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March 12, 2021

Delivered by Email & RESS

Ms. Christine Long
Registrar
Ontario Energy Board
2300 Yonge Street, Suite 2700
Toronto, ON
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Dear Ms. Long:

**Re: EB-2020-0249/EB-2018-0219 – PUC Distribution Inc.
SSG ICM Application
Argument-in-Chief**

Pursuant to Decision on Confidentiality and Procedural Order No. 7 dated February 3, 2021, please find attached PUC Distribution Inc.'s Argument-in-Chief in this proceeding.

Yours very truly,

BORDEN LADNER GERVAIS LLP

Per:

A handwritten signature in black ink, appearing to read 'Flora Ho', is written over a horizontal line.

Flora Ho
/Encl.

cc: Intervenor of record in EB-2020-0249/2018-0219

IN THE MATTER OF the *Ontario Energy Board Act, 1998*, S.O. 1998, c. 15, Sched. B, as amended (the “Act”);

AND IN THE MATTER OF an Application by PUC Distribution Inc. under Section 78 of the Act for an order approving just and reasonable rates and other charges for electricity distribution to be effective May 1, 2022.

**ARGUMENT-IN-CHIEF OF
PUC DISTRIBUTION INC.**

March 12, 2021

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A. INTRODUCTION

1. PUC Distribution Inc. (the “**Applicant**” or “**PUC Distribution**”) presents this Argument-in-Chief with respect to PUC Distribution’s amended and restated Incremental Capital Module (“**ICM**”) application filed with the Ontario Energy Board (the “**OEB**”) on October 29, 2020 seeking approval of PUC Distribution’s 2022 ICM funding request related to the Sault Smart Grid project (the “**SSG Project**”) (Board File No. EB-2020-0248) (the “**Amended Application**”).
2. The Amended Application restates and amends the request for relief contained in the original 2019 ICM application filed January 31, 2019 (OEB File No. EB-2018-0219) (the “**Original Application**”). On November 12, 2020, the OEB issued a completeness letter in respect of the Amended Application and combined the proceeding with the Original Application.
3. The SSG Project is a discrete project that represents a significant and material capital expenditure for PUC Distribution that is not funded through PUC Distribution’s existing rates.
4. If approved, the SSG Project will serve to reduce energy/commodity costs for end use consumers through the use of Voltage/VAR Optimization technology (“**VVO**”),¹ improve reliability through the implementation of Distributed Automation technology (“**DA**”),² and improve operational control and data availability through the integration into the advanced metering infrastructure (“**AMI**”), all with no net bill increase.
5. A key feature of the SSG Project is that the proposal is to implement the VVO, DA and AMI technologies across the entire PUC Distribution service area. The reason is to better align the SSG Project benefits with how the costs of the SSG Project will be apportioned to PUC Distribution’s customers. Since customers across the entire PUC Distribution service

¹ Voltage/VAR Optimization optimizes the voltage profiles along feeder lines and minimizes the reactive power in lines to reduce electricity consumption, demand, and losses.

² Distribution Automation helps provide PUC Distribution with better real-time visibility and monitoring of the distribution network, which will allow it to automatically locate and isolate faults, reconfigure feeder circuits and restore power more rapidly.

area would be required to pay incremental distribution costs associated with the SSG Project, PUC Distribution believed it was important that all of those customers had the opportunity to benefit from the cost savings, reliability improvements and operational improvements the SSG Project would deliver.

6. This is a unique ICM application that would not have been possible but for a federal grant from Natural Resources Canada (“**NRCan**”), where NRCan agreed to fund 25% of the total project costs incurred by PUC Distribution for the SSG Project (“**NRCan Funding**”).³ This is because of PUC Distribution’s determination that it would not pursue the SSG Project unless it achieves a “no net bill increase”, which was not possible absent the NRCan Funding.
7. PUC Distribution has conducted an analysis on how to pursue the SSG Project so that PUC Distribution customers would receive the most benefits while achieving “no net bill increase”. The most cost-effective option for ratepayers was to proceed with this ICM application, which benefits from the NRCan Funding and delivers benefits immediately.
8. The key difference between the Original Application and the Amended Application relates to the underlying financing structure proposed for the SSG Project, together with changes in project milestone dates and certain pricing estimates arising as a result of the passage of time.
9. In the Original Application, PUC Distribution proposed to develop the SSG Project using a P3 project finance structure. As discussed further below, following the technical conference in EB-2018-0219 PUC Distribution revisited this financing structure. In the Amended Application, PUC Distribution proposes to use a more traditional utility financing model to fund a standard EPC contract that was the result of a competitive Request for Proposals (“**RFP**”) process.

