## Q. Reference: Application, Attachment 1, Page 19, Lines 6-9

On Page 19 at Lines 6-9, Hydro states:
Hydro forecasts that the total annual O\&M cost for all four diesel generating stations would be approximately $\$ 2.15$ million per year over the 50-year duration of the study. Hydro estimates that by supplying southern Labrador with one centralized diesel generating station, the overall O\&M costs would reduce by approximately $\$ 670,000$ per year.

Please provide detailed O\&M cost estimates by function (i.e. generation, distribution, etc.) and by generating station annually over the 50-year duration of the study for both the status quo alternative of 4 diesel generating stations and one centralized diesel generating station. Please state all assumptions including decommissioning dates associated with existing generating stations and commissioning dates associated with any new generating assets.
A. Please refer to Newfoundland and Labrador Hydro's ("Hydro") response to LAB-NLH-007 for details on the assumptions used when calculating the operations and maintenance ("O\&M") cost estimates. A detailed O\&M cost estimate by function is included in NP-NLH-027, Attachment 1 (Revision 1). Table 1 shows the decommissioning date associated the existing generation stations and Table 2 shows the commissioning dates associated with new generating stations.

Table 1: Projected Decommissioning Years

| Diesel Generation Station | Alternative 1 | Alternative 3A |
| :--- | :---: | :---: |
| Mary's Harbour | 2030 | 2030 |
| Port Hope Simpson | 2035 | 2024 |
| St. Lewis | 2045 | 2045 |
| Charlottetown (Temporary Setup) | N/A | 2024 |

Table 2: Projected Commissioning Years

| Diesel Generation Station | Alternative 1 | Alternative 3A |
| :--- | :---: | :---: |
| Charlottetown | 2023 | N/A |
| Mary's Harbour | 2030 | $\mathrm{~N} / \mathrm{A}$ |
| Port Hope Simpson | 2035 | $\mathrm{~N} / \mathrm{A}$ |
| St. Lewis | 2045 | $\mathrm{~N} / \mathrm{A}$ |
| Regional | $\mathrm{N} / \mathrm{A}$ | 2024 |


