CAC #5

# Manitoba Hydro 2012/13 & 2013/14 General Rate Application

## Supporting Materials

## CAC Manitoba

## December 18, 2012

Public Interest Law Centre
of Legal Aid Manitoba
3rd floor – 287 Broadway
Winnipeg, MB R3C 0R9

A summary of the depreciation rates effective April 1, 2007 as compared to the depreciation rates effective April 1, 2011 and April 1, 2013 may be found in the tables on page 5-10, followed by a letter from Gannett Fleming, Inc. containing the depreciation rates to be used under GAAP, and by the full IFRS compliant Depreciation Study.

The following table provides a summary of the estimated changes to depreciation expense for electric operations for the 3 year period between 2012 and 2014:

| | Depreciation Expense ($ 000's) | | |
|---|---|---|---|
| | 2012 | 2013 | 2014 |
| **Change in service life - PP&E (net of contributions)** | (35,433) | (38,429) | (40,663) |
| **Change in Methodology (ELG)** | | | 32,307 |
| **Removal of Asset Retirement Costs from Depreciation** | | | (55,574) |
| **Net Impact** | **(35,433)** | **(38,429)** | **(63,930)** |

The significant changes in the depreciation study are discussed in the sections below.

Componentization & Change in Service Lives

In preparation for conversion to IFRS, Manitoba Hydro undertook a comprehensive review of existing depreciable component groupings, to determine whether IFRS requirements were met. IFRS is more rigorous than GAAP in terms of identifying separate components. As a result of this review, Manitoba Hydro determined that further componentization was required, primarily for generation and distribution assets. With the assistance of its depreciation consultant, Manitoba Hydro has established new component groupings consistent with the requirements of IFRS, and has completed a depreciation study based on these new component groupings.

Normally a depreciation study process is routine and involves updating the retirement experience of existing asset classes and reviewing operational factors to assess what new considerations are warranted. However, because of the new component groupings required under IFRS, an extensive effort involving accounting and operational personnel was required to research historical records and to assess operational factors of all new, existing and modified component groupings in order to establish account balances and to estimate service lives.

In addition, subject matter experts from the operational areas were able to provide information that has been developed through enhanced asset condition assessment processes that was not available in the 2005 depreciation study. This has resulted in less

reliance on statistical developed asset lives and more reliance on the enhanced operational information. This is particularly the case with respect to distribution plant where the increased reliance on operational information has significantly extended the service lives and resulted in the majority of the reduction in depreciation expense. For example, the extension in estimated service lives for Poles and Fixtures from 33 to 55 years is due, in part, to the introduction of bar-coding and the ability to specifically track the service lives of individual poles. Further, enhancements in the use of pole preservatives and other technologies in recent years have resulted in extended service lives for these and other plant assets.

The estimated impact of these changes for Manitoba Hydro electric operations is a decrease to depreciation expense (net of contributions) of $35.4 million in 2011/12, $38.4 million in 2012/13 and $40.7 million in 2013/14.

Change in methodology to Equal Life Group

There are two main methods used by utilities for calculating group depreciation -- the Average Service Life (ASL) procedure and the Equal Life Group (ELG) procedure.

An IFRS requirement is that any gains and losses on the disposal/retirement of an asset must be recognized immediately in income. This is different than the current North American regulatory practice of recording gains and losses in accumulated depreciation and this has resulted in the need to change the depreciation methodology to better match the recording of depreciation with the actual service life of the underlying assets.

The ASL procedure, which has been used by Manitoba Hydro in the past, calculates depreciation expense based upon the average life of all assets within each class. Although accepted for utility accounting under current Canadian accounting standards, this method is viewed as problematic from an IFRS perspective because, except for those assets which have a life exactly equal to the average service life of that group, assets are being depreciated over a longer or shorter timeframe than their expected service life.

The ELG procedure addresses this issue by developing depreciation rates with specific consideration of the expected retirement pattern for each asset within each class. Every asset in the class is depreciated over its own expected service life and therefore is expected to be fully depreciated (not over or under depreciated) when it is removed from service. The resulting depreciation expense calculations are in full compliance with IFRS and minimize retirement gains or losses that must be recognized in current income.

requirements and implementation of IFRS are generally aligned with the appropriate and reasonable depreciation practices and procedures commonly used for regulatory purposes.

In the view of Gannett Fleming, the use of an Iowa curve in the estimation of average service life and retirement expectations of a group of homogenous assets meets the requirements of IAS 16. However, the account structure of the utility must be analyzed to ensure that the assets included in each group are like in nature and service of the asset to the utility is similar. In this manner, it can be expected that any one of the assets in the group are equally likely to be subjected to any of the forces of retirement to which the group of assets are subjected.

In order to better meet the componentization requirements as discussed above, and to continue to use group accounting and depreciation practices, the company reviewed the type of physical assets included in all plant accounts. As a result of this review, Manitoba Hydro has developed a significant number of new accounts, particularly with regard to electric generation plant. Also as part of this development of new accounts, the company has recreated a database of aged plant accounting retirements and balances. Gannett Fleming used this database to perform a detailed retirement rate analysis as described previously in the report. In a limited number of accounts, Manitoba Hydro was not able to develop aged retirement balances. In these circumstances, Gannett Fleming statistically aged the unaged transactions in order that the retirement rate analysis could be completed for all accounts.

Survivor Curve Judgments. The survivor curve estimates were based on judgment which considered a number of factors. The primary factors were the statistical

provides a consistent method of estimating depreciation for electric plant. Iowa type survivor curves were used to depict the estimated survivor curves.

The estimates of net salvage were based on judgment which incorporated analyses of available historical data, a review of policies and outlook with management, a general knowledge of the electric utility industry, and comparisons of the salvage estimates from studies of other electric utilities. The estimates of net salvage are expressed as the average net salvage percent of the investment to be incurred or recovered upon its retirement.

RECOMMENDATIONS

The calculated annual depreciation accrual rates set forth herein apply specifically to electric plant in service as of March 31, 2005. Continued surveillance and periodic revisions are required to maintain use of appropriate depreciation rates. The survivor curves, amortization periods and net salvage percents determined in this study should be the basis for annual recalculations of the accrual rates. Complete depreciation studies, which re-evaluate these parameters, should be performed every three to five years.

RECOMMENDATIONS

The calculated annual depreciation accrual rates set forth herein apply specifically to plant in service as of March 31, 2010. Continued surveillance and periodic revisions are normally required to maintain continued use of appropriate depreciation rates, and to comply with the standards as set out in International Accounting Standard ("IAS") 16 of IFRS.

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.

MANITOBA HYDRO

SCHEDULE 2. CALCULATED ACCRUED DEPRECIATION, BOOK ACCUMULATED DEPRECIATION AND DETERMINATION OF ANNUAL PROVISION FOR TRUE-UP
FOR THE TWELVE MONTHS ENDED MARCH 31, 2010

| ACCOUNT | DESCRIPTION | SURVIVING ORIGINAL COST AS OF MARCH 31, 2010 | CALCULATED ACCRUED DEPRECIATION | BOOK ACCUMULATED DEPRECIATION | ACCUMULATED DEPRECIATION VARIANCE | | PROBABLE REMAINING LIFE | ANNUAL PROVISION FOR TRUE-UP | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | AMOUNT | PERCENT | | | |
| | (1) | (2) | (3) | (4) | (5) = (3)-(4) | (6) = (5)/(3) | (7) | (8)=(5)/(7) | |
| | **COMMUNICATION** | | | | | | | | |
| 5000B | BUILDINGS | 4,154,458 | 699,804 | 574,811 | 124,993 | 17.86 | 50.9 | 2,456 | |
| 5000C | BUILDING RENOVATIONS | 2,741,652 | 887,750 | 773,028 | 114,722 | 12.92 | 12.7 | 9,033 | ** |
| 5000D | BUILDING - SYSTEM CONTROL CENTRE | 15,857,686 | 2,970,157 | 2,435,337 | 534,820 | 18.01 | 49.9 | 10,718 | |
| 5000G | COMMUNICATION TOWERS | 8,733,929 | 1,827,718 | 1,324,964 | 502,754 | 27.51 | 40.4 | 12,444 | |
| 5000H | FIBRE OPTIC AND METALLIC CABLE | 117,999,925 | 25,692,882 | 15,180,344 | 10,512,538 | 40.92 | 22.0 | 477,843 | |
| 5000J | CARRIER EQUIPMENT | 119,230,804 | 53,498,641 | 37,005,633 | 16,493,008 | 30.83 | 7.4 | 2,228,785 | |
| 5000K | OPERATIONAL IT EQUIPMENT | 2,197,495 | 1,401,781 | 1,220,632 | 181,149 | 12.92 | 2.5 | 72,460 | ** |
| 5000M | MOBILE RADIO, TELEPHONE AND VIDEO CONFERENCING | 22,085,412 | 15,627,104 | 13,607,649 | 2,019,456 | 12.92 | 5.1 | 395,972 | ** |
| 5000N | OPERATIONAL DATA NETWORK | 8,530,264 | 2,447,746 | 2,131,429 | 316,317 | 12.92 | 5.4 | 58,577 | ** |
| 5000R | POWER SYSTEM CONTROL | 7,738,280 | 5,228,135 | 4,187,570 | 1,040,565 | 19.90 | 4.1 | 253,796 | |
| | **TOTAL COMMUNICATION** | **309,269,905** | **110,281,718** | **78,441,398** | **31,840,320** | **28.87** | | **3,522,083** | |
| | **MOTOR VEHICLES** | | | | | | | | |
| 6000E | PASSENGER VEHICLES | 1,304,413 | 524,561 | 278,987 | 245,574 | 46.82 | 4.0 | 61,394 | |
| 6000F | LIGHT TRUCKS | 52,299,249 | 23,436,917 | 22,656,047 | 780,870 | 3.33 | 4.7 | 166,143 | |
| 6000G | HEAVY TRUCKS | 61,004,014 | 25,444,402 | 21,612,533 | 3,831,869 | 15.06 | 7.4 | 517,820 | |
| 6000H | CONSTRUCTION EQUIPMENT | 17,016,205 | 6,026,089 | 5,037,993 | 988,096 | 16.40 | 7.5 | 131,746 | |
| 6000I | LARGE SOFT-TRACK EQUIPMENT | 13,146,265 | 4,170,185 | 2,827,041 | 1,343,144 | 32.21 | 11.5 | 116,795 | |
| 6000J | TRAILERS | 15,996,331 | 3,513,147 | 4,034,578 | (521,431) | (14.84) | 23.7 | (22,001) | |
| 6000K | MISCELLANEOUS VEHICLES | 5,724,654 | 2,531,307 | 2,945,366 | (414,059) | (16.36) | 5.1 | (81,188) | |
| | **TOTAL MOTOR VEHICLES** | **166,491,131** | **65,646,608** | **59,392,546** | **6,254,062** | **9.53** | | **890,708** | |
| | **BUILDINGS** | | | | | | | | |
| 8000B | BUILDINGS - GENERAL | 88,797,107 | 25,336,746 | 26,367,552 | (1,030,806) | (4.07) | 44.7 | (23,061) | |
| 8000C | BUILDING RENOVATIONS | 46,779,508 | 17,543,869 | 8,199,943 | 9,343,926 | 53.26 | 11.1 | 841,795 | ** |
| 8000D | BUILDING - 360 PORTAGE - CIVIL | 207,292,785 | 3,134,499 | 3,297,099 | (162,600) | (5.19) | 92.8 | (1,752) | |
| 8000E | BUILDING - 360 PORTAGE - ELECTRO/MECHANICAL | 65,888,581 | 2,864,820 | 2,097,639 | 767,181 | 26.78 | 31.2 | 24,589 | |
| | **TOTAL BUILDINGS** | **408,757,981** | **48,879,934** | **39,962,233** | **8,917,701** | **18.24** | | **841,572** | |
| | **GENERAL EQUIPMENT** | | | | | | | | |
| 9000H | TOOLS, SHOP AND GARAGE EQUIPMENT | 78,461,837 | 32,266,768 | 25,609,471 | 6,657,297 | 20.63 | 7.9 | 842,696 | ** |
| 9000K | COMPUTER EQUIPMENT | 48,379,758 | 21,246,665 | 10,308,698 | 10,937,967 | 51.48 | 2.5 | 4,375,187 | ** |
| 9000L | OFFICE FURNITURE AND EQUIPMENT | 21,726,896 | 4,008,883 | 4,689,826 | (680,943) | (16.99) | 16.6 | (41,021) | ** |
| 9000M | HOT WATER TANKS | 4,511,783 | 3,821,910 | 2,226,719 | 1,595,191 | 41.74 | 2.1 | 759,615 | ** |
| | **TOTAL GENERAL EQUIPMENT** | **153,080,275** | **61,344,226** | **42,834,715** | **18,509,511** | **30.17** | | **5,936,477** | |
| | **EASEMENTS** | | | | | | | | |
| A100A | EASEMENTS | 50,612,345 | 10,261,639 | 9,974,853 | 286,786 | 2.79 | 52.5 | 5,463 | |
| | **TOTAL EASEMENTS** | **50,612,345** | **10,261,639** | **9,974,853** | **286,786** | **2.79** | | **5,463** | |
| | **COMPUTER SOFTWARE AND DEVELOPMENT** | | | | | | | | |
| A200G | COMPUTER DEVELOPMENT - MAJOR SYSTEMS | 100,980,015 | 51,486,494 | 49,927,029 | 1,559,465 | 3.03 | 4.8 | 324,889 | |
| A200H | COMPUTER DEVELOPMENT - SMALL SYSTEMS | 42,827,602 | 20,884,256 | 22,172,434 | (1,288,178) | (6.17) | 5.8 | | ** |
| A200J | COMPUTER SOFTWARE - GENERAL | 5,076,404 | 1,864,607 | 1,979,619 | (115,012) | (6.17) | 3.5 | | ** |
| A200K | COMPUTER SOFTWARE - COMMUNICATION/OPERATIONAL | 3,639,540 | 2,483,317 | 2,059,432 | 423,885 | 17.07 | 2.9 | 146,167 | ** |
| A200L | OPERATIONAL SYSTEM MAJOR SOFTWARE - EMS/SCADA | 6,016,817 | 4,636,876 | 3,655,008 | 981,868 | 21.18 | 1.7 | 577,570 | |
| | **TOTAL COMPUTER SOFTWARE AND DEVELOPMENT** | **158,540,378** | **81,355,550** | **79,793,523** | **1,562,027** | **1.92** | | **1,048,625** | |
| | **TOTAL DEPRECIABLE ASSETS** | **12,067,737,939** | **3,815,828,705** | **4,410,288,464** | **(594,459,759)** | **(15.58)** | | **(6,791,243)** | |

* The account has no balance as of March 31, 2010 and rate will be used on a go-forward basis for future additions.
** On amortized account any true-up of less than 10% is not considered significant.
*** True-up was deemed as not significant or has been limited to the annual depreciation expenses.

MANITOBA HYDRO

SCHEDULE 2. CALCULATED ACCRUED DEPRECIATION, BOOK ACCUMULATED DEPRECIATION AND DETERMINATION OF ANNUAL PROVISION FOR TRUE-UP
FOR THE TWELVE MONTHS ENDED MARCH 31, 2010

| ACCOUNT | DESCRIPTION | SURVIVING ORIGINAL COST AS OF MARCH 31, 2010 | CALCULATED ACCRUED DEPRECIATION | BOOK ACCUMULATED DEPRECIATION | ACCUMULATED DEPRECIATION VARIANCE | | PROBABLE REMAINING LIFE | ANNUAL PROVISION FOR TRUE-UP | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | AMOUNT | PERCENT | | | |
| | (1) | (2) | (3) | (4) | (5) = (3)-(4) | (6) = (5)/(3) | (7) | (8)=(5)/(7) | |
| | **TRANSMISSION** | | | | | | | | |
| 2000F | ROADS, TRAILS AND BRIDGES | 4,045,718 | 1,118,735 | 937,453 | 181,282 | 16.20 | 28.5 | 6,361 | |
| 2000G | METAL TOWERS AND CONCRETE POLES | 340,022,220 | 90,153,172 | 99,791,962 | (9,638,790) | (10.69) | 59.8 | (161,184) | |
| 2000J | POLES AND FIXTURES | 104,983,312 | 31,662,039 | 37,079,466 | (5,417,427) | (17.11) | 36.6 | (148,017) | |
| 2000K | GROUND LINE TREATMENT | 1,410,002 | 406,685 | 384,224 | 22,461 | 5.52 | 7.1 | | ** |
| 2000L | OVERHEAD CONDUCTOR AND DEVICES | 304,577,152 | 101,223,234 | 131,135,862 | (29,912,628) | (29.55) | 44.1 | (678,291) | |
| 2000M | UNDERGROUND CABLE AND DEVICES | 1,167,763 | 668,351 | 669,421 | (1,070) | (0.16) | 19.5 | (55) | |
| | **TOTAL TRANSMISSION** | **756,206,167** | **225,232,216** | **269,998,388** | **(44,766,172)** | **(19.88)** | | **(981,186)** | |
| | **SUBSTATIONS** | | | | | | | | |
| 3000B | BUILDINGS | 109,491,690 | 43,169,830 | 48,643,362 | (5,473,532) | (12.68) | 39.1 | (139,988) | |
| 3000C | BUILDING RENOVATIONS | 32,047 | 13,582 | 15,351 | (1,769) | (13.03) | 11.5 | (154) | ** |
| 3000F | ROADS, STEEL STRUCTURES AND CIVIL SITE WORK | 109,211,425 | 30,704,401 | 36,248,752 | (5,544,351) | (18.06) | 36.0 | (154,010) | |
| 3000J | POLES AND FIXTURES | 7,810,315 | 2,159,493 | 2,630,995 | (471,502) | (21.83) | 25.4 | (18,563) | |
| 3100R | POWER TRANSFORMERS | 287,449,387 | 81,301,746 | 84,754,364 | (3,452,618) | (4.25) | 31.1 | (111,017) | |
| 3100S | OTHER TRANSFORMERS | 72,153,356 | 28,485,678 | 31,244,518 | (2,758,840) | (9.69) | 20.2 | (136,576) | |
| 3100T | INTERRUPTING EQUIPMENT | 156,214,257 | 57,460,857 | 62,510,255 | (5,049,398) | (8.79) | 26.8 | (188,410) | |
| 3100U | OTHER STATION EQUIPMENT | 503,404,372 | 177,009,144 | 190,927,472 | (13,918,328) | (7.86) | 26.0 | (535,320) | |
| 3100V | ELECTRONIC EQUIPMENT AND BATTERIES | 151,238,104 | 72,646,527 | 79,225,503 | (6,578,976) | (9.06) | 11.2 | (587,409) | |
| 3200M | SYNCHRONOUS CONDENSERS AND UNIT TRANSFORMERS | 111,737,981 | 39,137,448 | 40,432,632 | (1,295,184) | (3.31) | 38.9 | (33,295) | |
| 3200N | SYNCHRONOUS CONDENSER OVERHAULS | 11,320,594 | 2,820,878 | 2,861,617 | (40,739) | (1.44) | 9.8 | (4,157) | |
| 3200P | HVDC CONVERTER EQUIPMENT | 214,981,687 | 114,636,506 | 138,795,432 | (24,158,926) | (21.07) | 14.4 | (1,677,703) | |
| 3200S | HVDC SERIALIZED EQUIPMENT | 646,219,985 | 325,860,262 | 367,310,621 | (41,450,359) | (12.72) | 14.1 | (2,939,742) | |
| 3200U | HVDC ACCESSORY STATION EQUIPMENT | 55,177,090 | 23,419,465 | 29,083,976 | (5,664,511) | (24.19) | 25.2 | (224,782) | |
| 3200V | HVDC ELECTRONIC EQUIPMENT AND BATTERIES | 10,401,883 | 6,589,238 | 7,206,990 | (617,752) | (9.38) | 8.6 | (71,832) | |
| | **TOTAL SUBSTATIONS** | **2,446,844,172** | **1,005,415,055** | **1,121,891,841** | **(116,476,786)** | **(11.58)** | | **(6,822,958)** | |
| | **DISTRIBUTION** | | | | | | | | * |
| 4000A | UNDERGROUND DUCT AND CONDUIT - CONCRETE | 63,964,331 | 11,217,533 | 12,951,513 | (1,733,980) | (15.46) | 67.9 | (25,537) | |
| 4000C | UNDERGROUND DUCT - ROOF | 2,908,307 | 145,836 | 153,212 | (7,376) | (5.06) | 41.0 | (180) | |
| 4000G | METAL TOWERS | 4,571,448 | 1,173,035 | 2,355,833 | (1,182,798) | (100.83) | 37.0 | (31,968) | |
| 4000J | POLES AND FIXTURES | 566,174,558 | 127,369,656 | 264,136,310 | (136,766,654) | (107.38) | 40.3 | (3,393,713) | |
| 4000K | GROUND LINE TREATMENT | 33,145,019 | 15,894,039 | 16,746,756 | (852,717) | (5.37) | 5.7 | | ** |
| 4000L | OVERHEAD CONDUCTOR AND DEVICES | 613,820,471 | 134,801,042 | 245,433,977 | (110,632,935) | (82.07) | 40.1 | (2,758,926) | |
| 4000M | UNDERGROUND CABLE AND DEVICES - 66 KV | 19,523,432 | 2,161,937 | 2,297,161 | (135,224) | (6.25) | 55.0 | (2,459) | |
| 4000N | UNDERGROUND CABLE AND DEVICES - PRIMARY | 255,063,759 | 51,410,314 | 59,472,977 | (8,062,663) | (15.68) | 46.0 | (175,275) | |
| 4000P | UNDERGROUND CABLE AND DEVICES - SECONDARY | 193,755,072 | 48,230,397 | 55,909,148 | (7,678,751) | (15.92) | 33.1 | (231,986) | |
| 4000Q | SERIALIZED EQUIPMENT - OVERHEAD | 175,924,348 | 60,006,665 | 82,981,927 | (22,975,262) | (38.29) | 23.9 | (961,308) | |
| 4000R | DSC - HIGH VOLTAGE TRANSFORMERS | 5,415,940 | 509,552 | 706,487 | (196,935) | (38.65) | 34.8 | (5,659) | |
| 4000S | SERIALIZED EQUIPMENT - UNDERGROUND | 174,049,772 | 43,083,841 | 58,998,471 | (15,914,630) | (36.94) | 29.3 | (543,161) | |
| 4000V | ELECTRONIC EQUIPMENT | | | | | | | | */** |
| 4000W | SERVICES | 123,228,795 | 44,884,752 | 59,460,620 | (14,575,868) | (32.47) | 18.6 | (783,649) | |
| 4000X | STREET LIGHTING | 147,121,573 | 61,545,017 | 72,708,967 | (11,163,950) | (18.14) | 21.1 | (529,097) | |
| | **TOTAL DISTRIBUTION** | **2,378,666,825** | **602,433,616** | **934,313,358** | **(331,879,742)** | **(55.09)** | | **(9,442,919)** | |
| | **METERS** | | | | | | | | |
| 4900V | METERS - ELECTRONIC | 16,111,185 | 5,320,309 | 1,490,413 | 3,829,896 | 71.99 | 11.1 | 345,036 | |
| 4900Y | METERS - ANALOG | 22,469,156 | 16,861,536 | 5,931,142 | 10,930,394 | 64.82 | 4.4 | 2,484,180 | |
| 4900Z | METERING TRANSFORMERS | 8,984,899 | 3,313,305 | 3,413,836 | (100,531) | (3.03) | 22.6 | (4,448) | |
| | **TOTAL METERS** | **47,565,240** | **25,495,150** | **10,835,391** | **14,659,759** | **57.50** | | **2,824,768** | |

