

1 **AMPCO INTERROGATORY 1**

2 Issue 1.0 Revenue Requirement, Operating costs and Capital Spending.

3 1.0-AMPCO-1

4 **INTERROGATORY**

5 **Reference:** A-1-5 p. 2 Footnote 1

6 **Preamble:** The IESO refreshed its Corporate Strategy in 2022 as a result of the increasing
7 pace and scope of change in the sector to ensure that the organization is well positioned to
8 meet Ontarian's needs and expectations.

9 Questions:

10 a) Please provide a copy of the IESO's refreshed Corporate Strategy.
11

12 **RESPONSE**

13 a) Please see Exhibit B-1-2 page 6 as well as the Corporate Strategy available on the
14 IESO's website¹.

¹ <https://www.ieso.ca/-/media/Files/IESO/Document-Library/corporate/strategy/IESO-Corporate-Strategy-2022-2027.ashx>

AMPCO INTERROGATORY 2

Issue 1.0 Revenue Requirement, Operating costs and Capital Spending.

1.0-AMPCO-2

INTERROGATORY

Reference: A-1-5 p.3

Preamble: The IESO indicates it has identified and leveraged efficiencies in several areas to mitigate impacts of its revenue requirements to Ontario ratepayers.

Questions:

- a) Please provide a schedule that sets out each efficiency measure, year(s) of impact and quantify the amount by year.

RESPONSE

- a) The IESO does not have efficiency measures. As noted in Exhibit A, Tab 1, Schedule 5, the IESO has identified and leveraged operational and cost recovery efficiencies in several areas to mitigate the impacts of its revenue requirements in 2023-2025 to Ontario ratepayers. Given that the operational activities are function-centered across multiple areas of the organization it is difficult to quantify the resulting savings. The forecast for the cost recovery via the Reliable Integration Fee (and other cost recovery sources) is shown in Table 1 below.

Table 1- Cost Recovery Sources 2023-2025

(\$ Millions)	2023 Budget	2024 Budget	2025 Budget
Cost Recovery Sources:	6.0	7.0	8.2
- Connection Assessments	1.7	1.7	1.7
System Integration Assessments (SIA)	1.4	1.4	1.4
Technical Feasibility Studies (TFS)	0.3	0.3	0.3
- Reliability Integration	0.8	1.7	2.2
- Overhead cost recovery/allocation	3.5	3.6	4.3
- Registration fees	(0.5)	(0.5)	-

AMPCO INTERROGATORY 3

Issue 1.0 Revenue Requirement, Operating costs and Capital Spending.

1.0-AMPCO-3

INTERROGATORY

Reference: A-1-5 p.4

Preamble: The IESO describes how its OM&A costs are increasing as a result of energy transformation.

Questions:

a) Please provide the number of FTEs allocated to energy transformation in each of the years 2022, 2023, 2024 and 2025.

b) Please prepare a schedule that sets out the OM&A and Capital investments in each of the years 2022 to 2025 directly related to energy transformation.

c) Please provide the energy transformation workplan.

RESPONSE

a) In the 2023 – 2025 Business Plan, the IESO has identified several key initiatives and incremental work that it will undertake to enable the organization to play a critical role in driving and guiding the energy transformation in Ontario; however, all of IESO staff is in one way or another allocated to support the energy transformation of Ontario. See table 1 for average FTEs in 2022 - 2025.

1 **Table 1- Average FTE 2022 - 2025**

Average Full Time Equivalents (FTEs)	2022	2023	2024	2025
	Actual	Budget	Budget	Budget
Baseline	720	725	725	750
Incremental FTEs		80	113	106
Core Operations	720	805	838	856
Market Renewal Program	79	109	88	44
Total FTEs	799	914	926	900

2
3 b) See response to a). See Exhibit B-1-2 page 18 for the OM&A and Exhibit B-1-2 page 27
4 for the Capital investments associated with all the initiatives and work that the IESO
5 intends to carry out over the 3-year plan horizon to ensure the IESO is prepared to
6 support to energy transformation of Ontario.

7 c) The IESO will support the energy transformation through many integrated deliverables
8 and not a single workplan. In the 2023 –2025 Business Plan, the IESO has outlined
9 several initiatives and programs required to prepare the IESO to lead and support the
10 transformation of the energy sector in Ontario; each of these initiatives or programs have
11 different timelines and workplans. Some are outlined within the capital portfolio, for
12 example the Resource Adequacy Framework, Enabling Resources Program, or Market
13 Renewal Program.

AMPCO INTERROGATORY 4

Issue 1.0 Revenue Requirement, Operating costs and Capital Spending.

1.0-AMPCO-4

INTERROGATORY

Reference: : A-2-2 Attachment 2 - 2022 Performance Measures Results

Preamble:

Questions:

a) Page 1: With respect to the Operational Efficiency Measure #3, please identify the two

Strategic Initiatives that deviated from their approved Project Plan and explain why.

b) Page 2: The 2022 Performance Measure Results provide year-to-date results. Please provide

the 2002 Actuals for Measures #4-7.

RESPONSE

a) Two projects from the Strategic Initiatives portfolio deviated from their approved plans in

2022, including the Market Renewal Program and Improving Accessibility of Operating

Reserve. See 5.0 OEB Staff Interrogatory 26 a).

b) This is a transcription error in the column heading on page 2. Data within the column on

page 2 reflects the actuals for full-year 2022.

1 **AMPCO INTERROGATORY 5**

2 Issue 1.0 Revenue Requirement, Operating costs and Capital Spending.

3 1.0-AMPCO-5

4 **INTERROGATORY**

5 **Reference:** B-1-2 2023-2025 Business Plan p.18

6 **Preamble:** The IESO provides a table which outlines the 2023-2025 business plan
7 operating revenues and expenses.

8 Questions:

9 a) Please add 2022 actuals to the table.

10 **RESPONSE**

11 a) Please see below 2023 – 2025 Business Plan Pro Forma Statement of Operations with
12 2022 actuals.

(\$ Millions)	2022 Budget	2022 Forecast	2022 Actual	2023 Budget	2024 Budget	2025 Budget
Revenue						
IESO Usage Fee	201.5	204.1	206.6	208.4	218.4	229.7
Expenses						
Baseline Expenses	172.8	171.4	176.2	175.5	181.4	187.7
Resource and Transmission Adequacy	1.7	1.4	1.8	5.4	8.2	6.8
Enabling Resources	0.4	0.6	0.8	0.8	0.9	0.9
Pathway to Decarbonization	1.3	0.9	1.5	0.6	0.6	0.5
Other Government Priorities	4.6	4.3	2.1	2.9	2.5	2.5
MRP - ongoing operations	0.5	0.2	0.0	1.9	3.0	4.2
Cybersecurity	-	0.9	-	1.6	1.6	2.1
Strengthening Engagement	-	-	-	0.7	1.1	1.6
Culture, Employees and Capabilities	-	-	-	0.8	0.8	1.0
Sustaining Technology, Evolving Processes and tools	-	-	-	1.9	2.3	2.2
Operating Expenses sub-total	181.3	179.7	182.4	192.0	202.2	209.4
Amortization	20.0	18.5	17.6	23.1	22.0	27.0
Net Interest	(5.0)	(10.4)	(12.3)	(11.5)	(9.7)	(9.2)
Registration Fee	-	(0.8)	(0.8)	(0.5)	(0.5)	-
Market Renewal Program	5.2	4.3	4.6	5.3	4.4	2.5
Total Expenses	201.5	191.3	191.6	208.4	218.4	229.7
Operating Surplus	-	12.8	15.0	-	-	-
Accumulated Operating Surplus before potential Market Rebates	8.7	21.5	23.7	23.7	23.7	23.7

AMPCO INTERROGATORY 6

Issue 1.0 Revenue Requirement, Operating costs and Capital Spending.

1.0-AMPCO-6

INTERROGATORY

Reference: D-1-1 p.2

Preamble: The evidence indicates the OM&A expenses in 2022 were \$0.5 million (or 0.3%) above the OEB approved budget in part due to \$2.0 million of non-repeatable employee related costs (severance and overtime).

Questions:

- a) Please provide a breakdown of costs between severance and overtime.
- b) Please provide the nature of the overtime and the number of hours of overtime.

RESPONSE

- a) Please see below breakdown of costs variance in 2022 Actual vs. OEB Approved budget between severance and overtime.

Table 1 – Breakdown of Severance and Overtime

\$Millions	2022 Actual vs OEB Approved
Severance	1.0
Overtime	1.0

- b) There are a number of reasons and factors that lead to overtime, such as sickness, attrition of staff, leaves of absence, etc. About 21,000 hours of overtime were recorded in 2022.

AMPCO INTERROGATORY 7

Issue 1.0 Revenue Requirement, Operating costs and Capital Spending.

1.0-AMPCO-7

INTERROGATORY

Reference: D-1-1

Preamble: The IESO discusses the impact of vacancies on OM&A.

Questions:

a) Please provide the average number of vacancies in 2022.

b) Please provide the current number of vacancies in 2023.

RESPONSE

a) In 2022 the average FTE was 799 (both Operating and Capital), which compared to a budget of 827, which indicates the IESO had 28 vacancies on average.

b) Please see response to 1.0 OEB Staff Interrogatory 7 a) which shows the average net FTE increases as of May 2023 against the average full year FTEs included in the 2023 budget.

AMPCO INTERROGATORY 8

Issue 1.0 Revenue Requirement, Operating costs and Capital Spending.

1.0-AMPCO-8

INTERROGATORY

Reference: D-1-1

Preamble:

Questions:

- a) Please provide the percentage of total pension and other post-employment benefits (OPEB) amounts included in the revenue requirement for the years 2021, 2022, 2023, 2024 and 2025.

RESPONSE

- a) See Table 1 below for the percentage of total revenue for pension and other post-employment benefits (OPEB) for the years 2021, 2022, 2023, 2024 and 2025.

Table 1 – Percentage of Total Revenue for Pension and OPEB

Included in OMA (\$ Millions)	2021 Budget	2021 Actual	2022 OEB Approved	2022 Actual	2023 Budget	2024 Budget	2025 Budget
Total Pension and OPEB	20.7	20.3	16.7	20.8	15.0	17.4	21.1
Revenue	191.8	195.0	201.5	206.6	208.4	218.4	229.7
% of Revenue	11%	10%	8%	10%	7%	8%	9%

AMPCO INTERROGATORY 9

Issue 1.0 Revenue Requirement, Operating costs and Capital Spending.

1.0-AMPCO-9

INTERROGATORY

Reference 1: D-1-2 P1

Table 1 provides a Summary of OM&A for Business Units.

Reference 2: D-1-3 P1

Table 1 provides the average number of employees.

Preamble:

Questions:

- a) Please map the total FTEs to each Business Unit for 2022 Actuals, 2023 Forecast, 2024 Forecast and 2025 Forecast.

RESPONSE

- a) See response to 1.0 EDA Interrogatory 3 d).

AMPCO INTERROGATORY 10

Issue 1.0 Revenue Requirement, Operating costs and Capital Spending.

1.0-AMPCO-10

INTERROGATORY

Reference: D-1-2 Attachment 1

Preamble: Attachment 1 provides a summary of OM&A by Business Unit. Under the Markets & Reliability Business Unit, the unit Reliability Assurance & Operational Assessments has been added with \$4.5 million in spending beginning in 2021, increasing to \$5.8 million by 2025.

Questions:

a) Please provide details of the role of this unit.

RESPONSE

a) This division comprises a combination of two key areas: Reliability Assurance and Operational Effectiveness. Operational Effectiveness has been an existing function within the Markets & Reliability Business Unit, previously reporting under the Power System Assessments division. As such, most of this budget reflects a reallocation of existing budget. The Reliability Assurance unit is a new function. Reliability Assurance (RA) prepares strategies and actions that provide confidence that Ontario's electricity supply remains reliable under many conditions. Reliability Assurance partners with teams across the IESO and external stakeholders to understand events and trends that may impact Ontario's reliability and to conduct assessment of future risks to reliability. Focus areas including ensuring that Ontario has sufficient resources to meet a range of reliability needs

1 (e.g., capacity, energy, and ancillary services) with a view towards emerging requirements
2 in the face of Ontario's energy transition. A key product from this team is the public-facing
3 Annual Acquisition Report.

4 Operational Effectiveness is responsible for reliability-focused activities that encompass
5 various time horizons. Operational Effectiveness supports the reliable operation of the
6 IESO-controlled grid and the efficient and transparent operation of the IESO-administered
7 markets in real-time operations while adhering to North American Electric Reliability
8 Corporation (NERC) standards, Northeast Power Coordinating Council (NPCC) criteria, and
9 the Ontario Market Rules.

AMPCO INTERROGATORY 11

Issue 1.0 Revenue Requirement, Operating costs and Capital Spending.

1.0-AMPCO-11

INTERROGATORY

Reference: E-2-1 p. 5 Table 2 Material Capital Projects

Preamble:

Questions:

a) Please provide a list of the material capital projects in Table 2 that support MRP.

b) Please identify any projects in table 2 that were reallocated to Core Projects from MRP.

RESPONSE

a) The following material capital projects support the implementation of MRP and ongoing operations of the renewed market:

- Replacement of the Settlement Systems (RSS)
- Market Analysis and Simulation Toolset (MAST)

b) None.

AMPCO INTERROGATORY 12

Issue 1.0 Revenue Requirement, Operating costs and Capital Spending.

1.0-AMPCO-12

INTERROGATORY

Reference: E-2-1 p. 7

Preamble: The IESO provides the following capital performance measures for 2023-2025:

- Strategic Initiatives are progressing according to their approved schedule
- Strategic Initiatives are progressing according to their approved budget

Questions:

a) Please provide the percentage of Strategic Initiatives that were in-flight in 2022 and progressing on schedule according to the approved project charter or integrated project plan.

b) Please provide the percentage of Strategic Initiatives that were in-flight in 2022 and progressing on budget according to the approved project charter or integrated project plan.

RESPONSE

a) See response to 5.0 OEB Staff Interrogatory 26 a).

b) See response to 5.0 OEB Staff Interrogatory 26 a).

1 **AMPCO INTERROGATORY 13**

2 Issue 1.0 Revenue Requirement, Operating costs and Capital Spending.

3 1.0-AMPCO-13

4 **INTERROGATORY**

5 **Reference:** E-2-1 p. 3

6 **Preamble:** Projects placed into service in 2022 include: Identity Access Management Phase
7 2, F5 Loadbalancer and NERC Firewall Refresh, Generation to Load Obligations under
8 Proposed Interchange Distribution Calculator Changes, ICI Transition to Ontario Demand,
9 and External Identity Management (Portal). In addition, the IESO has been able to
10 complete the majority of the SCADA/EMS Upgrade, advance the MIM Technical Refresh
11 project and take on several smaller infrastructure, cybersecurity and facilities projects
12 that were not originally identified in 2022 project portfolio.

13 Questions:

14 a) Please provide any exception reporting for material deviations in cost, schedule and
15 objectives for the above projects placed into service in 2022.

16
17 **RESPONSE**

18 a) Material deviations in cost, schedule and objectives reported for the following projects
19 placed into service in 2022 are provided below:

1

Table 1 – Deviations for Projects Placed Into Service in 2022

Project Name	Schedule Deviation & Reason	Cost Deviation & Reason	Objective Deviation & Reason
Identity Access Management Phase 2	5 months delay due to unavailability of critical resources.	No deviation	No deviation
F5 Loadbalancer and NERC Firewall Refresh	No deviation	No deviation	No deviation
Generation to Load Obligations under Proposed Interchange Distribution Calculator Changes	This project was placed on hold for 2 years due to a critical external dependency.	No deviation	No deviation
ICI Transition to Ontario Demand	3 weeks delay due to defect resolution that was longer than estimated.	Additional \$2,000 due to unplanned effort required to resolve defects.	No deviation
External Identity Management (Portal)	8 months extension required in order to resolve technical issues identified during the production cutover.	Additional \$210,000 to resolve technical issues identified during the production cutover.	No deviation

2

AMPCO INTERROGATORY 14

Issue 1.0 Revenue Requirement, Operating costs and Capital Spending.

1.0-AMPCO-14

INTERROGATORY

Reference: D-1-2 p. 3

Preamble:

Questions:

- a) With respect to the Corporate Relations, Stakeholder Engagement and Innovation (CRSEI) business unit, please provide the most recent Innovation Workplan.

RESPONSE

- a) The most recent innovation workplan is the one available on the IESO website. The focus of the IESO's Innovation work is laid out in a) the IESO's DER Roadmap, published in December 2021 and b) the Enabling Resources Program. The IESO's Distributed Energy Resource (DER) Roadmap defines and sequences several initiatives that the IESO has or is undertaking to maximize the value that DERs can provide to Ontario's electricity system by addressing challenges and opportunities within the IESO's mandate (more information available on the IESO Website¹). The Enabling Resources Program is a multi-year capital program to integrate new and emerging technologies into IESO-

¹ <https://www.ieso.ca/en/Get-Involved/Innovation/Distributed-Energy-Resources/DER-Roadmap>

1 administered markets and system operations (more information available on the IESO
2 Website²) to enable these resources (storage, hybrids and distributed energy resources)
3 to contribute to the reliability and affordability of Ontario's electricity supply. The IESO's
4 Innovation efforts also include several Government-directed initiatives including the
5 Hydrogen Innovation Fund (HIF), the Interruptible Rate Pilot (IRP) and the
6 establishment and maintenance of the Clean Energy Credit (CEC) Registry.

² ieso.ca/en/Sector-Participants/Engagement-Initiatives/Engagements/Enabling-Resources-Program

1 **AMPCO INTERROGATORY 15**

2 Issue 1.0 Revenue Requirement, Operating costs and Capital Spending.

3 1.0-AMPCO-15

4 **INTERROGATORY**

5 **Reference:** Exhibit B-1-3, Minister's Letter Approving the IESO's 2023-2025 Business Plan,
6 Page 1

7 **Preamble:** In April 2022, the IESO and the Ministry signed a refreshed Memorandum of
8 Understanding, which established a new three-year approval cycle for the IESO's Business
9 Plan. In September 2023, in lieu of a new business plan, I expect the IESO will submit a
10 Business Outlook covering the next three fiscal years.

11 Questions:

12 a) Please provide a copy of the MOU.

13
14 **RESPONSE**

15 a) The MOU between the IESO and the Ministry of Energy can be found on the IESO's
16 website¹.

¹ <https://www.ieso.ca/en/Corporate-IESO/Corporate-Accountability/Memorandum-of-Understanding>

APPrO INTERROGATORY 1

Issue 1.0 Revenue Requirement, Operating Costs and Capital Spending

1.7 Is the IESO's 2023 capital expenditure budget of \$86 million for appropriate?

1.8 Is the IESO's 2024 capital expenditure budget of \$75.9 million appropriate?

1.9 Is the IESO's 2025 capital expenditure budget of \$58.2 million appropriate?

1.0- APPrO-1

INTERROGATORY

Reference: Exhibit B, Tab 1, Schedule 2, Page 27; Exhibit E, Tab 2, Schedule 1, Attachment 10.

Preamble: Appendix 3 to the IESO 2023-2025 Business Plan lists a total budget of \$2.1 million for the capital project entitled "Addressing Market Surveillance Panel (MSP) Recommendations. But the project description at Exhibit E, Tab 2, Schedule 1, Attachment 10 lists an estimated capital cost of \$2.4 million (including a \$0.6 million contingency).

Questions:

- a) Which is the correct capital project cost estimate?
- b) How exactly will these proposed costs be allocated?
- c) How will this proposed program differ from current IESO practices in addressing MSP recommendations?
- d) How will the IESO assess which projects will be included in the program going forward?
- e) Will stakeholders have an opportunity to propose projects to be included in the program in the future and/or provide input on projects proposed to be included by the IESO?
- f) Why is the cost estimate for 2023 significantly greater than that for 2024 and 2025?

RESPONSE

- 1 a) The estimated capital cost of \$2.4 million listed in Exhibit E, Tab 2, Schedule 1,
2 Attachment 10 is the most current estimate as it reflected the anticipated cost of
3 Transmission Rights Market Enhancement and Platform Refresh Project following
4 additional planning efforts that happened after the IESO 2023-2025 Business Plan
5 submission.
- 6 b) The proposed costs are reflective of costs for the Transmission Rights Market
7 Enhancement and Platform Refresh Project.
- 8 c) The proposed program will enable the IESO to prioritize and implement projects to
9 address MSP recommendations considering the human resources and funds allocated to
10 the program. In the past, no specific budget and resources were allocated to projects
11 related to MSP recommendations and such projects had to be evaluated along with all
12 the other IESO initiatives for funding and resources.
- 13 d) Should future MSP recommendations require project implementation, the project will be
14 added to the program for prioritization.
- 15 e) MSP recommendations requiring project implementation will be determined by the IESO.
16 Stakeholders can provide input to the projects identified to be implemented as part of
17 stakeholder engagement activities related to the projects.
- 18 f) The IESO expects the majority of procurement, development and testing activities on the
19 Transmission Rights Market Enhancement and Platform Refresh Project to happen in
20 2023 and hence the cost estimate for 2023 is significantly greater than that for 2024 and
21 2025.

APPrO INTERROGATORY 2

Issue 1.0 Revenue Requirement, Operating Costs and Capital Spending

1.7 Is the IESO's 2023 capital expenditure budget of \$86 million for appropriate?

1.8 Is the IESO's 2024 capital expenditure budget of \$75.9 million appropriate?

1.9 Is the IESO's 2025 capital expenditure budget of \$58.2 million appropriate?

1.0-APPrO-2

INTERROGATORY

Reference: Exhibit B, Tab 1, Schedule 2, Page 27; Exhibit E, Tab 2, Schedule 1, Attachment 10.

Preamble:

Appendix 3 to the IESO 2023-2025 Business Plan lists a budget of \$7 million in 2023, \$10 million in 2024 and \$13 million in 2025 for the capital project entitled "Space Needs Program". But the project description at Exhibit E, Tab 2, Schedule 1, Attachment 10 lists a capital budget of \$2.6 million (including a \$0.3 million contingency).

Questions:

a) Which is the correct cost estimate?

b) What is the source of these cost estimates?

c) The application evidence states in part that "[t]his project was initially estimated to be less than \$1 million of capital" – what is the source of the increase to \$2.6 million?

d) With respect to the Clarkson Office Pilot, the second floor already includes a spacious kitchen and numerous workstations. What new furnishings are being proposed?

e) How does the reclassification of some of the workstations at Clarkson to unassigned seating contribute to the total \$30 million project cost estimate?

f) Similarly, how does the introduction of unassigned seating and community concepts at Adelaide contribute to the total \$30 million cost estimate if these elements are being implemented "within the existing floor set-up, without renovations or alterations to the layout"?

- 1 g) A number of the meeting rooms in both Clarkson and Adelaide already contain audio and
2 video capability (e.g. large screens, polycoms, etc.) to facilitate collaboration as well as
3 hybrid virtual/in-person meetings. How will the proposed Meeting Room Enhancements
4 “enhance the employee experience”?
- 5 h) Does the current remote work policy for IESO employees warrant such enhancements?
6

7 **RESPONSE**

- 8 a) Both estimates are correct. They relate to different phases of the IESO Space Needs
9 Program. Exhibit E, Tab 2, Schedule 1 Attachment 10 refers to IESO Space Needs
10 Program – Office Pilot Project where the majority of expenditures were completed in
11 2022, whereas the Space Needs Program listed in Appendix 3 refers to the next Phase of
12 the Space Needs Program - Phase 3 – Implement and Transition (see Exhibit E, Tab 2,
13 Schedule 1 Attachment 4).
- 14 b) In relation to the Office Pilot Project, referenced in Exhibit E, Tab 2, Schedule 1
15 Attachment 10, the estimates were based on the results of engaging a general contractor
16 and performing more detailed cost estimates based on the scope of the project and more
17 current labour and material costing. The cost estimates for the Space Needs Program in
18 Exhibit E, Tab 2, Schedule 1, Attachment 4 are estimates informed by the Office Pilot and
19 will be further refined once the project is formally initiated.
- 20 c) As referenced above, the revised cost estimates were a result of engaging a general
21 contractor and obtaining more accurate cost estimates based on current labour and
22 material costs which had increased substantially as a result of the pandemic. In order to
23 support the Hybrid Work Model adopted by the IESO, the project also included the
24 purchase and installation of 25 Microsoft Surface Hubs for about 50% of IESO meeting
25 rooms to support more effective hybrid meetings which was not included in the original
26 estimate.
- 27 d) Although the Clarkson facility does have a larger cafeteria space on the 3rd floor there
28 was no kitchennette on the 2nd Floor. The pilot has introduced a small kitchennette
29 closer to the workspace to provide ready access to kitchen facilities for the participants of

1 the pilot. The office pilot has completely renovated and replaced all of the furniture in
2 an 8,000 sq.ft. area of the 2nd floor in order to assess the functionality of different
3 workstation and meeting room styles. Furniture on the remainder of the floor remains
4 unchanged.

5 e) The \$30 million project cost estimate for 2023-2025 reflects the estimated cost to
6 implement the Space Needs Program (see Exhibit E, Tab 2, Schedule 1 Attachment 4)
7 which includes a number of building enhancements and improvements at the IESO's
8 Mississauga control centre as well as renovate the office space and not to conduct the
9 Office Pilot. The actual cost of construction, furnishings, technology, etc. for the Office
10 Pilot has better informed the estimated cost to complete a similar renovation across the
11 remainder of IESO's office space which is reflected in the cost estimate provided for the
12 next phase of the Space Needs Program (refer to Exhibit E, Tab 2, Schedule 1
13 Attachment 4).

14 f) See the response to e) above.

15 g) The existing Polycoms and screens in the conference rooms provide a reduced user
16 experience for hybrid meetings, i.e. where some participants attend the meeting in-
17 person, while others join remotely, as these systems do not provide full video conference
18 capability or integrate with MS Teams. Experience through the pandemic has shown the
19 importance of video conferencing capability and the use of MS Teams. It is the IESO's
20 expectation, and early experience, that the introduction of the MS Surface Hubs will
21 improve the effectiveness of hybrid meetings.

22 h) The IESO has introduced an enduring Hybrid Work Model and the IESO believes that the
23 investment in these enhanced capabilities is a critical component of the hybrid work
24 experience.

APPrO INTERROGATORY 3

Issue 1.0 Revenue Requirement, Operating Costs and Capital Spending

1.7 Is the IESO's 2023 capital expenditure budget of \$86 million for appropriate?

1.8 Is the IESO's 2024 capital expenditure budget of \$75.9 million appropriate?

1.9 Is the IESO's 2025 capital expenditure budget of \$58.2 million appropriate?

1.0-APPrO-3

INTERROGATORY

Reference: Exhibit B, Tab 1, Schedule 2, Page 27; Exhibit E, Tab 2, Schedule 1, Attachment 10.

Preamble:

Appendix 3 to the IESO 2023-2025 Business Plan lists a budget of \$5 million in 2023 and \$5.4 million in 2024 for the capital project entitled "Backup Operating and Data Centres Relocation Project".

Questions:

- a) What are these cost estimates comprised of?
- b) How were these cost estimates calculated/determined if a new location has not yet been secured?

RESPONSE

- a) Cost estimates are comprised of IESO labour costs, computer services, computer equipment, facilities fit-out and transition costs for both the Backup Operating Centre and Backup Data Centres. They do not include contingency which was expected to be in the order of 50% due to the significant level of uncertainty associated with these order of magnitude estimates. Contingency is managed across the overall Project Portfolio.
- b) These are order of magnitude cost estimates based on the assumption that the IESO would be moving to leased facilities and many of the costs would be operating expenses as per current Backup Operating Centre and Backup Data Centre arrangements. The

- 1 IESO will refine these estimates as it advances in its project planning process, including
- 2 alternatives analysis relating to lease vs. purchasing.

APPrO INTERROGATORY 4

Issue 1.0 Revenue Requirement, Operating Costs and Capital Spending

1.7 Is the IESO's 2023 capital expenditure budget of \$86 million for appropriate?

1.8 Is the IESO's 2024 capital expenditure budget of \$75.9 million appropriate?

1.9 Is the IESO's 2025 capital expenditure budget of \$58.2 million appropriate?

1.0-APPrO-4

INTERROGATORY

Reference: Exhibit B, Tab 1, Schedule 2, Page 11

Preamble: The IESO 2023-2025 Business Plan states in part that "... the IESO will be recommending a relatively large number of transmission projects in the coming years".

Questions:

a) What are these transmission projects?

b) To the extent they have not been determined as yet, when and where does the IESO intend to publish this information?

RESPONSE

a) Future recommendations for transmission projects are not yet known.

b) Recommendations for transmission projects will be documented in their respective bulk and regional plans which will be available on the IESO's website¹. When projects are planning and development to be considered committed projects for the purpose of long-term system planning, they are summarized in the latest Annual Planning Outlook (APO)².

¹ <https://www.ieso.ca/en/Get-Involved/Regional-Planning>

² <https://www.ieso.ca/en/Sector-Participants/Planning-and-Forecasting/Annual-Planning-Outlook>

APPrO INTERROGATORY 5

Issue 1.0 Revenue Requirement, Operating Costs and Capital Spending

1.7 Is the IESO's 2023 capital expenditure budget of \$86 million for appropriate?

1.8 Is the IESO's 2024 capital expenditure budget of \$75.9 million appropriate?

1.9 Is the IESO's 2025 capital expenditure budget of \$58.2 million appropriate?

1.0-APPrO-5

INTERROGATORY

Reference: Exhibit B, Tab 2, Schedule 1, Page 25 of 51 and Note 12

Preamble: The IESO's 2022 Annual Report and Audited Financial Statements were filed in this proceeding on April 3, 2023. The Statement of Operations and Accumulated Deficit lists the entire collected \$11,206,000 in market sanctions and payment adjustments to have been spent on "[c]ustomer education and market enforcement expenses". Of these, \$2,460,000 is allocated toward "Operating and administration" expenses.

Questions:

a) Please provide an itemized list of these 2022 operating and administration expenses.

