AMPCO Interrogatory #138

Interrogatory

Reference: Ex D3 T1 S1

a) Please provide the Business Unit organizational structure for Support Services.

b) Please provide the average number of forecast FTEs for Information IT and Real Estate for the period 2022-2026 compared to 2016 to 2020.

c) Please provide OPG's key IT metrics and targets for the period 2022 to 2026.

Response

a) Support Services is comprised of the Business Units identified under Finance, Chief Administration Office, Law Division and Corporate Affairs, as well as the Corporate Business Development function within Enterprise Strategy, as seen in Ex. A1-5-1 and Ex. L-A1-01-AMPCO-001.

b) The average number of forecasted FTEs (regular and non-regular) per year as attributed to the nuclear facilities is 256 for Chief Information Office and 199 for Real Estate for the period 2022-2026, compared to 329 for Chief Information Office and 235 for Real Estate for the period 2016-2020.

c) The key IT metrics and targets for the period 2022-2026 are set out below in Chart 1, aligned to each of OPG's four business imperatives:

Chart 1 – 2022-2026 CIO Performance Metrics and Targets

PERFORMANCE METRICS	Targets				
	2022	2023	2024	2025	2026
FINANCIAL STRENGTH					
CIO Capital Project Actuals vs Forecast (%)	- 10% + 3.5%	- 10% + 3.5%	- 10% + 3.5%	- 10% + 3.5%	- 10% + 3.5%
CIO Base OM&A Actuals vs. Forecast (%)	- 10% + 3.5%	- 10% + 3.5%	- 10% + 3.5%	- 10% + 3.5%	- 10% + 3.5%
OPERATIONAL EXCELLENCE					
Asset Maintenance Cost Actuals vs Forecast (%)	- 10% + 3.5%	- 10% + 3.5%	- 10% + 3.5%	- 10% + 3.5%	- 10% + 3.5%
Critical Systems Availability (%)	99.34%	99.34%	99.34%	99.34%	99.34%
PROJECT EXCELLENCE					
Project Cost Performance Index (#)	± 0.10	± 0.10	± 0.10	± 0.10	± 0.10
Project Schedule Performance Index (#)	± 0.10	± 0.10	± 0.10	± 0.10	± 0.10
Capital Investment on 'Enable Innovation' (%)	9%	10%	10%	10%	10%
SOCIAL LICENSE					
Cyber Phishing response rate (%)	15%	15%	15%	15%	15%
Security Incidents Causing Financial Loss, Business Disruption, Or Publicity (#)	0	0	0	0	0
On Time and Above Client Expectation Score (# out of 5)	4	4	4	4	4

AMPCO Interrogatory #139

Interrogatory

Reference: Ex D3 T1 S1 P1

The evidence states Business Units may request the addition of higher priority out-of-plan projects driven by changing priorities.

a) Please discuss how OPG works within the constraints of an OEB approved budget to accommodate new priorities.

b) How many IT projects were cancelled, deferred or re-scoped during the 2016 to 2020 period?

Response

a) Effective portfolio management enables OPG to focus its limited resources on the highest overall value projects by implementing project selection, prioritization and optimization decisions in alignment with the overall corporate strategy. The process for managing and prioritizing IT investments within budgets, including the value framework used to assess projects, is described in Ex. D3-1-1, p. 4, line 4 to p. 5, line 9. OPG's portfolio approach for IT projects is similar to that used for Nuclear projects, which is described in detail in Ex. L-D2-01-AMPCO-017, and also follows Project Management Institute standards.

b) Relative to the EB-2016-0152 identified projects >$5M, three IT projects were cancelled, deferred or re-scoped during the 2016-2020 period.

AMPCO Interrogatory #140

Interrogatory

Reference: Ex D3 T1 S1 P6

OPG indicates these tools provide OPG with many benefits, including security protection, cost savings opportunities, as well as productivity improvements through increased mobility and ability to collaborate on work using the Cloud platform.

a) Please identify and quantify the forecast cost savings over the period 2022 to 2026 and explain how they are reflected in OPG's cost structure.

b) Please identify and quantify the cost savings over the period 2016 to 2020.

Response

a) The question references the benefits of the Microsoft products and services included with the E5 subscription discussed at Ex. D3-1-1, pp. 5-6. These core tools are used across the entire organization and therefore the improvements in them are broad enablers of improved efficiencies and performance, in support of OPG's overall cost structure and other targets (Ex. A2-2-1). Additionally, the benefits cited include enhanced security features. For these reasons, the savings cannot be isolated or quantified.

   See also Ex. L-D3-01-CCC-040.

b) See part a).

AMPCO Interrogatory #141

Interrogatory

Reference: Ex D3 T1 S2 Table 1a

a) Please provide the final in-service date from EB-2016-0152 for each of the four projects.

Ref: Ex D3 T1 S2 Table 2a

b) With respect to the completed/deferred projects from EB-2016-0152 and Ongoing Projects from EB-2016-0152, please provide the Final Inservice Date and Total Cost from EB-2016-0152.

c) Please identify the projects in part b) that have a BCS status of superceding or over variance and provide the variance.

d) Please provide the Post Implementation Review for the completed projects.

Ref: Ex D3 T1 S2 Table 2b, Table 2c, Table 2d

e) Please identify the projects that have a BCS status of superceding or over variance and provide the variance.

Response

a) The final in-service date from EB-2016-0152 for the projects within the CSA N290.7 Compliance program was December 2021. As noted in Ex. D3-1-2 p.2, OPG had forecast the first of these projects (project number 82924), as a Tier 2 project, for which the final in-service date was March 2018. The CSA N290.7 Compliance program is discussed further Ex. L-D3-01-SEC-109.

b) Refer to Final In-Service Date and Total Cost from EB-2016-0152 as follows:

No.	Project Name	Final In-Service Date	Total Project Cost ($M)
COMPLETED/DEFERRED PROJECTS FROM EB-2016-0152			
	IT - Asset Service Fee		
1	MS Windows Server Upgrade	Dec-16	9.3
2	Mainframe Purchase	Dec-16	7.0
3	Storage Purchase	Dec-16	6.1

No.	Project Name	Final In-Service Date	Total Project Cost ($M)
	IT - Nuclear Rate Base		
4	Security and Emergency Services (SES) P25 Interoperability Radio System (SIRS)	Dec-16	5.9
	Real Estate - Nuclear Rate Base		
5	Darlington Nuclear Generating Station Site Park Road & Holt Road Bridge Repair & Rehabilitation	Dec-17	5.0
ONGOING PROJECTS FROM EB-2016-0152			
	IT - Asset Service Fee		
6	Asset Suite Upgrade	Dec-21	17.2
7	Tempus Lifecycle Upgrade	Dec-19	5.2
8	Energy Market Application Refresh Program	Dec-21	5.0

c) Of the projects in part b), the Darlington Nuclear Generating Station Site Park Road & Holt Road Bridge Repair & Rehabilitation and the Tempus Lifecycle Upgrade have a BCS status of superseding with variances of $0.5M and $9.1M, respectively. The Security and Emergency Services P25 Interoperability Radio System has an overvariance of $1.3M.

d) A Post Implementation Review ("PIR") was completed for the MS Windows Server Upgrade and is included in Attachment 1. A PIR was not completed for the other closed projects in part b). The Tempus Lifecycle Upgrade and the Security and Emergency Services P25 Interoperability Radio System projects are yet to be closed.

e) Of the projects in Ex. D3-T1-S2, Table 2b, Table 2c, Table 2d, the Microsoft Sharepoint Upgrade and Ground Maintenance Complex have a BCS status of superseding with variances of $0.5M and $3.0M, respectively. There were overvariances in the Re-Imagine Program ($2.5M) and the Nuclear Integrated Digital Enhanced Network ($0.7M).

ONTARIO POWER GENERATION	Document Number: FIN-TMP-PA-002*	Revision: R02	Page: 1 of 2
	POST IMPLEMENTATION REVIEW TEMPLATE (For Simplified PIRs only)		

Station:	Project Name: Microsoft Windows Server 2003 Lifecycle Upgrade	Project No.: ICIIA185	Units:	Controlled Doc No.:

Approval	Cost	Date
Original Approval Estimate		
Approval Revision Estimate		
Final Approval Estimate	15,700	2016-09-30
Final Actual Project Cost	15,001	2018-03-15

Timing	
Target Date	
Latest Approved i/s Date	2016-09-30
In Service Date	2016-09-30
Period used to calculate Performance result	

DELIVERABLES

Target	Achievement
95% of baseline complete - 375 servers	390 servers completed
Mitigation plans for all excluded servers (approx. 113)	Mitigation plans for all excluded servers

QUALITATIVE RESULTS

	N/A

KEY LESSONS

	N/A

FOLLOW-UP ACTIONS

	N/A

Prepared by: __ John Tennant __ Date:_ 2018-02-14_
Author

Reviewed by: _ Jeff Ferguson _Date:______
Project Sponsor

Approved by: __ Faisal Ali __ Date:____________
Project Approval Authority Finance

Approved by: _Ian Roberts_Date:______
Project Approval Authority

ATTACH BCS:

Document: ICIIA185 IIA82161 - Windows 2003; 09-03-2015.pdf
Folder: http://catou-ogwspuwdc:9004/searchcenter/Pages/results.aspx?k=ICIIA185

Workflow Status Page 1 of 2

Team Sites > Support > Information Technology > Project Management Workflow > Project Managers Docs > Workflow Status

Workflow Status: PMO Reviewers-Concurrers

Workflow Information

Initiator: NORRIE John -C I O
Started: 7/29/2015 12:34 PM
Last run: 7/31/2015 8:13 AM
Document: IIA82161 full BCS - Microsoft Windows Server 2003 Lifecycle v2
Status: Approved

Tasks

The following tasks have been assigned to the participants in this workflow. Click a task to edit it. You can also view these tasks in the list Tasks.

Assigned To	Title	Due Date	Status	Outcome
NORRIE John -C I O	Please approve IIA82161 full BCS - Microsoft Windows Server 2003 Lifecycle v2	8/5/2015	Completed	Approved by NORRIE John -C I O
LEUNG Tony Wai -C I O	Please approve IIA82161 full BCS - Microsoft Windows Server 2003 Lifecycle v2	8/5/2015	Completed	Approved by LEUNG Tony Wai -C I O
ROBERTS Ian -C I O	Please approve IIA82161 full BCS - Microsoft Windows Server 2003 Lifecycle v2	8/5/2015	Completed	Approved by ROBERTS Ian -C I O
RUZ Jenny -FIN & C CTRL	Please approve IIA82161 full BCS - Microsoft Windows Server 2003 Lifecycle v2	8/5/2015	Completed	Approved by RUZ Jenny - FIN & C CTRL

Workflow History

View workflow reports
The following events have occurred in this workflow.