³ As per the Contribution Agreement between NRCan and PUC Distribution dated December 19, 2019 (as amended), NRCan agreed to fund the lesser of 25% of total project costs incurred or \$11,807,000. As 25% of the total eligible project costs is estimated to be \$32,438,213, which is the lesser of the two, PUC Distribution will benefit from 25% NRCan contribution.

10. Importantly, the overall scope of work or goals associated with the SSG Project have not changed in any material respect in the Amended Application as compared to the Original Application.
11. As set out herein, PUC Distribution submits that the request for ICM funding meets the Board's criteria for ICM funding. PUC Distribution has provided evidence to demonstrate that the SSG Project meets the tests of materiality, need, and prudence. PUC Distribution therefore seeks approval of the full ICM request amount for the SSG Project, effective May 1, 2022.

B. BACKGROUND

12. On January 31, 2019, PUC Distribution filed the Original Application under section 78 of the *Ontario Energy Board Act, 1998* (the "**Act**"). The Board assigned file number EB-2018-0219 to the Original Application.
13. The OEB bifurcated the IRM and ICM application in EB-2018-0219 and issued a Partial Decision and Order on the IRM portion of the application on June 20, 2019.
14. Pursuant to Procedural Order No. 2 dated May 3, 2019, a Technical Conference on the Original Application was held on June 19 and 20, 2019.
15. Following the Technical Conference, which provided PUC Distribution with valuable stakeholder input, PUC Distribution decided to improve and restructure the project delivery plan and therefore filed a letter on June 28, 2019 indicating its intent to amend the Original Application.
16. On July 16, 2019, the OEB issued Decision and Procedural Order No. 5 which provided, among other things, that the Original Application would be placed in abeyance until an amended application is filed.
17. PUC Distribution filed the Amended Application with the Board on October 28, 2020 for approval of ICM funding effective May 1, 2022 to support its proposed SSG Project. The Amended Application directly addressed a number of key concerns identified by the OEB

in Procedural Order No. 5.

18. For administrative purposes the OEB assigned a new file number for this proceeding (EB-2020-0249) and combined this proceeding with the Original Application (EB-2018-0219).
19. The OEB issued Procedural Order No. 6 on November 16, 2020, which indicated that parties that were granted intervenor status in EB-2018-0219 are deemed to be intervenors in this combined proceeding, that includes: Consumers Council of Canada (“CCC”), School Energy Coalition (“SEC”), and Vulnerable Energy Consumers Coalition (“VECC”).
20. In addition, on November 17, 2020, Environmental Defence (“ED”) requested intervenor status in this proceeding and was approved such status by the OEB on November 18, 2020.⁴
21. Procedural Order No. 6 made provision for written interrogatories, responses to which were filed by PUC Distribution on January 25, 2021 following a brief extension given the novelty and complexity of some of the requests.
22. A one-day Technical Conference was held on February 17, 2021, and PUC Distribution subsequently provided answers to undertakings given at the Technical Conference on February 26, 2021.
23. This Argument-in-Chief summarizes the evidence and PUC Distribution’s position on its ICM funding request made in the Amended Application.

C. INCREMENTAL CAPITAL MODULE

24. Section 3.3.2 of the *Chapter 2 Filing Requirements for Electricity Distribution Rate Applications* issued May 14, 2020 provides that ICM remains available to electricity distributors opting for Price Cap IR.
25. An ICM proposal must comply with the *Report of the Board: New Policy Options for the*

⁴ EB-2020-0249/EB-2018-0219 –Letter from the OEB re Environmental Defence Intervenor Request dated November 18, 2020.