| Alternative 1 |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Generatio | Costs |  |  |  | Total |
| Year | Charlottetown | Mary's Harbour | Port Hope Simpson | St. Lewis | Distribution O\&M Costs | Total ${ }^{1}$ | (Adjusted for Inflation) |
| 2025 | \$621,683 | \$397,500 | \$276,000 | \$230,000 | \$0 | \$1,525,183 | 1,695,887 |
| 2026 | \$622,139 | \$397,500 | \$276,000 | \$230,000 | \$0 | \$1,525,639 | 1,732,600 |
| 2027 | \$622,596 | \$397,500 | \$276,000 | \$230,000 | \$0 | \$1,526,096 | 1,770,108 |
| 2028 | \$623,054 | \$397,500 | \$276,000 | \$230,000 | \$0 | \$1,526,554 | 1,808,428 |
| 2029 | \$623,512 | \$397,500 | \$276,000 | \$230,000 | \$0 | \$1,527,012 | 1,847,579 |
| 2030 | \$623,972 | \$397,500 | \$276,000 | \$230,000 | \$0 | \$1,527,472 | 1,887,578 |
| 2031 | \$624,431 | \$466,734 | \$276,000 | \$230,000 | \$0 | \$1,597,165 | 2,015,826 |
| 2032 | \$624,892 | \$467,063 | \$276,000 | \$230,000 | \$0 | \$1,597,955 | 2,059,867 |
| 2033 | \$625,353 | \$467,392 | \$276,000 | \$230,000 | \$0 | \$1,598,745 | 2,104,870 |
| 2034 | \$625,815 | \$467,723 | \$276,000 | \$230,000 | \$0 | \$1,599,538 | 2,150,858 |
| 2035 | \$625,969 | \$468,053 | \$276,000 | \$230,000 | \$0 | \$1,600,023 | 2,197,429 |
| 2036 | \$626,123 | \$468,136 | \$419,173 | \$230,000 | \$0 | \$1,743,433 | 2,445,487 |
| 2037 | \$626,278 | \$468,219 | \$419,542 | \$230,000 | \$0 | \$1,744,039 | 2,498,548 |
| 2038 | \$626,432 | \$468,302 | \$419,913 | \$230,000 | \$0 | \$1,744,647 | 2,552,762 |
| 2039 | \$626,587 | \$468,385 | \$420,284 | \$230,000 | \$0 | \$1,745,256 | 2,608,154 |
| 2040 | \$596,896 | \$468,468 | \$420,284 | \$230,000 | \$0 | \$1,715,649 | 2,618,629 |
| 2041 | \$597,044 | \$468,510 | \$420,284 | \$230,000 | \$0 | \$1,715,838 | 2,674,811 |
| 2042 | \$597,044 | \$468,551 | \$420,284 | \$230,000 | \$0 | \$1,715,879 | 2,731,964 |
| 2043 | \$597,044 | \$468,593 | \$420,284 | \$230,000 | \$0 | \$1,715,921 | 2,790,338 |
| 2044 | \$597,044 | \$468,634 | \$420,284 | \$230,000 | \$0 | \$1,715,962 | 2,849,960 |
| 2045 | \$597,044 | \$468,676 | \$420,284 | \$230,000 | \$0 | \$1,716,004 | 2,910,856 |
| 2046 | \$597,044 | \$468,718 | \$420,284 | \$407,641 | \$0 | \$1,893,686 | 3,280,816 |
| 2047 | \$597,044 | \$468,759 | \$420,284 | \$407,641 | \$0 | \$1,893,728 | 3,350,910 |
| 2048 | \$597,044 | \$468,801 | \$420,284 | \$407,641 | \$0 | \$1,893,770 | 3,422,501 |
| 2049 | \$597,044 | \$468,842 | \$420,284 | \$407,641 | \$0 | \$1,893,811 | 3,495,623 |
| 2050 | \$597,044 | \$468,884 | \$420,284 | \$407,641 | \$0 | \$1,893,853 | 3,570,306 |
| 2051 | \$597,044 | \$468,884 | \$420,284 | \$407,641 | \$0 | \$1,893,853 | 3,646,505 |
| 2052 | \$597,044 | \$468,884 | \$420,284 | \$407,641 | \$0 | \$1,893,853 | 3,724,330 |
| 2053 | \$597,044 | \$468,884 | \$420,284 | \$407,641 | \$0 | \$1,893,853 | 3,803,817 |
| 2054 | \$597,044 | \$468,884 | \$420,284 | \$407,641 | \$0 | \$1,893,853 | 3,884,999 |
| 2055 | \$597,044 | \$468,884 | \$420,284 | \$407,641 | \$0 | \$1,893,853 | 3,967,915 |
| 2056 | \$597,044 | \$468,884 | \$420,284 | \$407,641 | \$0 | \$1,893,853 | 4,052,600 |
| 2057 | \$597,044 | \$468,884 | \$420,284 | \$407,641 | \$0 | \$1,893,853 | 4,139,092 |
| 2058 | \$597,044 | \$468,884 | \$420,284 | \$407,641 | \$0 | \$1,893,853 | 4,227,430 |
| 2059 | \$597,044 | \$468,884 | \$420,284 | \$407,641 | \$0 | \$1,893,853 | 4,317,654 |
| 2060 | \$597,044 | \$468,884 | \$420,284 | \$407,641 | \$0 | \$1,893,853 | 4,409,803 |
| 2061 | \$597,044 | \$468,884 | \$420,284 | \$407,641 | \$0 | \$1,893,853 | 4,503,919 |
| 2062 | \$597,044 | \$468,884 | \$420,284 | \$407,641 | \$0 | \$1,893,853 | 4,600,043 |
| 2063 | \$597,044 | \$468,884 | \$420,284 | \$407,641 | \$0 | \$1,893,853 | 4,698,219 |
| 2064 | \$597,044 | \$468,884 | \$420,284 | \$407,641 | \$0 | \$1,893,853 | 4,798,491 |
| 2065 | \$597,044 | \$468,884 | \$420,284 | \$407,641 | \$0 | \$1,893,853 | 4,900,902 |
| 2066 | \$597,044 | \$468,884 | \$420,284 | \$407,641 | \$0 | \$1,893,853 | 5,005,499 |
| 2067 | \$597,044 | \$468,884 | \$420,284 | \$407,641 | \$0 | \$1,893,853 | 5,112,328 |
| 2068 | \$597,044 | \$468,884 | \$420,284 | \$407,641 | \$0 | \$1,893,853 | 5,221,438 |
| 2069 | \$597,044 | \$468,884 | \$420,284 | \$407,641 | \$0 | \$1,893,853 | 5,332,876 |
| 2070 | \$597,044 | \$468,884 | \$420,284 | \$407,641 | \$0 | \$1,893,853 | 5,446,693 |

