIS

Age at Begin of Interval	Exposures at Beginning of Age Interval	Retirements During Age Interval	Retmt Ratio	Survivor Ratio	% Surviving
0	63,829	0	0.00000	1.00000	100.00
0.5	57,133	0	0.00000	1.00000	100.00
1.5	57,133	0	0.00000	1.00000	100.00
2.5	57,133	0	0.00000	1.00000	100.00
3.5	57,133	0	0.00000	1.00000	100.00
4.5	55,909	0	0.00000	1.00000	100.00
5.5	55,909	0	0.00000	1.00000	100.00
6.5	55,909	0	0.00000	1.00000	100.00
7.5	55,909	0	0.00000	1.00000	100.00
8.5	55,909	0	0.00000	1.00000	100.00
9.5	55,909	0	0.00000	1.00000	100.00
10.5	55,701	0	0.00000	1.00000	100.00
11.5	54,680	0	0.00000	1.00000	100.00
12.5	45,290	0	0.00000	1.00000	100.00
13.5	45,290	0	0.00000	1.00000	100.00
14.5	45,290	1,090	0.02407	0.97593	100.00
15.5	44,200	0	0.00000	1.00000	97.59
16.5	41,734	1,687	0.04042	0.95958	97.59
17.5	34,752	0	0.00000	1.00000	93.65
18.5	34,752	0	0.00000	1.00000	93.65
19.5	34,752	0	0.00000	1.00000	93.65
20.5	34,752	0	0.00000	1.00000	93.65
21.5	34,752	0	0.00000	1.00000	93.65
22.5	24,187	0	0.00000	1.00000	93.65
23.5	21,838	0	0.00000	1.00000	93.65
24.5	21,838	0	0.00000	1.00000	93.65
25.5	21,838	0	0.00000	1.00000	93.65
26.5	21,838	0	0.00000	1.00000	93.65

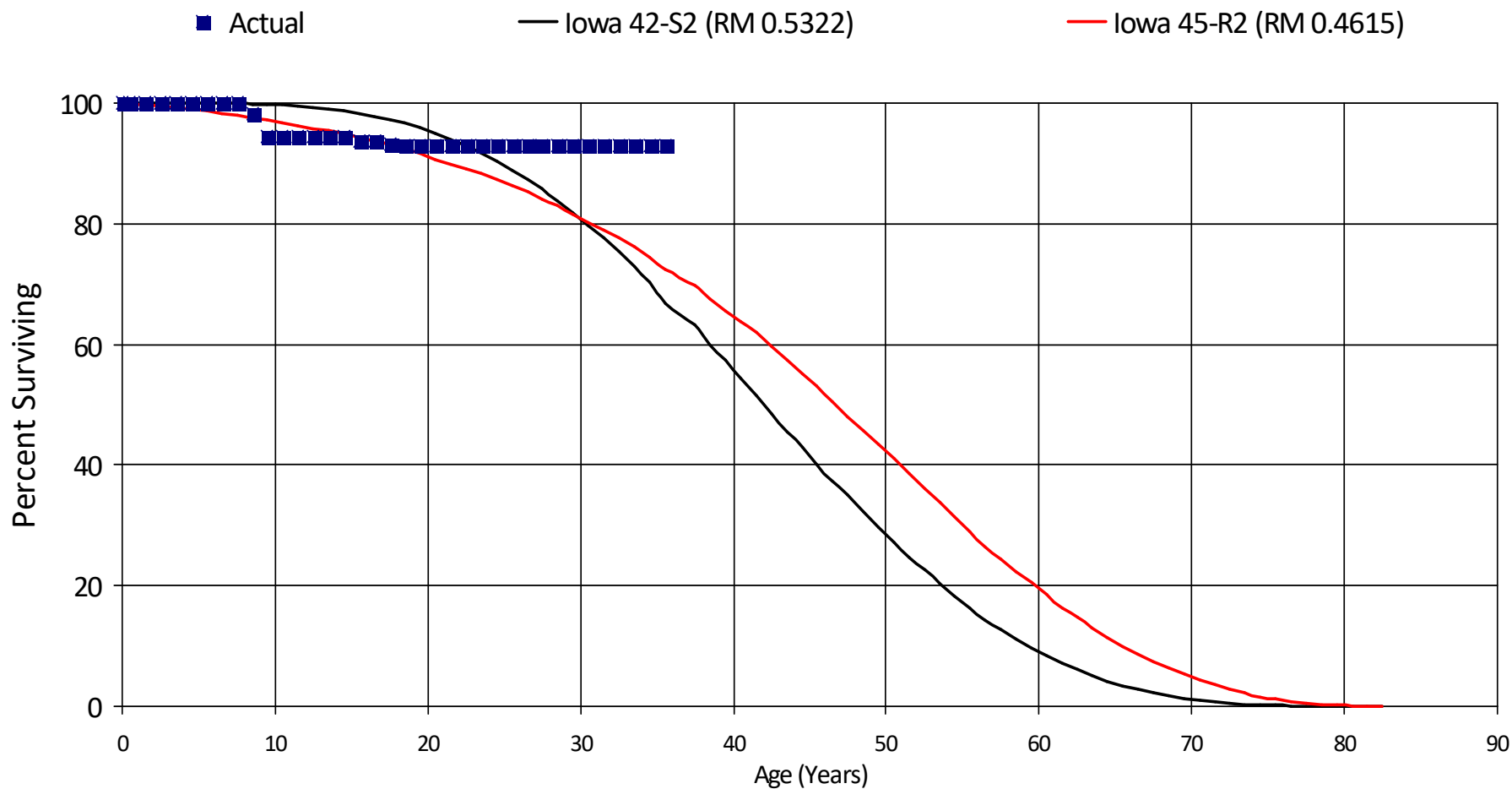
Naka Power Utilities (Yellowknife)

Account 373.10 - Sentinel Lights

Placement Band - 1989 - 2022 Experience Band - 2017 - 2022

27.5	18,666	105	0.00563	0.99437	93.65
28.5	17,044	1,060	0.06219	0.93781	93.12
29.5	8,478	1,204	0.14202	0.85798	87.33
30.5	7,274	740	0.10174	0.89826	74.93
31.5	3,103	0	0.00000	1.00000	67.31
32.5	0	0	0.00000	0.00000	67.31
Totals:		5,886			

Naka Power Utilities (Yellowknife)
Account 390.00 - Structures and Improvements
Placement Band - 1986 - 2022 Experience Band - 1987 - 2022
Actual and Smooth Survivor Curves



Naka Power Utilities (Yellowknife)

Account 390.00 - Structures and Improvements

Placement Band - 1986 - 2022 Experience Band - 1987 - 2022

RETIREMENT RATE ANALYSIS

Age at Begin of Interval	Exposures at Beginning of Age Interval	Retirements During Age Interval	Retmt Ratio	Survivor Ratio	% Surviving
0	6,672,574	0	0.00000	1.00000	100.00
0.5	6,666,153	1,523	0.00023	0.99977	100.00
1.5	5,984,545	0	0.00000	1.00000	99.98
2.5	5,966,666	0	0.00000	1.00000	99.98
3.5	5,963,686	0	0.00000	1.00000	99.98
4.5	5,960,535	0	0.00000	1.00000	99.98
5.5	5,955,980	0	0.00000	1.00000	99.98
6.5	5,943,011	0	0.00000	1.00000	99.98
7.5	5,937,510	100,861	0.01699	0.98301	99.98
8.5	1,991,146	77,590	0.03897	0.96103	98.28
9.5	1,874,965	0	0.00000	1.00000	94.45
10.5	1,804,479	2,500	0.00139	0.99861	94.45
11.5	1,626,550	0	0.00000	1.00000	94.32
12.5	1,588,709	0	0.00000	1.00000	94.32
13.5	1,585,282	0	0.00000	1.00000	94.32
14.5	1,542,108	12,784	0.00829	0.99171	94.32
15.5	1,529,324	0	0.00000	1.00000	93.54
16.5	1,529,324	5,433	0.00355	0.99645	93.54
17.5	1,523,891	6,495	0.00426	0.99574	93.21
18.5	1,486,800	0	0.00000	1.00000	92.81
19.5	1,486,790	0	0.00000	1.00000	92.81
20.5	1,451,703	0	0.00000	1.00000	92.81
21.5	1,422,631	0	0.00000	1.00000	92.81
22.5	1,406,290	0	0.00000	1.00000	92.81
23.5	1,336,267	0	0.00000	1.00000	92.81
24.5	1,255,728	0	0.00000	1.00000	92.81
25.5	793,556	0	0.00000	1.00000	92.81
26.5	786,224	0	0.00000	1.00000	92.81

Naka Power Utilities (Yellowknife)

Account 390.00 - Structures and Improvements

Placement Band - 1986 - 2022 Experience Band - 1987 - 2022

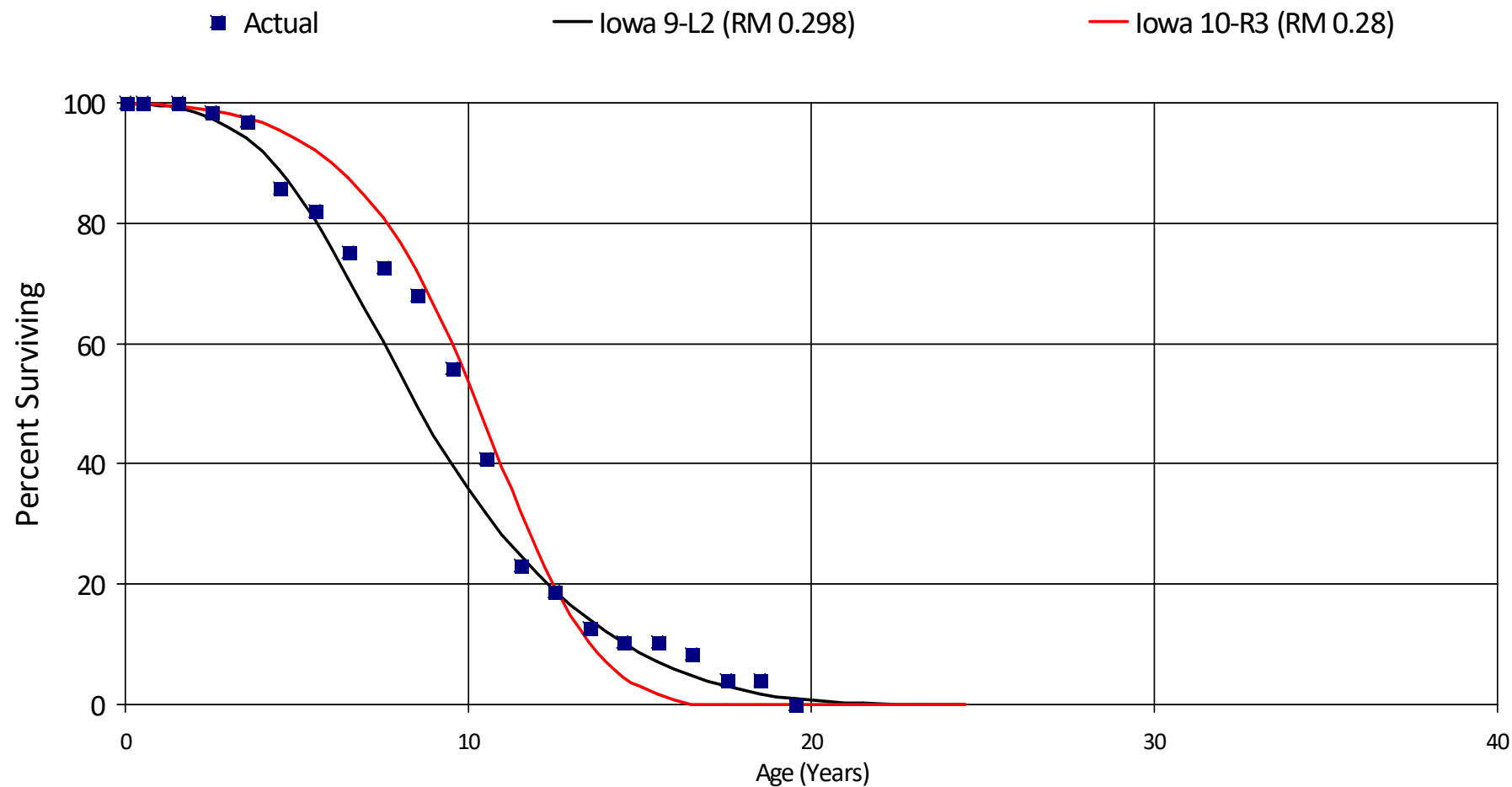
27.5	756,519	0	0.00000	1.00000	92.81
28.5	747,315	0	0.00000	1.00000	92.81
29.5	734,057	0	0.00000	1.00000	92.81
30.5	712,949	0	0.00000	1.00000	92.81
31.5	537,174	0	0.00000	1.00000	92.81
32.5	535,093	0	0.00000	1.00000	92.81
33.5	498,397	0	0.00000	1.00000	92.81
34.5	491,684	0	0.00000	1.00000	92.81
35.5	470,684	0	0.00000	1.00000	92.81
Totals:		207,186			

Naka Power Utilities (Yellowknife)

Account 392.20 - Transportation Equipment, Fleet Vehicles Category 2

Placement Band - 1970 - 2022 Experience Band - 1982 - 2022

Actual and Smooth Survivor Curves



Naka Power Utilities (Yellowknife)
Account 392.20 - Transportation Equipment, Fleet Vehicles Category 2
Placement Band - 1970 - 2022 Experience Band - 1982 - 2022

RETIREMENT RATE ANALYSIS

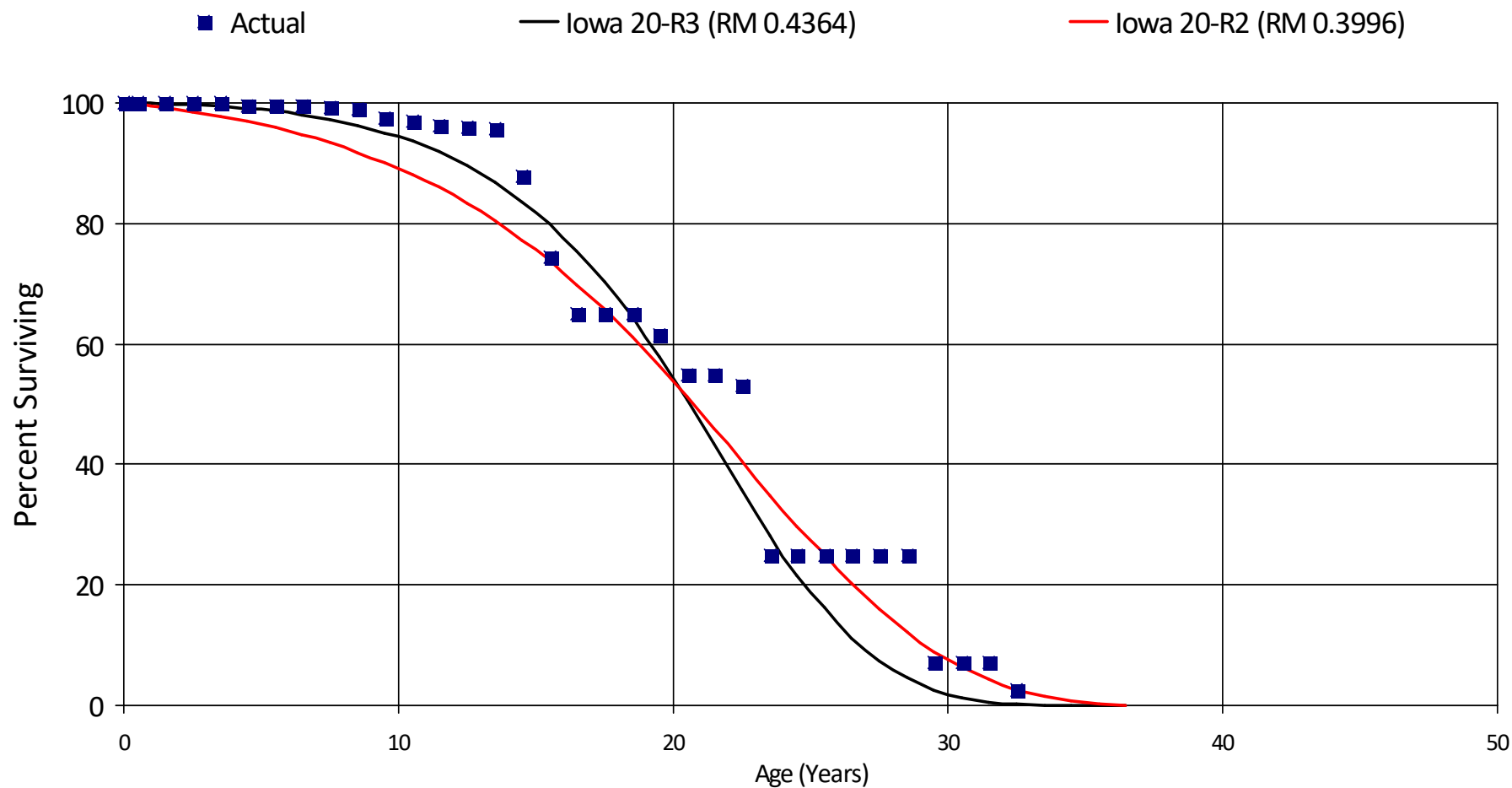
Age at Begin of Interval	Exposures at Beginning of Age Interval	Retirements During Age Interval	Retmt Ratio	Survivor Ratio	% Surviving
0	1,417,044	0	0.00000	1.00000	100.00
0.5	1,282,860	1,055	0.00082	0.99918	100.00
1.5	1,281,805	19,279	0.01504	0.98496	99.92
2.5	1,262,526	18,708	0.01482	0.98518	98.42
3.5	1,119,727	128,173	0.11447	0.88553	96.96
4.5	950,590	42,547	0.04476	0.95524	85.86
5.5	898,184	74,543	0.08299	0.91701	82.02
6.5	730,433	26,215	0.03589	0.96411	75.21
7.5	704,218	43,345	0.06155	0.93845	72.51
8.5	569,951	102,304	0.17950	0.82050	68.05
9.5	430,862	114,889	0.26665	0.73335	55.84
10.5	315,973	138,144	0.43720	0.56280	40.95
11.5	177,829	32,116	0.18060	0.81940	23.05
12.5	145,713	48,359	0.33188	0.66812	18.89
13.5	85,838	15,236	0.17750	0.82250	12.62
14.5	70,603	0	0.00000	1.00000	10.38
15.5	70,603	13,222	0.18727	0.81273	10.38
16.5	57,381	30,495	0.53145	0.46855	8.44
17.5	26,886	0	0.00000	1.00000	3.95
18.5	26,886	26,886	1.00001	-0.00001	3.95
19.5	0	0	0.00000	0.00000	0.00
Totals:		875,516			

Naka Power Utilities (Yellowknife)

Account 392.30 - Transportation Equipment, Fleet Vehicles Category 3

Placement Band - 1976 - 2022 Experience Band - 1995 - 2022

Actual and Smooth Survivor Curves



Naka Power Utilities (Yellowknife)
Account 392.30 - Transportation Equipment, Fleet Vehicles Category 3
Placement Band - 1976 - 2022 Experience Band - 1995 - 2022

RETIREMENT RATE ANALYSIS

Age at Begin of Interval	Exposures at Beginning of Age Interval	Retirements During Age Interval	Retmt Ratio	Survivor Ratio	% Surviving
0	2,347,101	0	0.00000	1.00000	100.00
0.5	2,332,087	0	0.00000	1.00000	100.00
1.5	2,308,951	0	0.00000	1.00000	100.00
2.5	2,303,847	1,435	0.00062	0.99938	100.00
3.5	2,218,313	10,070	0.00454	0.99546	99.94
4.5	2,208,243	0	0.00000	1.00000	99.49
5.5	2,208,243	0	0.00000	1.00000	99.49
6.5	2,005,444	2,639	0.00132	0.99868	99.49
7.5	1,963,638	5,885	0.00300	0.99700	99.36
8.5	1,945,739	30,535	0.01569	0.98431	99.06
9.5	1,912,052	9,557	0.00500	0.99500	97.51
10.5	1,624,316	15,039	0.00926	0.99074	97.02
11.5	1,609,276	961	0.00060	0.99940	96.12
12.5	1,270,994	3,768	0.00296	0.99704	96.06
13.5	994,436	82,985	0.08345	0.91655	95.78
14.5	911,451	139,596	0.15316	0.84684	87.79
15.5	771,855	96,058	0.12445	0.87555	74.34
16.5	675,797	229	0.00034	0.99966	65.09
17.5	675,568	0	0.00000	1.00000	65.07
18.5	613,503	33,249	0.05420	0.94580	65.07
19.5	580,254	64,091	0.11045	0.88955	61.54
20.5	231,136	0	0.00000	1.00000	54.74
21.5	231,136	6,836	0.02958	0.97042	54.74
22.5	224,300	119,704	0.53368	0.46632	53.12
23.5	104,596	0	0.00000	1.00000	24.77
24.5	104,596	0	0.00000	1.00000	24.77
25.5	104,596	0	0.00000	1.00000	24.77
26.5	104,596	0	0.00000	1.00000	24.77

Naka Power Utilities (Yellowknife)

Account 392.30 - Transportation Equipment, Fleet Vehicles Category 3

Placement Band - 1976 - 2022 Experience Band - 1995 - 2022

27.5	104,596	0	0.00000	1.00000	24.77
28.5	104,596	74,649	0.71369	0.28631	24.77
29.5	29,947	0	0.00000	1.00000	7.09
30.5	29,947	0	0.00000	1.00000	7.09
31.5	29,947	18,972	0.63352	0.36648	7.09
32.5	0	0	0.00000	0.00000	2.60
Totals:		716,258			



SECTION 7

7 NET SALVAGE

NAKA POWER UTILITIES (YELLOWKNIFE)

ACCOUNT 362 Distribution Substation

SUMMARY OF BOOK SALVAGE

Year	Regular Retirements	Cost of Removal Amount	Cost of Removal Percent	Gross Salvage Amount	Gross Salvage Percent	Net Salvage Amount	Net Salvage Percent	3-Year Amount	3-Year Percent	5-Year Amount	5-Year Percent	Historical Amount	Historical Percent	Concentric Recommendation
1988	2,518				0	0							0	
1989					0	0							0	
1990	323,480				0	0		0	0				0	
1991	41,761				0	0		0	0				0	
1992					0	0		0	0	0	0		0	
1993					0	0		0	0	0	0		0	
1994					0	0		0	0	0	0		0	
1995					0	0		0	0	0	0		0	
1996					0	0		0	0	0	0		0	
1997					0	0		0	0	0	0		0	
1998	13,790				0	0		0	0	0	0		0	
1999					0	0		0	0	0	0		0	
2000					0	0		0	0	0	0		0	
2001	6,900				0	0		0	0	0	0		0	
2002					0	0		0	0	0	0		0	
2003					0	0		0	0	0	0		0	
2004					0	0		0	0	0	0		0	
2005					0	0		0	0	0	0		0	
2006					0	0		0	0	0	0		0	
2007	1,300,364	119,245			0	-119,245		-39,748	-9	-23,849	-9	-119,245	-7	5.00
2008			0		0	0	0	-39,748	-9	-23,849	-9	-119,245	-7	5.00
2009			0		0	0	0	-39,748	-9	-23,849	-9	-119,245	-7	5.00
2010			0		0	0	0	0	0	-23,849	-9	-119,245	-7	5.00
2011			0		0	0	0	0	0	-23,849	-9	-119,245	-7	5.00
2012	1,794,191	-188	0		0	188	0	63	0	38	0	-59,529	-3	5.00
2013			0		0	0	0	63	0	38	0	-59,529	-3	5.00
2014	5,897	69,648	1,181		0	-69,648	-1,181	-23,154	-4	-13,892	-4	-62,902	-5	5.00
2015			0		0	0	0	-23,216	-1,181	-13,892	-4	-62,902	-5	5.00
2016			0		0	0	0	-23,216	-1,181	-13,892	-4	-62,902	-5	5.00
2017			0		0	0	0	0	0	-13,930	-1,181	-62,902	-5	5.00
2018	468,898	10,179	2		0	-10,179	-2	-3,393	-2	-15,965	-17	-49,721	-5	5.00
2019		734	0		0	-734	0	-3,638	-2	-2,183	-2	-39,924	-5	5.00
2020	24,884	11,107	45		0	-11,107	-45	-7,340	-4	-4,404	-4	-35,121	-5	5.00
2021	79,486	4,740	6		0	-4,740	-6	-5,527	-16	-5,352	-5	-30,781	-5	5.00
2022	616,447	9,746	2		0	-9,746	-2	-8,531	-4	-7,301	-3	-28,151	-5	5.00
TOTAL	4,678,615	225,212	4.81	0	0.00	-225,212	(4.81)							

NAKA POWER UTILITIES (YELLOWKNIFE)

ACCOUNT 364 - Poles, Towers & Fixtures

SUMMARY OF BOOK SALVAGE

Year	Regular Retirements	Cost of Removal Amount	Cost of Removal Percent	Gross Salvage Amount	Gross Salvage Percent	Net Salvage Amount	Net Salvage Percent	3-Year Amount	3-Year Percent	5-Year Amount	5-Year Percent	Historical Amount	Historical Percent	Concentric Recommendation
1987	7,613		0		0	0	0						0	
1988			0		0	0	0						0	
1989			0		0	0	0	0	0				0	
1990			0		0	0	0	0	0				0	
1991	9,744		0		0	0	0	0	0	0	0		0	
1992	46,100		0		0	0	0	0	0	0	0		0	
1993			0	-1,986	0	1,986	0	662	4	397	4	1,986	3	- 45.00
1994	2,906	21,500	740	-4,253	-146	-17,247	-594	-5,087	-31	-3,052	-26	-7,631	-23	- 45.00
1995	5,334	300	6	-9,734	-182	9,434	177	-1,942	-71	-1,165	-9	-1,942	-8	- 45.00
1996	6,657	26,483	398	-3,581	-54	-22,902	-344	-10,238	-206	-5,746	-47	-7,182	-37	- 45.00
1997	2,514	5,257	209	-2,192	-87	-3,064	-122	-5,511	-114	-6,359	-183	-6,359	-39	- 45.00
1998	2,095	4,591	219	-1,492	-71	-3,098	-148	-9,688	-258	-7,376	-189	-5,815	-42	- 45.00
1999	1,604	1,406	88	-1,387	-87	-19	-1	-2,061	-100	-3,930	-108	-4,987	-41	- 45.00
2000	5,889	4,884	83	-1,057	-18	-3,828	-65	-2,315	-72	-6,582	-175	-4,842	-43	- 45.00
2001	29,426		0	-1,122	-4	1,122	4	-908	-7	-1,778	-21	-4,180	-31	- 45.00
2002	4,892		0	-961	-20	961	20	-582	-4	-973	-11	-3,666	-29	- 45.00
2003	22,531	14,152	63	-1,948	-9	-12,204	-54	-3,374	-18	-2,794	-22	-4,442	-33	- 45.00
2004	5,866	686	12	-257	-4	-429	-7	-3,891	-35	-2,876	-21	-4,107	-32	- 45.00
2005	68,822	15,720	23	-184	0	-15,537	-23	-9,390	-29	-5,218	-20	-4,987	-29	- 45.00
2006	57,833	20,803	36		0	-20,803	-36	-12,256	-28	-9,602	-30	-6,116	-31	- 45.00
2007	92,666	17,753	19	-42	0	-17,711	-19	-18,017	-25	-13,337	-27	-6,889	-28	- 45.00
2008	45,614	17,219	38	-464	-1	-16,754	-37	-18,423	-28	-14,247	-26	-7,506	-29	- 45.00
2009	29,074	10,001	34	-1,228	-4	-8,774	-30	-14,413	-26	-15,916	-27	-7,580	-29	- 45.00
2010	20,949	43,487	208	-106	-1	-43,381	-207	-22,970	-72	-21,485	-44	-9,569	-37	- 45.00
2011	54,086		0		0	0	0	-17,385	-50	-17,324	-36	-9,569	-33	- 45.00
2012	24,831	68,131	274	18	0	-68,149	-274	-37,177	-112	-27,412	-79	-12,653	-44	- 45.00
2013	12,654	10,000	79		0	-10,000	-79	-26,050	-85	-26,061	-92	-12,520	-45	- 45.00
2014	3,640	23,870	656		0	-23,870	-656	-34,006	-248	-29,080	-125	-13,060	-49	- 45.00
2015	4,890	28,705	587		0	-28,705	-587	-20,858	-295	-26,145	-131	-13,772	-53	- 45.00
2016	19,939	36,572	183		0	-36,572	-183	-29,716	-313	-33,459	-254	-14,763	-58	- 45.00
2017	18,355	152,334	830	-237	-1	-152,097	-829	-72,458	-503	-50,249	-422	-20,485	-81	- 45.00
2018	211,919	86,700	41	-465	0	-86,236	-41	-91,635	-110	-65,496	-127	-23,115	-71	- 45.00
2019	90,768	108,299	119		0	-108,299	-119	-115,544	-108	-82,382	-119	-26,391	-75	- 45.00
2020	52,022	22,758	44		0	-22,758	-44	-72,431	-61	-81,193	-103	-26,257	-74	- 45.00
2021	23,162	56,288	243		0	-56,288	-243	-62,448	-113	-85,136	-107	-27,329	-78	- 45.00
2022	40,899	19,845	49		0	-19,845	-49	-32,964	-85	-58,685	-70	-27,071	-77	- 45.00
TOTAL														
	1,025,293	817,745	79.76	-32,676	(3.19)	-785,070	(76.57)							

NAKA POWER UTILITIES (YELLOWKNIFE)
ACCOUNT 365 - Overhead Conductors and Devices
SUMMARY OF BOOK SALVAGE

Year	Regular Retirements	Cost of Removal Amount	Cost of Removal Percent	Gross Salvage Amount	Gross Salvage Percent	Net Salvage Amount	Net Salvage Percent	3-Year Amount	3-Year Percent	5-Year Amount	5-Year Percent	Historical Amount	Historical Percent	Concentric Recommendation
1990	893		0		0	0	0						0	
1991	413		0		0	0	0						0	
1992	19,100		0		0	0	0	0	0				0	
1993			0		0	0	0	0	0				0	
1994	1,103		0		0	0	0	0	0	0	0		0	
1995	13,127		0		0	0	0	0	0	0	0		0	
1996	1,760		0		0	0	0	0	0	0	0		0	
1997	687		0		0	0	0	0	0	0	0		0	
1998	252		0		0	0	0	0	0	0	0		0	
1999	1,250		0		0	0	0	0	0	0	0		0	
2000	959		0		0	0	0	0	0	0	0		0	
2001	1,586		0		0	0	0	0	0	0	0		0	
2002	1,304		0		0	0	0	0	0	0	0		0	
2003	6,589		0		0	0	0	0	0	0	0		0	
2004	757	60	8	-2	0	-59	-8	-20	-1	-12	-1	-59	0	- 40.00
2005	28,806	12,427	43	-664	-2	-11,763	-41	-3,940	-33	-2,364	-30	-5,911	-15	- 40.00
2006	117,902	17,140	15		0	-17,140	-15	-9,654	-20	-5,792	-19	-9,654	-15	- 40.00
2007	77,615	6,293	8	-1,141	-1	-5,152	-7	-11,352	-15	-6,823	-15	-8,528	-12	- 40.00
2008			0	-536	0	536	0	-7,252	-11	-6,716	-15	-6,716	-12	- 40.00
2009	189	17,836	9,437	-629	-333	-17,207	-9,104	-7,274	-28	-10,145	-23	-8,464	-19	- 40.00
2010		29,554	0		0	-29,554	0	-15,408	-24,458	-13,703	-35	-11,477	-29	- 40.00
2011			0		0	0	0	-15,587	-24,741	-10,275	-66	-11,477	-29	- 40.00
2012		23,320	0	276	0	-23,596	0	-17,717	0	-13,964	-36,942	-12,992	-38	- 40.00
2013	378		0		0	0	0	-7,865	-6,242	-14,071	-12,409	-12,992	-38	- 40.00
2014	16,791		0		0	0	0	-7,865	-137	-10,630	-310	-12,992	-36	- 40.00
2015			0		0	0	0	0	0	-4,719	-137	-12,992	-36	- 40.00
2016	1,369	14,313	1,046		0	-14,313	-1,046	-4,771	-79	-7,582	-204	-13,139	-40	- 40.00
2017	272	768	282		0	-768	-282	-5,027	-919	-3,016	-80	-11,902	-41	- 40.00
2018	88	11,679	13,276		0	-11,679	-13,276	-8,920	-1,548	-5,352	-144	-11,881	-45	- 40.00
2019	42,698	32,758	77		0	-32,758	-77	-15,068	-105	-11,904	-134	-13,621	-49	- 40.00
2020	4,436	15,086	340		0	-15,086	-340	-19,841	-126	-14,921	-153	-13,734	-52	- 40.00
2021	7,607	20,628	271		0	-20,628	-271	-22,824	-125	-16,184	-147	-14,226	-57	- 40.00
2022	34,626	34,547	100		0	-34,547	-100	-23,420	-151	-22,940	-128	-15,581	-61	- 40.00
TOTAL	382,556	236,410	61.80	-2,697	(0.70)	-233,713	(61.09)							

NAKA POWER UTILITIES (YELLOWKNIFE)

ACCOUNT 365.10 - Overhead Services

SUMMARY OF BOOK SALVAGE

Year	Regular Retirements	Cost of Removal Amount	Cost of Removal Percent	Gross Salvage Amount	Gross Salvage Percent	Net Salvage Amount	Net Salvage Percent	3-Year Amount	3-Year Percent	5-Year Amount	5-Year Percent	Historical Amount	Historical Percent	Concentric Recommendation
2001	63		0		0	0	0						0	
2002	895		0		0	0	0						0	
2003	118		0		0	0	0	0	0				0	
2004			0		0	0	0	0	0				0	
2005			0		0	0	0	0	0	0	0		0	
2006			0		0	0	0	0	0	0	0		0	
2007			0		0	0	0	0	0	0	0		0	
2008			0		0	0	0	0	0	0	0		0	
2009			0		0	0	0	0	0	0	0		0	
2010	23,108		0		0	0	0	0	0	0	0		0	
2011	1,165		0		0	0	0	0	0	0	0		0	
2012			0		0	0	0	0	0	0	0		0	
2013			0		0	0	0	0	0	0	0		0	
2014			0		0	0	0	0	0	0	0		0	
2015			0		0	0	0	0	0	0	0		0	
2016	336		0		0	0	0	0	0	0	0		0	
2017			0		0	0	0	0	0	0	0		0	
2018	50,755		0		0	0	0	0	0	0	0		0	
2019	638	4,380	687		0	-4,380	-687	-1,460	-9	-876	-8	-4,380	-6	5.00
2020		156	0		0	-156	0	-1,512	-9	-907	-9	-2,268	-6	5.00
2021	6,978	4,792	69		0	-4,792	-69	-3,109	-122	-1,866	-16	-3,109	-11	5.00
2022			0		0	0	0	-1,649	-71	-1,866	-16	-3,109	-11	5.00
TOTAL	84,056	9,328	11.10	0	0.00	-9,328	(11.10)							

NAKA POWER UTILITIES (YELLOWKNIFE)
ACCOUNT 367- Underground Conductor and Devices
SUMMARY OF BOOK SALVAGE

Year	Regular Retirements	Cost of Removal Amount	Cost of Removal Percent	Gross Salvage Amount	Gross Salvage Percent	Net Salvage Amount	Net Salvage Percent	3-Year Amount	3-Year Percent	5-Year Amount	5-Year Percent	Historical Amount	Historical Percent	Concentric Recommendation
2000	164		0		0	0	0						0	
2001	415		0		0	0	0						0	
2002	473		0		0	0	0	0	0				0	
2003	1,950		0		0	0	0	0	0				0	
2004			0		0	0	0	0	0	0	0		0	
2005	19,556	-1,680	-9	-63	0	1,743	9	581	8	349	8	1,743	8	- 15.00
2006	19,640	5,658	29		0	-5,658	-29	-1,305	-10	-783	-9	-1,957	-9	- 15.00
2007	11,589	4,208	36		0	-4,208	-36	-2,708	-16	-1,625	-15	-2,708	-15	- 15.00
2008	11,827		0		0	0	0	-3,289	-23	-1,625	-13	-2,708	-12	- 15.00
2009	14,713		0	-39	0	39	0	-1,390	-11	-1,617	-10	-2,021	-10	- 15.00
2010	31,779	9,681	30		0	-9,681	-30	-3,214	-17	-3,902	-22	-3,553	-16	- 15.00
2011	903		0		0	0	0	-3,214	-20	-2,770	-20	-3,553	-16	- 15.00
2012	2,514	5,830	232	135	5	-5,965	-237	-5,215	-44	-3,121	-25	-3,955	-21	- 15.00
2013	20,589	3,300	16		0	-3,300	-16	-3,088	-39	-3,781	-27	-3,861	-20	- 15.00
2014	7,106		0		0	0	0	-3,088	-31	-3,789	-30	-3,861	-19	- 15.00
2015			0		0	0	0	-1,100	-12	-1,853	-30	-3,861	-19	- 15.00
2016			0		0	0	0	0	0	-1,853	-31	-3,861	-19	- 15.00
2017	61,540	20,335	33		0	-20,335	-33	-6,778	-33	-4,727	-26	-5,921	-23	- 15.00
2018	5,225	7,773	149		0	-7,773	-149	-9,369	-42	-5,622	-38	-6,126	-26	- 15.00
2019		1,714	0		0	-1,714	0	-9,941	-45	-5,964	-45	-5,685	-27	- 15.00
2020	6,021	9,348	155		0	-9,348	-155	-6,279	-167	-7,834	-54	-6,018	-31	- 15.00
2021	7,182	20,999	292		0	-20,999	-292	-10,687	-243	-12,034	-75	-7,267	-39	- 15.00
2022	14,432	4,900	34		0	-4,900	-34	-11,749	-128	-8,947	-136	-7,085	-39	- 15.00
TOTAL	237,616	92,067	38.75	33	0.01	-92,100	(38.76)							

NAKA POWER UTILITIES (YELLOWKNIFE)

ACCOUNT 367.10- Underground Services

SUMMARY OF BOOK SALVAGE

Year	Regular Retirements	Cost of Removal Amount	Cost of Removal Percent	Gross Salvage Amount	Gross Salvage Percent	Net Salvage Amount	Net Salvage Percent	3-Year Amount	3-Year Percent	5-Year Amount	5-Year Percent	Historical Amount	Historical Percent	Concentric Recommendation
2001	4		0		0	0	0						0	
2002	57		0		0	0	0						0	
2003			0		0	0	0	0	0				0	
2004			0		0	0	0	0	0				0	
2005			0		0	0	0	0	0	0	0		0	
2006			0		0	0	0	0	0	0	0		0	
2007			0		0	0	0	0	0	0	0		0	
2008			0		0	0	0	0	0	0	0		0	
2009			0		0	0	0	0	0	0	0		0	
2010	15,985		0		0	0	0	0	0	0	0		0	
2011	805		0		0	0	0	0	0	0	0		0	
2012			0		0	0	0	0	0	0	0		0	
2013			0		0	0	0	0	0	0	0		0	
2014			0		0	0	0	0	0	0	0		0	
2015			0		0	0	0	0	0	0	0		0	
2016			0		0	0	0	0	0	0	0		0	
2017	58,696	21,020	36		0	-21,020	-36	-7,007	-36	-4,204	-36	-21,020	-28	- 10.00
2018	35,111		0		0	0	0	-7,007	-22	-4,204	-22	-21,020	-19	- 10.00
2019	7,537	3,381	45		0	-3,381	-45	-8,134	-24	-4,880	-24	-12,200	-21	- 10.00
2020	1,289		0		0	0	0	-1,127	-8	-4,880	-24	-12,200	-20	- 10.00
2021		264	0		0	-264	0	-1,215	-41	-4,933	-24	-8,222	-21	- 10.00
2022	2,461	937	38		0	-937	-38	-400	-32	-916	-10	-6,400	-21	- 10.00
TOTAL	121,947	25,602	20.99	0	0.00	-25,602	(20.99)							

NAKA POWER UTILITIES (YELLOWKNIFE)