Funding of Capital Investments: the Advanced Capital Module (EB-2014-0219) issued September 18, 2014 (the “**Original Report**”) and the *Report of the Board: New Policy Options for the Funding of Capital Investments: Supplemental Report* (EB-2014-0219) issued January 22, 2016 (the “**Supplemental Report**”, and together with the Original Report the “**ACM Reports**”).

26. In particular, the ICM proposal must satisfy the eligibility criteria of materiality, need and prudence set out in section 4.1.5 of the Original Report.
27. As explained below, the SSG Project meets the Board’s ICM criteria in terms of materiality (including the project-specific eligibility test), need (including the means test and discrete project criteria) and prudence and therefore should be eligible for ICM funding as requested.

(i) Materiality

“A capital budget will be deemed to be material, and as such reflect eligible projects, if it exceeds the Board-defined materiality threshold. Any incremental capital amounts approved for recovery must fit within the total eligible incremental capital amount (as defined in this ACM Report) and must clearly have a significant influence on the operation of the distributor; otherwise they should be dealt with at rebasing.

Minor expenditures in comparison to the overall capital budget should be considered ineligible for ACM or ICM treatment. A certain degree of project expenditure over and above the Board-defined threshold calculation is expected to be absorbed within the total capital budget.”⁵

28. The ICM materiality threshold formula is set out in Section 4.5 of the Supplementary Report as:

$$\text{Threshold Value (\%)} = \left(1 + \left[\left(\frac{RB}{d}\right) \times (g + PCI \times (1 + g))\right]\right) \times ((1 + g) \times (1 + PCI))^{n-1} + X\%$$

where:

- RB = proposed test year rate base from the distributor’s Cost of Service application.
- d = proposed depreciation expense for the test year from the distributor’s Cost of Service application.
- g = growth is calculated based on the percentage difference in distribution revenues

⁵ Section 4.1.5 *Report of the Board: New Policy Options for the Funding of Capital Investments: the Advanced Capital Module* (EB-2014-0219) issued September 18, 2014 (“Original Report”).

between the forecast distribution revenues for the test year from the distributor's cost of service application and the distribution revenues from the most recent complete year.

- PCI = Price Cap Index (IPI stretch factor).
- The dead band X is 10%
- n = number of years since the effective year of the Cost of service application.

29. Tables 1 and 2 below provide the calculation of the Threshold Capital Expenditure and Eligible Incremental Capital amounts based on the OEB's ICM Model as updated during the interrogatory phase.⁶

Table 1: Threshold Capital Expenditures Calculation – as per ICM Model

<u>Parameter</u>	<u>Amount</u>
Cost of Service Rebasing Year	2018
Price Cap IR year in which Application is made	4
Price Cap Index	1.90%
Growth Factor	-0.67%
Dead Band	10%
Rate Base	\$99,658,055
Depreciation	\$3,780,329
Threshold Value for 2019	142%
Threshold Value for 2020	142%
Threshold Value for 2021	143%
Threshold Value for 2022	143%
Threshold Value for 2023	144%
Threshold CAPEX 2019	\$5,369,612
Threshold CAPEX 2020	\$5,384,334
Threshold CAPEX 2021	\$5,399,234
Threshold CAPEX 2022	\$5,414,316
Threshold CAPEX 2023	\$5,429,581

⁶ OEBstaff_PUC ICM Model_20201218.xls

Table 2: Eligible Incremental Capital

	Year 4 2022
Capital Expenditures	\$33,495,218
Materiality Threshold	\$5,414,316
Maximum Eligible Incremental Capital	\$28,080,902
Proposed ICM (SSG Project)	\$24,828,660

30. As can be seen above, the proposed \$24,828,660 ICM amount for the SSG Project is above the materiality threshold and also within the Maximum Eligible Incremental Capital.
31. The OEB has adopted a second, project-specific materiality test in the Original Report as quoted above, which states that minor expenditures in comparison to the overall capital budget should be considered ineligible for ICM treatment.
32. The SSG Project ICM amount (i.e. \$24,828,660) is not a minor expenditure in comparison to PUC Distribution’s overall capital budget (i.e. \$33,495,218), being approximately 74% of PUC Distribution’s overall capital budget.
33. Finally, the OEB has adopted a third test that may deny ICM funding for projects that are considered to be part of a typical annual capital program. The SSG Project is clearly outside of PUC Distribution’s typical annual capital program.
34. Therefore, PUC Distribution submits that it has met the “materiality” criteria, including the project-specific materiality test, of the ICM eligibility test.