Date Occurred	Event Type	User ID	Description	Outcome
7/29/2015 12:34 PM	Workflow Initiated	NORRIE John -C I O	PMO Reviewers-Concurrers was started. Participants: NORRIE John -C I O, LEUNG Tony Wai -C I O, ROBERTS Ian -C I O, RUZ Jenny - FIN & C CTRL	
7/29/2015 12:34 PM	Task Created	NORRIE John -C I O	Task created for NORRIE John -C I O. Due by: 8/5/2015 12:00:00 AM	
7/29/2015 12:34 PM	Task Created	NORRIE John -C I O	Task created for LEUNG Tony Wai - C I O. Due by: 8/5/2015 12:00:00 AM	
7/29/2015 12:34 PM	Task Created	NORRIE John -C I O	Task created for ROBERTS Ian -C I O. Due by: 8/5/2015 12:00:00 AM	
7/29/2015 12:34 PM	Task Created	NORRIE John -C I O	Task created for RUZ Jenny -FIN & C CTRL. Due by: 8/5/2015 12:00:00 AM	
7/29/2015 12:38 PM	Task Completed	LEUNG Tony Wai -C I O	Task assigned to LEUNG Tony Wai - C I O was approved by LEUNG Tony Wai -C I O. Comments:	Approved by LEUNG Tony Wai -C I O
7/29/2015 12:45 PM	Task Completed	NORRIE John -C I O	Task assigned to NORRIE John -C I O was approved by NORRIE John - C I O. Comments:	Approved by NORRIE John -C I O

http://catou-ogwspuwdc:9015/teamsites/support/it/pmw/_layouts/WrkStat.aspx?List=%7b... 7/31/2015

CCC Interrogatory #40

Interrogatory

Reference: Exhibit D3/T1/S1/p.6 and Table 1

The evidence states that in 2017 OPG entered into an Enterprise Agreement with Microsoft ("Microsoft Enterprise Agreement", which allows OPG to obtain per user software licenses for Microsoft E5. The new model shifts away from the purchase and implementation of individual software as it became obsolete to entering in to term agreement with Microsoft. As such OPG will no longer require individual, small projects for each product licence and will, instead, renegotiate and renew its agreement with Microsoft every three years. The IT Support services are increasing significantly beginning in 2020 and continuing into the IR term:

a) Please provide the Business Case Analysis for the changes resulting from the Microsoft Enterprise Agreement;
b) Please indicate why the IT Support Costs are increasing during the IR term. For example, the increase from 2019 to 2022 is almost double going from $53.1 million to $91.2 million.

Response

a) The Microsoft Enterprise Agreement is a sustaining investment and contract renewal, and is not an IT project. As such, a business case was not completed for the Microsoft Enterprise Agreement in 2017.

   As stated in Ex. D3-1-1, every three years, OPG renegotiates and renew its agreement with Microsoft. Although not required, in 2020, OPG utilized the Business Case Summary form (OPG-FORM-0076) to document the business justification for continued renewal of the Microsoft Enterprise Agreement. See Attachment 1 for the 2020 Business Case Summary. OPG does not plan to complete such justifications for ongoing future renewals during the IR term.

b) The IT costs identified at Ex. D3-1-1, Table 1 and referenced in the question are OPG's capital expenditures on IT projects. Please refer to Ex. L-F3-02-VECC-030 for further discussion.

Business Case Summary

Project #	ICIBO009 (AS7 ID IIA86018)	**Controlled Doc #**	Refer to the BCS Writing Guidance
Project Title	Microsoft Canada Enterprise Agreement		
Facility	700 University	**Investment Classification**	Sustaining
Project Level (Scalability)	B	**Financial Classification**	☐ OM&A ☒ Capital ☐ Capital Spare ☐ MFA ☐ CMFA ☐ Provision ☐ Others: [if applicable]
Release: Gate and Project Phase	☐ Choose an item. G0: Initiation ☐ Choose an item. G1: Choose an item.		☐ Choose an item. G2: Definition ☒ Full G3 : Execution
Estimate Class (overall project)	Class 1	**Target Project Completion Date**	Apr-2023

Recommendation

We recommend a release of $22,945 K, including $0 K of contingency.

This release is to support the renewal of the Microsoft Enterprise Agreement for Office 365 licensing and associated products. This business case includes the Microsoft EA spending of $7.649K/year for 3 years, but excludes the server cloud enrolment as well associated Azure costs.

Investment Cash Flows

$K	**LTD**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**Future**	**Total**
Previous releases									-
Current request	-		7,648	7,648	7,648				22,945
Total released to date	**-**	**-**	**7,648**	**7,648**	**7,648**	**-**	**-**	**-**	**22,945**
Future required	-								-
Total Project Cost	**-**	**-**	**7,648**	**7,648**	**7,648**	**-**	**-**	**-**	**22,945**
Ongoing Costs	-								
					Gate:	**G3**		**OAR Approval:**	$22,945 K

Approvals	**Signatures**	**Date**
The recommendation, including the identified ongoing costs, if any, represents the best option to meet the validated business need.		
Recommended by: Project Sponsor Chris Woodcock Director, IT Services, CIO	Chris Woodcock	Sept. 3, 2020
I concur with the business decision as documented in this BCS.		
Finance Approval: Louisa Kwan Director, Controllership		
I confirm that this investment/project, including the identified ongoing costs, if any, will address the business need, is of sufficient priority to proceed, and provides value for money.		
Line Approval per OAR 1.1: Jason Wight Chief Information Officer, CIO		

EXECUTIVE SUMMARY – Project Overview
The Microsoft (MS) Enterprise Agreement (EA) ensures Ontario Power Generation (OPG) has IT standardization across the organization, streamlined administration and budgeting, and provides a flexible infrastructure environment that responds rapidly to changing needs. This EA includes a robust Software Assurance program, and a comprehensive maintenance program that ensures OPG maximizes the benefits of the licensed products to help users save time and money while increasing productivity. These benefits support OPG's ability to plan, deploy, use, maintain, train and transition software solutions. OPG has had an EA with Microsoft since 2017. Changing the software platform would have a significant impact on OPG, and would impact on work processes and compatibility with many systems and alignment with our vendors and partners. The cost of any change would also be significant. The MS EA is a sustaining investment, and is not an IT Project. The EA reduces the cost of IT computing and maximizes the benefits of software investments as follows: • The right tools and resources that can help IT staff and employees be more productive. • Software Assurance that offers a broad range of tools, services, and solutions to help users. • Upgrade rights to the latest technology through Software Assurance. • The ability to standardize IT choices across the organization, so OPG can tap into the latest technology at substantial savings. • Spreading fixed payments across a three-year term will help OPG's budgeting process. • Reduce OPG's effort to manage software licenses, and streamline the procurement process. • The ability to evaluate any product for 60 days before a purchase. • Centralize purchasing and share software products with qualified affiliates. OPG requires a MS EA contract in place in order to maintain an innovative work environment. This EA provides OPG a program to access the latest technology—Microsoft Office, Windows, Security, Azure, Skype/Teams and Dynamics platforms beyond 2020.

Business Need For Project Level A or B
Consistent with the existing Microsoft EA, OPG still requires a simple, flexible, and affordable way to standardize its business technology (i.e. applications, operating systems, cloud, security, telecom and servers). The Enterprise Agreement can help drive IT standardization across the organization, streamline administration and budgeting, and build a flexible infrastructure.

Preferred Alternative:	**Microsoft Enterprise Agreement only viable solution** For Project Level A, B or C
Description of Preferred Alternative	
OPG has had an EA with Microsoft since 2017. OPG requires a MS EA contract in place in order to maintain an innovative work environment. This EA provides OPG a program to access the latest technology—Microsoft Office, Windows, Security, Azure, Skype/Teams and Dynamics platforms beyond 2020. This business case includes the Microsoft EA spending of $7.649K/year for 3 years, but excludes the server cloud enrolment as well associated Azure costs. As part of the Microsoft Enterprise Agreement OPG receives the following: • Windows 10 operating system • Office 365 (Word, Excel, PowerPoint, OneNote, Access) • Emails Outlook • SharePoint and Yammer • Skype and Teams • MyAnalytics and Power BI Pro • Microsoft Cloud App Security, Windows Defender and Azure Threat Protection Other new capabilities that OPG expects to take advantage of such as Microsoft Forms, PowerApps and Planner.	

Deliverables:	**Associated Milestones (if any):**	**Target Date:**
Current release:		

Deliverables:	**Associated Milestones (if any):**	**Target Date:**
Enterprise Agreement Renewal		April 1, 2023

Alternative 2:	**Base Case – No Project** For Project Level A, B or Value-Enhancing
OPG has had an EA with Microsoft for many years. Changing the software platform would have a significant impact on OPG, and would impact on work processes and compatibility with many systems and alignment with our vendors and partners. The cost of any change would also be significant. Therefore, this alternative is not recommended.	

Alternative 3: M365 E3/E5 — For Project Level A, B or Value-Enhancing

Negotiations with Microsoft assessed if we used a mix of license types could OPG get a better deal. OPG outlined a mix of 4000 E3 licenses and remaining E5 licenses. Microsoft could not provide the same license savings on E3 and E5 licenses making this option unattractive. OPG would lose all the security capabilities

Pro's
- No Pro's.

Cons:
- OPG would have to manage two different license types.
- Discounts were considerably less making the overall cost more than the preferred alternative.

M365 E3/E5	
EA	
Year 1 Annual Total	$8,103,720.03
Year 2 Annual Total	$8,103,720.03
Year 3 Annual Total	$8,103,720.03
Three-Year Total Spend	**$24,311,160.09**

Additional Risk Analysis — For Project Level A or B

No changes to the Enterprise Agreement expected over the term of the agreement.

Financial Evaluation — For Project Level A, B (with multiple feasible alternatives) or Value-Enhancing

$K	Preferred Alternative (M365 E5)	Base Case (No Project)	Alternative 3 (M365 E3/E5)	Alternative 4	Alternative 5
Project Cost	$22,945K	N/A.	$24,311K		
NPV					
Other: (e.g., IRR)					

Analysis of Financial Evaluation – Key Assumptions and Key Results:

A financial evaluation is not required for Sustaining investments.

APPENDICES

Appendix A1: Summary of Estimate - Total Project Cost										
Project Number:	**ICIBO009 (AS7 ID IIA86018)**									
Project Title:	**Microsoft Enhancement Agreement – 2020 – 2022**									
$K	**LTD**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**Future**	**Total**	**%**
Project Mgmt									-	0%
Inspection									-	0%
Engineering									-	0%
Procurement			7,648	7,648	7,648				22,945	100%
Construction									-	0%
Commissioning									-	0%
Closeout									-	0%
Subtotal	-	-	7,648	7,648	7,648	-	-	-	22,945	100%
Outside WBS									-	0%
Contingency									-	0%
Subtotal w/ Contingency	-	-	7,648	7,648	7,648	-	-	-	22,945	100%
Interest									-	0%
Other									-	0%
Total	**-**	**-**	**7,648**	**7,648**	**7,648**	**-**	**-**	**-**	**22,945**	**100%**
Removal Costs (incl. above)									-	0%

Appendix A2: Summary of Estimate – Notes			
Escalation Rate	N/A	**Interest Rate (going-forward)**	N/A

Appendix A3: Summary of Estimate – In-Service Estimates				
$K	Only applicable to capital projects. In-Service amount shall include interest but exclude removal costs.			
Project #	**Date (YYYY-MM-DD)**	**Description**	**Amount**	**%**
IIA86018	4/1/2021	Annual Total (2021)	7,648	33%
IIA86018	4/1/2022	Annual Total (2022)	7,648	33%
IIA86018	4/1/2023	Annual Total (2023)	7,648	33%
Total			22,945	100%

Prepared by:		**Reviewed and Endorsed by:**	
Joe Reid CIO Application Lead	[Insert Date] Date	Maurice Armstrong IT Services Manager	[Insert Date] Date

APPENDICES (Continued)

References	For Project Level A or B
EA Spreadsheet  OPG%20-%20Micros oft%20Renewal%20-%	

CCC Interrogatory #41

Interrogatory

Reference: Exhibit D3/T1/S1/p. 7

OPG has set out its Real Estate strategy to the end of 2026. The intent is to reduce its overall real estate footprint by optimizing the layout of its offices through workplace transformation and by investing in a new, sustainable corporate campus too consolidate non-plant employees at a principal location in Clarington. Did OPG retain outside consultants to assist in maximizing the most cost-effective strategy. If not, why not?