RESPONSE

a) The Adjustment Account is an account established within the wholesale markets. The IESO deposits penalty payments and other prescribed funds such as payment adjustments arising from resolution of settlement disputes and negotiated settlements into the Adjustment Account. The Market Rules prescribe that certain IESO expenses associated with those outcomes are to be reimbursed from the Adjustment Account. The IESO does not seek fee recovery for expenses reimbursed via the Adjustment Account. Please see below for the breakdown of the Operating and Administration Costs from the IESO's 2022 Annual Report:

**Table 1 – 2022 Customer Education and Market Enforcement OM&A
Breakdown**

2022 Operating & Administration Breakdown \$000's	
Overhead Allocation	1,605
Regulatory Fees & Licenses	621
Other Operating & Admin	234
Total	2,460

ED INTERROGATORY 1

Issue 1.1 Is the IESO's Fiscal Year 2023 revenue requirement of \$208.4 million appropriate?

Issue 1.2 Is the IESO's Fiscal Year 2024 revenue requirement of \$218.4 million appropriate?

Issue 1.3 Is the IESO's Fiscal Year 2025 revenue requirement of \$229.7 million appropriate?

Issue 1.4 Is the IESO's 2023 projected staffing levels and compensation (including salaries, benefits, pensions and other post-employment benefits) appropriate?

Issue 1.5 Is the IESO's 2024 projected staffing levels and compensation (including salaries, benefits, pensions and other post-employment benefits) appropriate?

Issue 1.6 Is the IESO's 2025 projected staffing levels and compensation (including salaries, benefits, pensions and other post-employment benefits) appropriate?

1.0-ED-1

INTERROGATORY

Reference: Exhibit B-1-3, Minister's Letter Approving the IESO's 2023-2025 Business Plan, Page 2

Preamble: In addition to these government-wide priorities, I expect the IESO to continue to advance the below priorities throughout the 3-year business planning period:

1. Progress with market renewal, enabling resources, electricity planning, the development of competitive procurements for electricity resources (i.e., meeting resource adequacy), and the development of a competitive transmission procurement process.

2. Progress on ensuring that electricity sector planning, procurement, and grid operations are ready for electrification and the energy transition and informed by leading approaches in other jurisdictions.

Questions:

- a) Please provide a table showing the FTEs assigned to procurements from 2020 (historical actual) to 2030 (forecast) – or up to 2025 if figures beyond that date cannot be provided. Please also include a row showing the total salaries and a row expressing those salaries as a percent of the total annual electricity commodity costs (current or forecast).
- b) Please comment on the adequacy of those staffing numbers in light of the procurements that will be required between 2023 to 2030 in light of electrification.

RESPONSE

- a) See Table 1 below which shows the FTEs assigned to procurements from 2022 to 2025, as well as their compensation and benefits as a percentage of total annual electricity commodity costs¹, as per the 2022 Annual Planning Outlook. Note that due to the organization restructuring in 2021, the requested analysis for prior to 2021 would be onerous to produce and the IESO is unable to undertake the requested additional analysis within the timeframe provided for interrogatories within this proceeding.

Table 1 – FTEs, Compensation and Benefits for RSA

Resource and System Adequacy (RSA)	2022 Actual	2023 Budget	2024 Budget	2025 Budget
Average Number of Employees (FTEs)	22	33	40	29
Compensation and Benefits (\$ Millions)	3.5	5.6	6.7	4.9
Annual electricity commodity costs (\$ Billions)	18,032	16,578	16,709	17,540
Compensation as % of commodity	0.02%	0.03%	0.04%	0.03%

1 b) The RSA team has sufficient headcount allocated in order to undertake the work
2 currently contemplated, with hiring ongoing to complement current resources for future
3 initiatives. The IESO is preparing for a significant amount of acquisition activity over the
4 next decade that is required to meet emerging system needs and account for the
5 decarbonization and electrification of the economy. The IESO's Resource Adequacy
6 Framework and the acquisition mechanisms that underpin it were designed in order to be
7 flexible and adaptable to uncertainties and changes. The cadenced nature of the IESO's
8 acquisition mechanisms, allows the IESO to continuously and seamlessly address
9 emerging system needs and changing system conditions by adjusting procurement
10 targets or addressing changes in policy considerations and/or system needs. The team's
11 resourcing reflects the current expected procurements based on the needs identified in
12 the Annual Planning Outlook (APO) and Annual Acquisition Report (AAR).

ED INTERROGATORY 2

Issue 1.1 Is the IESO's Fiscal Year 2023 revenue requirement of \$208.4 million appropriate?

Issue 1.2 Is the IESO's Fiscal Year 2024 revenue requirement of \$218.4 million appropriate?

Issue 1.3 Is the IESO's Fiscal Year 2025 revenue requirement of \$229.7 million appropriate?

Issue 1.4 Is the IESO's 2023 projected staffing levels and compensation (including salaries, benefits, pensions and other post-employment benefits) appropriate?

Issue 1.5 Is the IESO's 2024 projected staffing levels and compensation (including salaries, benefits, pensions and other post-employment benefits) appropriate?

Issue 1.6 Is the IESO's 2025 projected staffing levels and compensation (including salaries, benefits, pensions and other post-employment benefits) appropriate?

1.0-ED-2

INTERROGATORY

Reference: Exhibit B-1-3, Minister's Letter Approving the IESO's 2023-2025 Business Plan, Page 2

Preamble: In addition to these government-wide priorities, I expect the IESO to continue to advance the below priorities throughout the 3-year business planning period:

1. Progress with market renewal, enabling resources, electricity planning, the development of competitive procurements for electricity resources (i.e., meeting resource adequacy), and the development of a competitive transmission procurement process.

2. Progress on ensuring that electricity sector planning, procurement, and grid operations are ready for electrification and the energy transition and informed by leading approaches in other jurisdictions.

Questions:

- a) Please provide a table showing the FTEs assigned to electricity planning from 2020 (historical actual) to 2030 (forecast) – or up to 2025 if figures beyond that date cannot be provided. Please also include a row showing the total salaries and a row expressing those salaries as a percent of the total annual electricity commodity costs (current or forecast).
- b) Please comment on the adequacy of those staffing numbers in light of the planning that will be required between 2023 to 2030 in light of electrification.
- c) What is the approximate annual value of the costs that the IESO oversees, such as the total value of transactions in IESO-administered markets and the capital projects driven by IESO planning processes, including a breakdown of the various elements? A value for a sample year or an average is sufficient. We are seeking the information to get a picture of importance of the IESO's work as it relates to overall electricity costs borne by customers.

RESPONSE

- a) See the table below which shows the FTEs assigned to electricity planning from 2022 to 2025, as well as their compensation and benefits as a percentage of total annual electricity commodity costs¹, as per the 2022 Annual Planning Outlook. Note that due to the organization restructuring in 2021, the requested analysis for prior to 2021 would be

¹ Total annual electricity commodity costs include generation, conservation and wholesale market service charge costs.

onerous to produce and the IESO is unable to undertake the requested additional analysis within the timeframe provided for interrogatories within this proceeding.

Electricity Planning	2022 Actual	2023 Budget	2024 Budget	2025 Budget
Average Number of Employees (FTEs)	56	62	62	61
Compensation and Benefits Expenses (\$M)	10.3	10.0	10.4	10.9
Total annual electricity commodity costs (\$M)	18,032	16,578	16,709	17,540
Percentage	0.06%	0.06%	0.06%	0.06%

- b) The IESO believes the FTEs included in the 2023-2025 Business Plan are reasonable to carry-out the planning related activities that underpin the work, assumptions and information included the Business Plan. The IESO has not forecast FTE levels beyond the 2023-2025 Business Plan.
- c) The IESO oversees about \$22 billion annually in funds from the IESO-administered markets.

ED INTERROGATORY 3

Issue 1.1 Is the IESO's Fiscal Year 2023 revenue requirement of \$208.4 million appropriate?

Issue 1.2 Is the IESO's Fiscal Year 2024 revenue requirement of \$218.4 million appropriate?

Issue 1.3 Is the IESO's Fiscal Year 2025 revenue requirement of \$229.7 million appropriate?

Issue 1.4 Is the IESO's 2023 projected staffing levels and compensation (including salaries, benefits, pensions and other post-employment benefits) appropriate?

Issue 1.5 Is the IESO's 2024 projected staffing levels and compensation (including salaries, benefits, pensions and other post-employment benefits) appropriate?

Issue 1.6 Is the IESO's 2025 projected staffing levels and compensation (including salaries, benefits, pensions and other post-employment benefits) appropriate?

1.0-ED-3

INTERROGATORY

Reference: Exhibit B-1-3, Minister's Letter Approving the IESO's 2023-2025 Business Plan, Page 2

Preamble:

Questions:

a) How many FTEs are assigned to CDM programs?

b) If the IESO were directed by the Ontario Government to assume the design and administration of all gas and electric energy efficiency programming starting in 2025:

(i) how much advance notice would be required to allow for the necessary ramping

1 up of FTEs and

2 (ii) would it require new fees approval from the OEB?

3
4 **RESPONSE**

5 a) There are 59 FTEs assigned to CDM programs.

6 i. The IESO is unable to speculate and would need to conduct a comprehensive
7 analysis before proposing a timeline for executing on a substantial change to the
8 delivery of demand side management.

9 ii. The IESO is unable to speculate and would need to conduct a comprehensive
10 analysis to determine what authorities and approvals are required, and if any
11 new fee approvals would be required.

ED INTERROGATORY 4

Issue 1.1 Is the IESO's Fiscal Year 2023 revenue requirement of \$208.4 million appropriate?

Issue 1.2 Is the IESO's Fiscal Year 2024 revenue requirement of \$218.4 million appropriate?

Issue 1.3 Is the IESO's Fiscal Year 2025 revenue requirement of \$229.7 million appropriate?

Issue 1.4 Is the IESO's 2023 projected staffing levels and compensation (including salaries, benefits, pensions and other post-employment benefits) appropriate?

Issue 1.5 Is the IESO's 2024 projected staffing levels and compensation (including salaries, benefits, pensions and other post-employment benefits) appropriate?

Issue 1.6 Is the IESO's 2025 projected staffing levels and compensation (including salaries, benefits, pensions and other post-employment benefits) appropriate?

1.0-ED-4

INTERROGATORY

Reference: Exhibit B-2-1 2022 Annual Report and Audited Financial Statements, Page 6

Preamble:

Questions:

- a) Please provide the latest available figures showing the TRC ratio achieved in the IESO's CDM programs.

RESPONSE

1 a) The most recent cost-effectiveness results available for the 2021-2024 CDM Framework
2 were determined as part of the 2021 Evaluation, Measurement & Verification (EM&V)
3 process. In 2021, CDM Business Programs yielded a Total Resource Cost (TRC) ratio of
4 1.38. Support programs are not required to meet cost-effectiveness thresholds as these
5 programs provide significant non-energy benefits not captured through cost-effectiveness
6 analysis. Further information relating to CDM cost-effectiveness can be found on the
7 IESO's Evaluation, Measurement and Verification webpage.¹

¹ <https://www.ieso.ca/en/Sector-Participants/Energy-Efficiency/Evaluation-Measurement-and-Verification>

ED INTERROGATORY 5

Issue 1.1 Is the IESO's Fiscal Year 2023 revenue requirement of \$208.4 million appropriate?

Issue 1.2 Is the IESO's Fiscal Year 2024 revenue requirement of \$218.4 million appropriate?

Issue 1.3 Is the IESO's Fiscal Year 2025 revenue requirement of \$229.7 million appropriate?

Issue 1.4 Is the IESO's 2023 projected staffing levels and compensation (including salaries, benefits, pensions and other post-employment benefits) appropriate?

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Issue 1.6 Is the IESO's 2025 projected staffing levels and compensation (including salaries, benefits, pensions and other post-employment benefits) appropriate?

1.0-ED-5

INTERROGATORY

Reference: Exhibit B-2-1 2022 Annual Report and Audited Financial Statements, Page 9

Preamble: In response to Ontario's emerging electricity system needs, the IESO initiated a Long- Term Request for Proposals process to secure 4,000 MW to meet mid-decade needs. Approximately 2,500 MW of this supply is anticipated to comprise energy storage to provide flexibility to the power system, including other non-emitting forms of supply such as biofuels to help meet peak demands, as well as up to 1,500 MW of natural gas capacity in service between 2025 and 2027 to ensure reliability and affordability.

Questions:

- 1 a) Please provide a list of the outcomes of these procurements thus far.
- 2 b) What is the IESO's contingency plan in the event that is unable to procure sufficient MWs
- 3 of gas generation or it signs contracts but facilities are ultimately not built (e.g. due to
- 4 municipal opposition or lack of approval from a federal environmental assessment)? If this
- 5 occurs, will the IESO require additional budget for procurement activities?
- 6

7 **RESPONSE**

- 8 a) As of May 31, 2023 the IESO has completed proposal evaluation for the Non-Storage
- 9 Category and Storage Category 1 of the E-LT1 RFP and results for these two categories
- 10 of the procurement were announced on May 16, 2023. Under the Non-Storage Category
- 11 295 MW (maximum contract capacity) were procured from two proposals. Under the
- 12 Storage Category 1, a total of 739.25 MW (maximum contract capacity) were procured
- 13 from seven proposals . A detailed breakdown of the results is available on the IESO
- 14 website¹. The Proposals in Storage Category 2 (those above the Storage Threshold Price)
- 15 are still being evaluated, with results expected in the coming weeks thus concluding the
- 16 E-LT1 RFP.

17 Through the Same-Technology Upgrades Solicitation, the IESO secured up to 291 MW of

18 capacity from efficiency upgrades at existing natural gas facilities. These facilities will

19 upgrade existing equipment to provide additional capacity more efficiently to meet

20 growing demand. Contracts with expiry dates prior to 2032 have been extended to 2035

21 to provide continued flexibility to the broader system and to meet local needs. A detailed

22 breakdown of the results is available on the IESO ².

23

¹ <https://www.ieso.ca/-/media/Files/IESO/Document-Library/long-term-rfp/ELT1-RFP-Selected-Proponents.ashx>

² <https://www.ieso.ca/-/media/Files/IESO/Document-Library/long-term-rfp/Same-Technology-Upgrades-Results.ashx>

1 b) The IESO's Resource Adequacy Framework and the acquisition mechanisms that
2 comprise it have been created with risk mitigation built into their design. For example,
3 the Annual Capacity Auction serves as the short term balancing mechanism in the
4 framework, securing the capacity needed to meet Ontario's short-term resource
5 adequacy needs. The auction can be used to manage any potential shortfalls, as
6 identified in the question. Furthermore, the IESO's cadenced procurement approach
7 allows for the adaptation to changes in system needs.
8 Furthermore, when setting the procurement targets for its acquisition mechanisms, the
9 IESO considers a number of risks, including the likelihood that resources are able to
10 enter service in time, the potential that some resources may not be successful in their
11 development and the potential that some resources may face performance issues at the
12 onset of their reaching commercial operation. As such, the 4,000 MW target for the
13 IESO's long-term acquisitions was set through the lens of addressing the risks identified
14 above as the identified need is closer to 2,500 MW (as discussed in the [Resource](#)
15 [Eligibility Interim Report](#)).
16 Finally, the design of each individual procurement seeks to address potential reliability
17 risks associated with project development. For example, the E-LT1 RFP includes
18 provisions that require all projects to obtain support from their local municipal councils, in
19 order to limit the risk of local opposition to projects delaying development. There are
20 further provisions in the E-LT1 Contract that also address the uncertainty regarding
21 federal government regulations/ policies for natural gas generation.
22 The IESO continues to assess the impacts to system needs on a continuous basis,
23 including at the conclusion of acquisition mechanisms. The cadenced nature of
24 procurements allows for the ability to adapt to changes in system needs. As such, the
25 IESO currently does not foresee direct increase in its budget, however, the need for
26 additional mechanisms to continue to meet system needs cannot be ruled out. Additional
27 acquisition mechanisms may result in additional resourcing required for their design and
28 execution.

ED INTERROGATORY 6

Issue 1.1 Is the IESO's Fiscal Year 2023 revenue requirement of \$208.4 million appropriate?

Issue 1.2 Is the IESO's Fiscal Year 2024 revenue requirement of \$218.4 million appropriate?

Issue 1.3 Is the IESO's Fiscal Year 2025 revenue requirement of \$229.7 million appropriate?

Issue 1.4 Is the IESO's 2023 projected staffing levels and compensation (including salaries, benefits, pensions and other post-employment benefits) appropriate?

Issue 1.5 Is the IESO's 2024 projected staffing levels and compensation (including salaries, benefits, pensions and other post-employment benefits) appropriate?

Issue 1.6 Is the IESO's 2025 projected staffing levels and compensation (including salaries, benefits, pensions and other post-employment benefits) appropriate?

1.0-ED-6

INTERROGATORY

Reference: Exhibit D, Tab 1, Schedule 1, Plus Attachment(s), Page 7

Preamble: The budget for 2023-2025 includes resources for additional staff, legal and technical consultants, as well as for undertaking the design and execution of procurement mechanisms.

Questions:

a) What year is the IESO likely to undertake an energy procurement?

b) Would the budget proposed in this proceeding provide sufficient resources to undertake an energy procurement?

- 1 c) Please provide a table showing the percentage of hours that gas generation was (or is
2 forecast to be) contributing to Ontario's energy supply (i.e. the hours in which gas was
3 on the margin) from 2010 (actual historic) to 2030 (forecast).
- 4 d) Please provide a table from 2020 to 2030 with the IESO's forecast of the percent of gas
5 fired generation that is likely to be subject to carbon pricing. Please state underlying
6 assumptions.
- 7

8 **RESPONSE**

- 9 a) The IESO will be undertaking a number of cadenced long-term procurements in the
10 coming years, including the first Long-Term RFP (LT1 RFP), which will focus on acquiring
11 capacity, in the same manner as the Expedited Process (E-LT1 RFP). The IESO sees
12 energy needs starting to emerge towards the end of the decade and into the 2030s and
13 has committed to stakeholders that it will begin to engage on subsequent procurements,
14 such as the LT2 RFP and MT2 RFP, which will target resources able to meet both energy
15 and capacity needs, in the coming months. No exact date for those procurements has
16 been established but the IESO will work with stakeholders to firm up schedules as early
17 as possible.
- 18 b) The allocated capital budget accounts for a number of acquisition mechanisms to be
19 executed in a cadenced manner, including those for energy producing resources.
- 20 c) While it is unclear how the percentage of hours that gas generation is on the margin will
21 help inform a review of the IESO's revenue requirement submission, the IESO notes that
22 the requested information is included in the 2022 Annual Planning Outlook¹.
- 23 d) While it is unclear how the percentage of gas fired generation that is likely to be subject
24 to carbon pricing will help inform a review of the IESO's revenue requirement

¹ <https://www.ieso.ca/en/Sector-Participants/Planning-and-Forecasting/Annual-Planning-Outlook>

- 1 submission, the IESO notes that details of its carbon pricing is included in the 2022
- 2 Annual Planning Outlook and associated data tables and modules².

² <https://www.ieso.ca/en/Sector-Participants/Planning-and-Forecasting/Annual-Planning-Outlook>

ED INTERROGATORY 7

Issue 1.1 Is the IESO's Fiscal Year 2023 revenue requirement of \$208.4 million appropriate?

Issue 1.2 Is the IESO's Fiscal Year 2024 revenue requirement of \$218.4 million appropriate?

Issue 1.3 Is the IESO's Fiscal Year 2025 revenue requirement of \$229.7 million appropriate?

Issue 1.4 Is the IESO's 2023 projected staffing levels and compensation (including salaries, benefits, pensions and other post-employment benefits) appropriate?

Issue 1.5 Is the IESO's 2024 projected staffing levels and compensation (including salaries, benefits, pensions and other post-employment benefits) appropriate?

Issue 1.6 Is the IESO's 2025 projected staffing levels and compensation (including salaries, benefits, pensions and other post-employment benefits) appropriate?

1.0-ED-7

INTERROGATORY

Reference: Exhibit D, Tab 1, Schedule 1, Plus Attachment(s), Page 7

Preamble: The Enabling Resources program is an integrated set of projects to enable more resources to provide electricity system services within the current market architecture. This work will establish market participation models for hybrids, storage and Distributed Energy Resources to meet future reliability needs and enable strong competition in Resource Adequacy procurements.

Questions:

a) Please provide a table with columns listing: (i) the name of each project in the enabling

resources program, (ii) a description, (iii) the expected completion date, and (iv) the additional cost that would be required above the budgeted amounts to accelerate the completion date by at least 6 months.

RESPONSE

a) Please see the table below in response to (i),(ii) and (iii):

	Description	Expected Completion Date
Enabling Resources Program (ERP)	Through the program the IESO will prioritize and undertake the work required to increase the number of resources (e.g., hybrids, storage) that can participate in the IESO markets to deliver energy, capacity and ancillary services in order to increase options for reliability and competition to drive affordability.	End of 2026
Foundational Hybrid Participation Model Design	As part of the Enabling Resources Program (ERP), the IESO launched the Hybrid Integration Project (HIP) which identified two (2) potential hybrid participation models for participation in the IESO-administered markets. A hybrid participation model will allow for synergies through a coupling of storage technology and generation resources, including variable generation. This project is to develop the market design for the two identified "foundational" hybrid participation models so that hybrid resources are efficiently and reliably integrated into the IESO markets. The design work will also ensure external stakeholders have all the information required to participate as a hybrid resource in the upcoming procurements, including clarity on capacity and bid-to-bill design for participation in the renewed IESO markets.	Co-located July 2023 Integrated July 2025

	Description	Expected Completion Date
Distributed Energy Resources (DER)	This initiative includes the market design (second phase) and implementation (third phase) of the DER Market Vision and Design project. The design work in phase 2 will provide external stakeholders with information required to participate as a DER resource in subsequent procurements or capacity auctions. Following the design, the 3rd phase of this project to implement changes to systems and tools that will be required to recognize DERs in system modelling, dispatch, and any other requirements that were identified in previous phases.	July 2026
Automatic Approval of State-of-Charge (SoC) Changes	The objective of the Automatic Approval of State-of-Charge Changes project is to reduce the impact of SoC changes on the control room and to ensure that the IESO is prepared to manage an increased volume of storage resources in the interim period.	July 2025
Supporting Changes for Storage in the AGC Tool	The objective of this project is to integrate electricity storage resources (ESRs) into the IESO's Automatic Generation Control (AGC) tool in order to enable ESRs to compete fairly with other resources to provide regulation, an essential reliability service.	Jan 2027

- 1 (iv) Additional cost is necessary to accelerate the completion date of ERP projects by 6
- 2 months. Although the IESO cannot reasonably provide cost estimates to accelerate each of
- 3 the Program elements at this time, the IESO was recently awarded funding through Natural
- 4 Resource Canada's Smart Renewable & Electrification Pathways Program to support the
- 5 implementation of the ERP. Accordingly, and given other developments in Ontario's
- 6 electricity landscape since the initiation of ERP, the IESO is currently reviewing the scope and
- 7 work plan for ERP to look at opportunities to leverage this funding to advance efforts to
- 8 enable hybrids, storage and DERs into the IESO-administered electricity markets.

ED INTERROGATORY 8

Issue 1.1 Is the IESO's Fiscal Year 2023 revenue requirement of \$208.4 million appropriate?

Issue 1.2 Is the IESO's Fiscal Year 2024 revenue requirement of \$218.4 million appropriate?

Issue 1.3 Is the IESO's Fiscal Year 2025 revenue requirement of \$229.7 million appropriate?

Issue 1.4 Is the IESO's 2023 projected staffing levels and compensation (including salaries, benefits, pensions and other post-employment benefits) appropriate?

Issue 1.5 Is the IESO's 2024 projected staffing levels and compensation (including salaries, benefits, pensions and other post-employment benefits) appropriate?

Issue 1.6 Is the IESO's 2025 projected staffing levels and compensation (including salaries, benefits, pensions and other post-employment benefits) appropriate?

1.0-ED-8

INTERROGATORY

Reference: Exhibit D, Tab 1, Schedule 3,

Preamble:

Questions:

a) Please comment on whether IESO salaries are higher or lower than private sector salaries for staff with equivalent skills and qualifications. Please provide a differentiated answer on the assumption that the answer is different for different fields within the IESO.

b) Does the IESO find that exceptional staff sometimes leave the IESO for higher wages in the private sector?

1 c) Would increased salaries assist the IESO in hiring and retaining exceptional staff?
2

3 **RESPONSE**

- 4 a) As noted in 2022 Non Executive Total Remuneration Review (Exhibit D-1-3 Attachment
5 3) filed on March 4 2022, on average the total cash compensation (base salaries and
6 short term incentives) for Management jobs are 6% above the Private Sector, for Society
7 jobs, 11% above the Private Sector and PWU jobs, 30% above the Private Sector. As
8 noted in the response to 1.0 EDA Interrogatory 3 a), the IESO has observed increased
9 attrition due to a competitive labour market and higher market salaries as a result. The
10 IESO's next total compensation study, in 2024, will provide a more up-to-date
11 comparison of IESO salaries to those in the private sector.
- 12 b) Similar to many organizations, staff leave the IESO for a variety of reasons, and this
13 often includes higher wages and/or promotions. In 2022, based on exit surveys
14 conducted at the IESO, compensation was raised as one of the top 3 reasons for staff
15 exits.
- 16 c) As noted in the response to 1.0 OEB Staff Interrogatory 1, IESO has recently taken
17 actions to mitigate elevated attrition rates experienced at the IESO as a result of rising
18 salaries in the market.

EDA INTERROGATORY 2

Issue 1.2 Is the IESO's Fiscal Year 2024 revenue requirement of \$218.4 million appropriate?

Issue 1.3 Is the IESO's Fiscal Year 2025 revenue requirement of \$229.7 million appropriate?

1.0-EDA-2

INTERROGATORY

Reference: ExB-T1-S2 Page 17 / ExC-T2-S1 Page 1 / ExD-T1-S1 / ExD-T1-S2

Preamble:

Preamble (Exhibit A-T1-S5-page2)/ (Exhibit C-T2-S1 page 1)

*As part of its three-year filing, the IESO has provided historical OEB-approved data dating back to 2019 to support its **three-years of revenue requirements with variance explanations** that identify causal factors that drove material differences from approved expenditures. The evidence submitted as part of the submission includes material and relevant facts pertaining to operations and capital projects to facilitate the assessment of the IESO's expenditures, revenue requirements and usage fees as appropriate. This also **includes** discussion of specific programs, initiatives and results that would be helpful to the OEB and intervenors in their review of the application.*

Questions:

Table 1: IESO's Revenue Requirements (\$ millions)

	2019 OEB Approved	2020 OEB Approved	2021 OEB Approved	2022 OEB Approved	2023 Budget	2024 Budget	2025 Budget
Revenue Requirement	190.8	188.6	191.8	201.5	208.4	218.4	229.7

- a) Please complete "Table 1: IESO's Revenue Requirement" from Exhibit C, Tab 2, Schedule 1 to include a comparison to actual revenue requirement for 2019 – 2022 and trend

variance for \$ and % year over year.

- b) In the IESO's 2022 application (EB-2022-0002) pro forma statement of operations included minimal baseline expense increases between 1 to 2%, and in this application (EB-2022-0318) the baseline expense increases are now between 2 to 3.5%. IESO's original projections for baseline expenses in 2024 were \$178.2, and in the 2023 application projections for baseline expenses in 2024 have increased to \$181.4. Please provide a detailed summary of what items are included in baseline expenses of the Proforma statement of operations and itemize the \$10M budget increase between 2022 forecast actual spend of \$171.4, and the 2024 budget amount of \$181.4. Explain the IESO's new or changed assumptions that account for the difference between these two applications.

EB-2022-0002	2021	2022	2023	2024
Baseline Expenses	171.5	172.8	175	178.2
% Increase		0.8%	1.3%	1.8%

	2021	2022 - Forecast Actual	2023	2024	2025
EB-2023-0318					
Baseline Expenses		171.4	175.4	181.4	187.7
% Increase			2.3%	3.4%	3.5%

- c) Please explain the budget assumptions built into (Y2) 2024 financial revenue requirement to support moving to a multi-year revenue requirement and fees application?
- d) Please explain the budget assumptions built into (Y3) 2025 financial revenue requirement to support moving to a multi-year revenue requirement and fees application?
- e) As part of its three-year rate filing, please explain how the IESO is proposing to review its yearly financial results against board approved figures during (Y2) and (Y3). Is revenue requirement as proposed inclusive of inflationary considerations? If yes, what assumption was used?

RESPONSE

- a) Please see below Table 1 from Exhibit C, Tab 2, Schedule 1 modified to include a comparison to actual revenue requirement for 2019 – 2022 and trend variance for \$ and % year over year.

Table 1: IESO's Revenue Requirement comparison to actual revenue requirement for 2019 – 2022

Revenue Requirement (\$ Millions)	2019	2020	2021	2022
Budget = Revenue	190.8	188.6	191.8	201.5
Actual Revenue	191.0	188.6	195.0	206.6
Actual Expenses	187.2	186.3	187.6	191.6
Variance Budget Revenue vs Expenses \$	(3.8)	(2.3)	(7.4)	(15.0)
Variance %	-2.0%	-1.2%	-3.9%	-7.4%

- b) The baseline expenses include all IESO expenses (people, professional services, operating and administrative services), excluding the incremental asks identified for the various key initiatives. The \$10 million budget increase between 2022 forecast spend of \$171.4 million baseline expenses, and the 2024 budget amount of \$181.4 million is primarily related to compensation and benefits escalations (\$5.5 million) and increases in various operating and administrative expenses (\$4.5 million) due to normalization of in-person meetings and travel, as well as inflationary pressures. The differences in baseline expenses between IESO's 2022 application (EB-2022-0002) and the current application (EB-2022-0318) are: higher price increases of various services after renewals, impact of transitioning IESO's Backup Operating and Data Center from one rental facility to another, normalization of in-person meetings, training and travel requirements.

- c) And d) The request to move to a multi-year revenue requirement and fees application is

- 1 not based on the assumptions built into 2024-2025 (Y2-Y3).
- 2 e) The IESO has a Memorandum of Understanding with the Ministry of Energy whereby it
- 3 will report on the annual financial results along with an outlook for the following years
- 4 during the interim years after Minister approval of the Business Plan. The IESO confirms
- 5 that the revenue requirement as proposed is inclusive of inflationary considerations, and
- 6 these are based on specific services, some of which are already contracted, others
- 7 assumed a 2% average inflation over the 3 years.

