COMPARISON OF NUCLEAR FUEL COSTS

1.0 PURPOSE
This evidence presents period-over-period comparisons for nuclear fuel bundle costs for 2013-2021 in support of the approvals sought for nuclear fuel costs. Nuclear fuel costs consist of Total Fuel Bundle Cost, Used Fuel Storage and Disposal cost, and Fuel Oil. This exhibit discusses period-over-period changes for Total Fuel Bundle Cost. Used Fuel Storage and Disposal is discussed in Ex. C2-1-1. Comparisons for Fuel Oil are not discussed because the period-over-period changes are not material.

2.0 OVERVIEW
Period-over-period variances are presented in Ex. F2-5-2 Table 1 and are explained below. See Ex. F2-5-1 for a discussion of key drivers associated with nuclear fuel bundle costs.

3.0 PERIOD-OVER-PERIOD CHANGES – TEST YEARS

2017 Plan versus 2016 Budget
The decrease of $36.0M in nuclear fuel bundle cost is due to lower energy production of -$37.3M and higher fuel utilization efficiency of -$1.2M, offset by higher unit prices for new fuel loaded at +$2.4M.

2018 Plan versus 2017 Plan
The decrease of $0.2M in nuclear fuel bundle cost is due to lower unit prices for new fuel loaded at -$1.9M, offset by higher energy production of +$1.3M and lower fuel utilization efficiency of +$0.4M.

2019 Plan versus 2018 Plan
The decrease of $0.5M in nuclear fuel bundle cost is due to lower unit prices for new fuel loaded at -$2.7M and higher fuel utilization efficiency of -$0.1M, offset by higher energy production of +$2.3M.
2020 Plan versus 2019 Plan

The increase of $5.4M in nuclear fuel bundle cost is due to higher unit prices for new fuel loaded at +$1.8M and the one-time impact of +$15.3M related to the requirement for a load of new fuel to be included in the reactor core of Unit 2 prior to start-up, offset by lower energy production of -$6.8M and higher fuel utilization efficiency of -$4.9M.

2021 Plan versus 2020 Plan

The decrease of $15.8M in nuclear fuel bundle cost is due to lower energy production of -$9.2M and no repeat of the new fuel load in Unit 2 which occurred in 2020 (-$15.3M), offset by higher unit prices for new fuel loaded at +$3.2M and lower fuel utilization efficiency of +$5.5M.

4.0 PERIOD-OVER-PERIOD CHANGES – BRIDGE YEAR

2016 Budget versus 2015 Actual

The increase of $12.4M in nuclear fuel bundle cost is due to higher energy production of +$10M, higher unit prices for new fuel loaded at +$1.8M and lower fuel utilization efficiency of +$0.6M.

5.0 PERIOD-OVER-PERIOD CHANGES - HISTORICAL YEARS

2015 Actual versus 2015 OEB Approved

The decrease of $15.6M in nuclear fuel bundle cost is due to lower energy production of -$8.7M and lower unit prices for new fuel loaded at -$8.5M, offset by lower fuel utilization efficiency of +$1.6M.

2015 Actual versus 2014 Actual

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¹ Fuel Bundle Cost for OEB Approved adjusted to reflect nuclear production forecast adjustments per EB-2013-0321 Ex. N1, Ex. N2 and Decision with Reasons, pp. 39 and 49.
The decrease of $12.7M in nuclear fuel bundle cost is due to lower energy production of $14.1M offset by higher unit prices for new fuel loaded at +$0.6M and lower fuel utilization efficiency of +$0.8M.

2014 Actual versus 2014 OEB Approved

The decrease of $9.6M in nuclear fuel bundle cost is due to lower energy production of -$4.5M, lower unit prices for new fuel loaded at -$5.4M, offset by lower fuel utilization efficiency of +$0.3M.

2014 Actual versus 2013 Actual

The increase of $5.6M in nuclear fuel bundle cost is due to higher energy production of +$14.1M offset by lower unit prices for new fuel loaded at -$7.3M and higher fuel utilization efficiency of -$1.2M.

2013 Actual versus 2013 Budget

The decrease of $22.6M in nuclear fuel bundle cost is due to lower energy production of -$14.9M, lower unit prices for new fuel loaded at -$7.2M and higher fuel utilization efficiency of -$0.5M.
Table 1
Comparison of Nuclear Fuel Costs ($M)

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<td>Total Fuel Bundle Cost</td>
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<td>Used Fuel Storage &amp; Disposal</td>
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Notes:
1. Fuel Bundle Cost on lines 1, 2 and 3 adjusted to reflect nuclear production forecast adjustments per EB-2013-0321 Ex. N1, Ex. N2 and Decision with Reasons, pp. 39 and 49.