Response

OPG engaged consultants and participated in meetings with industry leaders and industry associations to gain insights to the opportunities and strategies available with respect to asset and workplace optimization that could be used by OPG to develop its real estate strategy.

Energy Probe Interrogatory #44

Interrogatory

Reference:
Exhibit D3, Tab 1, Schedule 1, page 1

Is OPG seeking OEB approval of capital expenditures presented in this exhibit? If the answer is yes, please list specific capital expenditures for which OPG is seeking approval. If the answer is no, please explain why not.

Response

OPG is not seeking approval of capital expenditures presented in the referenced exhibit. OPG is seeking approval of rate base amounts at Ex. B1-1-1 and overall revenue requirements at Ex. I1-1-1. Further, it is capital in-service amounts (at Ex. D3-1-2), not capital expenditures, that enter rate base and impact depreciation and amortization expenses and OM&A expenses (through asset service fees) as part of revenue requirement.

Energy Probe Interrogatory #45

Interrogatory

Reference:
Exhibit D3, Tab 1, Schedule 1, page 5

Is the business case for the Microsoft Enterprise Agreement in evidence? If the answer is yes, please provide the exhibit reference. If the answer is no, please file the business case.

Response

No. Refer to Ex. L-D3-01-CCC-040.

Energy Probe Interrogatory #46

Interrogatory

Reference:
Exhibit D3, Tab 1, Schedule 1, page 7, and D3, Tab 2, Attachment 2

a) Please provide a table listing the 11 buildings and the Kipling campus. For each building provide the actual total 2020 annual occupancy cost (not per employee). For each building, indicate if the building is owned by OPG or leased. For each building provide the revenue requirement that OPG is recovering in payment amounts.

b) Is OPG planning to sell buildings that it currently owns? Is the answer is yes, please list the buildings that OPG is planning to sell and the year of sale. If the answer is no, please explain why not.

c) Please provide the 2026 revenue requirement forecast for the Clarington Corporate Campus.

Response

a) The requested information for the 11 leased buildings and the owned Kipling campus that OPG expects to vacate as a result of the new building at Clarington is provided below:

Building	2020 Occupancy Cost ($M)[1]	Occupancy Type	2020 OEB Approved ($M)
1. 700 University Avenue	7.4	Leased	8.8
2. 889 Brock Road	4.9	Leased	4.0
3. 777 Brock Road	3.1	Leased	2.8
4. 230 Westney Road	1.4	Leased	1.2
5. 890 Brock Road	0.2	Leased	0.0
6. 1600 Stellar Drive	0.4	Leased	0.4

7. 2255 Forbes Street	1.3	Leased	1.3
8. 78 Richmond Street West	0.2	Leased	0.0
9. 1910 Clements Road	0.4	Leased	0.4
10. 1915 Clements Road[2]	0.0	Leased	0.0
11. 1340 Pickering Parkway	1.2	Leased	0.5
12. Kipling campus[3]	2.8	Owned	2.0

[1]For leased sites, occupancy costs represent the actual lease and utility costs attributed to the nuclear business. For 700 University Ave., also includes asset service fees charged to the nuclear business for leasehold improvements and related assets (net of tenant inducement allowance). For owned sites, occupancy costs represent asset service fees charged to the nuclear business.
[2]Occupancy costs related to 1915 Clements Road are less than $0.1M in 2020.
[3]The $2.8M in asset service fees related to the Kipling campus shown here include a true-up of $1.5M related to the 2020 fiscal year, which will be completed in 2021. The remaining $1.3M is included in the 2020 asset service fees for Kipling Ave. Office & Wesleyville, reflected in Ex. L-F3-02-LPMA-011, Attachment 1.

b) OPG is not planning to sell any buildings that form part of nuclear prescribed facilities as OPG continues to make use of such buildings.

c) Refer to Ex. L-F3-02-Energy Probe-059(a).

Energy Probe Interrogatory #47

Interrogatory

Reference:
Exhibit D3, Tab 1, Schedule 1, page 8 and D3, Tab 2, Attachment 1

a) Please provide cost details of the Workspace Transformation Initiative at 700 University showing the amounts spent on IT, furniture, carpets, lights, wiring, and carpets.

b) Will there be any stranded assets at 700 University when OPG moves to Clarington in 2026? If the answer is yes, please provide an estimate. If the answer is no, please explain why not.

Response

a) Cost details of the Workplace Transformation Initiative at 700 University Ave. are provided below:

Chart 1: 700 University Workplace Transformation Costs ($M)

Construction and Fit-Out[1]	13.6
Furniture	3.9
IT	2.4
Other	1.0
Total Cost	**20.9**

[1]Represents costs related to construction materials, labour, and interior fit-outs – including carpets, lights, wiring, integrated IT and additional furniture among others – required to convert to agile, free address workspaces. It is not possible to isolate the costs associated with carpets, lights, and wiring from the overall amount.

b) Assuming the question uses "stranded assets" to refer to undepreciated net book value of leasehold improvements and furniture at the time OPG exits the 700 University Ave. location, OPG does not expect to have any such "stranded assets" that it is seeking or would seek to recover from ratepayers. Additionally, OPG notes that it is not seeking recovery of asset service fees for 700 University Ave. Workplace Transformation improvements beyond approximately mid-2025, as shown in Ex. F3-2-1, Chart 3.

SEC Interrogatory #109

Interrogatory

Reference: D3-1-2, p.2

With respect to Cyber Security – CSA N290.7 Project:

a. Please provide a breakdown of the estimated cost of $40.7M.
b. Please provide the most recent business case for the project.

Response

a) As noted at Ex. D3-1-2, note 5, Canadian Standard Association ("CSA") N290.7 refers to an ongoing cyber security compliance program that combines multiple distinct projects to address issued requirements as well as estimated amounts in anticipation of future requirements of the Canadian Nuclear Safety Commission ("CNSC"). This includes compliance with CSA N290.7-14, issued in 2014. As part of the CSA N290.7 program, OPG achieved compliance to this standard by November 2019, when it was made a condition of OPG's operating licenses by the CNSC.

The CNSC has also directed OPG to comply with the new CSA N290.7-21 standard, a revision to CSA N290.7-14. The revised standard was originally expected to be issued in 2021, and is now expected to be released by early 2022. The costs in 2021-2025 reflect estimates of complying with the anticipated requirements of the revised standard.

A breakdown of the estimated cost of $40.7M is provided below.

Chart 1
Projects related to CSA Cyber security standards
CSA N290.7-14 and CSNA N290.7-21 ($M)

Project	Name	Description	Life to Date In-Service[1]	Future Expenditures[2]	Total
82924	CSA N290.7-14 Standard Assessment Project	Initial Assessment of Standard and Gap analysis. Governance Changes.	$3.8	N/A	$3.8
83690	PNGS N290.7 Remediation	Remediation of Pickering NGS	$3.0	$0.8	$3.8
83800	DNGS N290.7 Remediation	Remediation of Darlington NGS	$4.4	$0.7	$5.1
83692	Physical Security N290.7 Remediation	Remediation of Nuclear Physical Security Systems	$1.1	$0.6	$1.7
83820	Nuclear Supporting Equipment N290.7 Remediation	Remediation of common systems across OPG Nuclear	$2.1	$0.4	$2.5
86251	CSA N290.7-21 Standard	Assessment and implementation of new standard.	N/A	$23.9	$23.9
					$40.7

b) See Attachment 1.

[1] In-service amounts up to December 31, 2019.
[2] 2020 onwards.

Business Case Summary

Project #	ICISE055 ISE86251 - CAP ISE86252 – OMA	**Controlled Doc #**	TBD: OPG-BCS-08161-XXXXX
Project Title	CSA N290.7-21 Compliance Project		
Facility	CIO / Nuclear	**Investment Classification**	Regulatory
Project Level (Scalability)	D	**Financial Classification**	☐ OM&A ☒ Capital ☐ Capital Spare ☐ MFA ☐ CMFA ☐ Provision ☐ Others: [if applicable]
Release: Gate and Project Phase	☒ Full G0: Initiation ☒ Partial G1: Planning		☐ Full G2: Definition ☐ Choose an item. G3: Execution
Estimate Class (overall project)	Class 5	**Target Project Completion Date**	Dec 2025

Recommendation

We recommend a release of $1,000 K Capital, including $100 K of contingency. $500K of this release will be spent in 2020 and remaining $500K of this release will be spent in 2021. 2020 lockdown list contains sufficient spend to cover this release

This is an initial release for a multi-year program to bring OPG Nuclear stations into compliance with the new standard.

This release is to assess the new CSA N290.7-21 standard against OPG's current practice and identify the initiatives that need to be launched to be compliant with the new standard. The estimated total project cost range is to be determined for Gate 2 (Definition Phase) release.

Investment Cash Flows

$K	LTD	2020 CAP	2021 CAP	2022	2023	2024	2025	Future	Total
Previous releases	-	-							-
Current request	-	500	500						1,000
Total released to date	**-**	**500**	**500**	**-**	**-**	**-**	**-**	**-**	**1,000**
Future required	-		TBD	TBD	TBD	TBD	TBD	TBD	TBD
Total Project Cost									
Ongoing Costs	-			TBD	TBD	TBD	TBD	TBD	
					Gate:	**G1**		**OAR Approval:**	$1,000 K

Approvals	Signatures	Date
The recommendation, including the identified ongoing costs, if any, represents the best option to meet the validated business need.		
Recommended by: Project Sponsor David Rogalski Senior Manager, Computers and Control Design		August 2020
I concur with the business decision as documented in this BCS.		
Finance Approval: Suneethi Viswanathan Finance Controller		August 2020
I confirm that this investment/project, including the identified ongoing costs, if any, will address the business need, is of sufficient priority to proceed, and provides value for money.		
Line Approval per OAR 1.1: Kim Bosselle Director, IT Projects		August 2020

EXECUTIVE SUMMARY – Project Overview

The CSA N290.7 standard was first issued in 2014. Compliance to the standard by Nov. 2019 was made a condition of OPG's Operating License by the CNSC and was included in the License Condition Handbook for Pickering, Darlington and Nuclear Waste. The CIO initiated a program to assess our current state of compliance and the gaps that needed to be

EXECUTIVE SUMMARY – Project Overview
addressed to be compliant. These gaps were addressed and compliance achieved by the date necessary to meet our Operating License commitment. The CSA has just released a new standard for public review (CSA N290.7-21) which OPG will be expected to comply with. This project will evaluate the new standard and the work that must be completed to bring OPG into compliance. This initial BCS release will enable OPG to continue to leverage the resources from the original project to complete the assessment phase and address high priority gaps. This high priority work includes meeting specific commitments to the CNSC by the end of 2021 that resulted from a past Cyber Security Privileged and Confidential event.

Business Need	For Project Level A or B
The CNSC has directed OPG to comply with the new CSA N290.7-21 standard. The scope will also include the review and dispositioning of recommendations arising from past Cyber Process Network Reviews, past CNSC directives, as well al any findings from the CNSC Type 2 Cyber Security inspection for Darlington in Q1 2021. Past CNSC directives include: - *Identify Cyber Essential Assets (CEAs) which contain IP addresses and assess the requirement for the removal of any IP addresses labeled directly on the assets.* - *Perform an assessment of all files created by the CSA N290.7 Project and files associated with safety systems and emergency preparedness, to ensure appropriate classification, as per OPG-STD-0030, is applied.* - *Assess classification of associated documents in accordance with OPG-STD-0030.*	

Preferred Alternative:	**[Input Summary Title for the Preferred Alternative]** For Project Level A, B or C
Description of Preferred Alternative	
This project initiation release will assess the remediation work that is necessary to comply with the new standard and develop the alternatives / options to achieve compliance.	