MANITOBA HYDRO

SCHEDULE 2. CALCULATED ACCRUED DEPRECIATION, BOOK ACCUMULATED DEPRECIATION AND DETERMINATION OF ANNUAL PROVISION FOR TRUE-UP
FOR THE TWELVE MONTHS ENDED MARCH 31, 2010

| ACCOUNT | DESCRIPTION | SURVIVING ORIGINAL COST AS OF MARCH 31, 2010 | CALCULATED ACCRUED DEPRECIATION | BOOK ACCUMULATED DEPRECIATION | ACCUMULATED DEPRECIATION VARIANCE | | PROBABLE REMAINING LIFE | ANNUAL PROVISION FOR TRUE-UP | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | AMOUNT | PERCENT | | | |
| | (1) | (2) | (3) | (4) | (5) = (3)-(4) | (6) = (5)/(3) | (7) | (8)=(5)/(7) | |
| **11700** | **LONG SPRUCE** | | | | | | | | |
| 1170A | DAMS, DYKES AND WEIRS | 64,744,494 | 17,136,124 | 18,797,519 | (1,661,395) | (0.10) | 85.2 | (19,500) | |
| 1170B | POWERHOUSE | 143,780,355 | 38,092,455 | 41,787,059 | (3,694,604) | (0.10) | 85.2 | (43,364) | |
| 1170C | POWERHOUSE RENOVATIONS | | | | | | | | */** |
| 1170D | SPILLWAY | 42,273,617 | 18,296,252 | 17,142,264 | 1,153,988 | 0.06 | 41.0 | 28,146 | |
| 1170E | WATER CONTROL SYSTEMS | 57,946,281 | 37,207,115 | 41,449,762 | (4,242,647) | (0.11) | 17.5 | (242,437) | |
| 1170F | ROADS AND SITE IMPROVEMENTS | 1,172,867 | 657,177 | 687,609 | (30,432) | (0.05) | 22.0 | (1,383) | |
| 1170G | TURBINES AND GENERATORS | 143,328,643 | 72,028,075 | 77,103,787 | (5,075,712) | (0.07) | 30.7 | (165,333) | |
| 1170H | GOVERNORS AND EXCITATION SYSTEM | 145,844 | 20,097 | 21,732 | (1,635) | (0.08) | 40.7 | (40) | |
| 1170L | LICENCE RENEWAL | | | | | | | | */** |
| 1170P | A/C ELECTRICAL POWER SYSTEMS | 30,503,528 | 17,655,095 | 18,542,547 | (887,452) | (0.05) | 21.3 | (41,664) | |
| 1170Q | INSTRUMENTATION, CONTROL AND D/C SYSTEMS | 4,409,200 | 3,518,156 | 3,373,611 | 144,545 | 0.04 | 6.9 | 20,949 | |
| 1170R | AUXILIARY STATION PROCESSES | 12,199,119 | 6,909,582 | 7,135,875 | (226,293) | (0.03) | 17.9 | (12,642) | |
| 1170X | SUPPORT BUILDINGS | 160,484 | 18,662 | 18,618 | 44 | 0.00 | 50.4 | 1 | |
| 1170W | SUPPORT BUILDING RENOVATIONS | | | | | | | | */** |
| | **TOTAL LONG SPRUCE** | **500,664,431** | **211,538,790** | **226,060,384** | **(14,521,594)** | **(0.07)** | | **(477,268)** | |
| **11750** | **LIMESTONE** | | | | | | | | |
| 1175A | DAMS, DYKES AND WEIRS | 33,258,073 | 5,378,081 | 5,756,238 | (378,157) | (0.07) | 96.8 | (3,907) | |
| 1175B | POWERHOUSE | 461,430,334 | 74,262,785 | 79,485,351 | (5,222,566) | (0.07) | 96.9 | (53,896) | |
| 1175C | POWERHOUSE RENOVATIONS | | | | | | | | */** |
| 1175D | SPILLWAY | 201,240,773 | 56,703,974 | 49,241,598 | 7,462,376 | 0.13 | 47.6 | 156,773 | |
| 1175E | WATER CONTROL SYSTEMS | 116,224,392 | 44,988,138 | 48,919,806 | (3,931,668) | (0.09) | 29.6 | (132,827) | |
| 1175F | ROADS AND SITE IMPROVEMENTS | 17,164,432 | 6,795,781 | 6,832,303 | (36,522) | (0.01) | 28.5 | (1,281) | |
| 1175G | TURBINES AND GENERATORS | 403,825,745 | 124,076,655 | 130,029,479 | (5,952,824) | (0.05) | 42.0 | (141,734) | |
| 1175H | GOVERNORS AND EXCITATION SYSTEM | 16,584,271 | 6,439,021 | 6,847,507 | (408,486) | (0.06) | 29.2 | (13,989) | |
| 1175L | LICENCE RENEWAL | | | | | | | | */** |
| 1175P | A/C ELECTRICAL POWER SYSTEMS | 144,317,307 | 57,149,653 | 57,457,004 | (307,351) | (0.01) | 28.5 | (10,784) | |
| 1175Q | INSTRUMENTATION, CONTROL AND D/C SYSTEMS | 8,333,373 | 5,237,449 | 4,778,396 | 459,053 | 0.09 | 9.1 | 50,445 | |
| 1175R | AUXILIARY STATION PROCESSES | 36,054,205 | 16,111,470 | 15,631,104 | 480,366 | 0.03 | 21.2 | 22,659 | |
| 1175X | SUPPORT BUILDINGS | 5,703,494 | 1,625,607 | 1,616,130 | 9,477 | 0.01 | 42.6 | 222 | |
| 1175W | SUPPORT BUILDING RENOVATIONS | | | | | | | | */** |
| | **TOTAL LIMESTONE** | **1,444,136,399** | **398,768,614** | **406,594,917** | **(7,826,303)** | **(0.02)** | | **(128,319)** | |
| **11800** | **WUSKWATIM** | | | | | | | | |
| 1180A | DAMS, DYKES AND WEIRS | | | | | | | | * |
| 1180B | POWERHOUSE | | | | | | | | * |
| 1180C | POWERHOUSE RENOVATIONS | | | | | | | | */** |
| 1180D | SPILLWAY | | | | | | | | * |
| 1180E | WATER CONTROL SYSTEMS | | | | | | | | * |
| 1180F | ROADS AND SITE IMPROVEMENTS | | | | | | | | * |
| 1180G | TURBINES AND GENERATORS | | | | | | | | * |
| 1180H | GOVERNORS AND EXCITATION SYSTEM | | | | | | | | * |
| 1180P | A/C ELECTRICAL POWER SYSTEMS | | | | | | | | * |
| 1180Q | INSTRUMENTATION, CONTROL AND D/C SYSTEMS | | | | | | | | * |
| 1180R | AUXILIARY STATION PROCESSES | | | | | | | | * |
| 1180X | SUPPORT BUILDINGS | | | | | | | | * |
| 1180W | SUPPORT BUILDING RENOVATIONS | | | | | | | | */** |
| | **TOTAL WUSKWATIM** | **0** | **0** | **0** | **0** | **0.00** | | **0** | |
| **11990** | **INFRASTRUCTURE SUPPORTING GENERATION** | | | | | | | | |
| 1199F | PROVINCIAL ROADS | 25,380,938 | 14,256,798 | 13,691,986 | 564,812 | 0.04 | 21.8 | 25,909 | |
| 1199V | TOWN SITE BUILDINGS | 63,280,714 | 21,821,338 | 18,850,678 | 2,970,660 | 0.14 | 38.2 | 77,766 | |
| 1199W | TOWN SITE BUILDINGS RENOVATIONS | 13,502,581 | 2,082,369 | 809,439 | 1,272,930 | 0.61 | 16.0 | 79,558 | ** |
| 1199Y | TOWN SITE OTHER INFRASTRUCTURE | 26,527,464 | 6,785,574 | 6,187,988 | 597,586 | 0.09 | 30.3 | 19,722 | |
| | **TOTAL INFRASTRUCTURE SUPPORTING GENERATION** | **128,691,696** | **44,946,079** | **39,540,091** | **5,405,988** | **0.12** | | **202,955** | |
| | **TOTAL HYDRAULIC GENERATION** | **4,716,467,183** | **1,387,538,329** | **1,536,957,059** | **(149,418,730)** | **(0.11)** | | **(3,303,866)** | |

Based on the retirement rate analysis, and on the expectations of operational staff, Gannett Fleming recommends an Iowa 43-R2 curve.

Account 3100V – Electronic Equipment and Batteries, represents 6% of the substations assets and 1% of the depreciable assets studied. Comparable utilities within the electric industry have lives ranging from 15 and 25 years. The retirement pattern as shown at page IV-103 shows modest retirements starting about year five and increasing thereafter. Based on the retirement rate analysis, and on the expectations of operational staff, Gannett Fleming recommends an Iowa curve of 20-R2.

Account 3200P – HVDC Converter Equipment, represents 9% of the substations assets and 2% of the depreciable assets studied. The retirement pattern as shown on page IV-108 shows modest retirements starting about year nine and slowly increasing until about age 25 and increasing at a faster rate thereafter. Based on the retirement rate analysis, and on the expectations of operational staff, Gannett Fleming recommends an Iowa 25-R3 curve.

Account 3200S – HVDC Serialized Equipment, represents 26% of the substations assets and 5% of the depreciable assets studied. The retirement pattern as shown on page IV-110 shows retirements starting at year two and then increasing thereafter. Based on the retirement rate analysis, and on the expectations of operational staff, Gannett Fleming recommends an Iowa 25-R2 curve.

DISTRIBUTION ACCOUNTS

Account 4000J – Poles and Fixtures, represents 24% of the distribution assets and 5% of the depreciable assets studied. The poles are a mix of pine and cedar with wood poles making up about 99.5% of the poles in service. Typical industry lives for

wood poles range from 38 to 55 years. The retirement rate analysis as shown on pages IV-122 and IV-123 has indicated a preliminary average service life estimate of the Iowa 34-R3, which was at the short end of the range of peer industry comparable companies.

Manitoba Hydro operational staff confirmed the Gannett Fleming view that the statistically developed 34-year average service life estimate was too short for this account, and should have an average service life of at least 55 to 60 years. Based on all factors, Gannett Fleming recommends an Iowa 55-R3 curve, which maintains the retirement dispersion shape from the retirement rate analysis, conforms to the view of the Manitoba Hydro operational staff, and is within the range of industry peers.

Account 4000L – Overhead Conductor and Devices, represents 26% of the distribution assets and 5.1% of the depreciable assets studied. The retirement rate analysis as shown on pages IV-125 and IV-126 has indicated a preliminary average service life estimate of the Iowa 32-R2, which was at the short end of the range of peer industry comparable companies. Typical industry averages show lives ranging from 45 to 60 years, which is longer than the statistically developed life estimate of 32 years.

Operational staff indicated they are seeing no major issues with conductors and they would expect lives to be longer than the 55-year life estimate recommended for the poles account as the conductor is not always replaced when poles are retired. Based on all factors, Gannett Fleming recommends an Iowa 60-R2 curve, which maintains the retirement dispersion shape from the retirement rate analysis, conforms to the view of the Manitoba Hydro operational staff, and is within the range of industry peers.

Account 4000N – Underground Cable and Devices – Primary, represents 11% of the distribution assets and 2% of the depreciable assets studied. Operational staff

**PUB/MH I-82**

**Reference: Tab 5.0/Appendix 5.7/Gannett Fleming**

**e) Life span estimates of distribution (GF – P. II-34)**
**Please explain the rationale for increasing the service life of distribution assets to 55-60 years from MH's previous statistically developed 34 years.**

**ANSWER:**

The following response was prepared by Gannett Fleming.

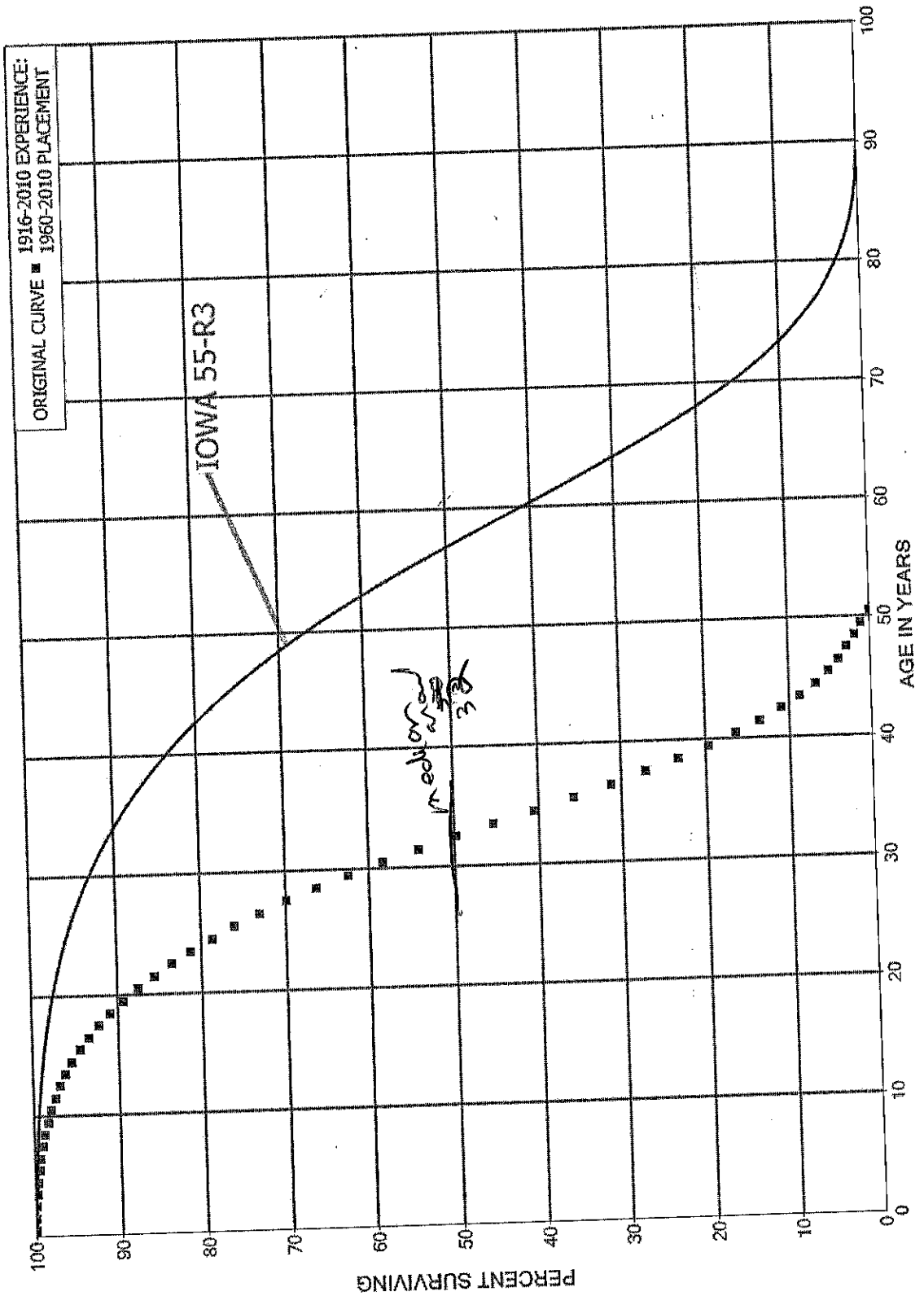
In the current depreciation study, the average service life estimates for the two largest Distribution Accounts (4000J – Poles and Fixtures and 4000L – Overhead Conductors and Devices) have increased dramatically. In the 2005 study these assets were formally in the Distribution – Poles, Conductor and Attachments accounts for Distribution (with a 31-year life) and Sub-Transmission (with a 38-year life). The average service life estimates in the 2005 depreciation study were based predominantly on the results of a study where the original installation years of retirements were not known, but rather were statistically developed using the computed mortality method. The interviews with Manitoba Hydro operational staff in 2005 did not provide an indication that the lives were materially short. The peer group analysis undertaken for the 2005 study indicated average service life estimates from 30 to 52 years.

However, the in current study, the Manitoba Hydro operational staff were confident that the life estimate for Poles should be materially lengthened from the life estimates as determined in the statistical retirement study. Gannett Fleming has also witnessed a trend to longer average service life estimates among the peer group analyzed. Additionally, the Province of Ontario has recently released the results of a depreciation study related to electric distribution assets that have indicated average service life estimates much longer than the currently used Manitoba life estimates. While the statistically generated studies have only indicated a small increase in life estimates, Gannett Fleming placed an increased amount of reliance on the industry trends and comments received from the Manitoba Hydro operational staff. Gannett Fleming notes that a significant amount of review of life characteristics has been undertaken by the MH operational staff over the past 18 month period. During the operational interviews the Manitoba Hydro operational staff was able to provide empirical evidence that the results of the life study were resulting in life estimates that were too short for the plant currently in service. Gannett Fleming feels that it is prudent at this time to place greater relevance on the comments of the MH operational staff than on the results of the mortality

study for these two accounts. Based on these factors, Gannett Fleming viewed that the use of a life estimate no longer than the longest of the peer group was appropriate.