ACCOUNT 368- Line Transformers

SUMMARY OF BOOK SALVAGE

Year	Regular Retirements	Cost of Removal Amount	Cost of Removal Percent	Gross Salvage Amount	Gross Salvage Percent	Net Salvage Amount	Net Salvage Percent	3-Year Amount	3-Year Percent	5-Year Amount	5-Year Percent	Historical Amount	Historical Percent	Concentric Recommendation
1990	18,178		0		0	0	0						0	
1991	89,995		0		0	0	0						0	
1992	53,155		0		0	0	0	0	0				0	
1993		1,000	0	-2,754	0	1,754	0	585	1			1,754	1	15.00
1994	591	2,000	339	-892	-151	-1,108	-188	215	1	129	0	323	0	15.00
1995	2,896	15,500	535	-415	-14	-15,085	-521	-4,813	-414	-2,888	-10	-4,813	-9	15.00
1996	8,056	5,220	65	-647	-8	-4,573	-57	-6,922	-180	-3,803	-29	-4,753	-11	15.00
1997	7,230		0	-5,311	-73	5,311	73	-4,782	-79	-2,740	-73	-2,740	-8	15.00
1998			0	-217	0	217	0	318	6	-3,048	-81	-2,247	-7	15.00
1999	8,375	12,383	148	-80	-1	-12,302	-147	-2,258	-43	-5,286	-100	-3,684	-14	15.00
2000	5,827	1,816	31	-623	-11	-1,192	-20	-4,426	-93	-2,508	-43	-3,372	-14	15.00
2001			0	-132	0	132	0	-4,454	-94	-1,567	-37	-2,983	-14	15.00
2002			0		0	0	0	-354	-18	-2,629	-93	-2,983	-14	15.00
2003		3,798	0	-111	0	-3,687	0	-1,185	0	-3,410	-120	-3,053	-16	15.00
2004		104	0		0	-104	0	-1,264	0	-970	-83	-2,785	-16	15.00
2005		33,934	0	-2,966	0	-30,968	0	-11,586	0	-6,925	0	-5,134	-32	15.00
2006		42,716	0		0	-42,716	0	-24,596	0	-15,495	0	-8,025	-54	15.00
2007		67,271	0	-2,153	0	-65,118	0	-46,267	0	-28,519	0	-12,103	-87	15.00
2008		304,645	0	-205	0	-304,440	0	-137,425	0	-88,669	0	-31,592	-244	15.00
2009		187,293	0		0	-187,293	0	-185,617	0	-126,107	0	-41,323	-340	15.00
2010		-296,731	0	-29,165	0	325,896	0	-55,279	0	-54,734	0	-19,722	-173	15.00
2011	2,240,801	60,272	3		0	-60,272	-3	26,110	3	-58,245	-13	-21,975	-16	15.00
2012	572,999	91,878	16	11	0	-91,889	-16	57,912	6	-63,600	-11	-25,655	-16	15.00
2013		-2,456	0		0	2,456	0	-49,902	-5	-2,220	0	-24,249	-16	15.00
2014		1,876	0	-6,882	0	5,006	0	-28,142	-15	36,239	6	-22,856	-16	15.00
2015			0		0	0	0	2,487	0	-28,940	-5	-22,856	-16	15.00
2016			0	-15,558	0	15,558	0	6,855	0	-13,774	-12	-21,110	-15	15.00
2017		713	0		0	-713	0	4,948	0	4,461	0	-20,223	-15	15.00
2018	42,794	2,189	5	-30,738	-72	28,549	67	14,465	101	9,680	113	-18,191	-14	15.00
2019			0		0	0	0	9,279	65	8,679	101	-18,191	-14	15.00
2020			0		0	0	0	9,516	67	8,679	101	-18,191	-14	15.00
2021		-3,014	0		0	3,014	0	1,005	0	6,170	72	-17,343	-14	15.00
2022	46,927		0		0	0	0	1,005	6	6,313	35	-17,343	-14	15.00

TOTAL **3,097,825** **532,404** **17.19** **-98,837** **(3.19)** **-433,567** **(14.00)**

NAKA POWER UTILITIES (YELLOWKNIFE)

ACCOUNT 373 - Street Lights

SUMMARY OF BOOK SALVAGE

Year	Regular Retirements	Cost of Removal Amount	Cost of Removal Percent	Gross Salvage Amount	Gross Salvage Percent	Net Salvage Amount	Net Salvage Percent	3-Year Amount	3-Year Percent	5-Year Amount	5-Year Percent	Historical Amount	Historical Percent	Concentric Recommendation
1990	52,308		0		0	0	0						0	
1991	4,000		0		0	0	0						0	
1992			0		0	0	0	0	0				0	
1993			0	-2,738	0	2,738	0	913	68			2,738	5	- 25.00
1994	231		0	-231	-100	231	100	989	1,287	594	5	1,484	5	- 25.00
1995	2,738		0		0	0	0	989	100	594	43	1,484	5	- 25.00
1996			0		0	0	0	77	8	594	100	1,484	5	- 25.00
1997	25		0	-9	-37	9	37	3	0	595	99	992	5	- 25.00
1998			0	-736	0	736	0	249	2,983	195	33	928	6	- 25.00
1999			0	-798	0	798	0	515	6,175	309	56	902	8	- 25.00
2000	2,154		0	-115	-5	115	5	550	77	332	76	771	8	- 25.00
2001	5,868		0	-779	-13	779	13	564	21	488	30	772	8	- 25.00
2002	8,714		0	-900	-10	900	10	598	11	666	20	788	8	- 25.00
2003	15,511	5,390	35	-821	-5	-4,569	-29	-964	-10	-395	-6	193	2	- 25.00
2004			0		0	0	0	-1,223	-15	-555	-9	193	2	- 25.00
2005	8,914	2,624	29	-174	-2	-2,450	-27	-2,340	-29	-1,068	-14	-71	-1	- 25.00
2006	14,252	4,444	31		0	-4,444	-31	-2,298	-30	-2,113	-22	-469	-4	- 25.00
2007		7,388	0	-4,587	0	-2,800	0	-3,232	-42	-2,853	-37	-663	-7	- 25.00
2008	2,803	34,049	1,215	-12,844	-458	-21,205	-756	-9,483	-167	-6,180	-119	-2,243	-25	- 25.00
2009	9,893	-6,571	-66	-1,391	-14	7,963	80	-5,348	-126	-4,587	-64	-1,514	-17	- 25.00
2010	21,371	8,279	39		0	-8,279	-39	-7,174	-63	-5,753	-60	-1,965	-20	- 25.00
2011			0		0	0	0	-105	-1	-4,864	-71	-1,965	-20	- 25.00
2012		12,737	0		0	-12,737	0	-7,005	-98	-6,852	-101	-2,639	-28	- 25.00
2013	13,769	373	3		0	-373	-3	-4,370	-95	-2,685	-30	-2,505	-26	- 25.00
2014	14,613	8,831	60		0	-8,831	-60	-7,314	-77	-6,044	-61	-2,857	-29	- 25.00
2015	412,207	13,508	3		0	-13,508	-3	-7,571	-5	-7,090	-8	-3,417	-11	- 25.00
2016	3,079	21,411	695		0	-21,411	-695	-14,583	-10	-11,372	-13	-4,317	-15	- 25.00
2017	121,750	97,429	80	-612	-1	-96,817	-80	-43,912	-25	-28,188	-25	-8,722	-26	- 25.00
2018	266,263	32,158	12	-1,053	0	-31,105	-12	-49,778	-38	-34,334	-21	-9,739	-22	- 25.00
2019	161,699	74,911	46		0	-74,911	-46	-67,611	-37	-47,550	-25	-12,573	-25	- 25.00
2020	66,149	27,931	42	-786	-1	-27,146	-41	-44,387	-27	-50,278	-41	-13,180	-26	- 25.00
2021	49,216	37,122	75		0	-37,122	-75	-46,393	-50	-53,420	-40	-14,138	-28	- 25.00
2022	96,116	21,729	23		0	-21,729	-23	-28,666	-41	-38,403	-30	-14,430	-28	- 25.00
TOTAL	1,353,643	403,744	29.83	-28,574	(2.11)	-375,170	(27.72)							

NAKA POWER UTILITIES (YELLOWKNIFE)

ACCOUNT 392.20 - Transportation Equipment - Fleet Vehicles Category 2

SUMMARY OF BOOK SALVAGE

Year	Regular Retirements	Cost of Removal Amount	Cost of Removal Percent	Gross Salvage Amount	Gross Salvage Percent	Net Salvage Amount	Net Salvage Percent	3-Year Amount	3-Year Percent	5-Year Amount	5-Year Percent	Historical Amount	Historical Percent	Concentric Recommendation
1982	42,821		0		0	0	0						0	15.00
1983			0		0	0	0						0	15.00
1984	6,800		0		0	0	0	0	0				0	15.00
1985	13,208		0		0	0	0	0	0				0	15.00
1986	9,810		0		0	0	0	0	0	0	0		0	15.00
1987	10,926		0		0	0	0	0	0	0	0		0	15.00
1988	12,024		0		0	0	0	0	0	0	0		0	15.00
1989			0		0	0	0	0	0	0	0		0	15.00
1990	11,771		0		0	0	0	0	0	0	0		0	15.00
1991	45,943		0		0	0	0	0	0	0	0		0	15.00
1992			0		0	0	0	0	0	0	0		0	15.00
1993	18,340		0		0	0	0	0	0	0	0		0	15.00
1994	14,522		0	-3,727	-26	3,727	26	1,242	11	745	4	3,727	2	15.00
1995	19,021		0	-6,018	-32	6,018	32	3,248	19	1,949	10	4,873	5	15.00
1996	12,829		0	-1,000	-8	1,000	8	3,582	23	2,149	17	3,582	5	15.00
1997			0		0	0	0	2,339	22	2,149	17	3,582	5	15.00
1998	13,000		0	-1,855	-14	1,855	14	952	11	2,520	21	3,150	5	15.00
1999	22,373		0	-9,000	-40	9,000	40	3,618	31	3,575	27	4,320	9	15.00
2000			0		0	0	0	3,618	31	2,371	25	4,320	9	15.00
2001			0		0	0	0	3,000	40	2,171	31	4,320	9	15.00
2002			0		0	0	0	0	0	2,171	31	4,320	9	15.00
2003			0		0	0	0	0	0	1,800	40	4,320	9	15.00
2004			0		0	0	0	0	0	0	0	4,320	9	15.00
2005			0		0	0	0	0	0	0	0	4,320	9	15.00
2006	12,865		0		0	0	0	0	0	0	0	4,320	8	15.00
2007			0		0	0	0	0	0	0	0	4,320	8	15.00
2008	19,690		0		0	0	0	0	0	0	0	4,320	8	15.00
2009	103,741		0	-16,000	-15	16,000	15	5,333	13	3,200	12	6,267	10	15.00
2010			0	-1,800	0	1,800	0	5,933	14	3,560	13	5,629	10	15.00
2011	44,368		0	-1,000	-2	1,000	2	6,267	13	3,760	11	5,050	9	15.00
2012			0		0	0	0	13,467	10	8,945	27	5,050	9	15.00
2013	24,376		0	-840	-3	840	3	13,747	10	8,945	10	4,582	9	15.00
2014	57,069		0	-3,485	-6	3,485	6	1,442	5	7,173	8	4,473	9	15.00
2015			0		0	0	0	1,442	5	7,173	8	4,473	9	15.00
2016	115,666		0	-31,540	-27	31,540	27	11,675	20	7,005	6	6,933	12	15.00
2017			0		0	0	0	10,513	27	11,850	10	6,933	12	15.00
2018			0		0	0	0	10,513	27	11,850	11	6,933	12	15.00
2019	121,907		0	-27,711	-23	27,711	23	9,237	23	5,768	4	8,665	14	15.00
2020			0		0	0	0	9,237	23	11,876	9	8,665	14	15.00
2021	104,929		0	-1,129	-1	1,129	1	9,613	13	11,876	8	8,085	12	15.00
2022	17,517	958	5	-31,500	-180	30,542	174	45,216	16	33,464	22	9,689	15	15.00
TOTAL	875,516	958	0.11	-136,605	(15.60)	135,647	15.49							

NAKA POWER UTILITIES (YELLOWKNIFE)

ACCOUNT 392.30 - Transportation Equipment - Fleet Vehicles Category 3

SUMMARY OF BOOK SALVAGE

Year	Regular Retirements	Cost of Removal Amount	Cost of Removal Percent	Gross Salvage Amount	Gross Salvage Percent	Net Salvage Amount	Net Salvage Percent	3-Year Amount	3-Year Percent	5-Year Amount	5-Year Percent	Historical Amount	Historical Percent	Concentric Recommendation
1995	32,270		0	-11,682	-36	11,682	36					11,682	36	20.00
1996			0		0	0	0					11,682	36	20.00
1997			0		0	0	0	3,894	36			11,682	36	20.00
1998			0		0	0	0	0	0			11,682	36	20.00
1999			0		0	0	0	0	0	2,336	36	11,682	36	20.00
2000			0		0	0	0	0	0	0	0	11,682	36	20.00
2001			0		0	0	0	0	0	0	0	11,682	36	20.00
2002			0		0	0	0	0	0	0	0	11,682	36	20.00
2003			0		0	0	0	0	0	0	0	11,682	36	20.00
2004	106,861		0		0	0	0	0	0	0	0	11,682	8	20.00
2005			0		0	0	0	0	0	0	0	11,682	8	20.00
2006			0		0	0	0	0	0	0	0	11,682	8	20.00
2007	25,625		0		0	0	0	0	0	0	0	11,682	7	20.00
2008			0		0	0	0	0	0	0	0	11,682	7	20.00
2009	148,084	-64,894	-44		0	64,894	44	21,631	37	12,979	37	38,288	24	20.00
2010	148,775		0	-30,011	-20	30,011	20	31,635	32	18,981	29	35,529	23	20.00
2011			0		0	0	0	31,635	32	18,981	29	35,529	23	20.00
2012			0		0	0	0	10,004	20	18,981	32	35,529	23	20.00
2013	170,387		0	-8,138	-5	8,138	5	2,713	5	20,609	22	28,681	18	20.00
2014			0		0	0	0	2,713	5	7,630	12	28,681	18	20.00
2015			0		0	0	0	2,713	5	1,628	5	28,681	18	20.00
2016			0		0	0	0	0	0	1,628	5	28,681	18	20.00
2017	64,138		0	-20,995	-33	20,995	33	6,998	33	5,827	12	27,144	19	20.00
2018			0		0	0	0	6,998	33	4,199	33	27,144	19	20.00
2019			0		0	0	0	6,998	33	4,199	33	27,144	19	20.00
2020		2,871	0		0	-2,871	0	-957	0	3,625	28	22,141	19	20.00
2021	20,117		0		0	0	0	-957	-14	3,625	22	22,141	19	20.00
2022			0		0	0	0	-957	-14	-574	-14	22,141	19	20.00
TOTAL	716,257	(62,023)	(8.66)	-70,826	(9.89)	132,849	18.55							



SECTION 8

8 DETAILED DEPRECIATION CALCULATIONS

Naka Power Utilities (Yellowknife)

Account #: 360.10 - Land Rights

CALCULATED ANNUAL ACCRUAL AND ACCRUED DEPRECIATION
BASED ON ORIGINAL COST AS OF December 31, 2022

ELG - Whole Life
Survivor Curve: R3
ASL: 75
Net Salvage: 0%
Truncation Year:

Year	Original Cost	Calculated Annual Accrual		Calculated Accumulated Depreciation		Average Age	ELG Remaining Life
		Rate	Amount	Factor	Amount		
1945	24.84	1.10%	0	0.8560	21	77.5	13.03
1946	86.37	1.11%	1	0.8507	73	76.5	13.43
1947	2.02	1.12%	0	0.8452	2	75.5	13.83
1950	2.36	1.14%	0	0.8275	2	72.5	15.11
1951	2.60	1.15%	0	0.8213	2	71.5	15.56
1954	2.88	1.17%	0	0.8014	2	68.5	16.97
1955	253.86	1.18%	3	0.7945	202	67.5	17.46
1956	64.50	1.18%	1	0.7873	51	66.5	17.96
1957	14.07	1.19%	0	0.7800	11	65.5	18.47
1958	111.65	1.20%	1	0.7725	86	64.5	18.99
1959	39.19	1.20%	0	0.7649	30	63.5	19.52
1960	574.18	1.21%	7	0.7570	435	62.5	20.06
1961	26.36	1.22%	0	0.7490	20	61.5	20.61
1962	239.65	1.22%	3	0.7408	178	60.5	21.17
1963	164.49	1.23%	2	0.7325	120	59.5	21.73
1964	418.04	1.24%	5	0.7240	303	58.5	22.30
1965	442.39	1.24%	6	0.7153	316	57.5	22.89
1966	288.74	1.25%	4	0.7065	204	56.5	23.47
1967	59.07	1.26%	1	0.6975	41	55.5	24.07
1968	445.51	1.26%	6	0.6884	307	54.5	24.67
1969	176.89	1.27%	2	0.6791	120	53.5	25.28
1970	413.54	1.28%	5	0.6696	277	52.5	25.90
1971	67.57	1.28%	1	0.6600	45	51.5	26.53
1972	414.44	1.29%	5	0.6503	270	50.5	27.16
1973	98.49	1.29%	1	0.6404	63	49.5	27.79
1974	142.53	1.30%	2	0.6304	90	48.5	28.43
1975	1,257.31	1.31%	16	0.6202	780	47.5	29.08
1976	611.75	1.31%	8	0.6100	373	46.5	29.74
1977	97.32	1.32%	1	0.5995	58	45.5	30.40
1978	1,396.26	1.32%	18	0.5889	822	44.5	31.06
1979	1,155.45	1.33%	15	0.5782	668	43.5	31.73
1980	1,366.45	1.33%	18	0.5674	775	42.5	32.41
1981	403.84	1.34%	5	0.5564	225	41.5	33.09
1982	1,257.64	1.35%	17	0.5453	686	40.5	33.77
1983	1,288.26	1.35%	17	0.5340	688	39.5	34.47
1984	633.85	1.36%	9	0.5227	331	38.5	35.16
1988	762.20	1.38%	11	0.4759	363	34.5	38.00
1990	1,009.44	1.39%	14	0.4517	456	32.5	39.44
1992	23,965.62	1.40%	336	0.4271	10,236	30.5	40.91

NakaPowerUtilities (Yellowknife)

Account #: 360.10 - Land Rights

CALCULATED ANNUAL ACCRUAL AND ACCRUED DEPRECIATION BASED ON ORIGINAL COST AS OF December 31, 2022

ELG - Whole Life
 Survivor Curve: R3
 ASL: 75
 Net Salvage: 0%
 Truncation Year:

Year	Original Cost	Calculated Annual Accrual		Calculated Accumulated Depreciation		Average Age	ELG Remaining Life
		Rate	Amount	Factor	Amount		
1993	12,064.72	1.41%	170	0.4146	5,002	29.5	41.65
1994	19,874.20	1.41%	280	0.4020	7,989	28.5	42.40
1995	20,685.17	1.42%	293	0.3893	8,052	27.5	43.15
1996	14,034.92	1.42%	199	0.3764	5,283	26.5	43.90
1997	2,085.21	1.43%	30	0.3635	758	25.5	44.66
1998	6,836.44	1.43%	98	0.3504	2,396	24.5	45.42
1999	630.55	1.44%	9	0.3372	213	23.5	46.19
2000	9,047.69	1.44%	130	0.3240	2,931	22.5	46.95
2001	10,872.14	1.44%	157	0.3106	3,376	21.5	47.73
2002	28,171.69	1.45%	408	0.2971	8,369	20.5	48.51
2003	4,797.47	1.45%	70	0.2835	1,360	19.5	49.29
2004	60,488.03	1.46%	882	0.2698	16,319	18.5	50.07
2005	144,156.91	1.46%	2,109	0.2560	36,904	17.5	50.86
2006	28,476.66	1.47%	418	0.2421	6,895	16.5	51.65
2007	101,867.72	1.47%	1,499	0.2281	23,241	15.5	52.44
2008	13,472.68	1.48%	199	0.2141	2,884	14.5	53.23
2009	41,592.68	1.48%	616	0.1999	8,315	13.5	54.02
2010	19,586.82	1.49%	291	0.1857	3,637	12.5	54.82
2011	185,743.42	1.49%	2,768	0.1714	31,827	11.5	55.61
2012	8,585.05	1.49%	128	0.1569	1,347	10.5	56.40
2013	4,465.50	1.50%	67	0.1424	636	9.5	57.19
2015	1,009.55	1.51%	15	0.1132	114	7.5	58.75
2016	4,182.79	1.51%	63	0.0984	412	6.5	59.52
2017	3,692.24	1.52%	56	0.0836	309	5.5	60.28
2018	1,806.97	1.53%	28	0.0687	124	4.5	61.00
2019	1,365.00	1.53%	21	0.0537	73	3.5	61.70
2020	38.03	1.54%	1	0.0386	1	2.5	62.33

TOTAL	789,411.87	11,548	198,500
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NET SALVAGE ADJUSTMENT	0	0
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TOTAL	11,548	198,500
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COMPOSITE ANNUAL ACCRUAL RATE	1.46%
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COMPOSITE ACTUAL ACCUMULATED DEPRECIATION FACTOR	0.25
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COMPOSITE AVERAGE AGE (YEARS)	17.35
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ELG COMPOSITE REMAINING LIFE (YEARS)	51.05
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NakaPowerUtilities (Yellowknife)

Account #: 362.00 - Station Equipment

**CALCULATED ANNUAL ACCRUAL AND ACCRUED DEPRECIATION
 BASED ON ORIGINAL COST AS OF December 31, 2022**

ELG - Whole Life
 Survivor Curve: S2.5
 ASL: 35
 Net Salvage: -5%
 Truncation Year:

Year	Original Cost	Calculated Annual Accrual		Calculated Accumulated Depreciation		Average Age	ELG Remaining Life
		Rate	Amount	Factor	Amount		
1994	41,461.89	2.62%	1,088	0.7476	30,998	28.5	9.62
2000	15,067.92	2.84%	429	0.6400	9,644	22.5	12.65
2001	544.73	2.88%	16	0.6187	337	21.5	13.25
2002	24,530.12	2.91%	714	0.5964	14,631	20.5	13.87
2003	4,139.31	2.94%	122	0.5732	2,373	19.5	14.52
2005	1,331,436.50	2.99%	39,864	0.5240	697,613	17.5	15.90
2006	319.20	3.02%	10	0.4980	159	16.5	16.63
2007	1,330,405.56	3.04%	40,448	0.4712	626,942	15.5	17.39
2009	2,435,082.52	3.08%	74,950	0.4155	1,011,829	13.5	18.99
2013	63,877.66	3.13%	1,998	0.2972	18,982	9.5	22.47
2017	249,137.01	3.15%	7,847	0.1732	43,158	5.5	26.25
2018	108,324.94	3.15%	3,414	0.1418	15,364	4.5	27.23
2020	31,286.95	3.15%	987	0.0788	2,467	2.5	29.21
2021	35,726.90	3.15%	1,127	0.0473	1,690	1.5	30.20
2022	37,803.26	3.15%	1,192	0.0158	596	0.5	31.20
TOTAL	5,709,144.47		174,204		2,476,783		
NET SALVAGE ADJUSTMENT			8,710		123,839		
TOTAL			182,914		2,600,622		

COMPOSITE ANNUAL ACCRUAL RATE	3.20%
COMPOSITE ACTUAL ACCUMULATED DEPRECIATION FACTOR	0.46
COMPOSITE AVERAGE AGE (YEARS)	14.28
ELG COMPOSITE REMAINING LIFE (YEARS)	18.50

NakaPowerUtilities (Yellowknife)

Account #: 362.10 - System Communication & Control

CALCULATED ANNUAL ACCRUAL AND ACCRUED DEPRECIATION

BASED ON ORIGINAL COST AS OF December 31, 2022

ELG - Whole Life
Survivor Curve: R1.5
ASL: 20
Net Salvage: 0%
Truncation Year:

Year	Original Cost	Calculated Annual Accrual		Calculated Accumulated Depreciation		Average Age	ELG Remaining Life
		Rate	Amount	Factor	Amount		
1983	8,424.75	0.00%	0	1.0000	8,425	39.5	0.00
1985	1,383.00	2.63%	36	0.9845	1,362	37.5	0.59
1986	1,090.00	2.66%	29	0.9722	1,060	36.5	1.04
1987	3,951.00	2.71%	107	0.9627	3,804	35.5	1.38
1988	7,523.85	2.77%	208	0.9549	7,184	34.5	1.63
1989	2,695.50	2.83%	76	0.9473	2,554	33.5	1.86
1991	2,988.00	2.96%	88	0.9309	2,782	31.5	2.34
1993	4,011.00	3.09%	124	0.9122	3,659	29.5	2.84
1997	16,909.21	3.40%	575	0.8664	14,650	25.5	3.93
2000	3,941.08	3.65%	144	0.8219	3,239	22.5	4.88
2001	221.16	3.74%	8	0.8045	178	21.5	5.22
2002	2,809.45	3.83%	108	0.7857	2,207	20.5	5.59
2003	10,649.20	3.93%	418	0.7654	8,151	19.5	5.98
2004	37,269.29	4.02%	1,498	0.7436	27,712	18.5	6.38
2005	3,305.76	4.12%	136	0.7202	2,381	17.5	6.80
2006	2,833.15	4.21%	119	0.6951	1,969	16.5	7.24
2008	1,096.16	4.42%	48	0.6402	702	14.5	8.15
2009	960.03	4.52%	43	0.6102	586	13.5	8.62
2010	449.92	4.63%	21	0.5786	260	12.5	9.10
2012	599.90	4.86%	29	0.5102	306	10.5	10.08
2013	1,197.20	4.98%	60	0.4735	567	9.5	10.56
2016	754.77	5.42%	41	0.3523	266	6.5	11.95
2017	1,508.33	5.60%	84	0.3080	465	5.5	12.36
2018	2,078.60	5.81%	121	0.2613	543	4.5	12.72
2020	99,472.40	6.38%	6,348	0.1595	15,871	2.5	13.17
TOTAL	218,122.71		10,471		110,881		

NET SALVAGE ADJUSTMENT	0	0
TOTAL	10,471	110,881

COMPOSITE ANNUAL ACCRUAL RATE	4.80%
COMPOSITE ACTUAL ACCUMULATED DEPRECIATION FACTOR	0.51
COMPOSITE AVERAGE AGE (YEARS)	13.91
ELG COMPOSITE REMAINING LIFE (YEARS)	8.68

NakaPowerUtilities (Yellowknife)

Account #: 364.00 - Poles, Towers and Fixtures

CALCULATED ANNUAL ACCRUAL AND ACCRUED DEPRECIATION
BASED ON ORIGINAL COST AS OF December 31, 2022

ELG - Whole Life
Survivor Curve: R2
ASL: 50
Net Salvage: -45%
Truncation Year:

Year	Original Cost	Calculated Annual Accrual		Calculated Accumulated Depreciation		Average Age	ELG Remaining Life
		Rate	Amount	Factor	Amount		
1960	64,221.42	1.41%	908	0.8836	56,744	62.5	8.24
1961	2,692.05	1.43%	38	0.8781	2,364	61.5	8.54
1962	25,988.23	1.44%	375	0.8724	22,672	60.5	8.85
1963	17,653.35	1.46%	257	0.8665	15,296	59.5	9.17
1964	40,816.70	1.47%	600	0.8604	35,118	58.5	9.49
1965	40,081.61	1.49%	595	0.8540	34,231	57.5	9.83
1966	30,850.30	1.50%	463	0.8475	26,145	56.5	10.17
1967	5,876.45	1.51%	89	0.8407	4,940	55.5	10.52
1968	42,804.64	1.53%	655	0.8336	35,683	54.5	10.88
1969	19,454.59	1.54%	300	0.8263	16,076	53.5	11.24
1970	22,238.80	1.56%	347	0.8188	18,209	52.5	11.62
1971	4,339.35	1.57%	68	0.8110	3,519	51.5	12.00
1972	41,842.69	1.59%	665	0.8029	33,596	50.5	12.40
1973	10,213.66	1.61%	164	0.7946	8,115	49.5	12.80
1974	8,662.97	1.62%	140	0.7859	6,809	48.5	13.21
1975	90,872.45	1.64%	1,487	0.7770	70,611	47.5	13.63
1976	63,394.15	1.65%	1,047	0.7679	48,678	46.5	14.06
1977	9,617.00	1.67%	160	0.7584	7,294	45.5	14.49
1978	152,231.03	1.68%	2,561	0.7487	113,969	44.5	14.94
1979	106,180.36	1.70%	1,803	0.7386	78,428	43.5	15.39
1980	21,119.16	1.71%	362	0.7283	15,381	42.5	15.85
1981	32,158.77	1.73%	556	0.7177	23,081	41.5	16.32
1982	114,265.02	1.75%	1,994	0.7068	80,764	40.5	16.80
1983	128,601.27	1.76%	2,265	0.6956	89,458	39.5	17.28
1984	66,197.04	1.78%	1,176	0.6841	45,289	38.5	17.77
1985	69,113.10	1.79%	1,239	0.6724	46,470	37.5	18.27
1986	196,018.29	1.81%	3,546	0.6603	129,435	36.5	18.78
1987	288,100.82	1.83%	5,259	0.6480	186,680	35.5	19.29
1988	379,675.13	1.84%	6,992	0.6353	241,216	34.5	19.80
1989	563,170.07	1.86%	10,463	0.6224	350,509	33.5	20.33
1990	673,120.11	1.87%	12,616	0.6092	410,035	32.5	20.85
1991	415,781.47	1.89%	7,862	0.5956	247,653	31.5	21.38
1992	328,646.65	1.91%	6,269	0.5818	191,213	30.5	21.92
1993	155,992.26	1.92%	3,002	0.5677	88,558	29.5	22.46
1994	420,228.10	1.94%	8,158	0.5533	232,515	28.5	23.01
1995	412,833.35	1.96%	8,086	0.5386	222,357	27.5	23.56
1996	165,237.79	1.98%	3,265	0.5236	86,522	26.5	24.11
1997	114,649.32	1.99%	2,285	0.5083	58,280	25.5	24.66
1998	164,441.12	2.01%	3,307	0.4928	81,029	24.5	25.22

NakaPowerUtilities (Yellowknife)

Account #: 364.00 - Poles, Towers and Fixtures

CALCULATED ANNUAL ACCRUAL AND ACCRUED DEPRECIATION
BASED ON ORIGINAL COST AS OF December 31, 2022

ELG - Whole Life
Survivor Curve: R2
ASL: 50
Net Salvage: -45%
Truncation Year:

Year	Original Cost	Calculated Annual Accrual		Calculated Accumulated Depreciation		Average Age	ELG Remaining Life
		Rate	Amount	Factor	Amount		
2000	176,455.89	2.05%	3,613	0.4607	81,292	22.5	26.34
2001	179,714.65	2.07%	3,713	0.4442	79,831	21.5	26.90
2002	404,522.05	2.09%	8,434	0.4274	172,904	20.5	27.46
2003	347,924.56	2.10%	7,321	0.4103	142,767	19.5	28.02
2004	379,196.32	2.12%	8,054	0.3929	149,002	18.5	28.58
2005	429,074.56	2.14%	9,200	0.3752	161,003	17.5	29.14
2006	434,266.83	2.16%	9,401	0.3572	155,124	16.5	29.69
2007	248,324.07	2.19%	5,429	0.3389	84,148	15.5	30.24
2008	333,396.04	2.21%	7,362	0.3202	106,752	14.5	30.78
2009	543,433.84	2.23%	12,124	0.3012	163,680	13.5	31.32
2010	538,684.97	2.25%	12,146	0.2819	151,831	12.5	31.85
2011	1,313,756.14	2.28%	29,950	0.2622	344,425	11.5	32.37
2012	761,747.58	2.31%	17,565	0.2421	184,435	10.5	32.87
2013	685,378.83	2.33%	15,995	0.2217	151,951	9.5	33.35
2014	366,782.44	2.36%	8,669	0.2009	73,685	8.5	33.81
2015	358,509.75	2.40%	8,589	0.1797	64,418	7.5	34.24
2016	492,123.04	2.43%	11,965	0.1580	77,770	6.5	34.63
2017	1,238,414.18	2.47%	30,602	0.1359	168,310	5.5	34.97
2018	698,425.66	2.52%	17,579	0.1133	79,105	4.5	35.23
2019	271,171.25	2.57%	6,975	0.0900	24,411	3.5	35.38
2020	345,304.76	2.64%	9,125	0.0661	22,812	2.5	35.34
2021	339,754.48	2.74%	9,322	0.0412	13,983	1.5	34.95
2022	430,340.15	2.94%	12,644	0.0147	6,322	0.5	33.54

TOTAL	16,826,082.68	367,205	6,124,902
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NET SALVAGE ADJUSTMENT	165,242	2,756,206
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TOTAL	532,447	8,881,108
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COMPOSITE ANNUAL ACCRUAL RATE	3.16%
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COMPOSITE ACTUAL ACCUMULATED DEPRECIATION FACTOR	0.53
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COMPOSITE AVERAGE AGE (YEARS)	18.40
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ELG COMPOSITE REMAINING LIFE (YEARS)	28.31
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NakaPowerUtilities (Yellowknife)

Account #: 365.00 - Overhead Conductors and Devices

CALCULATED ANNUAL ACCRUAL AND ACCRUED DEPRECIATION

BASED ON ORIGINAL COST AS OF December 31, 2022

ELG - Whole Life
Survivor Curve: R4
ASL: 45
Net Salvage: -40%
Truncation Year:

Year	Original Cost	Calculated Annual Accrual		Calculated Accumulated Depreciation		Average Age	ELG Remaining Life
		Rate	Amount	Factor	Amount		
1969	1,332.09	1.75%	23	0.9389	1,251	53.5	3.48
1970	264.86	1.78%	5	0.9334	247	52.5	3.74
1971	8,719.04	1.80%	157	0.9277	8,088	51.5	4.02
1973	3,952.17	1.85%	73	0.9150	3,616	49.5	4.60
1974	14,988.03	1.87%	281	0.9080	13,609	48.5	4.91
1976	45,349.69	1.92%	870	0.8922	40,461	46.5	5.62
1977	44,636.00	1.94%	867	0.8833	39,427	45.5	6.01
1978	45,542.62	1.96%	894	0.8736	39,787	44.5	6.44
1979	2,792.40	1.98%	55	0.8632	2,410	43.5	6.90
1981	5,379.31	2.02%	109	0.8398	4,518	41.5	7.91
1982	13,257.67	2.04%	271	0.8270	10,965	40.5	8.47
1984	27,571.69	2.08%	573	0.7995	22,043	38.5	9.66
1985	5,809.81	2.09%	122	0.7850	4,560	37.5	10.27
1986	8,642.83	2.11%	182	0.7700	6,655	36.5	10.90
1987	92,236.74	2.13%	1,961	0.7546	69,606	35.5	11.54
1988	115,773.74	2.14%	2,479	0.7388	85,537	34.5	12.20
1989	164,084.46	2.16%	3,539	0.7226	118,562	33.5	12.86
1990	295,921.64	2.17%	6,427	0.7059	208,876	32.5	13.54
1991	118,085.93	2.19%	2,582	0.6887	81,323	31.5	14.24
1992	190,419.30	2.20%	4,189	0.6710	127,778	30.5	14.95
1993	139,583.92	2.21%	3,090	0.6529	91,140	29.5	15.68
1994	310,318.31	2.23%	6,908	0.6344	196,870	28.5	16.42
1995	295,309.08	2.24%	6,609	0.6155	181,749	27.5	17.18
1996	173,621.17	2.25%	3,905	0.5961	103,491	26.5	17.96
1997	39,933.59	2.26%	902	0.5763	23,013	25.5	18.75
1998	80,241.98	2.27%	1,821	0.5561	44,625	24.5	19.55
1999	142,418.58	2.28%	3,246	0.5356	76,282	23.5	20.37
2000	10,327.94	2.29%	236	0.5148	5,317	22.5	21.21
2001	272,786.93	2.30%	6,263	0.4936	134,649	21.5	22.06
2002	210,102.24	2.30%	4,839	0.4721	99,199	20.5	22.92
2003	237,672.20	2.31%	5,490	0.4504	107,053	19.5	23.79
2004	285,658.68	2.32%	6,616	0.4285	122,394	18.5	24.68
2005	408,242.80	2.32%	9,478	0.4063	165,859	17.5	25.57
2006	251,873.50	2.33%	5,860	0.3839	96,692	16.5	26.48
2007	447,396.56	2.33%	10,429	0.3613	161,657	15.5	27.40
2008	409,516.18	2.34%	9,563	0.3386	138,666	14.5	28.32
2009	383,078.80	2.34%	8,960	0.3158	120,958	13.5	29.25
2010	291,270.54	2.34%	6,822	0.2928	85,276	12.5	30.20
2011	387,273.79	2.35%	9,082	0.2697	104,442	11.5	31.14

ELG - Whole Life

Survivor Curve: R4

ASL: 45

Net Salvage: -40%

Truncation Year:

NakaPowerUtilities (Yellowknife)

Account #: 365.00 - Overhead Conductors and Devices

CALCULATED ANNUAL ACCRUAL AND ACCRUED DEPRECIATION

BASED ON ORIGINAL COST AS OF December 31, 2022

Year	Original Cost	Calculated Annual Accrual		Calculated Accumulated Depreciation		Average Age	ELG Remaining Life
		Rate	Amount	Factor	Amount		
2012	509,164.67	2.35%	11,954	0.2465	125,513	10.5	32.09
2013	341,730.53	2.35%	8,031	0.2233	76,292	9.5	33.05
2014	149,379.85	2.35%	3,514	0.1999	29,865	8.5	34.02
2015	440,443.57	2.35%	10,368	0.1765	77,759	7.5	34.98
2016	121,295.68	2.36%	2,857	0.1531	18,572	6.5	35.95
2017	219,052.63	2.36%	5,163	0.1296	28,399	5.5	36.92
2018	168,528.74	2.36%	3,975	0.1061	17,887	4.5	37.90
2019	149,228.01	2.36%	3,522	0.0826	12,326	3.5	38.87
2020	206,158.25	2.36%	4,868	0.0590	12,170	2.5	39.85
2021	229,657.14	2.36%	5,427	0.0354	8,140	1.5	40.82
2022	151,994.85	2.37%	3,595	0.0118	1,798	0.5	41.78
TOTAL	8,668,020.73		199,051		3,357,376		
NET SALVAGE ADJUSTMENT			79,621		1,342,951		
TOTAL			278,672		4,700,327		

COMPOSITE ANNUAL ACCRUAL RATE	3.21%
COMPOSITE ACTUAL ACCUMULATED DEPRECIATION FACTOR	0.54
COMPOSITE AVERAGE AGE (YEARS)	17.21
ELG COMPOSITE REMAINING LIFE (YEARS)	26.40

NakaPowerUtilities (Yellowknife)

Account #: 365.10 - Overhead Services

CALCULATED ANNUAL ACCRUAL AND ACCRUED DEPRECIATION
BASED ON ORIGINAL COST AS OF December 31, 2022

ELG - Whole Life
Survivor Curve: R2.5
ASL: 50
Net Salvage: -5%
Truncation Year:

Year	Original Cost	Calculated Annual Accrual		Calculated Accumulated Depreciation		Average Age	ELG Remaining Life
		Rate	Amount	Factor	Amount		
1945	36.89	1.23%	0	0.9530	35	77.5	3.82
1950	29.73	1.29%	0	0.9374	28	72.5	4.84
1951	16.40	1.31%	0	0.9341	15	71.5	5.05
1955	1,143.14	1.36%	16	0.9197	1,051	67.5	5.89
1956	513.65	1.38%	7	0.9159	470	66.5	6.11
1957	60.49	1.39%	1	0.9119	55	65.5	6.33
1958	822.24	1.41%	12	0.9077	746	64.5	6.56
1959	557.73	1.42%	8	0.9034	504	63.5	6.79
1960	4,428.01	1.44%	64	0.8989	3,980	62.5	7.03
1961	223.50	1.45%	3	0.8943	200	61.5	7.27
1962	2,536.45	1.47%	37	0.8894	2,256	60.5	7.53
1963	2,168.38	1.49%	32	0.8842	1,917	59.5	7.79
1964	2,715.86	1.50%	41	0.8788	2,387	58.5	8.07
1965	3,103.40	1.52%	47	0.8732	2,710	57.5	8.35
1966	2,498.51	1.53%	38	0.8672	2,167	56.5	8.65
1967	767.91	1.55%	12	0.8610	661	55.5	8.96
1968	2,089.44	1.57%	33	0.8544	1,785	54.5	9.29
1969	1,336.26	1.58%	21	0.8475	1,133	53.5	9.62
1970	4,283.57	1.60%	69	0.8403	3,599	52.5	9.98
1971	501.97	1.62%	8	0.8327	418	51.5	10.35
1972	1,864.41	1.63%	30	0.8248	1,538	50.5	10.73
1973	884.40	1.65%	15	0.8165	722	49.5	11.13
1974	1,509.64	1.67%	25	0.8078	1,220	48.5	11.54
1975	5,430.36	1.68%	91	0.7988	4,338	47.5	11.96
1976	4,308.97	1.70%	73	0.7894	3,402	46.5	12.40
1977	388.68	1.71%	7	0.7797	303	45.5	12.86
1978	12,931.16	1.73%	224	0.7696	9,951	44.5	13.32
1979	6,961.67	1.75%	121	0.7591	5,285	43.5	13.81
1980	11,785.14	1.76%	207	0.7483	8,818	42.5	14.30
1981	3,231.56	1.78%	57	0.7371	2,382	41.5	14.80
1982	7,867.69	1.79%	141	0.7256	5,708	40.5	15.32
1983	12,154.23	1.81%	220	0.7137	8,674	39.5	15.85
1984	6,465.04	1.82%	118	0.7015	4,535	38.5	16.38
1985	7,148.49	1.84%	131	0.6890	4,925	37.5	16.93
1986	6,977.94	1.85%	129	0.6761	4,718	36.5	17.49
1987	46,480.42	1.87%	868	0.6629	30,813	35.5	18.05
1988	46,899.37	1.88%	883	0.6494	30,457	34.5	18.62
1989	64,391.69	1.90%	1,222	0.6356	40,928	33.5	19.21
1990	36,435.41	1.91%	697	0.6215	22,644	32.5	19.79