Deliverables:	**Associated Milestones (if any):**	**Target Date:**
Current release:		
Definition Phase BCS (G2) Approved	Gate 2	Nov. 1, 2021
All IP Address labels removed from Assets	CNSC Commitment	Dec.30, 2021
Assessment and cleanup of Project documents per OPG STD-0030 is complete	CNSC Commitment	Dec.30, 2021
High priority remediation's in-service	In-Service	Dec.30, 2021

Key Risk Assessment — For Project Level A, B or C

Risk Class	**Description of Risk**	**Response Type/ Actions/Final TCD**	**For Additional Review**	**Residual Ranking**
Cost	The anticipated cost to complete necessary mitigations is estimated to be 30-50M, well outside of OPG's current IT funding envelope.	Accept: • The definition phase will fully quantify the cost to OPG to meet the standard. • Consider implementing projects between CCD and CIO to achieve compliance. **Final TCD: [Dec-2021]**	No	Low
Physcial/ Personnel Security	The resources that were engaged and trained by the CSA N290.7-14 Project are at risk of departing for other engagements.	Mitigate: • Early initiation of this project with early targeted remediation's will enable OPG to retain trained resources. **Final TCD: [June - 2021]**	No	Low
Regulatory	The scope of mitigation requirements is extensive and may require many	Avoid:	No	Low

Key Risk Assessment		For Project Level A, B or C		
Risk Class	**Description of Risk**	**Response Type/ Actions/Final TCD**	**For Additional Review**	**Residual Ranking**
	years to achieve compliance. The value to undertake this work for Pickering, if it is to be decommissioned, is questionable.	• Open communications with the Steering Committee and Reg. Affairs over the approach for Pickering will ensure an informed recommendation to the CNSC on what Compliance looks like for Pickering. **Final TCD: [Dec-2021]**		

Financial Evaluation		For Project Level A, B (with multiple feasible alternatives) or Value-Enhancing			
$K	Preferred Alternative	Base Case (No Project)	Delay work	Alternative 4	Alternative 5
Project Cost					
NPV					
Other: (e.g., IRR)					

Analysis of Financial Evaluation – Key Assumptions and Key Results:

- The Financial Evaluation will be completed for the Definition Phase BCS once an accurate understanding of the cost and benefits is available.

Qualitative Factors — For Project Level A or B

List any qualitative factors provided by the Preferred Alternative. These factors may include:

- N/A – this is a D level project.

Post Implementation Review (PIR) Plan (refer to OPG-PROC-0056)

Type of PIR Report	Project Closure Report (PCR)	**PIR Completion Date**	Dec. 2024

☐ Detailed PIR KPIs will be provided in future BCS(s) when Definition Phase BCS release is requested.

PIR KPIs	**Current Baseline**	**Target Result**	**How to measure?**	**Who will measure?**

APPENDICES

Appendix A1: Summary of Estimate	**Choose an item.**									
Project Number:	**ICISE055**									
Project Title:	**CSA N290.7-21 Compliance Project**									
$K	**LTD**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**Future**	**Total**	**%**
Project Mgmt		10	50						60	6%
Inspection									-	0%
Engineering		435	390						825	83%
Procurement									-	0%
Construction									-	0%
Commissioning									-	0%
Closeout									-	0%
Subtotal	-	445	440	-	-	-	-	-	885	89%
Outside WBS									-	0%
Contingency		50	50						100	10%
Subtotal w/ Contingency	-	495	490	-	-	-	-	-	985	99%
Interest		5	10						15	2%
Other									-	0%
Total	**-**	**500**	**500**	**-**	**-**	**-**	**-**	**-**	**1,000**	**100%**
Removal Costs (incl. above)									-	0%

Appendix A2: Summary of Estimate – Notes			
Escalation Rate	2%	**Interest Rate (going-forward)**	3%

Appendix A3: Summary of Estimate – In-Service Estimates				
$K	In-Service amount and target dates will be included in the Definition phase BCS.			
Project #	**Date (YYYY-MM-DD)**	**Description**	**Amount**	**%**
ISE86251	12/30/2021	Remidiation Complete	TBD	100%
				0%
Total			-	0%

Prepared by:	**Reviewed and Endorsed by:**
Greg Payne Project Manager Date	Jennifer Lafferty Nuclear IT Program Manager Date

SEC Interrogatory #110

Interrogatory

Reference: D3-1-2, 2; D3-1-2, Attachment 1

With respect to the 700 University Workplace Transformation Project:

a. Please provide a detailed breakdown of the full costs of the project.
b. What is the total cost of the project, including amounts funded by way of the tenant inducement allowance?
c. [Attach 1, p.2] Each of the 3 options includes a NPV calculation. Please provide the full underlying NPV calculations including all assumptions made.

Response

a) Refer to Ex. L-D3-01-Energy Probe-047.

b) The total cost of the project is $20.9M, as set out at Ex. D3-1-2, Tab 1, Schedule 2, Table 1a, line 3, which includes amounts funded by way of the tenant inducement allowance.

In preparing this response, OPG noted that, in error, the operating costs for the business plan period is not net of the annual impact of the tenant inducement allowance received in accordance with the lease agreement for 700 University Avenue. OPG will reflect a corresponding reduction in the proposed operating costs of approximately $0.9M per applicable year in preparing the draft payment amounts order.

c) The underlying net present value calculation for each option – as described in Ex. D3-1-2, Attachment 1, p. 2 – is as follows:

Chart 1: Net Present Value Calculation for 700 University Workplace Transformation Options

Calculation	Net Present Value ($M)[1]
Option 1: Occupy the 18th and 19th Floors under a Free Address Model	
Savings from releasing remaining floors	22.1
Receipt of tenant inducement allowance	7.4
Capital expenditures to convert 18th and 19th floors to agile workspaces with free address model	(19.7)
Total Net Present Value – Option 1	**9.8**

Option 2: Occupy Half of the 9th Floor, 18th and 19th Floors under a Fixed Address Model	
Savings from releasing remaining floors	18.9
Receipt of tenant inducement allowance	7.4
Capital expenditures to modify 9th, 18th, 19th floors to accommodate personnel from released floors	(18.5)
Total Net Present Value – Option 2	**7.8**
Option 3: Do Nothing	
Receipt of tenant inducement allowance	7.4
Expenditures to meet baseline workstation requirements	(0.8)
Total Net Present Value – Option 3	**6.6**

[1]These net present values are net of tax and were calculated as of mid-2018.

The following assumptions were made in calculating the net present value for each option:

- Options 1 and 2 estimated that OPG would exit the lower concourse of the building midway in 2019 and the 17th floor in 2020.
- Option 1 estimated that OPG would also exit the 9th floor entirely in 2021, whereas option 2 assumed the company would only exit half of the 9th floor.
- Savings are realized each year over the remaining lease term from reduced leasing footprint under options 1 and 2 (base rent and operating costs).
- The need to incur costs to replace aged workstations to meet baseline requirements under option 3.
- Discount rate of 9% (since OPG's Head Office is not a prescribed facility).
- Income tax rate of 25%.
- Capital expenditures incurred under options 1 and 2 were categorized as class 13 in calculating the tax shield on CCA.

SEC Interrogatory #111

Interrogatory

Reference: D3-1-2, Attachment 2

With respect to the Clarington Corporate Campus Project:

a. Is there a more detailed project proposal and business case that exists for this project? If so, please provide copies.
b. Please provide a detailed breakdown of the forecast costs of the project and how they were estimated.
c. Please provide details regarding the procurement method for the project.
d. [p.6] The Applicant provides a cost and NPV calculation for the various alternatives. Please provide the full underlying cost breakdown and NPV calculations, including all assumptions made, for each alternative.
e. When the Project is completed, what is the forecast annual revenue requirement (allocated to both regulated nuclear and hydroelectric), including both capital and OM&A portions?
f. Please provide a list of current OPG facilities that the proposed project will replace, the total annual savings, and the amount of savings that would be allocated to OPG's regulated business

Response

a) The project is in the planning phase and a more detailed proposal has not yet been developed. There is not a more detailed business case than that provided in Ex. D3-1-2, Attachment 2.

b) The breakdown of the forecast costs of the project is below:

Chart 1: Forecast Costs for New Building at Clarington ($M)

Engineering, Procurement, Construction	[redacted]
Project Management and Oversight	
Escalation	
Contingency	
Total	

The estimate was derived using a leading construction estimation software, RSMeans, and supplemented with OPG's operational experience with, and industry standards for similar projects. The project in currently in the planning phase and detailed design is still to be completed, therefore the forecast cost is a Class 5 estimate.

c) This project is utilizing an EPC strategy with front-end engineering and design, with the aim of early contractor involvement to partially complete the design. OPG has also hired an owner's representative to develop user requirements and performance specifications, and to assist with project oversight.

d) The breakdown of the [redacted] in costs is provided in part (b) above.

As per Ex. D3-1-2, Attachment 2, p. 6, net present values were calculated for the preferred alternative and the base case. The underlying net present value calculations for these alternatives, updated per the financial model provided in Ex. JT2.30, are as follows:

Chart 2: Net Present Value Calculations for Clarington Business Case Alternatives

Description	**Net Present Value ($M)[1]**
Preferred Alternative: New Building	
Ongoing operating costs of the new building once in service[2]	[redacted]
Construction costs of the new building[3]	
Lease costs at existing sites until personnel is relocated to new building[4]	
Intra-site travel costs	
Relocation and other	
Total Net Present Value – Preferred Alternative	
Base Case: No Project and Continue Leasing	
Continued lease costs at identified existing sites[5]	[redacted]
Modifications at Kipling campus and 889 Brock Road to increase occupancy[6]	
Intra-site travel costs	
Total Net Present Value – Base Case	

[1]Present values are shown net of tax at 25% and were calculated as of 2020.
[2]Operating costs are assumed to escalate annually by 3%.
[3]Capital expenditures assumed to be CCA eligible as follows: 80% to class 1.1 and 20% to class 8.
[4]Refer to Ex. L-D3-01-Society-012, part (a) for the current estimated dates at which OPG aims to release its leased premises.
[5]Represents the present value of continuing to occupy 700 University Ave., 889 Brock Road, and Kipling campus during the 40-year time period equivalent to the life of the new building, as noted in Ex. D3-1-2, Attachment 2, p. 7. With the exception of 700 University Ave., these costs are estimated to increase by 3%

annually and are based on the amounts approximated by Chart 3 in part (f) below. Certain additional step-increases are included during future periods when a lease is assumed to be subject to renewal.
[6]Capital expenditures assumed to be CCA eligible as follows: 65% to class 1.1, 16% to class 8, 9% to class 46, and remainder to class 50.

The remaining assumptions made in calculating the net present value for the above alternatives are as set out at Ex. D3-1-2, Attachment 2, p. 7.

e) Refer to Ex. L-F3-02-Energy Probe-059, part (a) for the OM&A portion of the forecast annual revenue requirement allocated to the nuclear business during the IR term. Since the new building at Clarington will not be a prescribed facility, it is not included in the rate base.