ATTACHMENT 1

MANITOBA HYDRO
ACCOUNT 4000J - POLES AND FIXTURES
ORIGINAL AND SMOOTH SURVIVOR CURVES



ATTACHMENT 1

MANITOBA HYDRO

ACCOUNT 4000J - POLES AND FIXTURES

ORIGINAL LIFE TABLE

PLACEMENT BAND 1960-2010 EXPERIENCE BAND 1916-2010

| AGE AT BEGIN OF INTERVAL | EXPOSURES AT BEGINNING OF AGE INTERVAL | RETIREMENTS DURING AGE INTERVAL | RETMT RATIO | SURV RATIO | PCT SURV BEGIN OF INTERVAL |
|---|---|---|---|---|---|
| 0.0 | 640,302,274 | 161,906 | 0.0003 | 0.9997 | 100.00 |
| 0.5 | 609,761,195 | 375,907 | 0.0006 | 0.9994 | 99.97 |
| 1.5 | 576,567,933 | 462,125 | 0.0008 | 0.9992 | 99.91 |
| 2.5 | 548,125,828 | 563,046 | 0.0010 | 0.9990 | 99.83 |
| 3.5 | 522,264,045 | 669,927 | 0.0013 | 0.9987 | 99.73 |
| 4.5 | 496,987,564 | 793,823 | 0.0016 | 0.9984 | 99.60 |
| 5.5 | 469,904,027 | 927,817 | 0.0020 | 0.9980 | 99.44 |
| 6.5 | 440,102,196 | 1,066,411 | 0.0024 | 0.9976 | 99.25 |
| 7.5 | 393,251,723 | 1,165,684 | 0.0030 | 0.9970 | 99.01 |
| 8.5 | 370,972,791 | 1,324,158 | 0.0036 | 0.9964 | 98.71 |
| 9.5 | 349,527,336 | 1,501,496 | 0.0043 | 0.9957 | 98.36 |
| 10.5 | 324,397,893 | 1,647,860 | 0.0051 | 0.9949 | 97.94 |
| 11.5 | 292,467,078 | 1,772,685 | 0.0061 | 0.9939 | 97.44 |
| 12.5 | 262,987,600 | 1,876,403 | 0.0071 | 0.9929 | 96.85 |
| 13.5 | 242,899,446 | 2,008,133 | 0.0083 | 0.9917 | 96.16 |
| 14.5 | 217,749,581 | 2,111,967 | 0.0097 | 0.9903 | 95.36 |
| 15.5 | 199,746,647 | 2,233,780 | 0.0112 | 0.9888 | 94.44 |
| 16.5 | 181,525,566 | 2,308,134 | 0.0127 | 0.9873 | 93.38 |
| 17.5 | 164,385,453 | 2,422,722 | 0.0147 | 0.9853 | 92.20 |
| 18.5 | 147,210,072 | 2,550,206 | 0.0173 | 0.9827 | 90.84 |
| 19.5 | 135,706,010 | 2,629,010 | 0.0194 | 0.9806 | 89.26 |
| 20.5 | 126,090,036 | 2,729,219 | 0.0216 | 0.9784 | 87.53 |
| 21.5 | 114,969,094 | 2,782,703 | 0.0242 | 0.9758 | 85.64 |
| 22.5 | 104,461,117 | 2,849,021 | 0.0273 | 0.9727 | 83.57 |
| 23.5 | 94,584,155 | 2,918,701 | 0.0309 | 0.9691 | 81.29 |
| 24.5 | 84,216,420 | 2,920,508 | 0.0347 | 0.9653 | 78.78 |
| 25.5 | 74,340,118 | 2,922,194 | 0.0393 | 0.9607 | 76.05 |
| 26.5 | 65,411,749 | 2,917,845 | 0.0446 | 0.9554 | 73.06 |
| 27.5 | 56,105,577 | 2,833,015 | 0.0505 | 0.9495 | 69.80 |
| 28.5 | 48,391,317 | 2,774,021 | 0.0573 | 0.9427 | 66.27 |
| 29.5 | 41,311,092 | 2,669,644 | 0.0646 | 0.9354 | 62.48 |
| 30.5 | 34,483,495 | 2,530,869 | 0.0734 | 0.9266 | 58.44 |
| 31.5 | 28,796,064 | 2,333,014 | 0.0810 | 0.9190 | 54.15 |
| 32.5 | 23,740,269 | 2,127,395 | 0.0896 | 0.9104 | 49.76 |
| 33.5 | 17,645,785 | 1,853,768 | 0.1051 | 0.8949 | 45.30 |
| 34.5 | 12,807,327 | 1,523,847 | 0.1190 | 0.8810 | 40.54 |
| 35.5 | 9,296,076 | 1,181,665 | 0.1271 | 0.8729 | 35.72 |
| 36.5 | 6,828,335 | 890,887 | 0.1305 | 0.8695 | 31.18 |
| 37.5 | 5,067,957 | 728,380 | 0.1437 | 0.8563 | 27.11 |
| 38.5 | 3,663,916 | 564,738 | 0.1541 | 0.8459 | 23.21 |

ATTACHMENT 1

MANITOBA HYDRO

ACCOUNT 4000J - POLES AND FIXTURES

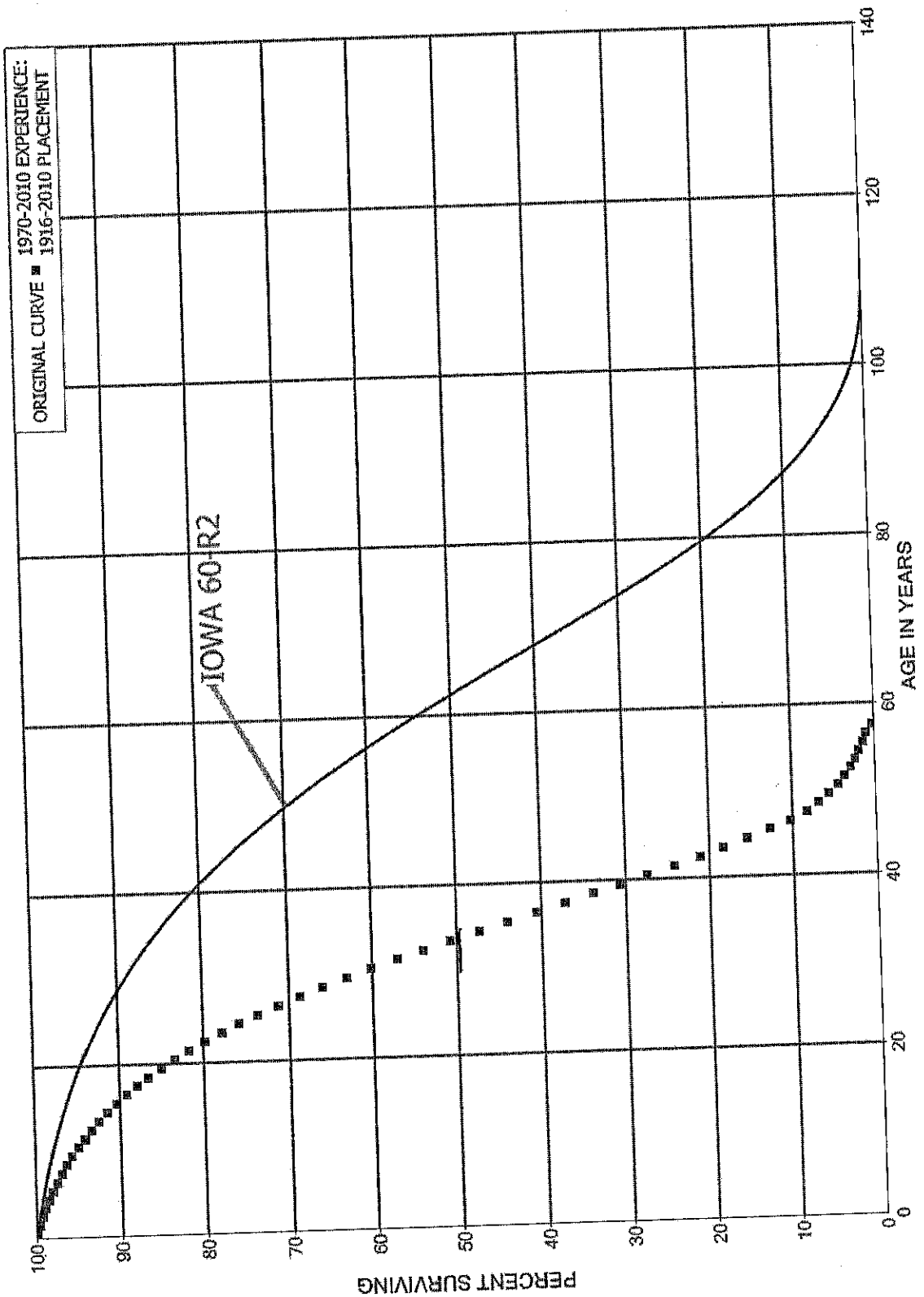
ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1960-2010 EXPERIENCE BAND 1916-2010

| AGE AT BEGIN OF INTERVAL | EXPOSURES AT BEGINNING OF AGE INTERVAL | RETIREMENTS DURING AGE INTERVAL | RETMT RATIO | SURV RATIO | PCT SURV BEGIN OF INTERVAL |
|---|---|---|---|---|---|
| 39.5 | 2,631,352 | 437,363 | 0.1662 | 0.8338 | 19.64 |
| 40.5 | 1,858,717 | 330,611 | 0.1779 | 0.8221 | 16.37 |
| 41.5 | 1,274,391 | 240,883 | 0.1890 | 0.8110 | 13.46 |
| 42.5 | 846,515 | 174,642 | 0.2063 | 0.7937 | 10.92 |
| 43.5 | 555,136 | 125,899 | 0.2268 | 0.7732 | 8.66 |
| 44.5 | 348,467 | 83,727 | 0.2403 | 0.7597 | 6.70 |
| 45.5 | 202,143 | 50,808 | 0.2513 | 0.7487 | 5.09 |
| 46.5 | 110,860 | 28,075 | 0.2532 | 0.7468 | 3.81 |
| 47.5 | 59,795 | 20,340 | 0.3402 | 0.6598 | 2.85 |
| 48.5 | 21,103 | 9,296 | 0.4405 | 0.5595 | 1.88 |
| 49.5 | 1,439 | 1,439 | 1.0000 | | 1.05 |
| 50.5 | | | | | |

ATTACHMENT 1

MANITOBA HYDRO
ACCOUNT 4000L - OVERHEAD CONDUCTOR AND DEVICES
ORIGINAL AND SMOOTH SURVIVOR CURVES



ATTACHMENT 1

MANITOBA HYDRO

ACCOUNT 4000L - OVERHEAD CONDUCTOR AND DEVICES

ORIGINAL LIFE TABLE

PLACEMENT BAND 1916-2010 EXPERIENCE BAND 1970-2010

| AGE AT BEGIN OF INTERVAL | EXPOSURES AT BEGINNING OF AGE INTERVAL | RETIREMENTS DURING AGE INTERVAL | RETMT RATIO | SURV RATIO | PCT SURV BEGIN OF INTERVAL |
|---|---|---|---|---|---|
| 0.0 | 680,302,669 | 999,865 | 0.0015 | 0.9985 | 100.00 |
| 0.5 | 649,714,090 | 2,052,258 | 0.0032 | 0.9968 | 99.85 |
| 1.5 | 614,887,051 | 2,158,731 | 0.0035 | 0.9965 | 99.54 |
| 2.5 | 585,242,617 | 2,278,794 | 0.0039 | 0.9961 | 99.19 |
| 3.5 | 557,871,658 | 2,367,474 | 0.0042 | 0.9958 | 98.80 |
| 4.5 | 530,779,166 | 2,486,640 | 0.0047 | 0.9953 | 98.38 |
| 5.5 | 501,441,421 | 2,586,868 | 0.0052 | 0.9948 | 97.92 |
| 6.5 | 468,959,768 | 2,664,137 | 0.0057 | 0.9943 | 97.42 |
| 7.5 | 421,532,147 | 2,631,021 | 0.0062 | 0.9938 | 96.86 |
| 8.5 | 398,451,287 | 2,715,963 | 0.0068 | 0.9932 | 96.26 |
| 9.5 | 375,811,202 | 2,805,286 | 0.0075 | 0.9925 | 95.60 |
| 10.5 | 349,050,733 | 2,842,387 | 0.0081 | 0.9919 | 94.89 |
| 11.5 | 314,737,182 | 2,835,785 | 0.0090 | 0.9910 | 94.12 |
| 12.5 | 283,518,795 | 2,814,215 | 0.0099 | 0.9901 | 93.27 |
| 13.5 | 262,393,569 | 2,832,006 | 0.0108 | 0.9892 | 92.34 |
| 14.5 | 237,667,918 | 2,814,991 | 0.0118 | 0.9882 | 91.35 |
| 15.5 | 220,132,761 | 2,853,354 | 0.0130 | 0.9870 | 90.26 |
| 16.5 | 203,846,819 | 2,890,540 | 0.0142 | 0.9858 | 89.09 |
| 17.5 | 186,412,988 | 2,901,064 | 0.0156 | 0.9844 | 87.83 |
| 18.5 | 169,282,392 | 2,916,231 | 0.0172 | 0.9828 | 86.46 |
| 19.5 | 156,372,680 | 2,930,161 | 0.0187 | 0.9813 | 84.97 |
| 20.5 | 145,502,171 | 2,984,642 | 0.0205 | 0.9795 | 83.38 |
| 21.5 | 132,848,949 | 2,981,806 | 0.0224 | 0.9776 | 81.67 |
| 22.5 | 121,510,131 | 2,982,564 | 0.0245 | 0.9755 | 79.84 |
| 23.5 | 110,702,841 | 2,966,113 | 0.0268 | 0.9732 | 77.88 |
| 24.5 | 100,232,486 | 2,938,146 | 0.0293 | 0.9707 | 75.79 |
| 25.5 | 89,576,170 | 2,890,848 | 0.0323 | 0.9677 | 73.57 |
| 26.5 | 80,005,396 | 2,840,953 | 0.0355 | 0.9645 | 71.20 |
| 27.5 | 70,632,502 | 2,773,334 | 0.0393 | 0.9607 | 68.67 |
| 28.5 | 62,788,727 | 2,731,227 | 0.0435 | 0.9565 | 65.97 |
| 29.5 | 55,911,792 | 2,638,335 | 0.0472 | 0.9528 | 63.10 |
| 30.5 | 49,313,544 | 2,525,359 | 0.0512 | 0.9488 | 60.12 |
| 31.5 | 43,398,386 | 2,365,921 | 0.0545 | 0.9455 | 57.05 |
| 32.5 | 37,674,627 | 2,248,758 | 0.0597 | 0.9403 | 53.94 |
| 33.5 | 31,541,675 | 2,111,691 | 0.0669 | 0.9331 | 50.72 |
| 34.5 | 26,308,363 | 1,892,165 | 0.0719 | 0.9281 | 47.32 |
| 35.5 | 22,033,182 | 1,691,048 | 0.0768 | 0.9232 | 43.92 |
| 36.5 | 18,437,918 | 1,545,495 | 0.0838 | 0.9162 | 40.55 |
| 37.5 | 15,565,308 | 1,389,209 | 0.0893 | 0.9107 | 37.15 |
| 38.5 | 13,106,740 | 1,251,677 | 0.0955 | 0.9045 | 33.83 |

ATTACHMENT 1

MANITOBA HYDRO

ACCOUNT 4000L - OVERHEAD CONDUCTOR AND DEVICES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1916-2010 EXPERIENCE BAND 1970-2010

| AGE AT BEGIN OF INTERVAL | EXPOSURES AT BEGINNING OF AGE INTERVAL | RETIREMENTS DURING AGE INTERVAL | RETMT RATIO | SURV RATIO | PCT SURV BEGIN OF INTERVAL |
|---|---|---|---|---|---|
| 39.5 | 11,082,936 | 1,167,122 | 0.1053 | 0.8947 | 30.60 |
| 40.5 | 9,202,728 | 1,095,223 | 0.1190 | 0.8810 | 27.38 |
| 41.5 | 7,554,361 | 949,743 | 0.1257 | 0.8743 | 24.12 |
| 42.5 | 6,226,544 | 843,551 | 0.1355 | 0.8645 | 21.09 |
| 43.5 | 4,882,498 | 753,402 | 0.1543 | 0.8457 | 18.23 |
| 44.5 | 3,734,952 | 678,595 | 0.1817 | 0.8183 | 15.42 |
| 45.5 | 2,720,057 | 527,442 | 0.1939 | 0.8061 | 12.62 |
| 46.5 | 1,973,992 | 380,724 | 0.1929 | 0.8071 | 10.17 |
| 47.5 | 1,441,361 | 262,389 | 0.1820 | 0.8180 | 8.21 |
| 48.5 | 992,105 | 182,838 | 0.1843 | 0.8157 | 6.71 |
| 49.5 | 628,310 | 119,039 | 0.1895 | 0.8105 | 5.48 |
| 50.5 | 399,939 | 74,582 | 0.1865 | 0.8135 | 4.44 |
| 51.5 | 250,630 | 50,224 | 0.2004 | 0.7996 | 3.61 |
| 52.5 | 151,751 | 29,767 | 0.1962 | 0.8038 | 2.89 |
| 53.5 | 115,716 | 24,568 | 0.2123 | 0.7877 | 2.32 |
| 54.5 | 71,656 | 22,598 | 0.3154 | 0.6846 | 1.83 |
| 55.5 | 25,216 | 6,979 | 0.2768 | 0.7232 | 1.25 |
| 56.5 | 4,990 | 3,959 | 0.7933 | 0.2067 | 0.91 |
| 57.5 | | | | | 0.19 |

the AC system due to the technology used. The selected Iowa 32-R3 Iowa curve reflects this increased retirement activity and is considered appropriate for this account.

Distribution systems comprise 16% of the depreciable plant studied. Of this investment, Account 3996 – Poles, Conductors, and Attachments constitutes 47% of the surviving plant. The retirements, additions and other plant transactions through 2005 were studied for these accounts. The Company had a previously approved life estimate of 28 years for this account. It is anticipated that the current trend of slightly decreasing retirements will continue over the next few years. Therefore, the 31-R2 Iowa curve, which was developed based on the retirement history of this account is appropriate.

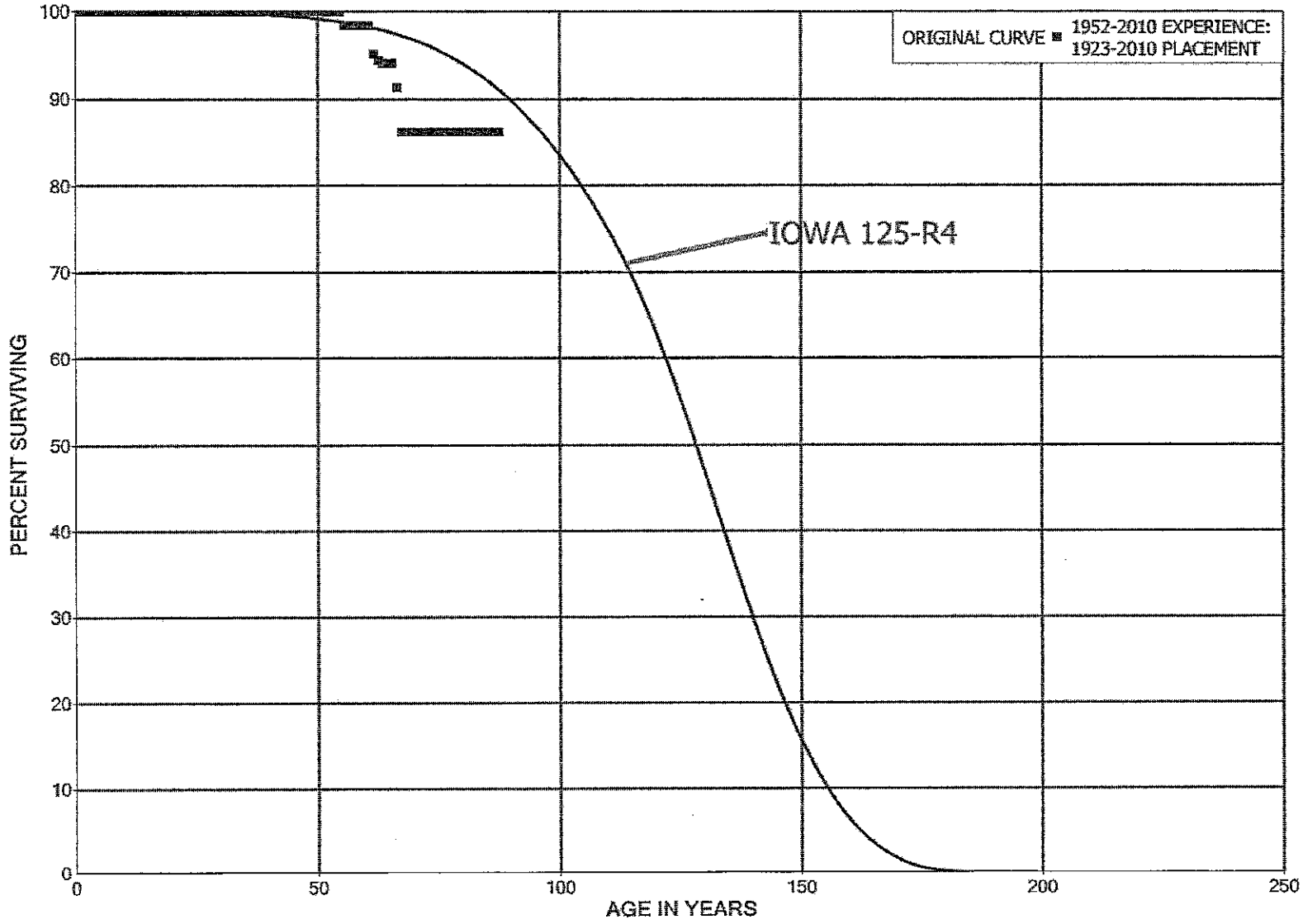
The survivor curves for the remaining electric utility accounts were based on similar considerations of historical analysis, management outlook and estimates for this Company and other electric utilities.

SALVAGE ESTIMATION

The estimates of salvage were based, in part, on the analysis of historical data for the years 1998 through 2005, and in larger part, on consideration of several factors including the net salvage characteristics of other electric utility properties, a knowledge of management's plans, review of accounting policies and procedures, and interviews held with operating personnel.