(ii) Need

“The distributor must pass the Means Test (as defined in this ACM Report).

Amounts must be based on discrete projects, and should be directly related to the claimed driver.

The amounts must be clearly outside of the base upon which the rates were derived.”⁷

35. PUC Distribution addressed the need criterion in Section 6 of the Amended Application (at pages 46-49). This AIC will focus on elaborating on key points made in the Amended Application rather than duplicating what has already been said.
36. Utilities are expected to plan their distribution system investments for the development and implementation of the smart grid to support grid modernization expenditures as required by applicable law.⁸
37. Each of VVO, DA and AMI Integration are well understood and prudent distribution system improvements that support the development and implementation of the smart grid. As indicated in the Navigant Report, the SSG Project is technically sound, designed and configured consistent with current utility practices.⁹ Different utilities across Ontario have implemented each of these technologies on parts of all of their systems over the years. None of these three technologies are novel.
38. What is novel is how PUC Distribution has combined these three technologies together into a single project so as to combine the energy savings reductions associated with VVO implementation with the reliability and operational improvements associated with DA and AMI integration in a way that achieves no net bell increase. What is also novel is how PUC Distribution has obtained the NRCAN Funding to greatly reduce the cost of implementing these technology improvements across its entire distribution system.
39. Traditionally, a utility would introduce these technology based improvements gradually over time into their system to help reduce the impact of incremental costs associated with these improvements on ratepayers. PUC Distribution did explore this option, called Option “B” in the Amended Application.¹⁰
40. Unfortunately, taking a gradual approach to implementation of the SSG Project has three

⁷ Section 4.1.5 of the Original Report.

⁸ Chapter 5 Filing Requirements, Section 5.1.1.

⁹ Navigant Report #2 at Appendix AA9 at Section 3.4 (page 18).

¹⁰ Amended Application at Section 7.B at pages 51-52.

significant negative implications:

- First, the SSG Project would no longer qualify for the NRCan Funding – which has a significant impact on the overall costs of the project;
- Second, the benefits associated with VVO (energy savings), DA (reliability improvements), and AMI Integration (operational improvements) would not begin to accrue right away, but would only be introduced slowly over time; and
- Third, the benefits associated with VVO (energy savings), DA (reliability improvements), and AMI Integration (operational improvements) would not be distributed evenly across all customers in the first ten years, meaning in the early years many customers would be paying incremental distribution costs without any associated benefits.

41. There has been continuing expectations from PUC Distribution customers for cost control, sustained or improved reliability and direct communication and participation with their utility, as well as better service options and choices in how they interact with their utility. Increasing development of distribution connected DER technologies and electric vehicle use is expected to continue the growing operational performance and delivery requirements of distribution system operators.¹¹
42. These factors have created the recognition and need for PUC Distribution to develop a better operational system monitoring so as to better control and access real-time data. PUC Distribution saw that integration of smart grid technologies in its day-to-day operations is becoming necessary for a safe, reliable system.¹²
43. As summarized in the Amended Application, PUC Distribution has developed the SSG Project, which provides PUC Distribution with efficient and cost-effective tools and data to solve its operational challenges.

¹¹ Amended Application at page 46 of 91.

¹² Ibid.