EDA INTERROGATORY 3

Issue 1.4 Is the IESO's 2023 projected staffing levels and compensation (including salaries, benefits, pensions and other post-employment benefits) appropriate?

Issue 1.5 Is the IESO's 2024 projected staffing levels and compensation (including salaries, benefits, pensions and other post-employment benefits) appropriate?

Issue 1.6 Is the IESO's 2025 projected staffing levels and compensation (including salaries, benefits, pensions and other post-employment benefits) appropriate?

1.0-EDA-3

INTERROGATORY

Reference: ExB-T1-S2 Page 17-20 / ExD-T1-S3 Page 1-11 Attachment 1 Appendix 2-K

Preamble: *After rigorous review, staffing levels will increase in 2023 as a number of strategic positions are added to support key initiatives (including the MRP). For 2023, the IESO anticipates an average of 914 full-time equivalent employees to deliver on core electricity system responsibilities and initiatives, as well as to support the MRP. Staffing levels will remain relatively flat in 2024 as the MRP begins to wind-down, with certain staff returning to core functions, concluding the transition in 2025 when the average full-time equivalent number of employees will be reduced to 900.*

Questions:

- a) The IESO was approved for a staffing level of 827 FTEs in 2022. IESO reports in this application that 2022 was understaffed by 28 FTEs and explains that this is a result of **labour market conditions** which led to an increase in voluntary attrition and retirements beginning in late 2021 and continuing through 2022.

- 1 • Please describe what is meant by 'labour market' conditions. How has this been
2 considered in future FTE considerations?
 - 3 • To determine the appropriateness of staffing levels, please provide an FTE
4 summary for number of voluntary attritions and retirements from 2019 – 2022
5 and provide an explanation as to how these trend assumptions are built into the
6 2023- 2025 FTE forecast.
 - 7 • Please explain how the proposed additional FTE staff resources will be assigned
8 to MRP implementation; please identify the number of staff resources that will be
9 re-assigned to core operations in the 2024 and 2025 budget year.
- 10 b) Please provide an updated FTE employee count as of April 30th, 2023.
- 11 c) In 2024 the budget projects 26 additional non-management temporary positions, please
12 describe the requirements for 26 temporary FTEs and the support function which they
13 will be assigned to.
- 14 d) Please provide a supporting table of FTEs assigned to the Business Unit Table for the
15 years 2021 – 2025.
- 16

17 **RESPONSE**

- 18 a) The labour market in late 2021 and through 2022, was one that was affected by
19 employees coming out of the Pandemic in search of a change, leading many to
20 retirement or changing jobs given the availability of options for jobs that were not
21 present through the preceding few years. The number of vacancies exceeded the
22 number of candidates in the labour market leading to a very competitive labour market
23 and increased salaries. As a result, many organizations, including the IESO, felt the
24 effect of higher-than-normal attrition rates and challenges in attracting candidates into
25 the vacancies. The IESO's 2023–2025 business plan was based on the historical
26 attrition rates available at the time, about a 5% average, in addition to assuming a 6-
27 month recruitment for new staff.

Please see Table 1 below for summary of staffing voluntary attritions and retirements from 2019–2022. The 2023–2025 FTE projection was based on historical average attrition rate available in mid-2022.

Table 1: Voluntary Attritions and Retirements from 2019–2022

All Employees (excludes university students)	2019	2020	2021	2022
Retirement	10	10	17	21
Voluntary	28	28	33	51
Voluntary Rate	3.3%	3.3%	3.8%	5.8%
Retirement Rate	1.2%	1.2%	1.9%	2.4%
Voluntary + Retirement Rate	4.5%	4.5%	5.7%	8.1%

30 of the incremental FTE in 2023 vs 2022 is for MRP implementation, starting in 2024 a small number of staff will begin to transition back to core operations and re-assigned to new initiatives and core work, while other temporary staff will come to term. In 2025, about 20 FTEs will be retained and re-assigned to capital work (particularly in Information & Technology Services) and for Market Power Mitigation work (in Market Assessment & Compliance Division).

- b) The IESO core operations and capital FTE count as of April 30th, 2023, is 832.
- c) As per Exhibit D-1-3 Attachment 1, the Total 2024 FTE budget is 926 of which 103 are non-management temporary positions, 11 lower than the 114 in the 2023 budget and not 26 additional FTEs as indicated in the question. This decrease is mainly attributable to FTEs on the Market Renewal Program completing their employment terms.
- d) See Table 2 below for Average FTEs assigned to the Business Unit Table for the years 2021 – 2025:

1 **Table 2: 2021–2025 Average FTEs by Business Unit**

Average FTE by Business Units	2021 Actual*	2022 Actual	2023 Budget	2024 Budget	2025 Budget
Markets & Reliability	187	182	213	225	230
Planning, Conservation and Resource Adequacy	100	115	133	140	126
Corporate Relations, Stakeholder Engagement and Innovation	60	62	69	75	79
Information and Technology Services	125	134	146	145	155
Legal Resources and Corporate Governance	77	72	78	85	86
Market Assessment and Compliance Division	6	7	7	7	14
CEO Office	3	3	3	3	3
Corporate Services	118	120	130	132	137
Human Resources	21	25	26	26	26
Market Renewal	77	79	109	88	44
Total IESO	774	799	914	926	900

2 *Restated to reflect the organizational restructuring where the Internal Audit function was transferred
3 from the CEO Office to Corporate Services

EDA INTERROGATORY 4

Issue 1.7 Is the IESO's 2023 capital expenditure budget of \$86 appropriate?

Issue 1.8 Is the IESO's 2024 capital expenditure budget of \$75.9 appropriate?

Issue 1.9 Is the IESO's 2025 capital expenditure budget of \$58.2 appropriate?

1.0-EDA-4

INTERROGATORY

Reference: : ExE-T2-S1-Attachment 1 Excel Capital Projects

Preamble:

Questions:

a) Please describe how frequently the IESO Board of Directors reviews the capital envelope for schedule and budgeted dollars. What is the materiality considered using the envelope approach which must be approved by the board?

b) The Capital Projects schedule in Exhibit E-S1-T2 Attachment 1 does not summarize total capital budget vs capital actual. Below is a summary comparing total board approved capital budget for Market Renewal Program vs capital actual for Market Renewal Program. The variance shows \$38.6M of potentially underspent approved capital.

Change Initiatives/ Projects	2019 Capital Budget	2019 Capital Actual	2020 Capital Budget	2020 Capital Actual	2021 Capital Budget	2021 Capital Actual	2022 Capital Budget	2022 Capital Actuals	Life to Date Capital Budget	Life to Date Capital Actuals	Variance
Market Renewal Program	\$26.0	\$10.3	\$25.9	\$25.0	\$44.6	\$24.0	\$35.4	\$34.0	\$131.9	\$93.3	\$38.6

Please reconcile the variance of the \$38.6M displaying budget shift considerations year over year and the % of completion to original budget.

c) IESO requested \$51M of MRP spending in 2023 which is a \$17M increase over 2022

1 actual spending. Please provide a YTD report of current capital dollars spent in 2023 and
2 the expected capital expenditure schedule for the remainder of this year.
3

4 **RESPONSE**

5 a) The IESO's Audit Committee has been provided regular overviews of progress against the
6 capital budget. The IESO Board reviews progress on the capital envelope twice a year,
7 once in August to review the mid-year progress and the other to review year-end results.
8 Any unplanned expenditures that increases the capital expenditure envelope by over \$2
9 million would be reviewed by the Board.

10 b) Capital spending for 2019 of \$10.3 million, was \$15.7 million lower than planned due to
11 reduced resources to complete detailed design, delays in onboarding detailed design
12 external support, and a change in the payment structure for the Dispatch Scheduling
13 Optimization (DSO) procurement which moved a \$10 million upfront payment budgeted
14 for 2019 into smaller milestone payments starting in 2020.

15 2020 capital spending of \$25 million, was \$0.9 million lower than planned due to the
16 delayed onboarding of implementation resources, including the external vendor for the
17 DSO tool development.

18 The \$44.6 million 2021 Budget corresponds to the budget before Schedule Validation 4
19 was approved in March 2021; the submission filed May 27, 2021 in EB-2020-0230 Exhibit
20 G-2-1 1 indicated the budget to be \$36 million, including a \$3.5 million contingency. See
21 response to OEB Staff Interrogatory 9 a) for the 2021 variance explanation.

22 The actual 2022 MRP capital spending of \$1.4 million lower than Baseline 5 Budget is
23 driven by underspend of internal IESO labour, as resources were able to complete
24 planned work with fewer person-hours than planned.

- 1 c) The current capital spend as of April 2023 is \$10.6 million. The IESO does not expect a
- 2 major variance to the annual budget of \$49.2 million which continues to track to the full
- 3 program budget of \$233 million.

EDA INTERROGATORY 5

Issue 1.7 Is the IESO's 2023 capital expenditure budget of \$86 appropriate?

Issue 1.8 Is the IESO's 2024 capital expenditure budget of \$75.9 appropriate?

Issue 1.9 Is the IESO's 2025 capital expenditure budget of \$58.2 appropriate?

1.0-EDA-5

INTERROGATORY

Reference: ExE-T3-S1-Page 1 / ExE-T1-Attachment 1 Excel – Service Life Comparison and Amortization Expense

Preamble:

Questions:

a) In the IESO's *Service Life Comparison and Amortization Expense* schedule the 2022 Actual Total amortization is reported as \$17.6 million, whereas the IESO's Revenue Requirement detailed in its *Financial Pro Forma Statement of Operations* includes an amount of \$18.5 as the projected actual amortization for 2022. Please reconcile the difference and provide the pro forma statement using the correct value.

b) Asset additions represent assets under construction that are placed in service during the budget period, including some capital projects listed in Appendix 3 of the 2023 – 2025 Business Plan, in accordance with their expected in-service date. In the IESO's 2022 application the IESO was approved \$35.4M of asset additions in the Market Systems and Applications category. Actual 2022 asset additions indicate that this category was under spent by \$24.9M. Please provide an explanation for how the asset additions have been reallocated or cancelled.

1 c) Closing Net Book Value in 2022 Actuals is reported as \$64.5M and the Budgeted Opening
2 Net Book Value for 2023 Budget is reported inconsistently as \$90.1M. Discrepancies
3 appear to be in the category opening for Market Systems and Applications. Please verify
4 and update the attachment and tables for the corrected figure. Please also provide the
5 calculated projection for amortization on existing assets and amortization on asset
6 additions. Verify that this has been calculated/projected on the 2022 actuals in this
7 calculation, not the original 2022 board approved assumptions.

8 d) Please confirm the 2025 Budget asset addition of \$181.8M. Please provide a breakdown
9 for this amount and the programs which contribute to this category.
10

11 **RESPONSE**

12 a) The values presented in the *Financial Pro Forma Statement of Operations*, under the
13 column for "2022 Forecast", which show an amortization amount of \$18.5 million, is a
14 projection done in mid-2022; whereas the values shown in the IESO's *Service Life*
15 *Comparison and Amortization Expense* schedule for the 2022 Actual Total amortization,
16 reported as \$17.6 million, is the actual amortization expense for 2022. The variance
17 between the two is due to delays in placing projects into service, particularly the
18 Supervisory Control and Data Acquisition/Energy Management System (SCADA/EMS). It
19 would not be correct to update the Pro-Forma Statement of Operations for this amount
20 since they do not correspond to the same scenario (Forecast vs Actual).

21 b) The Actual 2022 asset additions in the Market Systems and Applications category were
22 lower than the approved \$35.4 million by \$24.9 million due to delay in placing into
23 service SCADA/EMS, the Centralized Alarm Management System (CAMS), and the first
24 phase of the Replacement of Settlement Systems (RSS).

25 c) The information contained in the tables are correct. The reason for the 2023 Budget
26 Opening Net Book Value being different than the closing Net Book Value in 2022 Actuals

1 is because the 2023 Budget was prepared in mid-2022 before the books were closed;
2 therefore, the opening balance reflects a projected opening balance and not the actuals.
3 The projection for amortization on existing assets and amortization on asset additions
4 provided in the evidence corresponds to the amortization calculated for the revenue
5 requirement submission, it would not be appropriate to calculate this based on 2022
6 actuals since this would not align with the revenue requirement submission.

- 7 d) IESO confirms that the 2025 Budget asset addition of \$181.8 million in the Market
8 Systems and Applications category is correct and, as explained in Exhibit E Tab 3
9 Schedule 1 page 2 row 17-18, this is due to placing into service the remaining assets
10 from the Market Renewal Program.

1 **EP INTERROGATORY 1**

2 Issue 1.0 Revenue Requirement, Operating Costs and Capital Spending

3
4 1.0-EP-1

5 **INTERROGATORY**

6
7 Preamble: **Reference:** Exhibit D-1-1, Page 9

8 Questions:

9 a) Please file a list of Other Initiatives showing the amount budgeted for each initiative.

10 **RESPONSE**

11 a) The Other Initiatives included in the 2023 – 2025 Business Plan cover work for planned
12 initiatives directed by the government, such as Class B and Interruptible rate pilots,
13 hydrogen program, contracting biomass and small hydro generation, various unsolicited
14 proposals, and enhanced CDM program implementation, none of these have been
15 separately costed.

EP INTERROGATORY 2

Issue 1.0 Revenue Requirement, Operating Costs and Capital Spending

1.0-EP-2

INTERROGATORY

Reference: Exhibit C-3-1 A1, Lines 18 and 19

Preamble:

Questions:

- a) Where does IESO generate the funds for its ST and LT investments.
- b) List sources and annual amounts
- c) Please provide a summary of the short and long-term investment strategies
- d) Confirm IESO is financially-backed by the OEFC.
- e) What is the cost for this?
- f) Compare to Commercial Credit Facilities.

RESPONSE

- a) and b) are addressed in Exhibit D-2-1.
- c) Investment strategies are consistent with the Treasury Policy approved by the Minister of Finance (last approved in Oct 2022). Short-term funds are invested in deposits held in bank accounts and/or term deposits, and long-term funds are invested in permitted investment products.
- d) OEFC provides credit facilities to IESO for liquidity purposes.
- e) Advances are made at the cost to the province plus 0.5%, with no stand-by fees.
- f) Most commercial credit facilities include stand-by fees and significantly higher borrowing interest rates.

EP INTERROGATORY 3

1.0 Revenue Requirement, Operating Costs and Capital Spending

1.0-EP-3

INTERROGATORY

Preamble: **Reference:** Exhibit D-1-1, Appendix 2-JA, Line 9

Questions:

a) Please provide a full analysis of the Drivers for increases in the costs of the Legal Department 2022-2025

b) Please provide a table showing legal costs per MWh and as % of total OM&A

c) Please provide a projection of future legal fees for 2026-30

RESPONSE

a) Key drivers for 2022-2025 increases in the costs of the Legal Resources and Corporate Governance business unit in Line 9 of Exhibit D-1-1 Appendix 2-JA, are primarily attributed to annual escalation in compensation and benefits costs, higher North American Electric Reliability (NERC) and Northeast power Coordinating (NPCC) membership fees and increased legal consulting support associated with government initiatives. As noted, the business unit consists of more than just the legal department.

b) See Table 1 below:

Table 1: Legal Resources and Corporate Governance business unit costs for 2022–2025

Operating Expenses (\$ Millions)	2022 Actual	2023 Budget	2024 Budget	2025 Budget
Legal Resources and Corporate Governance	25.9	28.2	30.5	32.2
% of total OM&A	14%	14%	15%	15%
TWh	159.8	153.2	154.9	158.6
\$ / MWh	0.16	0.18	0.20	0.20

c) A projection of future legal fees for 2026-30 is not available and is not within the scope of the proceeding.

1 **EP INTERROGATORY 4**

2 1.0 Revenue Requirement, Operating Costs and Capital Spending

3
4 1.0-EP-4

5 **INTERROGATORY**

6 **Reference:** Exhibit D-1-2, Page 6

7 Preamble: "2025 budgeted costs of \$3.8 million are \$1.3 million higher than 2024 due to the
8 market power mitigation function returning assignment to MACD as MRP is completed."

9
10 Questions:

11 a) How is the market power mitigation function currently performed?

12
13 **RESPONSE**

14 a) The Market Power Mitigation function supporting the current market is performed by
15 staff in MACD. Please also see the response to 4.0 Energy Probe 12 a).

EP INTERROGATORY 5

1.0 Revenue Requirement, Operating Costs and Capital Spending

1.0-EP-5

INTERROGATORY

Preamble: **Reference:** Exhibit B-1-2, 2023-2025 Business Plan, Page 18; D-1-1, pages 4 and 8

Questions:

Please provide more detail of the new expenditure listed as “Culture, Employees, and Capabilities” that is shown as starting in 2023 including an itemized budget for each year.

RESPONSE

Each year, the IESO allocates budget to advance employee capabilities and to reinforce behaviours aligned to the IESO’s Corporate Strategy. Starting in 2023, and continuing over the three-year business plan, the action items to foster a culture of engagement include:

- A multi-year strategy and communication plan in support of equity, diversity, and inclusion
- A strategy and expanded program for employee health and wellness
- Development of a curriculum to build digital capabilities needed for IESO’s core mandate and strategy
- Employee and Leadership curricula aligned to our competency framework
- A 360-degree assessment and coaching program for senior leaders
- A roles and accountabilities framework to provide clarity of responsibilities, decision making and purpose for leadership roles

EP INTERROGATORY 6

1.0 Revenue Requirement, Operating Costs and Capital Spending

1.0-EP-6

INTERROGATORY

Reference. Exhibit D-1-3, Attachment 1, Form 2K
Questions:

a) For each year, 2020-2025, please provide the number of employees (FTE) allocated to:

i. Regular IESO operations and

ii. Development of MRP

b) For Regular IESO Operations provide the following OEB Utility Cost Benchmarks

i. FTE/Total MWh

ii. Compensation\$ per total MWh

iii. OM&A/MWh

iv. vi) OM&A /Market Participant

c) Please Graph these data and provide a discussion on the trends in Total Compensation and OM&A

d) Has IESO Benchmarked its costs to those of the other ISOs such as Alberta AESO, US ISOs. If so, provide these comparisons. If not, why has not this been done?

RESPONSE

a) See Table 1 below:

Table 1: Average FTE 2020 - 2025

Average FTE	2020 Actual	2021 Actual	2022 Actual	2023 Budget	2024 Budget	2025 Budget
Regular IESO operations	706	697	720	805	838	854
Market Renewal	66	77	79	109	88	47
Total IESO	772	774	799	914	926	900

b) See Table 2 below:

Table 2 - OEB Utility Cost Benchmarks

	2022 Actual	2023 Budget	2024 Budget	2025 Budget
FTE / Total MWh	0.000005	0.000006	0.000006	0.000006
Compensation \$ / Total MWh	0.83	0.90	0.93	0.94
OM&A \$ / Total MWh	1.17	1.29	1.33	1.34
OM&A \$ / Market Participants*	340,000	358,732	375,640	385,199

* This ratio has been calculated using a total of 550 Market and/or Program Participants as listed on the IESO's website as of June 1st, 2023

- c) About 70% of IESO OM&A expenses are related to compensation and benefits a graph would essentially show no change (a flat trend line) in the value using OM&A or Compensation.
- d) The IESO does conduct a compensation benchmarking study, refer to Exhibit D-1-3 Attachment 3, through a third-party vendor, Mercer, every two years and organizations like the Alberta Electric System Operator (AESO) would participate in the study; however, we are not privy to the specific data of any of the participants.

EP INTERROGATORY 7

1.0 Revenue Requirement, Operating Costs and Capital Spending

1.0-EP-7

INTERROGATORY

Preamble: **Reference:** Exhibit B-1-2, Business Plan, Page 18

Questions:

a) Please explain the reasons for the increase in Core Operations FTEs from 730 in 2022 Budget to 856 in the 2025 Budget. Specifically, is the scope of the activities included in Core Operations increasing? If it is increasing, please describe the increases in scope. If it is not increasing, please explain why more FTE's will be required for the same scope of work.

RESPONSE

a) The increase in FTEs in the 2025 Budget is driven by staff required to:

- support additional energy procurements,
- support new market functions/services resulting from the implementation of the Market Renewal Program,
- enhancing cybersecurity posture through reinforcing the resilience and integrity of the electricity grid,
- address various government priorities,
- sustaining critical IT infrastructure and core technology
- evolving internal processes and tools to promote high-performing employees.

1 **EP INTERROGATORY 8**

2 1.0 Revenue Requirement, Operating Costs and Capital Spending

3
4 1.0-EP-8

5 **INTERROGATORY**

6 Preamble: **Reference:** Exhibit D-1-2, Attachment 2, Organization Charts

7 Questions:

8 a) How many IESO employees have the title of Vice President, Director, Senior Manager, and
9 Manager?

10 b) Does IESO have an initiative to reduce the number of staff with Vice President and Director
11 titles?

12 **RESPONSE**

13 a) The IESO has 8 employees with the title of Vice President, 31 Directors, 49 Senior
14 Managers and 40 Managers. The management cadre makes up 13% of the overall
15 headcount. Represented and Individual Contributor roles make up the remaining 87% of
16 the overall IESO headcount.

17 b) The IESO does not have an initiative underway to reduce the number of staff with Vice
18 President and Director titles.

EP INTERROGATORY 9

1.0 Revenue Requirement, Operating Costs and Capital Spending

1.0-EP-9

INTERROGATORY

Preamble: **Reference:** Exhibit B-1-2, 2023-2025 Business Plan, Page 19

Questions:

a) Please provide more information on the "Space Needs Program & Facility Investment". Specifically, what is the Space Needs Program and what is the Facility Investment and how much is budgeted in each of these two categories in 2023, 2024 and 2023?

b) How much of the \$7.0 million budget has been spent so far in 2023?

RESPONSE

a) As stated in E-2-1 Attachment 4 - Project Summary - Phase 3 of the Space Needs Program, the project will implement a number of building enhancements and improvements at the IESO's Mississauga control centre as well as renovate the office space across its optimized footprint. The project is not yet initiated, however the current estimate is made up of approximately \$10 million in building enhancements and improvements and \$30 million in office renovations. As the project has not been initiated there is no further detail regarding the timing of these expenditures over 2023, 2024 and 2025.

b) As the project has not yet been initiated there have been no expenditures so far in 2023.

OEB STAFF INTERROGATORY 1

Issue 1: Revenue Requirement, Operating Costs and Capital Spending

1.0-OEB STAFF-1

INTERROGATORY

Reference: Exhibit B / Tab 1 / Schedule 2 / p. 18 Pro Forma Statement of Operations

Preamble: Exhibit B-1-2 is the IESO 2023-2025 Business Plan dated September 1, 2022. It contains the pro forma statement of operations with budgets for the years 2022 to 2025, inclusive, with the forecast for the year end 2022 at the time it was prepared.

Questions:

- a) Please complete the following table, using the latest available information the IESO may have for 2023. Please correct any inadvertent transcription errors.

Table 1: Pro Forma Statement of Operations – 2022 to 2025

\$ Millions	2022 Budget	2022 Actual	2023 Budget	2023 Forecast	2024 Budget	2025 Budget
Baseline Expenses	172.8		175.4		181.4	187.7
Resource and Transmission Adequacy	1.7		6.0		8.8	7.3
Enabling Resources	0.4		0.8		0.9	0.9
Pathway to Decarbonization	1.3		-		-	-
Other Government Priorities	4.6		2.9		2.5	2.5
MRP – ongoing operation of new functions	0.5		1.9		3.0	4.2
Cybersecurity	-		1.6		1.6	2.1
Strengthening Engagement	-		0.7		1.1	1.6
Culture, Employees and Capabilities	-		0.8		0.8	1.0

Sustaining Technology, Evolving Processes, and Tools	-		1.9		2.3	2.2
Operating Expenses Sub-Total	181.3		192.0		202.2	209.4
Amortization	20.0		23.1		22.0	27.0
Net Interest	(5.0)		(11.5)		(9.7)	(9.2)
Registration Fee	-		(0.5)		(0.5)	-
Market Renewal Program	5.2		5.3		4.4	2.5
Total Expenses	201.5		208.4		218.4	229.7

1

2

b) Please provide any additional information the IESO deems relevant regarding notable deviations between the most current business plan forecast for 2023 and the 2023 budget.

3

4

RESPONSE

5

a) Please note the IESO does not do activity-based accounting and cannot complete the table as requested. In-year tracking and forecasting is done on a business unit basis, as business units work cross-functionally to deliver the initiatives listed. The IESO has provided an OM&A forecast for 2023 by business unit, based on the latest information available as of May 2023 in Table 1 below:

6

7

8

9

10

11

1 **Table 1 - Operating Expenses by Business Unit**

\$ Millions	2022 Budget	2022 Actual	2023 Budget	2023 Forecast	2024 Budget	2025 Budget
Markets & Reliability	35.9	34.5	37.4	37.6	39.1	40.7
Planning, Conservation and Resource Adequacy	21.8	21.7	24.4	23.3	26.2	24.9
Corporate Relations, Stakeholder Engagement and Innovation	14.9	14.6	15.1	15.8	15.8	16.9
Information and Technology Services	43.3	43.0	46.8	46.7	49.4	51.6
Legal Resources and Corporate Governance	28.2	25.9	28.2	29.4	30.5	32.2
Market Assessment and Compliance Division	1.3	1.3	2.4	2.3	2.5	3.7
CEO Office	1.8	2.2	1.5	1.5	1.5	1.6
Corporate Services	27.9	27.7	29.3	30.0	30.2	31.5
Human Resources	5.0	5.5	6.2	6.4	6.4	6.4
Corporate Adjustment	1.2	6.0	0.7	15.2	0.6	(0.1)
Operating Expenses Sub-Total	181.3	182.4	192.0	208.2	202.2	209.4
Amortization	20.0	17.6	23.1	21.4	22.0	27.0
Net Interest	(5.0)	(12.3)	(11.5)	(18.5)	(9.7)	(9.2)
Registration Fee	-	(0.8)	(0.5)	(0.5)	(0.5)	-
Market Renewal Program	5.2	4.6	5.3	4.8	4.4	2.5
Total Expenses	201.5	191.6	208.4	215.4	218.4	229.7

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3 b) The 2023 forecast expenses are \$7 million or 3% higher than budget, primarily

4 driven by the present value of benefit enhancements included in the collective

5 agreement that was settled in Q1 2023, as well as actions taken to mitigate

6 elevated attrition rates experienced at the IESO as a result of rising salaries in

7 the market. These actions are partially offset by delays in hiring to the planned

8 headcount, higher interest income and lower than expected amortization. The

9 IESO will closely monitor the 2023 budget execution and where possible will

10 manage overages; however, given the unprecedented transformation of the

11 sector, the IESO is committed to continue the work in the 2023-2025 Business

12 Plan.

OEB STAFF INTERROGATORY 2

ISSUE 1: Revenue Requirement, Operating Costs and Capital Spending

1.0-OEB STAFF-2

INTERROGATORY

Reference:

- a. Exhibit B / Tab 2 / Schedule 1 / p. 34 (2022 Annual Report)
- b. Exhibit D / Tab 1 / Schedule 2 / p. 7 & 8

Preamble:

Effective January 1, 2011, the IESO adopted Canadian public sector accounting standards (PSAS) with a transition date of January 1, 2010. The adoption of PSAS was accounted for by retroactive application with the restatement of prior periods subject to the requirements in Section PS 2125, First-time Adoption by Government Organizations.

The corresponding change to pension and other-post employment benefits (OPEBs) resulted in previously unrecognized actuarial losses and past service costs of \$98,832,000 at the date of transition being charged to the PSAS Transition Item's accumulated deficit.

Each year, the IESO recovers a portion of the PSAS Transition Item's deficit through the IESO's annual system fees revenue. The annual amount recovered is transferred from the Regulatory Deferral Account to the PSAS Transition Item accumulated deficit each year. OEB staff notes that a portion of the PSAS Transition Item's deficit is recovered as part of "Corporate Adjustments" which are included in the IESO's OM&A as part of its revenue requirement.

In its application, the IESO demonstrated its actual and budgeted Corporate Adjustments included in OM&A, as shown in OEB Staff Table 1 below. The IESO stated that its Corporate Adjustments are mainly comprised of the annual amortization of the accumulated deficit resulting from the PSAS transition item corresponding to the change in pension and OPEBs, partially offset by the overhead cost recovery from other funding sources.

Table 1 – Overview of Corporate Adjustments

IESO Business Unit (million \$)	2021 Actual	2022 OEB Approved	2022 Actual	2023 Budget	2024 Budget	2025 Budget
Corporate Adjustment	1.5	1.2	6.0	0.7	0.6	(0.1)

Questions:

- a) Please provide a breakdown for each year (e.g., 2021 Actual, 2022 OEB Approved, 2022 Actual, 2023 Budget, 2024 Budget, 2025 Budget) of the Corporate Adjustments shown in OEB Staff Table 1, listing the PSAS Recovery Amount, overhead cost recovery, and other.
- b) Please provide and explain the variance analysis related to the PSAS Recovery Amount, year-over-year, specifically 2022 Actual versus 2021 Actual, 2022 Actual versus 2022 OEB Approved, 2023 Budget versus 2022 Actual, 2023 Budget versus 2022 OEB Approved, 2024 Budget versus 2023 Budget, and 2025 Budget versus 2024 Budget.
- c) Please confirm that there is no impact on capital expenditures or amortization from the Corporate Adjustments, in particular the recovery of PSAS transition items. If this is not the case, please explain.

RESPONSE

- a) Please see Table 1 below:

1 **Table 1 – Breakdown of Corporate Adjustments**

(\$ Millions)	2021 Actual	2022 OEB Approved	2022 Actual	2023 Budget	2024 Budget	2025 Budget
Corporate Adjustments	1.5	1.2	6.0	0.7	0.6	(0.1)
PSAS Amortization	3.3	3.3	3.3	3.3	3.3	3.3
Pension/OPEB Adjustments	-	-	4.4	-	-	-
One-time Items	0.4	-	0.7	(0.2)	(0.2)	(0.9)
Overhead Cost Recovery	(2.2)	(2.1)	(2.4)	(2.4)	(2.5)	(2.5)

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3 b) As the PSAS Recovery Amount is a static figure there is no year-over-year variance.