NakaPowerUtilities (Yellowknife)

Account #: 365.10 - Overhead Services

CALCULATED ANNUAL ACCRUAL AND ACCRUED DEPRECIATION BASED ON ORIGINAL COST AS OF December 31, 2022

ELG - Whole Life
Survivor Curve: R2.5
ASL: 50
Net Salvage: -5%
Truncation Year:

Year	Original Cost	Calculated Annual Accrual		Calculated Accumulated Depreciation		Average Age	ELG Remaining Life
		Rate	Amount	Factor	Amount		
1991	39,205.54	1.93%	756	0.6071	23,800	31.5	20.39
1992	38,902.55	1.94%	756	0.5923	23,043	30.5	20.99
1993	14,872.60	1.96%	291	0.5773	8,586	29.5	21.60
1994	26,819.03	1.97%	529	0.5620	15,072	28.5	22.21
1995	33,361.51	1.99%	663	0.5464	18,227	27.5	22.83
1996	18,013.04	2.00%	361	0.5304	9,555	26.5	23.46
1997	20,419.38	2.02%	412	0.5142	10,500	25.5	24.09
1998	14,477.67	2.03%	294	0.4977	7,206	24.5	24.72
1999	12,721.90	2.05%	260	0.4809	6,119	23.5	25.36
2000	28,613.60	2.06%	590	0.4639	13,273	22.5	26.00
2001	40,148.85	2.08%	834	0.4465	17,927	21.5	26.65
2002	67,207.54	2.09%	1,406	0.4289	28,822	20.5	27.30
2003	151,840.69	2.11%	3,200	0.4109	62,394	19.5	27.95
2004	49,838.12	2.12%	1,058	0.3927	19,571	18.5	28.61
2005	52,470.02	2.14%	1,122	0.3742	19,634	17.5	29.27
2006	28,398.99	2.15%	612	0.3554	10,093	16.5	29.92
2007	84,007.09	2.17%	1,823	0.3364	28,256	15.5	30.58
2008	90,428.76	2.19%	1,977	0.3170	28,667	14.5	31.24
2009	50,669.12	2.20%	1,116	0.2974	15,068	13.5	31.90
2010	15,354.26	2.22%	341	0.2775	4,261	12.5	32.55
2011	95,643.07	2.24%	2,140	0.2573	24,609	11.5	33.19
2012	91,232.50	2.26%	2,058	0.2368	21,607	10.5	33.84
2013	42,596.20	2.27%	969	0.2161	9,204	9.5	34.47
2014	36,345.60	2.29%	834	0.1950	7,088	8.5	35.08
2015	59,650.33	2.32%	1,381	0.1737	10,360	7.5	35.68
2016	63,142.76	2.34%	1,477	0.1520	9,599	6.5	36.26
2017	112,008.01	2.36%	2,648	0.1300	14,564	5.5	36.80
2018	104,394.07	2.39%	2,498	0.1077	11,241	4.5	37.29
2019	43,140.82	2.43%	1,047	0.0849	3,665	3.5	37.70
2020	30,055.70	2.47%	742	0.0617	1,856	2.5	37.99
2021	82,597.83	2.53%	2,090	0.0380	3,135	1.5	38.02
2022	17,770.65	2.64%	470	0.0132	235	0.5	37.31

ELG - Whole Life

Survivor Curve: R2.5

ASL: 50

Net Salvage: -5%

Truncation Year:

NakaPowerUtilities (Yellowknife)

Account #: 365.10 - Overhead Services

CALCULATED ANNUAL ACCRUAL AND ACCRUED DEPRECIATION
BASED ON ORIGINAL COST AS OF December 31, 2022

Year	Original Cost	Calculated Annual Accrual		Calculated Accumulated Depreciation		Average Age	ELG Remaining Life
		Rate	Amount	Factor	Amount		

TOTAL	1,970,297.60		42,461		704,719		
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NET SALVAGE ADJUSTMENT			2,123		35,236		
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TOTAL			44,584		739,955		
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COMPOSITE ANNUAL ACCRUAL RATE	2.26%
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COMPOSITE ACTUAL ACCUMULATED DEPRECIATION FACTOR	0.38
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COMPOSITE AVERAGE AGE (YEARS)	17.78
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ELG COMPOSITE REMAINING LIFE (YEARS)	29.11
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NakaPowerUtilities (Yellowknife)

Account #: 367.00 - Underground Conductor and Devices

CALCULATED ANNUAL ACCRUAL AND ACCRUED DEPRECIATION

BASED ON ORIGINAL COST AS OF December 31, 2022

ELG - Whole Life
Survivor Curve: R5
ASL: 45
Net Salvage: -15%
Truncation Year:

Year	Original Cost	Calculated Annual Accrual		Calculated Accumulated Depreciation		Average Age	ELG Remaining Life
		Rate	Amount	Factor	Amount		
1990	5,231.49	2.23%	117	0.7245	3,790	32.5	12.36
1991	29,944.16	2.24%	670	0.7046	21,098	31.5	13.21
1992	264,361.42	2.24%	5,930	0.6842	180,876	30.5	14.08
1993	26,907.14	2.25%	605	0.6634	17,851	29.5	14.97
1994	27,944.81	2.25%	630	0.6423	17,948	28.5	15.87
1995	94,657.64	2.26%	2,137	0.6208	58,765	27.5	16.80
1996	215,109.41	2.26%	4,863	0.5991	128,864	26.5	17.74
1997	194,377.60	2.26%	4,399	0.5771	112,168	25.5	18.69
1998	76,811.57	2.26%	1,740	0.5549	42,620	24.5	19.65
1999	191,652.26	2.27%	4,343	0.5325	102,059	23.5	20.63
2000	521,998.06	2.27%	11,833	0.5101	266,250	22.5	21.61
2001	501,420.74	2.27%	11,370	0.4875	244,447	21.5	22.60
2002	1,166,354.51	2.27%	26,451	0.4649	542,241	20.5	23.60
2003	1,049,670.08	2.27%	23,807	0.4423	464,227	19.5	24.59
2004	287,144.72	2.27%	6,513	0.4196	120,485	18.5	25.59
2005	736,597.42	2.27%	16,707	0.3969	292,372	17.5	26.59
2006	489,145.30	2.27%	11,095	0.3742	183,059	16.5	27.59
2007	404,264.15	2.27%	9,169	0.3516	142,124	15.5	28.59
2008	300,690.45	2.27%	6,820	0.3289	98,891	14.5	29.59
2009	492,865.18	2.27%	11,179	0.3062	150,915	13.5	30.59
2010	302,344.91	2.27%	6,858	0.2835	85,720	12.5	31.59
2011	273,644.85	2.27%	6,207	0.2608	71,377	11.5	32.59
2012	599,001.10	2.27%	13,586	0.2382	142,655	10.5	33.59
2013	565,538.16	2.27%	12,827	0.2155	121,859	9.5	34.59
2014	430,692.30	2.27%	9,769	0.1928	83,034	8.5	35.59
2015	394,380.39	2.27%	8,945	0.1701	67,088	7.5	36.59
2016	290,873.18	2.27%	6,597	0.1474	42,883	6.5	37.59
2017	224,043.90	2.27%	5,082	0.1247	27,949	5.5	38.59
2018	60,721.80	2.27%	1,377	0.1021	6,198	4.5	39.59
2019	274,312.12	2.27%	6,222	0.0794	21,776	3.5	40.59
2020	226,517.83	2.27%	5,138	0.0567	12,844	2.5	41.59
2021	276,175.24	2.27%	6,264	0.0340	9,396	1.5	42.59
2022	177,573.42	2.27%	4,028	0.0113	2,014	0.5	43.59

ELG - Whole Life

Survivor Curve: R5

ASL: 45

Net Salvage: -15%

Truncation Year:

NakaPowerUtilities (Yellowknife)

Account #: 367.00 - Underground Conductor and Devices

CALCULATED ANNUAL ACCRUAL AND ACCRUED DEPRECIATION

BASED ON ORIGINAL COST AS OF December 31, 2022

Year	Original Cost	Calculated Annual Accrual		Calculated Accumulated Depreciation		Average Age	ELG Remaining Life
		Rate	Amount	Factor	Amount		

TOTAL	11,172,967.31		253,274		3,885,845		
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NET SALVAGE ADJUSTMENT			37,991		582,877		
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TOTAL			291,266		4,468,722		
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COMPOSITE ANNUAL ACCRUAL RATE	2.61%
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COMPOSITE ACTUAL ACCUMULATED DEPRECIATION FACTOR	0.40
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COMPOSITE AVERAGE AGE (YEARS)	15.35
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ELG COMPOSITE REMAINING LIFE (YEARS)	28.76
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NakaPowerUtilities (Yellowknife)

Account #: 367.10 - Underground Services

CALCULATED ANNUAL ACCRUAL AND ACCRUED DEPRECIATION BASED ON ORIGINAL COST AS OF December 31, 2022

ELG - Whole Life
Survivor Curve: R3
ASL: 45
Net Salvage: -10%
Truncation Year:

Year	Original Cost	Calculated Annual Accrual		Calculated Accumulated Depreciation		Average Age	ELG Remaining Life
		Rate	Amount	Factor	Amount		
1976	1,603.75	1.84%	30	0.8560	1,373	46.5	7.82
1978	15,906.68	1.88%	299	0.8375	13,321	44.5	8.64
1979	13,085.85	1.90%	249	0.8275	10,828	43.5	9.07
1980	7,144.00	1.92%	137	0.8170	5,836	42.5	9.52
1981	1,933.00	1.94%	38	0.8060	1,558	41.5	9.99
1982	5,457.60	1.96%	107	0.7945	4,336	40.5	10.48
1983	6,524.00	1.98%	129	0.7825	5,105	39.5	10.98
1984	4,162.40	2.00%	83	0.7700	3,205	38.5	11.50
1985	486.11	2.02%	10	0.7570	368	37.5	12.04
1986	14,318.22	2.04%	292	0.7436	10,646	36.5	12.59
1990	3,142.16	2.11%	66	0.6853	2,153	32.5	14.93
1993	949.33	2.16%	21	0.6371	605	29.5	16.80
1994	1,711.85	2.18%	37	0.6202	1,062	28.5	17.45
1995	2,129.45	2.19%	47	0.6030	1,284	27.5	18.11
1996	1,149.78	2.21%	25	0.5854	673	26.5	18.77
1997	1,314.10	2.22%	29	0.5674	746	25.5	19.44
1998	924.10	2.24%	21	0.5490	507	24.5	20.13
1999	812.05	2.26%	18	0.5303	431	23.5	20.82
2000	1,142.66	2.27%	26	0.5112	584	22.5	21.52
2001	752.64	2.29%	17	0.4917	370	21.5	22.23
2004	14,426.43	2.33%	336	0.4312	6,221	18.5	24.40
2005	6,228.29	2.35%	146	0.4104	2,556	17.5	25.14
2007	5,507.91	2.37%	131	0.3678	2,026	15.5	26.64
2008	6,271.67	2.39%	150	0.3460	2,170	14.5	27.40
2009	3,684.35	2.40%	88	0.3240	1,194	13.5	28.17
2010	3,404.71	2.41%	82	0.3016	1,027	12.5	28.95
2011	473.72	2.43%	11	0.2789	132	11.5	29.73
2012	32,546.25	2.44%	794	0.2560	8,332	10.5	30.51
2013	42,211.81	2.45%	1,035	0.2328	9,828	9.5	31.30
2014	39,795.90	2.46%	980	0.2094	8,332	8.5	32.10
2015	26,752.90	2.48%	662	0.1857	4,968	7.5	32.89
2016	281,979.98	2.49%	7,017	0.1618	45,612	6.5	33.68
2017	306,606.62	2.50%	7,670	0.1376	42,187	5.5	34.47
2018	47,997.48	2.52%	1,207	0.1132	5,433	4.5	35.25
2019	136,930.80	2.53%	3,465	0.0886	12,128	3.5	36.02
2020	24,725.23	2.55%	630	0.0637	1,575	2.5	36.74
2021	93,316.48	2.57%	2,399	0.0386	3,598	1.5	37.40
2022	6,133.14	2.61%	160	0.0130	80	0.5	37.82

ELG - Whole Life

Survivor Curve: R3

ASL: 45

Net Salvage: -10%

Truncation Year:

NakaPowerUtilities (Yellowknife)

Account #: 367.10 - Underground Services

CALCULATED ANNUAL ACCRUAL AND ACCRUED DEPRECIATION
BASED ON ORIGINAL COST AS OF December 31, 2022

Year	Original Cost	Calculated Annual Accrual		Calculated Accumulated Depreciation		Average Age	ELG Remaining Life
		Rate	Amount	Factor	Amount		

TOTAL	1,163,643.40		28,646		222,391		
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NET SALVAGE ADJUSTMENT			2,865		22,239		
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TOTAL			31,511		244,630		
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COMPOSITE ANNUAL ACCRUAL RATE	2.71%
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COMPOSITE ACTUAL ACCUMULATED DEPRECIATION FACTOR	0.21
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COMPOSITE AVERAGE AGE (YEARS)	8.29
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ELG COMPOSITE REMAINING LIFE (YEARS)	32.49
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NakaPowerUtilities (Yellowknife)

Account #: 368.00 - Line Transformers

CALCULATED ANNUAL ACCRUAL AND ACCRUED DEPRECIATION BASED ON ORIGINAL COST AS OF December 31, 2022

ELG - Whole Life
 Survivor Curve: S3
 ASL: 35
 Net Salvage: -15%
 Truncation Year:

Year	Original Cost	Calculated Annual Accrual		Calculated Accumulated Depreciation		Average Age	ELG Remaining Life
		Rate	Amount	Factor	Amount		
2004	597,765.69	2.98%	17,802	0.5510	329,346	18.5	15.08
2005	1,265,439.97	3.00%	37,919	0.5244	663,584	17.5	15.87
2006	1,397,059.57	3.01%	42,082	0.4970	694,348	16.5	16.70
2007	1,690,250.02	3.03%	51,135	0.4689	792,587	15.5	17.55
2008	1,877,170.43	3.04%	56,991	0.4402	826,362	14.5	18.44
2009	970,852.60	3.04%	29,557	0.4110	399,024	13.5	19.35
2010	1,837,640.58	3.05%	56,066	0.3814	700,829	12.5	20.28
2011	1,641,608.75	3.06%	50,164	0.3514	576,891	11.5	21.22
2012	2,081,384.27	3.06%	63,674	0.3212	668,577	10.5	22.19
2013	521,854.07	3.06%	15,976	0.2908	151,776	9.5	23.16
2014	487,442.45	3.06%	14,930	0.2603	126,904	8.5	24.15
2015	827,850.79	3.06%	25,363	0.2298	190,224	7.5	25.14
2016	484,256.57	3.06%	14,839	0.1992	96,451	6.5	26.13
2017	215,783.60	3.06%	6,612	0.1685	36,369	5.5	27.13
2018	223,745.46	3.06%	6,857	0.1379	30,855	4.5	28.13
2019	43,626.39	3.06%	1,337	0.1073	4,679	3.5	29.13
2020	23,048.10	3.06%	706	0.0766	1,766	2.5	30.13
2021	11,303.69	3.06%	346	0.0460	520	1.5	31.13
TOTAL	16,198,082.99		492,357		6,291,092		
NET SALVAGE ADJUSTMENT			73,854		943,664		
TOTAL			566,211		7,234,756		

COMPOSITE ANNUAL ACCRUAL RATE	3.50%
COMPOSITE ACTUAL ACCUMULATED DEPRECIATION FACTOR	0.45
COMPOSITE AVERAGE AGE (YEARS)	12.80
ELG COMPOSITE REMAINING LIFE (YEARS)	20.10

NakaPowerUtilities (Yellowknife)

Account #: 371.00 - Automated Meters

**CALCULATED ANNUAL ACCRUAL AND ACCRUED DEPRECIATION
 BASED ON ORIGINAL COST AS OF December 31, 2022**

ELG - Whole Life
 Survivor Curve: R2.5
 ASL: 15
 Net Salvage: 0%
 Truncation Year:

Year	Original Cost	Calculated Annual Accrual		Calculated Accumulated Depreciation		Average Age	ELG Remaining Life
		Rate	Amount	Factor	Amount		
2005	87.46	5.01%	4	0.8770	77	17.5	2.46
2007	711.64	5.38%	38	0.8334	593	15.5	3.10
2010	1,852,217.09	5.91%	109,456	0.7387	1,368,198	12.5	4.42
2011	61,648.50	6.08%	3,748	0.6992	43,105	11.5	4.95
2012	38,606.02	6.25%	2,412	0.6561	25,328	10.5	5.50
2013	60,236.90	6.41%	3,864	0.6094	36,708	9.5	6.09
2014	46,021.01	6.58%	3,028	0.5593	25,741	8.5	6.70
2015	85,723.29	6.75%	5,783	0.5060	43,376	7.5	7.32
2016	57,403.51	6.91%	3,969	0.4494	25,798	6.5	7.96
2017	42,835.07	7.08%	3,035	0.3896	16,690	5.5	8.62
2018	43,459.31	7.26%	3,155	0.3267	14,200	4.5	9.27
2019	23,415.38	7.45%	1,744	0.2607	6,104	3.5	9.93
2020	24,656.88	7.66%	1,889	0.1915	4,721	2.5	10.56
2021	32,346.36	7.92%	2,563	0.1189	3,845	1.5	11.12
2022	73,660.63	8.36%	6,159	0.0418	3,079	0.5	11.46
TOTAL	2,443,029.05		150,848		1,617,564		
NET SALVAGE ADJUSTMENT			0		0		
TOTAL			150,848		1,617,564		

COMPOSITE ANNUAL ACCRUAL RATE	6.17%
COMPOSITE ACTUAL ACCUMULATED DEPRECIATION FACTOR	0.66
COMPOSITE AVERAGE AGE (YEARS)	11.02
ELG COMPOSITE REMAINING LIFE (YEARS)	5.30

Naka Power Utilities (Yellowknife)

Account #: 373.00 - Street Lights

CALCULATED ANNUAL ACCRUAL AND ACCRUED DEPRECIATION
BASED ON ORIGINAL COST AS OF December 31, 2022

ELG - Whole Life
Survivor Curve: R4
ASL: 35
Net Salvage: -25%
Truncation Year:

Year	Original Cost	Calculated Annual Accrual		Calculated Accumulated Depreciation		Average Age	ELG Remaining Life
		Rate	Amount	Factor	Amount		
1997	29,219.19	2.79%	814	0.7107	20,765	25.5	10.38
1998	69,047.71	2.81%	1,941	0.6887	47,551	24.5	11.08
1999	239,716.78	2.83%	6,793	0.6659	159,630	23.5	11.79
2000	72,661.42	2.86%	2,075	0.6424	46,678	22.5	12.52
2001	259,714.28	2.88%	7,468	0.6182	160,551	21.5	13.28
2002	365,720.67	2.89%	10,584	0.5933	216,972	20.5	14.05
2003	293,107.22	2.91%	8,533	0.5677	166,399	19.5	14.85
2004	252,485.02	2.93%	7,391	0.5415	136,728	18.5	15.66
2005	200,237.54	2.94%	5,890	0.5148	103,079	17.5	16.49
2006	241,059.77	2.95%	7,122	0.4875	117,519	16.5	17.35
2007	205,234.86	2.97%	6,088	0.4598	94,362	15.5	18.21
2008	99,647.14	2.98%	2,966	0.4316	43,010	14.5	19.09
2009	141,157.77	2.99%	4,215	0.4031	56,900	13.5	19.99
2010	118,051.39	2.99%	3,534	0.3743	44,181	12.5	20.90
2011	47,010.66	3.00%	1,411	0.3451	16,225	11.5	21.82
2012	257,902.52	3.01%	7,756	0.3158	81,436	10.5	22.75
2013	309,904.06	3.01%	9,336	0.2862	88,693	9.5	23.69
2014	954,126.07	3.02%	28,788	0.2565	244,695	8.5	24.64
2015	278,118.03	3.02%	8,402	0.2266	63,018	7.5	25.60
2016	565,499.32	3.02%	17,104	0.1966	111,176	6.5	26.56
2017	495,807.97	3.03%	15,011	0.1665	82,561	5.5	27.53
2018	688,156.42	3.03%	20,853	0.1364	93,837	4.5	28.50
2019	496,110.12	3.03%	15,045	0.1061	52,658	3.5	29.47
2020	254,393.94	3.03%	7,721	0.0759	19,301	2.5	30.45
2021	435,788.18	3.04%	13,236	0.0456	19,854	1.5	31.42
2022	447,409.98	3.04%	13,604	0.0152	6,802	0.5	32.39

TOTAL	7,817,288.03	233,680	2,294,581
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NET SALVAGE ADJUSTMENT	58,420	573,645
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TOTAL	292,100	2,868,226
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COMPOSITE ANNUAL ACCRUAL RATE	3.74%
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COMPOSITE ACTUAL ACCUMULATED DEPRECIATION FACTOR	0.37
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COMPOSITE AVERAGE AGE (YEARS)	9.95
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ELG COMPOSITE REMAINING LIFE (YEARS)	23.51
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Naka Power Utilities (Yellowknife)

Account #: 373.10 - Sentinel Lights

**CALCULATED ANNUAL ACCRUAL AND ACCRUED DEPRECIATION
 BASED ON ORIGINAL COST AS OF December 31, 2022**

ELG - Whole Life
 Survivor Curve: R3
 ASL: 35
 Net Salvage: 0%
 Truncation Year:

Year	Original Cost	Calculated Annual Accrual		Calculated Accumulated Depreciation		Average Age	ELG Remaining Life
		Rate	Amount	Factor	Amount		
1990	3,102.58	2.49%	77	0.8091	2,510	32.5	7.67
1991	3,430.92	2.52%	87	0.7944	2,726	31.5	8.15
1993	7,506.29	2.59%	194	0.7626	5,724	29.5	9.18
1994	1,517.00	2.62%	40	0.7455	1,131	28.5	9.73
1995	3,172.00	2.65%	84	0.7276	2,308	27.5	10.30
1999	2,349.00	2.76%	65	0.6489	1,524	23.5	12.72
2000	10,565.00	2.79%	295	0.6275	6,630	22.5	13.36
2005	5,294.87	2.92%	155	0.5112	2,707	17.5	16.74
2006	2,466.00	2.95%	73	0.4861	1,199	16.5	17.45
2010	9,389.58	3.04%	286	0.3801	3,569	12.5	20.38
2011	1,021.29	3.06%	31	0.3523	360	11.5	21.14
2012	207.67	3.09%	6	0.3240	67	10.5	21.91
2018	1,223.96	3.21%	39	0.1445	177	4.5	26.64
2022	6,696.35	3.34%	224	0.0167	112	0.5	29.41

TOTAL	57,942.51		1,655		30,743	
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NET SALVAGE ADJUSTMENT		0		0
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TOTAL		1,655		30,743
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COMPOSITE ANNUAL ACCRUAL RATE	2.86%
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COMPOSITE ACTUAL ACCUMULATED DEPRECIATION FACTOR	0.53
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COMPOSITE AVERAGE AGE (YEARS)	19.45
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ELG COMPOSITE REMAINING LIFE (YEARS)	15.84
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Naka Power Utilities (Yellowknife)

Account #: 390.00 - Structures and Improvements

CALCULATED ANNUAL ACCRUAL AND ACCRUED DEPRECIATION

BASED ON ORIGINAL COST AS OF December 31, 2022

ELG - Whole Life
Survivor Curve: R2
ASL: 45
Net Salvage: 0%
Truncation Year:

Year	Original Cost	Calculated Annual Accrual		Calculated Accumulated Depreciation		Average Age	ELG Remaining Life
		Rate	Amount	Factor	Amount		
1986	470,684.03	1.94%	9,122	0.7074	332,969	36.5	15.10
1987	21,000.00	1.96%	411	0.6950	14,595	35.5	15.58
1988	6,713.42	1.98%	133	0.6822	4,580	34.5	16.07
1989	36,695.13	2.00%	733	0.6690	24,551	33.5	16.57
1990	2,081.14	2.02%	42	0.6555	1,364	32.5	17.08
1991	175,774.91	2.04%	3,581	0.6417	112,791	31.5	17.59
1992	21,108.64	2.06%	434	0.6274	13,244	30.5	18.11
1993	13,258.06	2.08%	275	0.6129	8,125	29.5	18.64
1994	9,204.00	2.10%	193	0.5979	5,503	28.5	19.17
1995	29,704.72	2.12%	629	0.5826	17,306	27.5	19.70
1996	7,331.88	2.14%	157	0.5669	4,157	26.5	20.24
1997	462,172.06	2.16%	9,984	0.5509	254,598	25.5	20.79
1998	80,538.88	2.18%	1,757	0.5345	43,046	24.5	21.34
1999	70,022.68	2.20%	1,543	0.5177	36,251	23.5	21.89
2000	16,341.42	2.22%	364	0.5006	8,180	22.5	22.45
2001	29,072.22	2.25%	653	0.4831	14,044	21.5	23.01
2002	35,087.04	2.27%	796	0.4652	16,323	20.5	23.57
2003	10.00	2.29%	0	0.4470	4	19.5	24.13
2004	30,596.22	2.32%	708	0.4284	13,106	18.5	24.69
2008	43,173.70	2.41%	1,042	0.3501	15,116	14.5	26.92
2009	3,427.57	2.44%	84	0.3296	1,130	13.5	27.46
2010	37,840.38	2.47%	934	0.3086	11,678	12.5	28.00
2011	175,429.71	2.50%	4,382	0.2873	50,394	11.5	28.53
2012	70,485.78	2.53%	1,782	0.2655	18,712	10.5	29.05
2013	38,590.57	2.56%	988	0.2432	9,387	9.5	29.56
2014	3,845,502.54	2.59%	99,784	0.2206	848,160	8.5	30.04
2015	5,501.77	2.63%	145	0.1974	1,086	7.5	30.50
2016	12,968.31	2.67%	347	0.1737	2,253	6.5	30.92
2017	4,555.43	2.72%	124	0.1495	681	5.5	31.29
2018	3,150.78	2.77%	87	0.1247	393	4.5	31.60
2019	2,980.34	2.83%	84	0.0991	295	3.5	31.81
2020	17,878.63	2.91%	521	0.0728	1,301	2.5	31.84
2021	680,084.83	3.03%	20,575	0.0454	30,863	1.5	31.55
2022	6,421.08	3.24%	208	0.0162	104	0.5	30.34

ELG - Whole Life

Survivor Curve: R2

ASL: 45

Net Salvage: 0%

Truncation Year:

Naka Power Utilities (Yellowknife)

Account #: 390.00 - Structures and Improvements

CALCULATED ANNUAL ACCRUAL AND ACCRUED DEPRECIATION

BASED ON ORIGINAL COST AS OF December 31, 2022

Year	Original Cost	Calculated Annual Accrual		Calculated Accumulated Depreciation		Average Age	ELG Remaining Life
		Rate	Amount	Factor	Amount		

TOTAL	6,465,387.87		162,603		1,916,291		
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NET SALVAGE ADJUSTMENT			0		0		
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TOTAL			162,603		1,916,291		
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COMPOSITE ANNUAL ACCRUAL RATE	2.51%
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COMPOSITE ACTUAL ACCUMULATED DEPRECIATION FACTOR	0.30
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COMPOSITE AVERAGE AGE (YEARS)	12.87
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ELG COMPOSITE REMAINING LIFE (YEARS)	27.45
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Naka Power Utilities (Yellowknife)

Account #: 391.00 - Office Furniture and Equipment

CALCULATED ANNUAL ACCRUAL AND ACCRUED DEPRECIATION

BASED ON ORIGINAL COST AS OF December 31, 2022

ELG - Whole Life
Survivor Curve: SQ
ASL: 15
Net Salvage: 0%
Truncation Year:

Year	Original Cost	Calculated Annual Accrual		Calculated Accumulated Depreciation		Average Age	ELG Remaining Life
		Rate	Amount	Factor	Amount		
2008	1,339.97	6.67%	89	0.9667	1,295	14.5	0.50
2009	1,044.43	6.67%	70	0.9000	940	13.5	1.50
2010	7,977.90	6.67%	532	0.8333	6,648	12.5	2.50
2011	6,198.21	6.67%	413	0.7667	4,752	11.5	3.50
2012	4,186.03	6.67%	279	0.7000	2,930	10.5	4.50
2014	205,244.14	6.67%	13,683	0.5667	116,305	8.5	6.50
2016	1,419.30	6.67%	95	0.4333	615	6.5	8.50
2017	6,465.03	6.67%	431	0.3667	2,371	5.5	9.50
2019	3,100.34	6.67%	207	0.2333	723	3.5	11.50
2020	249.99	6.67%	17	0.1667	42	2.5	12.50
2022	15,927.63	6.67%	1,062	0.0333	531	0.5	14.50
TOTAL	253,152.97		16,877		137,152		
NET SALVAGE ADJUSTMENT			0		0		
TOTAL			16,877		137,152		

COMPOSITE ANNUAL ACCRUAL RATE	6.67%
COMPOSITE ACTUAL ACCUMULATED DEPRECIATION FACTOR	0.54
COMPOSITE AVERAGE AGE (YEARS)	8.13
ELG COMPOSITE REMAINING LIFE (YEARS)	6.87

ELG - Whole Life

Survivor Curve: SQ

ASL: 5

Net Salvage: 0%

Truncation Year:

Naka Power Utilities (Yellowknife)

Account #: 391.10 - Computer Hardware & Voice and Data Network Equi

CALCULATED ANNUAL ACCRUAL AND ACCRUED DEPRECIATION

BASED ON ORIGINAL COST AS OF December 31, 2022

Year	Original Cost	Calculated Annual Accrual		Calculated Accumulated Depreciation		Average Age	ELG Remaining Life
		Rate	Amount	Factor	Amount		
2019	3,106.92	20.00%	621	0.7000	2,175	3.5	1.50
2020	887.99	20.00%	178	0.5000	444	2.5	2.50
2021	35,322.91	20.00%	7,065	0.3000	10,597	1.5	3.50
2022	919.98	20.00%	184	0.1000	92	0.5	4.50

TOTAL 40,237.80 8,048 13,308

NET SALVAGE ADJUSTMENT 0 0

TOTAL 8,048 13,308

COMPOSITE ANNUAL ACCRUAL RATE 20.00%

COMPOSITE ACTUAL ACCUMULATED DEPRECIATION FACTOR 0.33

COMPOSITE AVERAGE AGE (YEARS) 1.65

ELG COMPOSITE REMAINING LIFE (YEARS) 3.35

ELG - Whole Life

Survivor Curve: SQ

ASL: 10

Net Salvage: 0%

Truncation Year:

Naka Power Utilities (Yellowknife)

Account #: 391.22 - Computer Software and Applications Major (10 YR)

CALCULATED ANNUAL ACCRUAL AND ACCRUED DEPRECIATION

BASED ON ORIGINAL COST AS OF December 31, 2022

Year	Original Cost	Calculated Annual Accrual		Calculated Accumulated Depreciation		Average Age	ELG Remaining Life
		Rate	Amount	Factor	Amount		
2014	134,470.78	10.00%	13,447	0.8500	114,300	8.5	1.50
2018	51,496.95	10.00%	5,150	0.4500	23,174	4.5	5.50
2019	123,086.90	10.00%	12,309	0.3500	43,080	3.5	6.50
2020	6,330.71	10.00%	633	0.2500	1,583	2.5	7.50
2021	21,081.44	10.00%	2,108	0.1500	3,162	1.5	8.50
TOTAL	336,466.78		33,647		185,299		
NET SALVAGE ADJUSTMENT			0		0		
TOTAL			33,647		185,299		

COMPOSITE ANNUAL ACCRUAL RATE 10.00%

COMPOSITE ACTUAL ACCUMULATED DEPRECIATION FACTOR 0.55

COMPOSITE AVERAGE AGE (YEARS) 5.51

ELG COMPOSITE REMAINING LIFE (YEARS) 4.49

ELG - Whole Life

Survivor Curve: R3

ASL: 10

Net Salvage: 15%

Truncation Year:

Naka Power Utilities (Yellowknife)

Account #: 392.20 - Transportation Equipment, Fleet Vehicles Category 2

CALCULATED ANNUAL ACCRUAL AND ACCRUED DEPRECIATION
BASED ON ORIGINAL COST AS OF December 31, 2022

Year	Original Cost	Calculated Annual Accrual		Calculated Accumulated Depreciation		Average Age	ELG Remaining Life
		Rate	Amount	Factor	Amount		
2009	11,516.00	6.95%	800	0.9381	10,803	13.5	0.89
2013	36,785.64	8.61%	3,169	0.8184	30,104	9.5	2.11
2014	90,921.92	9.01%	8,194	0.7660	69,647	8.5	2.60
2016	93,207.26	9.73%	9,073	0.6327	58,976	6.5	3.77
2017	9,859.50	10.07%	992	0.5536	5,458	5.5	4.44
2018	40,964.00	10.38%	4,251	0.4670	19,128	4.5	5.14
2019	124,090.59	10.67%	13,236	0.3733	46,326	3.5	5.88
2022	134,183.65	11.49%	15,414	0.0574	7,707	0.5	8.21

TOTAL	541,528.56		55,129		248,149		
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NET SALVAGE ADJUSTMENT		-8,269		-37,222		
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TOTAL		46,860		210,927		
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COMPOSITE ANNUAL ACCRUAL RATE	8.65%
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COMPOSITE ACTUAL ACCUMULATED DEPRECIATION FACTOR	0.39
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COMPOSITE AVERAGE AGE (YEARS)	4.84
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ELG COMPOSITE REMAINING LIFE (YEARS)	5.10
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Naka Power Utilities (Yellowknife)

Account #: 392.30 - Transportation Equipment, Fleet Vehicles Category 3

CALCULATED ANNUAL ACCRUAL AND ACCRUED DEPRECIATION

BASED ON ORIGINAL COST AS OF December 31, 2022

ELG - Whole Life
Survivor Curve: R2
ASL: 20
Net Salvage: 20%
Truncation Year:

Year	Original Cost	Calculated Annual Accrual		Calculated Accumulated Depreciation		Average Age	ELG Remaining Life
		Rate	Amount	Factor	Amount		
1990	10,975.00	2.96%	325	0.9624	10,562	32.5	1.27
2002	285,027.28	3.94%	11,244	0.8087	230,506	20.5	4.85
2004	62,065.14	4.14%	2,568	0.7653	47,500	18.5	5.67
2009	272,789.19	4.63%	12,640	0.6256	170,646	13.5	8.08
2010	337,321.93	4.74%	15,979	0.5921	199,741	12.5	8.61
2012	278,179.00	4.95%	13,771	0.5198	144,592	10.5	9.70
2013	3,152.01	5.06%	160	0.4808	1,516	9.5	10.26
2014	12,014.04	5.18%	622	0.4400	5,286	8.5	10.82
2015	39,167.45	5.30%	2,075	0.3973	15,561	7.5	11.38
2016	202,798.76	5.43%	11,002	0.3526	71,513	6.5	11.93
2019	84,100.08	5.89%	4,952	0.2061	17,333	3.5	13.48
2020	5,104.00	6.10%	311	0.1525	778	2.5	13.89
2021	23,136.05	6.39%	1,478	0.0958	2,217	1.5	14.16
2022	15,014.21	6.90%	1,037	0.0345	518	0.5	13.98

TOTAL	1,630,844.14	78,164	918,270
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NET SALVAGE ADJUSTMENT	-15,633	-183,654
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TOTAL	62,531	734,616
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COMPOSITE ANNUAL ACCRUAL RATE	3.83%
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COMPOSITE ACTUAL ACCUMULATED DEPRECIATION FACTOR	0.45
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COMPOSITE AVERAGE AGE (YEARS)	12.42
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ELG COMPOSITE REMAINING LIFE (YEARS)	8.78
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ELG - Whole Life

Survivor Curve: SQ

ASL: 10

Net Salvage: 0%

Truncation Year:

Naka Power Utilities (Yellowknife)

Account #: 394.00 - Tools, Shop, Garage, Stores and Laboratory Equipme

CALCULATED ANNUAL ACCRUAL AND ACCRUED DEPRECIATION

BASED ON ORIGINAL COST AS OF December 31, 2022

Year	Original Cost	Calculated Annual Accrual		Calculated Accumulated Depreciation		Average Age	ELG Remaining Life
		Rate	Amount	Factor	Amount		
2013	24,777.05	10.00%	2,478	0.9500	23,538	9.5	0.50
2014	61,851.39	10.00%	6,185	0.8500	52,574	8.5	1.50
2015	27,474.89	10.00%	2,747	0.7500	20,606	7.5	2.50
2016	22,135.75	10.00%	2,214	0.6500	14,388	6.5	3.50
2017	22,694.17	10.00%	2,269	0.5500	12,482	5.5	4.50
2018	17,919.48	10.00%	1,792	0.4500	8,064	4.5	5.50
2019	27,351.34	10.00%	2,735	0.3500	9,573	3.5	6.50
2020	22,329.48	10.00%	2,233	0.2500	5,582	2.5	7.50
2021	73,243.53	10.00%	7,324	0.1500	10,987	1.5	8.50
2022	20,722.96	10.00%	2,072	0.0500	1,036	0.5	9.50
TOTAL	320,500.04		32,050		158,830		
NET SALVAGE ADJUSTMENT			0		0		
TOTAL			32,050		158,830		

COMPOSITE ANNUAL ACCRUAL RATE	10.00%
COMPOSITE ACTUAL ACCUMULATED DEPRECIATION FACTOR	0.50
COMPOSITE AVERAGE AGE (YEARS)	4.96
ELG COMPOSITE REMAINING LIFE (YEARS)	5.04



SECTION 9

9 ESTIMATION OF SURVIVOR CURVES

9.1 Average Service Life

All assets have a service life, which is defined as “the period of time from its installation until it is retired from service”³. All account groups of property are made up of various assets with differing service lives and investment values. To calculate a depreciation rate, one must first calculate an average life for all assets in a single account. This can be done by ascertaining the age at retirement for every asset in an account and plotting it as a percentage of the units surviving at each age interval (a “Survivor Curve”). From the average life for each account, remaining lives can then be found which are then used to calculate the annual depreciation accruals and ultimately depreciation rate. A discussion of the general concept of survivor curves is presented and the Iowa type survivor curves are reviewed.

9.2 Survivor Curves

A survivor curve is defined as “a graph of the percent of units remaining in service expressed as a function of age”.⁴ To calculate the average life of the group, the remaining life expectancy, the probable life and the frequency curve, one must first create a survivor curve. Figure 1 shows a typical 40-R4 smoothed survivor curve as well as the accompanying derived curves. The type 40-R4 refers to the Iowa type curve, whose designation will be explained in further detail in the next section

To calculate the average service life, one must calculate the area under the survivor curve and divide by the percent surviving at age zero. The remaining life is equal to the area under the survivor curve and to the right of the current age, divided by the percent surviving at the current age. In Figure 1, for example, the hatched area to the right of age 45 divided by 28.9 percent surviving balance represents the remaining life for an asset that has reached that age. The probable life is “the total life expectancy of the property surviving at any age and is equal to the remaining life plus the current age.”⁵ If the probable life of the property is calculated for each year of age, the probable life curve shown in the chart can be developed. The frequency curve is calculated by taking the difference between the percent surviving on successive years on the survivor curve.⁶ Alternatively, frequency can be empirically determined by finding the amount of retirements at any given age. Plotting retirement frequency from the youngest to oldest ages and then taking the cumulative frequencies will generate percent surviving versus age.

³ Wolf, Frank K. and W. Chester Fitch, *Depreciation Systems* (Iowa State University Press, 1994), 21.