Continued use of the currently approved net savage percentages for Manitoba Hydro's generation accounts is recommended. The net salvage rates used in the development of the annual depreciation accrual rates in this study represent an estimate of the costs of removal for the on-going retirement of plant that will be required prior to the

MANITOBA HYDRO
ACCOUNT 000A - DAMS, DYKES AND WEIRS
ORIGINAL AND SMOOTH SURVIVOR CURVES




ATTACHMENT 1

MANITOBA HYDRO

ACCOUNT 000A - DAMS, DYKES AND WEIRS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1923-2010 EXPERIENCE BAND 1952-2010

| AGE AT BEGIN OF INTERVAL | EXPOSURES AT BEGINNING OF AGE INTERVAL | RETIREMENTS DURING AGE INTERVAL | RETMT RATIO | SURV RATIO | PCT SURV BEGIN OF INTERVAL |
|---|---|---|---|---|---|
| 0.0 | 508,421,790 | | 0.0000 | 1.0000 | 100.00 |
| 0.5 | 501,643,055 | | 0.0000 | 1.0000 | 100.00 |
| 1.5 | 500,090,101 | | 0.0000 | 1.0000 | 100.00 |
| 2.5 | 488,484,477 | | 0.0000 | 1.0000 | 100.00 |
| 3.5 | 487,761,872 | | 0.0000 | 1.0000 | 100.00 |
| 4.5 | 478,998,844 | | 0.0000 | 1.0000 | 100.00 |
| 5.5 | 475,383,219 | | 0.0000 | 1.0000 | 100.00 |
| 6.5 | 466,850,659 | | 0.0000 | 1.0000 | 100.00 |
| 7.5 | 463,706,748 | | 0.0000 | 1.0000 | 100.00 |
| 8.5 | 461,332,887 | | 0.0000 | 1.0000 | 100.00 |
| 9.5 | 460,509,752 | | 0.0000 | 1.0000 | 100.00 |
| 10.5 | 457,434,195 | | 0.0000 | 1.0000 | 100.00 |
| 11.5 | 457,229,039 | | 0.0000 | 1.0000 | 100.00 |
| 12.5 | 454,512,895 | | 0.0000 | 1.0000 | 100.00 |
| 13.5 | 454,162,200 | | 0.0000 | 1.0000 | 100.00 |
| 14.5 | 454,162,200 | | 0.0000 | 1.0000 | 100.00 |
| 15.5 | 454,162,200 | | 0.0000 | 1.0000 | 100.00 |
| 16.5 | 454,108,717 | | 0.0000 | 1.0000 | 100.00 |
| 17.5 | 447,052,369 | | 0.0000 | 1.0000 | 100.00 |
| 18.5 | 433,780,115 | | 0.0000 | 1.0000 | 100.00 |
| 19.5 | 420,254,749 | | 0.0000 | 1.0000 | 100.00 |
| 20.5 | 417,016,933 | 13,954 | 0.0000 | 1.0000 | 100.00 |
| 21.5 | 417,002,979 | | 0.0000 | 1.0000 | 100.00 |
| 22.5 | 418,403,378 | | 0.0000 | 1.0000 | 100.00 |
| 23.5 | 418,403,378 | | 0.0000 | 1.0000 | 100.00 |
| 24.5 | 405,403,073 | | 0.0000 | 1.0000 | 100.00 |
| 25.5 | 403,856,291 | | 0.0000 | 1.0000 | 100.00 |
| 26.5 | 384,193,841 | | 0.0000 | 1.0000 | 100.00 |
| 27.5 | 384,003,089 | | 0.0000 | 1.0000 | 100.00 |
| 28.5 | 385,373,616 | | 0.0000 | 1.0000 | 100.00 |
| 29.5 | 385,373,616 | | 0.0000 | 1.0000 | 100.00 |
| 30.5 | 385,373,616 | | 0.0000 | 1.0000 | 100.00 |
| 31.5 | 323,857,324 | | 0.0000 | 1.0000 | 100.00 |
| 32.5 | 106,855,187 | | 0.0000 | 1.0000 | 100.00 |
| 33.5 | 106,855,187 | | 0.0000 | 1.0000 | 100.00 |
| 34.5 | 106,855,187 | | 0.0000 | 1.0000 | 100.00 |
| 35.5 | 106,855,187 | | 0.0000 | 1.0000 | 100.00 |
| 36.5 | 106,855,187 | | 0.0000 | 1.0000 | 100.00 |
| 37.5 | 62,267,931 | | 0.0000 | 1.0000 | 100.00 |
| 38.5 | 62,267,931 | | 0.0000 | 1.0000 | 100.00 |

MANITOBA HYDRO

ACCOUNT 000A - DAMS, DYKES AND WEIRS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1923-2010 EXPERIENCE BAND 1952-2010

| AGE AT BEGIN OF INTERVAL | EXPOSURES AT BEGINNING OF AGE INTERVAL | RETIREMENTS DURING AGE INTERVAL | RETMT RATIO | SURV RATIO | PCT SURV BEGIN OF INTERVAL |
|---|---|---|---|---|---|
| 39.5 | 62,265,107 | | 0.0000 | 1.0000 | 100.00 |
| 40.5 | 62,265,107 | | 0.0000 | 1.0000 | 100.00 |
| 41.5 | 61,796,000 | | 0.0000 | 1.0000 | 100.00 |
| 42.5 | 61,796,000 | | 0.0000 | 1.0000 | 100.00 |
| 43.5 | 61,796,000 | | 0.0000 | 1.0000 | 100.00 |
| 44.5 | 20,881,841 | | 0.0000 | 1.0000 | 100.00 |
| 45.5 | 20,881,841 | | 0.0000 | 1.0000 | 100.00 |
| 46.5 | 20,881,841 | | 0.0000 | 1.0000 | 100.00 |
| 47.5 | 20,881,841 | | 0.0000 | 1.0000 | 100.00 |
| 48.5 | 20,881,841 | | 0.0000 | 1.0000 | 100.00 |
| 49.5 | 17,244,716 | | 0.0000 | 1.0000 | 100.00 |
| 50.5 | 17,244,716 | | 0.0000 | 1.0000 | 100.00 |
| 51.5 | 17,235,876 | | 0.0000 | 1.0000 | 100.00 |
| 52.5 | 11,635,572 | | 0.0000 | 1.0000 | 100.00 |
| 53.5 | 11,635,572 | | 0.0000 | 1.0000 | 100.00 |
| 54.5 | 11,635,572 | 192,434 | 0.0165 | 0.9835 | 100.00 |
| 55.5 | 8,809,810 | | 0.0000 | 1.0000 | 98.34 |
| 56.5 | 8,809,810 | | 0.0000 | 1.0000 | 98.34 |
| 57.5 | 8,807,519 | | 0.0000 | 1.0000 | 98.34 |
| 58.5 | 5,973,735 | | 0.0000 | 1.0000 | 98.34 |
| 59.5 | 5,962,152 | | 0.0000 | 1.0000 | 98.34 |
| 60.5 | 5,513,012 | 175,771 | 0.0319 | 0.9681 | 98.34 |
| 61.5 | 5,337,241 | 44,894 | 0.0084 | 0.9916 | 95.21 |
| 62.5 | 5,292,347 | 19,841 | 0.0037 | 0.9963 | 94.41 |
| 63.5 | 5,272,506 | | 0.0000 | 1.0000 | 94.05 |
| 64.5 | 5,272,506 | | 0.0000 | 1.0000 | 94.05 |
| 65.5 | 5,272,506 | 155,106 | 0.0294 | 0.9706 | 94.05 |
| 66.5 | 5,117,399 | 283,771 | 0.0555 | 0.9445 | 91.29 |
| 67.5 | 4,833,629 | | 0.0000 | 1.0000 | 86.22 |
| 68.5 | 4,833,629 | | 0.0000 | 1.0000 | 86.22 |
| 69.5 | 4,833,629 | | 0.0000 | 1.0000 | 86.22 |
| 70.5 | 4,833,629 | | 0.0000 | 1.0000 | 86.22 |
| 71.5 | 4,833,629 | | 0.0000 | 1.0000 | 86.22 |
| 72.5 | 4,833,629 | | 0.0000 | 1.0000 | 86.22 |
| 73.5 | 4,833,629 | | 0.0000 | 1.0000 | 86.22 |
| 74.5 | 4,833,629 | | 0.0000 | 1.0000 | 86.22 |
| 75.5 | 4,833,629 | | 0.0000 | 1.0000 | 86.22 |
| 76.5 | 4,833,629 | | 0.0000 | 1.0000 | 86.22 |
| 77.5 | 4,833,629 | | 0.0000 | 1.0000 | 86.22 |
| 78.5 | 2,211,109 | | 0.0000 | 1.0000 | 86.22 |

MANITOBA HYDRO

ACCOUNT 000A - DAMS, DYKES AND WEIRS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1923-2010 EXPERIENCE BAND 1952-2010

| AGE AT BEGIN OF INTERVAL | EXPOSURES AT BEGINNING OF AGE INTERVAL | RETIREMENTS DURING AGE INTERVAL | RETMT RATIO | SURV RATIO | PCT SURV BEGIN OF INTERVAL |
|---|---|---|---|---|---|
| 79.5 | 2,211,109 | | 0.0000 | 1.0000 | 86.22 |
| 80.5 | 2,211,109 | | 0.0000 | 1.0000 | 86.22 |
| 81.5 | 986,481 | | 0.0000 | 1.0000 | 86.22 |
| 82.5 | 986,481 | | 0.0000 | 1.0000 | 86.22 |
| 83.5 | 967,520 | | 0.0000 | 1.0000 | 86.22 |
| 84.5 | 967,520 | | 0.0000 | 1.0000 | 86.22 |
| 85.5 | 967,520 | | 0.0000 | 1.0000 | 86.22 |
| 86.5 | 931,651 | | 0.0000 | 1.0000 | 86.22 |
| 87.5 | | | | | 86.22 |

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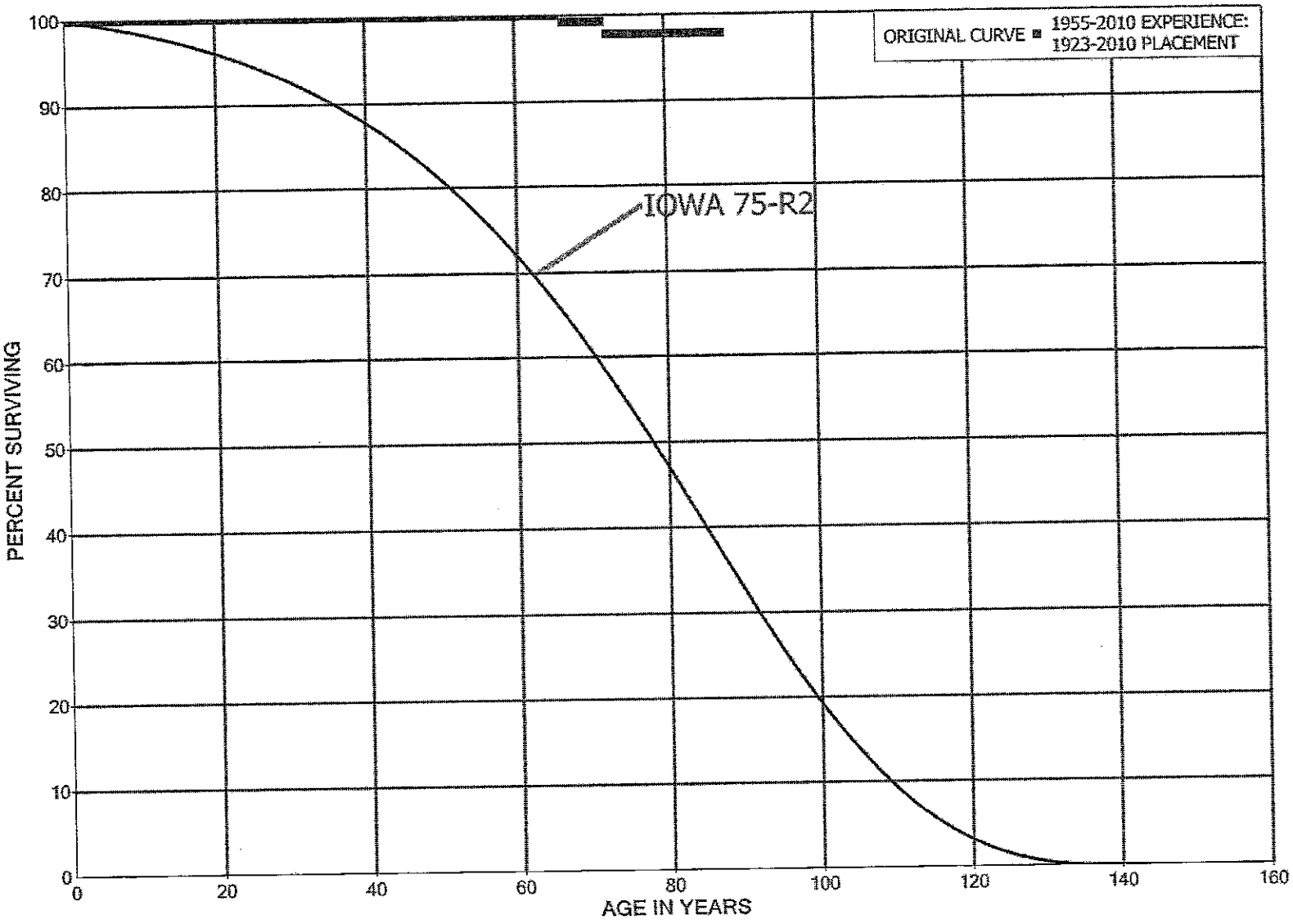
MANITOBA HYDRO
ACCOUNT 000D - SPILLWAY
ORIGINAL AND SMOOTH SURVIVOR CURVES




ATTACHMENT 1

ATTACHMENT 1

MANITOBA HYDRO

ACCOUNT 000D - SPILLWAY

ORIGINAL LIFE TABLE

PLACEMENT BAND 1923-2010 EXPERIENCE BAND 1955-2010

| AGE AT BEGIN OF INTERVAL | EXPOSURES AT BEGINNING OF AGE INTERVAL | RETIREMENTS DURING AGE INTERVAL | RETMT RATIO | SURV RATIO | PCT SURV BEGIN OF INTERVAL |
|---|---|---|---|---|---|
| 0.0 | 369,552,576 | | 0.0000 | 1.0000 | 100.00 |
| 0.5 | 369,506,280 | | 0.0000 | 1.0000 | 100.00 |
| 1.5 | 366,978,483 | | 0.0000 | 1.0000 | 100.00 |
| 2.5 | 366,762,400 | | 0.0000 | 1.0000 | 100.00 |
| 3.5 | 366,644,866 | | 0.0000 | 1.0000 | 100.00 |
| 4.5 | 365,995,189 | | 0.0000 | 1.0000 | 100.00 |
| 5.5 | 365,386,540 | | 0.0000 | 1.0000 | 100.00 |
| 6.5 | 365,386,540 | | 0.0000 | 1.0000 | 100.00 |
| 7.5 | 365,386,540 | | 0.0000 | 1.0000 | 100.00 |
| 8.5 | 365,386,540 | 1,838 | 0.0000 | 1.0000 | 100.00 |
| 9.5 | 365,384,702 | | 0.0000 | 1.0000 | 100.00 |
| 10.5 | 365,384,702 | | 0.0000 | 1.0000 | 100.00 |
| 11.5 | 365,384,702 | | 0.0000 | 1.0000 | 100.00 |
| 12.5 | 365,355,774 | | 0.0000 | 1.0000 | 100.00 |
| 13.5 | 364,377,188 | | 0.0000 | 1.0000 | 100.00 |
| 14.5 | 364,377,188 | | 0.0000 | 1.0000 | 100.00 |
| 15.5 | 363,467,145 | | 0.0000 | 1.0000 | 100.00 |
| 16.5 | 363,207,008 | | 0.0000 | 1.0000 | 100.00 |
| 17.5 | 322,517,032 | | 0.0000 | 1.0000 | 100.00 |
| 18.5 | 242,086,562 | | 0.0000 | 1.0000 | 100.00 |
| 19.5 | 161,656,093 | | 0.0000 | 1.0000 | 100.00 |
| 20.5 | 161,656,093 | | 0.0000 | 1.0000 | 100.00 |
| 21.5 | 161,656,093 | | 0.0000 | 1.0000 | 100.00 |
| 22.5 | 162,728,053 | | 0.0000 | 1.0000 | 100.00 |
| 23.5 | 162,728,053 | | 0.0000 | 1.0000 | 100.00 |
| 24.5 | 153,113,204 | | 0.0000 | 1.0000 | 100.00 |
| 25.5 | 153,130,509 | | 0.0000 | 1.0000 | 100.00 |
| 26.5 | 152,492,998 | | 0.0000 | 1.0000 | 100.00 |
| 27.5 | 152,492,998 | | 0.0000 | 1.0000 | 100.00 |
| 28.5 | 152,492,998 | | 0.0000 | 1.0000 | 100.00 |
| 29.5 | 152,492,998 | | 0.0000 | 1.0000 | 100.00 |
| 30.5 | 152,492,998 | | 0.0000 | 1.0000 | 100.00 |
| 31.5 | 110,724,015 | | 0.0000 | 1.0000 | 100.00 |
| 32.5 | 39,517,819 | | 0.0000 | 1.0000 | 100.00 |
| 33.5 | 39,517,819 | | 0.0000 | 1.0000 | 100.00 |
| 34.5 | 39,517,819 | | 0.0000 | 1.0000 | 100.00 |
| 35.5 | 39,517,819 | | 0.0000 | 1.0000 | 100.00 |
| 36.5 | 39,517,819 | | 0.0000 | 1.0000 | 100.00 |
| 37.5 | 14,110,860 | | 0.0000 | 1.0000 | 100.00 |
| 38.5 | 14,110,860 | | 0.0000 | 1.0000 | 100.00 |

ATTACHMENT 1

MANITOBA HYDRO

ACCOUNT 000D - SPILLWAY

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1923-2010 EXPERIENCE BAND 1955-2010

| AGE AT BEGIN OF INTERVAL | EXPOSURES AT BEGINNING OF AGE INTERVAL | RETIREMENTS DURING AGE INTERVAL | RETMT RATIO | SURV RATIO | PCT SURV BEGIN OF INTERVAL |
|---|---|---|---|---|---|
| 39.5 | 14,110,860 | | 0.0000 | 1.0000 | 100.00 |
| 40.5 | 14,110,860 | | 0.0000 | 1.0000 | 100.00 |
| 41.5 | 12,809,593 | | 0.0000 | 1.0000 | 100.00 |
| 42.5 | 12,809,593 | | 0.0000 | 1.0000 | 100.00 |
| 43.5 | 12,809,593 | | 0.0000 | 1.0000 | 100.00 |
| 44.5 | 8,802,525 | | 0.0000 | 1.0000 | 100.00 |
| 45.5 | 8,802,525 | | 0.0000 | 1.0000 | 100.00 |
| 46.5 | 8,802,525 | | 0.0000 | 1.0000 | 100.00 |
| 47.5 | 8,802,525 | | 0.0000 | 1.0000 | 100.00 |
| 48.5 | 8,802,525 | | 0.0000 | 1.0000 | 100.00 |
| 49.5 | 3,470,596 | | 0.0000 | 1.0000 | 100.00 |
| 50.5 | 3,470,596 | | 0.0000 | 1.0000 | 100.00 |
| 51.5 | 3,470,596 | | 0.0000 | 1.0000 | 100.00 |
| 52.5 | 3,470,596 | | 0.0000 | 1.0000 | 100.00 |
| 53.5 | 3,470,596 | | 0.0000 | 1.0000 | 100.00 |
| 54.5 | 3,470,596 | | 0.0000 | 1.0000 | 100.00 |
| 55.5 | 1,119,158 | | 0.0000 | 1.0000 | 100.00 |
| 56.5 | 1,119,158 | | 0.0000 | 1.0000 | 100.00 |
| 57.5 | 1,119,158 | | 0.0000 | 1.0000 | 100.00 |
| 58.5 | 1,119,158 | | 0.0000 | 1.0000 | 100.00 |
| 59.5 | 1,119,158 | | 0.0000 | 1.0000 | 100.00 |
| 60.5 | 1,119,158 | | 0.0000 | 1.0000 | 100.00 |
| 61.5 | 1,119,158 | | 0.0000 | 1.0000 | 100.00 |
| 62.5 | 1,119,158 | | 0.0000 | 1.0000 | 100.00 |
| 63.5 | 1,119,158 | | 0.0000 | 1.0000 | 100.00 |
| 64.5 | 1,119,158 | | 0.0000 | 1.0000 | 100.00 |
| 65.5 | 1,119,158 | 9,446 | 0.0084 | 0.9916 | 100.00 |
| 66.5 | 1,109,711 | | 0.0000 | 1.0000 | 99.16 |
| 67.5 | 1,109,711 | | 0.0000 | 1.0000 | 99.16 |
| 68.5 | 1,109,711 | | 0.0000 | 1.0000 | 99.16 |
| 69.5 | 1,109,711 | | 0.0000 | 1.0000 | 99.16 |
| 70.5 | 1,109,711 | | 0.0000 | 1.0000 | 99.16 |
| 71.5 | 1,109,711 | 16,317 | 0.0147 | 0.9853 | 99.16 |
| 72.5 | 1,093,394 | | 0.0000 | 1.0000 | 97.70 |
| 73.5 | 1,093,394 | | 0.0000 | 1.0000 | 97.70 |
| 74.5 | 1,093,394 | | 0.0000 | 1.0000 | 97.70 |
| 75.5 | 1,093,394 | | 0.0000 | 1.0000 | 97.70 |
| 76.5 | 1,093,394 | | 0.0000 | 1.0000 | 97.70 |
| 77.5 | 1,093,394 | | 0.0000 | 1.0000 | 97.70 |
| 78.5 | 21,434 | | 0.0000 | 1.0000 | 97.70 |