With regard to the forecast annual revenue requirement for the hydroelectric business, OPG declines to respond on the basis of relevance. O. Reg. 53/05 section 6(2), 13, i, establishes the Hydroelectric payment amounts for the period covered by this application at the level that exists on December 31, 2021. As such, the information sought is not relevant to any issue before the OEB in this application.

f) The requested information for the current OPG facilities the project will replace is provided below:

Chart 3: Facilities Being Replaced and Associated Annual Savings

Building	Total Annual Savings ($M)[1]	Annual Savings Allocated to Nuclear ($M)[1]
1. 700 University Avenue	[redacted]	[redacted]
2. 889 Brock Road		
3. 777 Brock Road		
4. 230 Westney Road		
5. 890 Brock Road		
6. 1600 Stellar Drive		
7. 2255 Forbes Street		
8. 78 Richmond Street West		
9. 1910 Clements Road		
10. 1915 Clements Road[2]		
11. 1340 Pickering Parkway		
12. Kipling campus		
13. 303 Townline Road, Niagara-on-the-Lake[3]		
Total	**23.3**	**19.5**

[1]For leased sites, represent the forecast lease and utility costs at the later of 2026 or the last full year before the expected termination date (Ex. L-D3-01-Society-12, part (a)). For 700 University Ave., the savings exclude annual asset service fees (net of the tenant inducement allowance) of \$2.8M (\$2.1M attributed to the nuclear business) for leasehold improvements and related assets.
[2]Annual savings for 1915 Clements Road are less than [redacted].
[3] The savings from exiting this property were not included in the financial evaluation underpinning the business case for the new building at Clarington; doing so would marginally improve the economic benefit of the preferred alternative. None of the annual costs of this property are attributed to the nuclear operations.

SEC Interrogatory #112

Interrogatory

Reference: D3-1-2, p.9

With respect to the Overhaul of the Darlington Energy Complex Second Floor Project:

a. Please provide the business case for the project.
b. Please provide a breakdown of the $10.2M project cost.

Response

a) and b)

The Overhaul of the Darlington Energy Complex Second Floor Project is currently in the identification phase and, as noted at Ex. D3-1-2, Table 2d, Note 3, detailed scope requirements are currently being developed. As such, OPG does not currently have a business case available as activities have yet to commence. The project is not expected to progress to the execution phase until 2024.

The estimated project cost of $10.2M comprises $8.8M for non-information technology ("IT") components and $1.4M for IT components. Beyond this, OPG has not further defined the specific breakdown of project costs, which have been estimated based on the per square foot cost for the Workplace Transformation of 700 University Ave.

SEC Interrogatory #113

Interrogatory

Reference: D3-1-2, p.6

With respect to the OPG Telephone Upgrade Project:

a. Please explain how removing fixed telephone lines at 700 University and replacing them with Skype costs $6.5M.
b. Please explain why is OPG physically removing the telephone lines.
c. Please provide the estimated annual savings of removing a fixed telephone service.
d. [D3-1-2] Please provide a revised versions of Tables 2a, 2b, and 4 that show the amounts allocated to nuclear.

Response

a) The OPG Telephone Upgrade is a company-wide project that addressed a number of issues related to OPG's corporate phone and voicemail systems across multiple OPG offices, including a number of offices that retain physical phones. Thus, the project was not limited to "removing fixed phone lines" at 700 University Ave. It delivered a number of components including:

- Migrated two OPG phone systems, one at 700 University Ave. and one at Darlington, to a single centralized phone infrastructure, which improves IT operational efficiencies in the company (discussed below).
- Upgraded obsolete telephone hardware systems at the Engineering Services & Support Building, Darlington Learning Centre, the Northwest Control Centre ("NWCC") and certain rooms at 800 Kipling Ave. to the same centralized phone system referenced above.
- Made available the Skype Conferencing System to all employees with computer access.
- Rolled out Skype phone numbers to employees located at 700 University Ave. and 1910 Clements Road to replace desktop phones.
- Enabled audio/video hardware conferencing abilities in certain meeting and board rooms, with a view to modernize technology and enhance employee collaboration and productivity.
- Centralized the call reporting software from three systems to one. This software monitors and analyzes usage of OPG's phone system, including recording call details (origin, destination, duration, etc.) in a directory for purposes of call trending and traffic studies. This consolidation was done at Pickering, Darlington, 800 Kipling Ave., 700 University Ave. and the NWCC.

The project was a component of OPG's Digital Strategy and was placed in-service in 2019 with a total cost of $6.5M, broken down as follows:

- Core phone system upgrade (infrastructure upgrade, including physical phones): $3.5M
- Skype phone and conferencing build and deployment (software licenses and implementation): $2.9M
- Phone call reporting system consolidation (monitoring and reporting): $0.1M

b) The scope of the OPG Telephone Upgrade Project did not include the physical removal of fixed phone lines. The physical removal of fixed phone lines was performed during the overall demolition work at 700 University Ave. as part of the 700 University Workplace Transformation project. As the need for fixed phone lines was removed through the OPG Telephone Upgrade Project, there was no need to reinstall phone lines in most instances.

c) Annual savings from the removal of desk phones at 700 University Ave. was approximately $38K. There was also a one-time cost avoidance of $63K related to installation and hardware of desk phones not replaced.

Additionally, and consistent with the objectives of OPG's Digital Strategy, the OPG Telephone Upgrade Project supported productivity improvements. This capability was a key enabler of meeting the unexpected work from home requirements as a result of COVID-19. OPG also benefited from operational efficiencies such as the need to monitor and support fewer phone systems after centralization.

d) As explained at Ex. F3-2-1, section 2.0, OPG does not allocate common assets, such as shared assets identifed at Ex. D3-1-2, Tables 2a, 2b, and 4 under IT – Asset Service Fee categories to the regulated business but rather charges a cost-based asset service fee to their use. As such, the requested tables provided in Attachment 1 comprise assets forecasted to be added under the Nuclear Rate Base categories.[1]

A part of the asset service fee calculation involves an apportionment of depreciation expense and associated return on capital for the assets, as discussed at Ex. F3-2-1, page 5. For the 2022-2026 period, the forecasted percentage portion for the nuclear facilities can be found at Ex. L-F3-02 Staff-267, Attachment 1 and applies to the common IT assets forecasted to be added over the period as shown under the Asset Service Fee categories at Ex. D3-1-2, Tables 2a, 2b and 4.

[1] There are no assets entering the nuclear rate base shown in Ex. D3-1-2, Table 2b.

Ex. D3-1-2 Table 2a (Revised)
Capital Project Listing - Support Services
(Capital Projects Impacting Nuclear Rate Base)
Projects $5M - $20M Total Project Cost[1]

Numbers may not add due to rounding.

Line No.	Project Name	Category	Project Description	Start Date	Final In-Service Date	Total Project Cost[2] ($M)	In-Service IR Term ($M)	In-Service 2020 ($M)	In-Service 2021 ($M)	In-Service 2022 ($M)	In-Service 2023 ($M)	In-Service 2024 ($M)	In-Service 2025 ($M)	In-Service 2026 ($M)
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)
	COMPLETED/DEFERRED PROJECTS FROM EB-2016-0152													
	IT - Nuclear Rate Base													
1	Security and Emergency Services (SES) P25 Interoperability Radio System (SIRS)[3]	Regulatory	Provide OPG's Nuclear Security and Operations staff with wireless communications as the current IDEN radio system used by Nuclear Operations will be no longer supported by the service provider by the end of 2015.	Dec-16	Dec-20	10.1	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0
2	**Subtotal**					10.1	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0
	Real Estate - Nuclear Rate Base													
3	Darlington Nuclear Generating Station Site Park Road & Holt Road Bridge Repair & Rehabilitation	Sustaining	Conduct repairs at the Holt Road and Park Road bridges at the Darlington Nuclear Generating Station Site. This project was in the 2016 evidence, completed and should be shown separate for RE - rate base complete.	Jan-16	Dec-18	7.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	**Subtotal**					7.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	**Total Projects**					17.5	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0

Notes:
1 Projects with expenditures during IR term OR In-Service amounts in Bridge or IR term AND Completed/Deferred projects (from EB-2016-0152 or subsequent).
2 Total Project Costs reflect BCS capital amounts (balance to be released) or the actual costs for completed projects, unless otherwise indicated.
3 Project was formerly named Radio Communication Program in EB-2016-0152, Ex. D3-1-2 Table 2, line 14.

Ex. D3-1-2 Table 4 (Revised)
Capital-Support Services Listing - Support Services
(Capital In-Service Impacting Nuclear Rate Base)
In-Service Summary - All Capital

Numbers may not add due to rounding.

Line No.	Capital In-Service Description	Reference	In-Service 2020 ($M)	In-Service 2021 ($M)	In-Service 2022 ($M)	In-Service 2023 ($M)	In-Service 2024 ($M)	In-Service 2025 ($M)	In-Service 2026 ($M)
			(a)	(b)	(c)	(d)	(e)	(f)	(g)
	In-Service								
	Projects ≥ $20 M - Rate Base								
1	**IT**	D3-1-2 Table 1	1.9	4.5	8.0	8.0	5.0	1.0	0.0
2	**Real Estate**	D3-1-2 Table 1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Projects $5M - $20M - Rate Base								
3	**IT**	D3-1-2 Table 2a/c	14.3	8.9	2.4	0.7	0.0	7.5	0.0
4	**Real Estate**	D3-1-2 Table 2a/d	4.0	13.4	20.6	0.0	0.0	17.5	0.0
	Projects < $5M - Rate Base								
5	**IT**	D3-1-2 Table 3	13.0	2.9	21.0	8.3	3.5	2.4	0.0
6	**Real Estate**	D3-1-2 Table 3	10.6	8.9	10.7	3.2	2.5	2.4	4.0
7	**Unallocated IT - Rate Base**			20.1	5.6	17.9	23.5	17.0	26.9
8	**Total In-Service Amounts**		43.8	58.8	68.3	38.0	34.4	47.8	30.9

Society Interrogatory #1

Interrogatory

Reference:
Exhibit D3-1-2, Attachment 2, Clarington Corporate Campus Business Case Summary.

The Clarington Corporate Campus BCS indicates under Deliverables that the User Requirements Assessment is to be completed in March 2021.

a) Have the user requirements been finalized? If so, please describe any material changes in the building design from what is described in the BCS.
b) Is the project still on track for the next milestones which are the final selection of the preferred alternative in May 2021 and for the approval of the Execution Phase in December 2021?

Response

a) The user requirements assessment has been completed. The conceptual design remains materially consistent with the BCS.

b) The project conceptual design has been finalized. The project is currently forecasting to obtain execution phase approval by March 2022.

Society Interrogatory #2

Interrogatory

Reference:
Exhibit D3-1-2, Attachment 2, Clarington Corporate Campus Business Case Summary.

The Campus BCS indicates under Business Need that OPG intends to accommodate approximately 2,400 employees in 1,680 workspaces, with approximately 30% of staff assumed to be out of the office at any point in time. Under Key Risks the BCS indicates: "As part of the on-going evolution of OPG's workplace needs, there is a risk that the assumed size of the new office building will need to be modified."

a) Please explain how OPG arrived at this 30% assumption? For example, is the assumption based on any studies or surveys, internal or external to OPG? If so, please describe them.
b) How is OPG planning to control the flow of employees in such a space constrained environment? For example. will there be a management process in place to direct employees if the office space is over capacity, or will overflow space be provided?
c) Please explain how "a corporate campus will facilitate increased collaboration" if 30% of employees are out of the office at any given time.
d) Is the assumed size of the building still a risk to the project? If so, has OPG's mitigation plan changed since the BCS was approved?

Response

a) The 30% assumption is based on internal occupancy reviews and general industry practices.

b) The design of the new building will not be a "space constrained environment." The space will be properly designed based on modern design principles which includes less barriers, promotes circulation and connection to other employees, and provides a variety of work settings including meeting, collaborative, and private work spaces. There will be sufficient seating to accommodate all employees assigned to the space.

c) OPG's non-plant based staff are currently spread among 12 different leased office locations around the Greater Toronto Area, the OPG-owned Kipling Ave. office and the Region of Niagara. Moving most of the employees from these sites together at the new campus will facilitate increased collaboration.

d) Yes, changes in assumptions, dependencies and scope are still a risk to the project. The mitigation plan has not changed.