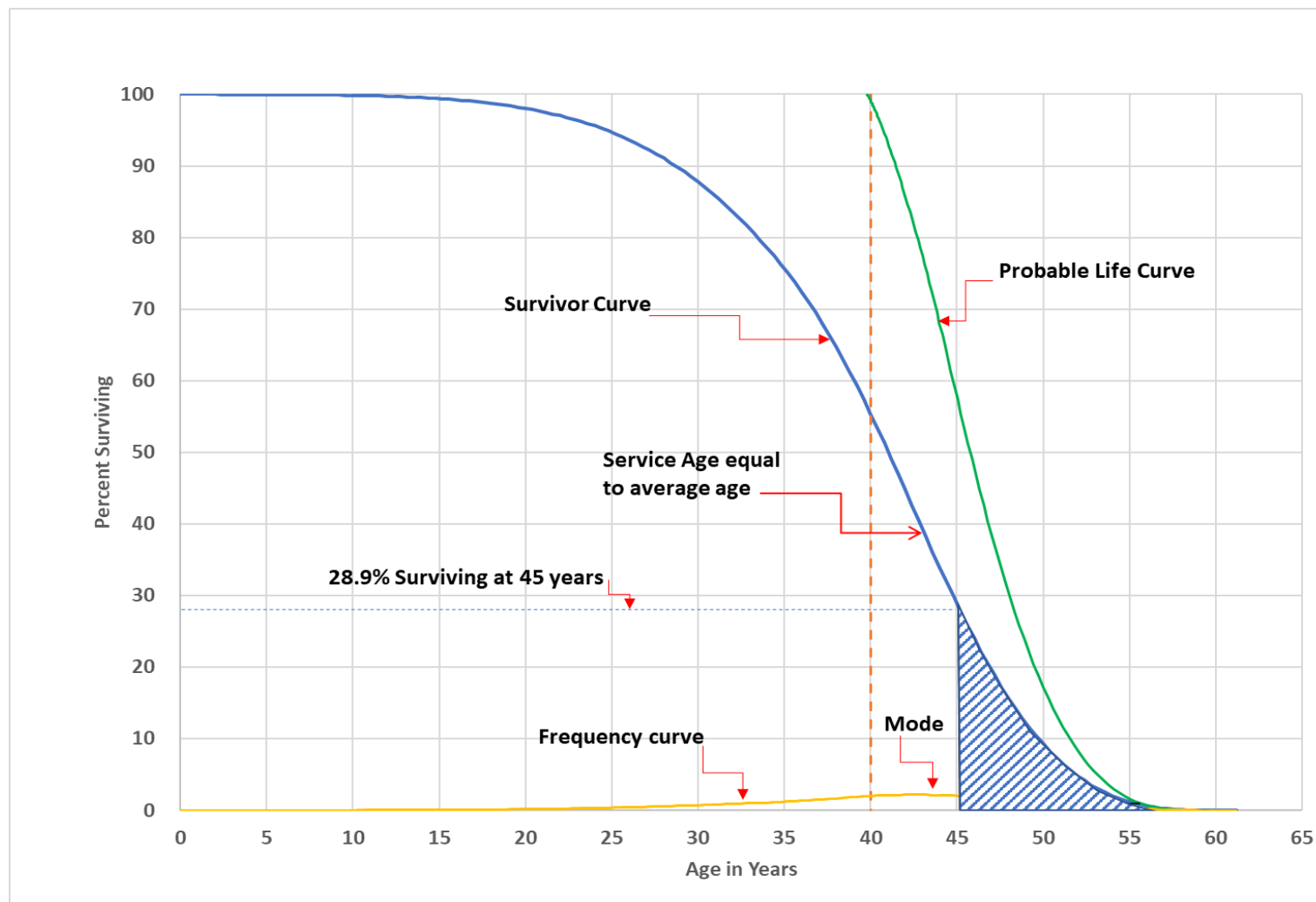
⁴ *Ibid*, 23.

⁵ *Ibid*, 29.

⁶ *Ibid*, 23-24.



FIGURE 1: TYPICAL SURVIVOR CURVE (40-R4) AND DERIVED CURVES





9.3 Iowa Type Curves

In 1931, Robley Winfrey and Edwin Kurtz of the Engineering Research Institute at Iowa State University published Bulletin 103, which laid the groundwork for what would eventually be known as the Iowa Curves. “The 13 type curves can be used as valuable aids in forecasting the probable future service lives of individual items and of groups of items of different kinds of physical equipment”⁷. The 13 curves described in Bulletin 103 eventually became a series of 22 generalized survivor curves which are used throughout the regulated utility industry. These 22 curves were described in Bulletin 125, published in 1967 by Harold A. Cowles, which became known as the Iowa curves.

The Iowa curves are organized with three variables: the average life of the plant; the location of the mode; and the variation of the life. All Iowa curves have both a letter and a number to represent the shape and height of the mode. The L curves, or left-moded curves, are used when the mode of the curve should be to the left of the average life. There are six L curves are presented in Figure 2. The R curves, or right-moded, are used when the mode of the curve should be to the right of the average life. There are five R curves, which are presented in Figure 3. The S curves, or symmetrically-moded, are used when the mode is equal to the average life. There are seven S curves, which are presented in Figure 4. The O curves, or origin curves, are used when the mode occurs at age 0. There are four O curves, which are presented in Figure 5. There are some occasions where it is appropriate to use a half curve. In these cases, the curve is assumed to be exactly halfway between the two curves.

In addition to Bulletin 125, Iowa curves have also been presented in subsequent Experiment Station bulletins and in the text *Engineering Valuation and Depreciation*.⁸ In 1957, Frank V. B. Couch, Jr., an Iowa State College graduate student, submitted a thesis⁹ presenting his development of the fourth family consisting of the four O-type survivor curves.

⁷ *Ibid*, 21

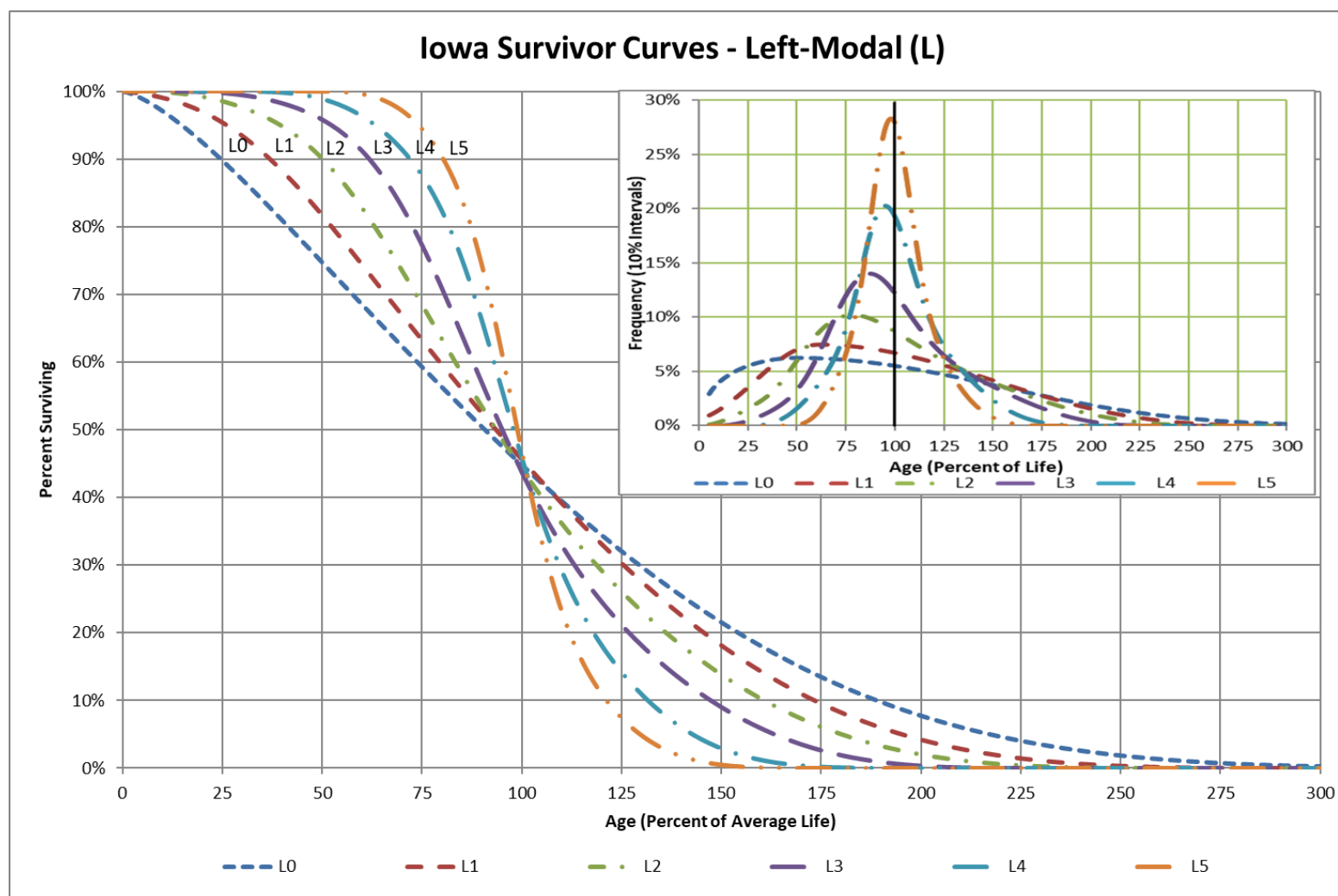
⁸ Marston, Anson, Robley Winfrey and Jean C. Hempstead, *Engineering Valuation and Depreciation* (The Iowa State University Press, 1953)

⁹ Couch, Frank V. B., Jr., *Classification of Type O Retirement Characteristics of Industrial Property* Unpublished M.S. Thesis (Engineering Valuation, Library, Iowa State College, Ames, Iowa, 1957)



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FIGURE 2: LEFT MODAL OR "L" IOWA TYPE SURVIVOR CURVES





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FIGURE 3: RIGHT MODAL OR “R” IOWA TYPE SURVIVOR CURVES

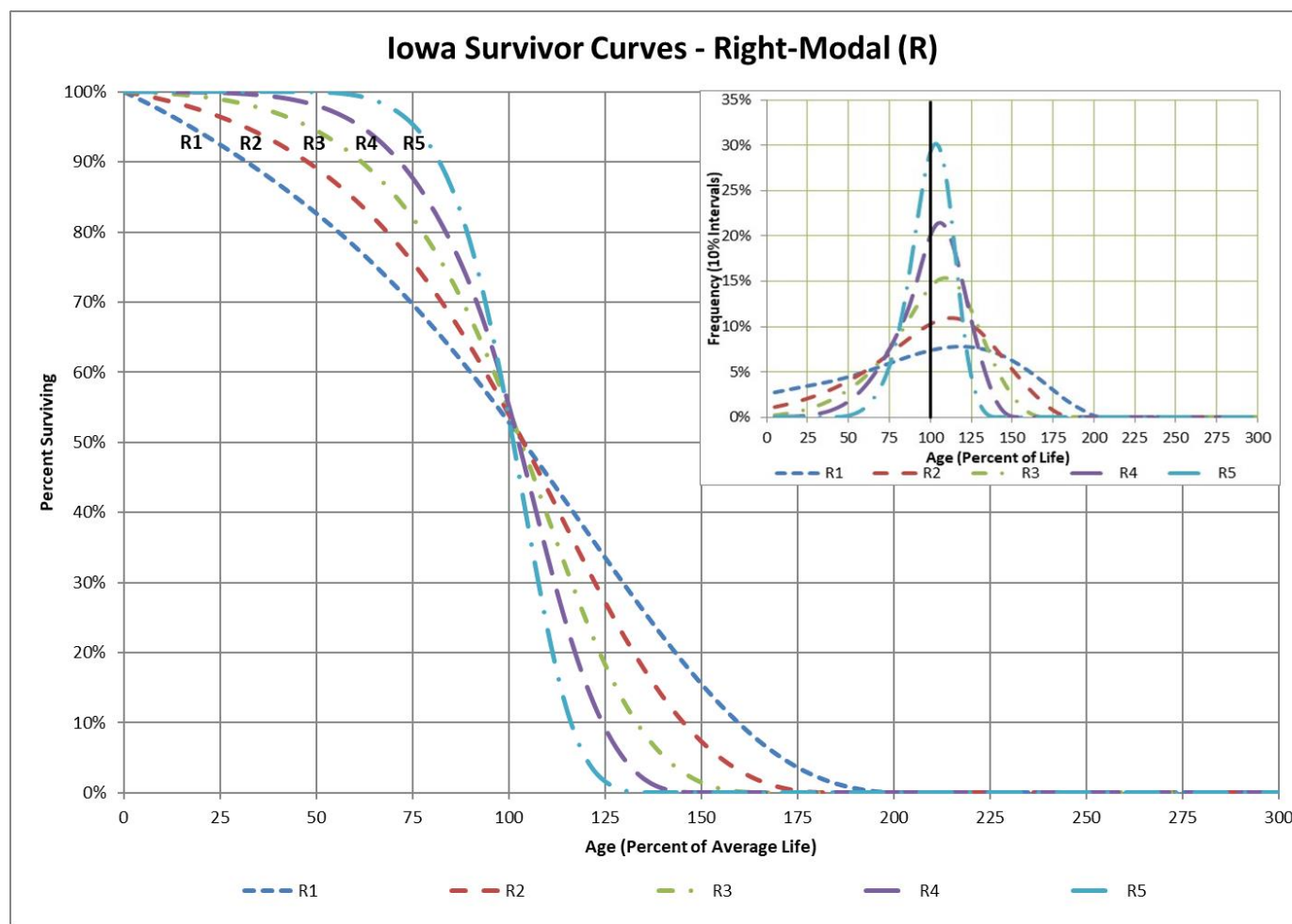
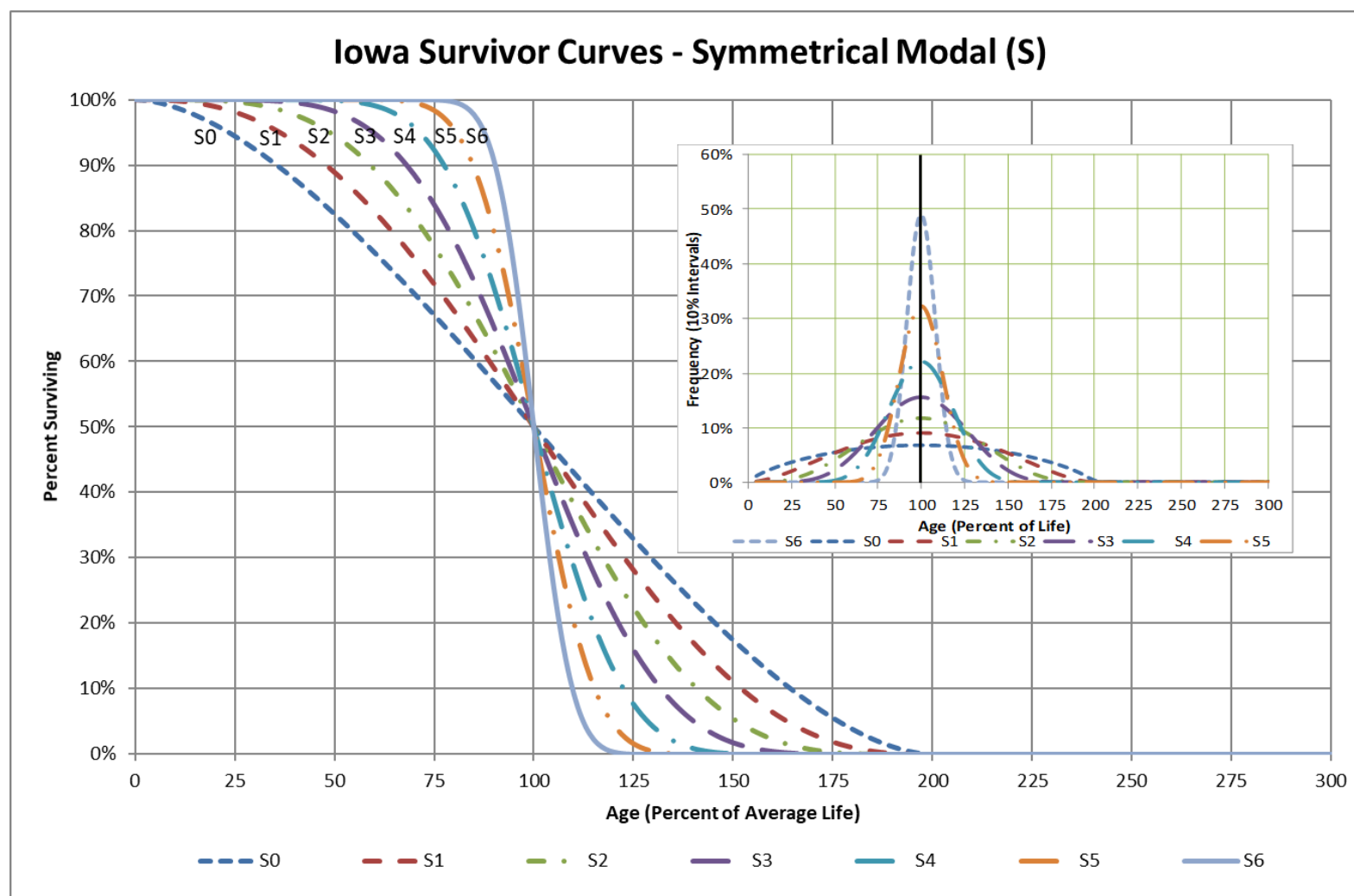




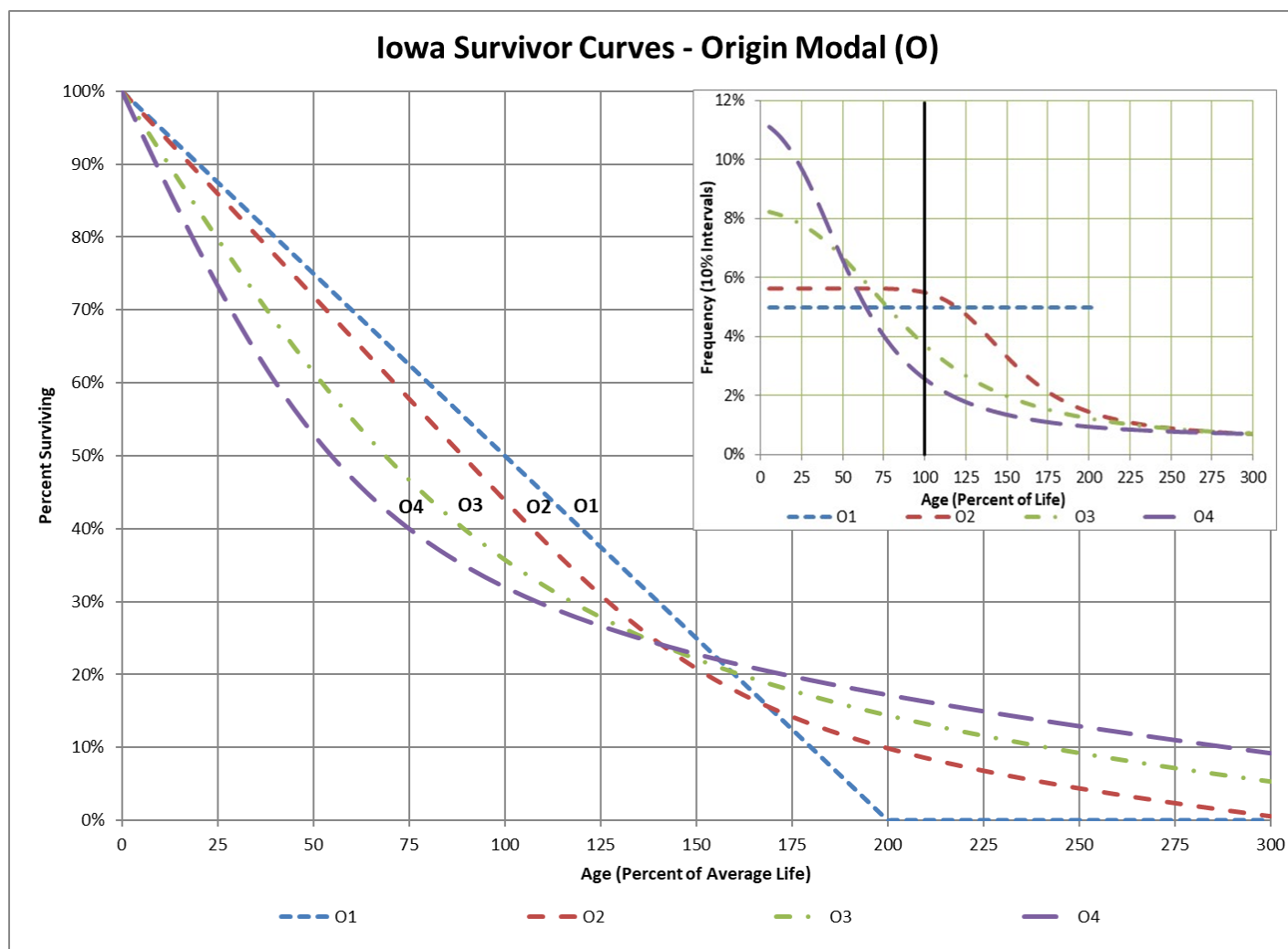
FIGURE 4: SYMMETRICAL OR "S" IOWA TYPE SURVIVOR CURVES





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FIGURE 5: ORIGIN MODAL OR "O" IOWA TYPE SURVIVOR CURVES





9.4 Retirement Rate Method of Analysis

The retirement rate method is a widely accepted actuarial method used to create survivor curves. This method is also referred to as an original life table. These survivor curves can then be used to determine the average service life of a plant account. The retirement rate method is thoroughly explained in several publications, including Statistical Analyses of Industrial Property Retirements,¹⁰ Engineering Valuation and Depreciation¹¹ and Depreciation Systems¹².

The retirement rate method is a subgroup of the placement and the experience band methods, as described in “Depreciation Systems”. The placement band method creates a survivor curve which describes the life characteristics of assets placed into service during a selected timeframe. The experience band method creates a survivor curve which describes the life characteristics of assets removed from service during a selected time frame. The retirement rate method creates both placement and experience bands to give the most complete or representative data. An example of the calculations used in the development of a life table follows. The example includes schedules of annual aged property transactions, a schedule of plant exposed to retirement, a life table and illustrations of smoothing the stub survivor curve.

9.5 Schedules of Annual Transactions in Plant Records

The property group used to illustrate the retirement rate method is observed for the experience band 2013-2022 during which there were placements during the years 2008-2022. In order to illustrate the summation of the aged data by age interval, the data was compiled in the manner presented in Schedules 1 and 2. In Schedule 1 (page 9-10), the year of installation (year placed) and the year of retirement are shown. The age interval during which a retirement occurred is determined from this information. In the example which follows, \$10,000 of the asset invested in 2008 were retired in 2013. The \$10,000 retirement occurred during the age interval between 4 ½ and 5 ½ years (2008 - 2003) on the basis that approximately one-half of the amount of property was installed prior to and after July 1 of each year. That is, on the average, property installed during a year is placed in service at the midpoint of the year for the purpose of the analysis. All retirements also are stated as occurring at the midpoint of a one-year age interval of time, except the first age interval which encompasses only one-half year.

The total retirements occurring in each age interval in a band are determined by summing the amounts for each transaction year-installation year combination for that age interval. For example, the total of \$143,000 retired for age interval 4½-5½ is the sum of the retirements entered on Schedule 1 immediately above the stair step line drawn on the table beginning with the 2013 retirements of 2008 installations and ending with the 2022 retirements of the 2017 installations. Thus, the total amount of \$143,000 for age interval 4½-5½ equals the sum of:

$$\$10 + \$12 + \$13 + \$11 + \$13 + \$13 + \$15 + \$17 + \$19 + \$20 = \$143 \text{ k}$$

¹⁰ Anson, Winfrey & Hempstead, supra note 7

¹¹ Anson, Winfrey & Hempstead, supra note 7

¹² Wolf & Fitch, supra note 2



Other transactions which affect the group are recorded in a similar manner in Schedule 2 (page 9-11). The entries illustrated include transfers and sales. The entries which are credits to the plant account are shown in parentheses. The items recorded on this schedule are not totaled with the retirements but are used in developing the exposures at the beginning of each age interval.



SCHEDULE 1. RETIREMENTS FOR EACH YEAR 2013-2020 – SUMMARIZED BY AGE INTERVAL

Experience Band 2013-2022

Placement Band 2008-2022

Retirements (Thousands of Dollars)
Annual Survivors at the Beginning of the Year

Year Placed (1)	2013 (2)	2014 (3)	2015 (4)	2016 (5)	2017 (6)	2018 (7)	2019 (8)	2020 (9)	2021 (10)	2022 (11)	Total During Age Interval (12)	Age Interval (13)
2008	10	11	12	13	14	16	23	24	25	26	26	13 ¹ / ₂ - 14 ¹ / ₂
2009	11	12	13	15	16	18	20	21	22	19	44	12 ¹ / ₂ - 13 ¹ / ₂
2010	11	12	13	14	16	17	19	21	22	18	64	11 ¹ / ₂ - 12 ¹ / ₂
2011	8	9	10	11	11	13	14	15	16	17	83	10 ¹ / ₂ - 11 ¹ / ₂
2012	9	10	11	12	13	14	16	17	19	20	93	9 ¹ / ₂ - 10 ¹ / ₂
2013	4	9	10	11	12	13	14	15	16	20	105	8 ¹ / ₂ - 9 ¹ / ₂
2014		5	11	12	13	14	15	16	18	20	113	7 ¹ / ₂ - 8 ¹ / ₂
2015			6	12	13	15	16	17	19	19	124	6 ¹ / ₂ - 7 ¹ / ₂
2016				6	13	15	16	17	19	19	131	5 ¹ / ₂ - 6 ¹ / ₂
2017					7	14	16	17	19	20	143	4 ¹ / ₂ - 5 ¹ / ₂
2018						8	18	20	22	23	146	3 ¹ / ₂ - 4 ¹ / ₂
2019							9	20	22	25	150	2 ¹ / ₂ - 3 ¹ / ₂
2020								11	23	25	151	1 ¹ / ₂ - 2 ¹ / ₂
2021									11	24	153	1 ¹ / ₂ - 1 ¹ / ₂
2022										13	80	0 - 1 ¹ / ₂
Total	53	68	86	106	128	157	196	231	273	308	1,606	



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SCHEDULE 2. OTHER TRANSACTIONS FOR EACH YEAR 2013-2020 – SUMMARIZED BY AGE INTERVAL

Experience Band 2013-2022

Placement Band 2008-2022

Acquisitions, Transfers and Sales (Thousands of Dollars)
Annual Survivors at the Beginning of the Year

Year Placed (1)	2013 (2)	2014 (3)	2015 (4)	2016 (5)	2017 (6)	2018 (7)	2019 (8)	2020 (9)	2021 (10)	2022 (11)	Total During Age Interval (12)	Age Interval (13)
2008							60 ^a				0	13 1/2 - 14 1/2
2009											0	12 1/2 - 13 1/2
2010											0	11 1/2 - 12 1/2
2011								(5) ^b			60	10 1/2 - 11 1/2
2012								6 ^a			0	9 1/2 - 10 1/2
2013											(5)	8 1/2 - 9 1/2
2014											6	7 1/2 - 8 1/2
2015											0	6 1/2 - 7 1/2
2016								(12) ^b			0	5 1/2 - 6 1/2
2017									22 ^a		0	4 1/2 - 5 1/2
2018								(19) ^b			10	3 1/2 - 4 1/2
2019											0	2 1/2 - 3 1/2
2020										(102) ^c	(121)	1 1/2 - 2 1/2
2021											0	1/2 - 1 1/2
2022											0	'0 - 1/2
Total	0	0	0	0	0	0	60	(30)	22	(102)	(50)	

a = Transfer Affecting Exposures at Beginning of Year

b = Transfer Affecting Exposures at End of Year

c = Sale With Continued Use

Parentheses denote Credit amount



9.6 Schedule of Plant Exposed to Retirement

The development of the amount of plant exposed to retirement at the beginning of each age interval is illustrated in Schedule 3 (page 9-13). The surviving plant at the beginning of each year from 2013 through 2022 is recorded by year in the portion of the table titled "Annual Survivors at the Beginning of the Year." The last amount entered in each column is the amount of new plant added to the group during the year. The amounts entered in Schedule 3 for each successive year following the beginning balance or addition, are obtained by adding or subtracting the net entries shown on Schedules 1 and 2. For the purpose of determining the plant exposed to retirement, transfers-in are considered as being exposed to retirement in this group at the beginning of the year in which they occurred, and the sales and transfers-out are considered to be removed from the plant exposed to retirement at the beginning of the following year. Thus, the amounts of plant shown at the beginning of each year are the amounts of plant from each placement year considered to be exposed to retirement at the beginning of each successive transaction year. For example, the exposures for the installation year 2018 are calculated in the following manner:

Exposures at age 0	=	amount of addition	=	\$750,000
Exposures at age ½	=	\$750,000 - \$ 8,000	=	\$742,000
Exposures at age 1½	=	\$742,000 - \$18,000	=	\$724,000
Exposures at age 2½	=	\$724,000 - \$20,000 - \$19,000	=	\$685,000
Exposures at age 3½	=	\$685,000 - \$22,000	=	\$663,000

For the entire experience band 2013-2022, the total exposures at the beginning of an age interval are obtained by summing diagonally in a manner similar to the summing of the retirements during an age interval (Schedule 1). For example, the figure of 3,789, shown as the total exposures at the beginning of age interval 4½-5½, is obtained by summing:

$$\$255 + \$268 + \$ 284 + \$311 + \$334 + \$374 + \$405 + \$448 + \$501 + \$609 = \$3,789k$$



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SCHEDULE 3 – PLANT EXPOSED TO RETIREMENT AT THE BEGINNING OF EACH YEAR, 2013-2020 – SUMMARIZED BY AGE INTERVAL

Experience Band 2013-2022

Placement Band 2008-2022

Exposures (Thousands of Dollars)
Annual Survivors at the Beginning of the Year

Year Placed (1)	2013 (2)	2014 (3)	2015 (4)	2016 (5)	2017 (6)	2018 (7)	2019 (8)	2020 (9)	2021 (10)	2022 (11)	Total at Beginning of Age Interval (12)	Age Interval (13)
2008	255	245	234	222	209	195	239	216	192	167	167	13 1/2 - 14 1/2
2009	279	268	256	243	228	212	194	174	153	131	323	12 1/2 - 13 1/2
2010	307	296	284	271	257	241	224	205	184	162	531	11 1/2 - 12 1/2
2011	338	330	321	311	300	289	276	262	242	226	823	10 1/2 - 11 1/2
2012	376	367	357	346	334	321	307	297	280	261	1,097	9 1/2 - 10 1/2
2013	420	416	407	397	386	374	361	347	332	316	1,503	8 1/2 - 9 1/2
2014		460	455	444	432	419	405	390	374	356	1,952	7 1/2 - 8 1/2
2015			510	504	492	479	464	448	431	412	2,463	6 1/2 - 7 1/2
2016				580	574	561	546	530	501	482	3,057	5 1/2 - 6 1/2
2017					660	653	639	623	628	609	3,789	4 1/2 - 5 1/2
2018						750	742	724	685	663	4,332	3 1/2 - 4 1/2
2019							850	841	821	799	4,955	2 1/2 - 3 1/2
2020								960	949	926	5,719	1 1/2 - 2 1/2
2021									1,080	1,069	6,579	1/2 - 1 1/2
2022										1,220	7,490	'0 - 1/2
Total	1,975	2,382	2,824	3,318	3,872	4,494	5,247	6,017	6,852	7,799	44,780	
<i>Additions during the year are denoted by bold red font.</i>												
	1,555	1,922	2,314	2,738	3,212	3,744	4,397	5,057	5,772	6,579	44,780	
	420	460	510	580	660	750	850	960	1,080	1,220	0	
	1,975	2,382	2,824	3,318	3,872	4,494	5,247	6,017	6,852	7,799	44,780	



9.7 Original Life Tables

The original life table, illustrated in Schedule 4 (page 9-15) is developed from the totals shown on the schedules of retirements and exposures, Schedules 1 and 3, respectively. The exposures at the beginning of the age interval are obtained from the corresponding age interval of the exposure schedule, and the retirements during the age interval are obtained from the corresponding age interval of the retirement schedule. The retirement ratio is the result of dividing the retirements during the age interval by the exposures at the beginning of the age interval. The percent surviving at the beginning of each age interval is derived from survivor ratios, each of which equals one minus the retirement ratio. The percent surviving is developed by starting with 100 percent at age zero and successively multiplying the percent surviving at the beginning of each interval by the survivor ratio, i.e., one minus the retirement ratio for that age interval. The calculations necessary to determine the percent surviving at age 5½ are as follows:

Percent surviving at age 4½	=	88.15		
Exposures at age 4½	=	\$3,789,000		
Retirements from age 4½ to 5½	=	\$143,000		
Retirement Ratio	=	$\$143,000 \div \$3,789,000$	=	0.0377
Survivor Ratio	=	$1.000 - 0.0377$	=	0.9623
Percent surviving at age 5½	=	$(88.15) \times (0.9623)$	=	84.83

The totals of the exposures and retirements (columns 2 and 3) are shown for the purpose of checking with the respective totals in Schedules 1 and 3. The ratio of the total retirements to the total exposures, other than for each age interval, is meaningless. The original survivor curve is plotted from the original life table (column 6, Schedule 4). When the curve terminates at a percent surviving greater than zero, it is called a stub survivor curve. Survivor curves developed from retirement rate studies generally are stub curves.



SCHEDULE 4: ORIGINAL LIFE TABLE - CALCULATED BY THE RETIREMENT RATE METHOD

Experience Band 2013-2022				Placement Band 2008-2022		
Age at Beginning of Interval	Exposures at Beginning of Age Interval	Retirements During Age Interval	Retirement Ratio	Survivor Ratio	% Surviving at Beginning of Age Interval	
(1)	(2)	(3)	(4)	(5)	(6)	
0	7,490	80	0.0107	0.9893	100.00	
0.5	6,579	153	0.0233	0.9767	98.93	
1.5	5,719	151	0.0264	0.9736	96.63	
2.5	4,955	150	0.0303	0.9697	94.08	
3.5	4,332	146	0.0337	0.9663	91.23	
4.5	3,789	143	0.0377	0.9623	88.16	
5.5	3,057	131	0.0429	0.9571	84.83	
6.5	2,463	124	0.0503	0.9497	81.19	
7.5	1,952	113	0.0579	0.9421	77.11	
8.5	1,503	105	0.0699	0.9301	72.64	
9.5	1,097	93	0.0848	0.9152	67.57	
10.5	823	83	0.1009	0.8991	61.84	
11.5	531	64	0.1205	0.8795	55.60	
12.5	323	44	0.1362	0.8638	48.90	
13.5	167	26	0.1557	0.8443	42.24	
					35.66	
Total	44,780	1,606				

Exposure and Retirement Amounts are in Thousands of Dollars.

Column 2 from Schedule 3, Column 12, Plant Exposed to Retirement.

Column 3 from Schedule 1, Column 12, Retirements for Each Year.

Column 4 = Column 3 divided by Column 2.

Column 5 = 1.0000 minus Column 4.

Column 6 - Column 5 multiplied by Column 6 as of the Preceding Age Interval.



9.8 Smoothing the Original Survivor Curve

The smoothing of the original survivor curve eliminates any irregularities and serves as the basis for the preliminary extrapolation to zero percent surviving of the original stub curve. Even if the original survivor curve is complete from 100 percent to zero percent, it is desirable to eliminate any irregularities, as there is still an extrapolation for the vintages which have not yet lived to the age at which the curve reaches zero percent. In this study, the smoothing of the original curve with established type curves was used to eliminate irregularities in the original curve.

The Iowa type curves are used in this study to smooth those original stub curves which are expressed as percentages surviving at ages in years. Each original survivor curve was compared to the Iowa curves using visual and mathematical matching in order to determine the better fitting smooth curves. In Figures 6, 7, and 8, the original curve developed in Schedule 4 is compared with the L, S, and R Iowa type curves which most nearly fit the original survivor curve. In Figure 6, the L1 curve with an average life between 12 and 13 years appears to be the best fit. In Figure 7, the S0 type curve with a 12-year average life appears to be the best fit and appears to be better than the L1 fitting. In Figure 8, the R1 type curve with a 12-year average life appears to be the best fit and appears to be better than either the L1 or the S0.

In Figure 9, the three fittings, 12-L1, 12-S0 and 12-R1 are drawn for comparison purposes. It is probable that the 12-R1 Iowa curve would be selected as the most representative of the plotted survivor characteristics of the group.