MANITOBA HYDRO

ACCOUNT 000D - SPILLWAY

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1923-2010 EXPERIENCE BAND 1955-2010

| AGE AT BEGIN OF INTERVAL | EXPOSURES AT BEGINNING OF AGE INTERVAL | RETIREMENTS DURING AGE INTERVAL | RETMT RATIO | SURV RATIO | PCT SURV BEGIN OF INTERVAL |
|---|---|---|---|---|---|
| 79.5 | 21,434 | | 0.0000 | 1.0000 | 97.70 |
| 80.5 | 21,434 | | 0.0000 | 1.0000 | 97.70 |
| 81.5 | 13,575 | | 0.0000 | 1.0000 | 97.70 |
| 82.5 | 13,575 | | 0.0000 | 1.0000 | 97.70 |
| 83.5 | 13,575 | | 0.0000 | 1.0000 | 97.70 |
| 84.5 | 13,575 | | 0.0000 | 1.0000 | 97.70 |
| 85.5 | 13,575 | | 0.0000 | 1.0000 | 97.70 |
| 86.5 | 13,575 | | 0.0000 | 1.0000 | 97.70 |
| 87.5 | | | | | 97.70 |

SCHEDULE 1. ESTIMATED SURVIVOR CURVES, NET SALVAGE PERCENTS, ORIGINAL COST AND ANNUAL ACCRUALS
FOR THE TWELVE MONTHS ENDED MARCH 31, 2010
(USE OF THE ASL PROCEDURE)

| ACCOUNT | DEPRECIABLE WORK | LIFE SPAN DATE | SURVIVOR CURVE | NET SALVAGE | SURVIVING ORIGINAL COST AS OF MARCH 31, 2010 | CALCULATED ANNUAL ACCRUAL AMOUNT | CALCULATED ANNUAL ACCRUAL RATE (%) | ANNUAL PROVISION FOR TRUE-UP | TOTAL DEPRECIATION EXPENSE | TOTAL DEPRECIATION RATE (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| | (1) | | (2) | (3) | (4) | (5) | (6)=(5)/(4) | (7) | (8)=(5)+(7) | (9)=(8)/(4) |
| 10000 | GENERATION | | | | | | | | | |
| 11000 | HYDRAULIC GENERATION | | | | | | | | | |
| 11050 | GREAT FALLS | | | | | | | | | |
| 1105A | DAMS, DYKES AND WEIRS | 2063 | 125-R4 | (10) | 17,302,772 | 238,985 | 1.38 | (16,829) | 222,156 | 1.28 |
| 1105B | POWERHOUSE | 2063 | 125-R4 | (10) | 7,990,993 | 109,555 | 1.37 | (8,305) | 101,250 | 1.27 |
| 1105C | POWERHOUSE RENOVATIONS | 2063 | 25-SQ | (10) | | | | | | 4.40 */** |
| 1105D | SPILLWAY | 2063 | 75-R2 | (10) | 9,676,327 | 163,925 | 1.69 | (10,492) | 153,433 | 1.59 |
| 1105E | WATER CONTROL SYSTEMS | 2063 | 50-S4 | (10) | 24,245,253 | 535,198 | 2.21 | (33,000) | 502,198 | 2.07 |
| 1105F | ROADS AND SITE IMPROVEMENTS | 2063 | 50-R3 | (10) | 213,964 | 5,020 | 2.35 | (29) | 4,991 | 2.33 |
| 1105G | TURBINES AND GENERATORS | 2063 | 65-S3 | (10) | 25,128,789 | 476,981 | 1.90 | (20,626) | 456,355 | 1.82 |
| 1105H | GOVERNORS AND EXCITATION SYSTEM | 2063 | 50-R4 | (10) | 492,218 | 10,949 | 2.22 | (548) | 10,401 | 2.11 |
| 1105L | LICENCE RENEWAL | 2063 | 50-SQ | 0 | | | | | | 2.00 */** |
| 1105P | A/C ELECTRICAL POWER SYSTEMS | 2063 | 50-R3 | (10) | 9,493,088 | 211,271 | 2.23 | (12,083) | 199,188 | 2.10 |
| 1105Q | INSTRUMENTATION, CONTROL AND D/C SYSTEMS | 2063 | 23-L2 | (10) | 19,271,956 | 899,389 | 4.67 | (45,393) | 853,996 | 4.43 |
| 1105R | AUXILIARY STATION PROCESSES | 2063 | 40-R2.5 | (10) | 8,345,798 | 228,986 | 2.74 | (13,147) | 215,839 | 2.59 |
| 1105X | SUPPORT BUILDINGS | 2063 | 65-R3 | (10) | 1,495,253 | 27,670 | 1.85 | (1,875) | 25,795 | 1.73 |
| 1105W | SUPPORT BUILDING RENOVATIONS | 2063 | 20-SQ | (10) | | | | | | 5.50 */** |
| | **TOTAL GREAT FALLS** | | | | **123,656,412** | **2,907,929** | **2.35** | **(162,327)** | **2,745,602** | **2.22** |
| 11100 | POINTE DU BOIS | | | | | | | | | |
| 1110A | DAMS, DYKES AND WEIRS | 2031 | 125-R4 | (10) | 11,263,332 | 491,508 | 4.36 | (82,462) | 409,046 | 3.63 |
| 1110B | POWERHOUSE | 2031 | 125-R4 | (10) | 6,242,749 | 298,076 | 4.77 | (24,130) | 273,946 | 4.39 |
| 1110C | POWERHOUSE RENOVATIONS | 2031 | 25-SQ | (10) | | | | | | 5.24 */** |
| 1110D | SPILLWAY - ORIGINAL | 2017 | 75-R2 | 0 | 3,104,842 | 344,107 | 11.08 | (85,021) | 259,086 | 8.34 |
| 1110E | WATER CONTROL SYSTEMS | 2031 | 50-S4 | (10) | 4,027,603 | 168,173 | 4.18 | (35,621) | 132,552 | 3.29 |
| 1110F | ROADS AND SITE IMPROVEMENTS | 2031 | 50-R3 | (10) | 28,533 | 1,206 | 4.23 | (266) | 942 | 3.30 |
| 1110G | TURBINES AND GENERATORS | 2031 | 65-S3 | (10) | 24,610,324 | 1,123,496 | 4.57 | (138,078) | 985,418 | 4.00 * |
| 1110H | GOVERNORS AND EXCITATION SYSTEM | 2031 | 50-R4 | (10) | | | | | | 5.24 */** |
| 1110L | LICENCE RENEWAL | 2031 | 50-SQ | 0 | | | | | | 4.76 |
| 1110P | A/C ELECTRICAL POWER SYSTEMS | 2031 | 50-R3 | (10) | 6,057,709 | 296,661 | 4.90 | (20,819) | 275,842 | 4.55 |
| 1110Q | INSTRUMENTATION, CONTROL AND D/C SYSTEMS | 2031 | 23-L2 | (10) | 355,559 | 20,419 | 5.74 | (2,381) | 18,038 | 5.07 |
| 1110R | AUXILIARY STATION PROCESSES | 2031 | 40-R2.5 | (10) | 1,377,014 | 65,027 | 4.72 | (10,107) | 54,920 | 3.99 |
| 1110X | SUPPORT BUILDINGS | 2031 | 65-R3 | (10) | 2,616,290 | 103,919 | 3.97 | (29,103) | 74,816 | 2.86 */** |
| 1110W | SUPPORT BUILDING RENOVATIONS | 2031 | 20-SQ | (10) | | | | | | 5.50 * |
| 1111D | SPILLWAY - NEW | | 75-R2 | (10) | | | | | | 1.47 * |
| | **TOTAL POINTE DU BOIS** | | | | **59,683,956** | **2,912,594** | **4.88** | **(427,989)** | **2,484,605** | **4.16** |
| 11150 | SEVEN SISTERS | | | | | | | | | |
| 1115A | DAMS, DYKES AND WEIRS | 2072 | 125-R4 | (10) | 31,497,995 | 386,490 | 1.23 | (60,803) | 325,687 | 1.03 |
| 1115B | POWERHOUSE | 2072 | 125-R4 | (10) | 13,653,945 | 157,769 | 1.16 | (34,219) | 123,550 | 0.90 |
| 1115C | POWERHOUSE RENOVATIONS | 2072 | 25-SQ | (10) | | | | | | 4.40 */** |
| 1115D | SPILLWAY | 2072 | 75-R2 | (10) | 2,841,355 | 40,970 | 1.44 | (7,812) | 33,158 | 1.17 |
| 1115E | WATER CONTROL SYSTEMS | 2072 | 50-S4 | (10) | 4,296,891 | 94,567 | 2.20 | (17,127) | 77,440 | 1.80 |
| 1115F | ROADS AND SITE IMPROVEMENTS | 2072 | 50-R3 | (10) | 201,701 | 4,456 | 2.21 | (744) | 3,712 | 1.84 |
| 1115G | TURBINES AND GENERATORS | 2072 | 65-S3 | (10) | 41,208,963 | 737,500 | 1.79 | (62,085) | 675,415 | 1.64 |
| 1115H | GOVERNORS AND EXCITATION SYSTEM | 2072 | 50-R4 | (10) | 6,860 | 151 | 2.20 | (379) | (228) | 2.00 |
| 1115L | LICENCE RENEWAL | 2072 | 50-SQ | 0 | | | | | | 2.00 */** |
| 1115P | A/C ELECTRICAL POWER SYSTEMS | 2072 | 50-R3 | (10) | 10,648,619 | 234,601 | 2.20 | (31,151) | 203,450 | 1.91 |
| 1115Q | INSTRUMENTATION, CONTROL AND D/C SYSTEMS | 2072 | 23-L2 | (10) | 3,821,416 | 182,855 | 4.79 | (40,388) | 142,467 | 3.73 |
| 1115R | AUXILIARY STATION PROCESSES | 2072 | 40-R2.5 | (10) | 5,224,958 | 134,972 | 2.58 | (23,517) | 111,455 | 2.13 |
| 1115X | SUPPORT BUILDINGS | 2072 | 65-R3 | (10) | 608,294 | 11,185 | 1.84 | (628) | 10,557 | 1.74 |
| 1115W | SUPPORT BUILDING RENOVATIONS | 2072 | 20-SQ | (10) | | | | | | 5.50 */** |
| | **TOTAL SEVEN SISTERS** | | | | **114,010,998** | **1,985,516** | **1.74** | **(278,855)** | **1,706,661** | **1.50** |

SCHEDULE 1. ESTIMATED SURVIVOR CURVES, NET SALVAGE PERCENTS, ORIGINAL COST AND ANNUAL ACCRUALS
FOR THE TWELVE MONTHS ENDED MARCH 31, 2010
(USE OF THE ASL PROCEDURE)

| ACCOUNT | DEPRECIABLE WORK | LIFE SPAN DATE | SURVIVOR CURVE | NET SALVAGE | SURVIVING ORIGINAL COST AS OF MARCH 31, 2010 | CALCULATED ANNUAL ACCRUAL AMOUNT | CALCULATED ANNUAL ACCRUAL RATE (%) | ANNUAL PROVISION FOR TRUE-UP | TOTAL DEPRECIATION EXPENSE | TOTAL DEPRECIATION RATE (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| | (1) | | (2) | (3) | (4) | (5) | (6)=(5)/(4) | (7) | (8)=(5)+(7) | (9)=(8)/(4) |
| **11200** | **SLAVE FALLS** | | | | | | | | | |
| 1120A | DAMS, DYKES AND WEIRS | 2072 | 125-R4 | (10) | 954,684 | 16,233 | 1.70 | (84) | 16,149 | 1.69 |
| 1120B | POWERHOUSE | 2072 | 125-R4 | (10) | 45,692,194 | 729,914 | 1.60 | (9,268) | 720,646 | 1.58 |
| 1120C | POWERHOUSE RENOVATIONS | 2072 | 25-SQ | (10) | | | | | | 4.40 */** |
| 1120D | SPILLWAY | 2072 | 75-R2 | (10) | 760,201 | 14,295 | 1.88 | (103) | 14,192 | 1.87 |
| 1120E | WATER CONTROL SYSTEMS | 2072 | 50-S4 | (10) | 318,933 | 7,022 | 2.20 | (59) | 6,963 | 2.18 |
| 1120F | ROADS AND SITE IMPROVEMENTS | 2072 | 50-R3 | (10) | 769,506 | 17,098 | 2.22 | (177) | 16,921 | 2.20 |
| 1120G | TURBINES AND GENERATORS | 2072 | 65-S3 | (10) | 11,630,909 | 211,168 | 1.82 | (3,143) | 208,025 | 1.79 |
| 1120H | GOVERNORS AND EXCITATION SYSTEM | 2072 | 50-R4 | (10) | | | | | | 2.20 * |
| 1120L | LICENCE RENEWAL | 2072 | 50-SQ | 0 | | | | | | 2.00 */** |
| 1120P | A/C ELECTRICAL POWER SYSTEMS | 2072 | 50-R3 | (10) | 21,815,741 | 485,981 | 2.23 | (4,334) | 481,647 | 2.21 |
| 1120Q | INSTRUMENTATION, CONTROL AND D/C SYSTEMS | 2072 | 23-L2 | (10) | 786,382 | 37,628 | 4.78 | (491) | 37,137 | 4.72 |
| 1120R | AUXILIARY STATION PROCESSES | 2072 | 40-R2.5 | (10) | 2,201,466 | 60,540 | 2.75 | (440) | 60,100 | 2.73 |
| 1120X | SUPPORT BUILDINGS | 2072 | 65-R3 | (10) | 3,724,095 | 68,422 | 1.84 | (1,005) | 67,417 | 1.81 |
| 1120W | SUPPORT BUILDING RENOVATIONS | 2072 | 20-SQ | (10) | | | | | | 5.50 */** |
| | **TOTAL SLAVE FALLS** | | | | **88,654,109** | **1,648,301** | **1.86** | **(19,103)** | **1,629,198** | **1.84** |
| **11250** | **PINE FALLS** | | | | | | | | | |
| 1125A | DAMS, DYKES AND WEIRS | 2092 | 125-R4 | (10) | 14,110,589 | 170,023 | 1.20 | (4,444) | 165,579 | 1.17 |
| 1125B | POWERHOUSE | 2092 | 125-R4 | (10) | 10,060,843 | 94,485 | 0.94 | (11,302) | 83,183 | 0.83 |
| 1125C | POWERHOUSE RENOVATIONS | 2092 | 25-SQ | (10) | | | | | | 4.40 */** |
| 1125D | SPILLWAY | 2092 | 75-R2 | (10) | 93,376 | 1,505 | 1.61 | (6) | 1,499 | 1.60 |
| 1125E | WATER CONTROL SYSTEMS | 2092 | 50-S4 | (10) | 3,564,106 | 78,410 | 2.20 | (9,007) | 69,403 | 1.95 |
| 1125F | ROADS AND SITE IMPROVEMENTS | 2092 | 50-R3 | (10) | 1,178,575 | 25,929 | 2.20 | (4,557) | 21,372 | 1.81 |
| 1125G | TURBINES AND GENERATORS | 2092 | 65-S3 | (10) | 9,464,220 | 160,333 | 1.69 | (21,435) | 138,898 | 1.47 |
| 1125H | GOVERNORS AND EXCITATION SYSTEM | 2092 | 50-R4 | (10) | | | | | | 2.20 * |
| 1125L | LICENCE RENEWAL | 2092 | 50-SQ | 0 | | | | | | 2.00 */** |
| 1125P | A/C ELECTRICAL POWER SYSTEMS | 2092 | 50-R3 | (10) | 5,071,108 | 111,564 | 2.20 | (6,896) | 104,668 | 2.06 |
| 1125Q | INSTRUMENTATION, CONTROL AND D/C SYSTEMS | 2092 | 23-L2 | (10) | 2,156,586 | 103,193 | 4.79 | (11,485) | 91,708 | 4.25 |
| 1125R | AUXILIARY STATION PROCESSES | 2092 | 40-R2.5 | (10) | 3,790,230 | 104,231 | 2.75 | (7,987) | 96,244 | 2.54 |
| 1125X | SUPPORT BUILDINGS | 2092 | 65-R3 | (10) | 336,412 | 5,699 | 1.69 | (269) | 5,430 | 1.61 |
| 1125W | SUPPORT BUILDING RENOVATIONS | 2092 | 20-SQ | (10) | | | | | | 5.50 */** |
| 1125Z | COMMUNITY DEVELOPMENT COSTS | 2092 | 81-SQ | 0 | 4,425,543 | 54,434 | 1.23 | (2,471) | 51,963 | 1.17 ** |
| | **TOTAL PINE FALLS** | | | | **54,251,587** | **909,806** | **1.68** | **(79,858)** | **829,948** | **1.53** |
| **11300** | **MCARTHUR FALLS** | | | | | | | | | |
| 1130A | DAMS, DYKES AND WEIRS | 2095 | 125-R4 | (10) | 3,578,068 | 35,150 | 0.98 | (2,609) | 32,541 | 0.91 |
| 1130B | POWERHOUSE | 2095 | 125-R4 | (10) | 9,523,798 | 88,239 | 0.93 | (8,742) | 79,497 | 0.83 |
| 1130C | POWERHOUSE RENOVATIONS | 2095 | 25-SQ | (10) | | | | | | 4.40 */** |
| 1130D | SPILLWAY | 2095 | 75-R2 | (10) | 2,351,438 | 34,402 | 1.46 | (6,451) | 27,951 | 1.19 |
| 1130E | WATER CONTROL SYSTEMS | 2095 | 50-S4 | (10) | 11,703,203 | 257,470 | 2.20 | (16,879) | 240,591 | 2.06 |
| 1130F | ROADS AND SITE IMPROVEMENTS | 2095 | 50-R3 | (10) | 234,820 | 5,166 | 2.20 | (489) | 4,677 | 1.99 |
| 1130G | TURBINES AND GENERATORS | 2095 | 65-S3 | (10) | 5,096,367 | 86,332 | 1.69 | (32,214) | 54,118 | 1.06 |
| 1130H | GOVERNORS AND EXCITATION SYSTEM | 2095 | 50-R4 | (10) | 119,315 | 2,625 | 2.20 | (121) | 2,504 | 2.10 |
| 1130L | LICENCE RENEWAL | 2095 | 50-SQ | 0 | | | | | | 2.00 */** |
| 1130P | A/C ELECTRICAL POWER SYSTEMS | 2095 | 50-R3 | (10) | 2,480,539 | 54,572 | 2.20 | (7,535) | 47,037 | 1.90 |
| 1130Q | INSTRUMENTATION, CONTROL AND D/C SYSTEMS | 2095 | 23-L2 | (10) | 1,245,885 | 59,616 | 4.79 | (6,197) | 53,419 | 4.29 |
| 1130R | AUXILIARY STATION PROCESSES | 2095 | 40-R2.5 | (10) | 3,440,197 | 94,605 | 2.75 | (5,940) | 88,665 | 2.58 |
| 1130X | SUPPORT BUILDINGS | 2095 | 65-R3 | (10) | 227,212 | 3,849 | 1.69 | (156) | 3,693 | 1.63 |
| 1130W | SUPPORT BUILDING RENOVATIONS | 2095 | 20-SQ | (10) | | | | | | 5.50 */** |
| | **TOTAL MCARTHUR FALLS** | | | | **40,000,842** | **722,026** | **1.81** | **(87,333)** | **634,693** | **1.59** |