Society Interrogatory #3

Interrogatory

Reference:
Exhibit D3-1-2, Attachment 2, Clarington Corporate Campus Business Case Summary.

The Campus BCS describes the Pros and Cons of the Preferred Alternative, including: (Pros) "A safe, modern and long-term office space will help attract and retain talent." (Cons) "Certain employees may be unwilling to move to the new office location." And "Inability to attract a segment of new talent given the new office location."

a) Please explain whether OPG expects the new building in Clarington will on balance aid or hinder its ability to attract and retain talent and why.

Response

a) OPG understands that there may be some employees and a segment of prospective future talent who will be unwilling to move to the new office location; however, on balance, OPG expects that Clarington Corporate Campus will attract and retain talent. The workforce at OPG is predominately comprised of technical professionals and trades that can, in part, be supplied by educational institutions that are within close proximity, namely Ontario Tech University and Durham College. Further, the location of the Campus, which will be in a regional Business Park focused on promoting energy and environmental innovation, is expected to increase talent attraction.

Society Interrogatory #4

Interrogatory

Reference:
Exhibit D3-1-2, Attachment 2, Clarington Corporate Campus Business Case Summary.

The Campus BCS describes a number of issues related to municipal government, specifically: zoning restrictions, the need for permits and connection agreements, and the possible construction of an organic digester near the proposed Clarington site.

a) To the best of OPG's knowledge, what is the status of the organic digester project proposed by the Region of Durham? If the organic digester is still under consideration, does OPG expect a decision from Durham before December 2021 or whenever OPG is expecting to commit to the execution of the Campus project?
b) Has OPG resolved any restrictions related to local zoning requirements? If not, please explain how they could impact the project.
c) To date, has OPG experienced any problems obtaining required permits and connection agreements? Is this still a future project risk? If so, by when are permits required for the project to stay on schedule?

Response

a) OPG understands that the Region of Durham has approved the location of an organic digester in the Clarington Energy Park. The Region of Durham has assured OPG that they will be taking steps to mitigate the concerns OPG raised related to the organic digester. OPG does not view the Organic Digester Project as a material risk to continuing with the Clarington Corporate Campus project.

b) and c)

Until all permits and approvals have been received, permitting and the zoning requirements therein will remain an ongoing risk to the site plan being approved and the project schedule being realized. While OPG has not experienced any issues obtaining permits or approvals to date, OPG continues to work with the Municipality of Clarington and regional stakeholders to ensure required permitting and approvals are obtained to meet the project schedule. The Municipality of Clarington has expressed their support for the project.

Society Interrogatory #5

Interrogatory

Reference:
Exhibit D3-1-2, Attachment 2, Clarington Corporate Campus Business Case Summary.

The Clarington Campus BCS describes a number of financial evaluation assumptions that support the $65M present value of cost reductions. These include: cost of capital, costs related to real estate, and other one-time costs related to employee relocation.

a) The BCS quotes a Cost of Capital of 3.5%, while other Value Enhancing BCSs in this application have used higher rates. For example, the 700U Workplace Transformation BCS (Exhibit D3-1-2, Attachment 1, page 6) quotes a discount rate of 9%. Please describe OPG's methodology for choosing the Discount Rate or Cost of Capital for evaluating Value Enhancing projects?
b) Please explain why a 3.5% rate was used for the financial evaluation? And why is such a low rate appropriate for a capital project that is seeking cost recovery from ratepayers?
c) Please recalculate the present value savings using a cost of capital of 6% and 9%, and for whatever rate OPG would normally apply to value enhancing capital projects.
d) Please clarify whether DEC renovation costs were included in the financial evaluation even if they are not part of this project? If not, were any costs excluded from the Base Case that would correspond to the additional capacity being added to the DEC?
e) Does the financial evaluation for this project include all the costs related to purchasing or relocating the contents of the building required for occupancy (furniture, IT equipment, etc.)?
f) Under Key Assumptions, the Campus BCS states: "Certain training facilities and specialized lab / testing equipment will not be located in the new building." Please explain if and how the related costs were included the financial evaluation.
g) Does the financial evaluation include an estimate for severance costs for employees unwilling to move to the new office location as well as the costs to hire and train replacement staff including the costs to engage temporary staff in the interim? If not, explain why not and estimate this impact on the $65M NPV cost reductions.
h) Over the 40-year time horizon for this project, have any costs for a mid-life refresh (for example: renovations, roof replacement, etc.) been included for the new building? If not, please explain why not and also provide an estimate of the impact of this on the $65M cost reductions.

i) Are there any other costs included in the evaluation that are not mentioned in the assumptions? If so, please describe them.

Response

a) OPG's methodology for selecting a discount rate to evaluate investment alternatives impacting regulated operations is not driven by investment classifications such as value enhancing. Rather, it is driven by whether the investment forms part of the prescribed assets or is an unregulated asset for which the regulated business is being charged a service fee. The 700 University Workplace Transformation Project is an example of the latter, unregulated category and thus utilized a discount rate of 9%.

b) The rate of 3.5% (pre-tax) was used as an approximation of OPG's incremental long-term cost of debt. The evaluation between the base case and the preferred alternative for the Clarington Campus BCS is, in substance, a "lease versus own" decision, which is an assessment of financing alternatives. In concept, long-term leasing is similar to financing the purchase of an asset with a loan. The after-tax cost of debt is therefore the appropriate rate for evaluating such financing alternatives on a comparable basis, as consistent with established finance theory. This differs from assessments of investment alternatives discussed in part (a) above.

c) Using a discount rate of 6%, the present value savings would be approximately $1M in favour of the preferred alternative, which is to construct the new building. Using a discount rate of 9%, the present value savings would be approximately $37M in favour of the base case, which is continuing to lease.

As discussed in part (b) above, using a 6% or 9% rate would not reflect the embedded cost of financing in a "lease versus own" decision and therefore would inappropriately skew the outcome. If a rate other than the after-tax cost of debt is used to evaluate "lease versus own" situations, OPG expects leasing would be consistently favoured, which would not reflect the substance of the decision.

d) Darlington Energy Complex ("DEC") renovation costs were not included in the financial evaluation for the new Clarington building and no costs were included in the base case corresponding to the additional capacity being added to the DEC. As noted in Ex. D3-1-2, Attachment 2, p. 7, retention and renovation of the DEC is common to both the preferred alternative and the base case, resulting in no impact to the financial evaluation outcome.

e) Yes.

f) The costs related to the training facilities and specialized lab / testing equipment were not included in the financial evaluation as there are no incremental costs associated with these. OPG plans to continue using its existing specialized facilities at Pickering and Darlington learning centers to satisfy such training and testing needs.

g) [redacted] OPG does not expect to incur any material incremental costs to hire and train replacement staff for those employees who choose not to relocate and no such costs are included in the proposed revenue requirements in this application.

h) The mid-life refresh costs have not been included in the financial evaluation. However, with both the preferred and base case alternatives assumed to be utilizing agile workspaces and spanning the 40-year time horizon, the need for a mid-life refresh and associated costs for the corresponding properties is expected to be common to both options, resulting in no material incremental impact to the financial evaluation outcome of the $65M (NPV) cost reductions.

i) No.

Society Interrogatory #6

Interrogatory

Reference:
Exhibit D3-1-2, Attachment 2, Clarington Corporate Campus Business Case Summary.

Regarding Niagara to Clarington Move of Staff

a) How many people are to be moved from Niagara Falls to the new proposed Clarington building assuming that all these employees agree to the move?
b) What is the possible maximum relocation costs for all these employees?
c) What is a reasonable square feet that needs to be included in the new Clarington building for each employee?
d) Estimate the total Clarington building cost which is required to accommodate the people in item a).
e) What cost savings can be quantified by moving these employees to Clarington in productivity improvements?
f) What is b) + d) – e)?
g) In the event f) above is negative, why is OPG making this decision to move these employees from Niagara if it does not make sense financially?
h) On what date does OPG expect to vacate its staff from Niagara?

Response

a) OPG's current estimate is that approximately [redacted] are to be moved from Niagara Falls to the new building at Clarington. This is subject to further refinement based on organizational needs and finalization of staff relocation plans.

b) Relocation costs are dependent on the circumstances of each particular employee and how they fit within the provisions of the collective agreements, and may vary significantly from one employee to the next. On this basis, determining the maximum possible relocation costs would require a case-by-case evaluation, which OPG has not performed. [redacted]

c) As noted at Ex. D3-1-1, p. 7, line 15, OPG is planning to reduce its overall office footprint to 180 square feet per employee, which OPG considers to be a reasonable estimate for each employee in the new Clarington building.

d) The total project costs described in Ex. D3-1-2, Attachment 2, p. 1 include the estimated cost required to accommodate, on an integrated basis, all non-plant staff estimated at the time of occupancy from all locations OPG is currently planning to exit. Therefore, it is not possible to determine the specific stand-alone cost required to accommodate employees moving from any one individual location or assume that the costs of the new building would proportionately increase or decrease with the number of employees moved. Furthermore, the project is currently a Class 5 estimate developed based on OPG's operational experience with, and industry standards for similar projects. It is currently in the planning phase with detailed design work yet to advance and, as such, the specific parameters of the space to be occupied by employees are yet to be determined.

e) OPG has not quantified productivity improvements specific to positions being relocated to the Clarington Campus from each individual location. Productivity improvements and other benefits are expected to be realized collectively for non-plant positions relocated to the Clarington Campus, through such factors as increased synergies, collaboration and engagement, greater opportunities for cross-training, career development and talent attraction, and overall enhancement of a community mindset. Although very important to OPG's organizational effectiveness and culture, many of these benefits are inherently difficult to quantify. As such, with the exception of cost savings from reduced intra-site employee travel, these improvements are not assigned an economic value as part of the project's financial evaluation. The present value of the assumed savings from reduced travel is approximately [redacted] over the life of the building.

f) Refer to part e) above.

g) Refer to part e) above.

h) As set out in Ex. D3-1-2, Attachment 2, p. 4, substantial completion of the new building at Clarington is expected in mid-2024. OPG anticipates that relocation of employees from various current sites to Clarington will commence shortly after. Over the period leading up to the completion of the new building, OPG will continue to develop detailed relocation plans based on business considerations.

Society Interrogatory #7

Interrogatory

Reference:
Exhibit D3-1-2, Attachment 2, Clarington Corporate Campus Business Case Summary.

Regarding Kipling to Clarington Move of Staff

a) How many people are to be moved from Kipling to the new proposed Clarington building assuming that all these employees agree to the move?
b) What is the possible maximum relocation costs for all these employees?
c) What is a reasonable square feet that needs to be included in the new Clarington building for each employee?
d) Please provide an estimate of the total Clarington building cost which is required to accommodate the people in item a).
e) What cost savings can be quantified by moving these employees to Clarington in productivity improvements?
f) What is is b) + d) – e)?
g) In the event f) above is negative, why is OPG making this decision to move these employees if it does not make sense financially?
h) What are the plans for the sale of the buildings at Kipling and when will that occur?
i) Have the expected sales revenues for Kipling been reflected in the Clarington cost/ benefit analysis? Please explain why or why not this has been done.
j) What is the basis of the estimated expected sales revenues?
k) What will OPG do with the money it receives from the sale of that site?
l) What are the estimated environmental remediation costs for Kipling before it can be sold? Would these costs exceed the sale price of Kipling or as a minimum offset a material amount of the expected sale revenues? Have these expected costs been reflected in the cost/ benefit analysis for Clarington? If not, why not?
m) What portion of the proceeds from the Kipling-site sale will accrue to the ratepayer?
n) On what date does OPG expect to vacate its staff from the Kipling building?