4 c) Confirmed.

OEB STAFF INTERROGATORY 3

ISSUE 1: Revenue Requirement, Operating Costs and Capital Spending

1.0-OEB STAFF-3

INTERROGATORY

Reference:

- a. Exhibit D / Tab 1 / Schedule 2 / p. 8
- b. Exhibit D / Tab 1 / Schedule 1 / p. 2
- c. Exhibit F / Tab 1 / Schedule 1 / p. 3

Preamble:

2022 Corporate Adjustments expenses were \$4.8 million higher than 2022 OEB Approved primarily due to a \$4.4 million one-time adjustment for OPEBs to reflect recently arbitrated settlement awards (i.e., the recognition of the liability from negotiated and arbitrated collective agreement settlements awarded in 2022).

The Forecast Variance Deferral Account (FVDA) balance as at December 31, 2022 was a credit surplus of \$23.7 million.

OEB staff notes that the IESO trues up its revenues and costs to break-even through the use of the FVDA, such that all of its incurred costs are recovered by the IESO.

Questions:

- a) Please confirm that the IESO is seeking recovery of a debit of \$4.4 million as part of the \$23.7 million credit surplus of the FVDA as at December 31, 2022, relating to a one-time adjustment for OPEB to recognize the liability from negotiated and arbitrated collective agreement settlements awarded in 2022. If this is not the case, please explain.
- b) Please explain this \$4.4 million debit adjustment, including why the recovery of this amount is reasonable.
- c) Please explain what controls and procedures are in place to ensure that all of the IESO's incurred costs are reasonable, given that all of its incurred costs are recovered by the IESO through the FVDA, if the FVDA balance is approved for disposition by the OEB.

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2 **RESPONSE**

3 a) The balance of the FVDA as at December 31, 2022, reflects the sum total of the
4 variances to the IESO's revenues and expenses. This includes the \$4.4 million variance
5 from the one-time adjustment to OPEBs.

6 b) See response to a) above. The \$4.4 million one-time adjustment to OPEB reflects the
7 present value of increases to health and dental benefits that were granted by an
8 arbitrator as part of 2022 collective agreement settlement. Under PSAB accounting rules,
9 the present value of the estimated impact of changes to retiree health and dental
10 benefits is recognized as a one-time expense.

11 c) The IESO's incurred costs are recovered by IESO usage fees which are approved by the
12 OEB.

OEB STAFF INTERROGATORY 4

ISSUE 1: Revenue Requirement, Operating Costs and Capital Spending

1.0-OEB STAFF-4

INTERROGATORY

Reference:

- a. Exhibit D / Tab 1 / Schedule 1 / p. 4-6
- b. EB-2022-0002, Clarification 1-Staff-1, July 13, 2022

Preamble:

The IESO has provided the following variance analysis regarding the pension and OPEB amounts:

- 2023 Budget versus 2022 Actual – \$1.4 million lower pension and OPEB expense projection
- 2024 Budget versus 2023 Budget – actuarial projected \$1.8 million increase of pension and OPEB liability
- 2025 Budget versus 2024 Budget – \$3.7 million increase in actuarial projected pension and OPEB liability

Questions:

- a) Please explain the drivers of the changes listed in the above preamble and comment on the reasonableness of these variances.
- b) Please provide a description of the key actuarial assumptions made, specifically 2023 Budget, 2024 Budget, and 2025 Budget.
- c) Please identify and explain the variance between 2022 Actual and 2022 OEB Approved for pension and OPEB.
- d) Please provide a table showing the breakdown of the pension and OPEBs amounts by year (including a breakdown of the portion charged to OM&A and the portion charged to capital), for 2022 Actual, 2022 OEB Approved, 2023 Budget, 2024 Budget, and 2025 Budget, as well as the dollar changes and

percentage changes. This table should be similar in format to OEB Staff Table 4 filed in the Clarification 1-Staff-1 question from the 2022 revenue requirement proceeding. Please also list 2022 Actual versus 2022 OEB Approved, 2023 Budget versus 2022 Actual, 2023 Budget versus 2022 OEB Approved, 2024 Budget versus 2023 Budget, and 2025 Budget versus 2024 Budget.

RESPONSE

a) Based on the information provided by IESO's actuarial service provider (AON) at the time of the preparation of the budget, the variances and drivers of the year over year pension and OPEB expense projection, described below, are considered reasonable:

- 2023 Budget versus 2022 Actual – \$1.4 million lower operating expense primarily driven by amortization of 2022 actuarial gains that start in 2023. This amount is excluding the \$4.4 million one-time OPEB adjustment in 2022 Actuals.
- 2024 Budget versus 2023 Budget – actuarial projected \$1.8 million increase of pension and OPEB operating expense, mostly driven by higher service and interest costs.
- 2025 Budget versus 2024 Budget – \$3.7 million increase in actuarial projected pension and OPEB operating expense, mostly driven by higher service and interest costs, in addition to amortization of actuarial losses beginning in 2025.

b) The 2023-2025 Pension and OPEB benefits budget is based on AON's June 2022 mid-year projection. Actuarial assumptions can be found in the response to 1.0 OEB Staff Interrogatory 5, Attachments 1 and 2.

c) The variance between 2022 Actual and 2022 OEB Approved operating expense for pension and OPEB is primarily due to the one-time OPEB adjustment of \$4.4 million for plan changes to health and dental benefits that were granted by an arbitrator as part of collective agreement settlement.

d) Please see Table 1 below:

1 Table 1 – 2022 Actual vs. 2022 OEB Approved Pension & OPEBs

Included in OMA and Capital (\$000's)	2022 OEB Approved	2022 Actual	2023 Budget	2024 Budget	2025 Budget	2022 Actual vs 2022 OEB Approved		2023 Budget vs 2022 Actual		2023 Budget vs 2022 OEB Approved		2024 Budget vs 2023 Budget		2025 Budget vs 2024 Budget	
Pension	10,203	8,368	9,557	11,004	13,678	(1,835)	-18%	1,189	14%	(646)	-6%	1,447	15%	2,674	24%
OM&A	9,037	7,186	8,377	9,593	12,316	(1,850)	-20%	1,191	17%	(659)	-7%	1,216	15%	2,723	28%
Capital	1,167	1,182	1,180	1,411	1,362	15	1%	(2)	0%	14	1%	231	20%	(49)	-3%
Other Benefits (OPEB)	8,615	15,040	8,022	8,965	9,721	6,425	75%	(7,019)	-47%	(594)	-7%	944	12%	756	8%
OM&A	7,628	13,569	6,584	7,798	8,746	5,941	78%	(6,985)	-51%	(1,044)	-14%	1,214	18%	948	12%
Capital	988	1,471	1,438	1,168	976	484	49%	(33)	-2%	450	46%	(270)	-19%	(192)	-16%
Total included in IESO Usage Fee and Capital Portfolio	18,818	23,408	17,579	19,969	23,399	4,590	24%	(5,830)	-25%	(1,240)	-7%	2,390	14%	3,430	17%
Pension/OPEB - Other Segments (OM&A)	1,519	1,522	1,622	1,534	1,760	3	0%	101	7%	104	7%	(88)	-5%	226	15%
Total IESO Pension and OPEB	20,337	24,930	19,201	21,503	25,159	4,593	23%	(5,729)	-23%	(1,136)	-6%	2,302	12%	3,656	17%

OEB STAFF INTERROGATORY 5

ISSUE 1: Revenue Requirement, Operating Costs and Capital Spending
1.0-OEB STAFF-5

INTERROGATORY

Reference:

a. Exhibit B / Tab 2 / Schedule 1 / p. 36 & 37 (2022 Annual Report)

Preamble:

The IESO stated that the most recent actuarial valuation of the IESO registered pension plan for regulatory funding purposes was completed as at January 1, 2022.

The one-year actual return on the IESO's registered pension plan's assets as at September 30, 2022 was -8.4% per annum.

The Bank of Canada's policy interest rate was 0.25% as at January 1, 2022 and 4.25% as at December 31, 2022. The rate as at May 25, 2023 is 4.50%.

Questions:

- a) Please provide the most recent actuarial reports/ updates/ valuations for all pension and OPEB plans.
- b) Please demonstrate how the pension and OPEBs amounts in the 2022 Actual, 2023 Budget, 2024 Budget, and 2025 Budget tie to the most recent actuarial reports/ updates/ valuations and the 2022 audited financial statements, as applicable.
- c) If the balances in the actuarial reports/ updates/ valuations and the audited financial statements are different from the 2022 Actual, 2023 Budget, 2024 Budget, and 2025 Budget revenue requirements, please provide an explanation supporting why the amount in the revenue requirements is more appropriate.
- d) Please confirm that there is an inverse relationship between the discount rate and the present value of any pension and OPEBs obligations, as well as versus those incorporated into the pension and OPEB amounts included in the IESO's 2022 Actual, 2023 Budget, 2024 Budget, and 2025 Budget, meaning that the higher the discount rate, the lower the present value. If this is not the case, please explain.

- e) Given the large increase in the Bank of Canada's policy interest rate since the IESO's most recent actuarial valuation as at January 1, 2022, as well as poor investment returns incurred in 2022, please explain whether the IESO has performed an update since January 1, 2022. If not, why not.
- f) If an update was performed, please also explain whether such update was incorporated in 2022 Actual, 2023 Budget, 2024 Budget, and 2025 Budget, as higher discount rates lead to lower pension and OPEB costs, but may be offset by poor investment returns.

RESPONSE

- a) Please see Attachment 1 – Actuarial Report Year End 2022 and Attachment 2 – 2022-2025 Expense and Funding Projections to this response.
- b) Please see Table 1 below and the attachments in part a) above.

Table 1: Reconciliation – 2022 Actual and 2023 – 2025 Budget

\$000's	2022 Actual ¹	2023 Budget ²	2024 Budget ²	2025 Budget ²
Per Actuarial Report:				
Pension benefits	9,046	10,293	11,849	14,738
Other Benefits (OPEB)	15,884	8,908	9,654	10,421
Total Pension/OPEB	24,930	19,201	21,503	25,159
Reconciliation:				
Capital and Operating in Revenue Requirement Submission	23,408	17,579	19,969	23,399
Pension/OPEB included in Non-IESO Core services	1,522	1,622	1,534	1,760
Total Pension/OPEB	24,930	19,201	21,503	25,159

¹The latest actuarial report that is being provided in response to a) (see Attachment 1) is the year-end report which ties back to the 2022 Audited Financial Statements.

² Reconciliation of 2023-2025 Budget is based on the actuarial projection being provided in response a) to this Exhibit (see Attachment 2).

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- c) The balances in the actuarial report/valuation and the audited financial statements are higher from what is being sought in the 2022 Actual, 2023 Budget, 2024 Budget, and 2025 Budget revenue requirements, because they are inclusive of the portion of pension and OPEB that is allocated to work that is funded from other sources (i.e. Smart Metering Entity, market enforcement and sanctions, government programs) which is not included in the revenue requirement.
- d) Confirmed.
- e) The IESO’s 2023-2025 budget was based on an updated projection as of June 2022, since then AON has provided another update as of December 2022.
- f) The December updates were incorporated into 2022 Actual results and in the latest 2023 forecast, included as the response to 1.0 OEB Staff Interrogatory 1, but it would not have changed the budget for 2023 -2025 which was submitted to the Minister September 2022.

January 12, 2023

BY E-MAIL

PRIVATE & CONFIDENTIAL

Ms. Melanie Dugard
Grant Thornton LLP
201 City Centre Drive, Suite 501
Mississauga ON L5B 2T4

**RE: INDEPENDENT ELECTRICITY SYSTEM OPERATOR (“IESO”)
PUBLIC SECTOR ACCOUNTING INFORMATION FOR FISCAL YEAR 2022**

Dear Ms. Dugard:

This letter and the attached appendices summarize the results of the accounting valuations for the post-employment pension and benefits plans named below for the fiscal year from January 1, 2022 to December 31, 2022. We have also included the results for the fiscal year 2021 for comparison purposes. Our report covers the following plans:

- Independent Electricity System Operator Pension Plan (“RPP”);
- Independent Electricity System Operator Supplemental Employee Retirement Plan (“SERP”); and
- Other (non-pension) post-employment and post-retirement benefit arrangements (“OPEB”).

The year-end liabilities have been determined using a September 30 measurement date. Aon has been engaged by IESO for the development of the results in these valuations.

All figures are in Canadian dollars.

We confirm that:

- The valuations have been performed in accordance with the requirements of Public Sector Accounting Handbook Section PS 3250 (“PSAB”).
- The plans are all defined benefit plans as defined by PSAB.

It is our understanding that for the purposes of PSAB accounting:

- The discount rate for the RPP is determined by reference to the expected return on plan assets; consistent with management’s best estimate of expected long-term experience and short-term forecasts.

- The discount rate for SERP and OPEB is determined using the cost of borrowing applicable to IESO. To estimate the rate expected plan cash flows were discounted using a yield curve based on Ontario provincial bonds and a single rate was determined which produced an equivalent present value. We then added a spread of 50 basis points to the single rate.
- Unrecognized gains or losses are amortized on a systematic basis over the EARS of the related employee group.
- Expected return on assets is based on market-related value of assets which is determined by deferring and amortizing all asset gains and losses (including fixed income gains and losses) each year over 3 years.
- Prior service costs are recognized in the period in which the amendment occurs.

We have discussed with the administrator that:

- The valuations include all employee future benefit plans required to be included in the valuations.
- The plan provisions are up to date as of the date of our report. We were advised by the Company of benefit plan changes impacting retiree health and dental benefits, coming into effect during 2022. These plan changes have been reflected as a plan amendment and the impact of such plan changes is reflected in the income statement.
- The plan administrator will advise us of changes to plan provisions and events which occur in the period from the date of the valuations up to the expected date of our report that could have a material effect on the valuations.

In conducting these valuations, we have used:

- Plan membership information supplied by IESO's third-party administrator, Lifeworks, as of January 1, 2022, for the RPP and SERP
- Plan membership and claims information provided by Canada Life, as of January 1, 2022, for the OPEB
- Expected contributions and benefit payments for the development of the fiscal 2022 expense;
- Actual contributions and benefit payments for the December 31, 2022 funded status;
- Financial statements of the pension fund prepared by CIBC Mellon;
- The projected benefit actuarial cost method; and
- Actuarial assumptions that have been determined as best estimate assumptions developed by management. A summary of the assumptions used are in the appendices.

The SERP plan is secured with a letter of credit and as such contributions are required to be made to a refundable tax account that has been established with the Canada Revenue Agency when premiums for the letter of credit are paid. The balance of the refundable tax account is being recorded as a corporate asset and therefore is not included as an asset for the purposes of the SERP.

We are not aware of any subsequent events which occurred or were fully committed to after December 31, 2022 and before the date of this report which would have a material impact on these results.

For the purposes of these valuations, it is my opinion that:

- The membership data on which the valuation is based are sufficient and reliable for the purpose of the valuation.
- The assumptions are appropriate for purposes of the valuation.
- The calculations have been made in accordance with our understanding of the requirements of PSAB 3250.
- This report has been prepared, and our opinions given, in accordance with accepted actuarial practice in Canada.

Sincerely,

A handwritten signature in black ink that reads "Linda Byron". The signature is written in a cursive, flowing style.

Linda M. Byron, FCIA, FSA
Senior Partner

Encl.

cc: Ms. Jeannette Briggs, IESO
Mr. Joel Helder, IESO
Mr. John Radich, Aon

INDEPENDENT ELECTRICITY SYSTEM OPERATOR

PSAB Disclosures

December 31, 2022 (\$000s)

	Registered Plan	Non-Registered Plan	OPEB Plan	Total
Change in benefit obligation				
Benefit obligation - September 30, 2021	\$ 629,884	\$ 41,425	\$ 147,802	\$ 819,111
Current service cost (employer)	13,063	1,284	7,107	21,454
Interest cost	34,883	1,424	5,220	41,527
Employee contributions **	10,108	-	-	10,108
Plan amendments	-	-	4,460	4,460
Benefits Paid	(37,626)	(1,641)	(2,732)	(41,999)
Net transfer in (out)	-	-	-	-
Actuarial loss (gain)	(26,127)	(7,316)	(40,559)	(74,002)
Benefit Obligation - September 30, 2022	\$ 624,185	\$ 35,176	\$ 121,298	\$ 780,659
Change in plan assets				
Market value of plan assets - September 30, 2021	\$ 720,786	\$ -	\$ -	\$ 720,786
Actual return on plan assets	(63,164)	-	-	(63,164)
Employer contributions	14,752	1,641	2,732	19,125
Employee contributions	10,108	-	-	10,108
Benefits paid	(37,626)	(1,641)	(2,732)	(41,999)
Surplus paid out to employer	-	-	-	-
Settlement payments	-	-	-	-
Net transfer in (out) *	-	-	-	-
Acquisitions (divestitures)	-	-	-	-
Actual plan expenses	-	-	-	-
Foreign exchange rate changes	-	-	-	-
Market value of plan assets - September 30, 2022	\$ 644,856	\$ -	\$ -	\$ 644,856
Actuarial Value of Assets - BOY	\$ 698,425	\$ -	\$ -	\$ 698,425
Actuarial Value of Assets - EOY	\$ 701,457	\$ -	\$ -	\$ 701,457
Reconciliation of funded status - end of period				
Funded status - surplus (deficit)	\$ 20,671	\$ (35,176)	\$ (121,298)	\$ (135,803)
Employer contributions after measurement date	4,717	437	755	5,909
Unamortized transitional obligation (asset)	-	-	-	-
Unamortized past service cost	-	-	-	-
Unamortized net actuarial loss (gain)	(3,266)	826	(55,185)	(57,625)
Accrued benefit asset (liability)	\$ 22,122	\$ (33,913)	\$ (175,728)	\$ (187,519)
Expected Future Benefit	-	-	-	-
Valuation allowance	-	-	-	-
Accrued benefit asset (liability), net of valuation allowance	\$ 22,122	\$ (33,913)	\$ (175,728)	\$ (187,519)
Components of 2022 expense				
Current service cost (employer)	\$ 13,063	\$ 1,284	\$ 7,107	\$ 21,454
Interest cost	34,883	1,424	5,220	41,527
Expected return on plan assets	(38,062)	-	-	(38,062)
Curtailment loss (gain)	-	-	-	-
Settlement loss (gain)	-	-	-	-
Amortization of past service costs	-	-	4,460	4,460
Amortization of net actuarial loss (gain)	(4,149)	603	(903)	(4,449)
Increase (decrease) in valuation allowance	-	-	-	-
Special termination benefits	-	-	-	-
Net expense (income)	\$ 5,735	\$ 3,311	\$ 15,884	\$ 24,930
Expected average remaining service life ("EARSL")	14.5	14.5	17.2	
Balance Sheet Reconciliation				
Accrued benefit asset/(liability) at Dec 31, 2021	\$ 11,586	\$ (32,275)	\$ (162,700)	\$ (183,389)
Net income / (expense) for period	(5,735)	(3,311)	(15,884)	(24,930)
Contributions	16,271	1,673	2,856	20,800
Accrued benefit asset/(liability) at Dec 31, 2022	\$ 22,122	\$ (33,913)	\$ (175,728)	\$ (187,519)
	-	-	-	-
Actual Asset Allocation at September 30, 2022				
Canadian equity securities	Not available	N/A		
Foreign equity securities	Not available	N/A		
Canadian debt securities	Not available	N/A		
Global infrastructure	Not available	N/A		
Canadian real estate	Not available	N/A		
Cash equivalents	Not available	N/A		
Assumptions at the beginning of the period		Assumptions at the end of the period		
Discount rate for RPP	5.50%	Discount rate for RPP	6.00%	
Discount rate for SERP & OPEB	3.40%	Discount rate for SERP & OPEB	4.70%	
Rate of compensation increase	3.50%	Rate of compensation increase	3.50%	
Health care inflation - Select	6.00%	Health care inflation - Select	4.69%	
Health care inflation - Ultimate	4.00%	Health care inflation - Ultimate	4.05%	
Expected rate of return on plan assets	5.50%	Expected rate of return on plan assets	6.00%	
Inflation	2.00%	Inflation	2.00%	
Mortality	95% CPM Public MI-2017	Mortality	95% CPM Public MI-2017	
2022 Cash Flows				
Estimated Employee Contributions	10,108	-	-	
Estimated Employer Contributions	14,752	1,547	3,049	
Estimated Benefit Payments	37,626	1,547	3,049	
EARSL	14.5	14.5	17.2	
Actual Employee Contributions	10,108	-	-	
Actual Employer Contributions	14,752	1,641	2,732	
Actual Benefit Payments	37,626	1,641	2,732	

* Transfer amount represents the net transfers resulting from reciprocal transfer agreements

** Includes employee contributions for past service

INDEPENDENT ELECTRICITY SYSTEM OPERATOR

PSAB Disclosures

December 31, 2021 (\$000s)

	Registered Plan	Non-Registered Plan	OPEB Plan	Total
Change in benefit obligation				
Benefit obligation - September 30, 2020	\$ 603,733	\$ 46,556	\$ 165,698	\$ 815,987
Current service cost (employer)	12,618	1,559	8,931	23,108
Interest cost	33,596	1,233	4,503	39,332
Employee contributions **	9,278	-	-	9,278
Plan amendments	-	-	-	-
Benefits Paid	(29,585)	(3,067)	(2,499)	(35,151)
Net transfer in (out)	-	-	-	-
Actuarial loss (gain)	244	(4,856)	(28,831)	(33,443)
Benefit Obligation - September 30, 2021	\$ 629,884	\$ 41,425	\$ 147,802	\$ 819,111
Change in plan assets				
Market value of plan assets - September 30, 2020	\$ 663,464	\$ -	\$ -	\$ 663,464
Actual return on plan assets	68,413	-	-	68,413
Employer contributions	9,215	3,067	2,499	14,781
Employee contributions	9,278	-	-	9,278
Benefits paid	(29,585)	(3,067)	(2,499)	(35,151)
Surplus paid out to employer	-	-	-	-
Settlement payments	-	-	-	-
Net transfer in (out) *	-	-	-	-
Acquisitions (divestitures)	-	-	-	-
Actual plan expenses	-	-	-	-
Foreign exchange rate changes	-	-	-	-
Market value of plan assets - September 30, 2021	\$ 720,786	\$ -	\$ -	\$ 720,786
Actuarial Value of Assets - BOY	\$ 655,774	\$ -	\$ -	\$ 655,774
Actuarial Value of Assets - EOY	\$ 698,425	\$ -	\$ -	\$ 698,425
Reconciliation of funded status - end of period				
Funded status - surplus (deficit)	\$ 90,902	\$ (41,425)	\$ (147,802)	\$ (98,325)
Employer contributions after measurement date	3,198	405	631	4,234
Unamortized transitional obligation (asset)	-	-	-	-
Unamortized past service cost	-	-	-	-
Unamortized net actuarial loss (gain)	(82,514)	8,745	(15,529)	(89,298)
Accrued benefit asset (liability)	\$ 11,586	\$ (32,275)	\$ (162,700)	\$ (183,389)
Expected Future Benefit	-	-	-	-
Valuation allowance	-	-	-	-
Accrued benefit asset (liability), net of valuation allowance	\$ 11,586	\$ (32,275)	\$ (162,700)	\$ (183,389)
Components of 2021 expense				
Current service cost (employer)	\$ 12,618	\$ 1,559	\$ 8,931	\$ 23,108
Interest cost	33,596	1,233	4,503	39,332
Expected return on plan assets	(35,763)	-	-	(35,763)
Curtailment loss (gain)	-	-	-	-
Settlement loss (gain)	-	-	-	-
Amortization of past service costs	-	-	-	-
Amortization of net actuarial loss (gain)	(3,142)	1,007	821	(1,314)
Increase (decrease) in valuation allowance	-	-	-	-
Special termination benefits	-	-	-	-
Net expense (income)	\$ 7,309	\$ 3,799	\$ 14,255	\$ 25,363
Expected average remaining service life ("EARSL")	14.5	14.5	17.2	
Balance Sheet Reconciliation				
Accrued benefit asset/(liability) at Dec 31, 2020	\$ 6,482	\$ (31,602)	\$ (150,961)	\$ (176,081)
Net income / (expense) for period	(7,309)	(3,799)	(14,255)	(25,363)
Contributions	12,413	3,126	2,516	18,055
Accrued benefit asset/(liability) at Dec 31, 2021	\$ 11,586	\$ (32,275)	\$ (162,700)	\$ (183,389)
Actual Asset Allocation at September 30, 2021				
Canadian equity securities	9.9%	N/A		
Foreign equity securities	41.1%	N/A		
Canadian debt securities	29.4%	N/A		
Global infrastructure	9.4%	N/A		
Canadian real estate	9.0%	N/A		
Cash equivalents	1.1%	N/A		
Assumptions at the beginning of the period		Assumptions at the end of the period		
Discount rate for RPP	5.50%	Discount rate for RPP	5.50%	
Discount rate for SERP & OPEB	2.60%	Discount rate for SERP & OPEB	3.40%	
Rate of compensation increase	3.50%	Rate of compensation increase	3.50%	
Health care inflation - Select	6.20%	Health care inflation - Select	6.00%	
Health care inflation - Ultimate	4.00%	Health care inflation - Ultimate	4.00%	
Expected rate of return on plan assets	5.50%	Expected rate of return on plan assets	5.50%	
Inflation	2.00%	Inflation	2.00%	
Mortality	95% CPM Public MI-2017 Mortality		95% CPM Public MI-2017	
2021 Cash Flows				
Estimated Employee Contributions	9,278	-	-	
Estimated Employer Contributions	9,215	1,415	2,499	
Estimated Benefit Payments	29,585	1,415	2,499	
EARSL	14.5	14.5	17.2	
Actual Employee Contributions	9,278	-		
Actual Employer Contributions	9,215	3,067		
Actual Benefit Payments	29,585	3,067		

* Transfer amount represents the net transfers resulting from reciprocal transfer agreements

** Includes employee contributions for past service

Actuarial Assumptions

December 31, 2021 Disclosure and 2022 Expense

Economic Assumptions

Discount Rate – RPP	5.50% per year
Discount Rate – SERP & OPEB	3.40% per year
Inflation	2.00% per year
Return on Assets	5.50% per year
Increases in Salary	3.50% per year
Increases in YMPE	2.75% per year
Increases in ITA Maximum	\$3,025.56 per year in 2019 and increasing by 2.75% per year after 2019
Dental Inflation	4.00% per year
Prescription Drugs Inflation	6.00% per year in 2021 grading down to an ultimate rate of 4.00% per year in 2031
Other Medical (Non-Drug) Inflation	4.00% per year
Expenses	Included in Return on Assets

Demographic Assumptions

Retirement Age	Rates vary by age and service (see January 1, 2019 actuarial valuation report)
Mortality Rates	95% of CPM public sector mortality table with improvement scale MI-2017
Withdrawal Rates	Rates vary by age and service (see January 1, 2019 actuarial valuation report)
Percent With Spouse at Retirement	90%
Age Difference	Male Spouse three years older

Cost Methods

Actuarial Cost Method	Projected Unit Credit
Asset Valuation Method	
For RPP	Market-related value ¹
For SERP and OPEB	N/A

¹ Investment gains and losses during each year are recognized in the smoothed value of assets over three years

Actuarial Assumptions

December 31, 2022 Disclosure

Economic Assumptions

Discount Rate – RPP	6.00% per year
Discount Rate – SERP & OPEB	4.70% per year
Inflation	2.00% per year; Actual pension escalation adjustments at January 1, 2023 have been reflected in the liabilities at December 31, 2022 ¹
Return on Assets	6.00% per year
Increases in Salary	3.50% per year
Increases in YMPE	2.75% per year
Increases in ITA Maximum	\$3,420.00 per year in 2022 and increasing by 2.75% per year after 2022
Dental Inflation	4.93% per year in 2022; grading to 4.05% per year in 2040
Prescription Drugs Inflation	4.47% per year in 2022; grading to 4.05% per year in 2040
Other Medical (Non-Drug) Inflation	4.76% per year in 2022; grading to 4.05% per year in 2040
Expenses	Included in Return on Assets

Demographic Assumptions

Retirement Age	Rates vary by age and service (see January 1, 2022 actuarial valuation report for the RPP)
Mortality Rates	95% of CPM public sector mortality table with improvement scale MI-2017
Withdrawal Rates	Rates vary by age and service (see January 1, 2022 actuarial valuation report for the RPP)
Percent With Spouse at Retirement	90%
Age Difference	Male Spouse three years older

Cost Methods

Actuarial Cost Method	Projected Unit Credit
Asset Valuation Method	
For RPP	Market-related value ²
For SERP and OPEB	N/A

¹ 7.9% for fully indexed benefits and 5.00% for benefits indexed at 75% of CPI

² Investment gains and losses during each year are recognized in the smoothed value of assets over three years

Gain/Loss Breakdown—OPEB

The table below is based on results extrapolated from the prior valuation dated January 1, 2019.

Disclosed ABO as of December 31, 2021	\$ 147,802,000
Plus: 2022 Service Cost	7,107,000
Plus: 2022 Interest Cost	5,220,000
Minus: 2022 Actual Benefits Payments	<u>(2,732,000)</u>
Expected ABO as of December 31, 2022	\$ 157,397,000

Impact of New Valuation

As of December 31, 2022	ABO	Change	
		Amount	%
Expected	\$ 157,397,000		
1) Updated Census	\$ 157,283,000	\$ (114,000)	(0.1%)
2) Updated Claims	\$ 179,620,000	22,337,000	14.2%
3) Updated Aging	\$ 143,426,000	(36,194,000)	(20.2%)
4) Updated Trend	\$ 157,027,000	13,601,000	9.5%
5) ODB Programming Change	\$ 153,825,000	(3,202,000)	(2.0%)
6) Revised Discount Rate	\$ 116,838,000	(36,987,000)	(24.0%)
7) Plan Amendment	\$ 121,298,000	<u>4,460,000</u>	3.9%
Total		\$ (35,782,000)	

Membership Data—RPP

Reference should be made to the valuation report for funding purposes as at January 1, 2022 for a complete description of the data and the tests performed to ensure the reliability of the data.