SCHEDULE 1. ESTIMATED SURVIVOR CURVES, NET SALVAGE PERCENTS, ORIGINAL COST AND ANNUAL ACCRUALS
FOR THE TWELVE MONTHS ENDED MARCH 31, 2010
(USE OF THE ASL PROCEDURE)

| ACCOUNT | DEPRECIABLE WORK | LIFE SPAN DATE | SURVIVOR CURVE | NET SALVAGE | SURVIVING ORIGINAL COST AS OF MARCH 31, 2010 | CALCULATED ANNUAL ACCRUAL AMOUNT | CALCULATED ANNUAL ACCRUAL RATE (%) | ANNUAL PROVISION FOR TRUE-UP | TOTAL DEPRECIATION EXPENSE | TOTAL DEPRECIATION RATE (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| | (1) | | (2) | (3) | (4) | (5) | (6)=(5)/(4) | (7) | (8)=(5)+(7) | (9)=(8)/(4) |
| **11350** | **KELSEY** | | | | | | | | | |
| 1135A | DAMS, DYKES AND WEIRS | 2101 | 125-R4 | (10) | 11,066,409 | 118,604 | 1.07 | (2,046) | 116,558 | 1.05 |
| 1135B | POWERHOUSE | 2101 | 125-R4 | (10) | 27,569,817 | 256,025 | 0.93 | (11,217) | 244,808 | 0.89 |
| 1135C | POWERHOUSE RENOVATIONS | 2101 | 25-SQ | (10) | | | | | | 4.40 */** |
| 1135D | SPILLWAY | 2101 | 75-R2 | (10) | 5,331,929 | 78,006 | 1.46 | (6,786) | 71,220 | 1.34 |
| 1135E | WATER CONTROL SYSTEMS | 2101 | 50-S4 | (10) | 11,792,566 | 259,436 | 2.20 | (12,855) | 246,581 | 2.09 |
| 1135F | ROADS AND SITE IMPROVEMENTS | 2101 | 50-R3 | (10) | 6,442,928 | 141,744 | 2.20 | (9,348) | 132,396 | 2.05 |
| 1135G | TURBINES AND GENERATORS | 2101 | 65-S3 | (10) | 130,323,693 | 2,207,683 | 1.69 | (12,933) | 2,194,750 | 1.68 |
| 1135H | GOVERNORS AND EXCITATION SYSTEM | 2101 | 50-R4 | (10) | 88,651 | 1,950 | 2.20 | (55) | 1,895 | 2.14 |
| 1135L | LICENCE RENEWAL | 2101 | 50-SQ | 0 | | | | | | 2.00 */** |
| 1135P | A/C ELECTRICAL POWER SYSTEMS | 2101 | 50-R3 | (10) | 5,751,610 | 126,535 | 2.20 | (9,565) | 116,970 | 2.03 |
| 1135Q | INSTRUMENTATION, CONTROL AND D/C SYSTEMS | 2101 | 23-L2 | (10) | 3,595,490 | 172,044 | 4.78 | (7,271) | 164,773 | 4.58 |
| 1135R | AUXILIARY STATION PROCESSES | 2101 | 40-R2.5 | (10) | 7,788,815 | 214,192 | 2.75 | (9,235) | 204,957 | 2.63 |
| 1135X | SUPPORT BUILDINGS | 2101 | 65-R3 | (10) | 9,953,977 | 168,620 | 1.69 | (2,711) | 165,909 | 1.67 |
| 1135W | SUPPORT BUILDING RENOVATIONS | 2101 | 20-SQ | (10) | | | | | | 5.50 */** |
| | **TOTAL KELSEY** | | | | **219,705,886** | **3,744,839** | **1.70** | **(84,022)** | **3,660,817** | **1.67** |
| **11400** | **GRAND RAPIDS** | | | | | | | | | |
| 1140A | DAMS, DYKES AND WEIRS | 2091 | 125-R4 | (10) | 53,468,974 | 555,421 | 1.04 | (30,489) | 524,932 | 0.98 |
| 1140B | POWERHOUSE | 2091 | 125-R4 | (10) | 24,506,522 | 240,399 | 0.98 | (16,737) | 223,662 | 0.91 |
| 1140C | POWERHOUSE RENOVATIONS | 2091 | 25-SQ | (10) | | | | | | 4.40 */** |
| 1140D | SPILLWAY | 2091 | 75-R2 | (10) | 5,308,334 | 77,804 | 1.47 | (8,835) | 68,969 | 1.30 |
| 1140E | WATER CONTROL SYSTEMS | 2091 | 50-S4 | (10) | 15,982,492 | 351,615 | 2.20 | (65,570) | 286,045 | 1.79 |
| 1140F | ROADS AND SITE IMPROVEMENTS | 2091 | 50-R3 | (10) | 2,581,475 | 56,792 | 2.20 | (13,491) | 43,301 | 1.68 |
| 1140G | TURBINES AND GENERATORS | 2091 | 65-S3 | (10) | 113,066,160 | 1,920,457 | 1.70 | (61,682) | 1,858,775 | 1.64 |
| 1140H | GOVERNORS AND EXCITATION SYSTEM | 2091 | 50-R4 | (10) | 42,718 | 940 | 2.20 | (32) | 908 | 2.13 |
| 1140L | LICENCE RENEWAL | 2091 | 50-SQ | 0 | | | | | | 2.00 */** |
| 1140P | A/C ELECTRICAL POWER SYSTEMS | 2091 | 50-R3 | (10) | 8,240,545 | 181,292 | 2.20 | (10,702) | 170,590 | 2.07 |
| 1140Q | INSTRUMENTATION, CONTROL AND D/C SYSTEMS | 2091 | 23-L2 | (10) | 4,674,247 | 223,663 | 4.79 | (32,854) | 190,809 | 4.08 |
| 1140R | AUXILIARY STATION PROCESSES | 2091 | 40-R2.5 | (10) | 5,600,506 | 154,014 | 2.75 | (7,004) | 147,010 | 2.62 |
| 1140X | SUPPORT BUILDINGS | 2091 | 65-R3 | (10) | 6,190,376 | 105,161 | 1.70 | (2,599) | 102,562 | 1.66 |
| 1140W | SUPPORT BUILDING RENOVATIONS | 2091 | 20-SQ | (10) | | | | | | 5.50 */** |
| 1140Z | COMMUNITY DEVELOPMENT COSTS | 2091 | 80-SQ | 0 | 101,442,997 | 1,268,037 | 1.25 | (90,628) | 1,177,409 | 1.16 ** |
| | **TOTAL GRAND RAPIDS** | | | | **341,105,346** | **5,135,595** | **1.51** | **(340,623)** | **4,794,972** | **1.41** |
| **11450** | **KETTLE** | | | | | | | | | |
| 1145A | DAMS, DYKES AND WEIRS | 2111 | 125-R4 | (10) | 45,280,663 | 414,201 | 0.91 | (23,299) | 390,902 | 0.86 |
| 1145B | POWERHOUSE | 2111 | 125-R4 | (10) | 146,207,420 | 1,340,586 | 0.92 | (74,373) | 1,266,213 | 0.87 |
| 1145C | POWERHOUSE RENOVATIONS | 2111 | 25-SQ | (10) | | | | | | 4.40 */** |
| 1145D | SPILLWAY | 2111 | 75-R2 | (10) | 25,406,960 | 371,704 | 1.46 | (34,043) | 337,661 | 1.33 |
| 1145E | WATER CONTROL SYSTEMS | 2111 | 50-S4 | (10) | 17,834,945 | 392,369 | 2.20 | (115,814) | 276,555 | 1.55 |
| 1145F | ROADS AND SITE IMPROVEMENTS | 2111 | 50-R3 | (10) | 10,591 | 233 | 2.20 | (7) | 226 | 2.14 |
| 1145G | TURBINES AND GENERATORS | 2111 | 65-S3 | (10) | 70,740,028 | 1,198,336 | 1.69 | (154,283) | 1,044,053 | 1.48 |
| 1145H | GOVERNORS AND EXCITATION SYSTEM | 2111 | 50-R4 | (10) | 3,304,326 | 72,695 | 2.20 | (17,985) | 54,710 | 1.66 |
| 1145L | LICENCE RENEWAL | 2111 | 50-SQ | 0 | | | | | | 2.00 */** |
| 1145P | A/C ELECTRICAL POWER SYSTEMS | 2111 | 50-R3 | (10) | 6,771,761 | 148,979 | 2.20 | (10,563) | 138,416 | 2.04 |
| 1145Q | INSTRUMENTATION, CONTROL AND D/C SYSTEMS | 2111 | 23-L2 | (10) | 12,001,279 | 574,261 | 4.78 | (81,473) | 492,788 | 4.11 |
| 1145R | AUXILIARY STATION PROCESSES | 2111 | 40-R2.5 | (10) | 15,361,985 | 422,455 | 2.75 | (47,108) | 375,347 | 2.44 |
| 1145X | SUPPORT BUILDINGS | 2111 | 65-R3 | (10) | 3,908,404 | 66,208 | 1.69 | (9,217) | 56,991 | 1.46 |
| 1145W | SUPPORT BUILDING RENOVATIONS | 2111 | 20-SQ | (10) | | | | | | 5.50 */** |
| | **TOTAL KETTLE** | | | | **346,828,362** | **5,002,027** | **1.44** | **(568,166)** | **4,433,861** | **1.28** |

SCHEDULE 1. ESTIMATED SURVIVOR CURVES, NET SALVAGE PERCENTS, ORIGINAL COST AND ANNUAL ACCRUALS
FOR THE TWELVE MONTHS ENDED MARCH 31, 2010
(USE OF THE ASL PROCEDURE)

| ACCOUNT | DEPRECIABLE WORK | LIFE SPAN DATE | SURVIVOR CURVE | NET SALVAGE | SURVIVING ORIGINAL COST AS OF MARCH 31, 2010 | CALCULATED ANNUAL ACCRUAL AMOUNT | CALCULATED ANNUAL ACCRUAL RATE (%) | ANNUAL PROVISION FOR TRUE-UP | TOTAL DEPRECIATION EXPENSE | TOTAL DEPRECIATION RATE (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| | (1) | | (2) | (3) | (4) | (5) | (6)=(5)/(4) | (7) | (8)=(5)+(7) | (9)=(8)/(4) |
| **11500** | **LAURIE RIVER** | | | | | | | | | |
| 1150A | DAMS, DYKES AND WEIRS | 2032 | 125-R4 | (10) | 355,538 | 8,898 | 2.50 | 3,446 | 12,344 | 3.47 |
| 1150B | POWERHOUSE | 2032 | 125-R4 | (10) | 7,664,146 | 289,315 | 3.77 | 36,456 | 325,771 | 4.25 |
| 1150C | POWERHOUSE RENOVATIONS | 2032 | 25-SQ | (10) | | | | | | 5.00 */** |
| 1150D | SPILLWAY | 2032 | 75-R2 | (10) | 870,000 | 26,605 | 3.06 | 7,180 | 33,785 | 3.88 |
| 1150E | WATER CONTROL SYSTEMS | 2032 | 50-S4 | (10) | 458,033 | 14,062 | 3.07 | 3,543 | 17,605 | 3.84 |
| 1150F | ROADS AND SITE IMPROVEMENTS | 2032 | 50-R3 | (10) | 1,441,914 | 45,615 | 3.16 | 12,143 | 57,758 | 4.01 |
| 1150G | TURBINES AND GENERATORS | 2032 | 65-S3 | (10) | 4,603,136 | 191,600 | 4.16 | 15,121 | 206,721 | 4.49 |
| 1150H | GOVERNORS AND EXCITATION SYSTEM | 2032 | 50-R4 | (10) | 882,653 | 39,660 | 4.49 | 1,827 | 41,487 | 4.70 |
| 1150L | LICENCE RENEWAL | 2032 | 50-SQ | 0 | | | | | | 4.55 */** |
| 1150P | A/C ELECTRICAL POWER SYSTEMS | 2032 | 50-R3 | (10) | 1,441,945 | 48,391 | 3.36 | 10,498 | 58,889 | 4.08 |
| 1150Q | INSTRUMENTATION, CONTROL AND D/C SYSTEMS | 2032 | 23-L2 | (10) | 1,220,047 | 60,217 | 4.94 | 27,960 | 88,177 | 7.23 |
| 1150R | AUXILIARY STATION PROCESSES | 2032 | 40-R2.5 | (10) | 308,504 | 10,635 | 3.45 | 2,623 | 13,258 | 4.30 |
| 1150X | SUPPORT BUILDINGS | 2032 | 65-R3 | (10) | 355,919 | 10,179 | 2.86 | 3,181 | 13,360 | 3.75 |
| 1150W | SUPPORT BUILDING RENOVATIONS | 2032 | 20-SQ | (10) | | | | | | 5.50 */** |
| | **TOTAL LAURIE RIVER** | | | | **19,601,835** | **745,177** | **3.80** | **123,978** | **869,155** | **4.43** |
| **11550** | **JENPEG** | | | | | | | | | |
| 1155A | DAMS, DYKES AND WEIRS | 2118 | 125-R4 | (10) | 15,295,318 | 142,827 | 0.93 | (1,830) | 140,997 | 0.92 |
| 1155B | POWERHOUSE | 2118 | 125-R4 | (10) | 76,905,294 | 696,306 | 0.91 | (12,006) | 684,300 | 0.89 |
| 1155C | POWERHOUSE RENOVATIONS | 2118 | 25-SQ | (10) | | | | | | 4.40 */** |
| 1155D | SPILLWAY | 2118 | 75-R2 | (10) | 14,942,733 | 218,620 | 1.46 | (6,081) | 212,539 | 1.42 |
| 1155E | WATER CONTROL SYSTEMS | 2118 | 50-S4 | (10) | 16,762,099 | 368,766 | 2.20 | (30,152) | 338,614 | 2.02 |
| 1155F | ROADS AND SITE IMPROVEMENTS | 2118 | 50-R3 | (10) | 1,563,205 | 34,391 | 2.20 | (1,238) | 33,153 | 2.12 |
| 1155G | TURBINES AND GENERATORS | 2118 | 65-S3 | (10) | 79,641,550 | 1,349,128 | 1.69 | (50,285) | 1,298,843 | 1.63 |
| 1155H | GOVERNORS AND EXCITATION SYSTEM | 2118 | 50-R4 | (10) | | | | | | 2.20 * |
| 1155L | LICENCE RENEWAL | 2118 | 50-SQ | 0 | | | | | | 2.00 */** |
| 1155P | A/C ELECTRICAL POWER SYSTEMS | 2118 | 50-R3 | (10) | 19,308,049 | 424,777 | 2.20 | (28,106) | 396,671 | 2.05 |
| 1155Q | INSTRUMENTATION, CONTROL AND D/C SYSTEMS | 2118 | 23-L2 | (10) | 3,343,800 | 160,001 | 4.79 | (8,517) | 151,484 | 4.53 |
| 1155R | AUXILIARY STATION PROCESSES | 2118 | 40-R2.5 | (10) | 9,796,258 | 269,397 | 2.75 | (8,392) | 261,005 | 2.66 |
| 1155X | SUPPORT BUILDINGS | 2118 | 65-R3 | (10) | 7,885,397 | 133,579 | 1.69 | (2,282) | 131,297 | 1.67 |
| 1155W | SUPPORT BUILDING RENOVATIONS | 2118 | 20-SQ | (10) | | | | | | 5.50 */** |
| | **TOTAL JENPEG** | | | | **245,443,703** | **3,797,792** | **1.55** | **(148,889)** | **3,648,903** | **1.49** |
| **11600** | **LAKE WINNIPEG REGULATION** | | | | | | | | | |
| 1160A | DAMS, DYKES AND WEIRS | | 125-R4 | (10) | 96,807,065 | 851,902 | 0.88 | (62,478) | 789,424 | 0.82 |
| 1160L | LICENCE RENEWAL | | 50-SQ | 0 | | | | | | 2.00 */** |
| 1160Z | COMMUNITY DEVELOPMENT COSTS | | 100-SQ | 0 | 387,802,871 | 3,878,029 | 1.00 | (223,323) | 3,654,706 | 0.94 ** |
| | **TOTAL LAKE WINNIPEG REGULATION** | | | | **484,609,937** | **4,729,931** | **0.98** | **(285,800)** | **4,444,131** | **0.92** |
| **11650** | **CHURCHILL RIVER DIVERSION** | | | | | | | | | |
| 1165A | DAMS, DYKES AND WEIRS | | 125-R4 | (10) | 114,718,213 | 1,009,520 | 0.88 | 976 | 1,010,496 | 0.88 |
| 1165D | SPILLWAY | | 75-R2 | (10) | 56,442,246 | 825,750 | 1.46 | 1,355 | 827,105 | 1.47 |
| 1165E | WATER CONTROL SYSTEMS | | 50-S4 | (10) | 17,583,551 | 386,838 | 2.20 | 1,954 | 388,792 | 2.21 |
| 1165F | ROADS AND SITE IMPROVEMENTS | | 50-R3 | (10) | 6,799,023 | 149,578 | 2.20 | 578 | 150,156 | 2.21 |
| 1165L | LICENCE RENEWAL | | 50-SQ | 0 | | | | | | 2.00 */** |
| 1165P | A/C ELECTRICAL POWER SYSTEMS | | 50-R3 | (10) | 1,596,593 | 35,125 | 2.20 | 136 | 35,261 | 2.21 |
| 1165Q | INSTRUMENTATION, CONTROL AND D/C SYSTEMS | | 23-L2 | (10) | 1,417,862 | 67,845 | 4.79 | 479 | 68,324 | 4.82 |
| 1165R | AUXILIARY STATION PROCESSES | | 40-R2.5 | (10) | 1,799,312 | 49,481 | 2.75 | 43 | 49,524 | 2.75 |
| 1165X | SUPPORT BUILDINGS | | 65-R3 | (10) | 28,361 | 480 | 1.69 | 0 | 480 | 1.69 |
| 1165W | SUPPORT BUILDING RENOVATIONS | | 20-SQ | (10) | | | | | | 5.50 */** |
| 1165Z | COMMUNITY DEVELOPMENT COSTS | | 100-SQ | 0 | 305,036,524 | 3,050,365 | 1.00 | (228,014) | 2,822,351 | 0.93 ** |
| | **TOTAL CHURCHILL RIVER DIVERSION** | | | | **505,421,684** | **5,574,982** | **1.10** | **(222,493)** | **5,352,489** | **1.06** |

SCHEDULE 1. ESTIMATED SURVIVOR CURVES, NET SALVAGE PERCENTS, ORIGINAL COST AND ANNUAL ACCRUALS
FOR THE TWELVE MONTHS ENDED MARCH 31, 2010
(USE OF THE ASL PROCEDURE)

| ACCOUNT | DEPRECIABLE WORK | LIFE SPAN DATE | SURVIVOR CURVE | NET SALVAGE | SURVIVING ORIGINAL COST AS OF MARCH 31, 2010 | CALCULATED ANNUAL ACCRUAL AMOUNT | CALCULATED ANNUAL ACCRUAL RATE (%) | ANNUAL PROVISION FOR TRUE-UP | TOTAL DEPRECIATION EXPENSE | TOTAL DEPRECIATION RATE (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| | (1) | | (2) | (3) | (4) | (5) | (6)=(5)/(4) | (7) | (8)=(5)+(7) | (9)=(8)/(4) |
| **11700** | **LONG SPRUCE** | | | | | | | | | |
| 1170A | DAMS, DYKES AND WEIRS | 2118 | 125-R4 | (10) | 64,744,494 | 592,929 | 0.92 | (8,709) | 584,220 | 0.90 |
| 1170B | POWERHOUSE | 2118 | 125-R4 | (10) | 143,780,355 | 1,317,441 | 0.92 | (19,381) | 1,298,060 | 0.90 |
| 1170C | POWERHOUSE RENOVATIONS | 2118 | 25-SQ | (10) | | | | | | 4.40 */** |
| 1170D | SPILLWAY | 2118 | 75-R2 | (10) | 42,273,617 | 618,463 | 1.46 | (14,770) | 603,693 | 1.43 |
| 1170E | WATER CONTROL SYSTEMS | 2118 | 50-S4 | (10) | 57,946,281 | 1,274,818 | 2.20 | (92,134) | 1,182,684 | 2.04 |
| 1170F | ROADS AND SITE IMPROVEMENTS | 2118 | 50-R3 | (10) | 1,172,867 | 25,803 | 2.20 | (1,173) | 24,630 | 2.10 |
| 1170G | TURBINES AND GENERATORS | 2118 | 65-S3 | (10) | 143,328,643 | 2,427,987 | 1.69 | (93,123) | 2,334,864 | 1.63 |
| 1170H | GOVERNORS AND EXCITATION SYSTEM | 2118 | 50-R4 | (10) | 145,844 | 3,209 | 2.20 | (21) | 3,188 | 2.19 |
| 1170L | LICENCE RENEWAL | 2118 | 50-SQ | 0 | | | | | | 2.00 */** |
| 1170P | A/C ELECTRICAL POWER SYSTEMS | 2118 | 50-R3 | (10) | 30,503,528 | 671,078 | 2.20 | (32,833) | 638,245 | 2.09 |
| 1170Q | INSTRUMENTATION, CONTROL AND D/C SYSTEMS | 2118 | 23-L2 | (10) | 4,409,200 | 210,980 | 4.78 | (18,309) | 192,671 | 4.37 |
| 1170R | AUXILIARY STATION PROCESSES | 2118 | 40-R2.5 | (10) | 12,199,119 | 335,476 | 2.75 | (14,985) | 320,491 | 2.63 |
| 1170X | SUPPORT BUILDINGS | 2118 | 65-R3 | (10) | 160,484 | 2,719 | 1.69 | (13) | 2,706 | 1.69 |
| 1170W | SUPPORT BUILDING RENOVATIONS | 2118 | 20-SQ | (10) | | | | | | 5.50 */** |
| | **TOTAL LONG SPRUCE** | | | | **500,664,431** | **7,480,903** | **1.49** | **(295,451)** | **7,185,452** | **1.44** |
| **11750** | **LIMESTONE** | | | | | | | | | |
| 1175A | DAMS, DYKES AND WEIRS | 2131 | 125-R4 | (10) | 33,258,073 | 302,205 | 0.91 | (1,269) | 300,936 | 0.90 |
| 1175B | POWERHOUSE | 2131 | 125-R4 | (10) | 461,430,334 | 4,194,354 | 0.91 | (17,501) | 4,176,853 | 0.91 |
| 1175C | POWERHOUSE RENOVATIONS | 2131 | 25-SQ | (10) | | | | | | 4.40 */** |
| 1175D | SPILLWAY | 2131 | 75-R2 | (10) | 201,240,773 | 2,944,153 | 1.46 | (18,950) | 2,925,203 | 1.45 |
| 1175E | WATER CONTROL SYSTEMS | 2131 | 50-S4 | (10) | 116,224,392 | 2,556,937 | 2.20 | (35,306) | 2,521,631 | 2.17 |
| 1175F | ROADS AND SITE IMPROVEMENTS | 2131 | 50-R3 | (10) | 17,164,432 | 377,618 | 2.20 | (4,778) | 372,840 | 2.17 |
| 1175G | TURBINES AND GENERATORS | 2131 | 65-S3 | (10) | 403,825,745 | 6,840,808 | 1.69 | (63,305) | 6,777,503 | 1.68 |
| 1175H | GOVERNORS AND EXCITATION SYSTEM | 2131 | 50-R4 | (10) | 16,584,271 | 364,854 | 2.20 | (4,880) | 359,974 | 2.17 |
| 1175L | LICENCE RENEWAL | 2131 | 50-SQ | 0 | | | | | | 2.00 */** |
| 1175P | A/C ELECTRICAL POWER SYSTEMS | 2131 | 50-R3 | (10) | 144,317,307 | 3,174,981 | 2.20 | (40,184) | 3,134,797 | 2.17 |
| 1175Q | INSTRUMENTATION, CONTROL AND D/C SYSTEMS | 2131 | 23-L2 | (10) | 8,333,373 | 398,752 | 4.79 | (9,553) | 389,199 | 4.67 |
| 1175R | AUXILIARY STATION PROCESSES | 2131 | 40-R2.5 | (10) | 36,054,205 | 991,491 | 2.75 | (14,354) | 977,137 | 2.71 |
| 1175X | SUPPORT BUILDINGS | 2131 | 65-R3 | (10) | 5,703,494 | 96,617 | 1.69 | (751) | 95,866 | 1.68 |
| 1175W | SUPPORT BUILDING RENOVATIONS | 2131 | 20-SQ | (10) | | | | | | 5.50 ** |
| | **TOTAL LIMESTONE** | | | | **1,444,136,399** | **22,242,770** | **1.54** | **(210,830)** | **22,031,940** | **1.53** |
| **11800** | **WUSKWATIM** | | | | | | | | | |
| 1180A | DAMS, DYKES AND WEIRS | 2152 | 125-R4 | (10) | | | | | | 0.88 * |
| 1180B | POWERHOUSE | 2152 | 125-R4 | (10) | | | | | | 0.88 * |
| 1180C | POWERHOUSE RENOVATIONS | 2152 | 25-SQ | (10) | | | | | | 4.40 */** |
| 1180D | SPILLWAY | 2152 | 75-R2 | (10) | | | | | | 1.47 * |
| 1180E | WATER CONTROL SYSTEMS | 2152 | 50-S4 | (10) | | | | | | 2.20 * |
| 1180F | ROADS AND SITE IMPROVEMENTS | 2152 | 50-R3 | (10) | | | | | | 2.20 * |
| 1180G | TURBINES AND GENERATORS | 2152 | 65-S3 | (10) | | | | | | 1.69 * |
| 1180H | GOVERNORS AND EXCITATION SYSTEM | 2152 | 50-R4 | (10) | | | | | | 2.20 * |
| 1180P | A/C ELECTRICAL POWER SYSTEMS | 2152 | 50-R3 | (10) | | | | | | 2.20 * |
| 1180Q | INSTRUMENTATION, CONTROL AND D/C SYSTEMS | 2152 | 23-L2 | (10) | | | | | | 4.78 * |
| 1180R | AUXILIARY STATION PROCESSES | 2152 | 40-R2.5 | (10) | | | | | | 2.75 * |
| 1180X | SUPPORT BUILDINGS | 2152 | 65-R3 | (10) | | | | | | 1.69 * |
| 1180W | SUPPORT BUILDING RENOVATIONS | 2152 | 20-SQ | (10) | | | | | | 5.50 */** |
| | **TOTAL WUSKWATIM** | | | | **0** | **0** | | **0** | **0** | |
| **11990** | **INFRASTRUCTURE SUPPORTING GENERATION** | | | | | | | | | |
| 1199F | PROVINCIAL ROADS | | 50-R3 | (10) | 25,380,938 | 558,381 | 2.20 | 24,833 | 583,214 | 2.30 |
| 1199V | TOWN SITE BUILDING | | 65-L3 | (7) | 63,280,714 | 1,042,740 | 1.65 | 41,341 | 1,084,081 | 1.71 |
| 1199W | TOWN SITE BUILDINGS RENOVATIONS | | 20-SQ | (6) | 13,502,581 | 715,319 | 5.30 | 87,367 | 802,686 | 5.94 ** |
| 1199Y | TOWN SITE OTHER INFRASTRUCTURE | | 45-R3 | (10) | 26,527,464 | 646,258 | 2.44 | 14,107 | 660,365 | 2.49 |
| | **TOTAL INFRASTRUCTURE SUPPORTING GENERATION** | | | | **128,691,696** | **2,962,698** | **2.30** | **167,648** | **3,130,346** | **2.43** |
| | **TOTAL HYDRAULIC GENERATION** | | | | **4,716,467,183** | **72,502,886** | **1.54** | **(2,920,113)** | **69,582,773** | **1.48** |