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FIGURE 6: ILLUSTRATION OF THE MATCHING OF AN ORIGINAL SURVIVOR CURVE WITH A L1 IOWA TYPE CURVE ORIGINAL AND SMOOTH SURVIVOR CURVES

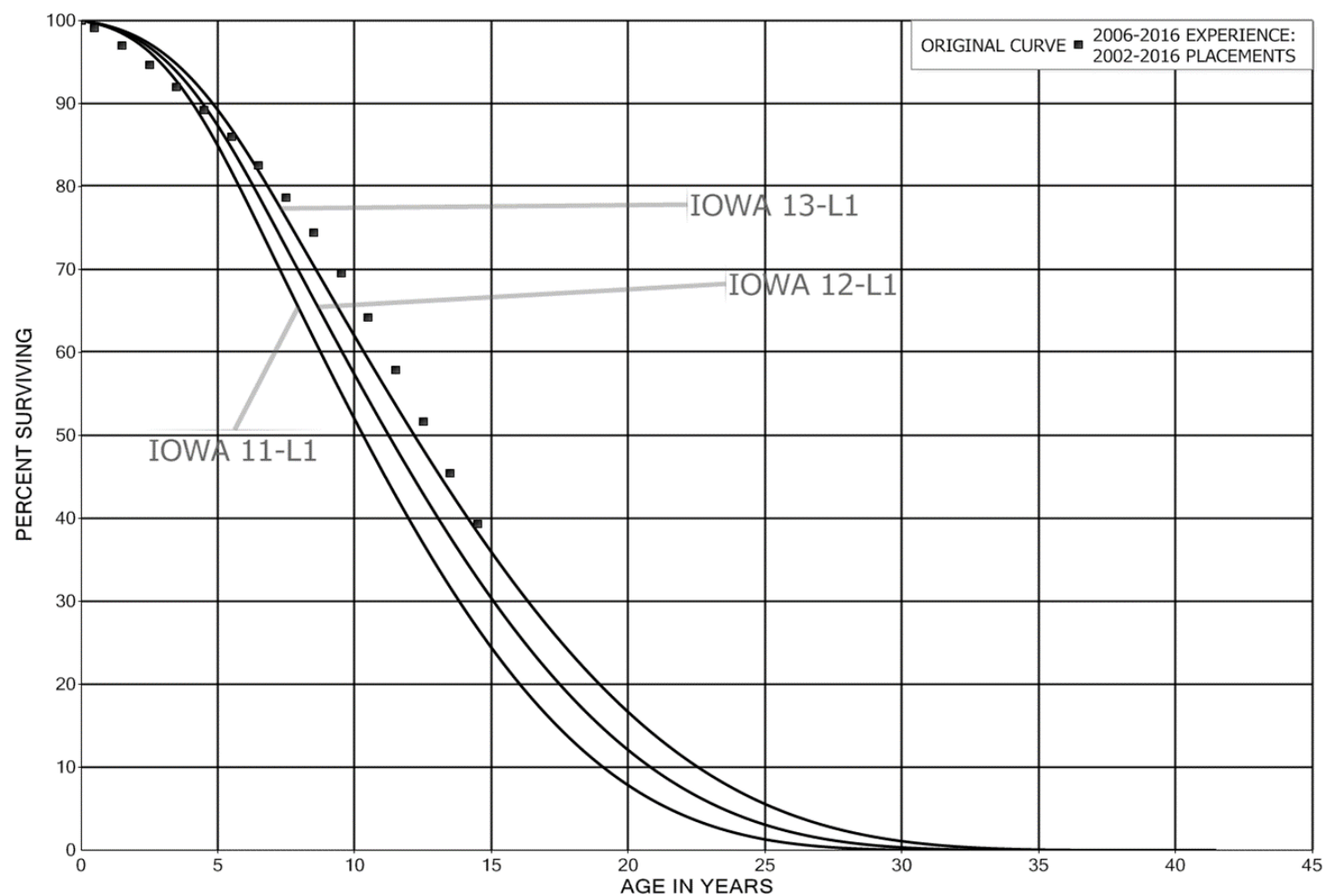




FIGURE 7: ILLUSTRATION OF THE MATCHING OF AN ORIGINAL SURVIVOR CURVE WITH A S0 IOWA TYPE CURVE ORIGINAL AND SMOOTH SURVIVOR CURVES

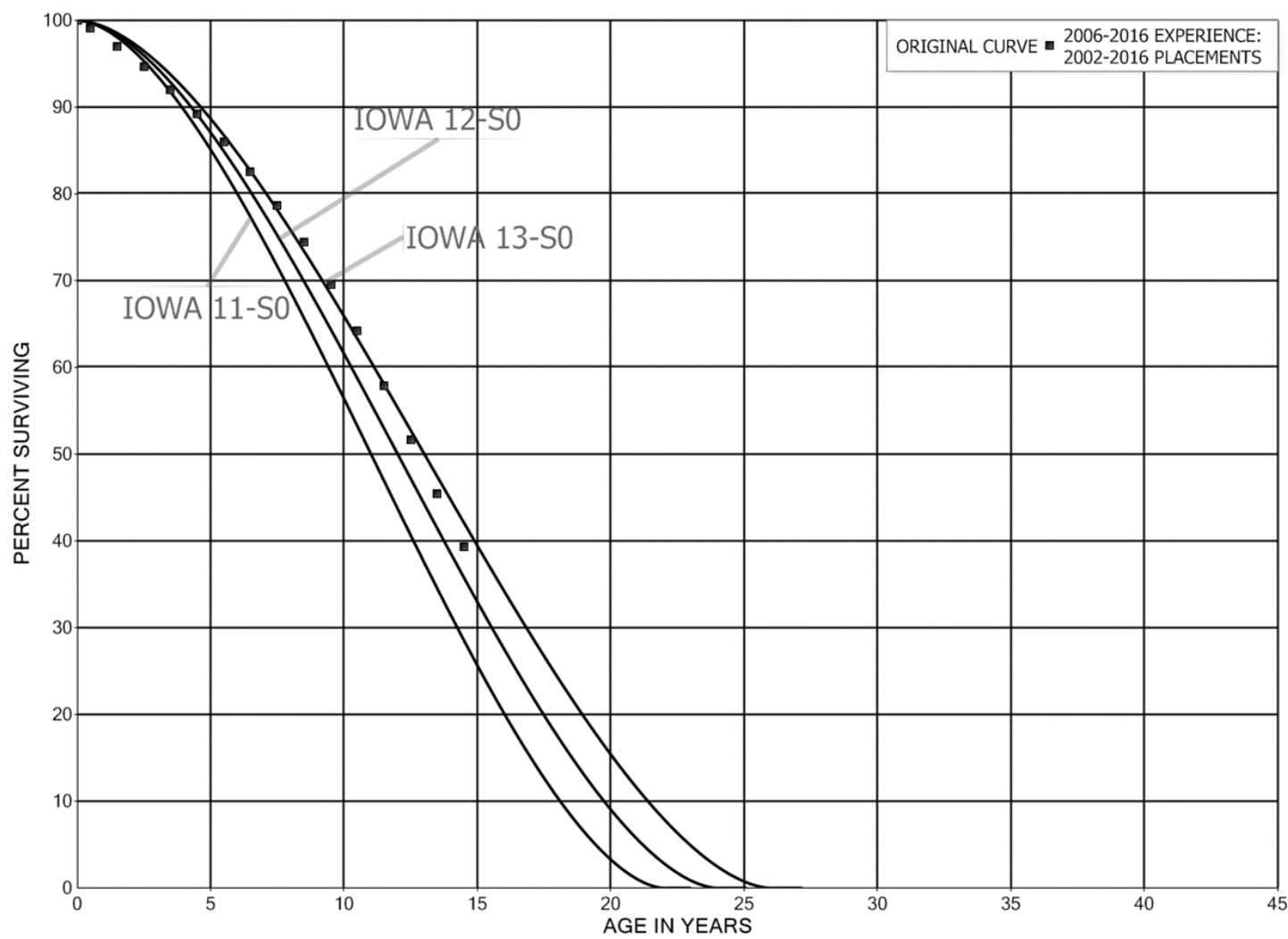
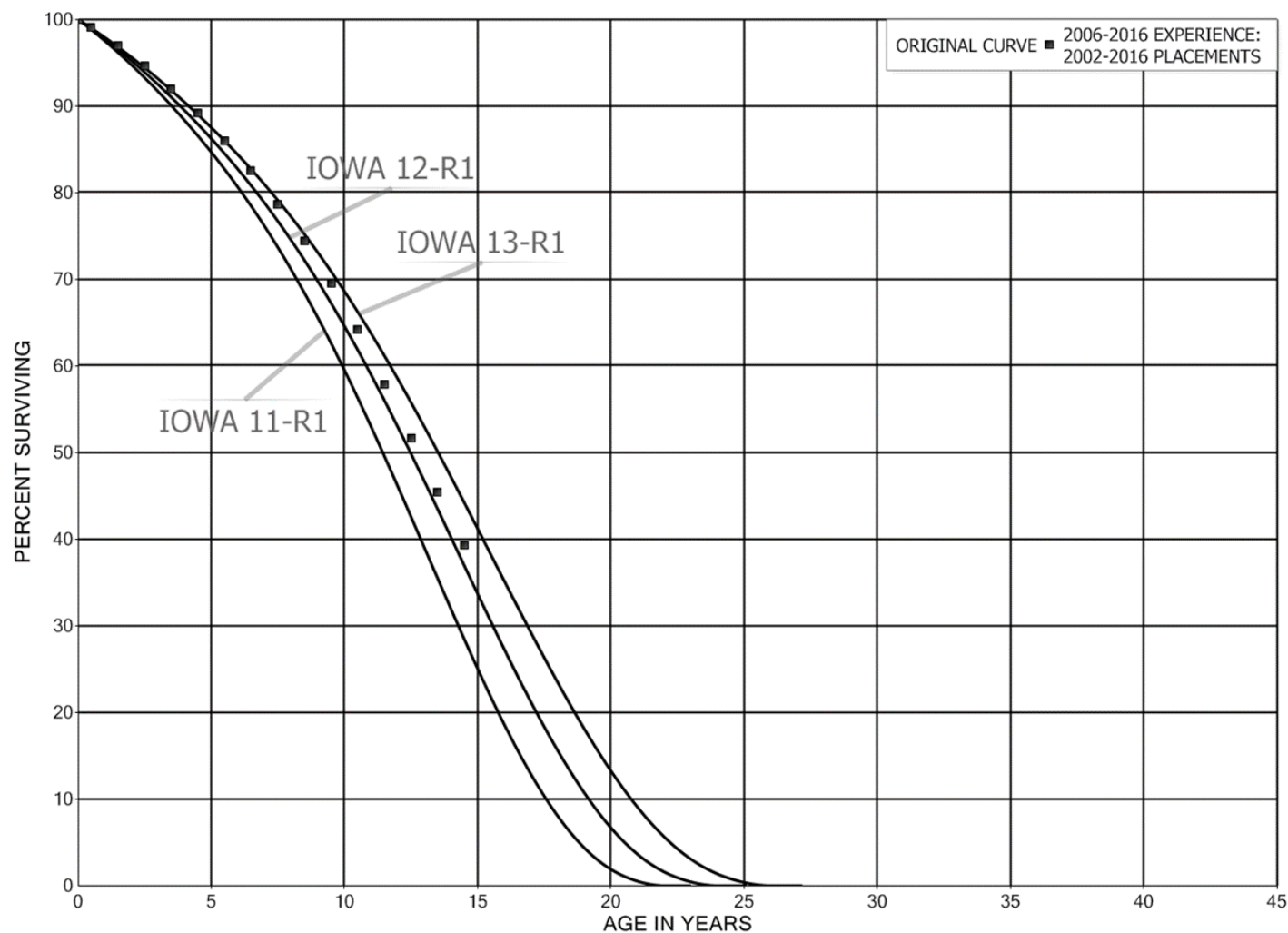




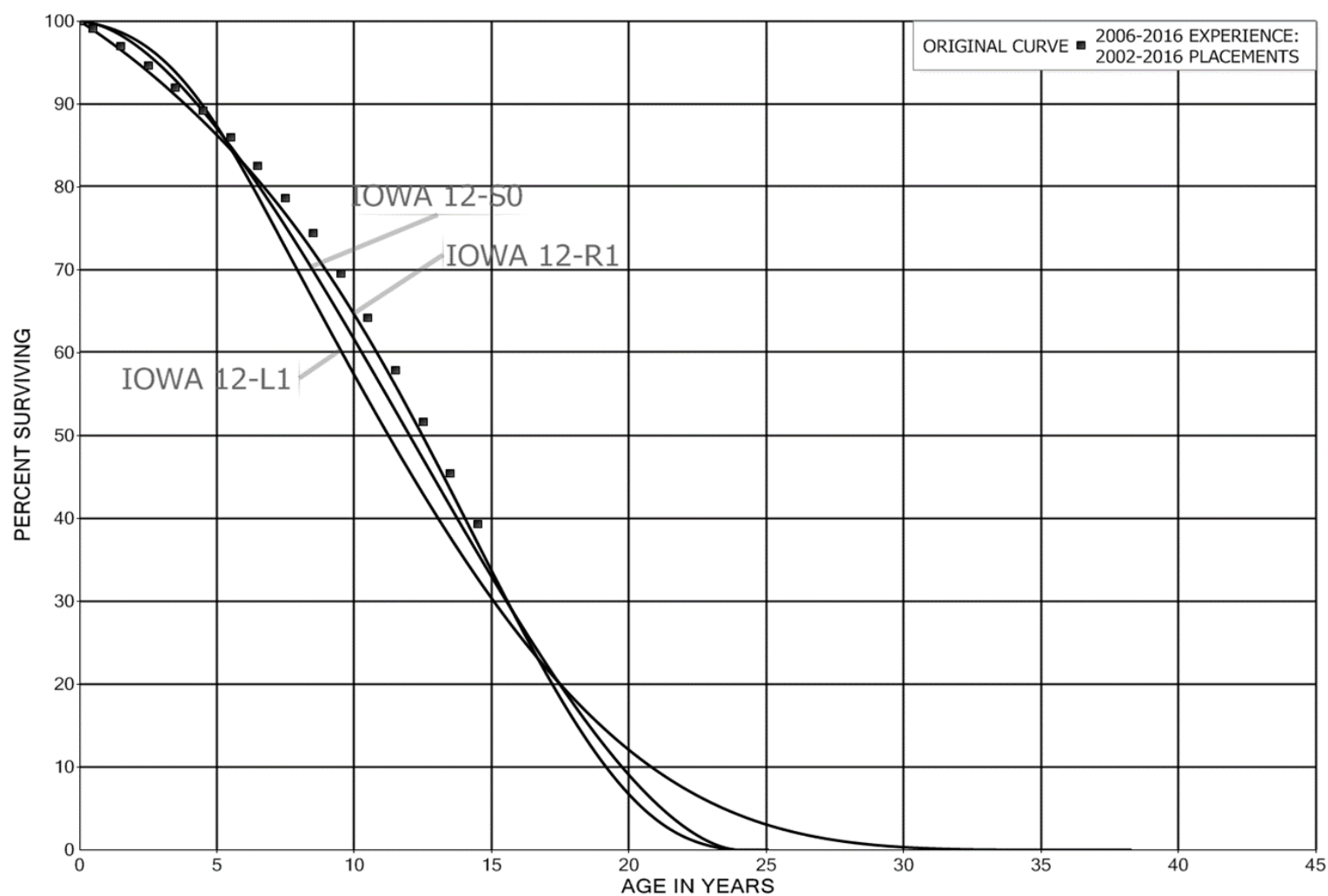
FIGURE 8: ILLUSTRATION OF THE MATCHING OF AN ORIGINAL SURVIVOR CURVE WITH A R1 IOWA TYPE CURVE ORIGINAL AND SMOOTH SURVIVOR CURVES





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FIGURE 9: ILLUSTRATION OF THE MATCHING OF AN ORIGINAL SURVIVOR CURVE WITH A L1 IOWA TYPE CURVE ORIGINAL AND SMOOTH SURVIVOR CURVES





SECTION 10

10 ESTIMATION OF NET SALVAGE

The estimates of net salvage were based primarily on the professional judgment of Concentric, based in part on historical data, and in part through a comparison to Canadian peer companies. The analysis of historic net salvage activity considered gross salvage and cost of removal as recorded to the depreciation reserve account. Net salvages as a percentage of the cost of plant retired are calculated for each plant component on annual, three-year and five-year rolling average bands.

The net salvage percentages estimated is usually determined using the “Traditional Approach” for net salvage estimation. When a utility retires plant, the plant may be: (1) sold to a third party; (2) reused by the utility for additional service; (3) abandoned in place; or (4) physically removed. In the circumstances where the plant is sold or re-used, salvage proceeds (or positive salvage amount) is normally recognized. In circumstances where the plant is abandoned in place or physically removed, a cost of removal expenditure (or negative salvage) is incurred. The net of these estimated gross salvage proceeds and the estimated costs of removal are expressed as a percentage of the account’s original cost to determine a net salvage percentage. In the circumstances where the salvage proceeds exceed the costs of retirement, a net positive salvage percentage exists. In the circumstances where the costs of removal exceed the salvage proceeds, a net negative salvage as a percentage of the original cost is the result.

The estimation of the net salvage as a percentage of original cost as developed using the traditional approach, includes the following five steps.

1. The annual retirement, gross salvage and cost of removal transactions for the period of analysis is extracted from the plant accounting systems.
2. A net salvage amount (gross salvage proceeds less cost of retirement) is calculated for each historic year. Additionally, a net salvage amount is also calculated for each historic three-year and five-year rolling band.
3. The net salvage amount determined above is compared to the original book costs retired for each period in the manner described, which results in a net salvage percentage of original costs retired for each year, in addition to three-year rolling bands and the five-year rolling band. The annual, the three-year rolling average, and the five-year rolling average net salvage percentages are analyzed to determine a reasonable estimated net salvage percentage. At this point the net salvage percentage is based purely upon statistical analysis.
4. Each account is then compared to the net salvage percentage currently approved, compared to Canadian peer companies, and discussed with company engineering staff. Based on the statistical analysis, the review of current and Canadian peer company net salvage percentages, and with the professional judgment of Concentric, a net salvage percentage is determined for each account.
5. The net salvage percentage is then used in the depreciation rate calculations in the depreciation study.

SECTION 7 – RETURN ON RATE BASE

7.1 Overview

123. There are two components of the Return on Rate Base included within this Section:

- a. Cost of Capital, which is comprised of:
 - (i) the fair Return on the Equity (ROE) used to fund rate base;
 - (ii) the cost of long-term debt used to fund rate base;
 - (iii) other capital, specifically customer deposits and no cost capital; and
 - (iv) the capital structure, or the proportion of funding of rate base from the cost of capital components, particularly the allowable equity ratio.
- b. Rate Base, which is determined utilizing:
 - (i) capital additions net of contributions and depreciation;
 - (ii) working capital including lead/lag factors; and
 - (iii) deferred charges and/or credits.

124. Naka-YK is seeking approvals for rate base of \$45.7 million with a \$3.1 million average cost of capital in 2024 and \$45.2 million with a \$3.0 million average cost of capital in 2025. As shown in Table 7.1 below, rate base has moderately increased since Naka-YK was last before the Board in the 2017 GRR. Details pertaining to the capital additions and depreciation parameters utilized to determine rate base are discussed in detail within Section 6 and Section 11 of this Application.

**Table 7.1: Return on Rate Base
(\$000)**

	2021	2022	2023	2024	2025	2017
	Actual			Test Period		Approved
Cost of Capital	3,351	3,208	3,516	3,107	3,048	3,116
Rate Base	42,535	41,812	43,964	45,704	45,252	44,917

125. While rate base has had moderate increases, the average cost of capital has declined since the 2017 GRR largely due to lower costs of long-term debt with the maturity of higher interest debt series since 2017.

126. The requested cost of capital includes a return on equity of 9.83 percent and an equity ratio of 42 percent. Naka-YK requests linking its return on equity to Alberta's 2024 Generic Cost of Capital (GCOC) for the test years 2024-2025, plus a premium for incremental risk in the amount of 55 basis points or 0.55 percent. This approach would result in an outcome similar to the 2011-2013 Negotiated Settlement in which an ROE of 9.30 percent was established as demonstrated in Table 7.2 below.

Table 7.2: Return on Equity & Equity Ratio Premiums

	2011-2013 GRA		2024-2025 GRA	
	ROE	Equity %	ROE	Equity
Approved/Applied	9.30%	43.5%	9.83%	42%
Alberta GCOC (ATCO Electric Distribution for 2011)	8.75% (2011)	39% (2011)	9.28% (2024)	37% (2024)
Premium	0.55%	4.5%	0.55%	5.0%

127. Naka-YK's requested equity ratio of 42 percent represents a five percent adder to Alberta's approved equity ratio. The requested ROE and equity ratio reflect recent market conditions and common utility risks through Alberta's 2024 Generic Cost of Capital (GCOC) benchmark. The adders of 55 basis points and five percent, respectively, compensate Naka-YK for its incremental risk.

7.2 Cost of Capital – Equity Component

7.2.1 Return on Equity & Common Equity Ratio: Background

128. Under Section 50 of the *Public Utilities Act (PUA)*, the Board is required to fix a fair return on the rate base of a public utility. The fair return standard, as established by the Supreme Court of Canada, is defined as follows:

By a fair return is meant that the company will be allowed as large a return on the capital invested in its enterprise (which will be net to the company) as it would receive if it were investing the same amount in other securities possessing an attractiveness, stability and certainty equal to that of the company's enterprise...

The duty of the Board was to fix fair and reasonable rates; rates which, under the circumstances, would be fair to the consumer on the one hand, and which, on the other hand, would secure to the company a fair return for the capital invested.¹

129. Prior to this Application, Naka-YK's most recent Cost of Capital amount was determined by way of a negotiated settlement per its 2011-2013 GRA. In Decision 13-2011,² the Board approved a Return on Equity (ROE) of 9.3 percent for each of the 2011-2013 Test Years. Similarly, the common equity ratio was set at 43.5 percent for each of the 2011-2013 Test Years.

130. Naka-YK's 2017 GRR was a limited scope review and not a full rate Application. Naka-YK did not request approval for any changes from the ROE and common equity ratios approved per Decision 13-2011. The Board approved the continuation of the previously approved 9.3 percent ROE and 43.5 percent common equity ratio in Decision 17-2017.

131. Naka-YK is a relatively small sized utility, having smaller service territory, lower rate base and fewer customers than many investor-owned utilities in Canada. In addition, with the entire service territory in Yellowknife, Naka-YK operates in a relatively isolated northern service territory compared to many organizations. This jurisdiction has also advanced government policies and initiatives in service of decarbonization and the ongoing Energy Transition to meet Federal and Territorial Net-Zero targets. This transition impacts the behaviors of customers and increases complexity of the distribution system increasing the risk of variability in returns. These factors were all considered when assessing the proposed premium over Alberta's GCOC.

132. Generally, because of the materiality of cost and revenue variances and the higher tendency for variability in returns, smaller companies have higher inherent business risk and require higher returns. This variability is further affected by evolving government

¹ *Northwestern Utilities Ltd. v. Edmonton (City)*, [1929] SCR 186 at 192-93, [1929] 2 DLR 4 *TransCanada Pipelines Ltd. (Re)*, 2013 LNCNEB 2, at para. 565.

² Decision 13-2011, dated August 26, 2011.

policy, the isolated jurisdiction and the costs associated. For 2024-2025, Naka-YK is requesting a return on equity of 9.83 percent and a common equity ratio of 42 percent.

7.2.2 Return on Equity & Common Equity Ratio: AUC-Approved 2024 GCOC

133. Naka-YK submits that the latest AUC approval for cost of capital is a reasonable starting point for determining Naka-YK's ROE and Common Equity. The AUC determined the 2024 Generic Cost of Capital in Decision 28585-D01-2023 and approved a ROE of 9.28 percent and Common Equity of 37 percent³ in Alberta.⁴

134. Alberta's GCOC process takes into consideration the macroeconomic and market conditions under which utilities in Alberta operate, and includes an assessment of utility business risk. The 2024 GCOC proceeding in Alberta was a fully litigated process and included the participation of, and expert witness testimony submitted on behalf of, all of the Alberta utilities and several customer advocacy groups. The requested approach of utilizing a benchmark ROE is not uncommon for smaller utilities; regulators in British Columbia, the Yukon and this Board, in the case of Naka-NWT, use benchmark returns on equity for establishing fair returns for smaller utilities in their jurisdictions.

7.2.3 Return on Equity: Risk Premium

135. Naka-YK has higher risk compared to utilities in Alberta, particularly the Alberta electric distribution utilities,⁵ due to its smaller size and the economic characteristics of its service area. Since Naka-YK's previous cost of capital was established, the risks associated with its small size and northern jurisdiction have increased with the advancement of policies and initiatives such as GNWT's "2030 Energy Strategy: A Path to More Affordable, Secure and Sustainable Energy in the Northwest Territories"⁶ and the

³ With the exception of Apex Utilities, a natural gas distribution company in Alberta with an approved equity ratio of 39 percent. The AUC accepts that Apex's small size, service territory and operations create additional risk and awarded an equity ratio 2 percent above the generic 37 percent. Decision 27084-D02-2023, para. 275-282.

⁴ Decision 28585-D01-2023, paras. 1 and 5.

⁵ Electric distribution utilities in Alberta are ATCO Electric Distribution, Fortis Alberta, ENMAX Power and EPCOR Distribution and Transmission Inc.

⁶ <https://www.inf.gov.nt.ca/en/services/energy/2030-energy-strategy>

Government of Canadian Net - Zero Emissions Accountability Act and climate plan.⁷ Energy Transformation policies and initiatives aimed at advancing decarbonization efforts and impacting customer behaviors, in the Northwest Territories (NWT), increase variability and impose higher risk for Naka-YK, the implications of which are more impactful due to Naka-YK's small size. As will be detailed throughout this Section, Naka-YK is requesting a ROE risk premium of 55 basis points to compensate for these additional risks.

7.2.3.1 Market Demand Risk

136. Market demand risks relate to the volatility of sales and their impact on the fair return. Naka-YK is more susceptible to many variables, including weather (particularly given the range of temperatures in northern Canada), seasonal volatility of business activity, concentration of sales among fewer customers, the economic health of the community at large, as well as adoption of new technologies and decarbonization.

137. Economic trends suggest that the NWT economic growth is further behind other jurisdictions in Canada, indicating additional market demand risk for a NWT utility, as outlined in Table 7.3.

Table 7.3: Northwest Territories Economic Growth Trends & Provincial Rank⁸

	GDP	Population	Non-Residential Construction
2019-2024 Growth Rate	0.0%	0.1%	11.1%
Provincial/Territorial Rank (out of 13)	12 th	13 th	12 th

138. While the Alberta benchmark considered low economic growth in Canada,⁹ it is appropriate to compensate Naka-YK for incremental risk associated with the NWT's economic performance and outlook.

⁷ <https://www.canada.ca/en/services/environment/weather/climatechange/climate-plan/climate-plan-overview/emissions-reduction-2030.html>.

⁸ IBIS World Industry Reports, Northwest Territories Economic Overview, <https://www.ibisworld.com/canada/economic-profiles/northwest-territories>.

⁹ Decision 27084-D02-2023 Determination of the Cost-of-Capital Parameters in 2024 and Beyond, para. 42.

139. Compounding Naka-YK's risk is the fact that it serves a relatively small market with considerably less economic strength and diversity than the service areas of other utilities. Naka-YK does not have any industrial customers, and its residential and commercial sales are primarily affected by the general economic activity within the communities served. The loss of revenue from a few customers has a greater effect on Naka-YK than it does on a larger utility with a larger, more diverse customer base.

7.2.3.2 Energy Transition

140. Since the last cost of capital review for Naka-YK, utilities across North America have experienced various degrees of transformational change based on laws and government policies focused on decarbonization, sustainability, the need for grid modernization, and general changes to the way in which customers receive utility service (e.g., self-supply). These changes generally increase risk and uncertainty for utilities, and more significantly affect Naka-YK because of its small customer base over which costs can be shared.

141. In the NWT, the Government's 2030 Energy Strategy outlines its plan for the development of secure, affordable, and sustainable energy in the NWT for transportation, heat and electricity. This plan includes support for energy efficiency and conservation programs, local renewable and alternative energy solutions, and large-scale energy projects. One of the guiding principles of the GNWT's 2030 Energy Strategy is the transition to a lower carbon economy by reducing GHG emissions, increasing the use of renewable and alternative energy and improving energy efficiency within its own operations. Programs such as the EV network and Net Metering have potential to influence customer behaviors, which in turn have an impact on the distribution system.

142. In Decision 27084-D02-2023, the AUC determined that no adjustment to the common equity ratio for the Alberta Utilities was warranted at this time as the impact on the Alberta Utilities' business risk due to decarbonization is unclear.¹⁰ The NWT, comparatively has a clear path to decarbonization in the GNWT's 2030 Energy Strategy.

¹⁰ AUC Decision 27084-D02-2023, para. 266.

For utilities operating in the NWT, the Energy Transition clearly represents a fundamental change that has a pervasive impact on the utility business as a result of GNWT policies relating to climate change, decarbonization and electrification. These impacts include changing customer behaviors which impact sales volumes and system load as well as implications for system capacity and capital investments required to ensure safe and reliable services. As such, a risk premium to the GCOC awarded by the AUC is warranted for Naka-YK especially given the 2030 timeline in GNWT compared to Alberta's Emission's Reduction and Energy Development Plan¹¹ targeting the 2050 timeframe.

7.2.3.3 *Operating Cost Risk*

143. Operating cost risks essentially comprise the potential for the actual ROE to fall short of the approved ROE due to under-estimation of capital expenditures, financing costs, and O&M expenses. The remote jurisdiction served by Naka-YK can result in higher than anticipated repair costs for unplanned maintenance of distribution facilities.

144. In addition, due to the severe weather conditions that can occur in northern Canada, repair costs can deviate substantially from those forecast in operating budgets which are based on normal weather conditions. Extreme weather trends increase the uncertainty and variability of the conditions Naka-YK operates in, thereby increasing its associated risks. These factors, as well as the implications of the energy transition discussed above, have potential to impact necessary capital expenditures to ensure safe, reliable power and create variability in sales volumes. All of which impose variability to Naka-YK's costs and revenues, and which significantly impact Naka-YK's returns due to its relatively small size.

145. Given the foregoing, Naka-YK submits that its request for a 55 basis point equity risk premium is reasonable and appropriate.

¹¹ <https://open.alberta.ca/dataset/7483e660-cd1a-4ded-a09d-82112c2fc6e7/resource/75eec73f-8ba9-40cc-b7f4-cdf335a1bd30/download/epa-emissions-reduction-and-energy-development-plan.pdf>.

7.2.4 Common Equity Ratio

146. Naka-YK requests an equity ratio of 42 percent. With consideration to the reduction of administrative and regulatory burden, Naka-YK proposes aligning the approved equity ratio of Naka-YK with the same methodology as recently approved for Naka-NWT;¹² therefore requesting a common equity ratio five percent above the Alberta benchmark of 37 percent. In Decisions 9-2014 and 2-2024 the Board approved using a 5 percent adder to the Alberta GCOC for Naka-NWT. This is a reduction to Naka-YKs previously approved common equity ratio which aligns with the trend realized in Alberta since 2011.

7.2.5 Return on Equity & Equity Ratio: Assessment of Comparators.¹³

147. Another factor that must be contemplated as part of affording Naka-YK the opportunity to earn a fair return is Naka-YK's ROE in comparison to those awarded to comparable utilities in other jurisdictions.

148. Naka-YK has compiled Table 7-4 below, which contains information about investor-owned utilities, with similar characteristics including their approved ROEs and common equity ratios. Naka-YK notes its unique circumstances and characteristics constrains the availability of direct comparators, however the entities selected in the table below have some similar qualities to draw comparisons against. The table also includes an Alberta and a British Columbia comparator as the Canadian North comparator utilities (ATCO Electric Yukon and Naka Power Utilities (NWT)) use those jurisdictions as their benchmark.

¹² Decision 2024-02.

¹³ In 2011 ATCO Electric Distribution has an approved common equity ratio of 39 percent compared to 2024 GCOC of 37 percent.

Table 7.4: Information on Comparator Utilities

Utility	Equity Ratio	ROE	Customer Count	Total Sales	Rate Base	Decision Reference
Naka Power Utilities (YK) 2024 Applied	42%	9.83%	9,088 (2024F)	152 GWH (2024F)	\$45.7M (2024F)	TBD
Naka Power Utilities (NWT)	42%	8.85%	2,618 (2023 actual)	30 GWH (2023 actual)	\$14.4M (2023 actual)	16-2024
ATCO Electric Yukon	40%	9.50%	20,872 (2023 actual)	363 GWh (2023 actual)	\$126.8M (2023 actual)	2024-01
FortisBC Inc. (FBC)	41%	9.65%	150,563 (2022 actual)	3,306 GWh (2022 actual)	\$1.58B (2022 actual)	G-236-23
ATCO Electric Distribution	37%	9.28%	231,319	11,435 GWh	\$3.596B	D27084-D02-2023
Maritime Electric	40%	9.35%	89,600 (2025F)	1,326 GWh (2021 actual)	\$471M (2025F)	UE23-04
Alaska Electric Light & Power Co (AEL&P)	58.18%	11.45%	17,000 (2021F)	404 GWh (2021F)	\$115M (2021F)	U-22-078 Order 14

149. The most significant varying factor compared to each of the comparators is size. In this regard, Naka-YK has higher risk, indicating a higher return on its common equity than nearly all comparators is appropriate. ATCO Electric Distribution and FBC are significantly larger than Naka-YK in all respects and, as such, have lower deemed risk. Maritime Electric is an investor-owned utility that similarly purchases power from government owned generation. Maritime Electric's jurisdiction similarly is exposed to extreme weather conditions, and logistical challenges; however, these risks are mitigated to a greater degree than they are for Naka-YK, as Maritime Electric's customer base is nearly ten times larger.

150. AEL&P also has many similar characteristics being a small sized, northern utility. Differing factors contributing to its approved return on equity would be a US location, where typically returns are higher, as well as a volatile and market sensitive customer base (cruise line tourism) in addition to generation risk. These factors indicate it is reasonable for Naka-YK to have a lower return than AEL&P.

151. Naka-NWT and AEY are strong comparators as the only other Canadian, investor-owned utilities in the North. AEY is larger than Naka-YK; however, AET also has generation risk. Overall, a comparable or slightly higher ROE is appropriate for Naka-YK.

The comparators indicate that the ROE for Naka-NWT is an outlier for assessing Naka-YK's ROE, considering it is the smallest sized utility. Naka-NWT has not been used as a basis for comparison.

152. Given the range of approved ROEs shown in the table above, Naka-YK submits that the proposed overall return of 9.83 percent is appropriate and reasonable.

7.3 Cost of Capital – Long Term Debt

153. Naka-YK is forecasting to issue long-term debt in 2024. All long-term debt issuances are planned to be issued to CU Inc. and will mirror the specific terms and conditions of public financing completed by CU Inc. These debenture issues forecast in Table 7.5 have a 30-year term to maturity. The coupon rates were determined based on discussions with ATCO's Treasury Department. The credit spread of 1.55 percent is based on the long-term debt issued by CU Inc. from 2011 through 2023.

Table 7.5: Debt Forecast

	2024
Long Canada Bond Rate	3.20%-3.80%
Credit Spread	1.55%
Recommended Rate	4.71%
Issue Costs	0.05%
Recommended All-In Rate	4.76%

7.4 Cost of Capital – Customer Deposits

154. The customer deposits, or security deposits, included in this Application relate to deposits paid by customers to Naka-YK if they have been unable to establish a satisfactory credit rating, have been disconnected or restricted by a current-limiting device or have not paid all past due charges. The balances of customer deposits, included in Table 7.6, are as shown below:

**Table 7.6: Customer Deposits
(\$000)**

	2021	2022	2023	2024	2025	2017
	Actual			Test Period		Approved
Customer Deposits	651	688	714	736	744	564

7.5 Rate Base

7.5.1 Capital Additions

**Table 7.7: Rate Base
(\$000)**

	2021	2022	2023	2024	2025	2017
	Actual			Test Period		Approved
Capital Expenditures	2,877	3,505	4,955	3,210	3,700	3,675
Capital Additions to Rate Base	2,319	1,643	6,767	3,444	4,011	3,775

155. These additions are primarily driven by a requirement to upgrade, enhance, and replace components on the distribution and streetlight systems, meters and computer systems as well as general property and equipment that have reached the end of their life cycle. Capital Additions are discussed in further detail in Section 11 of the Application.

7.5.2 Contributions

156. Contributions in aid of construction are received from customers in accordance with the company's investment policy in its Terms and Conditions. The contributions, outlined in Schedule 11.5, are as shown below:

**Table 7.8: Contributions
(\$000)**

	2021	2022	2023	2024	2025	2017
	Actual			Test Period		Approved
Contributions in Aid of Construction (per year)	247	809	520	1,017	1,247	623

157. Naka-YK's forecast process involves a review of projects included in the Capital Additions outlined in Section 11 to identify those projects which will require a customer contribution.

7.5.3 Deferred Charges and Credits

158. The mid-year deferred charges and credit amounts, included in rate base and outlined in Schedule 11.7, are as shown below:

**Table 7.9: Deferred Charges and Credits
(\$000)**

	2021	2022	2023	2024	2025	2017
	Actual			Test Period		Approved
Mid-Year Balance	690	883	1,330	1,678	1,761	(146)

7.5.3.1 Rate Case Reserve

159. Naka-YK has continued using a reserve account to flow through rate case costs to customers for GRAs filings. The annual rate case write off has remained unchanged, at \$418,000 annually, from that approved in the 2017 GRR through to 2023. For 2024 and 2025, a placeholder cost in the amount of \$200,000 assuming a Negotiated Settlement has been forecast in addition to the costs over-refunded to customers since 2017. As the rate case reserve account has accumulated a significant balance since the 2017 GRR, Naka-YK is proposing, in an effort to mitigate significant increases to customer rates that this balance be recovered over five years.

7.5.3.2 Reserve for Injuries and Damages

160. The Reserve for Injuries and Damages (RID or Reserve) is used for uninsured and uninsurable losses and the deductible portion of insurance claims. Maintaining the Reserve mitigates rate fluctuations by smoothing out the charges to O&M with respect to these types of losses. The establishment of the Reserve provides financial advantages compared to paying significantly higher insurance premiums to reduce deductibles or to insure items which carry prohibitively high premiums.

161. In contrast to the rate case costs, Naka-YK's RID Reserve account has been in a collection position for a number of years and customers are owed the accumulated balances. The accumulated balances net of the applied for Wildfire RID claim discussed later in this section is proposed to be refunded 75 percent in 2024 and the remaining 25 percent in 2025. Tapering the refund mitigates future collections for over accumulated refunded balances.

162. The 2023 actuals for Naka-YK include amounts related to the wildfires and evacuation of Yellowknife residents that took place in August 2023. Incremental costs

related to the response efforts were incurred that were not included in Naka-YK's applied-for/approved revenue requirement and have been included in the RID. These costs include overtime costs of Naka-YK personnel, as well as labour, travel, and accommodation costs of external resources and additional supplies brought in to respond to the wildfires.

163. In addition to incremental O&M costs, Naka-YK experienced lower net revenues (revenue, net of purchase power or lost margin) in 2023 due to the lower energy consumption experienced during the GNWT mandated evacuation orders. Please refer to Section 7.3 Attachment 1 and Section 7.3 Attachment 2 for details regarding the lower net revenue amount calculations, as well as the incremental O&M costs.

7.6 Working Capital

164. Working capital is a component of the company's total rate base as, generally, the payment of expense occurs in advance of the receipt of revenues.

165. The components of working capital are:

- Purchase Power;
- Operating Expenses;
- Income Tax;
- Goods and Services Tax;
- Depreciation Expense;
- Interest Expense;
- Common Equity (retained earnings component);
- Common Equity (dividend component); and
- Materials and Supplies Inventory (based on the estimated inventory balance).

166. The nature of the revenues and expenses, and the payment terms from the previous lead/lag study, have not changed materially since the 2011-2013 GRA.

167. The working capital, included in rate base, is outlined in Schedule 11.9, with the details on the components, incorporating working capital, disclosed on Schedule 11.9, as follows:

**Table 7.10: Working Capital
(\$000)**

	2021	2022	2023	2024	2025	2017
	Actual			Test Period		Approved
Working Capital	1,031	1,064	1,764	1,145	1,241	894

7.6.1 Lead Lag Allowances

168. Naka-YK has updated the results of its previous Lead Lag Study for material changes since the study to support the working capital allowance calculation in this Application. Please refer to Section 7.5 Attachment 1 for the comprehensive review of Naka-YK's working capital lead/lag allowances.

**Naka Power Utilities (Yellowknife) (Naka-YK)
Reserve for Injuries and Damages (RID) Claim Summary
Yellowknife, NT
("ZF015-23 Fire" or the "Fire")**

Date of Incident

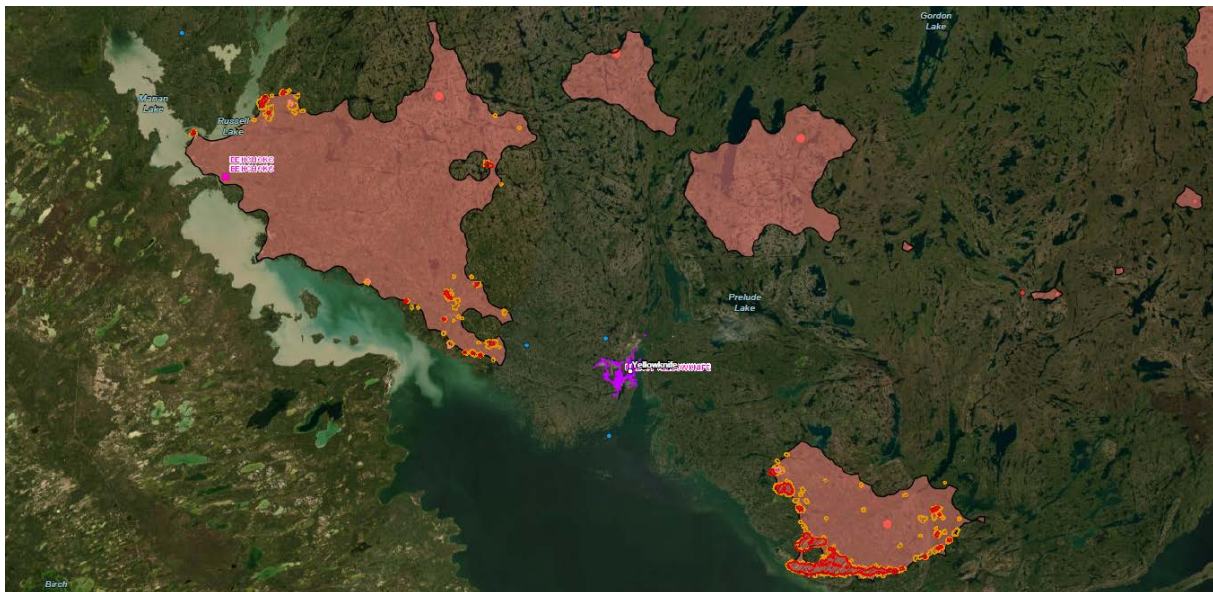
August 2023

Incident Description

1. The ZF015-23 Fire originated northwest of Yellowknife and progressed within 15 kilometers of the City of Yellowknife (City) by August 15, 2023. The progression of this fire which had already affected the community of Behchoko earlier in the summer along with three other fires, ZF085, ZF011, and ZF012, which were north, northeast, and southeast of the City, respectively. This resulted in a state of local emergency being declared by the City on August 15, 2023.
 2. The following evening on August 16, 2023, unfavourable weather conditions lead to increased fire behavior and a greater risk to the City resulting in an evacuation alert being issued by the City. By the morning of August 17, 2023, the evacuation alert had been escalated to an evacuation order by the City. Residents were asked to evacuate Yellowknife by 12:00 pm on August 18, 2023. All but eight of Naka Power Utilities (Yellowknife)'s (Naka-YK) 20 employees safely evacuated the City by the evacuation order deadline.
 3. As a critical service provider, Naka-YK remained in the community to continue to provide essential electricity services. The evacuation order remained in place until September 6, 2023, with Naka-YK retaining essential employees in the City throughout. Due to the duration of the event, support was provided by ATCO Electric to relieve the Incident Management Team (IMT) to ensure the health of Naka-YK employees as well as to ensure fatigue did not affect leadership decision making during the event.
-

4. Ultimately, the Fire was held at approximately 15 km from Yellowknife, and due to significant firefighting efforts, no damage was sustained to Naka-YK's assets. Naka-YK's maintained electricity services to all customers in Yellowknife without interruption as well as installed fire protection on main lines on the west side of the City where the fire threat was greatest. In an effort to support customers during this challenging time, Naka-YK's suspended billing to all Yellowknife customers. Naka-YK resumed energy billing in October allowing residents time to return.

Figure 1: Left to right - ZF015, ZF085, ZF011, ZF012



RID Costs:

5. Naka-YK recorded lost revenue, as well as incremental operations and maintenance costs, as a result of the fire. The estimated RID costs related to the Fire are outlined in Table 1 below. A total of \$333,767 has been booked in the RID account for 2023. A further breakdown of these costs can be found in Section 7.1, Attachment 2.

**Table 1: Reserve for Injuries and Damages (RID)
(\$000)**

Description	Total
Lost Revenue Net of Supply	\$160.3
Operations and Maintenance	\$173.4
Total	\$333.8

6. Lost Revenues, Net of Supply represents Naka-YK's lower revenue collected in 2023, net of supply (i.e., offset by reduced purchase power and fuel costs). These lower net revenue amounts are mainly due to lower energy consumption due to the GNWT mandated evacuation orders. Please refer to Section 7.1, Attachment 2 for a summary of the lower energy consumption and associated lost revenues net of supply.

7. As Naka-YK's approved revenue requirement recovery has been negatively impacted by the wildfires and the GNWT mandated evacuation orders, the inclusion of these losses (difference between expected revenue and actual revenue received) in the RID enables Naka-YK to recover its prudently incurred costs for safely providing continuous utility services.

8. Lost Operations and Maintenance (O&M) costs are the incremental costs not included in Naka-YK's approved revenue requirement related to the response efforts during the events. This includes overtime/standby costs of Naka-YK personnel as well as the labour, travel and accommodation costs of external resources and additional supplies brought in to respond to the Fire.