Membership Data—SERP

The following table presents relevant characteristics of the membership as at January 1, 2022 for those estimated to be entitled to a benefit from the SERP on the accounting basis.

Active Members of the SERP

	January 1, 2022		
	Males	Females	Total
Number	29	16	45
Average age	47.7	51.2	49.0
Average service from date of hire	15.6	13.3	14.8
Average credited service	14.1	10.8	12.9
Average pensionable earnings	\$ 216,430	\$ 241,856	\$ 225,471

Retired Members of the SERP

	January 1, 2022		
	Males	Females	Total
Number	52	11	63
Average age	67.8	68.9	68.0
Average monthly pension	\$ 2,290	\$ 554	\$ 11,381

Deferred Vested Members of the SERP

	January 1, 2022		
	Males	Females	Total
Number	4	2	6
Average age	54.4	54.3	54.4
Average monthly pension	\$ 782	\$ 419	\$ 801

Membership Data—OPEB

The following table presents relevant characteristics of the membership as at January 1, 2022 for those estimated to be entitled to a benefit from the OPEB on the accounting basis.

	1-Jan-22
Post-Retirement Benefits	
<i>Active Employees</i>	
Number	797
Average Age	43.5
Average Years of Service	11.0
Expected Average Remaining Service Lifetime (EARSL)]	16.3
Expected Average Service to Full Eligibility	11.5
<i>Retirees</i>	
Number	
Single Coverage	29
Family Coverage	267
Total	396
Average Age	72.3
<i>Beneficiaries</i>	
Number	
Waived Coverage	0
Single Coverage	38
Total	38
Average Age	78.4
Post-Employment Benefits	
Disabled Employees Receiving Benefits	10

Claims Costs Assumption—OPEB

PWU			
Age	Drugs 2022	Other Medical 2022	Dental 2022
<=55	\$2,864	\$1,019	\$1,161
60	\$3,281	\$1,051	\$1,211
65	\$1,365	\$1,057	\$1,175
70	\$1,365	\$1,064	\$1,140
75	\$1,365	\$1,070	\$1,106
80	\$1,365	\$1,076	\$1,074
85+	\$1,365	\$1,081	\$1,048
Society			
Age	Drugs 2022	Other Medical 2022	Dental 2022
<=55	\$2,356	\$1,311	\$1,100
60	\$2,700	\$1,352	\$1,147
65	\$1,124	\$1,360	\$1,113
70	\$1,124	\$1,368	\$1,080
75	\$1,124	\$1,377	\$1,048
80	\$1,124	\$1,385	\$1,017
85 and over	\$1,124	\$1,391	\$992
Management			
Age	Drugs 2022	Other Medical 2022	Dental 2022
<=55	\$1,640	\$1,338	\$1,026
60	\$1,878	\$1,380	\$1,070
65	\$782	\$1,388	\$1,038
70	\$782	\$1,396	\$1,007
75	\$782	\$1,405	\$977
80	\$782	\$1,413	\$948
85 and over	\$782	\$1,420	\$926

- Claims cost above includes impact of plan changes coming into effect in 2022
- Claims cost includes administration fees and taxes

Claims Cost—Postemployment Benefits

Medical, 2022 Claims Cost

Single \$10,300

Family \$13,700

Dental 2022 Claims Cost

Single \$1,100

Family \$2,200

Claims Costs Assumption—OPEB

PWU			
	Drugs	Other Medical	Dental
	2019	2019	2019
<=55	\$2,005	\$647	\$716
60	\$2,608	\$761	\$877
65	\$1,203	\$869	\$908
70	\$1,328	\$880	\$938
75	\$1,328	\$890	\$946
80	\$1,328	\$897	\$890
85+	\$1,328	\$884	\$848

Society			
	Drugs	Other Medical	Dental
	2019	2019	2019
<=55	\$1,366	\$1,102	\$854
60	\$1,776	\$1,297	\$1,045
65	\$819	\$1,481	\$1,082
70	\$905	\$1,499	\$1,118
75	\$905	\$1,517	\$1,127
80	\$905	\$1,528	\$1,061
85 and over	\$905	\$1,507	\$1,011

Management			
	Drugs	Other Medical	Dental
	2019	2019	2019
<=55	\$1,321	\$836	\$755
60	\$1,718	\$984	\$925
65	\$793	\$1,123	\$958
70	\$875	\$1,137	\$990
75	\$875	\$1,151	\$997
80	\$875	\$1,159	\$939
85 and over	\$875	\$1,143	\$895

Plan Provisions—Pension

Registered Plan

See January 1, 2022 actuarial valuation report for a summary of the plan provisions.

SERP

The SERP provides the portion of the RPP formula benefits that are in excess of the amounts that are permitted by the *Income Tax Act* to be paid from the RPP. The SERP also includes special pension arrangements provided to certain individuals.

Plan Provisions—OPEB

Eligibility

Retirees from active service, in receipt of a pension, are eligible for life insurance, medical and dental coverage as described later.

Employees hired on or after certain dates described below must also meet applicable service requirements. Employees in the Management group hired on or after January 1, 2006 must have more than 10 years of service at retirement to be eligible under the Standard plan, or have at least 21 years of service at retirement to be eligible under the Enhanced plan. Employees represented by the PWU and hired after April 1, 2009 and March 31, 2012 require 7 years of service to be eligible for post-retirement benefits. Employees represented by the PWU and hired on or after April 1, 2012 require at least 10 years of service to be eligible for post-retirement benefits. Employees represented by the Society and hired after January 1, 2010 require 10 years of service to be eligible for post-retirement benefits.

Deferred vested members with 25 or more years of service at termination are eligible for medical and dental coverage once they commence receiving a pension from the Company. Members of the Society group who are eligible to retire with an unreduced pension and with 25 or more years of service at termination who choose to take the commuted value of their pension instead of receiving a pension from the Company may elect benefits coverage of 70% of the medical and dental coverage or choose a one-time lump-sum payout of \$40,000 plus \$2,000 for every full year of continuous employment with the IESO/OPA/Ontario Hydro beyond 25 years of continuous service, to a max lump sum payment of \$60,000 (less required deductions) instead of the benefits.

Spouses and dependents are eligible for medical and dental coverage while the retiree is alive. After the retiree's death, spouses and dependents are eligible for coverage if the spouse is in receipt of a pension.

Surviving spouses and dependants of an employee who died in active employment are also eligible for medical and dental coverage if the spouse is in receipt of a pension.

Plan Provisions—OPEB (continued)

Benefits

Life Insurance

Life coverage equal to 50% of base annual earnings at retirement (or annual earnings at age 65 whichever comes first for Mgmt. & PWU) is provided in the first 10 years of retirement, reducing to 25% of base annual earnings 10 years after retirement.

Retirement Bonus

Employees with 10 or more years of continuous service receive a lump-sum payment of one month's earnings at retirement, subject to advance notice requirements. Notice: Society 3 months, Mgmt. 4 months & PWU 4 weeks.

Medical and Dental

Vary depending on the employee group the retiree was in as an active employee. The groups are as follows:

- Members of the ("Society")
- Members of the Power Workers' Union ("PWU")
- Management Group ("Management")

Semi-Private and Private Hospital Accommodation Plan

- The semi-private differential between ward accommodation and semi-private accommodation in an active treatment hospital.
- Up to \$30 per day (\$40 for Society and Management) for a maximum of 120 days in any period of 365 consecutive days towards semi-private or private room accommodation in a hospital for the chronically ill or a chronic care unit of a general hospital.
- Up to \$20 per day (no limit for Society and Management) for the differential between ward accommodation and semi-private accommodation (or private room for PWU) in a contract (private) hospital or a convalescent/rehabilitative hospital up to 120 days (365 days for Society and Management) per lifetime.

These expenses are not subject to the annual deductible.

Plan Provisions—OPEB (continued)

Extended Health Care Benefits Plan

Covers benefits such as:

- Differential between semi-private and private room accommodation in an active treatment hospital.
- Prescription drugs (as listed in the Company Drug Formulary List) subject to the following:
 - (a) A dispensing fee up to a maximum of \$9.50 for PWU \$9.00 for Management, and Generic substitution unless the physician requests no substitution.
Over-the-counter drugs that do not require a prescription by law are covered where medically required (life sustaining drugs only for Society and Management).
- Blood and blood products.
Private-duty nursing, subject to a maximum fee as set by the largest Nursing Registry in Ontario.
- Ambulance services.
- Physiotherapy treatments (subject to some limitation).
- Miscellaneous items such as prosthetic appliances, equipment rental, support stockings.
- Dental treatment as the result of an accident.
- Hearing aids (once every three years, no restriction for Management).
- Eyeglasses (including contact lenses) up to \$750 for PWU and Management and \$600(Enhanced) \$300 (Standard) \$ for Society per person every two calendar years.
- Laser eye surgery up to a lifetime maximum of \$3,000 for PWU and Management and \$4,100 for Society

- Services of clinical psychologists(psychotherapist Society, PWU & Mgmt.) (Social Worker for Mgmt. & PWU), registered massage therapists, speech therapists, chiropractors, podiatrists, chiropodists, naturopaths, dieticians (for Society and Management only), registered nutritionists (for PWU only), homeopaths, acupuncturists, certified shiatsu therapists (for Society only) and clinical ecologist subject to certain per person per calendar year maximum which may vary by Claim Branch.

Annual deductibles are as follows:

- Management and PWU: \$20 single / \$40 family
Deductibles do not apply to vision care and hearing aids.

Out-of-Province Medical Emergency Benefit Coverage

For management pensioners the plan provides comprehensive coverage for emergency medical and dental treatment required when traveling temporarily outside of Ontario or outside of Canada. Reimbursement is based on reasonable and customary charges of the area in which the service or supply is provided.

Dental Benefits

The plan pays 100% of Class A Services and 85% of Class B Services

Class A Services include examinations, x-rays, preventive services, periodontal services, endodontic services and extensive oral surgery. Class B Services include dentures and crowns.

For all Claim Branches, the current ODA Fee Guide applies for Society and PWU, and the prior year Guide applies for Management..

No deductibles apply. There is an annual maximum of \$4,500 (excluding orthodontics).

This plan also pays 75% (85% PWU) of eligible charges related to Orthodontic Benefits subject to a lifetime maximum per individual of \$5,000 per person

About Aon

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June 6, 2022

BY E-MAIL

PRIVATE & CONFIDENTIAL

Ms. Betsy Melendez
Manager, Financial Resource Planning & Analysis
Independent Electricity System Operator
Station A, Box 4474
Toronto, ON M5W 4E5

**RE: INDEPENDENT ELECTRICITY SYSTEM OPERATOR ("IESO") PUBLIC SECTOR
ACCOUNTING EXPENSE SENSITIVITY ESTIMATES
FOR FISCAL YEARS 2022 THROUGH TO 2025 (UPDATE)**

Dear Betsy:

We are pleased to provide you with projections of the pension expense through 2025 for business planning purposes, for the following plans:

- Independent Electricity System Operator Pension Plan ("RPP");
- Independent Electricity System Operator Supplemental Employee Retirement Plan ("SERP"); and
- Other (non-pension) post-employment and post-retirement benefit arrangements ("OPEB")

We have also prepared a funding estimate for the years 2022 through 2025 inclusive for the RPP.

This letter reflects the following:

- Discount rate and expected return on assets assumption of 5.50% throughout the expense projection period from the 2022 year end to 2025 for the RPP and is the same as the discount rate used at December 31, 2021 year end;
- Discount rates of 4.30% throughout the expense projection period from the 2022 year end to 2025 for the SERP and OPEB. The 4.30% was based on market rate for provincial bonds plus 50 basis points and reflects market conditions at April 30, 2022;
- For the projected RPP going concern results at January 1, 2022, we have used a discount rate of 5.50% and a provision for adverse deviations of 7.84%, reflecting the assumptions in use for the ongoing actuarial valuation that will be filed on that date. Other key assumptions are unchanged from the 2019 actuarial valuation;
- For the solvency valuation we have used the assumptions prescribed as at January 1, 2022;
- Asset performance through April 30, 2022; and
- Expected 2022-2025 contributions based on IESO's funding policy and projections of funded position in accordance with January 2019 valuation.



Ms. Betsy Melendez
June 6, 2022
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In conducting this analysis, we have used:

- Plan membership information supplied by IESO as of January 1, 2019 for the pension plans, as summarized in the summary of results for the January 1, 2019 actuarial valuation;
- Plan membership information supplied by IESO as of January 1, 2019 for the OPEB plan;
- Scheduled changes in PWU, Society and non-represented member contributions;
- Actual asset returns and cash flows for the RPP to April 30, 2022;
- Expected contributions based on the plan's funding policy and the January 1, 2019 actuarial valuation;
- Expected benefit payments for the fiscal years 2022 through to 2025;
- An acceptable method to roll forward the plan liabilities; and
- An acceptable method to roll forward the plan assets, while assuming a 5.50% investment return.

We have used the same actuarial methods and assumptions as were used for the fiscal 2021 year-end disclosure with the exception of changes to the OPEB and SERP discount rates which have been updated to reflect current market conditions.

We note that the 2022 expense included in this letter is not expected to change unless there is a significant event that would require an adjustment, such as changes due to collective bargaining, plan design changes or substantial membership changes. The 2023, 2024 and 2025 expense estimates will differ from these estimates as a result of asset returns differing from expectations and differences in contributions and benefit payments. Furthermore, new valuations are being done for the RPP, SERP, and OPEB as at January 1, 2022. The results of these valuations will be reflected in the Fiscal 2022 year end disclosure and in the 2023 expense. Changes in membership and experience will impact the results of the valuations and will impact the 2023 expense and beyond.

See Appendix B for a breakdown of each benefit plan's expense by component.

Expense (in CDN \$000s)	2022	2023	2024	2025
RPP	\$ 5,796	\$ 7,399	\$ 8,882	\$ 11,695
SERP	3,392	2,894	2,967	3,043
OPEB	11,419	8,908	9,654	10,421
Total	\$ 20,607	\$ 19,201	\$ 21,503	\$ 25,159

Sincerely,

Linda Byron, FSA, FCIA
Senior Partner

Encl.

cc: Ms. Jeanette Briggs, IESO
Mr. Kevin Reid, IESO
Mr. John Radich, Aon



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June 6, 2022
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Appendix A

Independent Electricity System Operator Funding Projection for 2022-2025 (in CDN \$000s)

	2022 ^{1 2}	2023	2024	2025
Going Concern (BOY)				
Actuarial Value of Assets (net of PYCB) ³	708,836	722,185	752,362	787,095
Liabilities	<u>675,399</u>	<u>688,679</u>	<u>725,539</u>	<u>751,549</u>
Funded Position as at January 1	33,437	33,506	26,822	35,545
Discount Rate	5.50%	5.50%	5.50%	5.50%
Inflation Rate	2.00%	2.00%	2.00%	2.00%
Provision for Adverse Deviations (PfAD)	7.84%	7.84%	7.84%	7.84%
Mortality Table	95% CPM Public 2014 with projection MI-2017			
Solvency (BOY)				
Market Value of Assets (net of PYCB)	754,164	697,938	735,308	775,100
Liabilities	<u>672,200</u>	<u>670,395</u>	<u>702,911</u>	<u>702,911</u>
Funded Position as at January 1	81,964	27,543	32,397	72,189
Discount Rate - CV	2.1% for 10 years; 3.1% thereafter			
Discount Rate - Annuity Purchase	2.86%			
Mortality Table	CPM Combined 2014 with projection CPM-B			
Contributions				
Total Normal Cost	24,281	25,130	26,010	26,920
Employee Contributions	<u>9,473</u>	<u>9,810</u>	<u>10,159</u>	<u>10,521</u>
Employer Normal Cost	14,808	15,320	15,851	16,400
Contribution exempt under transitional rule	-	-	-	-
Going Concern Special Payments	-	-	-	-
Solvency Special Payments	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
Minimum Required Contributions	14,808	15,320	15,851	16,400
Funding Policy Recommended Contribution	14,808	15,320	15,851	16,400
Prior Year Credit Balance	-	-	-	-
Total Expected Company Contributions	14,808	15,320	15,851	16,400
Notes				
1. Solvency results based on Q4 2021 dashboard results				
2. Next valuation required as at January 1, 2022				
3. Asset gains/losses smoothed over 3 years. Asset expected to return 5.50% per annum for 2022 through 2025.				



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June 6, 2022
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Appendix B

Independent Electricity System Operator

PSAB Expense Projection for FY2022-2025 (in CDN \$000s)

Salary Scale	3.50%	3.50%	3.50%		
Inflation	2.00%	2.00%	2.00%		
Mortality	CPM Public MI-2017	CPM Public MI-2017	CPM Public MI-2017		
Fiscal 2022 Expense					
Discount Rate	5.50%	3.40%	3.40%		
Expected Return on Assets	5.50%	n/a	n/a		
Current Service Cost	\$ 13,063	\$ 1,361	\$ 7,107	\$ 21,531	
Interest Cost	34,919	1,428	5,215	41,562	
Expected Return on Plan Assets	(38,037)	-	-	(38,037)	
Amortization of Net Actuarial Loss (Gain)	(4,149)	603	(903)	(4,449)	
Net expense (income)	\$ 5,796	\$ 3,392	\$ 11,419	\$ 20,607	
Fiscal 2023 Expense					
Discount Rate	5.50%	4.30%	4.30%		
Expected Return on Assets	5.50%	n/a	n/a		
Current Service Cost	\$ 13,718	\$ 1,144	\$ 5,553	\$ 20,415	
Interest Cost	36,214	1,594	5,768	43,576	
Expected Return on Plan Assets	(39,150)	-	-	(39,150)	
Amortization of Net Actuarial Loss (Gain)	(3,383)	156	(2,413)	(5,640)	
Net expense (income)	\$ 7,399	\$ 2,894	\$ 8,908	\$ 19,201	
Fiscal 2024 Expense					
Discount Rate	5.50%	4.30%	4.30%		
Expected Return on Assets	5.50%	n/a	n/a		
Current Service Cost	\$ 14,192	\$ 1,184	\$ 5,803	\$ 21,179	
Interest Cost	37,738	1,637	6,123	45,498	
Expected Return on Plan Assets	(40,458)	-	-	(40,458)	
Amortization of Net Actuarial Loss (Gain)	(2,590)	146	(2,272)	(4,716)	
Net expense (income)	\$ 8,882	\$ 2,967	\$ 9,654	\$ 21,503	
Fiscal 2025 Expense					
Discount Rate	5.50%	4.30%	4.30%		
Expected Return on Assets	5.50%	n/a	n/a		
Current Service Cost	\$ 14,683	\$ 1,226	\$ 6,064	\$ 21,973	
Interest Cost	39,232	1,681	6,497	47,410	
Expected Return on Plan Assets	(41,119)	-	-	(41,119)	
Amortization of Net Actuarial Loss (Gain)	(1,101)	136	(2,140)	(3,105)	
Net expense (income)	\$ 11,695	\$ 3,043	\$ 10,421	\$ 25,159	

OEB STAFF INTERROGATORY 6

ISSUE 1: Revenue Requirement, Operating Costs and Capital Spending

1.0-OEB STAFF-6

INTERROGATORY

Reference:

- a. Exhibit D / Tab 2 / Schedule 1 / p. 2
- b. Exhibit F / Tab 1 / Schedule 1 / p. 2

Preamble:

In Exhibit D-2-1, the IESO explains market interest income earned on funds passing through the IESO wholesale market, in accordance with the Market Rules. The IESO identifies that approximately 50% of the 2022 operating surplus was due to upside in interest income caused by higher overnight interest rates, earned on the volume of funds described in reference a.

Questions:

- a) Please elaborate on the nature of funds that the IESO holds, in accordance with the Market Rules, and earns short-term interest income. What are the drivers that can cause the volume of funds to fluctuate month-to-month and year-over-year? Does the IESO forecast this volume within its business processes? If so, please comment on how accurate the IESO's previous forecasts have been compared to actuals. For example, has the IESO tended to over-forecast or under-forecast market interest income on funds?
- b) Of the reported 2022 \$6.5 million higher than budget gain on short-term investment income, approximately what proportion was due to higher than plan interest rates and what proportion was due to the IESO holding a higher than plan volume of funds that earned interest?

RESPONSE

- a) The IESO oversees and reconciles more than \$22 billion in funds from the IESO-administered markets, related services, programs and electricity charges. In this

1 settlement process, the IESO earns short-term interest on the market funds held for two
2 business days in accordance with the market settlement calendar. Accordingly, the
3 drivers that can cause the volume of funds to fluctuate month-to-month and year-over-
4 year are primarily related to changes in demand volumes (e.g. resulting from weather,
5 consumer patterns, exports) and energy price. The IESO does forecast interest income
6 within its business processes based on historical trends of market funds volume and
7 interest rates. It is to be expected that the IESO's forecast will fluctuate both over and
8 under depending on market conditions. In addition, actual interest rates versus interest
9 rate projections by Canadian major banks used in the business plan can drive
10 fluctuations to market interest income projections in the business plan. The IESO uses
11 the best information available in its projection but given that interest rate and volumes
12 are uncontrollable factors; historically interest income has been under-forecasted.

- 13 b) \$4.4 million was due to higher than planned interest rates and \$2.1 million was due to
14 higher than planned volume of funds related to market conditions.

OEB STAFF INTERROGATORY 7

ISSUE 1: Revenue Requirement, Operating Costs and Capital Spending

1.0-OEB STAFF-7

INTERROGATORY

Reference:

a. EB-2022-0318 Exhibit D / Tab 1 / Schedule 3 / Table 1

b. EB-2022-0002 Exhibit B / Tab 1 / Schedule 2 / p. 20

Preamble:

In Exhibit D-1-3 Table 1, the IESO provides actual and planned FTEs. Reference b. provides the planned FTE levels from the previous Business Plan for the overlapping years.

Questions:

a) Please complete the following table, correcting any inadvertent transcription errors.

Table 1: FTE Additions, Actual and Plan – 2022 to 2025

	2022 Plan	2022 Actual	2023 YTD	2023 Plan	2024 Plan	2025 Plan
Gross FTE additions	N/A			N/A	N/A	N/A
Net FTE increase	53	25		115	12	(26)
Year-End Total FTEs	827	799	N/A	914	926	900

b) Please confirm if the IESO still maintains a 2023 FTE year-end target of 914. If the IESO deems this target achievable, please explain this assessment in light of the IESO reporting fewer FTEs than in the OEB approved plan in all historical years reported in Table 1 of D-1-3. If the IESO has revised the FTE target for 2023, what is the new

target and what is the approximate impact on revenue requirement in 2023, 2024, and 2025?

- c) What would be the approximate impact on Revenue Requirement in each of 2023, 2024, and 2025 if only 50% of the 2023 FTE increase was met? 75%? OEB staff would be satisfied with an approximate "order of magnitude" or "percentage" response.
- d) Please explain the decision-making process and main factors that led the IESO to increase the budget FTE for 2023 from the 2022-2024 Business Plan of 852 to the current business plan amount of 914.

RESPONSE

- a) Please see Table 1 below. IESO has corrected the heading of Net FTE increase and Year-End FTEs to Average Net increase and Average Full Year to be consistent with the reporting of average FTEs in the Business Plan and throughout the evidence provided in this application:

Table 1: FTE Average Additions, Actual and Plan – 2022 to 2025

	2022 Plan	2022 Actual	2023 YTD May	2023 Plan	2024 Plan	2025 Plan
Gross FTE additions	N/A	105	76	N/A	N/A	N/A
Average Net FTE increase	53	25	34	115	12	(26)
Average Year-End Total FTEs	827	799	N/A	914	926	900

- b) The IESO expects to reach the planned FTEs by end of 2023 and therefore expects the 2024 and 2025 headcount to be on target. The IESO has taken the following actions to support the acquisition of talent:
- Increased the Talent Management team by two Talent Acquisition Advisors to assist with the volume of requisitions;
 - Expanded the candidate pool, by:

- i. Promoting the IESO's Greater Toronto Area Top Employer Award and Canadian Human Resources Excellence Award for Learning and Development Strategy
 - ii. Profiling employees and their stories on the new Careers Page and LinkedIn
 - iii. Attending university career fairs for new graduates
 - iv. Expanding partnerships with educational institutions
 - v. Leveraging recruitment agencies for hard-to-fill roles
 - vi. Implementing actions consistent with IESO's Employee Value Proposition
 - vii. Offering a hybrid work model
 - viii. Posting roles on sites for underrepresented populations (e.g. Pride at Work)
- c) The annual impact would be approximately \$7 million if only 50% of the 2023 operating FTE increase was met (excluding FTE for capital projects which do not contribute to current year revenue requirement), and approximately \$3 million if 75% of the FTE increase was met.
- d) The main factor that led the IESO to increase the FTE budget for 2023, from the 2022-2024 Business Plan is the delivery of the refreshed Corporate Strategy. As per Exhibit D-1-3, page 1, lines 9-11, for 2023, the IESO has a budget of 914 FTEs to deliver on key initiatives that are critical to maintaining its core operations, to support the significant transformation of the electricity sector, and to support the Market Renewal Program.

OEB STAFF INTERROGATORY 8

ISSUE 1: Revenue Requirement, Operating Costs and Capital Spending

1.0-OEB STAFF-8

INTERROGATORY

Reference:

a. Exhibit D / Tab 1 / Schedule 3 / p. 1-2

Preamble:

Exhibit D-1-3 provides details regarding operating expenses and average number of employees, both capital and operating.

Questions:

- a) Please fill in the table below to show only the number of FTEs and staff compensation that correspond to the operations expense budget.

Table 1: Staffing Compensation from Operating Budget

	2022 Budget	2022 Actual	2023 Budget	2024 Budget	2025 Budget
Average Number of Employees (Operating Expenses FTEs)					
Executive					
Management					
Non-Management Regular					
Non-Management Temporary					
Total					
Total Compensation for Operating Expenses (\$M) (Salary, Wages & Benefits)					
Executive					

Management					
Non-Management Regular					
Non-Management Temporary					
Total					
Compensation per Average Operating Employee					
Executive					
Management					
Non-Management Regular					
Non-Management Temporary					
Total					

- b) Based on the table in a), please provide reasons for any changes in operations-related compensation per average employee from 2022 actual to and between the budgets in 2023, 2024, and 2025.
- c) Please fill in the table below to show only the average number of FTEs and staff compensation that correspond to the capital expense budget.

Table 2: Staffing Compensation from Capital Budget

	2022 Budget	2022 Actual	2023 Budget	2024 Budget	2025 Budget
Average Number of Employees (Capital Expenses FTEs)					
Executive					
Management					
Non-Management Regular					
Non-Management Temporary					
Total					
Total Compensation for Capital Expenses (\$M) (Salary, Wages & Benefits)					

Executive					
Management					
Non-Management Regular					
Non-Management Temporary					
Total					
Compensation per Average Capital Employee					
Executive					
Management					
Non-Management Regular					
Non-Management Temporary					
Total					

- d) Based on the table in c), please provide reasons for any changes in capital-related compensation per average employee from 2022 actual to and between the budgets in 2023, 2024, and 2025.
- e) If applicable, please describe the reasons for any differences between the average budget compensations calculated for capital versus operating employees.

RESPONSE

- a) The number of FTEs and staff compensation that correspond to the operations expense budget is in Table 1 below:

Table 1: Staffing Compensation from Operating Budget

	2022 Budget	2022 Actual	2023 Budget	2024 Budget	2025 Budget
Average Number of Employees (Operating Expenses FTEs)					
Executive	8	8	8	8	8
Management	135	129	147	146	148
Non-Management Regular	506	498	533	559	578
Non-Management Temporary	53	54	75	75	57
Total	702	690	763	789	790
Total Compensation for Operating Expenses (\$M) (Salary, Wages & Benefits)					
Executive	4.7	4.8	4.7	4.8	4.8
Management	29.0	26.9	30.5	31.4	32.4
Non-Management Regular	89.1	92.4	91.4	97.4	103.3
Non-Management Temporary	6.7	8.2	10.6	11.3	9.3
Total	129.5	132.3	137.3	144.8	149.8
Compensation per Average Operating Employee					
Executive	0.6	0.6	0.6	0.6	0.6
Management	0.2	0.2	0.2	0.2	0.2
Non-Management Regular	0.2	0.2	0.2	0.2	0.2
Non-Management Temporary	0.1	0.2	0.1	0.1	0.2
Total	0.2	0.2	0.2	0.2	0.2

- b) There is no material change in operations-related compensation per average employee from 2022 actual to 2023, 2024, and 2025. The operations-related compensation per average employee in the Non-Management Temporary category is slightly lower in 2023 and 2024 primarily due to the lower budgeted compensation for the incremental temporary resources added in 2023 and 2024.
- c) The number of FTEs and staff compensation that correspond to the capital expense budget is in Table 2 below:

Table 2: Staffing Compensation from Capital Budget

	2022 Budget	2022 Actual	2023 Budget	2024 Budget	2025 Budget
Average Number of Employees (Capital Expenses FTEs)					
Executive	0	0	0	0	0
Management	9	10	10	9	6
Non-Management Regular	79	75	108	107	89
Non-Management Temporary	37	24	33	21	15
Total	125	109	151	138	110
Total Compensation for Capital Expenses (\$M) (Salary, Wages & Benefits)					
Executive	0	0	0	0	0
Management	2.0	2.6	2.2	2.0	1.3
Non-Management Regular	13.2	16.0	17.7	17.6	15.3
Non-Management Temporary	4.9	2.8	4.6	3.4	2.1
Total	20.0	21.4	24.5	22.9	18.7
Compensation per Average Capital Employee					
Executive	0	0	0	0	0
Management	0.2	0.3	0.2	0.2	0.2
Non-Management Regular	0.2	0.2	0.2	0.2	0.2
Non-Management Temporary	0.1	0.1	0.1	0.2	0.1
Total	0.2	0.2	0.2	0.2	0.2

- d) There is no material change in capital-related compensation per average employee from 2022 actual to and between the budgets in 2023, 2024, and 2025. The compensation per average employee in Management in 2022 is related to the mix of staff allocating time to capital activities in 2022.
- e) There is no material difference between the average budget compensations calculated for capital versus operating employees.