44. The SSG Project will contribute to the four main performance outcomes of the utility's Regulatory Scorecard (i.e. Customer Focus; Operational Effectiveness; Public Policy Responsiveness, and Financial Performance)¹³ as detailed in the Amended Application.
45. Based on the customer survey results from PUC Distribution's customer engagement, PUC Distribution's customers indicated that reliability is very important. Customers' responses also indicated that they value the utility keeping costs low roughly as much as the utility making investments to improve reliability.¹⁴ The SSG Project, which includes the use of NRCAN Funding to decrease project costs borne by ratepayers, is able to address both of these drivers identified through customer engagement by achieving key reliability improvements with "no net bill increase".

a. Means Test

46. In order to be eligible for ICM funding, a distributor must pass the "Means Test" (as defined in the ACM Reports) by showing that its regulated return is less than 300 basis points above the deemed return on equity ("ROE") embedded in the distributor's rates.¹⁵
47. The forecasted ROE for 2020, 2021 and 2022 is 7.89%, 7.04% and 7.60% respectively,¹⁶ which are all less than 300 basis points above the 2018 board-approved ROE of 9.00%. In addition, PUC Distribution's historical ROE was 4.46% in 2015, 0.98% in 2016, 1.78% in 2017, 4.25% in 2018 and 8.87% in 2019.¹⁷
48. As such, PUC Distribution meets the Means Test.

b. Discrete Project and Outside Current Rate Base

49. ICM funding is no longer limited to non-discretionary projects during the Price Cap IR Term. Any discrete project (discretionary or otherwise) adequately supported is eligible

¹³ EB-2020-0249/EB-2018-0219 – Amended Application dated October 28, 2020 ("Amended Application") Page 47 of 91.

¹⁴ EB-2020-0249/EB-2018-0219 – Responses to Interrogatories dated January 25, 2021 ("IRR"), CCC-21 at page 121 of 231.

¹⁵ Original Report, page 15.

¹⁶ IRR – VECC-14

¹⁷ Amended Application at page 24, lines 4-6.

for ICM funding subject to capital funding availability flowing from the formula results.¹⁸

50. The SSG Project is a discrete project that is not funded through existing rates. This is addressed in the Amended Application at pages 14-16.
51. The SSG Project was not included in PUC Distribution's most recent cost of service, and was therefore outside of the base upon which current rates were derived. The incremental capital requested in this ICM is directly related to the cost for developing and deploying the SSG Project. The incremental revenue requested is net of government funding and there are no new customers or load growth as a direct result of the SSG Project. The incremental revenue requested will not be recovered through other means.
52. Therefore, PUC Distribution submits that it has met the "need" criteria of the ICM eligibility test.

(iii) Prudence

*"The amounts to be incurred must be prudent. This means that the distributor's decision to incur the amounts must represent the most cost-effective option (not necessarily least initial cost) for ratepayers."*¹⁹

a. Options Analysis

53. PUC Distribution completed a comprehensive analysis of the options surrounding its pursuits of the SSG Project:²⁰
 - Pursue and develop the SSG Project over a two (2) years following OEB approval, utilizing the NRCan funding, as proposed in the Amended Application ("**Option A**");
 - Pursue and develop the SSG Project over ten (10) or more years in order to spread out the costs of the SSG Project on PUC Distribution's ratepayers, forfeiting

¹⁸ See the Original Report at Section 4.1.3.

¹⁹ Original Report Section 4.1.5.

²⁰ Amended Application pages 49 to 53.

NRCAN funding (“**Option B**”); and

- Not pursue or develop the SSG Project at all (“**Option C**”).

54. In assessing these alternatives, PUC Distribution considered the alternative that would be the most prudent, cost-effective and most efficient option of the three.

55. The analysis conducted by PUC Distribution is detailed in the Amended Application.²¹ The options and their Pros and Cons are summarized in Table 3 below.