Naka Power Utilities (Yellowknife) (Naka-YK)
2024-2025 General Rate Application (GRA)
Proceeding ID 2024-013

2023 Wildfire RID Claim - Forecast Breakdown
(\$000)

Line No.	Description	2023
1	Lost Revenue Net of Supply	
2		
3	Revenue Loss	835.4
4	Purchase Power Savings	(675.1)
5		
6	Total Lost Revenue Net of Supply	160.3
7		
8	Operations and Maintenance	
9	ATCO Electric Labour	24.2
10	Naka-YK Labour - Overtime	27.3
11	Travel, Accommodations & Other	122.0
12		
13	Total Operations and Maintenance	173.5
14		
15		
16	Total Reserve for Injuries and Damages	333.8

Naka Power Utilities (Yellowknife) (Naka-YK)
2024-2025 General Rate Application (GRA)
Proceeding ID 2024-013

Lost Revenue Net of Supply
(\$000)

Line No.	Description	2023
1	Residential	
2	Sales in MWh	1,123.9
3	Revenue	362.1
4		
5	Commercial	
6	Sales in MWh	1,642.6
7	Revenue	473.3
8		
9	Street & Space lights	
10	Sales in MWh	-
11	Revenue	-
12		
13	Total Company	
14	Sales in MWh	2,766.5
15	Revenue	835.4
16		
17	Less	
18	Cost of Supply	(675.1)
19		
20	Lost Revenue Net of Supply	160.3

Naka Power Utilities (Yellowknife) (Naka-YK) Lead Lag Study

SECTION 1 – LEAD LAG STUDY

1. This lead lag study has been undertaken by Naka-YK, to support the working capital allowance calculation in the 2024-2025 GRA. The methods used in the study are consistent with the methods approved by the Board in Decision 13-2011, respecting the last comprehensive study completed for Naka-YK's 2011-2013 GRA, unless otherwise described below.

Table 1.1: Net O&M Lead Days

	Days
Average Lag in revenue collection	44.93
Less: average lag in payment of operating expenses	(42.30)
Net O&M Lead Days	2.63

2. To arrive at the net O&M lag days, a study was conducted respecting the receipt of revenues and operating expenses. For this analysis, an average of three-years (2021-2023) was used for revenue and 2023 actuals were used for O&M expenses. As there were no significant changes to the receipt of the revenue process, there was a slight increase from 40.20 days to 44.93 days.

3. A study was done for the average lag in payment of operating expenses. As a result of the study, there was an increase in the average lag in payment of operating expenses from 38.96 days to 42.30 days. This increase of 3.33 days (8.5 percent) is mainly the result of payroll remittances changing from bi-monthly to bi-weekly payroll remittances.

SECTION 2 – REVENUE LAG

4. The lag days for the collection of revenue are measured from the consumption of power to receipt of cash while expenses are measured from the provision of service or receipt of operating materials and supplies to the date payments are made.

SECTION 3 – OPERATION & MAINTENANCE EXPENSES

5. For all categories, the average total lag days has been calculated as follows:

$$\begin{aligned} \text{Total Average Expense Lag Day} = & \text{Consumption Lag} \\ & \text{Plus Processing Lag} \\ & \text{Plus Payment Lag} \end{aligned}$$

6. Consumption lag is the number of days between the date the goods were received, or the service was performed, and the invoice date.

7. Processing lag is the number of days between the payment date of the invoice was issued and the date the cheque cleared the bank.

8. The average total lag days are determined by the major categories of expenses outlined in the following table.

Table 3.1: Lead/Lag Operation & Maintenance Expenses

Operations & Maintenance	Operating Expenses	(Lead)/Lag Days	Weighted Revenue
Salaries and wages	2,102,316	44.62	93,802,152
Purchased Power	38,536,929	38.24	1,473,833,499
Property Taxes	91,461	(34.86)	(3,188,346)
Franchise Taxes	1,081,699	213.50	230,942,677
Insurance	18,629	(136.00)	(2,533,477)
Parent Company	699,749	30.21	21,139,430
Other Operating Expenses	1,105,346	28.51	31,513,427
Total Operating Expenses	43,636,130	42.3	1,845,509,362

3.1 Salaries & Wages

9. Since the last lead-lag study, payroll remittances have changed from bi-monthly to bi-weekly payroll remittances, which has resulted in an increase of 30.21 days to 44.62 days.

3.2 Purchase Power

10. The average consumption lag for purchase power is 15.21 days and, combined with the payment lag of 23.04 days, results in a total of 38.24 lag days, which is slightly higher than the 36.21 amount from the previous study.

3.3 Property Tax

11. Property taxes were billed for a calendar year and were paid at various dates throughout the year. The total average lead days remained unchanged from the previous study at 34.86 days.

3.4 Franchise Tax

12. Franchise taxes are due to the City of Yellowknife on January 31st, following the franchise year. The total consumption and payment lag is 213.50 days, which has increased from the 189.5 lag days from the last study.

3.5 Insurance

13. Insurance is billed for a one-year term. Substantially all the insurance premiums were paid in July 2023. Insurance payments made in 2023 were analyzed and a weighted average from the midpoint resulted in a lead time of 136 days, which is unchanged from the previous study.

3.6 Parent Charges

14. Based on an analysis of 2023, parent charges had a 15.21 day consumption lag and a 15 day payment lag, for a total lag of 30.21 days, which is unchanged from the previous study.

3.7 Other Operating Expenses

15. Other expenses were paid on a 9.88 day basis. Adjusting this amount for a payment lag of 18.63 days, results in a total lag of 28.51 days, which is unchanged from the previous study.

3.8 Income Tax Expense

16. Income Tax expense lag represents income tax instalment payments that are made monthly. The expense lag of 15.21 days was subtracted from the revenue lag of 44.93 days, resulting in a 29.72 day lead.

3.9 Final Tax Payment / Receipt

17. The lag for final tax payment/receipt is 198 days, given that the settlement is within the first half of the following year.

3.10 Goods and Service Tax

18. GST remittance is the net amount of GST collected and GST paid. GST is remitted, on a monthly basis, resulting in a total lag time of 30.00 days.

3.11 Depreciation Expense

19. As depreciation expense is recovered in the company's revenues, the lag days for depreciation expense are equal to the revenue lag days of 44.93 days.

3.12 Interest Expense

20. The interest expense lag days were determined to be 91.25 days, based on the interest payments schedule of long-term

21. As interest expense is recovered in revenues, the expense lag of 91.25 days was subtracted from the revenue lag of 44.93 days, resulting in a 46.32 day lead for interest expense.

3.13 Common Equity (Retained Earnings Component)

22. The lag days for common equity (retained earnings component) are the same as the lag days for depreciation expense.

3.14 Common Equity (Dividend Component)

23. The expense lag days for the dividend component was determined to be 45.63 days. As the costs relating to the dividend are recovered through revenues, the expense lag was subtracted from the revenue lag of 44.93 days, resulting in a 0.7 lead for common equity (dividend component).

Table 3.2: Lead/Lag

Lead/Lag	Revenue Lag	Expenses Lead/Lag	Net Lead/Lag
Operating Expenses	44.93	42.29	2.63
Tax Installments	44.93	15.21	29.72
Taxes Receivable	44.93	243.33	(198.41)
Long Term Debt	44.93	91.25	(46.32)
Dividends	44.93	45.63	(0.70)
Depreciation	44.93		44.93
Equity	44.93		44.93

SECTION 8 – INCOME TAXES

8.1 Overview

169. The Income Tax expense included in this Application is outlined in Schedule 8.0 and is as follows:

**Table 8.1: Income Tax
(\$000)**

	2021	2022	2023	2024	2025	2017
	Actual			Test Period		Approved
Income Tax Expense	508	458	(613)	374	666	356

170. Naka-YK continues to use the flow-through method to calculate the Income Tax expense. Under the flow-through method, Naka-YK calculates the Income Tax expense based on taxable income, which is minimized by claiming the maximum of all available deductions, including Capital Cost Allowance (CCA). Naka-YK also does not record deferred taxes under this methodology.

171. The decrease in Income Tax expense between 2021 and 2022 is mainly due to the increase in deductions related to CIS Replacement IT running costs. The decrease in income tax expense between 2022 and 2023, and subsequent tax expense increase in 2024, is due to a one-time CCA deduction in 2023 related to the CIS Replacement capital addition. These costs are eligible for Class 12 CCA at a rate of 100 percent. This means that the entire cost of the software can be deducted in the year it is acquired rather than spreading the deduction over several years. This treatment acknowledges software's rapid obsolescence and short useful life compared to other types of assets. Accordingly, this deduction will not be available in future years.

8.2 Income Tax Rate Variance Deferral Account

172. Income Taxes forecast by Naka-YK in this Application are based on the currently enacted Federal and Territorial statutory Income Tax and CCA rates.

173. Since the income tax rate is not under the control of Naka-YK, not reasonably forecastable, and an error in forecasting the rate could produce a loss or gain of

substantial magnitude, Naka-YK is requesting approval for the continued use of an income tax rate variance deferral account. Any changes from these rates will be used to determine an updated revenue requirement. This updated revenue requirement will be compared to the final Board-approved revenue requirement for the year in question and any differences will be either refunded to, or collected from, customers.

SECTION 9 – TAXES OTHER THAN INCOME

9.1 Overview

174. Taxes other than income included in this Application are as follows:

**Table 9.1: Taxes Other than Income
(\$000)**

	2021	2022	2023	2024	2025	2017
	Actual			Test Period		Approved
Property Taxes	86	93	91	96	101	74
Franchise Fees	1,076	1,092	1,082	1,179	1,228	1,021

9.2 Franchise Fees

175. The Franchise Fees are paid to the City based on the Franchise Agreement effective November 4, 2020, which grants exclusive rights to Naka-YK for the distribution of electrical energy to the municipality and its residents. The Franchise Fee is recovered through the Franchise Fee Rider, which is a flow-through of the fee paid to the municipality.

176. The Franchise Fee forecast is prepared by applying the stepped fee structure per the Franchise Agreement to the forecast revenue. Periodic rate adjustments are made to reflect this in rates. The most recent adjustment was effective January 1, 2024, which set the Franchise Fee Rider to 1.237 percent of the revenue generated from the sale of electricity in the municipality per the letter to the Board dated November 17, 2023.¹

9.3 Property Taxes

177. Property taxes are paid to the City annually for Naka-YK's office building(s), substation properties, power lines, and other company-owned properties within the city. The forecast increase in Property Taxes is based on applying an annual rate adjustment of five percent² over the Test Period.

¹ Notification of Adjustment to Franchise Tax letter to the Board dated November 17, 2023.

² <https://cabinradio.ca/170135/news/yellowknife/yellowknife-set-for-five-percent-property-tax-increase/>.

SECTION 10 – OTHER REVENUES

178. Please refer to Section 2 for related information on Other Revenues.

SECTION 11 - CAPITAL ADDITIONS

11.1 Overview

179. In this Section, Naka-YK is seeking Board approval of its forecasts for 2024 and 2025 additions. Naka-YK's capital investment strategy over the 2011-2023 period was to sustain the functionality and capacity of the existing assets, while investing in modern technologies where it was more efficient or required to do so. The following summarizes capital projects that were completed from 2011-2023:

- Routine distribution system maintenance and replacement of aged/obsolete infrastructure;
- Replacement of deteriorating/obsolete streetlights in conjunction with the City's water/sewer replacement program;
- Conversion of streetlights to energy efficient, longer lasting Light Emitting Diode (LED) heads;
- Completion in 2011 and 2012 of the final two phases of the distribution system conversion from 5 kV to 25 kV as approved in Decision 12-2004;
- Renovation of the service complex in Yellowknife to remediate the deteriorating condition of the building and expand it as required to meet operational requirements;
- Replacement of the obsolete customer billing system in 2023;
- Improvement to load distribution for lines 5L540 and 5L641; and
- Revise clearance between pole connection points on shared pole infrastructure in the Kam Lake area.

180. The following list summarizes the capital projects that are forecast to be completed in 2024-2025:

- Routine distribution system maintenance and replacement of aged/obsolete infrastructure;
- Replacement of deteriorating/obsolete streetlights in conjunction with the City's water/sewer replacement program;

- Revise clearance between pole connection points on shared pole infrastructure in the Kam Lake area;
- The Engle Business District Recloser project, where electrical load growth requires installation of a SCADA (remote) controlled recloser to allow for timely power system recovery with less manual system operations;
- The City of Yellowknife Lift Station 1 Line Re-Route project to relocate a 34 kV overhead powerline to accommodate construction; and
- The first phase in converting to Advanced Metering Infrastructure.

181. In accordance with the Minimum Filing Requirements (MFRs), Business Cases to support the business need for capital projects/programs during 2021-2023 and the Test Period have been provided in Section 17. In addition, descriptions for all capital additions exceeding \$100,000, for the period 2011-2020, are included in Section 11, Attachment 1.

182. New extension projects are not included in the Business Cases or in Attachment 11.1 because the identification and requests for these projects result from customer needs and are largely funded by customer contributions.

183. Capital Expenditures and Additions, summarized in Table 11.1, are managed and tracked by project. Please refer to Sections 11.2-11.6 below for summaries of the nature of the projects included in each Program.

184. The capital expenditures and additions included in this Application are outlined in Schedule 11.8 and are set out in the following table:

**Table 11.1: Capital Expenditures and Additions
(\$000)**

	2021	2022	2023	2024	2025	2017
	Actual			Test Period		Approved
Capital Expenditures	2,877	3,505	4,955	3,210	3,700	3,675
Capital Additions to Rate Base	2,319	1,643	6,767	3,444	4,011	3,775

185. Capital expenditures are funds spent to purchase, maintain, or upgrade assets, while capital additions are the capitalization of those expenditures related to projects placed in service. Once assets are capitalized, they are added to Naka-YK's rate base and start depreciating. Timing differences exist between when funds are spent and when projects are completed and placed in service, particularly on larger scale projects that take a longer time to complete.

11.2 New Extensions

186. Naka-YK develops its new extension capital forecast based on discussions with the City, developers, engineering firms, and customers. Naka-YK assesses the ability of the existing infrastructure to accommodate the proposed growth by taking into account the specific service requirements of the customer. Naka-YK then develops an estimate for the facilities required for each of the new extensions, which is included in its annual forecast. In addition, Naka-YK considers historical customer additions to account for walk-in customers that are expected to require service.

187. Naka-YK is requesting the Board's approval of a revision to the Maximum Investment Levels (MILs) quoted in Schedule A of its Terms and Conditions of Service (T&Cs).¹ While Naka-YK has not performed an updated MILs Study, in an effort to retain the same proportion of investment that customers in 2011 received (namely, inter-generational equity), Naka-YK is proposing to maintain the previously-approved MILs in 2024, however adjust the 2025 MILs to accommodate for inflation by inflating the Approved 2011 MILs to 2025 dollars. Please refer to Table 11.2 below for Naka-YK's proposed MILs and please refer to Section 11.2 Attachments 1 and 2 for the respective blacklined and clean versions of Naka-YK's Schedule A MILs. Naka-YK will revise the updated Schedule A MILs of the T&Cs, as applicable, after the decision on this Application has been rendered.

¹ [Naka Power Utilities | Rates & Regulations.](#)

**Table 11.2: Proposed Maximum Investment Levels
(\$000)**

Maximum Investment Levels	Units	2021	2022	2023	2024	2025
Residential						
Single Family Dwelling	per site	2,340	2,340	2,340	2,340	3,060
Multiple Family Dwelling	per site	780	780	780	780	1,020
Small General Service	per kW	340	340	340	340	445
Street Lighting	per light	Cost of Installation				
Private Lighting	per light	1,340	1,340	1,340	1,340	1,750

Note: Proposed MILs have been rounded up or down to the nearest \$5.

11.3 Distribution Improvements

188. Distribution improvement projects generally fall into four major categories (each project may not be exclusive to just one of these categories):

- (i) System Performance Projects – required to maintain system performance to an acceptable level. This category includes system protection, voltage, current and line clearance projects.
- (ii) Life Extension Projects – required to increase the operating life of the distribution system. This category includes electrical equipment refurbishments or upgrades, voltage conversions, reconductor projects and street light upgrades.
- (iii) System Replacement Projects – required to replace distribution system facilities on a planned basis when they have reached the end of their useful life. This includes replacement of distribution poles, ground systems, as well as overhead and underground system equipment replacements.
- (iv) Forced Projects – required to correct unplanned system failures and upgrades due to other projects in the area or a new development. These projects are also initiated due to contractual obligations with the City.

189. In addition to the above, Naka-YK tracks distribution system performance on an ongoing basis and the performance is reviewed when preparing the capital forecast. Naka-YK also reviews unplanned outages that may be attributed to system deficiencies and implements corrective action as required. Costs for distribution improvements are forecast based on preliminary engineering design work and take into consideration historical project costs for comparable projects.

190. Naka-YK works closely with the City and completes much of its work in conjunction with the City's road works program. Working together with the City has proven to be efficient and cost effective when improvements to the electrical system are required.

11.4 Street and Sentinel Lights

191. Expenditures are required to provide new street and private lighting in Naka-YK's service area. All streetlight work is completed in consultation with the City. Streetlights that require replacement due to poor condition assessments are included in this category. A condition assessment is based on performance of streetlights, deficiencies or substandard conditions and the general physical condition. Inspection of general physical condition includes the base and metal structure deterioration, rust, broken bolts and damage. New installations or LED conversion requests from the City or customers are also included. The forecast is determined based on known areas of development in the City, as well as a review of historic replacement requirements.

11.5 Meters

192. Capital Meter additions include new meter installations that are required to replace end of life meters as identified by Measurement Canada, as well as the installation of new meters required to accommodate load growth associated with customer requests for service. These expenditures allow Naka-YK to meet its obligation to provide metered service connections. The capital meter additions are forecast based on known areas of development and expected connection requests.

11.6 Transformers and Regulators

193. Distribution transformers and regulators are required to meet customer growth and to replace transformers that are being used for new extensions or for service upgrades.

11.7 Tools and Equipment

194. This portion of the capital forecast provides for the replacement of equipment and for the purchase of new equipment required to support Naka-YK's operations. These costs include tools, office furniture, office computer equipment and software,

communication equipment, transportation equipment, lands and buildings. Estimates are developed by determining what the needs are for upgrade, purchase or replacement of general property and equipment and developing a forecast based on historical and market prices.

11.8 Capital Project Delivery

195. Naka-YK has a project process in place for the identification, planning, and execution of its capital projects. The general project process is followed for New Extensions, Distribution Improvements, Street Lights and General Property and Equipment projects.

196. At the initiation of a new project, either requested by the City, a new customer, or identified by Naka-YK as being required for system improvement, the general scope of the project is identified, and the appropriate internal employees are engaged. As the general scope of a project is further defined, a more detailed review is completed that identifies the needs of the customer or the deficiency in the power system that needs to be addressed. An engineer will establish the total scope of the effort, define the project objectives, and develop a cost estimate, projected schedule, and the resources required to successfully complete the project.

197. Where appropriate, Business Cases and/or engineering studies are also completed to ensure the most reasonable alternative is selected and that the solution meets the needs of both the system and the customer.

198. The Operations Supervisor will review the current power system in consideration of the new project, with the key consideration being the safe integration of the project into the power system. If the project is a new customer extension project, a review of substation(s) and feeder loading, as well as the condition of existing electrical equipment, will be completed.

199. As the project proceeds, there is regular internal reporting on emerging issues that can affect scope, schedule, or costs so that mitigation strategies can be developed to minimize their impact.



Naka Power Utilities (Yellowknife) (Naka-YK)

2024-2025 General Rate Application (GRA)

**Section 11.1 Attachment 1
Capital Additions over \$100,000
2011-2020**

2011 CAPITAL ADDITIONS

Distribution Improvements

- 25 kV Conversion – Phase Seven \$2,183,000

Naka Power Utilities (Yellowknife) (Naka-YK) completed Phase Seven of the feeder conversion from 5 kV to 25 kV (5L201). The detailed information and justification of this system improvement was included in Naka-YK's 25 kV conversion application which was approved by the Board in Decision 12-2004 to be completed over eight years. The feeder conversion was necessary to ensure the compatibility of system hardware to system operating voltage. The work involved changing all 5 kV insulators, transformers, switches, underground cable, and other hardware to 25 kV on the seventh phase of the conversion project.

Land and Buildings

- Parking Lot Leveling – 481 Range Lake Road \$110,000

Naka-YK was unable to utilize all the property at 481 Range Lake Road due to rock formations causing extreme variance in elevations. Naka-YK leveled the parking lot. This included blasting and removing of rock, which allowed for additional company parking and storage and material management.

2012 CAPITAL ADDITIONS

Distribution Improvements

- 25 kV Conversion – Phase Eight \$3,184,000

Naka-YK completed Phase Eight of the feeder conversion from 5 kV to 25 kV (5L204). The detailed information and justification of this system improvement was included in Naka-YK's 25 kV conversion application which was approved by Board Decision 12-2004. The feeder conversion was necessary to assure the compatibility of system hardware to system operating voltage. The work involved changing all 5 kV insulators, transformers, switches, underground cable, and other hardware to 25 kV on the final phase of the conversion project.

Street & Sentinel Lights

- 49 Ave to Niven \$133,000

Please refer to Business Case #02 – Streetlight Reconstruction & Additions

- Light Emitting Diode (LED) Streetlighting \$107,000

Converted High-Pressure Sodium streetlights to more energy efficient LED lighting.

Transportation Equipment **\$287,000**

- Replace Unit 1104 \$287,000

Replaced digger 21 years old at time of replacement and had reached the end of its useful life.

2013 CAPITAL ADDITIONS

Distribution Improvements

- Kam Lake Loop \$642,000

Kam Lake had 425 customers and was fed by a single source line from the Butler Substation. The customer base was increasing as more land was made available for development and another feed to supply the increased load was required. The additional feeder also provides more operational options in the event of a failure in Kam Lake.

Street & Sentinel Lights

- Bromley Drive \$135,000

Please refer to Business Case #02 – Streetlight Reconstruction & Additions.

- Light Emitting Diode (LED) Streetlighting \$133,000

Convert High Pressure Sodium streetlights to more energy efficient LED lighting.

2014 CAPITAL ADDITIONS

Street & Sentinel Lights

- 52nd Ave \$121,000

Please refer to Business Case #02 – Streetlight Reconstruction & Additions.

- Light Emitting Diode (LED) Streetlighting \$313,000

Convert High Pressure Sodium streetlights to more energy efficient LED lighting.

- Hwy 3 & Hwy 4 \$177,000

Installed streetlights on the new Highway #4 intersection as requested and funded by the Government of the Northwest Territories.

- Wiley & Raccine \$146,000

Replaced the existing steel Davit streetlights with the decorative style to complement the City of Yellowknife's development scheme for the Harbour Plan as requested by the City.

- Hwy 3 & Old Airport Road \$141,000

Installed streetlights on the Old Airport Road intersection as requested and funded by the Government of Northwest Territories.

Office Furniture & Equipment

- Purchase New Office Furniture \$190,000

Purchased new furniture as required for expanded and renovated facility.

Land And Buildings

- Building Renovation \$3,796,000

Expanded existing service complex as required for day-to-day operations, including increased space for vehicle maintenance, materials management and administrative offices as well as improved traffic flow.

2015 CAPITAL ADDITIONS

Street & Sentinel Lights

o	52 Ave	\$154,000
o	Horton Crescent	\$111,000

Please refer to Business Case #02 – Streetlight Reconstruction & Additions.

- Light Emitting Diode (LED) Streetlighting \$163,000

Convert High Pressure Sodium streetlights to more energy efficient LED lighting.

2016 CAPITAL ADDITIONS

Street & Sentinel Lights

- Light Emitting Diode (LED) Streetlighting \$774,000

Convert High Pressure Sodium streetlights to more energy efficient LED lighting.

Transportation Equipment

- Replace 2000 Case 590SL Backhoe with 2016 Finning 430F2 backhoe loader \$206,000

2017 CAPITAL ADDITIONS

Distribution Improvements

- Franklin Ave – 54 Ave 49 Street to School Draw \$255,000

The project involves replacing approximately seventy end-of-life power poles located on elevated, inaccessible ground behind existing properties. As part of the proposed work, Naka-YK intends to upgrade existing copper secondary conductors and remove de-energized primary conductors from these poles. These upgrades will improve safety and reliability of service in the area. To facilitate future maintenance, Naka-YK plans to relocate the poles to the front street for easier access.

- 7000S Burnt Out Transformer \$330,000

Replace failed substation Transformer, this was due to a manufacturer defect that occurred outside of the warranty period.

- Otto Drive \$178,000

Upgrade and convert 10 existing power poles which are 40 years of age to underground. This portion is to reroute the secondary so the poles can be removed; the underground provides a safe and more reliable system as it is not exposed to environmental elements and brushing concerns.

Street & Sentinel Lights

- o Kam Lake Road \$164,000
- o Finlayson Drive \$138,000

Please refer to Business Case #02 – Streetlight Reconstruction & Additions.

- Streetlight Northland Trailer Park (NLTP) Bases \$250,000

Replace steel bases with concrete bases due to extreme frost heaving in the area.

2018 CAPITAL ADDITIONS

Distribution Improvements

- Cooper VFI \$270,000

Purchase 2 Cooper VFI units to create system security, reliability and also standardization within Yellowknife Distribution Substations.

Street & Sentinel Lights

- o Streetlight Williams Ave \$101,000
- o Streetlight Franklin Ave \$260,000
- o Streetlight Dagenais \$117,000

2019 CAPITAL ADDITIONS

Distribution Improvements

- Northland Trailer Park Conduit Issue \$149,000

Underground line depth on the roads in Northland Trailer Park (NLTP) was required to ensure CSA code was met. Add concrete cover to road crossing with less than one meter of cover.

- Rebuilds, Replacements & Life Extensions \$119,000

Please refer to Business Case #01 – Rebuilds & Pole Replacements.

Street & Sentinel Lights

- o Streetlight Oar Phase I \$149,000
- o Streetlight Dagenais \$192,000

Please refer to Business Case #02 – Streetlight Reconstruction & Additions.

Office Furniture, Computer Equipment and Software, Communication Equipment

- My Account \$113,000

Provides Naka-YK's customers with the ability to access Utility account information at any time through an online portal on (Naka-YK) webpage. Customers can make payments, view details, communicate with Naka-YK and manage their accounts through this portal.

2020 CAPITAL ADDITIONS

Distribution Improvements

- Range Lake Tie \$184,000

Please refer to Business Case #05 – 25 kV Feeders 5L640 and 5L641 Load Redistribution.

Street & Sentinel Lights

- Streetlight 54th Ave \$104,000

Please refer to Business Case #02 – Streetlight Reconstruction & Additions.



Naka Power Utilities (Yellowknife)

TERMS AND CONDITIONS

OF

SERVICE

Effective: January 1, ~~2012~~2025
Supersedes: ~~February~~January 1, 200912

Board Decision: ~~20-2011~~xx-xxxx



Effective: 20~~25~~¹²-01-01
Supercedes: 20~~12~~⁰⁹-0~~21~~⁰¹-01
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Supercedes: 2009~~12~~-0201-01
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1. INTRODUCTION

Northland Utilities (Yellowknife) Limited o/a Naka Power Utilities (Yellowknife)'s (Naka-YK) (hereinafter referred to as the "Company") Electric Service Tariff is comprised of Rate Schedules and these Terms and Conditions of Service, which are filed with the Public Utilities Board for the Northwest Territories (herein referred to as the "Board"), pursuant to the Public Utilities Act. The Company conducts its business activities in compliance with these Terms and Conditions.

These Terms and Conditions may not be changed without the approval of the Board. Parties having any inquiries or complaints regarding these Terms and Conditions may direct them directly to the Company or the Board.

The Company's Electric Service Tariff is available to the public during normal business hours at the business offices of the Company and at the offices of the Board and can be accessed on the Company's website at: www.northlandutilities.com <https://www.nakapower.com/en-ca.html>.



Effective: ~~2012~~2025-01-01
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2. INTERPRETATION

2.1 Definitions

The following words or phrases, when used in these terms and conditions, the Electric Service Tariff, or an application, contract or agreement for service, shall have the meaning set forth below:

“Billing Demand” - the Demand upon which billing to a Customer is based as specified in a rate schedule or contract. Demand may be estimated or measured by an approved demand meter.

“Board” - the Public Utilities Board for the Northwest Territories.

“Cancellation Costs” - means the aggregate of all actual costs and expenses incurred by the Company related to the work and all costs incurred by the Company in connection with the termination thereof including, but not limited to:

- (a) the cost of all equipment and material, inclusive of any deposit, restocking and cancellation charges;
- (b) the amount payable to any contractor for the supply of labour and miscellaneous materials;
- (c) the cost of engineering studies, surveying and drafting;
- (d) the fees of any consultant or professional retained by the Company;
- (e) the costs incurred in the process of obtaining easements, rights-of-way and regulatory approvals;
- (f) the expense of wages and benefits paid for services performed by the Company's employees;
- (g) the carrying costs incurred; and



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- (h) the costs incurred to salvage equipment and materials (net of any credit to the Company for reusable equipment and material), and the reclamation of any property used by the Company.

“Capital Cost” the cost of materials, labour, equipment, expenses and any other direct or indirect costs incurred by the Company in extending Service to a Point of Service.

“Capital Recovery Stream” – the series of payments designed to recover the invested capital over the life of the Service.

“Company” - Northland Utilities (Yellowknife) Limited o/a Naka Power Utilities (Yellowknife).

“Connected Load” - the sum of the capacities or ratings of the electric Energy consuming apparatus connected to a supplying system or any part of such system.

“Construction Contribution” - a specific payment by a Customer to offset Company costs incurred in providing Service that will primarily benefit that Customer or group of Customers only and not the other ratepayers in the distribution system. The contribution will be the difference between the cost of extending the Company's Facilities to serve a Customer and the Maximum Available Company Investment specified in Schedule A.

“Cost Sharing” - refers to the procedure of having a new Customer or group of Customers who connect to an existing facility for which another Customer or group of Customers has paid a contribution, assessed their share of that cost, and then is refunded to the existing Customer(s).

“Current Limiting Device” - a device that limits the amount of Demand available to a specific Customer.



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“Customer” - a person, firm, partnership, corporation, association or organization (including, without limitation, individual members of any unincorporated entity) to whom the Company provides any service hereunder or who receives any service hereunder. This would include joint tenants, whether or not their name appears on the application for Service.

“Demand” - the rate at which electric Energy is delivered by the Company, expressed in kilowatts, kilovolt amperes or other suitable unit, at a given instant or averaged over any designated period of time.

“Dwelling” - means a private residence consisting of single family living quarters, having, in one self-contained unit, at least sleeping quarters, a kitchen for domestic use and a bathroom.

“Energy” - electricity consumed expressed in kilowatt hours.

“Facilities” - a physical plant (including, without limitation, generating plants, transmission and distribution lines, transformers, meters, equipment and machinery).

“Force Majeure” - circumstances not reasonably within the control of the Company, including acts of God, strikes, lockouts or other industrial disturbances, acts of the public enemy, wars, blockades, insurrections, riots, pandemics, epidemics, landslides, lightning, earthquakes, fires, storms, floods, high water, washouts, inclement weather, orders or acts of civil or military authorities, civil disturbances, explosions, breakdown or accident to equipment, mechanical breakdowns, the intervention of federal, territorial, or local government or from any of their agencies or boards excluding Decisions and/or Orders made by the Board in the normal course of it exercising its authority to establish the revenue requirement of the parties to this agreement, the order or direction of any court, and any other cause, whether of the kind herein enumerated or otherwise.

“In-Service Date” - means the date on which the Company specifies the Service Connection is to be available.



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“Load” - the Demand and Energy delivered or required at any Point of Service.

“Load Factor” - the ratio of the average Demand (in kilowatts) supplied during a designated period to the peak or maximum Demand (in kilowatts) occurring in the period. To express Load Factor as a percentage:

- (a) multiply the Energy used in the period by 100;
- (b) multiply the maximum Demand by the number of hours in the period; and
- (c) divide (a) by (b).

“Maximum Available Company Investment” - the maximum investment in dollars which the Company will incur to extend Service to a Point of Service as set forth in Schedule A hereto;

“Multiple Dwelling” - a residential building containing more than one Dwelling unit which shares all or part of a Service Connection.

“Point of Service” - the point at which the Company's service conductors are connected to the wires or apparatus of a Customer.

“Power Factor” - the ratio of the highest metered kilowatt Demand in a billing period to the highest metered kilovolt-ampere Demand in that same billing period.

“Satisfactory Credit Rating” – means that credit rating determined at the discretion of the Company, and may include the Customer having paid all bills on an existing Company account in full on or before the due date of the said bill for twelve consecutive months, or a similar payment record as established with another utility service provider within the past twelve months.

“Security Deposit” - an amount determined in accordance with Article 4.6.

“Service” – the providing of Energy and delivery by the Company to the Point of Service at the maximum Demand level required by the Customer.



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“Service Connection” - the Facilities required to physically connect the Customer's facilities to the Company's system.

“Single Family Dwelling” - a Dwelling that is not part of a Multiple Dwelling.

2.2 Conflicts

- (a) If there is any conflict between a provision expressly set out in an Order of the Board and these Terms and Conditions, the Order of the Board shall govern.
- (b) If there is any conflict between a provision expressly set out in these Terms and Conditions as may be amended from time to time, and any contract or agreement for service, the express provision of these Terms and Conditions shall govern, as of their effective date.

2.3 Headings

The division of these Terms and Conditions into sections, subsections and other subdivisions and the insertion of headings are for convenience of reference only and shall not affect the construction or interpretation of these Terms and Conditions.

2.4 Schedules and Appendices

The following schedules and appendices are attached to and form part of these Terms and Conditions:

- Schedule A - Maximum Company Investment
- Schedule B - Standard Supply Specifications
- Schedule C - Conditions for Underground Subdivisions
- Schedule D - Fees and Service Charge Summary



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3. GENERAL PROVISIONS

3.1 Board Approval

These Terms and Conditions have been approved by the Board. The Company may amend these Terms and Conditions by filing a notice of amendment with the Board. Included in the notice shall be notification of which Customer groups are affected by the amendment and an explanation of how affected Customers will be notified of the amendments. If the Board approves the notice of the amendment, the amendment will take effect upon the date set by the Board. If no specific date is set by the Board then the amendment will take effect on the date of the Board's Order approving the notice of amendment.

3.2 Effective Date

These Terms and Conditions are in effect as of the indicated effective date. Whenever the Company files notice of an amendment to these Terms and Conditions, or when the Board approves an amendment to these Terms and Conditions, revisions will be issued, with the effective date of the amendments indicated thereon.

3.3 Terms and Conditions Prevail

- (a) These Terms and Conditions, as amended from time to time, apply to the Company and to every Customer to which the Company provides a Service Connection.
- (b) The application for a Service Connection (whether verbal or written), the use by the Customer of a Service Connection or the payment by the Customer of an account rendered by the Company in relation to a Service Connection shall constitute acceptance by the Customer of these Terms and Conditions.



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- (c) No agreement can provide for the waiver or alteration of any part of these Terms and Conditions unless such agreement is first filed with and approved by the Board.

3.4 Ownership of Facilities

- (a) The Company remains the owner of all Facilities necessary to provide a Service Connection to the Customer, whether or not affixed to the Customer's facilities or land, unless an agreement between the Company and Customer specifically provides otherwise.
- (b) Payment made by the Customers for costs incurred by the Company in installing Facilities does not entitle Customers to ownership of any such Facilities, unless an agreement between the Company and the Customer specifically provides otherwise.

3.5 Use of Energy

Service is provided for a Customer's sole use and only for the purposes specified by contract or by the rate schedule applicable to such Service. A Customer shall not re-sell Energy.

3.6 Customer Extensions

A Customer shall not extend service Facilities beyond property owned or occupied by the Customer.

3.7 Customer Generation

A Customer must sign an agreement with the Company if the Customer wishes to have Service:

- (a) in parallel operation with; or
- (b) as supplementary, auxiliary or standby Service to any other source of electric Energy.



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3.8 Frequency and Voltage Levels

The Company will make every reasonable effort to supply Energy at 60 Hertz alternating current. The voltage levels and variations will comply with the Canadian Standards Association standards and shall be in accordance with the Company's standard supply specifications as specified in Schedule B.

3.9 Fees and Other Charges

The Company will provide all standard services hereunder pursuant to the approved Electric Service Tariff. All additional and supplementary services provided by the Company to a Customer will be charged a separate rate or fee, such as those included, without limitation, in Schedule D herein. Payment for these services shall be in accordance with the provisions of these Terms and Conditions.

4. APPLICATION FOR AND CONDITIONS OF SERVICE

4.1 General Requirements

Any applicant for Service may be required to sign an application or a contract for Service, and shall supply information respecting Load, preferred supply conditions and the manner in which Energy will be utilized. An applicant may also be required to establish a Satisfactory Credit Rating with the Company prior to being connected for Service.

The Company reserves the right to verify the identity of the Customer and the accuracy of the information provided and to require the Customer to sign an application in writing on forms provided by the Company. If a Customer is not of legal age, a Security Deposit may be required in order to obtain Services and, in addition, a person of legal age may be required to accept responsibility for the Services on that Customer's behalf.

Contracts for Service are not transferable. Persons taking over premises, where Energy has been used previously, must make a new application for Service and pay



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the necessary Connection Fee defined in Schedule D, per Article 4.3 and Security Deposit per Article 4.6.

In the event that a Customer cancels a project the Customer shall pay all additional costs related to the cancellation of their project, including Cancellation Costs, incurred by the Company.

4.2 Conditions of Service

Upon receipt of an application or contract for Service, the Company shall notify the applicant of any conditions which must be satisfied before the application or contract will be accepted and Service may be commenced. The Company will provide notice that a copy of the Terms and Conditions are available.

4.3 Connection Fee

Whenever a connection is made, the Customer will pay a non-refundable Connection Fee as defined in Schedule D, which shall be included in the Customer's first billing, or paid with the application for Service (save and except that, where the Customer has paid a Construction Contribution for the Service, the Connection Fee shall be deemed to be included in the Construction Contribution).

4.4 Terms and Conditions and Rate Schedule Apply

Whether or not a Customer has signed an application or contract for Service, these Terms and Conditions and the Rate Schedule applicable to the Service supplied by the Company shall apply. In addition to payments for Service, the Customer is required to pay the Company the amount of any tax or assessment levied by any tax authority on Service delivered to the Customers.

4.5 Application of Rate Schedules

The Company will endeavor to apply the rate schedule which applies to the Service and is most favorable to the Customer.



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Where the Customer's Service requirements change so that some other rate schedule(s) apply to the Service, the Company will change the Customer's billing accordingly.

A Customer may elect to have Service billed on any other rate schedule applicable to their Service requirements. Any change shall not be effective until the next complete billing period. An election under this section may not be made more than once in any 12-month period, unless the Customer's Service requirements change.

4.6 Security Deposit

(a) Security Deposit Requirements

The Company may require a Security Deposit from an applicant or Customer in the following circumstances:

- (i) applicant has not established a Satisfactory Credit Rating with the Company;
- (ii) the Customer's Service has been disconnected or restricted by a Current Limiting Device; or
- (iii) the Customer has not paid all past bills for Service.

If a Security Deposit is required and has not been provided prior to connection, it will be added to the bill for Service and due in full on the due date identified on the bill.

(b) Amount of Security Deposit

The amount to be deposited with the Company shall be determined by the Company at the time of the Service application and shall be based on an estimate of the total amount billed over a period of three months in which Energy consumption by the Customer is expected to be the highest. The Security Deposit required may be adjusted accordingly based on the Customer's actual use of the Service or other information made available to the Company.

(c) Interest on Security Deposit



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The Company will pay simple interest on the Security Deposit from the date the deposit is paid, at the rate specified from time to time in the Residential Tenancy Act of the Government of the Northwest Territories and such interest will be credited to the Customer's account on the first bill following December 31 of each year or when the deposit is refunded.

(d) Refunds of Security Deposit

The Company may refund a Security Deposit or credit the Customer's account with interest when:

- (i) the Customer's Service is disconnected, other than for default in payment of accounts, and the Customer has paid all amounts owing to the Company, or
- (ii) the Customer has established a Satisfactory Credit Rating.

(e) Use of Security Deposit

If a Customer fails to pay any amount billed, and collection action has been initiated by the Company, the Company may apply all or any portion of that Customer's Security Deposit to the unpaid amount, including interest. Upon termination of a Service Connection, the Company may apply all or any portion of that Customer's Security Deposit to the unpaid amount, including interest. The Customer will then be required to fully restore the Security Deposit before Service is reconnected or continued.

4.7 Delay in Taking Service - Other than Subdivision

Except in the case of a Customer who requests service to a subdivision, if Service is not taken within 30 days of the In-Service Date, the Company may begin billing the Customer for the minimum amount specified in the appropriate rate schedule or as specified in the contract between the Company and the Customer, whichever is greater.



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4.8 Extension of Service

(a) Customer Contribution to Construction Costs

If the Company's estimated costs of extending Facilities at the request of a Customer are less than the Maximum Available Company Investment specified in Schedule A for the type of Service provided, the Customer will not be required to make any contribution. In all other cases, an agreement for payment of the Construction Contribution must be made between the Customer and the Company before any work on the extension is commenced.