OEB STAFF INTERROGATORY 9

ISSUE 1: Revenue Requirement, Operating Costs and Capital Spending

1.0-OEB STAFF-9

INTERROGATORY

Reference:

- a. Exhibit E / Tab 2 / Schedule 1 / Table 1
- b. Exhibit E / Tab 2 / Schedule 1 / p. 1-3
- c. Exhibit G / Tab 2 / Schedule 1/ p. 6-7

Preamble:

In the above references, the IESO reports that it has underspent its capital plan in all reported years. Reference b. primarily cites reasons associated with the non-MRP capital plan. These include: the deferral of procurements in 2019 and 2020; delays in initiating projects in 2021; changes in timing of hardware purchases, reductions in vendor pricing, extending timelines, and delays from vendors in 2022. The IESO also notes in reference b. that some of the underspend was offset by working within its capital envelope to work on a new high priority project in 2020. Similar project re-prioritization is cited in 2021 and 2022, offsetting the underspend in the respective years.

In references b. and c., the IESO details MRP related underspending, including the cancellation of work that was included in the 2019 OEB approved capital expenditure budget and delayed onboarding, and unused contingency in 2020. For 2022, the IESO states work related to market rules and manuals were completed with lower than planned costs, and that other work was completed with fewer person-hours than planned.

Based on the filed evidence, OEB staff note that the IESO has been approved a cumulative capital expenditures budget of approximately \$235 million for the 2019 to 2022 period, inclusive. OEB staff note that reported capital expenditures for the same period are approximately \$195 million. These figures include the cancelled Incremental Capacity Auction, since the OEB approved related amounts for capital expenditure and the IESO subsequently reported expenditures. OEB staff note that the IESO has underspent its cumulative OEB approved capital budget for 2019 to 2022, inclusive, by approximately 17%.

Questions:

- a) Exhibit E-2-1, on page 2 at lines 18 to 20, identifies that the 2021 actual MRP capital expenditure was \$12 million lower than the OEB approved amount, and directs to Exhibit G-2-1 for details. OEB staff are unable to locate the explanation for this \$12 million variance in 2021 in Exhibit G-2-1. Please direct staff to the explanation in filed evidence that provides the details of this \$12 million underspend or provide it as a response to this interrogatory.
- b) In light of the consistent underspending on capital reported in the above references, please justify the requested capital expenditures for 2023, 2024, and 2025. What lessons has the IESO learned that it has applied to more appropriately budget capital expenditures in this application?
- c) What would be the usage fee impact in each of the requested years for each user type if the IESO reduced its capital expenditure budget by 10% in each of 2023, 2024, and 2025?
- d) If the IESO receives its requested usage fees and underspent its capital expenditure budget by 10% in each of 2023, 2024, and 2025 in the application period, what would be the resultant operating surplus in each of the years? An estimate or approximation would be sufficient to satisfy this interrogatory.

RESPONSE

- a) The \$12 million variance between the MRP 2021 actual capital expenditure and the 2021 OEB approved amount is shown in Table 4 in Exhibit G-2-1 of the IESO's 2022 Revenue Requirement Submission (EB-2022-0002) and is provided below:

Table 1 – Breakdown of 2021 MRP Variance

(\$ Millions)	2021 OEB Approved	2021 Actual	2021 Variance
Compensation & Benefits	13.3	11.8	(1.5)
Professional & Consulting	4.1	1.2	(2.9)
Operating & Administration	14.1	10.5	(3.6)
Interest	1.0	0.5	(0.5)
Subtotal	32.5	24.0	(8.5)
Contingency	3.5	-	(3.5)
Total Capital Expenses	36.0	24.0	(12.0)

2021 capital expenses were \$12.0 million lower than budgeted due to a set of variances including:

- Delays in gathering business and vendor requirements, which resulted in the deferral of internal and external IT implementation costs;
- Reduced contractor costs;
- Lower corporate funding rates resulting in lower interest expense; and
- Unused contingency.

b) A number of factors have contributed to the historical underspend, including: (i) availability of critical project resources to advance projects at the expected rate leading to extended project timelines and outlays of capital expenses; (ii) contingency allocation at a portfolio level; and (iii) project intake process inefficiencies.

As a result of an ongoing assessment of past practices the IESO has applied the following lessons learned in preparation of the capital budget included in the 2023-2025 Business Plan:

- 1 1. Resource management tools and supporting processes have provided greater insight
2 into internal resource capacity and availability to support assigned projects within
3 the capital project portfolio;
- 4 2. The IESO has adopted a “risk and opportunity” approach to managing variances
5 throughout the year. Projected overruns (risks) can be managed by deferring or de-
6 scoping less critical or lower priority work. Projected underspends (opportunities)
7 can be managed by advancing work from later years, funding continuous
8 improvement and smaller initiatives, or undertaking new priority work that was
9 unbudgeted when the capital budget was established.
- 10 3. Project intake and initiation processes have been improved to enhance awareness of
11 dependencies between initiatives by bringing an enterprise-wide view earlier in the
12 project lifecycle, and to ensure projects move to the Planning Phase at the
13 appropriate time.
- 14 c) A 10% reduction in capital expenditure budget in each of 2023, 2024, and 2025 would
15 have no material impact on the usage fees in 2023, 2024 and 2025, since the fees are
16 only impacted by the amortization of specific capital projects that are planned to be
17 placed into service within the 3-year planning horizon.
- 18 d) As explained c) above, a reduction in capital spend does not translate directly into
19 operating expense savings within the 2023-2025 budget and therefore does not directly
20 result in surplus in 2023-2025.

OEB STAFF INTERROGATORY 10

ISSUE 1: Revenue Requirement, Operating Costs and Capital Spending
1.0-OEB STAFF-10

INTERROGATORY

Reference:

- a. Exhibit E / Tab 2 / Schedule 1 / Table 2
- b. Exhibit E / Tab 2 / Schedule 1 / p. 8

Preamble:

In E-2-1, the IESO provides details on material capital projects, which are those with total project costs that exceed a \$4 million threshold. Further, the IESO states that it focuses is project measures on the advancement of strategic initiatives.

Questions:

- a) Please confirm which of the projects in reference a. are deemed strategic initiatives.
- b) Please also confirm whether there are any projects that are deemed strategic initiatives that do not meet the \$4 million threshold to be also deemed material projects. If there are strategic initiatives that do not meet the threshold for a material project, please identify those projects. What is the capital budget for these projects for 2023, 2024, and 2025?

RESPONSE

a) Strategic initiatives in reference a. are listed below:

- MRP
- Replacement of the Settlement Systems
- Dynamic Limits in Real Time
- Enabling Resources Program
- Resource Adequacy Program
- Space Needs Program
- Enabling Grid Transformation Program

- b) Strategic initiatives that do not meet the \$4 million threshold with their respective budgets for 2023, 2024, 2025 are listed below:

Table 1 – Strategic Initiatives Under \$4 Million

Projects (\$ millions)	2023 Budget	2024 Budget	2025 Budget
PMU Integration - Phase 3	1.0	1.0	1.0
Data Excellence Program	0.5	0.8	0.5
Addressing Market Surveillance Panel (MSP) Recommendations	1.2	0.4	0.5

OEB STAFF INTERROGATORY 11

ISSUE 1: Revenue Requirement, Operating Costs and Capital Spending

1.0-OEB STAFF-11

INTERROGATORY

Reference:

a. Exhibit E / Tab 2 / Schedule 1 / Table 2

b. Exhibit E / Tab 2 / Schedule 1 / p. 8

c. Exhibit A / Tab 1 / Schedule 5 / p. 5-6

d. Exhibit E / Tab 2 / Schedule 1 / Attachment 1 – Capital Projects (Appendix 2-AA

Preamble:

In reference b., the IESO states that it focuses project measures on the advancement of strategic initiatives. Further, the IESO states that the remainder of the capital portfolio is made up of core business projects. Although important and often mandatory, there is often discretion on the timing of execution of these core business projects.

In reference a., the IESO provides the total capital budgets in each of 2023, 2024, and 2025, providing figures for “the IESO core project portfolio” and “for the MRP.” In this reference, the core project portfolio budget is the balance of the annual capital budget that is not related to MRP. For example: “For 2023, the IESO’s capital budget is \$86 million, including \$35 million for the IESO core project portfolio and \$51 million for the MRP.” Reference c. identifies specific projects, other than MRP, that are categorized as strategic initiatives.

Questions:

- a) Please resolve the apparent discrepancy between references a. and c. by identifying each of the projects in reference d. that are deemed a strategic initiative, and thus subject to focused project measures, and each of those that are deemed core business projects, and thus subject to discretion on the timing of execution.

RESPONSE

- a) Although the terminology appears similar in the two references, they are two different concepts. The core project portfolio consists of all capital projects that are “non-MRP” and is composed of both “Core Business Projects” which are those initiatives which maintain critical business services and compliance with regulatory requirements, and “Strategic Initiatives” which are those initiatives which advance the corporate strategy. Please see the classification in projects below:

Table 1 – Classification of Capital Projects

Capital Projects (\$ Millions)	Strategic Initiatives vs Core Business Project
Replacement of the Settlement Systems	Strategic Initiative
Data Excellence Program	Strategic Initiative
Wide Area Visualization Environment (WAVE) - Phase 2	Core Business Project
Enabling Resources Program	Strategic Initiative
Addressing Market Surveillance Panel (MSP) Recommendations	Strategic Initiative
Dynamic Limits in Real-Time	Strategic Initiative
Enterprise Antivirus Replacement	Core Business Project
Resource Adequacy Program	Strategic Initiative
Market Analysis and Simulation Toolset (MAST)	Core Business Project
Long Term Demand Forecast Tool Replacement	Core Business Project
Core Network Refresh	Core Business Project
PMU Integration - Phase 3	Strategic Initiative
Space Needs Program	Strategic Initiative
Backup Operating and Data Centres Relocation Project	Core Business Project
Meter Data Management System Replacement (MDMS)	Core Business Project
Enabling Grid Transformation Program	Strategic Initiative
Lawson Refresh	Core Business Project
Firewall Refresh	Core Business Project
Data Loss Prevention (DLP) Phase 2	Core Business Project
Windows Infrastructure Refresh	Core Business Project
MIM Technical Refresh	Core Business Project
LogRhythm SIEM Refresh	Core Business Project
Network WAN Infrastructure	Core Business Project
Cybectec Refresh	Core Business Project
Aspen File Server Refresh	Core Business Project

Capital Projects (\$ Millions)	Strategic Initiatives vs Core Business Project
Intrusion Prevention System (IPS) Refresh	Core Business Project
Other Initiatives/Projects (Less than a \$1 million)	Mix of both
Market Renewal Program - Energy Program	Strategic Initiative

OEB STAFF INTERROGATORY 12

ISSUE 1: Revenue Requirement, Operating Costs and Capital Spending

1.0-OEB STAFF-12

INTERROGATORY

Reference:

- a. Exhibit A / Tab 2 / Schedule 2
- b. Exhibit A / Tab 2 / Schedule 2 / Attachment 1
- c. Exhibit A / Tab 2 / Schedule 2 / Attachment 2
- d. Exhibit E / Tab 2 / Schedule 1 / p. 8

Preamble:

In Exhibit A-2-2, the IESO states that it has developed a new balanced scorecard to more closely align with key initiatives within the organization. Attachment 1 provides the 2023-2025 performance measures. Attachment 2 provides the 2022 performance measures results.

Questions:

- a) Please confirm that the IESO will no longer use the internal performance metrics in reference c. and that the IESO will only use those in reference b. If this is not the case, please list all the performance measures on the IESO's scorecard for 2023, 2024, and 2025.
- b) If part a) is confirmed, please reconcile the apparent discrepancy between the statement of focusing metrics on strategic initiatives and removing the metric for overall schedule adherence of strategic initiatives. If OEB staff's interpretation is incorrect, please identify the internal performance measure(s) that are a part of the IESO's balanced scorecard that will monitor overall performance of executing strategic initiatives.

RESPONSE

a) Confirmed.

b) As a corporate performance measure, the strategic initiatives schedule adherence measure was providing limited value as it was capturing a small number of initiatives within a narrow definition. This led to under performance in one or two initiatives having an outsized impact on the overall results without consideration for the size, complexity or relative priority. The IESO has moved away from the measure providing limited value for the IESO's Strategic Initiatives. The new measures are at a higher level to capture the broader impacts/outcomes of strategic initiatives across the organization. The new measures for 2023-2025 align with outcomes of the refreshed strategy released in 2022 and business plan priorities centered on individually measuring the three largest corporate initiatives that will drive strategy towards intended outcomes:

- Market Renewal
- Resource Adequacy; and
- Enabling Resources

These measures of significant programs underway at the IESO provide a proxy on effectiveness of execution.

REASCWA INTERROGATORY 1

Issue 1.0 Revenue Requirement, Operating Costs and Capital Spending

1.1 Is the IESO's Fiscal Year 2023 revenue requirement of \$208.4 million appropriate?

1.2 Is the IESO's Fiscal Year 2024 revenue requirement of \$218.4 million appropriate?

1.3 Is the IESO's Fiscal Year 2025 revenue requirement of \$229.7 million appropriate?

1.0-REASCWA-1

INTERROGATORY

Reference: Exhibit D, tab 1, schedule 2, pages 2-3

Reference: Exhibit D, tab 1, schedule 2, attachment 1

Preamble:

The IESO has budgeted \$75.5 million in operating expenses for its Planning, Conservation and Resource Adequacy business unit. The IESO is in the midst of designing, launching, and running multiple resource procurements, including through the Medium-term, Expedited Long-term, and Long-term RFPs; the small hydro re-contracting initiative; the Same Technology Upgrade solicitation; the capacity auction, etc. The importance of these various initiatives to Ontario's electricity supply needs makes it is essential that the IESO is appropriately resourced to deliver the full potential of these procurements. At the same time, budgets under this business unit have increased considerably over the last five years.

Questions:

- a) Please provide the IESO's forecast and historical expenditures for each of the supply adequacy/procurement initiatives that are currently underway or being developed – that is to say, a budget breakdown per procurement initiative (e.g., MT RFP, E LT-1 RFP, LT-1 RFP, LT-2 RFP, small hydro recontracting, same

technology upgrade, annual capacity auction, etc.)

b) Please describe how the IESO has established the budget for each supply adequacy/ procurement initiative for 2023, 2024, and 2025.

c) Please describe what impact, if any, the delays to the conclusion of some supply adequacy/procurement initiatives have had or will have on the three-year Planning, Conservation and Resource Adequacy budget.

d) Please explain why the 2025 budgeted cost of \$24.9 million remains considerably higher than the 2020, 2021 and 2022 actuals (\$14.8 million, \$18.9 million, \$21.7 million, respectively), even as the temporary resources that the IESO has added to support resource and transmission adequacy initiatives in 2022, 2023, and 2024 "come to term".

RESPONSE

a) The IESO does not do activity-based accounting and is therefore unable to provide the expenditures for each initiative as requested. In-year tracking and forecasting is done on a business unit basis. Please see the response to 1.0 ED Interrogatory 1 a) for information on procurement initiatives.

b) To establish the O&M budget for the supply adequacy and procurement initiatives, the IESO bases its forecasts on the expected number of procurements based on the needs forecasted in the Annual Planning Outlook and the Annual Acquisition Report and leverages its past procurement experience.

c) Delays in the to the conclusion of some supply adequacy/procurement initiatives will not have a material impact on the three-year Planning, Conservation and Resource Adequacy budget.

d) The 2025 budgeted costs remain higher than the 2020, 2021 and 2022 actuals to account for the cumulative impact in compensation and benefits increases, including on the incremental headcount added over 2023-2025 for ongoing work, in addition to inflation impact on core work services.

REASCWA INTERROGATORY 2

Issue 1.0 Revenue Requirement, Operating Costs and Capital Spending

1.7 Is the IESO's 2023 capital expenditure budget of \$86.0 million appropriate?

1.8 Is the IESO's 2024 capital expenditure budget of \$75.9 million appropriate?

1.9 Is the IESO's 2025 capital expenditure budget of \$58.2 million appropriate?

1.0-REASCWA-2

INTERROGATORY

Reference: Exhibit E, tab 2, schedule 1, attachment 9, page 4

Preamble:

With Ontario's growing electricity supply needs, the IESO is undertaking a series of supply procurements, including a number of RFPs, the small hydro re-contracting initiative, the Same Technology Upgrades solicitation, etc. To date these processes have yielded over 1500 MW of capacity under contract. The IESO has also successfully secured capacity via the annual capacity auction.

Regarding the capital expenditure budget for the capacity auction enhancements project, the IESO has estimated a \$3.3 million capital cost for a forward capacity auction. The IESO notes that the status of the forward capacity auction is "not initiated", and at a January 26, 2023 webinar/stakeholder the IESO stated that "In light of other ongoing procurement activities, updated capacity needs assessments and recent annual capacity auction results, the benefits of an enhanced capacity auction with multi-year commitments may not be fully realized if pursued at this time. As such, further design activities on the proposed Forward Capacity Auction will be suspended until a time that the role and benefits this procurement mechanism can offer can be explored within the context of the Resource Adequacy Framework." (<https://ieso.ca/-/media/Files/IESO/Document-Library/engage/cae/cae-20230126-presentation.ashx> , slide 33).

Questions:

- 1
- 2 a) Please explain why the IESO continues to include a cost estimate for the forward
- 3 capacity auction if design activities have been suspended until further notice.
- 4 b) Please describe the IESO's current views with respect to the need for a forward
- 5 capacity auction, especially in light of the IESO's May 16, 2023 announcement
- 6 of the selected proponents for the non-storage category and storage category
- 7 1 of the E-LT1 RFP and of the agreements from the Same Technology Upgrades
- 8 Solicitation.
- 9 c) Please explain what circumstances, metrics, or guidelines the IESO is using to
- 10 determine the appropriateness and timing of revisiting the development of a
- 11 forward capacity auction.
- 12

13 **RESPONSE**

- 14 a) The IESO continues to explore and assess the benefits of various supply procurements,
- 15 including the use of a forward capacity auction, and how they can contribute to ensuring
- 16 resource adequacy in conjunction with other ongoing Resource Adequacy Framework
- 17 procurement initiatives.
- 18 b) The IESO continues to believe that a forward capacity auction, if implemented, together
- 19 with an annual capacity auction could provide greater certainty while maintaining the
- 20 shorter term flexibility that the auction provides. This type of opportunity might work for
- 21 suppliers who may have an expiring contract, who may be awaiting an upcoming
- 22 request for proposals process, or who may prefer a shorter capacity commitment than is
- 23 provided by a contract. The progress in the E-LT1 RFP and the Same Technology
- 24 Upgrades Solicitation do not impact this view.
- 25 c) While no specific criteria have been established to revisit the development of the
- 26 Forward Capacity Auction, the IESO continues conversations with stakeholders through
- 27 the Capacity Auction Engagement to inform the evolution of the changes that improve
- 28 the commitment certainty and liquidity of the auction.

SUP INTERROGATORY 1

Issue 1.1 Is the IESO's Fiscal Year 2023 revenue requirement of \$208.4 million appropriate?

Issue 1.2 Is the IESO's Fiscal Year 2024 revenue requirement of \$218.4 million appropriate?

Issue 1.3 Is the IESO's Fiscal Year 2025 revenue requirement of \$229.7 million appropriate?

1.0-SUP-1

INTERROGATORY

Preamble: Reference: C-2-1 p1 lns24-25

"the IESO continues to realize efficiencies by examining its long-term office space needs".

Questions:

a) Please explain as well as provide details on this examination of IESO's long-term office space needs.

b) Please provide the resulting annual cost savings resulting from this initiative for each of 2019 to 2025

RESPONSE

a) Under the IESO Space Needs Program the IESO continues to look for opportunities to optimize its office footprint and reduce operating costs. The introduction of a new office design, featuring Activity Based Work, will support the enduring Hybrid Work model and improve employee experience, providing opportunities to reduce the IESO's overall footprint and reduce operating costs. In late 2020, the IESO released space at its downtown offices at a cost saving of \$0.3 million by moving to unassigned seating. The IESO has an opportunity at the end of its current leases (October 2025) at the downtown and Oakville office locations to release additional space once the new office design is fully implemented across the office locations.

- 1 b) Operating cost savings to date are \$0.3 million per annum due to the release of space at
- 2 the downtown offices as described in the response to a) above. No further reductions to
- 3 operating costs are anticipated until 2026, with the amount of the reduction to be
- 4 determined by the amount of space released at that time.

SUP INTERROGATORY 2

Issue 1.4 Is the IESO's 2023 projected staffing levels and compensation (including salaries, benefits, pensions and other post-employment benefits) appropriate?

Issue 1.5 Is the IESO's 2024 projected staffing levels and compensation (including salaries, benefits, pensions and other post-employment benefits) appropriate?

Issue 1.6 Is the IESO's 2025 projected staffing levels and compensation (including salaries, benefits, pensions and other post-employment benefits) appropriate?

1.0-SUP-2

INTERROGATORY

Preamble: Reference: Exhibit D-1-3, Attachment 1 Appendix 2-K

Questions:

a) For each of the four categories (ie FTE's, Total Salary and Wages, Total Benefits, Total Compensation), please break out Non-Management Regular and Non-Management Temporary into Society and PWU represented employees.

b) In the table provided to answer part a) above, please separate out pension contributions from Total Benefits

c) Does Attachment 1 include compensation costs which are capitalized? If not, please provide a version of the table created to answer parts a) and b) above for capitalized labour costs.

d) Please provide the above in an excel spreadsheet.

RESPONSE

a) The requested analysis would be onerous to produce and the IESO is unable to undertake the requested additional analysis within the timeframe provided for interrogatories within this proceeding. The IESO would be required to undertake the

analysis manually as the IESO's financial software does not capture the requested detailed compensation information by jurisdiction (e.g. Management, Society and PWU). In an effort to be responsive, the IESO is able to provide Table 1 below which includes FTE and total compensation and benefits by representation - Management, Society and PWU.

Table 1 - FTE and Compensation by Representation

Average Full Time Equivalents (FTEs)	2019 Actual	2020 Actual	2021 Actual	2022 Budget	2022 Actual	2023 Budget	2024 Budget	2025 Budget
Executive	7	7	7	8	8	8	8	8
Management	129	134	147	144	139	158	155	154
Society	570	562	557	608	586	681	697	670
PWU	63	69	63	67	66	67	66	68
Total	769	772	774	827	799	914	926	900
Compensation & Benefits (\$ Millions)								
Executive/Board	4.3	4.4	4.4	4.7	4.7	4.7	4.8	4.8
Management	26.3	27.2	29.5	28.9	26.9	30.5	31.3	32.4
Society	82.8	84.2	84.9	87.2	91.4	92.7	99.1	102.7
PWU	9.9	10.0	8.1	8.7	9.3	9.3	9.6	9.9
Total	123.2	125.8	126.9	129.5	132.3	137.3	144.8	149.8

- b) See response to a) above.
- c) Compensation costs in Attachment 1 are operating only. No capitalized labour is included. For information on capitalized labour please see 1.0 OEB Staff Interrogatory 8
- c) Table 2.
- d) Given the condensed nature of Table 1 provided in response to a) above, an excel version was not required.

SUP INTERROGATORY 3

Issue 1.4 Is the IESO's 2023 projected staffing levels and compensation (including salaries, benefits, pensions and other post-employment benefits) appropriate?

Issue 1.5 Is the IESO's 2024 projected staffing levels and compensation (including salaries, benefits, pensions and other post-employment benefits) appropriate?

Issue 1.6 Is the IESO's 2025 projected staffing levels and compensation (including salaries, benefits, pensions and other post-employment benefits) appropriate?

1.0-SUP-3

INTERROGATORY

Preamble: Reference: D-1-3 Staffing and Compensation, p1 lns 5-8

The 2022 average FTEs of 799 was below 2022 OEB approved budget levels of 827 average FTEs as a result of labour market conditions which led to an increase in voluntary attrition and retirements beginning in late 2021 and continuing through 2022.

Questions:

- a) Further to the FTE breakout of Exhibit D-1-3, Attachment 1 Appendix 2-K as provided in reply to SUP #2, for 2019-2025 for each of Executive, Management, Society Regular, PWU Regular, Society Temporary and PWU Temporary, please provide voluntary attrition, non- voluntary attrition, retirements and new hires.

RESPONSE

- a) The table below provides the summary of attrition by jurisdiction.

Table 1 - Management

Year	Headcount in Jurisdiction	New Hires	Voluntary Resignation Count	Voluntary Resignation %	Retirement Count	Retirement %
2019	172	20	8	4.7%	2	1.2%
2020	160	9	9	5.6%	2	1.3%
2021	166	13	10	6.0%	4	2.4%
2022	163	12	10	6.1%	4	2%

1

2 **Table 2 - Power Workers Union**

Year	Headcount in Jurisdiction	New Hires	Voluntary Resignation Count	Voluntary Resignation %	Retirement Count	Retirement %
2019	82	7	4	4.9%	1	1.2%
2020	78	7	0	0.0%	2	2.6%
2021	86	14	5	5.8%	4	4.7%
2022	75	11	2	2.7%	5	7%

3 **Table 3 - Society of United Professionals**

Year	Headcount in Jurisdiction	New Hires	Voluntary Resignation Count	Voluntary Resignation %	Retirement Count	Retirement %
2019	672	53	15	2.2%	7	1.0%
2020	683	37	19	2.8%	6	0.9%
2021	689	56	17	2.5%	9	1.3%
2022	737	82	39	5.3%	12	2%

4

SUP INTERROGATORY 4

Issue 1.4 Is the IESO's 2023 projected staffing levels and compensation (including salaries, benefits, pensions and other post-employment benefits) appropriate?

Issue 1.5 Is the IESO's 2024 projected staffing levels and compensation (including salaries, benefits, pensions and other post-employment benefits) appropriate?

Issue 1.6 Is the IESO's 2025 projected staffing levels and compensation (including salaries, benefits, pensions and other post-employment benefits) appropriate?

1.0-SUP-4

INTERROGATORY

Preamble: Reference: D-1-3 Staffing and Compensation p2, Ins 9-13

*The 2023 budgeted operating compensation expense of \$137.3 million is \$5.0 million higher than 2022 due to \$10.7 million in hiring to support key initiatives, and \$2.6 million in collective agreement escalations. **These increases are partially offset by \$6.9 million of 2022 operating compensation expenses not planned to be repeated in 2023 (OPEB adjustment, severance and overtime), and \$1.4 million due to a lower pension and OPEB expense projection.***

Questions:

a) Please explain why the 2022 OPEB adjustment will not be repeated in 2023.

b) Please explain the partial offset of \$1.4 million due to a lower pension and OPEB expense projection.

c) Please provide the OPEB expense actuals for 2019 to 2022 and the projection for 2023 to 2025.

d) If the answer to b) includes an updated pension liability actuarial report please provide a copy of the updated report.

e) How often does IESO update its pension liability actuarial report?

RESPONSE

a) Please see the response to 1.0 OEB Staff Interrogatory 3 b) for the explanation of 2022 OPEB adjustment.

b) Please refer to response to 1.0 OEB Staff Interrogatory 4 a) for explanation of the partial offset of \$1.4 million due to a lower pension and OPEB expense projection.

c) Please refer to response to 1.0 OEB Staff Interrogatory 4 d) for OPEB expense actuals for 2022 and the projection for 2023 to 2025. For the 2019 to 2021, please refer to response to 1.3 OEB Staff Interrogatory 18 c) in EB-2020-0230 Exhibit 1 Tab 1.3 Schedule 1 filed September 9, 2021.

d) Please see the response to 1.0 OEB Staff Interrogatory 5 Attachment 1 and 2 for actuarial reports.

e) The IESO receives updated pension and OPEB liability projections from actuary twice a year.

SUP INTERROGATORY 5

Issue 1.4 Is the IESO's 2023 projected staffing levels and compensation (including salaries, benefits, pensions and other post-employment benefits) appropriate?

Issue 1.5 Is the IESO's 2024 projected staffing levels and compensation (including salaries, benefits, pensions and other post-employment benefits) appropriate?

Issue 1.6 Is the IESO's 2025 projected staffing levels and compensation (including salaries, benefits, pensions and other post-employment benefits) appropriate?

1.0-SUP-5

INTERROGATORY

Preamble: Reference: D-1-3 Staffing and Compensation p3, Ins1-3

The 2024 budgeted operating compensation expense of \$144.8 million is \$7.5 million higher than 2023 due to \$3.5 million in hiring to support key initiatives, \$2.8 million in collective agreement escalations, and \$1.8 million due to a higher pension and OPEB expense projection.

Reference: D-1-3 Staffing and Compensation p3, Ins6-7

The 2025 budgeted expense of \$149.8 million is \$5.0 million higher than 2024 due to \$3.7 million higher pension and OPEB expense projection ...

Questions:

a) Please explain the higher pension and OPEB expense projections in 2024 and 2025.

RESPONSE

a) Please see response to 1.0 OEB Staff Interrogatory 4 for explanation of higher pension and OPEB expense projections in 2024 and 2025.

1 **VECC INTERROGATORY 1**

2 Issue 1.0 Revenue Requirement, Operating Costs and Capital Spending

3 1.0-VECC-1

4 **INTERROGATORY**

5 Reference: Exhibit A, Tab 2, Schedule 2

6 Preamble:

7 Questions:

8 a) Please explain how the performance measures set out in Exhibit A affect the
9 compensation of IESO employees.

10

11 **RESPONSE**

12

13 a) Please see the response to 1.1 SEC Interrogatory 5 a).

VECC INTERROGATORY 2

Issue 1.0 Revenue Requirement, Operating Costs and Capital Spending

1.0-VECC-2

INTERROGATORY

Reference: Exhibit D, Tab1, Schedule 2

Preamble:

Questions:

a) Using Table 1 (Summary of OM&A for Business Units) please add an additional two rows for each business unit showing the allocated internal FTEs in each business unit for each year and, separately, the contractor FTEs.

b) Please add two additional rows for each business unit which delineate the costs as between labour/compensation related and other OM&A costs.