Table 3: SSG Project Options Summary

Option	Description	Pros	Cons
A (Preferred)	Develop the SSG Project over 2021 and 2022 following OEB approval, as contemplated in the ICM Application.	<ul style="list-style-type: none"> - Allows ratepayers to realize benefits associated with direct savings in their bills from improved energy efficiency, increased reliability and resilience of the grid, and other benefits by December 31, 2022 (i.e. 9 years earlier as compared to Option B). - Allows PUC Distribution and ratepayers to take advantage of the savings from the NRCAN Funding, which will reduce the capital cost of the SSG Project by \$8.1 million. 	<ul style="list-style-type: none"> - Requires ratepayers to cover the costs to implement the SSG Project in the amount of \$24,828,660 in a one year rate change, rather than over 10 years as contemplated by Option B.
B	Develop the SSG Project over 10 years	<ul style="list-style-type: none"> - Spreads out the costs of the SSG Project on PUC Distribution’s ratepayers, resulting in lower annual costs for ratepayers in year 2022. 	<ul style="list-style-type: none"> - forfeit NRCAN Funding since a 2031 in-service date exceeds the required completion date of March 31, 2023 under the NRCAN Funding agreement. - Ratepayers will need to cover full cost of \$32,938,213 (or higher) to implement the SSG Project. - SSG Project deferral could result in higher development costs, as EPC contractor mobilization and demobilization costs would bring higher costs to the work. - Direct savings due to improved energy efficiency through voltage regulation cannot be fully realized

²¹ Ibid.

			<p>until the entire SSG Project is in-service – for some ratepayers will take up to 9 years.</p> <p>- Other benefits from the SSG Project will also be delayed by up to 9 years for some ratepayers, such as increased system flexibility, reliability, forecasting and responsiveness, reduction in line losses etc.</p>
C	Do nothing	- Ratepayers will incur no incremental costs.	<p>- Contrary to good utility practice as it prevents PUC Distribution from modernizing its grid and keeping up with technological advances.</p> <p>- NRCan Funding forfeited.</p> <p>- Ratepayers will not receive any benefits associated with the SSG such as improvement to reliability, reduction in provincial carbon emissions, etc.</p> <p>- SSG would still need to occur some time in the near future to ensure PUC Distribution's grid operation is able to meet the needs of the increasing challenges but the ratepayers will lose the cost reductions afforded by the NRCan Funding at that time.</p>

56. Based on the above analysis, PUC Distribution found that Option A is the preferred option as it would enable ratepayers to realize benefits associated with the SSG Project sooner and take advantage of the NRCan Funding to reduce the capital cost of the SSG Project.
57. By taking advantage of the NRCan Funding, it significantly decreases the costs of the SSG Project that local ratepayers would otherwise have to bear. The NRCan Funding also makes it possible to implement the SSG Project with “no net bill increase” to PUC Distribution customers.
58. Therefore, PUC Distribution concluded that Option A is the most cost-effective option for ratepayers.

b. Obtaining competitive pricing for the SSG Project

59. A key feature of the Amended Application is the change in financing structure meant that PUC Distribution was now open to use of a public and competitive tendering process to obtain pricing through an RFP that was posted on MERX.
60. Specifically, PUC Distribution issued a RFP on October 4, 2019 seeking competitive proposals for engineering, procurement and construction (“EPC”) services for the implementation of the SSG Project to provide community-scale smart grid technology applications and an integrated and intelligent distribution management platform for the PUC Distribution electrical distribution service area. The RFP also provided allowance for innovative project financing structure, innovative financing arrangements, or other novel structures or proposals, however those proposals were evaluated on a value basis against a more traditional EPC approach. A copy of the RFP and related addendums are attached to the Amended Application as Appendix AA2-1, AA2-2, and AA2-3.
61. Proposals were received in response to the RFP in late 2019. The RFP proposals were evaluated based on the five (5) criteria in Appendix AA2-4 of the Amended Application for a qualification score.
62. PUC Distribution elected to award the project to Black & Veatch, which was the most qualified proponent and had the lowest price proposal.
63. A copy of the EPC contract scope of work and pricing is attached as Appendix AA3-1 and AA3-6 to the Amended Application. The EPC contract was executed by Overland Contracting Canada Inc., a wholly owned subsidiary of Black & Veatch, and PUC Distribution on October 7, 2020 (“EPC Contract”). The EPC Contract and its Appendices are attached as Appendix AA3-7 to the Amended Application.

c. No net bill increase and customer benefits

64. PUC Distribution also updated its analysis to ensure the SSG Project as revised continues to maintain “no net bill increase” for customers.
65. As seen in Table 4 below (which is a reproduction of Table 1: Customer Annual Net Benefit

Summary from the Amended Application),²² the SSG Project continues to be expected to achieve an annual net benefit to customers of \$616,897. This calculation purposefully excludes reliability benefits, principally because reliability related benefits will not show up directly on a customer's utility bill. PUC Distribution is forecasting that the SSG Project will deliver an additional \$2,017,000 in reliability benefits annually.