Response

a) OPG's current estimate is that approximately [redacted] are to be moved from the Kipling campus to the new building at Clarington. This is subject to further refinement based on organizational needs and finalization of staff relocation plans.

b) Refer to Ex. L-D3-01-Society-006 (b).

c) Refer to Ex. L-D3-01-Society-006 (c).

d) Refer to Ex. L-D3-01-Society-006 (d).

e) Refer to Ex. L-D3-01-Society-006 (e).

f) Refer to Ex. L-D3-01-Society-006 (f).

g) Refer to Ex. L-D3-01-Society-006 (g).

h) [redacted]

i) The financial evaluation of the Clarington Campus project does not factor in proceeds from any asset sales. Further, any proceeds from a sale of the Kipling campus would be common both to the preferred alternative and the base case (Ex. D3-1-2, Attachment 2, pp. 3-5), which therefore would not impact the outcome of the evaluation.

j) [redacted]

k) OPG declines to answer on the basis of relevance. Any proceeds or costs associated with a sale of the Kipling campus property do not impact approvals sought in this application. Like OPG's head office sold in 2017, the Kipling campus property is not a prescribed facility and has never been included in OPG's rate base. As the OEB stated in EB-2016-0152 (Decision on Issues List Prioritization, December 21, 2016, p. 2), "The OEB also notes that OPG's head office is not a regulated asset."

l) [redacted]

[redacted]

[redacted] For the reason noted in part (i) above, the financial evaluation of the Clarington Campus project does not factor in proceeds from any asset sales or any environmental remediation costs associated with such sales.

[redacted]

The above encompasses a response to the question posed at the Technical Conference by Mr. Gluck of OEB staff regarding the estimate of OPG's asset retirement obligation for the Kipling campus property (Tr. Tech. Conf., May 10, 2021, p. 107).

l) Refer to Ex. L-F3-02-Staff-265 (f).

m) Refer to Ex. L-D3-01-Society-012 (a) for the current estimated date at which OPG plans to release its space at the Kipling campus, [redacted]

Society Interrogatory #8

Interrogatory

Reference:
Exhibit D3-1-2, Attachment 2, Clarington Corporate Campus Business Case Summary.

Regarding 700 University to Clarington Move of Staff

a) How many people are to be moved from 700 University to the new proposed Clarington building assuming that all these employees agree to the move?
b) What is the possible maximum relocation costs for all these employees?
c) What is a reasonable square feet that needs to be included in the new Clarington building for each employee?
d) Please provide an estimate of the total Clarington building cost which is required to accommodate the people in item a).
e) What cost savings can be quantified by moving these employees to Clarington in productivity improvements?
f) What is is b) + d) – e)?
g) In the event f) above is negative, why is OPG making this decision to move these employees if it does not make sense financially?
h) On what date does OPG expect to vacate its staff from 700 University?

Response

a) OPG's current estimate is that approximately [redacted] are to be moved from 700 University Avenue to the new building at Clarington. This is subject to further refinement based on organizational needs and finalization of staff relocation plans.

b) Refer to Ex. L-D3-01-Society-006 (b). [redacted]

c) Refer to Ex. L-D3-01-Society-006 (c).

d) Refer to Ex. L-D3-01-Society-006 (d).

e) Refer to Ex. L-D3-01-Society-006 (e).

f) Refer to Ex. L-D3-01-Society-006 (f).

g) Refer to Ex. L-D3-01-Society-006 (g).

h) [redacted]

[redacted]

Society Interrogatory #9

Interrogatory

Reference:
Exhibit D3-1-2, Attachment 2, Clarington Corporate Campus Business Case Summary.

Currently, OPG's generation is bid into the IESO market from a control room located at 700 University (18th Floor) with a backup site located at Kipling.

a) Does the Clarington BCS include the costs of a new control room and its back up?
b) If the answer is yes, what is this cost?
c) If the answer is no, please explain.

Response

[redacted]

[redacted]

[redacted]

Society Interrogatory #10

Interrogatory

Reference:
Exhibit D3-1-2, Attachment 2, Clarington Corporate Campus Business Case Summary.

OPG's Clean Energy Plan has a goal of being a net zero carbon emitter by 2040. Reference: https://www.opg.com/climate-change/

a) Please explain how the increased travel (mostly by car) to get to Clarington (by employees from Niagara, Kipling and 700 University) contribute to achieving this goal?

Response

a) The new Clarington Campus building will be designed, built and operated with a view to sustainability and low carbon principles. OPG has not conducted a study of all downstream impacts of implementing the Campus on carbon emissions, including any increased automobile usage by employees. As a general matter, OPG notes that employees are expected to have a range of transit options to reach the site in addition to individual internal combustion vehicles, including electric vehicles, mass transit, cycling and carpooling, in addition to relocating closer to the Campus. In particular, Metrolinx plans to locate a Go Train station close to the site, and the site will also include electric vehicle chargers to support the demand.

Society Interrogatory #11

Interrogatory

Reference:

Exhibit D3-1-2 p3 ln8-9
"This [Clarington Corporate Campus] initiative targets a reduction in square footage per employee in alignment with current industry standards…"

Exhibit D3-1-2, Attachment 2, Clarington Corporate Campus Business Case Summary p2
"The benefits of this new, modern, office include [an] estimated cost reduction of approximately $65M (present value) over the next 40 years by moving away from a lease strategy and reducing the number of work locations (e.g. lower travel costs)".

Exhibit D3-1-2, Attachment 2, Clarington Corporate Campus Business Case Summary p3
"Key Assumptions [for the Clarington Corporate Campus include] … 30% of staff of [sic] will be out of the office at any point in time".

a) Does the estimated $65M present value cost reduction assume that if the leasing strategy remained that it would be modified to target a reduction in square footage per employee in alignment with current industry standards? If the answer is no, please explain why OPG would not employ this strategy to reduce its leasing costs.
b) Does the estimated $65M present value cost reduction assume that if the leasing strategy remained that it would be modified to reflect that 30% of staff will be out of the office at any point in time? If the answer is no, please explain why not.
c) If the answers to a) and / or b) are no, please re-estimate the $65M cost reduction to take into account both of these assumptions being reflected.
d) Of the 30% of staff which OPG assumes will be out of the office at any point in time:
    1) what portion of this staff does OPG expect to work from home (WFH)?
    2) Does OPG have policies and procedures in place to accommodate the WFH provisions?
e) Please explain how the Clarington Corporate Campus initiative has taken into account physical distancing of staff if another pandemic similar to Covid-19 occurs. Will the initiative also have appropriate air filtration systems installed throughout in order to handle future pandemics? If not please explain why not.

Response

a) Yes.

b) Yes.

c) Not applicable.

d) 1) The 30% assumption does not assume that any portion of the staff would be working from home.

2) Refer to the response in part (d) (1) above. Notwithstanding current remote work arrangements to adhere with social distancing protocols mandated by public health guidelines during COVID-19, there are no formal policies or procedures currently in place to accommodate work from home provisions on a regular basis.

e) The design of the new building will not be guided by a potential need for physical distancing of employees that may arise in the event of a future pandemic. OPG cannot speculate on the physical distancing or other response measures that may be required in the event of a future pandemic and would implement any such measures, as it has for COVID-19, in consideration of public health guidelines at the time.

OPG has not yet assessed potential air filtration and / or sterilization systems for inclusion in the new building and will do so as part of developing the building's design.

Society Interrogatory #12

Interrogatory

Reference:
Exhibit D3-1-2, Attachment 2, Clarington Corporate Campus Business Case Summary p3

> *Consolidation of workspace through the construction of a corporate campus allows OPG to optimize our real estate footprint and reduce costs.*
> ***Consolidation will require the release / termination of current real estate interests over the next 5-7 years****, coordinated with the construction of the new building and the workplace transformation at the DEC. …*
> *OPG's non-plant based staff are currently spread among 12 different leased office locations around the Greater Toronto Area (GTA), the OPG-owned Kipling Ave office and in the region of Niagara.* ***The preferred alternative is to terminate the majority of these occupancies and move all of the employees from these sites to the new campus****, which will consist of the DEC and the new office building to be constructed as part of this project.*

NEWS OCT 08, 2019 BY JENNIFER O'MEARA CLARINGTON THIS WEEK
"4 things you should know, 4 months after OPG's big move announced
From design to GO Train dreams, here's what's going on behind the scenes for OPG's new headquarters"
https://www.toronto.com/news-story/9630482-4-things-you-should-know-4-months-after-opg-s-big-move-announced/

> *The new headquarters could be roughly 200,000 square feet —* ***bringing together all non-station staff from 15 properties into one****.* ***The move will save $13 million a year in lease costs****, and OPG may find cost savings in bringing all of the operations together, explained Hergert.*

Jun 10, 2019 Toronto Sun, "OPG moving its HQ east of Toronto"
https://torontosun.com/opinion/columnists/lilley-opg-moving-east

> *Right now the various offices that OPG operates in the region cost about $26 million a year, they expect that to drop to $13 million a year in operating costs, that's even taking into account what could be generous moving allowances.*

a) The Clarington Corporate Campus BCS states that all the staff to be moved are located in 12 different leased office locations around the Greater Toronto Area (GTA), the OPG-owned Kipling Ave office and in the region of Niagara. Please provide a table listing these 12 different leased office locations around the GTA as well as the three OPG owned locations and state the expected date when each of these occupancies will be terminated along with the number of staff located there and the square feet which are leased.
b) Why will some of these current real estate interests be terminated 7 years from now (2027), which will be one year after the last staff will have been moved to CCC in 2026?
c) Please confirm or update the referenced Clarington This Week statement that the CCC "move will save $13M a year in lease costs".
d) Please include in the table provided in answer to part a) the break down by location of the annual lease cost savings provided in answer to part c).
e) Please confirm or update the following points made in the referenced Toronto Sun article:
   1) the various offices that OPG operates in the region cost about $26 million a year.
   2) OPG expect [the $26M a year] to drop to $13 million a year in operating costs, that's even taking into account what could be generous moving allowances.
   3) Confirm and explain how the moving allowances are taken into account in the $13M a year drop in operating costs.
f) How does the referenced Toronto Sun article's $13M a year drop in operating costs compare to the referenced Clarington This Week article's $13M a year savings in lease costs? Are these both referring to the same cost savings or do they include different cost components?

Response

a) As noted at Ex. D3-1-1, p. 7, line 17, OPG currently expects to vacate leases at 11 buildings in the Greater Toronto Area. In the course of responding to this interrogatory, OPG identified that Ex. D3-1-2, Attachment 2, p. 3 erroneously stated the company would exit 12 leased office locations going forward, instead of 11. This is a typographical error and has no impact on the financial analysis underpinning the business case, which considered exit from 11 leased premises. Additionally, OPG will exit one currently owned location – the Kipling campus – as noted in Ex. D3-1-1, p. 7, line 18. The requested information for these 12 locations in total is provided below.