RESPONSE

a) The IESO does not budget for contractor FTEs. For the FTEs by business unit, see response to 1.0 EDA Interrogatory 3 d).

b) See Table 1 below for OM&A cost breakdown by business unit to show compensation and benefits separate from other OM&A. Note that due to the organization restructuring in 2021, the requested breakdown for prior to 2021 would be onerous to produce and the IESO is unable to undertake the requested additional analysis within the timeframe provided for interrogatories within this proceeding.

1 **Table 1: OM&A breakdown by Business Unit**

(\$ Millions)	2019 Actual	2020 Actual	2021 Actual	2022 Actual	2023 Budget	2024 Budget	2025 Budget
Markets & Reliability	31.1	35.7	36.0	34.5	37.4	39.1	40.7
Compensation & Benefits			35.5	33.5	36.1	38.0	39.6
Other OM&A			0.5	1.0	1.3	1.1	1.1
Planning, Conservation and Resource Adequacy	15.1	14.8	18.9	21.7	24.4	26.2	24.9
Compensation & Benefits			18.5	20.2	22.9	24.6	23.5
Other OM&A			0.4	1.5	1.5	1.6	1.4
Corporate Relations, Stakeholder Engagement and Innovation	15.9	15.6	12.8	14.6	15.1	15.8	16.9
Compensation & Benefits			10.6	11.2	11.9	12.9	14.0
Other OM&A			2.2	3.4	3.2	2.9	2.9
Information and Technology Services	40.6	40.0	40.9	43.0	46.8	49.4	51.6
Compensation & Benefits			18.4	18.8	20.7	21.8	22.7
Other OM&A			22.5	24.2	26.1	27.6	28.9
Legal Resources and Corporate Governance	24.6	24.5	25.6	25.9	28.2	30.5	32.2
Compensation & Benefits			13.9	12.9	14.4	15.6	16.4
Other OM&A			11.7	13.0	13.8	14.9	15.8
Market Assessment and Compliance Division	1.8	1.4	1.3	1.3	2.4	2.5	3.7
Compensation & Benefits			1.3	1.3	1.4	1.5	2.7
Other OM&A			0.0	0.0	1.0	1.0	1.0
CEO Office	1.8	1.6	1.8	2.2	1.5	1.5	1.6
Compensation & Benefits			1.5	1.3	1.2	1.3	1.3
Other OM&A			0.3	0.9	0.3	0.2	0.3
Corporate Services	26.5	27.6	27.7	27.7	29.3	30.2	31.5
Compensation & Benefits			17.6	16.7	17.5	18.4	19.9
Other OM&A			10.1	11.0	11.8	11.8	11.6
Human Resources	4.2	4.3	4.9	5.5	6.2	6.4	6.4
Compensation & Benefits			3.6	4.0	4.3	4.3	4.5
Other OM&A			1.3	1.5	1.9	2.1	1.9
Market Renewal	8.6	2.1	3.0	4.6	5.3	4.4	2.5
Compensation & Benefits			2.4	4.0	3.8	3.1	2.0
Other OM&A			0.6	0.6	1.5	1.3	0.5
Corporate Adjustment	7.0	3.7	1.5	6.0	0.7	0.6	(0.1)
Compensation & Benefits			3.6	8.4	3.3	3.3	3.3
Other OM&A			(2.1)	(2.4)	(2.6)	(2.7)	(3.4)
Total OM&A Expenses	177.2	171.3	174.3	187.0	197.3	206.6	211.9

1 **VECC INTERROGATORY 3**

2 Issue 1.0 Revenue Requirement, Operating Costs and Capital Spending

3 1.0-VECC-3

4 **INTERROGATORY**

5 Reference: Exhibit D, Tab1, Schedule 2

6 Preamble: "*2025 budgeted costs of \$3.8 million are \$1.3 million higher than 2024 due to the*
7 *market power mitigation function returning assignment to MACD as MRP is completed.*"

8 Questions:

- 9 a) From which business unit is the \$1.3 million deducted due to the above mentioned
10 returning assignment?
11

12 **RESPONSE**

- 13 a) The \$1.3 million is deducted from MRP.

1 **VECC INTERROGATORY 4**

2 Issue 1.0 Revenue Requirement, Operating Costs and Capital Spending

3 1.0-VECC-4

4 **INTERROGATORY**

5 Reference: Exhibit D, Tab1, Schedule 2, page 7

6 Preamble:

7 Questions:

- 8 a) Please provide the annual incremental HR costs attributable to the “*cultural transformation*
9 *and building capabilities*” initiative

10
11 **RESPONSE**

- 12 a) The annual incremental HR costs attributable to the “cultural transformation and building
13 capabilities” initiative is about \$0.5 million.

1 **VECC INTERROGATORY 5**

2 Issue 1.0 Revenue Requirement, Operating Costs and Capital Spending

3 1.0-VECC-5

4 **INTERROGATORY**

5 Reference: Exhibit D, Tab1, Schedule 3

6 Preamble:

7 Questions:

8 a) Bill 124 has recently been declared null and void. The Government of Ontario has
9 appealed that decision. If that appeal fails what impact would confirmation of the court's
10 decision have on IESO's compensation costs in 2023 through 2025?

11 b) Do any of the current agreements with the PWU or Society have "reopener" clauses
12 which could potentially provide for retroactive compensation?

13 **RESPONSE**

14 a) If the appeal of Bill 124 is not successful, it will have an impact on IESO's compensation
15 costs in 2023 through 2025. The Society and Management has already met on the
16 "reopener" for wages for 2022, 2023 and 2024 and the IESO expects a ruling from the
17 arbitrator on this in late June as to the outcome and impact to budget. The PWU does
18 not have a reopener and would rely on the court decision, but the IESO expects that it
19 will indeed have an impact on cost in the 2023-2025 as it relates to retroactive
20 payments.

21 b) See answer a) above.

VECC INTERROGATORY 6

Issue 1.0 Revenue Requirement, Operating Costs and Capital Spending

1.0-VECC-6

INTERROGATORY

Reference: Exhibit D, Tab 2, Schedule 1

Preamble:

Table 1: Net Interest Expense from 2019 to 2025

Net Interest Expense (In \$ millions)	Historical							Budget		
	2019 OEB Approved	2019 Actual	2020 Actual	2021 OEB Approved	2021 Actual	2022 OEB Approved	2022 Actual	2023	2024	2025
Ontario Electricity Financial Corporation Credit Facility	2.1	2.3	1.7	1.5	1.4	1.8	1.4	2.6	3.7	4.4
Capitalized Interest	(0.9)	(0.5)	(0.7)	(0.8)	(0.9)	(1.4)	(1.3)	(1.3)	(0.6)	(0.5)
Financing Charges	0.3	0.3	0.3	0.3	0.1	0.2	0.1	0.2	0.2	0.2
Short Term Investment Income	(5.9)	(7.9)	(3.5)	(2.2)	(2.1)	(2.2)	(8.7)	(9.2)	(8.5)	(8.5)
Long Term Investment Income	(1.5)	(3.2)	(2.4)	(1.3)	(3.7)	(3.3)	(3.7)	(3.8)	(4.5)	(4.8)
Total	(5.9)	(9.0)	(4.6)	(2.5)	(5.2)	(5.0)	(12.2)	(11.5)	(9.7)	(9.2)

Questions:

a) Please provide the interest rate assumptions used in calculating the 2023 through 2025 interest expenses.

b) What is the inflation rate assumed for budgeting purposes in 2023, 2024 and 2025?

RESPONSE

a) Based on information forecasted by the Bank of Canada and large Canadian financial institutions, the interest rate assumed in 2023 was 2.75%, dropping to 2.50% by April 2024 and remaining at that level through 2025.

- 1 b) Different inflation rates were assumed according to known terms for each of the major
- 2 expenses in the budget, for others a 2% average over the 3 years was assumed which
- 3 was driven by the Bank of Canada's stated monetary policy.

VECC INTERROGATORY 7

Issue 1.0 Revenue Requirement, Operating Costs and Capital Spending

1.0-VECC-7

INTERROGATORY

Reference: Exhibit E, Tab 2, Schedule 1, page 5 Table 2: Material Capital Projects

Preamble:

Questions:

- a) Please provide a table showing the 2023 material capital projects listed in Table 2 and showing: (1) spending to date and (2) current expected completion date (month end) for the project components budgeted for the 2023.

RESPONSE

- a) The table below provides the spending to date and current expected completion date for material capital projects budgeted for 2023:

Table 1 – 2023 Material Capital Projects

Material Capital Project (\$ Millions)	Spending to Date (As of month end April 2023)	Current Expected Completion Date (month end)
Market Renewal Program (MRP)	103.6	May 2025
Replacement of the Settlement Systems	31.1	Dec 2023
Centralized Alarm Management System Replacement	4.4	Dec 2023
SCADA/Energy Management System (EMS) Upgrade	12.4	Mar 2023
Dynamic Limits in Real-Time	0.7	Dec 2024
Core Network Refresh	1.2	Oct 2024
Market Analysis and Simulation Toolset (MAST)	0.3	Jul 2025
Enabling Resources Program	0.0	Dec 2026
Resource Adequacy Program	3.9	Jun 2024
Space Needs Program	2.3	Dec 2026
Backup Operating Centre and Backup Data Centre Relocation	0.6	Mar 2025
Meter Data Management System Replacement (MDMS)	0.0	Dec 2028
Enabling Grid Transformation Program	0.0	Dec 2028
Lawson Refresh	0.0	Dec 2026

VECC INTERROGATORY 8

Issue 1.0 Revenue Requirement, Operating Costs and Capital Spending

1.0-VECC-8

INTERROGATORY

Reference: Exhibit E, Tab 2, Schedule 1, page 5 Table 2: Material Capital Projects

Preamble:

Core Network Refresh

Year	2022	2023	2024	Total
Capital	\$46,000	\$1,980,000	\$1,800,000	\$3,826,000
Capital (Contingency)				\$939,000
Total Capital (Including Contingency)				\$4,765,000
Operating	\$17,000	\$23,000	\$40,000	\$80,000
Operating (Contingency)				\$24,000
Total Operating (Including Contingency)				\$104,000
Total (Including Contingency)				\$4,869,000

Questions:

- a) Please explain the variance in the 2024 capital spending for this project as shown in the table above (\$1.8 million) and as shown in Table 2 (\$0.6M).

1 **RESPONSE**

- 2 a) The variance in forecast is due to advancement of the Core Network hardware procurement
3 that was originally planned to be procured in 2024.

VECC INTERROGATORY 9

Issue 1.0 Revenue Requirement, Operating Costs and Capital Spending

1.0-VECC-9

INTERROGATORY

Reference: Exhibit E, Tab 2, Schedule 1, page 5 Table 2: Material Capital Projects

Preamble:

Enabling Resource Program

	Actuals		Budget										
Calendar Year	2021		2022		2023		2024		2025		2026		Contingency
Initiative	CAP	OPEX	CAP	OPEX	CAP	OPEX	CAP	OPEX	CAP	OPEX	CAP	OPEX	
Total	-	313	-	1,775	300	1,675	2,525	1,250	4,015	450	1,350	200	1,385
Hybrid Resources													
IESO Labour		231		900	300	600	700	200		-			
Consultants				150		50		150		50			
Other							675		675				
Total	-	231	-	1,050	300	650	1,375	350	675	50	-	-	468
DER													
IESO Labour		82		600		800	500	600	1,000	200	500	100	
Consultants		0		125		225		200		100		-	
Other							450		450		450		
Total	-	82	-	725	-	1,025	950	800	1,450	300	950	100	638
Storage Operational Enhancements													
IESO Labour							200	100	500	100	400	100	
Other									1,390				
Total	-	-	-	-	-	-	200	100	1,890	100	400	100	279

Questions:

- a) Please explain the variance in the capital spending for this project as shown in the table above and that shown in Table 2 (for example in 2024 total capital is shown as \$2.525 above and in Table 2 as 0.6M).

RESPONSE

- a) See Table 1 below with a list of projects that contributed to the total Enabling Resources program budget in the Business Plan. Table 2 above is from the Program Charter that was prepared in 2022 at the Program Initiation Phase which assumed that resources will be available to initiate work on Hybrid Resources, DER and Storage Operational Enhancements in 2024. These projects were subsequently deferred to start in late 2025 as reflected in the Business Plan.

Table 1 – Projects Contributing to Enabling Resources Program

\$(millions)	2023	2024	2025
Enabling Resources Program (ERP)	0.3	0.6	3.3
Projects within ERP are listed below:			
1. Foundational Hybrid Participation Model Design	0.3	0.5	0.5
2. DER	0	0	1
3. Automatic Approval of State-of-Charge Changes	0	0.1	0.3
4. Supporting Changes for Storage in the AGC Tool (2023-2025)	0	0	0.5

1 **VECC INTERROGATORY 10**

2 Issue 1.0 Revenue Requirement, Operating Costs and Capital Spending

3 1.0-VECC-10

4 **INTERROGATORY**

5 Reference: Exhibit E, Tab 2, Schedule 1, Attachment 4

6 Preamble:

7
8 Questions:

9 a) Please clarify/specify how the Space Needs Program monies are allocated as between
10 (a) current space renovations; (b) new space; (c) other costs – please specify.

11 b) Please clarify how the monies for the program are allocated as between the various IESO
12 leased and owned facilities.

13 **RESPONSE**

14 a) Please see the response to 1.0 Energy Probe Interrogatory 9 a).

15 b) As the Space Needs Program – Phase 3 has not been initiated and the IESO has not yet
16 determined its overall office space footprint it is not possible to provide a breakdown of
17 investments between owned and leased facilities. However, \$10 million in building
18 enhancements are expected at the Mississauga control centre which is owned by the
19 IESO. The \$30 million renovation costs will be split between both owned and leased
20 facilities.

EDA INTERROGATORY 1

Issue 1.1 Is the IESO's Fiscal Year 2023 revenue requirement of \$208.4 million appropriate?

1.0-EDA-1

INTERROGATORY

Reference: ExB-T1-S2 Page 17 / ExC-T2-S1 Page 1 / ExD-T1-S1 / ExD-T1-S2

Preamble:

Questions:

a) In its 2022 rate application (EB-2022-0002) the IESO was approved \$201.5M for its 2022 revenue requirement. In the 2023 rate application the IESO has reported total adjusted expenses of \$196.7M in its 2023 Proforma Financial Statements which is lower than expected by \$4.8M (\$201.5M-\$196.7M). Please describe the \$4.8M variance.

b) IESO's 2022 actual forecast for IESO usage fee is \$2.6M (\$204.1-\$201.5) higher than budgeted approved revenue. Please describe the reason for this variance between budget and actual. Show the calculation of this variance between usage fee **volume** and **dollars**.

c) IESO's 2023 revenue requirement of \$208.4 million includes four new expense programs and accounts for an increase of \$5M total. These programs are Cyber Security, Strengthening Engagement, Culture Employees and Capabilities, and Sustaining Technology, Evolving Processes and Tools, please confirm that these programs were not historically considered within baseline expenses. Please provide more detail about these programs and how their budget will be monitored.

d) Resource Transmission and Adequacy expenses are budgeted to significantly increase between 2022 – 2025 and support procurement initiatives directed by the Minister of

1 Energy. Please provide the breakdown of the budgeted expenses for Resource Adequacy
2 categorized by resource for additional staff (include FTEs required), legal and technical
3 consultants, and design of procurement mechanisms

4 Preamble: ExA-T1-S5-page3/ ExC-T2-S1 page 1 / ExG-T1-S1:

5 *The IESO has identified and leveraged efficiencies in several areas to mitigate impacts of its*
6 ***revenue requirements** to Ontario ratepayers. The IESO anticipates an increase in new*
7 *contracted facilities over the next three years to meet electricity system needs. Through the*
8 *Reliable Integration fee, IESO expenses associated with activities undertaken to connect new*
9 *facilities **are offset by fees paid** by the project proponent and **thus impacts to Ontario***
10 ***ratepayers are reduced.** Further development of systems to track contracts, automate*
11 *contract settlements, and introduce processes for streamlining energy efficiency contract*
12 *approvals have also yielded operational efficiencies. Furthermore, the IESO continues to*
13 *realize efficiencies by examining its long-term office space needs.*

14 e) The leveraged efficiencies to mitigate impacts of the revenue requirement to Ontario
15 ratepayers is referenced in multiple sections of the application and the IESO Business
16 Plan. The Reliable Integration Fee approved in the EB-2022-0002 Settlement (Issue 3.1,
17 ExG-T1-S1) was made effective as of Dec 8, 2022. Please show using the Pro-Forma
18 statements how IESO expenses associated with activities undertaken to connect new
19 facilities (Transmission Connected, **and Distribution Connected**) have been
20 considered within the revenue requirement offset by (ExC-3-1-Attachment 1) other fees
21 paid by the project proponents. Please quantify the reduction to revenue requirement
22 and describe the IESO's projection for the next three years, given how recent the fee
23 was implemented and the lack of data available.

24

25

26

RESPONSE

- a) The \$4.8 million variance between IESO's 2022 rate application (EB-2022-0002) for revenue requirement and the 2022 Forecast adjusted expenses of \$196.7 million is primarily driven by \$1.6 million from lower staffing costs (savings from vacancies partially offset by higher health and benefit costs, severance and overtime), \$1.5 million lower amortization expense due to delay in pacing projects into service, \$0.9 million lower than planned MRP spending for market rules and manuals, and \$0.8 million unplanned registration fee.
- b) The \$2.6 million usage fee revenue variance between IESO's 2022 approved budget and the 2022 Forecast (\$204.1-\$201.5 million) is driven by higher than planned volumes due to extreme weather patterns, particularly in winter and summer 2022. See Table 1 below for volume and dollar variances:

Table 1: 2022 Budget vs Forecast Revenue

2022	Volume (TWh)	\$ Millions
Budget	155.0	201.5
Forecast	157.4	204.5
Variance	2.4	2.6

- c) The four new expense "programs" (Cyber Security, Strengthening Engagement, Culture Employees and Capabilities, and Sustaining Technology, Evolving Processes and Tools), that account for an increase of \$5 million in IESO's 2023 revenue requirement of \$208.4 million, represent incremental investments required in these areas to ensure IESO meets its strategic goals; these areas of work are not new to the IESO but the incremental needs have been called out separately in this application to provide more clarity to how the additional funds being requested would be allocated. Given that the IESO does not have the capability to do activity base accounting/reporting it will be difficult to track

with precision how the budget in these areas is utilized; however, the IESO will monitor the spending based on broader estimates of allocation of work.

- d) The Resource Transmission and Adequacy expenses increase significantly in 2023-2025, primarily due to additional staff (between 22 and up to 37 at the peak), required to ensure the province has acquired the necessary resources to meet the growing electricity supply needs, less than 10% of the requested budget is expected to be allocated to legal, technical consultants, and design of procurement mechanisms.
- e) The IESO expenses associated with activities undertaken to connect new facilities are included as a contra-expense or cost recovery in the Baseline Expense line shown in the Pro-Forma statements; meaning that if these had not been accounted for, then the Baseline Expenses would be higher than presented so would the revenue requirement. The reduction to the revenue requirement projection for the next three years for these fees is described in Exhibit C-3-1 page 1 and 2, and the dollars are provided in the corresponding attachment. See Table 2 below:

Table 2: Impact of Cost Recovery on Activities to Connect New Facilities

(\$ Millions)	2023 Budget	2024 Budget	2025 Budget
Revenue Requirement as per Pro Forma	208.4	218.4	229.7
Revenue Requirement without accounting for recovery of connection activities	210.9	221.8	233.6
Baseline Expenses as per Pro Forma	175.4	181.4	187.7
Baseline Expenses without accounting for recovery of connection activities	177.9	184.8	191.6
Cost Recovered:	2.5	3.4	3.9
- Connection Assessments (SIA & TFS)	1.7	1.7	1.7
- Reliability Integration	0.8	1.7	2.2

SEC INTERROGATORY 1

Issue 1.1 Is the IESO's Fiscal Year 2023 revenue requirement of \$208.4 million appropriate?

1.0-SEC-1

INTERROGATORY

Reference:

Preamble:

Questions:

Please provide a copy of all budget guidance documents that were issued regarding the budgets that underlie this application.

RESPONSE

Please see Attachment 1 – Board Material Business Plan to this response as well as the attachments to 1.1 SEC Interrogatory 2.

AUGUST 24, 2022

IESO Board of Directors 2023-2025 Business Plan Business Plan Overview and Approval

Lesley Gallinger, President & CEO, Independent Electricity System Operator
Barbara Anderson, Vice President, Corporate Services and CFO

Purpose and Summary

- **Purpose of Item:** Approval by the Board
- **Executive Summary:**
 - Aligning the three-year business plan with the refreshed strategy is setting a course for a future state that is decarbonized, decentralized and digitalized
 - The IESO's funding requirement for 2023-2025 represents 5.8%, 4.8% and 5.2% year over year increases
 - A modular approach was followed to articulate need for incremental investments while managing baseline cost pressures, as we did in the 2022-2024 Business Plan

Significant Issues, Risks and Opportunities: Talent acquisition required for the business plan may be challenged by the current workforce availability

Proposal and Analysis

- The refreshed strategy identified the energy transformation underway and how the IESO needs to address the significant growth in the industrial, mining and agricultural sectors, as well as major expansion in transportation electrification, which will collectively drive higher electricity demand than Ontario has seen in many years (increase by nearly two per cent per year during next 10 years)
- These demand increases are being compounded by nuclear retirements and refurbishments as well as the expiration of a large number of generator contracts, which impacts available supply
- Energy needs are emerging as early as 2025 and the 2023 – 2025 business plan enables the IESO to deliver on the first three years of the refreshed strategy, committed to helping drive and guide a transition to ensure a reliable, affordable and sustainable energy future

Proposal and Analysis

- The IESO continues work started in 2022 under Resource and Transmission Adequacy and Enabling Resources to secure additional supply and expansions needed to address the emerging electricity needs
- Various government initiatives are included - Class B and Interruptible rate pilots, programs to provide new contracts for existing small hydroelectric generation facilities, enhanced energy efficiency conservation and demand management programs
- MRP¹ will introduce new features and tools that require additional resources for market operations, monitoring and ongoing maintenance and support.

Next slide shows how the key initiatives enable the refreshed strategy

Proposal and Analysis - Initiatives Alignment to Strategy

Drive & Guide the Sector's Future

- Strengthening stakeholder and community connections
- Continue Enabling Resources Program

Ensure System Reliability while Supporting Cost Effectiveness

- MRP¹ support & maintenance to operate the renewed market
- Resource and Transmission Adequacy incremental investments

Drive Business Transformation

- Sustaining our critical IT systems, and evolving internal processes and tools

- Address various Government Initiatives

- Enhancing cybersecurity posture through reinforcing the resilience and integrity of the electricity grid
- Enabling the grid transformation program

Continuing to build out workforce culture, capacity and capabilities to promote a high-performing organization

5 ¹Market Renewal Program (MRP)

Initiatives Included in Business Plan

Incremental Initiatives (\$ Millions)	2022 Forecast	2023 Budget	2024 Budget	2025 Budget
Resource and Transmission Adequacy	1.4	6.0	8.8	7.3
Enabling Resources	0.6	0.8	0.9	0.9
Pathway to Decarbonization	0.9	-	-	-
Other Government Priorities	4.3	2.9	2.5	2.5
MRP ¹ - ongoing operation of new functions	0.2	1.9	3.0	4.2
Cybersecurity	0.9	1.6	1.6	2.1
Strengthening Engagement	-	0.7	1.1	1.6
Culture, Employees and Capabilities	-	0.8	0.8	1.0
Sustaining Technology, Evolving Processes and Tools	-	1.9	2.3	2.2
Total Incremental Initiatives	8.3	16.6	20.8	21.7

6 ¹Market Renewal Program (MRP)

What is Not Included Or Delayed

- No Clean Energy Credit Registry and Market investment beyond the initial subscription-based service to be introduced in January 2023
- No investment related to program options for the low carbon hydrogen technologies report due to Ministry of Energy by October 31, 2022
- Improvements to the use of Operating Reserve over our interties will be delayed until later in the business planning timeframe - starting work in mid-late 2024
- Reduced pace for the Grid Transformation Program – Focus initially on Phasor Measurement Unit Phase 3 and Electromagnetic Study Capability in 2023
- Information Governance Program advanced at a slower pace with only the first few initiatives being advanced over the business planning period

Financial Assumptions

- Upward pressures on salaries have been reflected in 2025 as Bill 124 (limiting salary increased to 1%), ceases in December 2024
- Rise in pension and OPEB expenses driven by liabilities increase and lower projected net return on plan assets
- Real estate strategy to support longer term IESO space needs will have material impact over the planning period (i.e. Cost of Upgrading and Renovating Clarkson, timing and degree of lease terminations, etc.)
- The rapid increase in the interest rate is forecasted to add \$5.4 million of surplus through interest income to the IESO in 2022 by year-end. This rate of increase (beginning the year 0.25% to 2.5% as of July 13, 2022) was not budgeted and surplus is deemed an uncontrollable variance that is excluded from the business plan percentage year over year increase between 2022 and 2023 funding requirement
- The proposed approval is a funding requirement for 5.8%, 4.8% and 5.2% year over year increases for 2023, 2024 and 2025 which results in an average residential electricity bill increase of 8.3 cents per month over the 2023-2025 planning period

IESO's Operating Reserve

- The IESO has approval from the Ontario Energy Board to maintain an operating reserve of \$10 million, to manage cost or revenue variances from budgets, as well as changes to the external environment that impact the IESO and may not be within its control or reasonably foreseeable, a practice adopted by similar sector organizations
- As the IESO enters into their first three year business plan and given the complexity and uncertainty around the transformation of the sector, there is potential for material unplanned work; therefore, the IESO will be recommending to the OEB an increase to the operating reserve to a balance of \$15 million funded through its forecasted 2022 surplus. The balance of the surplus will be returned to the market
- The Ministry has expressed support with this approach

Detailed Financials

- 2022 forecast expenses are below approved budget mainly due to significantly higher interest income and lower expenses driven by project delays and staff hiring delays
- 2023 higher expenses driven by incremental initiatives and amortization impacts of assets placed into service in late 2022
- 2024 and 2025 are impacted by MRP¹ ongoing operation of new functions, MRP/RSS¹ amortization impacts, and further investments most notably initiatives to ensure resource acquisition to meet system needs by 2026

Pro Forma Statement of Operations For the Year Ended December 31 (\$ Millions)	2022 Budget	2022 Forecast	2023 Budget	2024 Budget	2025 Budget
Revenue					
IESO Usage Fee	201.5	204.1	208.4	218.4	229.7
Total Revenue	201.5	204.1	208.4	218.4	229.7
Expenses					
Baseline Expenses	172.8	171.4	175.4	181.4	187.7
Initiatives	8.5	8.3	16.6	20.8	21.7
Sub-Total	181.3	179.7	192.0	202.2	209.4
Amortization	20.0	18.5	23.1	22.0	27.0
Net Interest	(5.0)	(10.4)	(11.5)	(9.7)	(9.2)
Registration fees	-	(0.8)	(0.5)	(0.5)	-
Market Renewal Program	5.2	4.3	5.3	4.4	2.5
Total Expenses	201.5	191.3	208.4	218.4	229.7
<i>Uncontrollable Interest Variance</i>		5.4	-	-	-
<i>Adjusted Total Expenses</i>	<i>201.5</i>	<i>196.7</i>	<i>208.4</i>	<i>218.4</i>	<i>229.7</i>
<i>Year-over-year variance</i>	-	-	5.8%	4.8%	5.2%
Operating Surplus/(Deficit)	-	12.8	-	-	-
Accumulated Operating Surplus	8.7	15.0	15.0	15.0	15.0
Potential Rebate to Market Participants	-	6.5	-	-	-

10 ¹Market Renewal Program (MRP), Replacement Settlement System (RSS)

Capital Projects

- Significant investments in IESO's facilities and backup operating and data centres are required to maintain reliable system and business operations. We will continue investment in Enabling Resources Program, complete RSS¹ and other key initiatives to support the IESO's refreshed strategy, advance cybersecurity program and maintain our critical systems and services through a number of core business projects
- MRP¹ capital spending includes solution development deliverables and testing to ensure both the IESO and market participants are prepared for the launch of the renewed market.