(b) Cost Sharing

If a new Customer shares a portion of an existing extension, the existing electrical Customer(s) may be entitled to cost sharing of the Construction Contribution based on the amount of extension shared. Cost sharing will be administered for a five year term commencing December 31 of the year of construction of the original extension. The Company will not administer refunds of less than \$50.00.

Non-metered, public Services, such as for street lights and heat tapes are not eligible for cost sharing.

4.9 Underground Facilities

In the event that the Company extends its Facilities underground, the extension shall be subject to the conditions set out in Schedule "C", Conditions of Underground Service attached hereto.

4.10 Conversion from Overhead to Underground Service

When a Customer requests that existing Company Facilities be converted from overhead to underground, the Customer may be charged for all costs incurred by the Company in connection with the conversion, including the following:



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- (a) the present value of Capital Recovery Stream(s) associated with the existing Facilities which are being removed, plus
- (b) the actual cost of removing the existing Facilities, less the actual salvage value, plus
- (c) the actual cost for the installation of the new underground Facilities, less any Available Company Investment as specified in Schedule A.

4.11 Temporary Service

Where the Company reasonably believes that a requested Service will be temporary, a Connection Fee as defined in Schedule D will be assessed and the Company may require the Customer requesting the Service to pay the Company's total estimated cost of installation and removal of the Facilities plus the cost of unsalvageable material. The Company may require that such payment be made before the temporary Service is installed.

4.12 Mobile Homes

Service shall normally be provided to mobile homes through separate points of delivery, based on the applicable residential rate schedule.

Service provided to common use areas (e.g., laundry facilities) in a mobile home park shall be separately metered and billed at the applicable General Service rate.

In mobile home parks or trailer courts where the Company reasonably believes homes are temporary, the Company may elect to provide Service only through the Point of Service billed to the mobile home park or trailer court.

4.13 Multiple Dwellings

Each individual unit within a Multiple Dwelling (including apartment and condominium buildings) will be served as a separate Point of Service and metered and billed individually on the applicable residential Rate Schedule. The Company and a Customer may agree that one bill will be issued covering all individual units in



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a Multiple Dwelling. Where the Company and a Customer have agreed that service to a Multiple Dwelling shall be delivered through a single Point of Service, the applicable General Service (non-residential) rate schedule will apply to the Service. Service provided to common use areas (eg. laundry facilities, hallways, etc.) shall be separately metered and billed at the applicable General Service rate.

4.14 Relocation of Company Facilities

Subject to any other provision of these Terms and Conditions of Service, the Company shall, at the request of the Customer, relocate the Facilities installed by the Company to provide Service to the Customer. The Customer requesting such relocation shall pay all costs incurred by the Company in so doing, and shall, if requested by the Company, pay, in advance of the Company undertaking such relocation, the estimated cost thereof. Following satisfactory completion of the work, the Customer will be invoiced or refunded the difference between the total estimated cost and the actual cost with applicable GST.

4.15 Reconnection

At such time as circumstances which resulted in disconnection of Service or restriction of Service through the installation of a Current Limiting Device (as provided by these Terms and Conditions) have been rectified to the satisfaction of the Company or the Customer has requested a reconnection after having requested a previous disconnection, the Company shall reconnect and continue the provision of Service to a Customer, whose Service was previously disconnected or restricted, upon payment by that Customer of:

- (a) any amount owing to the Company; and
- (b) a Reconnection Fee as defined in Schedule D, unless otherwise specifically provided in a contract with a Customer, and
- (c) the Security Deposit, if any, required under Section 4.6 hereof.



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If Service is reconnected within 12 months of disconnection, with the exception of seasonal Service, the Company may request that the Customer pay the minimum monthly bill for each month of disconnection.

The Company may add an Overdue Account Fee as defined in Schedule D if a site visit is required to attempt collection of overdue accounts and Service is not disconnected or for delivery of a notice of pending disconnection.

This section does not apply when a Customer's Service was disconnected for safety reasons (see Article 11.2).

5. RIGHTS-OF-WAY AND ACCESS TO FACILITIES

5.1 Easements

The Customer shall grant, or cause to be granted, to the Company, without cost to the Company, such easements or rights-of-way over, upon or under the property owned and controlled by the Customer as the Company reasonably requires for the construction, installation, maintenance, repair, and operation of the Facilities required for a Service Connection to the Customer, and for vegetation management, emergency response and all other obligations required to be performed by the Company hereunder.

5.2 Right of Entry

The Company's employees or agents shall have the right to enter a Customer's property at all reasonable times for the purpose of installing, maintaining, repairing, replacing, testing, monitoring, reading, disconnecting or removing the Company's Facilities and for any other purpose incidental to the provision of Service and the Customer shall not prevent or hinder the Company's entry. The Company will endeavor to provide reasonable notice to the Customer when the Company requires entry to the Customer's property for planned maintenance or repair to the Company's Facilities.



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5.3 Vegetation Management

The Customer shall permit the Company to manage vegetation on the property owned or controlled by the Customer to maintain proper clearances and reduce the risk of contact with the Company's Facilities. The Company shall endeavor to provide reasonable notice to a Customer before such work is performed.

Vegetation management in the vicinity of the high voltage distribution Facilities (primary system) is the responsibility of the Company. Vegetation will be maintained to established standards to reduce contact with the energized Facilities.

Vegetation management in the vicinity of the low voltage (service drops or secondary system) distribution Facilities on the Customer's property is the responsibility of the Customer. Where the Company determines that vegetation management is required to maintain the integrity of the Company's low voltage overhead Facilities, the Company may, at the Customer's expense, perform the work that is the responsibility of the Customer as set out herein. With respect to the low voltage overhead distribution Facilities only, the Company shall make reasonable efforts to notify the Customer that such work is required, and shall provide the Customer a reasonable opportunity to undertake the work required, before such work is performed by the Company.

5.4 Interference with Company's Facilities

Customers shall not install, or allow to be installed, any temporary or permanent structures that could interfere with the proper operation of the Company's Facilities or result in non-compliance with applicable legislation, statutes, standards, codes or regulations.

5.5 Customer Brushing

Customers requesting Service that requires the extension of Facilities to the Customer's property shall be responsible for brushing on the Customer's property in



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accordance with the Company's specifications. In addition, unobstructed access to each structure requiring Service must be provided.

6. METERS

6.1 Installation

(a) Provision and Ownership

Unless otherwise specifically provided in a contract with a Customer, the Company shall provide, install and seal all meters necessary for measuring the Energy and Demand supplied to each Customer.

Current transformers, voltage transformers and metering test switches (if required) will be supplied to the Customer for installation by the Customer's qualified personnel or contractor. Transformers shall be installed in accordance with the Company's specifications and all codes, legislation, and reference to applicable metering standards.

(b) Responsibility of Customer

Each Customer shall provide and install a CSA-approved meter receptacle or other CSA-approved Facilities acceptable to the Company for the installation of the Company's meter or metering equipment.

Metering equipment and installation specifications for each Customer's requirement will be made available upon request.

6.2 Location

Meter locations shall be approved by the Company having regard to the type of service being provided and so as to permit safe and convenient access to the meter by the Company. In the event a meter is installed on a meter pole, the pole shall be provided and maintained by the Customer in accordance with the provisions of the Canadian Electric Code and any other applicable legislation.



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Meter sockets for self-contained meters shall be mounted on the exterior of a building at an accessible location acceptable to the Company.

The centerline of the meter socket must be 1.5 to 1.8 meters above the finished grade or permanent platform of the Customer's facility and in an appropriately lighted area.

Metering instrument transformer enclosures shall contain only the Company's metering auxiliary equipment and shall not be used as a raceway, splitter box or cabinet for any other purpose.

6.3 Meter Tests and Adjustments

Unless otherwise specifically provided in a contract with a Customer, a meter may be inspected by the Company at any reasonable time. At the request of a Customer, and upon payment of the Company's Meter Accuracy Test Handling Fee defined in Schedule D plus the meter testing fee payable to the Government of Canada, the Company shall arrange for a meter to be tested or calibrated by an official designated for that purpose by Industry Canada or such other accredited agency as may, from time to time, be assigned with that responsibility.

If a test determines that the meter is not accurate within the limits set by government standards, the Customer's bill will be adjusted back to the time that the error can reasonably be determined to have commenced. Where the commencement of the error cannot reasonably be determined, it shall be deemed to have commenced three months before the test or on the date of the meter installation, whichever occurred later.

In the event that the test of the meter discloses that it is not accurate within the limits prescribed from time to time by such department, then any meter handling and testing fees paid by the Customer shall be refunded to the Customer.



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6.4 Access to Meters

The Company may, at any reasonable time, read, inspect, remove and test a meter installed on property owned or controlled by the Customer.

Where the Customer's Service address or location is generally locked during normal business hours, the Customer shall provide the Company with a key to permit access to the meter.

If the Company informs a Customer that reasonable access to metering equipment is not being provided, then the Customer must take immediate action to remedy the situation. If the Customer fails to remedy the situation within a reasonable time:

- (a) the Company, at its sole discretion, may estimate consumption until the situation has been remedied, in which case the Customer shall be billed on the basis of the Company's estimates; or
- (b) the Company will remedy the situation on behalf of the Customer and apply the costs to the Customer's next regular billing; or
- (c) both a) and b); or
- (d) the Company will discontinue Service in accordance with Section 11 of these Terms and Conditions of Service

7. METER READING AND BILLING

7.1 Time of Reading and Billing

Unless otherwise specifically provided in a contract with a Customer, meters shall be read monthly or bi-monthly or at such other intervals as are practical in the circumstances. Customer's bills will be based upon meter readings or estimates, for those billing periods when the meter is not read, made by the Company. Whenever a bill is based on an estimate, an adjustment to reflect actual usage will be made after the meter is next read.



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7.2 Calculation of Bills

The amount of any initial and final charges, other than Energy, may be prorated, based upon the ratio that the number of days that Service was provided to a Customer in the billing period to the total number of days in the billing period.

The Company may elect not to charge a Customer for the billing period if, during that period, Demand was five kilowatts or less, Service was provided for five days or less and Energy consumption was five kilowatt-hours or less.

For all new accounts, the Company may add the charges for Service provided during the initial period to the bill for the following billing period.

The Company may elect to change a Customer's meter reading schedule. Where a meter reading schedule is changed, any charges during the transition period between the old and new meter reading schedule, may be prorated based upon the ratio of the number of days that Service was provided to a Customer in the billing period to the total number of days in the billing period.

The Company may add to the Customer's bill any charges due and owing to the Company (e.g. construction contribution, account receivable charges, former overdue accounts etc.).

7.3 Payment

Payment of a bill for Service is due and payable on the date indicated thereon. A Late Payment Charge, as defined in Schedule D, will be applied by the Company on any overdue amount.

Bills shall be deemed rendered and other notices duly given when delivered to the Customer at the mailing address provided by the Customer. Failure to receive a bill shall not release a Customer from the obligation to pay the amount for any Service provided by the Company, nor shall it entitle the Customer to any delay or to any extension of the date after which a Late Payment Charge becomes applicable.



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Payment of a bill for Service may be requested by the Company from any or all of the Customers at a Service Connection, on a joint and several basis, even if the Customer no longer resides in the same premises when payment is due.

7.4 Late Payment Charge

The Company may add a Late Payment Charge as defined in Schedule D on any overdue account. An Overdue Account Fee as defined in Schedule D will be charged if a personal visit is required to collect an overdue amount.

7.5 Dishonoured Payments

The Company may add a Dishonoured Payment Fee, as defined in Schedule D, to a Customer's bill in respect of any cheque, or other form of payment tendered by the Customer as payment of a bill, that is returned by the Customer's bank for any reason.

Following the receipt of two (2) dishonoured payments from the Customer, the Company shall notify the Customer that only cash, a money order or certified cheque will be accepted for payment.

7.6 Remedies for Non-Payment

If a Customer fails to pay a bill for Service by the due date, the Company may use any legal remedy available to the Company to recover payment, including, without limiting the generality of the foregoing, recovery through the use of a collection agency. Reasonable costs incurred by the Company to recover payment may be added to the Customer's bill.

7.7 Totalized Metering

When Service is provided through multiple Points of Service to a Customer's plant site consisting of centralized processing facilities or product transportation facilities located on lands leased or owned by the Customer, where such multiple Points of Service are located within a radius of half a mile of each other, the Customer and



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Company may agree that the measured Demand and Energy at each Point of Service be totalized and only one bill issued for each billing period. The Customer shall pay the incremental metering cost associated with totalized metering.

7.8 Combined Service

A residential Customer shall notify the Company when the Customer receives Service at their premises for the purposes of operating a business or commercial undertaking. Subject to the discretion of the Company and in consultation with the Customer, the applicable General Service rate shall be applied in those cases in which Service for both residential and non-residential purposes is received by a Customer through a single meter.

7.9 Consolidated Billing

The Company will issue a separate bill for each Point of Service. However, the Customer and Company may agree that the Company will issue one bill totaling charges for service delivered at more than one Point of Service. The Customer may be billed for any program customization to accommodate a request for consolidated billing.

7.10 Unauthorized Use

Where the Company determines that there has been unauthorized use of electric service including, but not limited to, meter tampering, unauthorized connection or reconnection, theft, fraud, intentional or unintentional use of energy whereby the Company is denied full compensation for service provided, the Company may disconnect the Service, or take other appropriate actions. The Company will bill the Customer for the Company's estimate of such unauthorized use, plus all costs related to the investigation and resolution of the problem, including repairs of damage or reconstruction of Company Facilities. Nothing in this section shall limit any other rights or remedies that the Company may have in connection with such unauthorized use.



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7.11 Billing Error

The Customer must provide written notice to the Company in order to dispute any or all amounts owing on a bill. In the event the Customer disputes an amount owing, the Customer shall nonetheless pay such disputed amount. Following resolution of any such dispute, the Company will return any amount found owing to the Customer forthwith. The right or ability of the Company to adjust a bill for service provided hereunder shall only apply to bills rendered during a period of 12 months prior to the date of the written notice of the dispute.

8. SERVICE CHANGES

8.1 Notice by Customer

A Customer shall give to the Company reasonable prior notice of any change in Service requirements, including any change in Connected Load to enable the Company to determine whether or not it can supply such revised Service without changes to its Facilities. The Customer shall not change its Service requirements without the Company's written permission.

8.2 Responsibility for Damage

Each Customer shall bear responsibility for and shall pay for any damage caused to the Company's Facilities as the result of the Customer changing the Customer's Service requirements without the permission of the Company.

8.3 Changes to Company Facilities

If the Company must modify its Facilities to accommodate a change in Service requirements the Customer shall pay for all costs in connection with such modification including the following costs:

- (a) the present value of Capital Recovery Stream(s) associated with the existing Facilities which are being removed, plus



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- (b) the actual cost of removing the existing Facilities, less the actual salvage value, less
- (c) any Available Company Investment, as specified in Schedule A.

9. COMPANY RESPONSIBILITY AND LIABILITY

9.1 Continuous Supply

The Company shall make all reasonable efforts to maintain a continuous supply of Energy to its Customers, but the Company cannot guarantee an uninterrupted supply of Energy.

Whenever the Company reasonably determines, and without liability of any kind, the Company reserves the right to disconnect, curtail, interrupt, or reduce Service to Customers:

- (a) to facilitate construction, installation, maintenance, repairs, replacement or inspection of any of the Company's Facilities, or to permit the connection or disconnection of other Customers;
- (b) to maintain the safety and reliability of the Company's Facilities; or
- (c) for any other reason related to dangerous or hazardous circumstances including emergencies, forced outages, potential overloading of the Company's Facilities or Force Majeure.

The Company shall use reasonable efforts to minimize any scheduled curtailment, interruption or reduction in supply to the extent reasonably practicable under the circumstances, to provide the Customer with prior notification of any such curtailment, interruption or reduction to the extent reasonably practicable, and to resume the Customer's Service Connection as promptly as reasonably practicable.



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9.2 Company Liability

Notwithstanding anything to the contrary contained in these Terms and Conditions, the Company shall not be liable for any loss, injury, damage, expense, charge, cost or liability of any kind, whether of direct, indirect, special or consequential nature, (excepting only direct physical loss, injury or damage to a Customer or a Customer's property, resulting from the negligent acts or omissions of the Company, its employees or agents) arising out of or in any way connected with the provision of service by the Company to its Customers including, but not limited to, any failure, defect, fluctuation, reduction or interruption in the provision of Service by the Company to its Customers or the Company's failure to meet an In-Service Date provided that the Company has made reasonable efforts to meet the said In-Service Date. For the purposes of the foregoing and without otherwise restricting the generality thereof, "direct physical loss, injury or damage" shall not include loss of revenue, loss of profits, loss of earnings, loss of production, loss of contract, cost of purchased or replacement capacity and Energy, cost of capital, and loss of use of any Facilities or property, or any other similar damage or loss whatsoever.

9.3 Force Majeure

Should the Company be unable, because of Force Majeure, to provide a continuous supply of Energy to a Customer, the Company's responsibilities, so far as they are affected by the Force Majeure, shall be relieved and suspended during the duration of such circumstances and the Company shall not be liable for any failure to perform any terms of these Terms and Conditions to the extent that and when such failure is due to, or is a consequence of, an event of Force Majeure. Where practical, the Company shall give notice to the affected Customers of such Force Majeure.

10. CUSTOMER RESPONSIBILITY AND LIABILITY



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10.1 Approvals

The Customer shall be responsible for obtaining all permits, certificates, licenses, inspections, reports, and other authorizations necessary for the installation and operation of the Service Connection. The Company shall not be required to commence or continue installation or operation of a Service Connection unless and until the Customer has complied with the requirements of all permits, certificates, licenses, inspections, reports and other authorizations, and all right-of-way agreements, and all Company requirements applicable to the installation and operation of the Service Connection.

10.2 Customer Responsibility

The Customer shall be solely responsible for the use, installation, condition and maintenance of all facilities, including but not limited to wiring, equipment and apparatus on the Customer's side of the Point of Service, except Facilities owned by the Company. Where a Customer uses its Service Connection in a manner that causes interference with the operation of the Company's Facilities or with any Customer's use of a Service Connection, such as abnormal voltage levels, frequency levels, flicker levels, or harmonic and interharmonic levels, at the Company's request, and at the Customer's own expense, the Customer shall take whatever action is required to correct the interference or disturbance. Alternatively, the Company may elect to correct the interference or disturbance at the Customer's expense.

10.3 Customer Liability

The Customer assumes full responsibility for the proper use of Facilities and for the condition, suitability and safety of any and all wires, cables, devices or equipment energized on the Customer's premises or on premises owned or controlled by the Customer that are not the Customer's property.



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The Customer shall be responsible for and shall pay for any damage to the Company's Facilities located upon the Customer's premises which is caused by the negligent acts or omissions or willful misconduct of the Customer or of anyone permitted by the Customer to be on the Customer's premises.

The Customer shall indemnify and save harmless the Company from and against any claim or demand for injury to persons or damage to property (including loss of use thereof and of any other property affected by the damage to property) arising out of or in any way connected with the use of the Service so long as such injury or damage is not caused by the negligent acts or omissions or willful misconduct of the Company, its employees or agents.

The Customer releases the Company and its agents, directors, officers, employees, independent contractors, representatives, successors and assigns from any and all claims and liabilities whatsoever relating to or arising as a result of the Customer, or its agents, directors, officers, employees, independent contractors, representatives, successors and assigns carrying out any acts required by these Terms and Conditions for the provision of Service, maintenance of Service, or any other act whatsoever arising out of or in any way connected with the existence or use of the Service so long as such injury or damage is not caused by the negligent acts or omissions or willful misconduct of the Company, its employees or agents.

10.4 Service Calls

The Company may require a Customer to pay the actual costs of a Customer requested service call if the source of the problem is the Customer's facilities.

10.5 Protective Devices

The Customer shall be responsible for determining whether any devices are required to protect their equipment from damage that may result from the provision of Service by the Company. The Customer shall provide and install any such devices.

11. TERMINATION OF SERVICE



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11.1 Termination By Customer

Except where otherwise provided in a written agreement between the Company and a Customer, a Customer may, at any time, give the Company reasonable written or verbal notice to terminate service. Upon receipt of such notice, the Company shall read the Customer's meter within a reasonable time, and, shall use its best efforts to read the Customer's meter at the time requested by the Customer. A Customer shall pay for all Service provided to the time of such reading.

11.2 Company Termination for Safety Reasons

The Company may, without notice, terminate a Customer's Service where, in the Company's opinion:

- (a) the Customer has permitted the wiring of their facilities to become hazardous;
- (b) the wiring of the Customer's facilities fails to comply with applicable law; or
- (c) the use of the Service may cause damage to the Company's Facilities or interfere with or disturb Service to any other Customer.

The Company will reconnect the Service when the safety problem is resolved and when the Customer has provided, or paid the Company's costs of providing, such devices or equipment as may be necessary to resolve such safety problem and to prevent such damage, interference or disturbance. The Company may assess a Reconnection Fee, as defined in Schedule D.

11.3 Company Termination Other Than for Safety

The Company, or anyone acting under its authority, may, upon giving at least 48 hours' notice to the Customer, terminate the Customer's Service or install a Current Limiting Device to restrict the Service to such Customer in a number of circumstances, including but not limited to, if the Customer:

- (a) fails to meet its obligation under these Terms and Conditions, the terms of a contract for Service, or of the Company's Rate Schedules;



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- (b) uses their Service Connection in such a way that causes interference with the operation of the Company's Facilities or any other Customer's use of a Service Connection resulting from abnormal voltage levels, frequency levels, flicker levels, or harmonic and interharmonic levels.
- (c) tampers with any Company Facilities;
- (d) neglects or refuses to pay the amount billed for Service due and owing to the Company by the date indicated on the bill for Service;
- (e) changes Service requirements without the permission of the Company;
- (f) makes use of the Service for illegal purposes or in circumstances where the Company has evidence of Energy theft, or fraud by the Customer.

11.4 Removal of Facilities

Upon discontinuance of Service for whatsoever reason, the Company shall be entitled to remove any of its Facilities located upon the property of the Customer and to enter upon the Customer's property for that purpose.



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SCHEDULE A: MAXIMUM AVAILABLE COMPANY INVESTMENT

1. Subject to the provisions of Article 2 of this Schedule "A", the maximum cost which the Company will incur to extend Service to a Point of Service (herein referred to as the "Maximum Available Company Investment") shall be determined as follows. Under no circumstances would the Maximum Company Investment exceed the Customer extension cost:

- (a) Residential Service:

~~2012~~2025: \$~~2,290~~3,060 per Single Family Dwelling and \$~~760~~1,020 per unit in a Multiple Dwelling;

~~2013: \$2,340 per Single Family Dwelling and \$780 per unit in a Multiple Dwelling;~~

- (b) General Service:

~~2012~~2025: \$~~330~~445 per kilowatt of estimated Billing Demand, which shall not be less than five kilowatts. -If the estimated life of the Service is less than 25 years or seasonal, then the Maximum Available Company Investment shall be determined in the manner described in Article 2;

~~2013: \$340 per kilowatt of estimated Billing Demand, which shall not be less than five kilowatts. If the estimated life of the Service is less than 25 years or seasonal, then the Maximum Company Investment shall be determined in the manner described in Article 2;~~

- (c) Municipal Street Lighting & Private Lighting Service:

Municipal Street Lighting Service: cost of installation

Private Lighting Service:

~~2012~~2025: \$~~1,310~~1,750 per light



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~~2013: \$1,340 per light~~

2. The investment in any extension of Service, whether or not specified in Article 1, above, shall consider the Load characteristics and service life of that type of Service. If the Company determines that the extension of Service deviates substantially from the norm, the Company will calculate the investment in the Service on a pro-rated basis of the full Maximum Company Investment for that class of customer.



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SCHEDULE B: STANDARD SUPPLY SPECIFICATIONS

The Company's standard supply specifications, which are in accordance with Canadian Standards Association standard CAN-C235-83, are as follows:

Residential:

- 240/120 V
- for services 100 amps or less, single phase, three wire
 - overhead secondary conductors are supplied by the Company
 - in designated areas, underground secondary conductors, labour to install conductors and protective raceways and trenching are supplied by the Customer.

General Service:

- 240/120 V
- single phase, three wire
 - overhead secondary conductors are supplied by the Company up to and including 150 kVa load
 - overhead secondary conductors with carrying capacity of greater than 150 kVa are supplied by the Customer.
 - underground secondary conductors and raceways are supplied and installed by the Customer

- 208Y/120 V
- three phase, four wire
 - overhead secondary conductors are supplied by the Company up to and including 150 kVa load
 - Overhead secondary conductors with carrying capacity of greater than 150 kVa are supplied by the Customer.
 - underground secondary conductors and raceways are supplied and installed by the Customer



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480Y/277 V

- three phase, four wire
- overhead secondary conductors are supplied by the Company for loads up to 150 kVa
- overhead secondary conductors are supplied by the Customer for loads greater than 150 kVa
- underground secondary conductors and raceways are supplied and installed by the Customer

600Y/347 V

- three phase, four wire
- overhead secondary conductors are supplied by the Company for loads up to 150 kVa
- overhead secondary conductors are supplied by the Customer for loads greater than 150 kVa
- underground secondary conductors are supplied and installed by the Customer.

If a Customer requires Service that is outside of the standard service specifications above, the Company will attempt to meet the Customer's needs. This arrangement may require an agreement outlining specific contract terms and conditions.



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SCHEDULE C: CONDITIONS OF UNDERGROUND SERVICE

Underground Extensions and Services

When a developer or Customer requests underground Service, the availability and suitability of underground Service will be determined by the Company taking into consideration:

- existing overhead Service availability,
- soil conditions, and
- the relative cost to supply overhead vs. underground.

If the Company determines that underground Service is suitable and available, the following rules and regulations apply:

- (a) All underground construction is subject to the Terms and Conditions of Service regarding Customer contributions. Underground services are subject to the Maximum Company Investment specified in Schedule A. Costs above the Maximum Company Investment are the responsibility of the developer or Customer.
- (b) The Company will supply, install and maintain all conductor and equipment associated with primary and secondary supply including duct and cable, risers, transformer vaults or pads, transformer and protective fences and/or blast walls, secondary duct, wire, and pedestals to the lot line, trenching and backfilling subject to Paragraph (a) above.
- (c) For single family residential services, the Customer shall provide a meter socket and service conductor protection in accordance with code from sixty centimeters below grade level to the line side of the meter socket and will ensure the Service has a minimum 100 ampere capacity. The Customer will supply route, trench, sand and backfill from the lot line or the pedestal to the meter socket location. The Customer will also install the expansion joint, duct, elbow, and strapping from the ground line to the meter base. The Company will install secondary conductor and equipment from the closest pedestal to a



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location on the line side of the meter base, subject to the Company investment specified in Schedule A.

- (d) For services which are not single family residential, (up to and including four-plexes), the secondary conductors and equipment from the meter socket up to, but not including the Company specified underground supply equipment (either a pedestal, riser structure, or transformer) must be supplied, installed, and maintained by the Customer except by written agreement with the Company. This includes, but is not limited to, all commercial, apartment, and condominium type developments.
- (e) The developer or Customer shall provide without cost to the Company such rights of way, easements, utility corridors, and transformer locations as the Company may require for the installation, operation, and maintenance of such extensions, which the developer or Customer shall keep free and clear of any buildings, structures, fences, pavement, trees, or any other obstructions which may hinder the Company in installing, maintaining, or removing its Facilities.

Underground Subdivisions:

In addition to the above, the following shall apply for underground extensions to supply new subdivisions:

- (a) The developer shall provide the Company a certified copy of the registered plan of subdivision and final construction plans showing the locations of sidewalks, curbs and gutters, driveways (if known) and underground utilities together with such evidence as the Company may require to the effect that all rules and regulations applicable to the development have been or will be complied with by the developer.
- (b) Survey stakes indicating the grades and property lines shall be installed and maintained by the developer.



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- (c) The surface of the ground for a distance of not less than 1.5 meters on each side of the alignments for the underground conductor lines shall be graded by the developer to within eight (8) centimeters of final grade.
- (d) Unless otherwise agreed to by the Company, the developer shall provide a survey for the location of transformers, street light bases, and cable routing, as required.
- (e) Permanent improvements other than sidewalks, curbs, and gutters may not be constructed by the developer until approved by the Company.



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SCHEDULE D: FEES AND SERVICE CHARGE SUMMARY

CONNECTION and RECONNECTION FEES

Connection Fee (4.1, 4.3, 4.11):

During normal business hours: \$50.00

Outside of normal business hours: Company's actual cost (min. \$50.00)

Reconnection Fee (4.15, 11.2)

During normal business hours: \$60.00

Outside of normal business hours: Company's actual cost (min. \$60.00)

LATE PAYMENT AND DISCONNECTION

Overdue Account Fee (4.15, 7.4) \$30.00 (personal visit)

Late Payment Charge (7.3, 7.4): 1.5% per month (19.56% per annum)

Dishonoured Payments (7.5): \$35.00

MISCELLANEOUS FEES / CHARGES

Meter Accuracy Test Handling Fee (6.3)

Self Contained (Cumulative) Meter \$100.00

Instrument (Interval) Meter \$200.00



Naka Power Utilities (Yellowknife)

TERMS AND CONDITIONS

OF

SERVICE

Effective: January 1, 2025
Supercedes: January 1, 2012

Board Decision: xx-xxxx



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1. INTRODUCTION

Northland Utilities (Yellowknife) Limited o/a Naka Power Utilities (Yellowknife)'s (Naka-YK) (hereinafter referred to as the "Company") Electric Service Tariff is comprised of Rate Schedules and these Terms and Conditions of Service, which are filed with the Public Utilities Board for the Northwest Territories (herein referred to as the "Board"), pursuant to the Public Utilities Act. The Company conducts its business activities in compliance with these Terms and Conditions.

These Terms and Conditions may not be changed without the approval of the Board. Parties having any inquiries or complaints regarding these Terms and Conditions may direct them directly to the Company or the Board.

The Company's Electric Service Tariff is available to the public during normal business hours at the business offices of the Company and at the offices of the Board and can be accessed on the Company's website at: <https://www.nakapower.com/en-ca.html>.



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2. INTERPRETATION

2.1 Definitions

The following words or phrases, when used in these terms and conditions, the Electric Service Tariff, or an application, contract or agreement for service, shall have the meaning set forth below:

“Billing Demand” - the Demand upon which billing to a Customer is based as specified in a rate schedule or contract. Demand may be estimated or measured by an approved demand meter.

“Board” - the Public Utilities Board for the Northwest Territories.

“Cancellation Costs” - means the aggregate of all actual costs and expenses incurred by the Company related to the work and all costs incurred by the Company in connection with the termination thereof including, but not limited to:

- (a) the cost of all equipment and material, inclusive of any deposit, restocking and cancellation charges;
- (b) the amount payable to any contractor for the supply of labour and miscellaneous materials;
- (c) the cost of engineering studies, surveying and drafting;
- (d) the fees of any consultant or professional retained by the Company;
- (e) the costs incurred in the process of obtaining easements, rights-of-way and regulatory approvals;
- (f) the expense of wages and benefits paid for services performed by the Company's employees;
- (g) the carrying costs incurred; and



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- (h) the costs incurred to salvage equipment and materials (net of any credit to the Company for reusable equipment and material), and the reclamation of any property used by the Company.

“Capital Cost” the cost of materials, labour, equipment, expenses and any other direct or indirect costs incurred by the Company in extending Service to a Point of Service.

“Capital Recovery Stream” – the series of payments designed to recover the invested capital over the life of the Service.

“Company” - Northland Utilities (Yellowknife) Limited o/a Naka Power Utilities (Yellowknife).

“Connected Load” - the sum of the capacities or ratings of the electric Energy consuming apparatus connected to a supplying system or any part of such system.

“Construction Contribution” - a specific payment by a Customer to offset Company costs incurred in providing Service that will primarily benefit that Customer or group of Customers only and not the other ratepayers in the distribution system. The contribution will be the difference between the cost of extending the Company's Facilities to serve a Customer and the Maximum Available Company Investment specified in Schedule A.

“Cost Sharing” - refers to the procedure of having a new Customer or group of Customers who connect to an existing facility for which another Customer or group of Customers has paid a contribution, assessed their share of that cost, and then is refunded to the existing Customer(s).

“Current Limiting Device” - a device that limits the amount of Demand available to a specific Customer.



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“Customer” - a person, firm, partnership, corporation, association or organization (including, without limitation, individual members of any unincorporated entity) to whom the Company provides any service hereunder or who receives any service hereunder. This would include joint tenants, whether or not their name appears on the application for Service.

“Demand” - the rate at which electric Energy is delivered by the Company, expressed in kilowatts, kilovolt amperes or other suitable unit, at a given instant or averaged over any designated period of time.

“Dwelling” - means a private residence consisting of single family living quarters, having, in one self-contained unit, at least sleeping quarters, a kitchen for domestic use and a bathroom.

“Energy” - electricity consumed expressed in kilowatt hours.

“Facilities” - a physical plant (including, without limitation, generating plants, transmission and distribution lines, transformers, meters, equipment and machinery).

“Force Majeure” - circumstances not reasonably within the control of the Company, including acts of God, strikes, lockouts or other industrial disturbances, acts of the public enemy, wars, blockades, insurrections, riots, pandemics, epidemics, landslides, lightning, earthquakes, fires, storms, floods, high water, washouts, inclement weather, orders or acts of civil or military authorities, civil disturbances, explosions, breakdown or accident to equipment, mechanical breakdowns, the intervention of federal, territorial, or local government or from any of their agencies or boards excluding Decisions and/or Orders made by the Board in the normal course of it exercising its authority to establish the revenue requirement of the parties to this agreement, the order or direction of any court, and any other cause, whether of the kind herein enumerated or otherwise.

“In-Service Date” - means the date on which the Company specifies the Service Connection is to be available.



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“Load” - the Demand and Energy delivered or required at any Point of Service.

“Load Factor” - the ratio of the average Demand (in kilowatts) supplied during a designated period to the peak or maximum Demand (in kilowatts) occurring in the period. To express Load Factor as a percentage:

- (a) multiply the Energy used in the period by 100;
- (b) multiply the maximum Demand by the number of hours in the period; and
- (c) divide (a) by (b).

“Maximum Available Company Investment” - the maximum investment in dollars which the Company will incur to extend Service to a Point of Service as set forth in Schedule A hereto;

“Multiple Dwelling” - a residential building containing more than one Dwelling unit which shares all or part of a Service Connection.

“Point of Service” - the point at which the Company’s service conductors are connected to the wires or apparatus of a Customer.

“Power Factor” - the ratio of the highest metered kilowatt Demand in a billing period to the highest metered kilovolt-ampere Demand in that same billing period.

“Satisfactory Credit Rating” – means that credit rating determined at the discretion of the Company, and may include the Customer having paid all bills on an existing Company account in full on or before the due date of the said bill for twelve consecutive months, or a similar payment record as established with another utility service provider within the past twelve months.

“Security Deposit” - an amount determined in accordance with Article 4.6.

“Service” – the providing of Energy and delivery by the Company to the Point of Service at the maximum Demand level required by the Customer.



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“Service Connection” - the Facilities required to physically connect the Customer's facilities to the Company's system.

“Single Family Dwelling” - a Dwelling that is not part of a Multiple Dwelling.

2.2 Conflicts

- (a) If there is any conflict between a provision expressly set out in an Order of the Board and these Terms and Conditions, the Order of the Board shall govern.
- (b) If there is any conflict between a provision expressly set out in these Terms and Conditions as may be amended from time to time, and any contract or agreement for service, the express provision of these Terms and Conditions shall govern, as of their effective date.

2.3 Headings

The division of these Terms and Conditions into sections, subsections and other subdivisions and the insertion of headings are for convenience of reference only and shall not affect the construction or interpretation of these Terms and Conditions.

2.4 Schedules and Appendices

The following schedules and appendices are attached to and form part of these Terms and Conditions:

- Schedule A - Maximum Company Investment
- Schedule B - Standard Supply Specifications
- Schedule C - Conditions for Underground Subdivisions
- Schedule D - Fees and Service Charge Summary



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3. GENERAL PROVISIONS

3.1 Board Approval

These Terms and Conditions have been approved by the Board. The Company may amend these Terms and Conditions by filing a notice of amendment with the Board. Included in the notice shall be notification of which Customer groups are affected by the amendment and an explanation of how affected Customers will be notified of the amendments. If the Board approves the notice of the amendment, the amendment will take effect upon the date set by the Board. If no specific date is set by the Board then the amendment will take effect on the date of the Board's Order approving the notice of amendment.

3.2 Effective Date

These Terms and Conditions are in effect as of the indicated effective date. Whenever the Company files notice of an amendment to these Terms and Conditions, or when the Board approves an amendment to these Terms and Conditions, revisions will be issued, with the effective date of the amendments indicated thereon.

3.3 Terms and Conditions Prevail

- (a) These Terms and Conditions, as amended from time to time, apply to the Company and to every Customer to which the Company provides a Service Connection.
- (b) The application for a Service Connection (whether verbal or written), the use by the Customer of a Service Connection or the payment by the Customer of an account rendered by the Company in relation to a Service Connection shall constitute acceptance by the Customer of these Terms and Conditions.



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- (c) No agreement can provide for the waiver or alteration of any part of these Terms and Conditions unless such agreement is first filed with and approved by the Board.

3.4 Ownership of Facilities

- (a) The Company remains the owner of all Facilities necessary to provide a Service Connection to the Customer, whether or not affixed to the Customer's facilities or land, unless an agreement between the Company and Customer specifically provides otherwise.
- (b) Payment made by the Customers for costs incurred by the Company in installing Facilities does not entitle Customers to ownership of any such Facilities, unless an agreement between the Company and the Customer specifically provides otherwise.

3.5 Use of Energy

Service is provided for a Customer's sole use and only for the purposes specified by contract or by the rate schedule applicable to such Service. A Customer shall not re-sell Energy.

3.6 Customer Extensions

A Customer shall not extend service Facilities beyond property owned or occupied by the Customer.

3.7 Customer Generation

A Customer must sign an agreement with the Company if the Customer wishes to have Service:

- (a) in parallel operation with; or
- (b) as supplementary, auxiliary or standby Service to any other source of electric Energy.



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3.8 Frequency and Voltage Levels

The Company will make every reasonable effort to supply Energy at 60 Hertz alternating current. The voltage levels and variations will comply with the Canadian Standards Association standards and shall be in accordance with the Company's standard supply specifications as specified in Schedule B.

3.9 Fees and Other Charges

The Company will provide all standard services hereunder pursuant to the approved Electric Service Tariff. All additional and supplementary services provided by the Company to a Customer will be charged a separate rate or fee, such as those included, without limitation, in Schedule D herein. Payment for these services shall be in accordance with the provisions of these Terms and Conditions.

4. APPLICATION FOR AND CONDITIONS OF SERVICE

4.1 General Requirements

Any applicant for Service may be required to sign an application or a contract for Service, and shall supply information respecting Load, preferred supply conditions and the manner in which Energy will be utilized. An applicant may also be required to establish a Satisfactory Credit Rating with the Company prior to being connected for Service.

The Company reserves the right to verify the identity of the Customer and the accuracy of the information provided and to require the Customer to sign an application in writing on forms provided by the Company. If a Customer is not of legal age, a Security Deposit may be required in order to obtain Services and, in addition, a person of legal age may be required to accept responsibility for the Services on that Customer's behalf.

Contracts for Service are not transferable. Persons taking over premises, where Energy has been used previously, must make a new application for Service and pay



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the necessary Connection Fee defined in Schedule D, per Article 4.3 and Security Deposit per Article 4.6.

In the event that a Customer cancels a project the Customer shall pay all additional costs related to the cancellation of their project, including Cancellation Costs, incurred by the Company.

4.2 Conditions of Service

Upon receipt of an application or contract for Service, the Company shall notify the applicant of any conditions which must be satisfied before the application or contract will be accepted and Service may be commenced. The Company will provide notice that a copy of the Terms and Conditions are available.

4.3 Connection Fee

Whenever a connection is made, the Customer will pay a non-refundable Connection Fee as defined in Schedule D, which shall be included in the Customer's first billing, or paid with the application for Service (save and except that, where the Customer has paid a Construction Contribution for the Service, the Connection Fee shall be deemed to be included in the Construction Contribution).

4.4 Terms and Conditions and Rate Schedule Apply

Whether or not a Customer has signed an application or contract for Service, these Terms and Conditions and the Rate Schedule applicable to the Service supplied by the Company shall apply. In addition to payments for Service, the Customer is required to pay the Company the amount of any tax or assessment levied by any tax authority on Service delivered to the Customers.

4.5 Application of Rate Schedules

The Company will endeavor to apply the rate schedule which applies to the Service and is most favorable to the Customer.



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Where the Customer's Service requirements change so that some other rate schedule(s) apply to the Service, the Company will change the Customer's billing accordingly.

A Customer may elect to have Service billed on any other rate schedule applicable to their Service requirements. Any change shall not be effective until the next complete billing period. An election under this section may not be made more than once in any 12-month period, unless the Customer's Service requirements change.