Chart 1

Building No.	Building	Expected Date of Termination[1]	Staff Occupancy[2]	Square Feet Leased[3]	Annual Lease Cost Savings ($M)[7]
1	700 University Avenue[4]	[redacted]	463	114,974	3.9
2	889 Brock Road	[redacted]	511	177,488	4.9
3	777 Brock Road	[redacted]	339	98,640	3.1
4	230 Westney Road[5]	[redacted]	139	54,988	1.4
5	890 Brock Road[6]	[redacted]	N/A	14,088	0.2
6	1600 Stellar Drive	[redacted]	82	21,512	0.4
7	2255 Forbes Street	[redacted]	25	158,151	1.3
8	78 Richmond Street West	[redacted]	14	12,124	0.2
9	1910 Clements Road	[redacted]	34	37,920	0.4
10	1915 Clements Road[6,8]	[redacted]	N/A	3,905	0.0
11	1340 Pickering Parkway	[redacted]	102	36,220	1.2
12	Kipling Campus[9]	[redacted]	213	N/A	N/A

[1]Represents the current estimated dates at which OPG plans to release these spaces. [redacted]
[2]Represents the approximate number of staff whose base work location is assigned to the site as at December 31, 2020.
[3]Building 12 is owned.
[4]Excludes asset service fee (net of tenant inducement) for 700 University Ave. leasehold improvements

and related assets that are included in the occupancy cost shown in Ex. L-D3-01-Energy Probe-046 (a).

[5] [redacted]

[6]This space is utilized for laboratory and other purposes whereby no staff are currently permanently assigned to this location.

[7]Based on the 2020 occupancy costs, which represent the lease and utility costs attributed to the nuclear business for each leased site listed.

[8]Occupancy costs related to 1915 Clements Road are less than $0.1M in 2020.

[9]Refer to Ex. L-D3-01-Society-007, part (n) for further details.

b) OPG assumes that CCC refers to the Clarington Campus.

OPG has not yet developed detailed staff relocation plans. At present, OPG anticipates that some of the termination dates for the current real estate interests may extend beyond the completion of the new building at Clarington due to a combination of current obligations under the lease agreements and availability of space impacted by the completion of the Darlington Refurbishment Program. OPG will continue to develop relocation plans and review assumed termination dates leading up to the completion of the new building at Clarington, based on business considerations.

c) and d)

Refer to part a) for the estimated reductions in lease and associated costs for the nuclear business based on current occupancy cost. This does not include additional reductions in these costs achieved to date through the 700 University Workplace Transformation project (Ex. L-D3-01-SEC-110) and the termination of the 1908 Colonel Sam Drive lease.

e) 1) OPG is unable to speculate on the specific basis for the referenced article. As a general matter, OPG notes that it has implemented certain reductions in its leasing footprint and associated costs since the time the article was published.

The 11 leased properties identified in part a) above have a current total operating cost of $18.0 million, of which approximately $17.0 million is attributed to the nuclear business as shown in part a).

2) and 3) Refer to parts (c) and (d) above. [redacted]

f) Refer to part e).

Board Staff Interrogatory #176

Interrogatory

Reference:
Exhibit D3 / Tab 1 / Schedule 1 / p. 9

Preamble:

OPG discussed its real estate strategy, which is primarily based on constructing the new Clarington Corporate Campus to consolidate non-plant employees at one principal location, and moving away from a lease strategy. OPG estimated that this strategy will result in a reduction of approximately $65 million over the next 40 years.

Question(s):

a) Please provide a discussion regarding whether OPG has reconsidered the need (or size) of the Corporate Campus building in the context of the work from home provisions that OPG implemented during the COVID-19 pandemic.

b) Please advise whether the Corporate Campus building is intended to serve only an administrative function (i.e. there will not be workshops, garages, etc. in the building).

c) Please provide the following related to the Corporate Campus building:

   i. $ / Sq. Ft.

   ii. $ / FTE (only include FTE's that will work full-time, or near full-time, at the Corporate Campus building).

d) Please explain in detail how OPG arrived at a $65 million reduction in costs, including the assumptions related to the cost of leasing over a 40-year timeframe.

Response

a) OPG has not reconsidered the need or size of the new building at Clarington as a result of the COVID-19 pandemic. While OPG is pleased that it had the IT infrastructure in place to enable employees to work from home during the extraordinary circumstances arising from the COVID-19 pandemic, the company expects to return to its normal business model once the public health situation permits. Given the nature of its operations, OPG considers this to be the optimal strategy for enabling employee engagement and the organization's success. As described in Ex. D3-1-1, OPG's new head office is expected to facilitate sustained increased collaboration, innovation and efficiencies amongst employees, while creating a modern long-term office space to help attract and retain talent.

b) The Corporate Campus building is an office building.

c) The Corporate Campus building estimated $ / Sq. Ft. and $ / FTE is:

I. [redacted]

II. [redacted]

d) The $65M (present value) reduction in costs is derived from the difference in the net present values between the preferred alternative and the base case, as noted at Ex. D3-1-2, Attachment 2, p.6. Refer to Ex. L-D3-01-SEC-111 part (d) for these net present value calculations and associated assumptions, including the cost of leasing over a 40-year timeframe.

Board Staff Interrogatory #177

Interrogatory

Reference:
Exhibit D3 / Tab 1 / Schedule 2 / Tables 5a-5b

Question(s):

a) Please provide a breakdown of the aggregate 2017-2021 support services capital in-service additions (both planned and actual) recovered through: (i) rate base; and (ii) asset service fees.

b) Please provide a breakdown of the aggregate 2022-2026 support services capital in-service additions (both planned and actual) recovered through: (i) rate base; and (ii) asset service fees.

c) As part of this response, please discuss how minor fixed assets are recovered (i.e. rate base or asset service fees).

Response

a) and b) The requested information is in Chart 1 provided below. As there is no 2021 actual results yet, the 2021 budget has been used.

Chart 1

Line No.	Business Unit	2017-2021 OEB Approved	2017 - 2020 Actual and 2021 Budget	2022-2026 Plan
1	IT - Nuclear Rate Base	24.4	101.3	158.6
2	Real Estate - Nuclear Rate Base	38.4	75.5	60.8
3	**Support Services - Rate Base**	**62.8**	**176.8**	**219.4**
4	IT - Asset Service Fee	69.8	223.5	213.4
5	Real Estate - Asset Service Fee	14.0	40.3	4.0
6	Clarington Corporate Campus	0.0	0.0	[redacted]
7	Microsoft Enterprise Agreement	0.0	46.5	46.0
8	Minor Fixed Assets	6.0	13.2	16.0
9	**Support Services - Asset Service Fee**	**89.8**	**323.5**	[redacted]
10	**Total Support Services**	**152.6**	**500.3**	[redacted]

c) Minor fixed assets are recovered as an asset service fee.

Board Staff Interrogatory #178

Interrogatory

Reference:
Exhibit D3 / Tab 1 / Schedule 2 / p. 6

Preamble:

OPG identified two separate capital projects related to the "Reimagine Program" which appears to be two phases of the same project. OPG stated that the cost of the "Reimagine Program", which was completed in 2020, is $17.5 million. "Reimagine Program 2.0" was started in the same year (2020) and is estimated to cost $14 million. The total cost of the "Reimagine Program" is therefore estimated to be $31.5 million.

Question(s):

a) Is OEB staff's understanding correct that this was a phased project and the total cost related to the "Reimagine Program" project is over $30 million? If so, was a BCS completed? If a BCS was completed, please provide it. If a BCS was not completed, please explain why.

Response

a) No. Re-Imagine and Re-Imagine 2.0 are two separate projects, with different work streams.

Board Staff Interrogatory #179

Interrogatory

Reference:
Exhibit D3 / Tab 1 / Schedule 2 / p. 8

Preamble:

OPG identified a new capital project referred to as the “Pickering Wi-Fi Power House Unit 1-8” which would establish a broadband wireless network infrastructure within the station to “facilitate direct access to the data and applications required to perform field work.” OPG also noted that the project is expected to be completed in 2023 at a cost of $18.3 million. OPG further discussed a project related to Darlington (the Darlington Wireless Program) that also involves establishing network to “facilitate direct access to data and applications required to perform field work” and it has an estimated cost of $6.4 million.

Question(s):

a) When in 2023 does OPG forecast that the Pickering Wi-Fi Power House Unit 1-8 project will be completed?

b) Please explain why the Pickering Wi-Fi Power House Unit 1-8 project is needed with Pickering NGS going out of service in 2025.

c) Would OPG’s staff have access to the data and applications required to perform field work without the Pickering Wi-Fi Power House Unit 1-8 project? If not, please explain how OPG’s staff are currently accessing the data and applications required without it.

d) Please explain why the cost of the wireless project at Pickering NGS is expected to be almost three-fold higher than the wireless project at Darlington NGS where both are being undertaken to achieve the same purpose.

Response

a) The Pickering Wi-Fi Power House Unit 1-8 project is a program of investments, with a forecast in-service of $9.8M in 2020,[1] $5.4M in 2021, and the remainder thereafter. The program began in early 2018, and has successfully implemented Wi-Fi in many parts of the station. OPG forecasts the Pickering Wi-Fi Power House

[1] As at December 31, 2020, $9.3M had been placed in-service.

Unit 1-8 project will be substantially completed in December 2023.

b) The Pickering Wi-Fi Power House Unit 1-8 project at the Pickering reactor buildings is required to support ongoing station operations and is an important aspect of enterprise digitization. The investment in Wi-Fi allows staff at Pickering to access the corporate network at various locations of the site and is critical for leveraging various performance-improving digitization initiatives across the organization. For example, Wi-Fi capabilities are needed for workers to utilize the operations surveillance systems, the station live feed surveillance system, the tele-dose radiation protection surveillance system, and the monitoring and diagnostics centre ("M&D Centre") innovations (see Ex. L-F2-01-SEC-019 for more information on the M&D Centre). Wireless internet is also needed for staff to have direct access to data and applications required to perform fieldwork, including the downloading of electronic work packages.

By modernizing technology, this investment has and will continue to deliver value prior to the planned shutdown of Pickering. This includes enabling operational improvements, supporting nuclear fleet initiatives and facilitating planning and execution of work, thereby enhancing safety, quality and efficiency. The installation of the Wi-Fi network will also enable remote monitoring of the Pickering units after closure.

c) Without the Pickering Wi-Fi Powerhouse Unit 1-8 project, OPG staff would have access to existing data and applications at stationary workspaces only. OPG employees would not be able to access the new IT tools that have been developed to improve productivity and efficiency. For example, employees would not be able to leverage electronic work packages deployed across the nuclear fleet as a replacement for the manual process of printing and assembling the packages. Wi-Fi capability supports the use of tablets in this process, which will lead to further efficiency gains in the field. The Wi-Fi also allows station users to communicate live within remote areas such as the containment area, something that was not previously possible.

d) The costs of the referenced projects at Pickering and Darlington cannot be directly compared because the scopes of work for the Darlington Wireless Program and the Pickering Wi-fi Power House Unit 1-8 project are different. The main reasons for the different scopes include:

- Wi-Fi had already been installed in certain parts of Darlington and in certain on-site buildings in order to support oversight of the Darlington Refurbishment Program. The current Darlington Wireless Program project expands coverage to the remainder of the station and other on-site buildings to support ongoing operations.

- Pickering has a larger footprint than Darlington (eight units versus four units; two physically separate stations) and a different containment design, requiring a larger number of access points ("APs") for the wireless network.
- Pickering has higher electro-magnetic interference sensitivity, thus requiring APs to have a strict limit on their power output. This, in turn, translates into more APs (and associated cabling and other hardware) being required to provide Wi-Fi coverage for the same square footage at Pickering as compared to Darlington.

Energy Probe Interrogatory #48

Interrogatory

Reference:
Exhibit D4, Tab 1, Schedule 1, page 1

Please confirm that there has been no change in OPG's capitalization policy since the EB-2016-0152 proceeding.

Response

Confirmed.