Table 4: Customer Annual Net Benefits Summary

Cost of Power - updated to current estimate	\$ 82,512,685	App [AA15] -Cost of Power Spreadsheet
Projected % energy savings with SSG implementation	2.70%	App [AA14] -Energy Savings Spreadsheet
Projected customer energy savings through SSG	\$ 2,227,842	App [AA14] -Energy Savings Spreadsheet
Projected system loss energy savings through SSG	\$ 105,111	App [AA14] -Energy Savings Spreadsheet
Total purchased power savings	\$ 2,332,953	
ICM additional revenue from increased SSG asset base	\$ 1,754,862	ICM Model output
Benefit of reduced capital expenditures with SSG	(\$304,390)	APP [AA17] CAPEX Deferral Spreadsheet
Additional O & M expenses due to SSG implementation	\$ 296,400	App [AA13] -Project Benefit Estimate Memo
Operating efficiency benefits due to SSG implementation	(\$30,816)	App [AA13] -Project Benefit Estimate Memo
	\$ 1,716,056	
Annual net benefit to customers	\$ 616,897	
Annual projected reliability benefit to customers	\$ 2,017,000	App [AA10] -Navigant Report #3 (NPV \$33M)
Total Annual projected benefit to customers w/reliability	\$ 2,633,897	

66. Through the course of the proceeding PUC Distribution was asked what it would do if it became necessary to reduce the scope of work associated with the SSG Project so as to keep costs within the EPC Contract capital cost limit. In response, PUC Distribution noted that the scope of DA would be reduced.
67. The reason for this is because a reduction in DA scope will not affect the “no net bill increase” objective – as the full benefits of VVO and other savings will still be realized. The effect of a reduced scope of DA may be lower reliability improvements,²³ but PUC Distribution believes that this is directly reflective of customer preferences that indicate

²² Amended Application page 20 of 91.

²³ IRR Staff-23(a) and (b)

that while they prefer reliability improvements they are not willing to write a blank cheque to achieve those improvements.

d. Sensitivity Analysis

68. PUC Distribution also performed a sensitivity analysis on its net benefits calculation to determine how different levels of projected energy savings would impact the forecasted benefits from the project.
69. Review of project scope and preliminary engineering work by Black & Veatch (the EPC Contractor) confirmed PUC Distribution's estimate of an average 2.7% energy savings "has a high probability" of being achieved in their view and potential exists for even greater savings than the estimate.²⁴ This is the base scenario for the net benefits calculation proposed by PUC Distribution.
70. However, PUC Distribution also believed it would be helpful to analyze a range of other energy savings scenarios. In the reference studies considered by PUC Distribution of pilot projects on VVM technology, PUC Distribution found that average energy savings achieved from those projects ranged from approximately 2% to 4%.²⁵ As such, PUC Distribution performed a sensitivity analysis using those two extremes.
71. In performing this sensitivity analysis, PUC Distribution calculated the forecast annual impact on customers from 2022 to 2041, showing and aggregating the pattern of each of the costs and benefits over time. Assuming:
- NPV at 6% discount rate;
 - Ontario's 2017 Long-Term Energy Plan used to forecast increase cost of power; projection of the customers total bill increase based on a 750 kWh customer;
 - Using PUC Distribution's cost of capital parameters from its 2018 Cost of Service

²⁴ Amended Application page 54 of 91.

²⁵ IRR SEC-24.