4.6 Security Deposit

(a) Security Deposit Requirements

The Company may require a Security Deposit from an applicant or Customer in the following circumstances:

- (i) applicant has not established a Satisfactory Credit Rating with the Company;
- (ii) the Customer's Service has been disconnected or restricted by a Current Limiting Device; or
- (iii) the Customer has not paid all past bills for Service.

If a Security Deposit is required and has not been provided prior to connection, it will be added to the bill for Service and due in full on the due date identified on the bill.

(b) Amount of Security Deposit

The amount to be deposited with the Company shall be determined by the Company at the time of the Service application and shall be based on an estimate of the total amount billed over a period of three months in which Energy consumption by the Customer is expected to be the highest. The Security Deposit required may be adjusted accordingly based on the Customer's actual use of the Service or other information made available to the Company.

(c) Interest on Security Deposit



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The Company will pay simple interest on the Security Deposit from the date the deposit is paid, at the rate specified from time to time in the Residential Tenancy Act of the Government of the Northwest Territories and such interest will be credited to the Customer's account on the first bill following December 31 of each year or when the deposit is refunded.

(d) Refunds of Security Deposit

The Company may refund a Security Deposit or credit the Customer's account with interest when:

- (i) the Customer's Service is disconnected, other than for default in payment of accounts, and the Customer has paid all amounts owing to the Company, or
- (ii) the Customer has established a Satisfactory Credit Rating.

(e) Use of Security Deposit

If a Customer fails to pay any amount billed, and collection action has been initiated by the Company, the Company may apply all or any portion of that Customer's Security Deposit to the unpaid amount, including interest. Upon termination of a Service Connection, the Company may apply all or any portion of that Customer's Security Deposit to the unpaid amount, including interest. The Customer will then be required to fully restore the Security Deposit before Service is reconnected or continued.

4.7 Delay in Taking Service - Other than Subdivision

Except in the case of a Customer who requests service to a subdivision, if Service is not taken within 30 days of the In-Service Date, the Company may begin billing the Customer for the minimum amount specified in the appropriate rate schedule or as specified in the contract between the Company and the Customer, whichever is greater.



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4.8 Extension of Service

(a) Customer Contribution to Construction Costs

If the Company's estimated costs of extending Facilities at the request of a Customer are less than the Maximum Available Company Investment specified in Schedule A for the type of Service provided, the Customer will not be required to make any contribution. In all other cases, an agreement for payment of the Construction Contribution must be made between the Customer and the Company before any work on the extension is commenced.

(b) Cost Sharing

If a new Customer shares a portion of an existing extension, the existing electrical Customer(s) may be entitled to cost sharing of the Construction Contribution based on the amount of extension shared. Cost sharing will be administered for a five year term commencing December 31 of the year of construction of the original extension. The Company will not administer refunds of less than \$50.00.

Non-metered, public Services, such as for street lights and heat tapes are not eligible for cost sharing.

4.9 Underground Facilities

In the event that the Company extends its Facilities underground, the extension shall be subject to the conditions set out in Schedule "C", Conditions of Underground Service attached hereto.

4.10 Conversion from Overhead to Underground Service

When a Customer requests that existing Company Facilities be converted from overhead to underground, the Customer may be charged for all costs incurred by the Company in connection with the conversion, including the following:



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- (a) the present value of Capital Recovery Stream(s) associated with the existing Facilities which are being removed, plus
- (b) the actual cost of removing the existing Facilities, less the actual salvage value, plus
- (c) the actual cost for the installation of the new underground Facilities, less any Available Company Investment as specified in Schedule A.

4.11 Temporary Service

Where the Company reasonably believes that a requested Service will be temporary, a Connection Fee as defined in Schedule D will be assessed and the Company may require the Customer requesting the Service to pay the Company's total estimated cost of installation and removal of the Facilities plus the cost of unsalvageable material. The Company may require that such payment be made before the temporary Service is installed.

4.12 Mobile Homes

Service shall normally be provided to mobile homes through separate points of delivery, based on the applicable residential rate schedule.

Service provided to common use areas (e.g., laundry facilities) in a mobile home park shall be separately metered and billed at the applicable General Service rate.

In mobile home parks or trailer courts where the Company reasonably believes homes are temporary, the Company may elect to provide Service only through the Point of Service billed to the mobile home park or trailer court.

4.13 Multiple Dwellings

Each individual unit within a Multiple Dwelling (including apartment and condominium buildings) will be served as a separate Point of Service and metered and billed individually on the applicable residential Rate Schedule. The Company and a Customer may agree that one bill will be issued covering all individual units in



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a Multiple Dwelling. Where the Company and a Customer have agreed that service to a Multiple Dwelling shall be delivered through a single Point of Service, the applicable General Service (non-residential) rate schedule will apply to the Service. Service provided to common use areas (eg. laundry facilities, hallways, etc.) shall be separately metered and billed at the applicable General Service rate.

4.14 Relocation of Company Facilities

Subject to any other provision of these Terms and Conditions of Service, the Company shall, at the request of the Customer, relocate the Facilities installed by the Company to provide Service to the Customer. The Customer requesting such relocation shall pay all costs incurred by the Company in so doing, and shall, if requested by the Company, pay, in advance of the Company undertaking such relocation, the estimated cost thereof. Following satisfactory completion of the work, the Customer will be invoiced or refunded the difference between the total estimated cost and the actual cost with applicable GST.

4.15 Reconnection

At such time as circumstances which resulted in disconnection of Service or restriction of Service through the installation of a Current Limiting Device (as provided by these Terms and Conditions) have been rectified to the satisfaction of the Company or the Customer has requested a reconnection after having requested a previous disconnection, the Company shall reconnect and continue the provision of Service to a Customer, whose Service was previously disconnected or restricted, upon payment by that Customer of:

- (a) any amount owing to the Company; and
- (b) a Reconnection Fee as defined in Schedule D, unless otherwise specifically provided in a contract with a Customer, and
- (c) the Security Deposit, if any, required under Section 4.6 hereof.



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If Service is reconnected within 12 months of disconnection, with the exception of seasonal Service, the Company may request that the Customer pay the minimum monthly bill for each month of disconnection.

The Company may add an Overdue Account Fee as defined in Schedule D if a site visit is required to attempt collection of overdue accounts and Service is not disconnected or for delivery of a notice of pending disconnection.

This section does not apply when a Customer's Service was disconnected for safety reasons (see Article 11.2).

5. RIGHTS-OF-WAY AND ACCESS TO FACILITIES

5.1 Easements

The Customer shall grant, or cause to be granted, to the Company, without cost to the Company, such easements or rights-of-way over, upon or under the property owned and controlled by the Customer as the Company reasonably requires for the construction, installation, maintenance, repair, and operation of the Facilities required for a Service Connection to the Customer, and for vegetation management, emergency response and all other obligations required to be performed by the Company hereunder.

5.2 Right of Entry

The Company's employees or agents shall have the right to enter a Customer's property at all reasonable times for the purpose of installing, maintaining, repairing, replacing, testing, monitoring, reading, disconnecting or removing the Company's Facilities and for any other purpose incidental to the provision of Service and the Customer shall not prevent or hinder the Company's entry. The Company will endeavor to provide reasonable notice to the Customer when the Company requires entry to the Customer's property for planned maintenance or repair to the Company's Facilities.



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5.3 Vegetation Management

The Customer shall permit the Company to manage vegetation on the property owned or controlled by the Customer to maintain proper clearances and reduce the risk of contact with the Company's Facilities. The Company shall endeavor to provide reasonable notice to a Customer before such work is performed.

Vegetation management in the vicinity of the high voltage distribution Facilities (primary system) is the responsibility of the Company. Vegetation will be maintained to established standards to reduce contact with the energized Facilities.

Vegetation management in the vicinity of the low voltage (service drops or secondary system) distribution Facilities on the Customer's property is the responsibility of the Customer. Where the Company determines that vegetation management is required to maintain the integrity of the Company's low voltage overhead Facilities, the Company may, at the Customer's expense, perform the work that is the responsibility of the Customer as set out herein. With respect to the low voltage overhead distribution Facilities only, the Company shall make reasonable efforts to notify the Customer that such work is required, and shall provide the Customer a reasonable opportunity to undertake the work required, before such work is performed by the Company.

5.4 Interference with Company's Facilities

Customers shall not install, or allow to be installed, any temporary or permanent structures that could interfere with the proper operation of the Company's Facilities or result in non-compliance with applicable legislation, statutes, standards, codes or regulations.

5.5 Customer Brushing

Customers requesting Service that requires the extension of Facilities to the Customer's property shall be responsible for brushing on the Customer's property in



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accordance with the Company's specifications. In addition, unobstructed access to each structure requiring Service must be provided.

6. METERS

6.1 Installation

(a) Provision and Ownership

Unless otherwise specifically provided in a contract with a Customer, the Company shall provide, install and seal all meters necessary for measuring the Energy and Demand supplied to each Customer.

Current transformers, voltage transformers and metering test switches (if required) will be supplied to the Customer for installation by the Customer's qualified personnel or contractor. Transformers shall be installed in accordance with the Company's specifications and all codes, legislation, and reference to applicable metering standards.

(b) Responsibility of Customer

Each Customer shall provide and install a CSA-approved meter receptacle or other CSA-approved Facilities acceptable to the Company for the installation of the Company's meter or metering equipment.

Metering equipment and installation specifications for each Customer's requirement will be made available upon request.

6.2 Location

Meter locations shall be approved by the Company having regard to the type of service being provided and so as to permit safe and convenient access to the meter by the Company. In the event a meter is installed on a meter pole, the pole shall be provided and maintained by the Customer in accordance with the provisions of the Canadian Electric Code and any other applicable legislation.



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Meter sockets for self-contained meters shall be mounted on the exterior of a building at an accessible location acceptable to the Company.

The centerline of the meter socket must be 1.5 to 1.8 meters above the finished grade or permanent platform of the Customer's facility and in an appropriately lighted area.

Metering instrument transformer enclosures shall contain only the Company's metering auxiliary equipment and shall not be used as a raceway, splitter box or cabinet for any other purpose.

6.3 Meter Tests and Adjustments

Unless otherwise specifically provided in a contract with a Customer, a meter may be inspected by the Company at any reasonable time. At the request of a Customer, and upon payment of the Company's Meter Accuracy Test Handling Fee defined in Schedule D plus the meter testing fee payable to the Government of Canada, the Company shall arrange for a meter to be tested or calibrated by an official designated for that purpose by Industry Canada or such other accredited agency as may, from time to time, be assigned with that responsibility.

If a test determines that the meter is not accurate within the limits set by government standards, the Customer's bill will be adjusted back to the time that the error can reasonably be determined to have commenced. Where the commencement of the error cannot reasonably be determined, it shall be deemed to have commenced three months before the test or on the date of the meter installation, whichever occurred later.

In the event that the test of the meter discloses that it is not accurate within the limits prescribed from time to time by such department, then any meter handling and testing fees paid by the Customer shall be refunded to the Customer.



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6.4 Access to Meters

The Company may, at any reasonable time, read, inspect, remove and test a meter installed on property owned or controlled by the Customer.

Where the Customer's Service address or location is generally locked during normal business hours, the Customer shall provide the Company with a key to permit access to the meter.

If the Company informs a Customer that reasonable access to metering equipment is not being provided, then the Customer must take immediate action to remedy the situation. If the Customer fails to remedy the situation within a reasonable time:

- (a) the Company, at its sole discretion, may estimate consumption until the situation has been remedied, in which case the Customer shall be billed on the basis of the Company's estimates; or
- (b) the Company will remedy the situation on behalf of the Customer and apply the costs to the Customer's next regular billing; or
- (c) both a) and b); or
- (d) the Company will discontinue Service in accordance with Section 11 of these Terms and Conditions of Service

7. METER READING AND BILLING

7.1 Time of Reading and Billing

Unless otherwise specifically provided in a contract with a Customer, meters shall be read monthly or bi-monthly or at such other intervals as are practical in the circumstances. Customer's bills will be based upon meter readings or estimates, for those billing periods when the meter is not read, made by the Company. Whenever a bill is based on an estimate, an adjustment to reflect actual usage will be made after the meter is next read.



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7.2 Calculation of Bills

The amount of any initial and final charges, other than Energy, may be prorated, based upon the ratio that the number of days that Service was provided to a Customer in the billing period to the total number of days in the billing period.

The Company may elect not to charge a Customer for the billing period if, during that period, Demand was five kilowatts or less, Service was provided for five days or less and Energy consumption was five kilowatt-hours or less.

For all new accounts, the Company may add the charges for Service provided during the initial period to the bill for the following billing period.

The Company may elect to change a Customer's meter reading schedule. Where a meter reading schedule is changed, any charges during the transition period between the old and new meter reading schedule, may be prorated based upon the ratio of the number of days that Service was provided to a Customer in the billing period to the total number of days in the billing period.

The Company may add to the Customer's bill any charges due and owing to the Company (e.g. construction contribution, account receivable charges, former overdue accounts etc.).

7.3 Payment

Payment of a bill for Service is due and payable on the date indicated thereon. A Late Payment Charge, as defined in Schedule D, will be applied by the Company on any overdue amount.

Bills shall be deemed rendered and other notices duly given when delivered to the Customer at the mailing address provided by the Customer. Failure to receive a bill shall not release a Customer from the obligation to pay the amount for any Service provided by the Company, nor shall it entitle the Customer to any delay or to any extension of the date after which a Late Payment Charge becomes applicable.



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Payment of a bill for Service may be requested by the Company from any or all of the Customers at a Service Connection, on a joint and several basis, even if the Customer no longer resides in the same premises when payment is due.

7.4 Late Payment Charge

The Company may add a Late Payment Charge as defined in Schedule D on any overdue account. An Overdue Account Fee as defined in Schedule D will be charged if a personal visit is required to collect an overdue amount.

7.5 Dishonoured Payments

The Company may add a Dishonoured Payment Fee, as defined in Schedule D, to a Customer's bill in respect of any cheque, or other form of payment tendered by the Customer as payment of a bill, that is returned by the Customer's bank for any reason.

Following the receipt of two (2) dishonoured payments from the Customer, the Company shall notify the Customer that only cash, a money order or certified cheque will be accepted for payment.

7.6 Remedies for Non-Payment

If a Customer fails to pay a bill for Service by the due date, the Company may use any legal remedy available to the Company to recover payment, including, without limiting the generality of the foregoing, recovery through the use of a collection agency. Reasonable costs incurred by the Company to recover payment may be added to the Customer's bill.

7.7 Totalized Metering

When Service is provided through multiple Points of Service to a Customer's plant site consisting of centralized processing facilities or product transportation facilities located on lands leased or owned by the Customer, where such multiple Points of Service are located within a radius of half a mile of each other, the Customer and



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Company may agree that the measured Demand and Energy at each Point of Service be totaled and only one bill issued for each billing period. The Customer shall pay the incremental metering cost associated with totaled metering.

7.8 Combined Service

A residential Customer shall notify the Company when the Customer receives Service at their premises for the purposes of operating a business or commercial undertaking. Subject to the discretion of the Company and in consultation with the Customer, the applicable General Service rate shall be applied in those cases in which Service for both residential and non-residential purposes is received by a Customer through a single meter.

7.9 Consolidated Billing

The Company will issue a separate bill for each Point of Service. However, the Customer and Company may agree that the Company will issue one bill totaling charges for service delivered at more than one Point of Service. The Customer may be billed for any program customization to accommodate a request for consolidated billing.

7.10 Unauthorized Use

Where the Company determines that there has been unauthorized use of electric service including, but not limited to, meter tampering, unauthorized connection or reconnection, theft, fraud, intentional or unintentional use of energy whereby the Company is denied full compensation for service provided, the Company may disconnect the Service, or take other appropriate actions. The Company will bill the Customer for the Company's estimate of such unauthorized use, plus all costs related to the investigation and resolution of the problem, including repairs of damage or reconstruction of Company Facilities. Nothing in this section shall limit any other rights or remedies that the Company may have in connection with such unauthorized use.



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7.11 Billing Error

The Customer must provide written notice to the Company in order to dispute any or all amounts owing on a bill. In the event the Customer disputes an amount owing, the Customer shall nonetheless pay such disputed amount. Following resolution of any such dispute, the Company will return any amount found owing to the Customer forthwith. The right or ability of the Company to adjust a bill for service provided hereunder shall only apply to bills rendered during a period of 12 months prior to the date of the written notice of the dispute.

8. SERVICE CHANGES

8.1 Notice by Customer

A Customer shall give to the Company reasonable prior notice of any change in Service requirements, including any change in Connected Load to enable the Company to determine whether or not it can supply such revised Service without changes to its Facilities. The Customer shall not change its Service requirements without the Company's written permission.

8.2 Responsibility for Damage

Each Customer shall bear responsibility for and shall pay for any damage caused to the Company's Facilities as the result of the Customer changing the Customer's Service requirements without the permission of the Company.

8.3 Changes to Company Facilities

If the Company must modify its Facilities to accommodate a change in Service requirements the Customer shall pay for all costs in connection with such modification including the following costs:

- (a) the present value of Capital Recovery Stream(s) associated with the existing Facilities which are being removed, plus



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- (b) the actual cost of removing the existing Facilities, less the actual salvage value, less
- (c) any Available Company Investment, as specified in Schedule A.

9. COMPANY RESPONSIBILITY AND LIABILITY

9.1 Continuous Supply

The Company shall make all reasonable efforts to maintain a continuous supply of Energy to its Customers, but the Company cannot guarantee an uninterrupted supply of Energy.

Whenever the Company reasonably determines, and without liability of any kind, the Company reserves the right to disconnect, curtail, interrupt, or reduce Service to Customers:

- (a) to facilitate construction, installation, maintenance, repairs, replacement or inspection of any of the Company's Facilities, or to permit the connection or disconnection of other Customers;
- (b) to maintain the safety and reliability of the Company's Facilities; or
- (c) for any other reason related to dangerous or hazardous circumstances including emergencies, forced outages, potential overloading of the Company's Facilities or Force Majeure.

The Company shall use reasonable efforts to minimize any scheduled curtailment, interruption or reduction in supply to the extent reasonably practicable under the circumstances, to provide the Customer with prior notification of any such curtailment, interruption or reduction to the extent reasonably practicable, and to resume the Customer's Service Connection as promptly as reasonably practicable.



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9.2 Company Liability

Notwithstanding anything to the contrary contained in these Terms and Conditions, the Company shall not be liable for any loss, injury, damage, expense, charge, cost or liability of any kind, whether of direct, indirect, special or consequential nature, (excepting only direct physical loss, injury or damage to a Customer or a Customer's property, resulting from the negligent acts or omissions of the Company, its employees or agents) arising out of or in any way connected with the provision of service by the Company to its Customers including, but not limited to, any failure, defect, fluctuation, reduction or interruption in the provision of Service by the Company to its Customers or the Company's failure to meet an In-Service Date provided that the Company has made reasonable efforts to meet the said In-Service Date. For the purposes of the foregoing and without otherwise restricting the generality thereof, "direct physical loss, injury or damage" shall not include loss of revenue, loss of profits, loss of earnings, loss of production, loss of contract, cost of purchased or replacement capacity and Energy, cost of capital, and loss of use of any Facilities or property, or any other similar damage or loss whatsoever.

9.3 Force Majeure

Should the Company be unable, because of Force Majeure, to provide a continuous supply of Energy to a Customer, the Company's responsibilities, so far as they are affected by the Force Majeure, shall be relieved and suspended during the duration of such circumstances and the Company shall not be liable for any failure to perform any terms of these Terms and Conditions to the extent that and when such failure is due to, or is a consequence of, an event of Force Majeure. Where practical, the Company shall give notice to the affected Customers of such Force Majeure.

10. CUSTOMER RESPONSIBILITY AND LIABILITY



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10.1 Approvals

The Customer shall be responsible for obtaining all permits, certificates, licenses, inspections, reports, and other authorizations necessary for the installation and operation of the Service Connection. The Company shall not be required to commence or continue installation or operation of a Service Connection unless and until the Customer has complied with the requirements of all permits, certificates, licenses, inspections, reports and other authorizations, and all right-of-way agreements, and all Company requirements applicable to the installation and operation of the Service Connection.

10.2 Customer Responsibility

The Customer shall be solely responsible for the use, installation, condition and maintenance of all facilities, including but not limited to wiring, equipment and apparatus on the Customer's side of the Point of Service, except Facilities owned by the Company. Where a Customer uses its Service Connection in a manner that causes interference with the operation of the Company's Facilities or with any Customer's use of a Service Connection, such as abnormal voltage levels, frequency levels, flicker levels, or harmonic and interharmonic levels, at the Company's request, and at the Customer's own expense, the Customer shall take whatever action is required to correct the interference or disturbance. Alternatively, the Company may elect to correct the interference or disturbance at the Customer's expense.

10.3 Customer Liability

The Customer assumes full responsibility for the proper use of Facilities and for the condition, suitability and safety of any and all wires, cables, devices or equipment energized on the Customer's premises or on premises owned or controlled by the Customer that are not the Customer's property.



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The Customer shall be responsible for and shall pay for any damage to the Company's Facilities located upon the Customer's premises which is caused by the negligent acts or omissions or willful misconduct of the Customer or of anyone permitted by the Customer to be on the Customer's premises.

The Customer shall indemnify and save harmless the Company from and against any claim or demand for injury to persons or damage to property (including loss of use thereof and of any other property affected by the damage to property) arising out of or in any way connected with the use of the Service so long as such injury or damage is not caused by the negligent acts or omissions or willful misconduct of the Company, its employees or agents.

The Customer releases the Company and its agents, directors, officers, employees, independent contractors, representatives, successors and assigns from any and all claims and liabilities whatsoever relating to or arising as a result of the Customer, or its agents, directors, officers, employees, independent contractors, representatives, successors and assigns carrying out any acts required by these Terms and Conditions for the provision of Service, maintenance of Service, or any other act whatsoever arising out of or in any way connected with the existence or use of the Service so long as such injury or damage is not caused by the negligent acts or omissions or willful misconduct of the Company, its employees or agents.

10.4 Service Calls

The Company may require a Customer to pay the actual costs of a Customer requested service call if the source of the problem is the Customer's facilities.

10.5 Protective Devices

The Customer shall be responsible for determining whether any devices are required to protect their equipment from damage that may result from the provision of Service by the Company. The Customer shall provide and install any such devices.

11. TERMINATION OF SERVICE



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11.1 Termination By Customer

Except where otherwise provided in a written agreement between the Company and a Customer, a Customer may, at any time, give the Company reasonable written or verbal notice to terminate service. Upon receipt of such notice, the Company shall read the Customer's meter within a reasonable time, and, shall use its best efforts to read the Customer's meter at the time requested by the Customer. A Customer shall pay for all Service provided to the time of such reading.

11.2 Company Termination for Safety Reasons

The Company may, without notice, terminate a Customer's Service where, in the Company's opinion:

- (a) the Customer has permitted the wiring of their facilities to become hazardous;
- (b) the wiring of the Customer's facilities fails to comply with applicable law; or
- (c) the use of the Service may cause damage to the Company's Facilities or interfere with or disturb Service to any other Customer.

The Company will reconnect the Service when the safety problem is resolved and when the Customer has provided, or paid the Company's costs of providing, such devices or equipment as may be necessary to resolve such safety problem and to prevent such damage, interference or disturbance. The Company may assess a Reconnection Fee, as defined in Schedule D.

11.3 Company Termination Other Than for Safety

The Company, or anyone acting under its authority, may, upon giving at least 48 hours' notice to the Customer, terminate the Customer's Service or install a Current Limiting Device to restrict the Service to such Customer in a number of circumstances, including but not limited to, if the Customer:

- (a) fails to meet its obligation under these Terms and Conditions, the terms of a contract for Service, or of the Company's Rate Schedules;



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- (b) uses their Service Connection in such a way that causes interference with the operation of the Company's Facilities or any other Customer's use of a Service Connection resulting from abnormal voltage levels, frequency levels, flicker levels, or harmonic and interharmonic levels.
- (c) tampers with any Company Facilities;
- (d) neglects or refuses to pay the amount billed for Service due and owing to the Company by the date indicated on the bill for Service;
- (e) changes Service requirements without the permission of the Company;
- (f) makes use of the Service for illegal purposes or in circumstances where the Company has evidence of Energy theft, or fraud by the Customer.

11.4 Removal of Facilities

Upon discontinuance of Service for whatsoever reason, the Company shall be entitled to remove any of its Facilities located upon the property of the Customer and to enter upon the Customer's property for that purpose.



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SCHEDULE A: MAXIMUM AVAILABLE COMPANY INVESTMENT

1. Subject to the provisions of Article 2 of this Schedule "A", the maximum cost which the Company will incur to extend Service to a Point of Service (herein referred to as the "Maximum Available Company Investment") shall be determined as follows. Under no circumstances would the Maximum Company Investment exceed the Customer extension cost:
 - (a) Residential Service:
2025: \$3,060 per Single Family Dwelling and \$1,020 per unit in a Multiple Dwelling;
 - (b) General Service:
2025: \$445 per kilowatt of estimated Billing Demand, which shall not be less than five kilowatts. If the estimated life of the Service is less than 25 years or seasonal, then the Maximum Available Company Investment shall be determined in the manner described in Article 2;
 - (c) Municipal Street Lighting & Private Lighting Service:
Municipal Street Lighting Service: cost of installation
Private Lighting Service:
2025: \$1,750 per light
2. The investment in any extension of Service, whether or not specified in Article 1, above, shall consider the Load characteristics and service life of that type of Service. If the Company determines that the extension of Service deviates substantially from the norm, the Company will calculate the investment in the Service on a pro-rated basis of the full Maximum Company Investment for that class of customer.



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SCHEDULE B: STANDARD SUPPLY SPECIFICATIONS

The Company's standard supply specifications, which are in accordance with Canadian Standards Association standard CAN-C235-83, are as follows:

Residential:

- 240/120 V
- for services 100 amps or less, single phase, three wire
 - overhead secondary conductors are supplied by the Company
 - in designated areas, underground secondary conductors, labour to install conductors and protective raceways and trenching are supplied by the Customer.

General Service:

- 240/120 V
- single phase, three wire
 - overhead secondary conductors are supplied by the Company up to and including 150 kVa load
 - overhead secondary conductors with carrying capacity of greater than 150 kVa are supplied by the Customer.
 - underground secondary conductors and raceways are supplied and installed by the Customer

- 208Y/120 V
- three phase, four wire
 - overhead secondary conductors are supplied by the Company up to and including 150 kVa load
 - Overhead secondary conductors with carrying capacity of greater than 150 kVa are supplied by the Customer.
 - underground secondary conductors and raceways are supplied and installed by the Customer



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480Y/277 V

- three phase, four wire
- overhead secondary conductors are supplied by the Company for loads up to 150 kVa
- overhead secondary conductors are supplied by the Customer for loads greater than 150 kVa
- underground secondary conductors and raceways are supplied and installed by the Customer

600Y/347 V

- three phase, four wire
- overhead secondary conductors are supplied by the Company for loads up to 150 kVa
- overhead secondary conductors are supplied by the Customer for loads greater than 150 kVa
- underground secondary conductors are supplied and installed by the Customer.

If a Customer requires Service that is outside of the standard service specifications above, the Company will attempt to meet the Customer's needs. This arrangement may require an agreement outlining specific contract terms and conditions.



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SCHEDULE C: CONDITIONS OF UNDERGROUND SERVICE

Underground Extensions and Services

When a developer or Customer requests underground Service, the availability and suitability of underground Service will be determined by the Company taking into consideration:

- existing overhead Service availability,
- soil conditions, and
- the relative cost to supply overhead vs. underground.

If the Company determines that underground Service is suitable and available, the following rules and regulations apply:

- (a) All underground construction is subject to the Terms and Conditions of Service regarding Customer contributions. Underground services are subject to the Maximum Company Investment specified in Schedule A. Costs above the Maximum Company Investment are the responsibility of the developer or Customer.
- (b) The Company will supply, install and maintain all conductor and equipment associated with primary and secondary supply including duct and cable, risers, transformer vaults or pads, transformer and protective fences and/or blast walls, secondary duct, wire, and pedestals to the lot line, trenching and backfilling subject to Paragraph (a) above.
- (c) For single family residential services, the Customer shall provide a meter socket and service conductor protection in accordance with code from sixty centimeters below grade level to the line side of the meter socket and will ensure the Service has a minimum 100 ampere capacity. The Customer will supply route, trench, sand and backfill from the lot line or the pedestal to the meter socket location. The Customer will also install the expansion joint, duct, elbow, and strapping from the ground line to the meter base. The Company will install secondary conductor and equipment from the closest pedestal to a



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location on the line side of the meter base, subject to the Company investment specified in Schedule A.

- (d) For services which are not single family residential, (up to and including four-plexes), the secondary conductors and equipment from the meter socket up to, but not including the Company specified underground supply equipment (either a pedestal, riser structure, or transformer) must be supplied, installed, and maintained by the Customer except by written agreement with the Company. This includes, but is not limited to, all commercial, apartment, and condominium type developments.
- (e) The developer or Customer shall provide without cost to the Company such rights of way, easements, utility corridors, and transformer locations as the Company may require for the installation, operation, and maintenance of such extensions, which the developer or Customer shall keep free and clear of any buildings, structures, fences, pavement, trees, or any other obstructions which may hinder the Company in installing, maintaining, or removing its Facilities.

Underground Subdivisions:

In addition to the above, the following shall apply for underground extensions to supply new subdivisions:

- (a) The developer shall provide the Company a certified copy of the registered plan of subdivision and final construction plans showing the locations of sidewalks, curbs and gutters, driveways (if known) and underground utilities together with such evidence as the Company may require to the effect that all rules and regulations applicable to the development have been or will be complied with by the developer.
- (b) Survey stakes indicating the grades and property lines shall be installed and maintained by the developer.



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- (c) The surface of the ground for a distance of not less than 1.5 meters on each side of the alignments for the underground conductor lines shall be graded by the developer to within eight (8) centimeters of final grade.
- (d) Unless otherwise agreed to by the Company, the developer shall provide a survey for the location of transformers, street light bases, and cable routing, as required.
- (e) Permanent improvements other than sidewalks, curbs, and gutters may not be constructed by the developer until approved by the Company.



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SCHEDULE D: FEES AND SERVICE CHARGE SUMMARY

CONNECTION and RECONNECTION FEES

Connection Fee (4.1, 4.3, 4.11):

During normal business hours: \$50.00

Outside of normal business hours: Company's actual cost (min. \$50.00)

Reconnection Fee (4.15, 11.2)

During normal business hours: \$60.00

Outside of normal business hours: Company's actual cost (min. \$60.00)

LATE PAYMENT AND DISCONNECTION

Overdue Account Fee (4.15, 7.4) \$30.00 (personal visit)

Late Payment Charge (7.3, 7.4): 1.5% per month (19.56% per annum)

Dishonoured Payments (7.5): \$35.00

MISCELLANEOUS FEES / CHARGES

Meter Accuracy Test Handling Fee (6.3)

Self Contained (Cumulative) Meter \$100.00

Instrument (Interval) Meter \$200.00

SECTION 12 – AFFILIATE TRANSACTIONS

200. Please refer to Section 5 for Related Party Transactions.

SECTION 13 – PRIOR BOARD DIRECTIONS

13.1 Summary

201. The following provides a response to prior Board Directions.

13.2 Board Directions

**Table 13.1: Naka Power Utilities (Yellowknife) 2017 GRR: Board Decision 17-2017
(Dated: December 28, 2017)**

Direction		Response
1	Since the historical capital additions were not subject to review as part of these proceedings, the Board agrees that the historical additions constituting the 2018 opening rate base should be subject to review at the time of the GRA expected to be filed in 2018. <i>(paragraph #37)</i>	For the Board's review, Naka-YK has included supporting information in Section 11.1 Attachment 1 in respect of all capital additions greater than \$100,000 over the period 2011 to 2020, as well as business cases for all capital additions greater than \$100,000 in the years 2021 to 2025.

202. Naka-YK requests that the Board confirm this directive is satisfied and that Naka-YK is relieved of this direction from Decision 17-2017.

SECTION 14 – SUPPLEMENTAL INFORMATION

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SECTION 15 – DISTRIBUTION RATE AND RIDER ADJUSTMENTS

15.1 Rider R – Revenue Adjustment Rider

203. In this Application, Naka-YK is requesting approval for a Revenue Adjustment – Rider R of 2.512 percent, effective November 1, 2024, and 4.384 percent, effective January 1, 2025. This Rider (as outlined in Section 15.1 Attachment 1) collects (or refunds) the difference between the revenue requirement and revenue on approved base rates which is currently set at -1.815 percent, as approved in Decision 6-2018. As detailed throughout the schedules and summarized in Schedule 15.1, the 2024 Revenue Requirement is \$1.567 million higher than 2024 forecast revenue at current rates, resulting in an incremental rate increase of 4.327 percent. In 2025, the Revenue Requirement is \$2.252 million higher than 2025 forecast revenue at current rates, resulting in an additional incremental rate increase to Rider R of 1.8724 percent.

204. The impact of the proposed Rider R increases on a sample residential and commercial customer's monthly bill has been determined for each customer class. An average monthly consumption of 600 kWh has been used for a sample residential customer and 1,000 kWh consumption and 5 kW demand for a sample general service customer.

Table 15.1: Impact of Proposed Rider R on Sample Monthly Bill

Customer Class	2024 Impact %	2025 Impact %
Residential	3.0	1.3
General Service	2.9	1.2



Revenue Adjustment Rider (Rider R)

Applicable

- Rider R is applicable to all rate classes defined by the Company for services provided in the City of Yellowknife. This rider collects (or refunds) the difference between the approved revenue requirement and revenue on approved base rates.

Rates

- All of the company's base rate revenue will be adjusted by:

Effective November 1, 2024	2.512%
Effective January 1, 2025	4.384%

SECTION 16 – DEFERRAL ACCOUNTS AND ADJUSTMENTS

16.1 Summary

205. The Deferral Accounts and Adjustments for which Naka-YK is seeking approval in this Application are as follows:

Table 16.1: Summary of Deferral Accounts and Adjustments (\$)

	Collection from (Refund to) Customers
Deferral Accounts	
Defined Benefit Pension Plan Cash Contribution Deferral	(\$25,000)
25 kV Conversion Project Deferral	\$10,493
Adjustments	
2017 General Rate Review True-Up Adjustment	(\$227,000)
Net Amount Due to Customers	(\$241,507)

16.2 Defined Benefit Pension Plan Cash Contribution Deferral

206. In accordance with the 2011-2013 GRA dated April 21, 2011, and subsequent Board Decision 13-2011 dated August 26, 2011, this deferral account flows through increases or decreases to Naka-YK's required cash contributions to the Defined Benefit Pension plan for 2013 and subsequent years. In the 2017 GRR Application, Naka-YK requested no changes to the deferral accounts which were previously approved, including the Defined Benefit Pension Plan Cash Contribution Deferral. The continuation of the previously approved deferrals was approved by the Board in Decision 17-2017.

207. The detailed calculations of the amount owing to or due from customers by year can be found in Schedule 16.1. The net amount Naka-YK is proposing to refund to customers for the years 2013-2023 is \$25,000.

16.3 25 kV Conversion Project Deferral

208. In 2004, Naka-YK received approval from the Board for an eight-year project to convert the 5 kV system serving the City of Yellowknife to 25 kV service. In Decision 7-2007, the Board approved a deferral account for this 25 kV project to flow

through the annual impact on revenue requirement of the difference between forecast and actual 25 kV capital additions, including the variance in the Depreciation expense, as well as income taxes from changes in the CCA. The 25 kV project was completed in 2012, as planned.

209. On June 7, 2013, Naka-YK submitted a 2012 Deferral Account Application, which addressed the impact on the 2012 revenue requirement of the difference between forecast and actual 25 kV capital additions. In that Application, Naka-YK indicated that it had determined a 25 kV deferral account balance of \$10,493, as of May 1, 2013. This balance was comprised of a \$15,493 under-collection as of April 30, 2013, which was partially offset by the net refund owing to customers of \$5,000 for the 2012 deferral amount. Due to the immateriality of the 25 kV deferral account balance, Naka-YK requested approval to settle this balance in a future Rider Application, which was approved by the Board in Decision 8-2013 dated June 14, 2013.

210. In this Application, Naka-YK is requesting approval to collect the \$10,493 balance owing from customers related to the 25 kV Conversion Project Deferral.

16.4 2017 General Rate Review True-Up Adjustment

211. On August 25, 2017, Naka-YK submitted the 2017 GRR Application to the Board. Included in the GRR Application was a request for approval for an Interim Refundable Rate Rider, Rider K, to begin refunding a preliminary surplus of \$842,000. In Board Decision 15-2017, the Board approved Rider K, as filed, which was implemented effective October 1, 2017.

212. On March 28, 2018, the Board issued Decision 6-2018 regarding Naka-YK's 2017 GRR Compliance Filing. In that decision, the Board approved Naka-YK's updated revenue surplus for 2017 of \$908,000. The Board also approved an adjustment to Naka-YK's rates to reflect the revised revenue requirement, Rider R, to be effective April 1, 2018.

213. In Decision 6-2018, the Board also approved Rider E – Temporary Refund/Surcharge Rider to be effective from April 1, 2018, to December 31, 2018, to refund the excess revenues related to 2017 and the first three-months of 2018. The amount of excess revenues to be refunded through Rider E was calculated as follows:¹

**Table 16.2: Revenue Surplus Refunded through Rider E
from April 1 – December 31, 2018
(\$000)**

Revenue Surplus	(\$908)
Refund from Interim Rider K	\$438
Remaining Revenue Surplus to be Refunded	(\$470)

214. As the revenue surplus approved by the Board for 2017² was \$908,000 and Rider E was intended to refund this surplus for 2017, as well as for the first three months of 2018, the calculation of the remaining revenue surplus to be refunded through Rider E of \$470,000 was incorrect. The corrected calculations are as follows:

**Table 16.3: Corrected Calculation of Revenue Surplus to be Refunded
(\$000)**

Revenue Surplus – 2017	(\$908)
Revenue Surplus – First 3 Months of 2018	(\$227)
Refund from Interim Rider K	\$438
Corrected Remaining Revenue Surplus to be Refunded	(\$697)
Amount Refunded from April 1 – December 31, 2018	(\$470)
Amount Remaining to Be Refunded	(\$227)

215. As a result of this error, Naka-YK is requesting approval in this Application to refund the remaining \$227,000 owing to customers.

¹ Northland Utilities (Yellowknife) Limited o/a Naka-YK, 2017 General Rate Review Application - Compliance Filing, Schedule 12.

² Decision 6-2018.

16.5 Carrying Charges

216. Once the deferral accounts and adjustment balances to be settled with customers are approved by the Board, Naka-YK will calculate carrying charges on the amounts and file the calculations with the Compliance Filing to this Application.

217. Naka-YK is not aware of a standard carrying charge rate that is utilized in the Northwest Territories. As such, for the purpose of calculating carrying charges on the deferral account and adjustment balances, Naka-YK is proposing to rely on the carrying charge rate methodology set out in AUC Rule 023.³ Currently, AUC Rule 023 specifies that carrying charges be set equal to the Bank of Canada Target for Overnight rate plus 1.75 percent.

16.6 Cost Recovery/Refund Rider – Rider H

218. Naka-YK proposes to utilize the Cost Recovery/Refund Rider – Rider H to refund the net deferral and adjustment balance, including associated carrying charges. The design of Rider H, including the period over which Naka-YK will refund the balance, will be detailed in the Compliance Filing to this Application.

³ https://media.auc.ab.ca/prd-wp-uploads/regulatory_documents/Consultations/Rule023.pdf.

SECTION 17 – BUSINESS CASES

219. Business Cases are provided for all projects greater than \$100,000 in accordance with the Negotiated Settlement approved in Decision 17-2011.

220. The Business Cases fall into the following two categories:

- (a) Business Cases not previously filed in Rate Applications for 2021-2023.

Number	Name
1	Rebuild & Pole Replacements (annual)
2	Streetlight Reconstruction & Additions (annual)
3	5L660 Pole Replacement and Realignment
4	Canadian Tire Line Re-Route
5	25 kV Feeders 5L640 and 5L641 Load Redistribution
6	ATCO CIS Replacement
7	Accommodation Requirements

- (b) 2024-2025 Capital Business Cases – these projects will be completed and added to the rate base in the Test Years.

Number	Name
1	Rebuild & Pole Replacements (annual)
2	Streetlight Reconstruction & Additions (annual)
8	Kam Lake NWTel Joint Use Clearances
9	Lift Station Reroute
10	Engle Business District Recloser
11	Streetlight Davit & Base Replacements
12	Advanced Metering Infrastructure

- (c) Future Capital Business Cases – a portion of this project will be completed and added to the rate base in Future Years.

Number	Name
12	Advanced Metering Infrastructure ¹

- (d) 2011-2020 Capital Additions costing more than \$100,000² have been included in Attachment 11.1.

¹ Advanced Meter Infrastructure is a multi-phase project starting in 2025 and continuing in 2027-2029.

² This threshold was agreed to in the Naka-NWT 2011-2013 Negotiated Settlement, para.12.