SCHEDULE 1. ESTIMATED SURVIVOR CURVES, NET SALVAGE PERCENTS, ORIGINAL COST AND ANNUAL ACCRUALS
FOR THE TWELVE MONTHS ENDED MARCH 31, 2010
(USE OF THE ASL PROCEDURE)

| ACCOUNT | DEPRECIABLE WORK | LIFE SPAN DATE | SURVIVOR CURVE | NET SALVAGE | SURVIVING ORIGINAL COST AS OF MARCH 31, 2010 | CALCULATED ANNUAL ACCRUAL AMOUNT | CALCULATED ANNUAL ACCRUAL RATE (%) | ANNUAL PROVISION FOR TRUE-UP | TOTAL DEPRECIATION EXPENSE | TOTAL DEPRECIATION RATE (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| | (1) | | (2) | (3) | (4) | (5) | (6)=(5)/(4) | (7) | (8)=(5)+(7) | (9)=(8)/(4) |
| 12000 | **THERMAL GENERATION** | | | | | | | | | |
| 12050 | **BRANDON UNIT 5 (COAL)** | | | | | | | | | |
| 1205B | POWERHOUSE | 2020 | 65-R4 | 0 | 11,729,518 | 426,044 | 3.63 | 27,604 | 453,648 | 3.87 |
| 1205C | POWERHOUSE RENOVATIONS | 2020 | 25-SQ | 0 | | | | | | 10.00 */** |
| 1205F | ROADS AND SITE IMPROVEMENTS | 2020 | 50-R3 | 0 | 4,012,331 | 174,507 | 4.35 | 8,310 | 182,817 | 4.56 |
| 1205G | THERMAL TURBINES AND GENERATORS | 2020 | 50-S3 | 0 | 19,611,168 | 949,751 | 4.84 | 37,117 | 986,868 | 5.03 |
| 1205H | GOVERNORS AND EXCITATION SYSTEM | 2020 | 50-R4 | 0 | 2,343,861 | 114,615 | 4.89 | 4,246 | 118,861 | 5.07 |
| 1205J | STEAM GENERATOR AND AUXILIARIES | 2020 | 65-R2.5 | 0 | 14,827,183 | 548,058 | 3.70 | 34,152 | 582,210 | 3.93 |
| 1205L | LICENCE RENEWAL | 2020 | 50-SQ | 0 | | | | 0 | | 10.00 */** |
| 1205P | A/C ELECTRICAL POWER SYSTEMS | 2020 | 50-R3 | 0 | 8,009,703 | 305,876 | 3.82 | 18,931 | 324,807 | 4.06 |
| 1205Q | INSTRUMENTATION, CONTROL AND D/C SYSTEMS | 2020 | 23-L2 | 0 | 26,389,775 | 1,343,471 | 5.09 | 85,022 | 1,428,493 | 5.41 |
| 1205R | AUXILIARY STATION PROCESSES | 2020 | 40-R2.5 | 0 | 47,306,417 | 2,102,919 | 4.45 | 105,137 | 2,208,056 | 4.67 |
| 1205X | SUPPORT BUILDINGS | 2020 | 65-R3 | 0 | 7,253,899 | 292,642 | 4.03 | 15,562 | 308,204 | 4.25 |
| 1205W | SUPPORT BUILDING RENOVATIONS | 2020 | 20-SQ | 0 | | | | | | 10.00 */** |
| | **TOTAL BRANDON UNIT 5 (COAL)** | | | | **141,483,855** | **6,257,883** | **4.42** | **336,081** | **6,593,964** | **4.66** |
| 12100 | **BRANDON UNITS 6 AND 7** | | | | | | | | | |
| 1210B | POWERHOUSE | | 65-R4 | (10) | 14,925,029 | 252,830 | 1.69 | (6,757) | 246,073 | 1.65 |
| 1210C | POWERHOUSE RENOVATIONS | | 25-SQ | (10) | | | | | | 4.40 */** |
| 1210G | THERMAL TURBINES AND GENERATORS | | 50-S3 | (10) | 9,823,758 | 216,123 | 2.20 | (7,827) | 208,296 | 2.12 |
| 1210H | GOVERNORS AND EXCITATION SYSTEM | | 50-R4 | (10) | | | | | | 2.20 * |
| 1210K | COMBUSTION TURBINE | | 25-R3 | (10) | 143,284,091 | 6,304,500 | 4.40 | (494,364) | 5,810,136 | 4.05 |
| 1210L | LICENCE RENEWAL | | 50-SQ | 0 | | | | 0 | | 2.00 */** |
| 1210M | COMBUSTION TURBINE OVERHAULS | | 10-SQ | (10) | | | | | | 11.00 */** |
| 1210P | A/C ELECTRICAL POWER SYSTEMS | | 50-R3 | (10) | 6,252,586 | 137,557 | 2.20 | (4,779) | 132,778 | 2.12 |
| 1210Q | INSTRUMENTATION, CONTROL AND D/C SYSTEMS | | 23-L2 | (10) | 1,114,338 | 53,321 | 4.78 | (2,322) | 50,999 | 4.58 |
| 1210R | AUXILIARY STATION PROCESSES | | 40-R2.5 | (10) | 10,639,560 | 292,588 | 2.75 | (12,177) | 280,411 | 2.64 |
| | **TOTAL BRANDON UNITS 6 AND 7** | | | | **186,039,362** | **7,256,919** | **3.90** | **(528,226)** | **6,728,693** | **3.62** |
| 12150 | **SELKIRK** | | | | | | | | | |
| 1215B | POWERHOUSE | | 65-R4 | 0 | 6,808,812 | 104,856 | 1.54 | (41,751) | 63,105 | 0.93 |
| 1215C | POWERHOUSE RENOVATIONS | | 25-SQ | 0 | | | | | | 4.00 */** |
| 1215F | ROADS AND SITE IMPROVEMENTS | | 50-R3 | 0 | 1,630,443 | 32,609 | 2.00 | (10,650) | 21,959 | 1.35 |
| 1215G | THERMAL TURBINES AND GENERATORS | | 50-S3 | 0 | 22,750,003 | 455,000 | 2.00 | (123,633) | 331,367 | 1.46 |
| 1215H | GOVERNORS AND EXCITATION SYSTEM | | 50-R4 | 0 | 17,307 | 346 | 2.00 | 0 | 346 | 2.00 |
| 1215J | STEAM GENERATOR AND AUXILIARIES | | 65-R2.5 | 0 | 48,630,259 | 748,906 | 1.54 | (97,831) | 651,075 | 1.34 |
| 1215L | LICENCE RENEWAL | | 50-SQ | 0 | | | | 0 | | 2.00 */** |
| 1215P | A/C ELECTRICAL POWER SYSTEMS | | 50-R3 | 0 | 3,171,700 | 63,434 | 2.00 | (25,153) | 38,281 | 1.21 |
| 1215Q | INSTRUMENTATION, CONTROL AND D/C SYSTEMS | | 23-L2 | 0 | 5,257,468 | 228,700 | 4.35 | (101,800) | 126,900 | 2.41 |
| 1215R | AUXILIARY STATION PROCESSES | | 40-R2.5 | 0 | 13,791,022 | 344,776 | 2.50 | (118,947) | 225,829 | 1.64 |
| 1215X | SUPPORT BUILDINGS | | 65-R3 | 0 | 1,033,229 | 15,912 | 1.54 | (4,951) | 10,961 | 1.06 |
| 1215W | SUPPORT BUILDING RENOVATIONS | | 20-SQ | 0 | | | | | | 5.00 */** |
| | **TOTAL SELKIRK** | | | | **103,090,244** | **1,994,539** | **1.93** | **(524,716)** | **1,469,823** | **1.43** |
| | **TOTAL THERMAL GENERATION** | | | | **430,613,460** | **15,509,341** | **3.60** | **(716,861)** | **14,792,480** | **3.44** |
| | **TOTAL GENERATION** | | | | **5,147,080,643** | **88,012,227** | **1.71** | **(3,636,974)** | **84,375,253** | **1.64** |
| | **DIESEL GENERATION** | | | | | | | | | |
| 1300B | BUILDINGS | | 30-R3 | (5) | 9,191,362 | 321,376 | 3.50 | (85,396) | 235,980 | 2.57 |
| 1300C | BUILDING RENOVATIONS | | 15-SQ | 0 | 17,685 | 1,180 | 6.67 | (271) | 909 | 5.14 ** |
| 1300M | ENGINES AND GENERATORS - OVERHAULS | | 5-SQ | 0 | | | | | | 20.00 */** |
| 1300N | ENGINES AND GENERATORS | | 25-R2 | 0 | 18,152,912 | 726,116 | 4.00 | (385,026) | 341,090 | 1.88 |
| 1300Q | ACCESSORY STATION EQUIPMENT | | 20-R3 | (5) | 13,457,225 | 706,504 | 5.25 | (293,123) | 413,381 | 3.07 |
| 1300T | FUEL STORAGE AND HANDLING | | 30-R2 | (5) | 3,803,695 | 132,996 | 3.50 | (46,327) | 86,669 | 2.28 |
| | **TOTAL DIESEL GENERATION** | | | | **44,622,878** | **1,888,172** | **4.23** | **(810,143)** | **1,078,029** | **2.42** |

MANITOBA HYDRO

SCHEDULE 1. ESTIMATED SURVIVOR CURVES, NET SALVAGE PERCENTS, ORIGINAL COST AND ANNUAL ACCRUALS
FOR THE TWELVE MONTHS ENDED MARCH 31, 2010
(USE OF THE ASL PROCEDURE)

| ACCOUNT | DEPRECIABLE WORK | LIFE SPAN DATE | SURVIVOR CURVE | NET SALVAGE | SURVIVING ORIGINAL COST AS OF MARCH 31, 2010 | CALCULATED ANNUAL ACCRUAL AMOUNT | CALCULATED ANNUAL ACCRUAL RATE (%) | ANNUAL PROVISION FOR TRUE-UP | TOTAL DEPRECIATION EXPENSE | TOTAL DEPRECIATION RATE (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| | (1) | | (2) | (3) | (4) | (5) | (6)=(5)/(4) | (7) | (8)=(5)+(7) | (9)=(8)/(4) |
| | **TRANSMISSION** | | | | | | | | | |
| 2000F | ROADS, TRAILS AND BRIDGES | | 45-R2.5 | (10) | 4,045,718 | 98,675 | 2.44 | 2,845 | 101,520 | 2.51 |
| 2000G | METAL TOWERS AND CONCRETE POLES | | 85-R4 | (25) | 340,022,220 | 5,015,328 | 1.48 | 102,289 | 5,117,617 | 1.51 |
| 2000J | POLES AND FIXTURES | | 55-R3 | (35) | 104,983,312 | 2,579,440 | 2.46 | 32,383 | 2,611,823 | 2.49 |
| 2000K | GROUND LINE TREATMENT | | 10-SQ | 0 | 1,410,002 | 141,000 | 10.00 | 0 | 141,000 | 10.00 ** |
| 2000L | OVERHEAD CONDUCTOR AND DEVICES | | 65-R4 | (15) | 304,577,152 | 5,390,077 | 1.77 | (450,334) | 4,939,743 | 1.62 |
| 2000M | UNDERGROUND CABLE AND DEVICES | | 45-R3 | (5) | 1,167,763 | 27,221 | 2.33 | (1,127) | 26,094 | 2.23 |
| | **TOTAL TRANSMISSION** | | | | **756,206,167** | **13,251,741** | **1.75** | **(313,944)** | **12,937,797** | **1.71** |
| | **SUBSTATIONS** | | | | | | | | | |
| 3000B | BUILDINGS | | 65-R4 | (5) | 109,491,690 | 1,770,481 | 1.62 | (134,112) | 1,636,369 | 1.49 |
| 3000C | BUILDING RENOVATIONS | | 20-SQ | 0 | 32,047 | 1,602 | 5.00 | 0 | 1,602 | 5.00 ** |
| 3000F | ROADS, STEEL STRUCTURES AND CIVIL SITE WORK | | 50-R4 | (10) | 109,211,425 | 2,402,651 | 2.20 | (109,645) | 2,293,006 | 2.10 |
| 3000J | POLES AND FIXTURES | | 40-R2 | (35) | 7,810,315 | 263,598 | 3.37 | (9,626) | 253,972 | 3.25 |
| 3100R | POWER TRANSFORMERS | | 50-R2 | (15) | 287,449,387 | 6,611,336 | 2.30 | (249,808) | 6,361,528 | 2.21 |
| 3100S | OTHER TRANSFORMERS | | 35-R2 | (15) | 72,153,356 | 2,373,124 | 3.29 | (146,970) | 2,226,154 | 3.09 |
| 3100T | INTERRUPTING EQUIPMENT | | 45-R2 | (15) | 156,214,257 | 3,988,150 | 2.55 | (220,981) | 3,767,169 | 2.41 |
| 3100U | OTHER STATION EQUIPMENT | | 43-R2 | (15) | 503,404,372 | 13,488,405 | 2.68 | (694,114) | 12,794,291 | 2.54 |
| 3100V | ELECTRONIC EQUIPMENT AND BATTERIES | | 20-R2 | (10) | 151,238,104 | 7,871,119 | 5.20 | (671,348) | 7,199,771 | 4.76 |
| 3200M | SYNCHRONOUS CONDENSERS AND UNIT TRANSFORMERS | | 65-R2 | (15) | 111,737,981 | 1,978,880 | 1.77 | (99,142) | 1,879,738 | 1.68 |
| 3200N | SYNCHRONOUS CONDENSER OVERHAULS | | 15-R2 | (15) | 11,320,594 | 868,346 | 7.67 | (26,812) | 841,534 | 7.43 |
| 3200P | HVDC CONVERTER EQUIPMENT | | 25-R3 | (15) | 214,981,687 | 9,889,158 | 4.60 | (999,716) | 8,889,442 | 4.13 |
| 3200S | HVDC SERIALIZED EQUIPMENT | | 25-R2 | (15) | 646,219,985 | 29,726,119 | 4.60 | (2,696,220) | 27,029,899 | 4.18 |
| 3200U | HVDC ACCESSORY STATION EQUIPMENT | | 37-R4 | (15) | 55,177,090 | 1,713,249 | 3.11 | (139,657) | 1,573,592 | 2.85 |
| 3200V | HVDC ELECTRONIC EQUIPMENT AND BATTERIES | | 20-R2 | (10) | 10,401,883 | 572,104 | 5.50 | (87,428) | 484,676 | 4.66 |
| | **TOTAL SUBSTATIONS** | | | | **2,446,844,172** | **83,518,322** | **3.41** | **(6,285,579)** | **77,232,743** | **3.16** |
| | **DISTRIBUTION** | | | | | | | | | |
| 4000A | UNDERGROUND DUCT AND CONDUIT - CONCRETE | | 75-R4 | (5) | 63,964,331 | 1,516,031 | 2.37 | (52,744) | 1,463,287 | 2.29 |
| 4000C | UNDERGROUND DUCT - ROOF | | 50-R3 | (5) | 2,908,307 | 61,074 | 2.10 | (455) | 60,619 | 2.08 |
| 4000G | METAL TOWERS | | 50-R4 | (25) | 4,571,448 | 114,286 | 2.50 | (23,451) | 90,835 | 1.99 |
| 4000J | POLES AND FIXTURES | | 55-R3 | (38) | 566,174,558 | 14,220,040 | 2.51 | (2,354,944) | 11,865,096 | 2.10 |
| 4000K | GROUND LINE TREATMENT | | 10-SQ | 0 | 33,145,019 | 3,175,797 | 9.58 | 0 | 3,175,797 | 9.58 ** |
| 4000L | OVERHEAD CONDUCTOR AND DEVICES | | 60-R2 | (38) | 613,820,471 | 14,146,107 | 2.30 | (1,969,809) | 12,176,298 | 1.98 |
| 4000M | UNDERGROUND CABLE AND DEVICES - 66 KV | | 70-R3 | (5) | 19,523,432 | 293,144 | 1.50 | (5,164) | 287,980 | 1.48 |
| 4000N | UNDERGROUND CABLE AND DEVICES - PRIMARY | | 60-R4 | (5) | 255,063,759 | 4,472,543 | 1.75 | (172,361) | 4,300,182 | 1.69 |
| 4000P | UNDERGROUND CABLE AND DEVICES - SECONDARY | | 45-R4 | (5) | 193,755,072 | 4,516,431 | 2.33 | (225,377) | 4,291,054 | 2.21 |
| 4000Q | SERIALIZED EQUIPMENT - OVERHEAD | | 35-R3 | (15) | 175,924,348 | 5,782,518 | 3.29 | (756,708) | 5,025,810 | 2.86 |
| 4000R | DSC - HIGH VOLTAGE TRANSFORMERS | | 50-R2 | (15) | 5,415,940 | 124,567 | 2.30 | (6,204) | 118,363 | 2.19 |
| 4000S | SERIALIZED EQUIPMENT - UNDERGROUND | | 40-R3 | (15) | 174,049,772 | 5,003,931 | 2.88 | (439,888) | 4,564,043 | 2.62 |
| 4000V | ELECTRONIC EQUIPMENT | | 10-SQ | 0 | | | | | | 10.00 */** |
| 4000W | SERVICES | | 30-R2 | (40) | 123,228,795 | 5,744,926 | 4.66 | (345,986) | 5,398,940 | 4.38 |
| 4000X | STREET LIGHTING | | 35-R3 | (15) | 147,121,573 | 4,838,829 | 3.29 | (362,891) | 4,475,938 | 3.04 |
| | **TOTAL DISTRIBUTION** | | | | **2,378,666,825** | **64,010,224** | **2.69** | **(6,715,984)** | **57,294,240** | **2.41** |
| | **METERS** | | | | | | | | | |
| 4900V | METERS - ELECTRONIC | | 20-R1.5 | 0 | 16,111,185 | 805,559 | 5.00 | 176,517 | 982,076 | 6.10 |
| 4900Y | METERS - ANALOG | | 25-R3 | 0 | 22,469,156 | 858,893 | 3.82 | 2,183,720 | 3,042,613 | 13.54 |
| 4900Z | METERING TRANSFORMERS | | 40-R1.5 | 0 | 8,984,899 | 224,619 | 2.50 | (27,391) | 197,228 | 2.20 |
| | **TOTAL METERS** | | | | **47,565,240** | **1,889,071** | **3.97** | **2,332,847** | **4,221,918** | **8.88** |