Application to calculate revenue requirement;

- Additional OM&A expenses and operating efficiency benefits adjusted by 1.90% per year which aligns with inflationary rate for PUC's 2021 IRM less the stretch factor of 0.30%;
- Additional revenue from increases SSG asset base was calculated each year by using Tab 9 of the ICM model. In 2028, the computer software would become fully depreciated and PUC Distribution has not included the replacement of computer software in 2028.

72. The results of this analysis are show in detail in response to IRR SEC-12, and is summarized in Table 5 below.

Table 5: Sensitivity Analysis of Net Benefits Calculations (NPV 2022-2041)

	Low Scenario (2% energy savings)	Base Scenario (2.7% energy savings)	High Scenario (4% energy savings)
NPV of annual net benefit to customers	\$3,729,534	\$12,506,291	\$28,805,983
NPV of projected reliability benefits	\$25,864,956	\$25,864,956	\$25,864,956

73. Based on the above sensitivity analysis, even if the projected energy savings is at 2%, there is still a significant amount of benefits to PUC Distribution customers arising from the SSG Project.
74. From PUC Distribution's comprehensive options and sensitivity analyses, proceeding with Option A, which is the SSG Project as set out in the Amended Application, is the preferred option. Therefore, PUC Distribution submits that it has met the "prudent" criteria of the ICM eligibility test.

(iv) Rate Riders

PUC Distribution has followed the instructions in the OEB ICM Model to determine rate

riders. The specific rate riders can be found at Table 13 of the Amended Application.²⁶ The rate riders would be in effect from May 1, 2022 to April 30, 2023 at which time PUC Distribution would be rebasing under its 2023 Cost of Service Application. The impact to customers as a result of these rate riders is shown in Table 6 below (a reproduction of Table 14 in the Amended Application).

Table 6: Bill Impacts Resulting from Rate Riders

			With Consumption Savings		Without Consumption Savings	
Class	Consumption (kWh)	Consumption (kW)	Total Bill Increase/Decrease	Total Bill Impact %	Total Bill Increase/Decrease	Total Bill Impact %
Residential	750	0	-\$1.21	-1.05%	\$1.16	1.01%
Residential	825	0	-\$1.44	-1.17%	\$1.16	0.94%
Residential	367	0	\$0.00	0.00%	\$1.16	1.66%
Residential	2,000	0	-\$5.15	-1.97%	\$1.16	0.44%
GS<50	2,000	0	-\$4.92	-1.68%	\$2.56	0.87%
GS<50	272	0	\$0.00	0.00%	\$1.01	1.83%
GS<50	3,000	0	-\$7.76	-1.80%	\$3.45	0.80%
GS>50	19,740	55	-\$62.85	-1.86%	\$25.08	0.74%
GS>50	57,220	145	-\$194.19	-2.07%	\$56.42	0.60%
GS>50	142,465	452	-\$487.42	-2.02%	\$163.34	0.68%
GS>50	169,620	468	-\$585.22	-2.10%	\$168.91	0.61%

75. As seen in Table 6, if customers received the full benefit from consumption savings, there will be a total bill decrease or neutral effect on their bills.

D. CONCLUSION

76. PUC Distribution submits that it has demonstrated the SSG Project's eligibility for ICM funding through meeting the Board's criteria of materiality, need and prudence, as detailed in this Argument-in-Chief.
77. The SSG Project is a material and significant capital expenditure that is needed to address the growing operational performance and delivery requirements of PUC Distribution.

²⁶ Amended Application page 56 and 57.

78. PUC Distribution has considered different options and found that pursuing the SSG Project as contemplated in this ICM application is the most cost-effective option for ratepayers.
79. This is a unique opportunity for PUC Distribution to pursue the SSG Project with the help of NRCan Funding, so that it can provide benefits to its customers through improvements to its distribution system while achieving “no bet bill increase” for its customers – both of which are important to PUC Distribution and its customers.
80. Therefore, PUC Distribution respectfully requests the approval of the ICM funding requests for the SSG Project and approval of the associated ICM rate riders.

ALL OF WHICH IS RESPECTFULLY SUBMITTED THIS 12TH DAY OF MARCH, 2021.

BORDEN LADNER GERVAIS LLP

Per:



Flora Ho