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| Alternative 3a |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Generation O\&M Costs |  |  |  |  |  | Total |
| Year | Regional | Mary's <br> Harbour | Port Hope Simpson | St. Lewis | Distribution O\&M Costs | Total ${ }^{2}$ | (Adjusted for Inflation) |
| 2025 | \$675,614 | \$397,500 |  | \$230,000 | \$30,767 | \$1,333,880 | \$1,483,173 |
| 2026 | \$676,351 | \$397,500 |  | \$230,000 | \$557 | \$1,304,407 | \$1,481,356 |
| 2027 | \$677,089 | \$397,500 |  | \$230,000 | \$3,207 | \$1,307,796 | \$1,516,903 |
| 2028 | \$677,830 | \$397,500 |  | \$230,000 | \$2,677 | \$1,308,007 | \$1,549,527 |
| 2029 | \$678,572 | \$397,500 |  | \$230,000 | \$83,555 | \$1,389,627 | \$1,681,352 |
| 2030 | \$679,316 | \$397,500 |  | \$230,000 | \$3,207 | \$1,310,023 | \$1,618,865 |
| 2031 | \$942,704 |  |  | \$230,000 | \$142,163 | \$1,314,867 | \$1,659,530 |
| 2032 | \$943,968 |  |  | \$230,000 | \$146,283 | \$1,320,251 | \$1,701,888 |
| 2033 | \$945,234 |  |  | \$230,000 | \$155,038 | \$1,330,272 | \$1,751,404 |
| 2034 | \$946,503 |  |  | \$230,000 | \$706,088 | \$1,882,591 | \$2,531,473 |
| 2035 | \$947,543 |  |  | \$230,000 | \$142,163 | \$1,319,706 | \$1,812,449 |
| 2036 | \$948,236 |  |  | \$230,000 | \$159,158 | \$1,337,394 | \$1,875,942 |
| 2037 | \$948,930 |  |  | \$230,000 | \$142,163 | \$1,321,093 | \$1,892,626 |
| 2038 | \$949,626 |  |  | \$230,000 | \$142,163 | \$1,321,789 | \$1,934,037 |
| 2039 | \$950,323 |  |  | \$230,000 | \$316,336 | \$1,496,659 | \$2,236,645 |
| 2040 | \$950,556 |  |  | \$230,000 | \$204,993 | \$1,385,549 | \$2,114,791 |
| 2041 | \$950,730 |  |  | \$230,000 | \$142,163 | \$1,322,893 | \$2,062,252 |
| 2042 | \$950,789 |  |  | \$230,000 | \$155,038 | \$1,335,827 | \$2,126,858 |
| 2043 | \$950,847 |  |  | \$230,000 | \$142,163 | \$1,323,010 | \$2,151,409 |
| 2044 | \$950,906 |  |  | \$230,000 | \$651,498 | \$1,832,404 | \$3,043,352 |
| 2045 | \$950,964 |  |  | \$230,000 | \$155,038 | \$1,336,002 | \$2,266,259 |
| 2046 | \$1,017,371 |  |  |  | \$218,603 | \$1,235,974 | \$2,141,328 |
| 2047 | \$1,017,430 |  |  |  | \$142,793 | \$1,160,223 | \$2,052,989 |
| 2048 | \$1,017,488 |  |  |  | \$171,388 | \$1,188,876 | \$2,148,588 |
| 2049 | \$1,017,547 |  |  |  | \$351,071 | \$1,368,618 | \$2,526,214 |
| 2050 | \$1,017,605 |  |  |  | \$142,793 | \$1,160,398 | \$2,187,592 |
| 2051 | \$1,017,605 |  |  |  | \$166,068 | \$1,183,673 | \$2,279,095 |
| 2052 | \$1,017,605 |  |  |  | \$223,923 | \$1,241,528 | \$2,441,511 |
| 2053 | \$1,017,605 |  |  |  | \$355,593 | \$1,373,198 | \$2,758,079 |
| 2054 | \$1,017,605 |  |  |  | \$818,433 | \$1,836,038 | \$3,766,400 |
| 2055 | \$1,017,605 |  |  |  | \$142,793 | \$1,160,398 | \$2,431,214 |
| 2056 | \$1,017,605 |  |  |  | \$148,113 | \$1,165,718 | \$2,494,486 |
| 2057 | \$1,017,605 |  |  |  | \$166,068 | \$1,183,673 | \$2,586,966 |
| 2058 | \$1,017,605 |  |  |  | \$218,603 | \$1,236,208 | \$2,759,446 |
| 2059 | \$1,017,605 |  |  |  | \$776,671 | \$1,794,276 | \$4,090,637 |
| 2060 | \$1,017,605 |  |  |  | \$171,388 | \$1,188,993 | \$2,768,550 |
| 2061 | \$1,017,605 |  |  |  | \$142,793 | \$1,160,398 | \$2,759,634 |
| 2062 | \$1,017,605 |  |  |  | \$142,793 | \$1,160,398 | \$2,818,531 |
| 2063 | \$1,017,605 |  |  |  | \$166,068 | \$1,183,673 | \$2,936,425 |
| 2064 | \$1,017,605 |  |  |  | \$876,288 | \$1,893,893 | \$4,798,593 |
| 2065 | \$1,017,605 |  |  |  | \$781,193 | \$1,798,798 | \$4,654,921 |
| 2066 | \$1,017,605 |  |  |  | \$166,068 | \$1,183,673 | \$3,128,478 |
| 2067 | \$1,017,605 |  |  |  | \$142,793 | \$1,160,398 | \$3,132,418 |
| 2068 | \$1,017,605 |  |  |  | \$148,113 | \$1,165,718 | \$3,213,938 |
| 2069 | \$1,017,605 |  |  |  | \$374,346 | \$1,391,951 | \$3,919,578 |
| 2070 | \$1,017,605 |  |  |  | \$218,603 | \$1,236,208 | \$3,555,317 |

[^1]
[^0]:    Dollars are reflective of 2020 dollars.

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