MANITOBA HYDRO

SCHEDULE 1. ESTIMATED SURVIVOR CURVES, NET SALVAGE PERCENTS, ORIGINAL COST AND ANNUAL ACCRUALS
FOR THE TWELVE MONTHS ENDED MARCH 31, 2010
(USE OF THE ASL PROCEDURE)

| ACCOUNT | DEPRECIABLE WORK | LIFE SPAN DATE | SURVIVOR CURVE | NET SALVAGE | SURVIVING ORIGINAL COST AS OF MARCH 31, 2010 | CALCULATED ANNUAL ACCRUAL AMOUNT | CALCULATED ANNUAL ACCRUAL RATE (%) | ANNUAL PROVISION FOR TRUE-UP | TOTAL DEPRECIATION EXPENSE | TOTAL DEPRECIATION RATE (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| | (1) | | (2) | (3) | (4) | (5) | (6)=(5)/(4) | (7) | (8)=(5)+(7) | (9)=(8)/(4) |
| | **COMMUNICATION** | | | | | | | | | |
| 5000B | BUILDINGS | | 65-R4 | (5) | 4,154,458 | 67,178 | 1.62 | 2,171 | 69,349 | 1.67 |
| 5000C | BUILDING RENOVATIONS | | 20-SQ | (5) | 2,741,652 | 142,649 | 5.20 | 12,831 | 155,480 | 5.67 ** |
| 5000D | BUILDING - SYSTEM CONTROL CENTRE | | 65-R4 | (5) | 15,857,686 | 256,419 | 1.62 | 9,369 | 265,788 | 1.68 |
| 5000G | COMMUNICATION TOWERS | | 60-R2.5 | (5) | 8,733,929 | 153,149 | 1.75 | 5,543 | 158,692 | 1.82 |
| 5000H | FIBRE OPTIC AND METALLIC CABLE | | 35-R1.5 | (4) | 117,999,925 | 3,509,790 | 2.97 | 105,202 | 3,614,992 | 3.06 |
| 5000J | CARRIER EQUIPMENT | | 15-S0.5 | (5) | 119,230,804 | 8,341,929 | 7.00 | 819,002 | 9,160,931 | 7.68 |
| 5000K | OPERATIONAL IT EQUIPMENT | | 5-SQ | (5) | 2,197,495 | 385,045 | 17.52 | 119,637 | 504,682 | 22.97 ** |
| 5000M | MOBILE RADIO, TELEPHONE AND VIDEO CONFERENCING | | 8-SQ | (5) | 22,085,412 | 1,483,447 | 6.72 | 778,002 | 2,261,449 | 10.24 ** |
| 5000N | OPERATIONAL DATA NETWORK | | 8-SQ | (5) | 8,530,264 | 1,119,597 | 13.12 | 82,774 | 1,202,371 | 14.10 ** |
| 5000R | POWER SYSTEM CONTROL | | 10-R2 | (5) | 7,738,280 | 647,840 | 8.37 | 215,478 | 863,318 | 11.16 |
| | **TOTAL COMMUNICATION** | | | | **309,269,905** | **16,107,043** | **5.21** | **2,150,010** | **18,257,053** | **5.90** |
| | **MOTOR VEHICLES** | | | | | | | | | |
| 6000E | PASSENGER VEHICLES | | 9-L2 | 20 | 1,304,413 | 115,936 | 8.89 | 28,779 | 144,715 | 11.09 |
| 6000F | LIGHT TRUCKS | | 10-L3 | 15 | 52,299,249 | 4,445,436 | 8.50 | (337,383) | 4,108,053 | 7.85 |
| 6000G | HEAVY TRUCKS | | 15-L2 | 10 | 61,004,014 | 3,662,071 | 6.00 | (104,256) | 3,557,815 | 5.83 |
| 6000H | CONSTRUCTION EQUIPMENT | | 15-L2 | 20 | 17,016,205 | 907,985 | 5.34 | (10,557) | 897,428 | 5.27 |
| 6000I | LARGE SOFT-TRACK EQUIPMENT | | 22-L2.5 | 15 | 13,146,265 | 508,432 | 3.87 | 54,308 | 562,740 | 4.28 |
| 6000J | TRAILERS | | 35-R3 | 25 | 15,996,331 | 343,063 | 2.14 | (32,096) | 310,967 | 1.94 |
| 6000K | MISCELLANEOUS VEHICLES | | 10-L1.5 | 15 | 5,724,654 | 486,596 | 8.50 | (147,394) | 339,202 | 5.93 |
| | **TOTAL MOTOR VEHICLES** | | | | **166,491,131** | **10,469,519** | **6.29** | **(548,599)** | **9,920,920** | **5.96** |
| | **BUILDINGS** | | | | | | | | | |
| 8000B | BUILDINGS - GENERAL | | 65-R4 | (5) | 88,797,107 | 1,434,342 | 1.62 | (24,357) | 1,409,985 | 1.59 |
| 8000C | BUILDING RENOVATIONS | | 20-SQ | (5) | 46,779,508 | 2,385,884 | 5.10 | 955,245 | 3,341,129 | 7.14 ** |
| 8000D | BUILDING - 360 PORTAGE - CIVIL | | 100-R4 | 0 | 207,292,785 | 2,072,928 | 1.00 | (3,463) | 2,069,465 | 1.00 |
| 8000E | BUILDING - 360 PORTAGE - ELECTRO/MECHANICAL | | 45-R2 | 0 | 65,888,581 | 1,462,726 | 2.22 | (4,971) | 1,457,755 | 2.21 |
| | **TOTAL BUILDINGS** | | | | **408,757,981** | **7,355,880** | **1.80** | **922,453** | **8,278,333** | **2.03** |
| | **GENERAL EQUIPMENT** | | | | | | | | | |
| 9000H | TOOLS, SHOP AND GARAGE EQUIPMENT | | 15-SQ | 0 | 78,461,837 | 5,233,405 | 6.67 | 842,696 | 6,076,101 | 7.74 ** |
| 9000K | COMPUTER EQUIPMENT | | 5-SQ | 0 | 48,379,758 | 9,401,982 | 19.43 | 4,375,187 | 13,777,169 | 28.48 ** |
| 9000L | OFFICE FURNITURE AND EQUIPMENT | | 20-SQ | 0 | 21,726,896 | 1,086,345 | 5.00 | (41,021) | 1,045,324 | 4.81 ** |
| 9000M | HOT WATER TANKS | | 6-SQ | 0 | 4,511,783 | 197,108 | 4.37 | 759,615 | 956,723 | 21.20 ** |
| | **TOTAL GENERAL EQUIPMENT** | | | | **153,080,275** | **15,918,840** | **10.40** | **5,936,477** | **21,855,317** | **14.28** |
| | **EASEMENTS** | | | | | | | | | |
| A100A | EASEMENTS | | 75-R3 | 0 | 50,612,345 | 673,144 | 1.33 | (26,807) | 646,337 | 1.28 |
| | **TOTAL EASEMENTS** | | | | **50,612,345** | **673,144** | **1.33** | **(26,807)** | **646,337** | **1.28** |
| | **COMPUTER SOFTWARE AND DEVELOPMENT** | | | | | | | | | |
| A200G | COMPUTER DEVELOPMENT - MAJOR SYSTEMS | | 10-R3 | 0 | 100,980,015 | 10,098,002 | 10.00 | (537,161) | 9,560,841 | 9.47 |
| A200H | COMPUTER DEVELOPMENT - SMALL SYSTEMS | | 10-SQ | 0 | 42,827,602 | 4,282,760 | 10.00 | | 4,282,760 | 10.00 ** |
| A200J | COMPUTER SOFTWARE - GENERAL | | 5-SQ | 0 | 5,076,404 | 1,002,927 | 19.76 | | 1,002,927 | 19.76 ** |
| A200K | COMPUTER SOFTWARE - COMMUNICATION/OPERATIONAL | | 5-SQ | 0 | 3,639,540 | 360,800 | 9.91 | 146,167 | 506,967 | 13.93 ** |
| A200L | OPERATIONAL SYSTEM MAJOR SOFTWARE - EMS/SCADA | | 6-R3 | 0 | 6,016,817 | 987,000 | 16.40 | 417,942 | 1,404,942 | 23.35 |
| | **TOTAL COMPUTER SOFTWARE AND DEVELOPMENT** | | | | **158,540,378** | **16,731,489** | **10.55** | **26,948** | **16,758,437** | **10.57** |
| | **TOTAL DEPRECIABLE ASSETS** | | | | **12,067,737,939** | **319,825,672** | **2.65** | **(6,969,295)** | **312,856,377** | **2.59** |

* The account has no balance as of March 31, 2010 and rate will be used on a go-forward basis for future additions.
** On amortized accounts any true-up of less than 10% is not considered significant.
*** True-up was deemed as not significant.

# PART II. METHODS USED IN THE ESTIMATION OF DEPRECIATION

## DEPRECIATION

Depreciation, in public utility regulation, is the loss in service value not restored by current maintenance, incurred in connection with the consumption or prospective retirement of utility 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 causes to be given consideration are wear and tear, deterioration, action of the elements, inadequacy, obsolescence, changes in the art, changes in demand, and the requirements of public authorities.

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 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 the selection of group depreciation procedures. These subjects are discussed in the sections that follow.

**MANITOBA HYDRO**

**2012/13 & 2013/14 ELECTRIC GENERAL RATE APPLICATION**

**MANITOBA INDUSTRIAL POWER USERS GROUP ("MIPUG") PRE-ASK QUESTIONS OF MANITOBA HYDRO**

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**MIPUG/MH/PRE-ASK-5**

Question:
Please confirm that the rates shown at page III-8 of the Gannett Fleming study are not correct for the first year of depreciating Wuskwatim once in-service under an ELG approach (they appear to be rates related to an ASL approach absent net salvage). If the rates shown are incorrect for the ELG approach, please provide the correct year 1 ELG depreciation rates for Wuskwatim.

**ANSWER:**

The following response was prepared by Gannett Fleming.

The referenced depreciation rates were calculated in accordance with the ASL procedure. The ELG procedure is dependent upon a vintage surviving cost distribution, with varying annual accrual rates applicable to each vintage. Given that the Wuskwatim generation plant was not yet in service and was expected to have large amounts of investment prior to the next depreciation study, and further given the precise amounts of investment by account and year were not known at the time, Gannett Fleming viewed that the use of an Average Service Life (ASL) depreciation rate would be reasonable for the period of time until the next depreciation study is completed.

Gannett Fleming understood that the Wuskwatim plant was expected to be placed into service prior to the next review of depreciation rates. Manitoba Hydro will require depreciation rates once the plant is in service, therefore depreciation rates for this plant were requested in this study. At the time of the next study, the plant will have been placed into service, and an appropriate depreciation rate will be calculated in accordance with the ELG procedure. However, for the 2010 Depreciation Study, given that the ELG procedure weights depreciation rates on the investment by vintage, Gannett Fleming views that use of a forecast depreciation rate based on the ASL procedure is appropriate for this account.

Furthermore, given the very long life estimates and Life Spans for the Wuskwatim plant, the variance in the accumulated depreciation account that will require adjustment over the remaining life of the facilities will not be material on an annual basis.

Notwithstanding the above, if the ELG procedure was to be used in the first year of service, the following depreciation rates would have been recommended:

Account 1180A – Dams, Dykes and Weirs – 0.87%
Account 1180B – Powerhouse – 0.87%
Account 1180C – Powerhouse Renovations – 4.00%
Account 1180D – Spillway – 2.06%
Account 1180E – Water Control Systems – 2.07%
Account 1180F – Roads and Site Improvements – 2.36%
Account 1180G – Turbines and Generators – 1.65%
Account 1180H – Governors and Excitation Systems – 2.13%
Account 1180P – A/C Electrical Power Systems – 2.36%
Account 1180Q – Instrumentation, control and D/C Systems – 5.50%
Account 1180R – Auxiliary Station Processes – 3.33%
Account 1180X – Support Buildings – 1.82%
Account 1180W – Support Building Renovations – 5.00%

As a supplement to the above response, Manitoba Hydro has included the following table which provides a comparison between the depreciation rates proposed in the 2010 Depreciation Study and the ELG based depreciation rates provided by Gannett Fleming, Inc. in the above response:

**Depreciation Rates Calculated Without Net Salvage:**

| Account | Depreciable Work | ASL [1] (%) | ELG (%) |
|---|---|---|---|
| 1180A | Dams, Dykes & Weirs | 0.80 | 0.87 |
| 1180B | Powerhouse | 0.80 | 0.87 |
| 1180C | Powerhouse Renovations | 4.00 | 4.00 |
| 1180D | Spillway | 1.33 | 2.06 |
| 1180E | Water Control Systems | 2.00 | 2.07 |
| 1180F | Roads & Site Improvements | 2.00 | 2.36 |
| 1180G | Turbines & Generators | 1.54 | 1.65 |
| 1180H | Governors & Excitation System | 2.00 | 2.13 |
| 1180P | A/C Electrical Power Systems | 2.00 | 2.36 |
| 1180Q | Instrumentation, Control & D/C Systems | 4.35 | 5.50 |
| 1180R | Auxiliary Station Processes | 2.50 | 3.33 |
| 1180X | Support Buildings | 1.54 | 1.82 |
| 1180W | Support Building Renovations | 5.00 | 5.00 |

[1] Appendix 5.7 - 2010 Depreciation Study, page III-8

**MIPUG/MH I-16**

**Subject:** **Appendix 5.7 Depreciation Study re: Wuskwatim**

**d)** **Please indicate if the values in IFF11-2 pages 31 and 32 for "non-controlling interest" would be affected by adoption of alternative depreciation rates as per part (a) above. If so, please provide the values for each approach.**

**ANSWER:**

"Non-controlling interest" in IFF11-2 represents dividends paid under an assumed NCN preferred equity investment. A change to depreciation rates does not impact non-controlling interest under this assumption.

**MIPUG/MH II-9**

**Subject: MIPUG/MH I-15(a), Gannett Fleming**

**c) For each study in part (b) above, please indicate if the study is:**

**i. intended to be compliant with IFRS;**
**ii. makes use of the ASL procedure, the ELG procedure, or some other procedure (please specify);**
**iii. includes net salvage in the depreciation rates or some other form of amortization over the useful life of the asset in question.**

**ANSWER:**

The following response was prepared by Gannett Fleming.

Northwest Territories Power Corporation (NWTPC) – 2012 Study

i. Study was prepared giving consideration to IFRS implementation issues
ii. Study was prepared using the ASL procedure
iii. Study includes net salvage within the depreciation calculations

Manitoba Hydro – 2010 Study

i. Study was prepared giving consideration to IFRS implementation issues
ii. Study was prepared using the ELG procedure
iii. Study does not include net salvage within the depreciation calculations.

Yukon Energy Corporation – 2004 Study

i. Study was prepared prior to IFRS
ii. Study was prepared using the ASL procedure
iii. Study includes net salvage within the depreciation calculations

The City of Red Deer Electric system – 2011 Study

i. Study was not prepared giving consideration to IFRS
ii. Study was prepared using the ELG procedure
iii. Study includes net salvage within the depreciation calculations

British Columbia Transmission Corporation – 2005 Study

i. Study was prepared prior to IFRS
ii. Study was prepared using the ASL procedure
iii. Study does not include net salvage within the depreciation calculations

BC Hydro – 2006 Study

i. Study was prepared prior to IFRS
ii. Study was prepared using the ASL procedure
iii. Study does not include net salvage within the depreciation calculations

City of Lethbridge Electric System – 2008 Study

i. Study was not prepared giving consideration to IFRS
ii. Study was prepared using the ELG procedure
iii. Study includes net salvage within the depreciation calculations

SaskPower – 2011 Study

i. Current study was prepared giving consideration to IFRS implementation issues
ii. Study was prepared using the ASL procedure
iii. Study does not include net salvage within the depreciation calculations.

Quilliq Energy Corporation – 2011 Study

i. Study was not prepared giving consideration to IFRS
ii. Study was prepared using the ASL procedure
iii. Study does not include net salvage within the depreciation calculations

**CAC/MH I-47**

**Subject:** **Depreciation**
**Reference:** **Tab 4, Page 5 Lines 6 & 7**

**Preamble:** **Manitoba Hydro states "... partially offset by the change to the Equal Life Group methodology for calculating depreciation rates (as required with the transition to IFRS)."**

**a) Provide specific cites in IFRS pronouncements that require the use of Equal Life Group methodology and provide a copy of the cited references, together with copies of the pages containing those cites.**

**ANSWER:**

IAS 16 does not require that the Equal Life Group (ELG) method be used for determining depreciation rates as both the Average Service Life (ASL) and ELG method are acceptable methods for determining depreciation rates under IFRS.

The specific references from the IFRS pronouncements that MH considered regarding the change to the ELG methodology are as follows:

IFRS section IAS 16 Property, Plant & Equipment paragraphs:

**50** The depreciable amount of an asset shall be allocated on a systematic basis over its useful life.

**57** The useful life of an asset is defined in terms of the asset's expected utility to the entity. ,..., The estimation of the useful life of the asset is a matter of judgement based on the experience of the entity with similar assets.

**60** The depreciation method used shall reflect the pattern in which the asset's future economic benefits are expected to be consumed by the entity.

**68** The gain or loss arising from the de-recognition of an item of property, plant and equipment shall be included in profit and loss when the item is derecognized (unless IAS 17 requires otherwise on a sale and leaseback). Gains shall not be classified as revenue."

*(Please note that MH is not in a position to provide copies of the pages containing the particular reference due to copyright laws.)*

Under the ASL method, the depreciation rate is based on the average life of all assets within the overall component class. The calculation of the ELG depreciation rate is more robust and is based on the expected retirement pattern for similar asset groups within the overall asset component class. Rather than determining a depreciation rate using an overall average life of the entire asset component class, the ELG method breaks the larger class into sub-components groups with similar lives and factors the different service lives of the sub-components into the overall depreciation rate for the larger component class. As such, the ELG method provides a better matching of depreciation expense with the expected consumption of the asset, which complies with the requirements of IAS 16.

The IAS 16 requirement to recognize gains and losses on asset retirements immediately in net income is significantly different than the existing GAAP accounting practice that permits the recognition of annual gains and losses in accumulated depreciation. Differences in how depreciation rates are calculated under the ASL and ELG methods will influence the extent of annual asset retirement gains and losses that will be required to be recognized in net income under IFRS and will thus, influence the method to be chosen by an entity.

Since most assets are removed from service either before or after the average service life of the overall component class, it is expected that the extent of material gains and losses to be recognized in net income under IFRS would be higher when using the ASL method. The ELG calculated rate is expected to more accurately reflect the service life of the individual assets within the larger component class and thus, assets are more likely to be fully depreciated when they are removed from service under the ELG method; reducing any gain or loss.

The ELG method will minimize the amount of gains and losses recognized on retirement of assets, and will reduce net income volatility. As a result, the ELG method is the preferred approach for rate-regulated utilities as it is expected to promote rate stability for customers.

# Public Utility Depreciation Practices

August 1996

National Association of
Regulatory Utility Commissioners
1101 Vermont Avenue, N.W., Suite 200
Washington, DC 20005

Price: $60.00

## Comparison of ELG and VG Procedures

In comparison with the VG procedure, the ELG procedure results in annual accruals that are higher during the early years of a vintage's life, thereby causing an increase in depreciation expense and revenue requirements during these years. In 1981, when the FCC began to permit use of ELG for new plant additions for the telephone industry, it chose a 3-year phase-in period to reduce the immediate impact on both depreciation expense and revenue requirements.

The difference between the two procedures is the timing of depreciation accruals. The VG procedure treats each unit as if its life is equal to the average-life of the group, where the group is all investment placed into service in a specific year (vintage) for a particular plant account. Using the ELG procedure, the investment in each vintage is further divided into subgroups. All of the property in a subgroup is expected to have the same life. For example, the items within a vintage which are expected to live one year are grouped together; the items expected to live two years are grouped together... In Table 12-7, three equally priced items of plant (A, B, and C) are placed in the vintage year and expected to live one, two, and three years, respectively. The average service life of the three units under the VG procedure is two years.

TABLE 12-7

| *Unit* | *Expected Life* | *Life Weight* |
|---|---|---|
| *a* | *b (Years)* | $c = a + b$ |
| *A* | *1* | *1* |
| *B* | *2* | *2* |
| *C* | *3* | *3* |
| *Average/Total* | *2* | *6* |

Using the ELG procedure, item A which has a life of one year, will have a depreciation rate of 100%. Item B has a depreciation rate of 50% for each of two years and item C has a depreciation rate of 33.3% for each of three years. Under the VG procedure, the average-life of two years is used to develop the composite vintage depreciation rate of 50% which is used each year. Table 12-8 provides a comparison of the depreciation accruals under each procedure: