

Requests for Information

1 NP-CA-009           **Reference: *Comments on Newfoundland Power’s 2022 Capital Budget***  
2                           ***Application, Elenchus Research Associates Inc., August 13, 2021, page***  
3                           ***23, footnote 30.***

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5                           ***“The capital cost for the Distributed Energy Resource Project #2 assumes***  
6                           ***1% annual cost reductions from technological improvements.”***

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8 **QUESTION:**           **Please provide industry sources that substantiate the 1% annual cost**  
9                           **reductions from technological improvements in both the short term**  
10                          **and the longer term.**

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12 **RESPONSE:**        The 1% annual cost reductions from technological improvements in both  
13                          the short term and the longer term is used for illustrative purposes. The  
14                          values can be easily revised for any other assumed rate of cost decline. The  
15                          actual future cost declines are unknowable, but the 1% rate is conservative  
16                          given the expectations of experts, as cited below.

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18                          •     The National Renewable Energy Laboratory (“NREL”), a division  
19                          of the United States Department of Energy, develops an Annual  
20                          Technology Baseline database and report which provides historic  
21                          and forecast technology cost and performance data for renewable  
22                          technologies.<sup>9</sup> NREL forecasts the levelized cost of utility-scale  
23                          solar plus battery storage to decline by an average of 2.58%<sup>10</sup> per  
24                          year from 2019 to 2050. The levelized cost of residential rooftop  
25                          solar is forecast to decline by 3.23% per year over the same time  
26                          period. Another NREL study, Cost Projections for Utility-Scale  
27                          Battery Storage,<sup>11</sup> estimates that the cost of utility-scale battery  
28                          storage will decline by 59% from 2020 to 2050, an average decline  
29                          of 2.93% per year.

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31                          •     In its Alternative Renewables Cost Assumptions in Annual Energy  
32                          Outlook 2020, the US Energy Information Administration (“EIA”),  
33                          also part of the US Department of Energy, forecasts the capital cost  
34                          of utility-scale solar to decline by 53% from 2019 to 2050, an  
35                          annualized decline of 2.40% per year. Residential rooftop solar is  
36                          forecast to decline by 1.2% per year over the same period.<sup>12</sup>

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<sup>9</sup> [NREL 2020 Standard Scenarios Report: A U.S. Electricity Sector Outlook](#). Forecast NREL data is provided in Conservative, Moderate, and Advanced scenarios. The data provided above reflects the Moderate scenario figures provided in the ATB Spreadsheet.

<sup>10</sup> Calculated as the geometric mean of annual price declines.

<sup>11</sup> *Cost Projections for Utility-Scale Battery Storage*, Wesley Cole and A. Will Frazier, National Renewable Energy Laboratory, page 5.

<sup>12</sup> *Alternative Renewables Cost Assumptions in AEO2020*, January 2020, US Energy Information Administration, page 2.