Capital (\$ Millions)	2022 Budget	2022 Forecast	2023 Budget	2024 Budget	2025 Budget
Core Operations Initiatives	30.0	30.0	23.0	28.6	30.6
Space Needs Program & Facility Investment	-	-	7.0	10.0	13.0
Back Up Operating and Data Centre Relocation	-	-	5.0	5.0	-
Market Renewal Program ²	41.2	37.1	51.0	32.3	14.6
Total Capital Envelope	71.2	67.1	86.0	75.9	58.2

11

¹Market Renewal Program (MRP), Replacement Settlement System (RSS)² Pending Approval

Market Renewal Program Financials

- The IESO is presenting to the Markets Committee on August 23 a revised program funding and a refreshed schedule for approval, including an in-service and an updated cost estimate for the delivery of Market Renewal
- In 2025, MRP¹ requires operating funding post go-live to deliver market participant support and training, complete internal document updates, and complete project closure activities (i.e. evaluate project performance, lesson learned documentation, etc.), and capital funding for changes identified after the in service date
- The business plan accommodates these revised cost estimates

Full Time Equivalent (FTE) Staffing

Key staffing related drivers:

- Core staff increases required to support resource adequacy strategy, to prepare for implementation of the new market functions/services, for enabling resources program, to address the various government priorities and to prepare the IESO for the rapidly changing Ontario power system
- MRP¹ resources increase in 2023 for market implementation and as the work shifts to operations testing and go-live some resources will begin to return to core operations. In 2025, staff is retained to provide training, complete internal documentation, tool changes post go-live and to ensure an effective framework to measure the benefits post go-live

Average FTEs Full Time Equivalent (FTEs)	2022 Budget	2022 Forecast	2023 Budget	2024 Budget	2025 Budget
Core Operations	730	714	805	838	856
Market Renewal Program	97	92	109	88	44
Total FTEs	827	806	914	926	900

Strategic Risks and Corporate Performance Measures

- Strategic Risks and Performance Measures and Targets have been refreshed based on the new strategy
 - Strategic Risks: Starting in early 2022, Management commenced a process to re-assess strategic risks through a series of focused discussions in parallel with the strategy refresh work. These discussions have helped calibrate the thinking on our principal risks to achieving strategic outcomes and risk interdependencies with the Core Strategies
 - Performance Measures: Measures and targets have been reconstituted to align with the IESO's refreshed strategy and 2023-2025 Business Plan. Since the strategy update this spring, Directors and ELT members have been engaged in an iterative process to contribute refreshed measures and identify annual targets. This set of measures is intended to help improve engagement and provide clear identification with how work efforts contribute to the IESO's over-all strategy success

Strategic Risks

Risk #	Risk Event Description	Core Strategy		
		Drive & Guide the Sector's Future	Ensure System Reliability while Supporting Cost-Effectiveness	Drive Business Transformation
1	Material undersupply of energy at a provincial and regional level.	X	X	X
2	IESO actions to identify and address supply shortfalls not seen as credible by the stakeholder community.	X	X	
3	IESO's information technology systems and data are disrupted by cybersecurity threats.	X	X	X
4	Cyberattack impacting non-IESO owned assets required for operating the IESO-controlled grid.	X	X	
5	Competitive mechanisms not working as intended impairs the IESO's efficiency mandate.	X	X	
6	A regulatory decision or recommendation is made that impedes the ability to advance strategic priorities.	X	X	
7	Readiness of our culture, people, processes and tools to rapidly adapt and pivot to address transformation.	X	X	X

Performance Measures

Strategic Alignment		Measure	Target			Measure Weight
			2023	2024	2025	
Outcomes	<ul style="list-style-type: none"> • Drive and guide the evolution of the system to ensure long-term reliability • Maintain affordability via competition and other mechanisms • Effectively respond to changes in policy and customer choices 	1. Market Renewal Program delivery: Total actual schedule complete percentage is within planned completion	80%	90%	100%	20%
		2. Maintaining Resource Adequacy: plans in place to ensure that resource adequacy reliability standards are met for the next 5 years	100%	100%	100%	10%
		3. Resource Adequacy procurement: number of supply offers in open and competitive mechanisms exceed the target capacity	20%	22%	24%	10%
		4. Enabling Resources Program delivery: Percentage complete of program plan	33%	44%	65%	10%
Enablers	<ul style="list-style-type: none"> • Evolve the IESO's culture enabled by people, tools, and processes to promote a high-performing organization • Effectively tell the IESO's story to strengthen stakeholders and community connections 	5. Employee pulse survey results for specific annual engagement areas of focus	4% average increase	4% average increase	4% average increase	15%
		6. Effectiveness of stakeholder engagement actions through positive survey results (within 2%+/- tolerance range)	80%	81%	82%	15%
Key Risk	<ul style="list-style-type: none"> • Maintain vigilance on cyber security threats to the IESO and the system, and adapt as required <p>* 2023 is to develop a measure. Execution against cyber risk mitigation measure will occur in 2024-2025.</p>	7. Cyber threat intelligence technology implementation	90%	92%	94%	10%
		8. Phishing Metrics Trend	<5%	<4%	<3%	5%
		9. Determine pathway for assessment of appropriate regulatory instrument for system cyber risk mitigation*	Substantial Completion	TBD	TBD	5%

Next Steps/Implementation

- September 1: Deliver Business Plan to the Minister of Energy
- October/November: File 2023-2025 revenue requirement submission with the Ontario Energy Board
- 2023 Quarterly Updates: Year to date results, strategic risks and performance measures

Business Plan 2023-2025

Independent Electricity System Operator
September 1, 2022

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Letter from the President & CEO

Ontario's electricity system is undergoing unprecedented transformation. Demand for electricity is forecast to grow substantially over the next two decades, driven by strong economic growth in the industrial, mining and agricultural sectors, as well as electrification of transportation. At the same time, supply conditions are tightening, with nuclear units being refurbished, the Pickering nuclear facility soon retiring, and generation contracts expiring.

Governments at all levels are moving forward with decarbonization policies, driven by community and customer preferences. While Ontario's electricity grid is well positioned to support decarbonization of the broader economy, being one of the cleanest in the world, we will need to be prepared for electrification to potentially double or triple demand over the next 20 years.

Like many jurisdictions around the world, new non-emitting resources are increasingly being integrated into the grid. While energy storage and distributed energy resources are already playing a role in Ontario, the stage is set for these resources to take a big leap forward in the coming years.

With the increasing pace and scope of change, we felt it was time to refine and recalibrate our corporate strategy for the next five years to ensure we are well positioned to meet Ontarians' needs and expectations. For this reason, we undertook a thorough visioning process in late 2021 and early 2022 to imagine the sustainable future-state energy system that Ontario will require, and identify a series of concrete steps to deliver on future needs.

The 2023-2025 Business Plan sets out the IESO revenue requirement and capital spending needed to maintain our critical responsibilities and deliver on our refreshed strategy.

As the system integrator, the IESO is being asked to do more with every passing year. The job of ensuring a reliable and affordable supply of electricity for Ontario's businesses, communities, residents and Indigenous peoples is becoming increasingly complex. Yet it remains crucial to power economic development and support decarbonization of the economy.

Despite the significant change underway, our electricity system is prepared for future growth, and the IESO is continuing to implement a comprehensive plan to procure new generation. At the same time, the IESO is actively studying how to reduce reliance on gas generation over the long-term and transition to a more decarbonized electricity system.

The IESO is also continuing to integrate new non-emitting resources like energy storage and distributed energy resources, gaining lessons that we can build on as we transition to a more sustainable electricity grid of the future. In addition, our energy efficiency programs continue to reduce grid demand while helping businesses save on costs, and we are looking at expanding opportunities.

Many of our initiatives are designed to drive down costs for Ontario ratepayers, and one of our integral initiatives to fulfil that goal is our Market Renewal Program (MRP). This project will bring significant ratepayer benefits and ensure continued reliable operations as the system becomes more diversified, distributed, and digitized.

As we take proactive steps to ensure a reliable and affordable system, we must also remain vigilant to potential cybersecurity threats. Uptake of our cybersecurity services is increasing cascading across the sector, helping to ensure local distribution companies and generation owners have access to the latest cyber intelligence. These efforts are critical as cyber threats have been identified as our primary risk.

To support our efforts, we are enhancing our engagement efforts and strengthening our outreach to municipalities, Indigenous communities, and consumers of electricity.

While we continue to carefully review all expenditures and seek out new efficiencies, new investments are needed. To fully prepare the sector for the future and ensure Ontarians' electricity needs are met, we must invest in our people and our systems. As a result, the IESO is proposing increases to its budget to ensure it can continue to meet Ontarians' expectations of an affordable, sustainable, resilient and reliable power system.

To deliver on this plan, the IESO includes a revenue requirement of \$208.4 in 2023, \$218.4 in 2024, and \$229.7 in 2025. These figures represent increases of 5.8%, 4.9%, and 5.2% year over year. For the average residential electricity bill, this translates into an increase of 8.3 cents per month over the 2023 -2025 planning period.

There are currently many exciting developments taking place across Ontario. The province is attracting new businesses, communities are developing ambitious energy plans, emerging technologies are providing more choice, and the transportation and industrial sectors are undergoing electrification.

The IESO is committed to supporting the future prosperity of the province by driving and guiding the sector's future, ensuring system reliability while supporting cost effectiveness, and driving business transformation. While this job is becoming increasingly challenging, with new investment we are confident that our comprehensive business plan and skilled workforce can continue to deliver.

Lesley Gallinger

President and CEO

2023-2025 Business Plan – IESO Priorities

Introduction

A reliable, affordable and sustainable supply of electricity is fundamental to the prosperity and well-being of Ontario's residents, businesses, institutions and communities. Each and every day, they count on the Independent Electricity System Operator (IESO) to ensure electricity is available where and when it's needed.

The IESO is here to ensure the province's power system can deliver this essential resource. By working collaboratively and purposefully with market participants, municipal officials, Indigenous communities, government bodies and a vast range of other partners in the energy sector and beyond, we operate for today, plan for tomorrow and prepare for the future.

Positioned at the heart of Ontario's electricity sector, the IESO's work impacts how electricity is produced and consumed, how it is transmitted and distributed, and how it is managed and planned for in real-time and over the longer term to ensure the province's needs are met at all times.

We play a unique and critical role in Ontario's energy ecosystem – and in the province as a whole. For more than a decade now, the electricity landscape has been experiencing an unprecedented transformation, and the pace of change shows no signs of slowing.

Facing these changes head-on, we are setting a course for a future state that is decarbonized, decentralized and digitalized. Although some aspects of this journey cannot be foreseen with certainty, the IESO is resolute in our commitment to support Ontario's energy transition – leading change when required, but also facilitating our partners' leadership.

In responding to sector transformation, the IESO refined and recalibrated its five-year corporate strategy in early 2022. This business plan is anchored in our refreshed strategy, and adds more specificity and detail to demonstrate how we plan to deliver value for Ontarians in the coming years.

IESO Corporate Strategy at a Glance



Drive and Guide the Sector's Future

We will drive and guide the sector's future by strengthening relationships with stakeholders and Indigenous communities and effectively responding to changes in customer choice and policy, while acting as an advisor and participant in discussions on how to create a sustainable, future-state energy system.

Strengthen stakeholder and Indigenous community engagement via purposeful, transparent outreach

The essential link connecting all of the IESO's current and future activities is engagement. This includes traditional sector stakeholders, as well as a vast and varied array of other parties who influence our planning and decisions, including Indigenous communities and organizations, business and industry leaders, trade associations, academic institutions and various levels of government. Each group has a unique role to play in the system, with its own specific needs, interests and priorities.

At all times the IESO must work to understand the nature of these forces driving transformation and make informed decisions that strike an appropriate balance. In planning for the future, we must carefully weigh diverse interests and plot a course that considers the interplay among them.

To do so requires honest and open dialogue with the parties affected by our decisions. Given the scope and impact of our mandate, we must work closely with a large number of affected interests, often with competing priorities and varying perspectives. For this reason, engagement activities are absolutely essential to informing the IESO's work.

With every passing year, more voices are joining the energy conversation. Through our engagement processes, we strive to make balanced decisions – decisions that are effective and appropriate, and that will stand the test of time. Over the next five years, we will continue to engage in a targeted and transparent manner, consulting and collaborating with different groups through thoughtful means and mechanisms.

Our engagement with Indigenous communities and organizations, for example, is deepening. Our work in this area is focused on powering change – and changing lives.

Now more than ever before, many Indigenous leaders across Ontario are pursuing projects that support greater energy independence and provide new opportunities to create local revenue and jobs. By developing generation and storage systems, becoming equity partners and leaders in major infrastructure projects, prioritizing energy efficiency as a way to demonstrate environmental stewardship, and engaging in important conversations about system planning, Indigenous communities are seeking greater autonomy and becoming catalysts for change.

The IESO is proud to stand beside them on this journey to greater self-determination. While there is still work to be done, developing Indigenous capacity is an important step towards a longer-term goal of achieving economic reconciliation and driving fair, equitable and inclusive participation in the energy sector.

As our electricity system becomes more decentralized, with more choice at the consumer and community level, the IESO is also strengthening its engagement with municipalities. These efforts will

ensure municipal input is integrated into IESO decision making, and that municipalities are aware of opportunities available to them to use electricity to achieve economic development and sustainability goals.

Identify, anticipate and respond to changes in customer choice and policy

Consumer preferences and choices are some of the key drivers behind the energy transition that is underway. As our reliance on electricity increases through economic growth and the transition to non-emitting energy sources, the IESO is supporting this shift while maintaining reliability and affordability.

As a result, our development activities are focused on meeting consumer demand while respecting customer preferences, including new supply options to meet our growing needs. This includes testing concepts such as residential microgrids, local energy markets, aggregated electric vehicle charging solutions, strategic energy management and artificial intelligence, to name a few.

In the meantime, we are accelerating our efforts to integrate distributed energy resources into Ontario's electricity grid and market. These small-scale community-based resources have the potential to deliver flexible and affordable solutions to local supply issues while also meeting regional and provincial needs.

We will continue to prioritize energy efficiency, the cheapest and most sustainable resource available. The IESO's Save on Energy programs have reached homes and businesses in all sectors across Ontario, saving enough energy over the last decade to power 1.7 million homes for a year. Looking ahead, conservation and demand management will play a growing role in meeting our reliability needs with targeted programs that help address provincial and local reliability concerns.

Advise on and actively participate in dialogue on the configuration of the future-state sustainable energy system

Ontario's energy future will be shaped by the conversations and insights shared through our engagement framework. What our electricity system looks like in the years to come will be influenced by our sector's ability to collaborate and contribute to an understanding of what is needed to evolve the system further.

We are actively working to integrate emerging technologies and enable new resources to participate in the IESO markets. Pairing energy storage with wind or solar generation can improve operational efficiency and help meet the province's emerging electricity needs. For this reason, the integration of hybrid storage/generation resources has been designated a priority project within the IESO's Enabling Resources initiative.

Through active engagement with stakeholders and communities, we have already made great strides, as we build a participation model for implementation. We are also working with sector partners to reduce the barriers to storage resources and evolve the relevant policies, rules, processes and tools to better enable the integration of storage resources within the current structure of our market. Enabling more resources to participate in our markets will increase competition, drive down costs, and provide sustainable options.

Looking ahead, we will strive to support the transformation of Ontario's electricity system by driving and guiding the future of the sector. While at times it is best to lead from the front, charting a path for others to follow, it is also important to create opportunities for others to lead and pave the way when appropriate.

While efforts to reduce emissions across all sectors continue to accelerate, the coming decade will see a rapidly-changing electricity landscape in Ontario. As the first jurisdiction in North America to completely eliminate coal-fired electricity generation, today, Ontario's electricity system is among the cleanest in the world, accounting for less than three per cent of the province's GHG emissions.

The IESO has been engaging with stakeholders, technical experts and others to develop a view of Ontario's decarbonized future. Our Pathways to Decarbonization project provides a focus for concrete conversations about how to eliminate greenhouse gas (GHG) emissions from our system while balancing the need to maintain reliability as other sectors of the economy also decarbonize through electrification.

The move towards greater decarbonization is driving Ontario residents, businesses, institutions and communities to seek new opportunities to further reduce GHG emissions. A growing number of consumers are looking for ways to reduce their carbon footprint by investing in technologies that include electric vehicles, heat pumps, induction stoves, smart thermostats and other devices.

Many industrial and commercial customers are exploring ways to electrify their operations and reduce their reliance on natural gas and other fossil fuels, not only to achieve cost savings but also to meet environmental, social and governance-related objectives. At the same time, a number of municipalities across Ontario have established their own emission reduction targets. Many are implementing major energy-efficiency projects and testing electric transit systems as part of their own climate-change mitigation strategies.

The IESO will continue to share its expertise as part of this dialogue, encouraging a common understanding of the issues at hand and bringing a variety of perspectives to the table. Given our role as system integrator, we must ensure all voices are heard and all ideas are considered. Plotting a viable, sustainable and financially responsible course for Ontario's energy future is a shared responsibility. The IESO will remain steadfast in our efforts to bring the right parties together to explore options to meet changing needs and priorities.

Ensure System Reliability While Supporting Cost-Effectiveness

To ensure system reliability while supporting cost effectiveness, we will transform the real-time markets and adapt our planning processes, cost-effectively acquire services and champion cybersecurity.

Renew the real-time markets to advance energy transformation

As the landscape has changed, so too have our markets. The opening of the wholesale market in 2002 introduced an important new force: competition. By establishing a model where electricity suppliers compete to meet the province's electricity needs, the IESO has ensured Ontarians benefit from a more dynamic and cost-effective system.

Competition is a thread that connects many of the IESO's activities – and is expected to play an even greater role in future operations. The IESO's Market Renewal Program (MRP) is introducing fundamental reforms to the province's electricity markets to improve how we supply, schedule and price electricity to meet Ontario's future needs at the lowest cost.

The market of the future must also accommodate a range of new resource types, often with different strengths and operating characteristics than our existing fleet. Given the ongoing transformation of the system, the market must be flexible enough to support the integration of new sources of supply, accommodate changing policy imperatives and consumer preferences, stimulate investments in new supply as required, and deliver the most economically efficient outcomes. Market Renewal is building the foundation to enable our future needs, decarbonization goals, demand-side participation and new innovations entering the market.

Beyond the wholesale market, competition is expected to dominate other aspects of our business in the years to come, including the procurement of existing and new resources to meet Ontario's rapidly increasing demand for electricity. We are securing resources, testing new integration models and re-examining our systems and processes to reduce barriers to entry to ensure we derive the greatest value from new and emerging technologies.

This essential work will play out over several years, resulting in a system that is more flexible, resilient and diversified. In addition to meeting the IESO's operational requirements, the system must satisfy the needs of ratepayers and communities, as well as asset owners and investors.

In lockstep with the planned implementation of MRP, we are also making great progress on a multi-year initiative to replace our legacy settlement systems to ensure they can support the complex needs of the project. Settling the market is a critical function that requires sophisticated software. Over \$22 billion in transactions occur each year through IESO's administered markets and programs so it is imperative that these transactions be settled accurately.

We will continue to take the necessary steps to ensure reliability by upgrading and replacing core applications, infrastructure and cybersecurity tools. For example, core projects include a refresh of the Transmission Rights Auction platform and the completion of the Supervisory Control and Data Acquisition (SCADA) / Energy Management System (EMS) upgrade. We are also investing in a Market Analysis and Simulation Toolset, a tool to monitor, correct, improve or alter market design or operations over the multiple timeframes once MRP goes live.

Adapt short- and long-term planning to meet evolving system needs

One operational challenge the IESO must manage is that electricity needs are not static. Rather, they are subject to a broad range of forces and variables. The dynamic nature of Ontario's electricity requirements means the IESO must take a flexible and responsive approach to planning the system. We must have the ability to identify, react, and adapt to changing realities.

When it comes to electricity planning, understanding what's important to consumers, communities and businesses at the regional level is critical. Every region of the province has unique characteristics and energy needs, which the IESO must understand, consider and plan for.

Over the next three years, we will continue to adapt our short- and long-term planning processes to meet evolving system needs – not just for the province as a whole, but for its many regions and individual communities. We will identify system needs and opportunities, monitor evolving technologies and supply options, and effectively plan transmission so that electricity is available where and when it is needed. To achieve these objectives, we will update our demand forecasting tools and our energy modelling system to ensure we have access to state-of-the-art technologies.

We are also taking steps to improve how we identify and assess distributed energy resources and other non-wires alternatives as these technologies will undoubtedly become more important as Ontario transitions to a cleaner energy supply mix. There will, however, continue to be situations when transmission solutions (poles, wires and stations) will be the only viable option.

We will focus on increasing the transparency of our transmission planning processes to ensure all affected stakeholders, communities, utilities, residents and businesses know what we are contemplating – and why. Every region has its own specific needs and interests so providing opportunities to gain insight from stakeholders and communities is also of paramount importance to inform our decision-making. To ensure electricity infrastructure gets built in a timely manner, we need all of our partners to understand the big picture and the need to expand the system.

By working closely with our partners, we will proactively identify where in the province new, large customers are likely to connect and then develop transmission plans to supply those sites. This foundational work is critical to enable economic development and ensure the necessary supply chains exist to support the energy transition.

To meet future system needs, the IESO will be recommending a relatively large number of transmission projects in the coming years. For reliability purposes, it is imperative that these projects be completed on time. For this reason, we will put more emphasis on monitoring the implementation of our plans, understanding any potential implementation risks, and preparing to take action to ensure long-term reliability, if needed.

Cost-effectively acquire services to maintain reliability in the evolving sector

The IESO has worked with sector stakeholders to develop a Resource Adequacy Framework to address evolving reliability needs in a cost-effective and flexible manner while balancing ratepayer and supplier risk.

We remain committed to using competitive mechanisms to meet Ontario's resource adequacy needs and are working with stakeholders, communities and others to deliver on the Resource Adequacy Framework.

To facilitate competition and provide business planning certainty, our efforts have been structured around three timeframes: short, medium and long-term. In the short term, capacity auctions will be the primary mechanism to meet needs, while existing resources capable of expansions or upgrades are the focus of our medium-term procurements. For new projects with longer lead times, we will conduct longer term procurements to respect developers' need for certainty and a reasonable return on their investments.

Champion cybersecurity, situational awareness and best practices within the sector

Protecting the IESO grid against threats and vulnerabilities remains a high priority, both in the physical and cyber realms. Cyberattacks are becoming more common and more complex with every passing year. For this reason, the IESO continues to work closely with sector partners to share information and deepen situational awareness. The safe and reliable operation of Ontario's power system is built upon a large, decentralized supply chain – and we are already taking steps to reinforce the weakest links.

Given the rate at which cyber risks are increasing, this work will continue for the foreseeable future. Ransomware, malware, social engineering and phishing are the most common ways that bad actors try to access the grid – but this is not unique to Ontario. In fact, it's a global phenomenon and a broadly shared concern. We will remain vigilant and continue to collaborate with experts from around the world to identify, mitigate and minimize the collective risks to reliability.

In 2019, the IESO became the first system operator in North America to be accountable for providing cybersecurity-related services to the broader electricity sector. Lighthouse, the cornerstone of our cyber offerings, provides a near real-time view into threats and incidents that can impact the power grid. Designed to improve the security and resilience of the system, this detection, assessment and information-sharing service is the result of a one-of-a-kind partnership with the Canadian Centre for Cyber Security, a trusted federal source of cybersecurity information, advice and guidance that builds on the IESO's existing leadership and capabilities.

We will continue to expand the reach and effectiveness of our flagship Lighthouse program to ensure we enroll as many members as possible. A holistic view and understanding of market participants' cybersecurity postures and program objectives is required to develop an informed and coordinated approach to cyber resilience for Ontario's electricity sector.

As cybersecurity events, and ransomware attacks in particular, continue to increase across the sector, the IESO is also focused on bolstering its cyber incident response capability. These initiatives include developing cyber incident response playbooks and conducting regular tabletop exercises to practice response execution in an effort to reduce the potential impact and accelerate resolution timelines.

Drive Business Transformation

To drive business transformation, we will evolve our internal processes, technologies and tools, identifying and building next-generation skills and competencies while defining and enhancing the IESO culture and employee experience.

Define and enhance our desired culture and employee experience

The IESO's organizational success is underpinned by our employees. For this reason, we are taking concrete steps to modernize our corporate culture and enhance the employee experience. The IESO is on a journey to establish a more inclusive culture where our people can realize their full potential.

Our vision is to create a sense of belonging, where diverse expertise and perspectives are valued. We must operate in a fair and consistent manner, make employees feel safe challenging the status quo, and ensure corporate values are reflected in the attitudes and behaviours of our workforce. IESO employees have a strong sense of purpose, and we are making the necessary investments in our people and our workplace to enable them to deliver results that support it.

We have already taken a number of actions, with more to follow. The IESO is working to support its employees by promoting a clear understanding of our purpose, strategic priorities, and key activities. Leaders must create an environment of inclusivity, enhance their team's connection to support IESO's priorities and encourage diverse perspectives while investing in each other's success.

This evolution requires ongoing organizational focus and change in a number of areas. We must fully align our workforce to common goals and priorities. This shared understanding will help to build a united, cohesive team with a common commitment to achieving our goals.

We are also proceeding with an organizational alignment review that will be implemented in 2023. This review will ensure we have the right organizational structure in place to provide clarity for decision-making through well-defined leadership roles with clear accountabilities. This will support the delivery of our strategy and mandate moving forward.

The review will enable the IESO to identify existing strengths and opportunities for enhancements to our current organizational structure; align roles and accountabilities to the refreshed corporate strategy; clarify accountabilities and decision-making both vertically and horizontally; empower leaders within their scope of authority; and better enable our leaders to successfully guide their teams in implementing the strategic plan and delivering our core mandate.

Before the pandemic, we also launched a program to assess our broader space needs and explore the benefits offered by co-locating more employees at a single location. These benefits included advancing our culture, offering employees more flexibility and choice in how and where they work within the office, and optimizing our real estate footprint with savings realized outside of this business plan's time horizon. While the strategies to achieve our goals have evolved over time, many of our objectives remain the same: a more flexible, inviting and cost-effective workspace that responds to emerging workplace trends and employee feedback, supporting a culture based on teamwork and collaboration, and an improved employee experience overall.

Although the pandemic has provided an opportunity for us to reconsider and reevaluate our space needs, especially in the context of a proposed hybrid work model, we will continue to prioritize employee wellbeing, business productivity and cost containment.

Identify and build next-generation skills and competencies

Ensuring our employees have the skills they need to excel in a changing environment is a high priority. Learning needs change over the course of every career. For this reason, we offer learning and development opportunities for staff at different points in the employee lifecycle. Although some training content is tailored to meet the needs of employees at specific levels in the organization, we firmly believe leadership can be found across the IESO. It is a skill we plan to nurture, as all employees play a key role in helping the IESO achieve its strategic objectives.

Internal capacity building will be even more critical in the years to come. By making strategic investments in learning and development, we are taking steps towards aligning program offerings with corporate priorities and employee interests, which is essential to driving engagement, commitment and loyalty.

We are proactively working to build the necessary capabilities for the future to deliver on our mandate. For example, forecasting demand and ensuring resource availability is a complex task that requires expertise across the organization, including planning, operations, contract management, information technology and market development, among others.

We are also developing plans to attract, engage and retain top-level talent in certain key areas, including cybersecurity, data science, artificial intelligence and machine learning, stakeholder and community relations, contract management, and economics. We will also focus to a greater degree on succession planning and strengthening inclusive leadership capabilities.

As is the case with many of our sector partners, the IESO is experiencing a demographic shift with the planned retirement of some long-term employees. We are actively recruiting from top academic institutions to attract staff with the optimal combination of skills, experience and passion to drive the organization forward.

To deliver the best results, employees need to be future-oriented, solutions-driven and capable of responding positively and effectively to changes in the environment. They also need the right tools and technologies to do their work.

Evolve business processes, technologies and tools

Driving business transformation involves optimizing our workforce as well as the systems and processes that support them. As with every aspect of Ontario's electricity sector, the changes required to make this happen are significant and wide reaching. Today, we are making the necessary investments to facilitate this transformation and deliver long-term value to residents, communities, businesses and institutions across Ontario.

Complex information technology (IT) programs and tools enable us to perform essential tasks that include forecasting demand, dispatching resources and monitoring the grid for cyber threats. After years of deferring investments in a risk-informed way, many of the IESO's IT systems require

renewal as they approach their end of life. Some of these upgrades will be made to control room systems to support the integration of emerging resources, and to improve situational awareness. In the coming years, we will continue to update or replace many of these key IT systems that help us maintain the reliability of the grid.

Good decisions require good data. Given our central role in managing the power system and the scope of our IT tools and systems, the IESO has access to a wealth of operational electricity data stretching back to the opening of Ontario's electricity market in 2002. When fully utilized, this data can provide unique insights into the complex inner-workings of electricity production, usage, planning, forecasting and much more.

Earlier this decade, the IESO embarked on a program of work to evolve our data and analytics maturity level and capabilities. By developing a data strategy and enterprise data catalogue, the IESO is treating organizational data as an invaluable business asset. We continue our work to leverage this data to identify additional market efficiencies, support reliable grid operations and improve our risk management practices.

We are also evolving and enhancing many of the IT systems that support our operations staff to ensure they have maximum visibility into different grid assets.

Financial Overview

The 2023-2025 Business Plan provides an overview of the resources required to maintain the high levels of performance necessary for the IESO to deliver on its core responsibilities, as well as deliver on the first three years of a refreshed strategy, committed to helping drive and guide a transition to ensure a reliable, affordable and sustainable energy future.

The IESO is moving forward on key initiatives that are critical to maintaining its core operations and to support the significant growth in the industrial, mining and agricultural sectors, as well as major expansion in transportation electrification, which will collectively drive higher electricity demand than Ontario has seen in many years; demand is expected to increase by nearly two per cent per year during the next 10 years. These demand increases are being compounded by nuclear retirements and refurbishments as well as the expiration of a large number of generator contracts, which impacts available supply. Energy needs are emerging as early as 2025.

To achieve this outcome, the IESO is proposing increases to its revenue requirement of 5.8%, 4.9%, and 5.2% over the three year planning period. The rapid increase in the interest rate is forecasted to add \$5.4 million of surplus through interest income to the IESO in 2022 by year-end. This rate of increase was not budgeted thus the surplus is deemed an uncontrollable variance that is excluded from the percentage year over year increase between 2022 and 2023 funding requirements. Over the 2023-2025 planning period, for the average residential electricity bill, this translates to an 8.3 cents per month increase. The IESO has taken steps to manage our exposure to macroeconomic trends and will continue to do so in support of value for ratepayers. The IESO has and will continue to carefully review all expenditures and find efficiencies, where possible, to minimize the impact to ratepayers of Ontario while we invest to support the significant transformation of the sector.

In the 2023-2025 Business Plan, the IESO is proposing to:

- Continue work started in 2022 under Resource and Transmission Adequacy and Enabling Resources, furthering incremental investments to secure additional supply and expansions needed to address electricity needs emerging and the unprecedented transformation of the electricity system over the next decade.
- Deliver on government initiative work related to Class B and Interruptible rate pilots, potential program to provide new contracts for existing small hydroelectric generation facilities, enhanced energy efficiency conservation and demand management programs, along with other smaller initiatives.
- Complete the \$233 million Market Renewal Program (MRP) investment, at which time the new market will begin to generate significant ratepayer savings building on the benefits that the market has delivered to consumers over the past 20 years. The program investment will be amortized over a 20-year period. The new market will introduce new features and tools that require additional resources for market operations, monitoring and ongoing maintenance and support. As such, the business plan includes resources for additional staff, technical consultants and support & maintenance to operate the renewed market.
- Strengthen IESO's preparedness to support Ontario's electricity transformation through enhancing cybersecurity posture, reinforcing the resilience and integrity of the electricity grid,

sustaining our critical IT systems and enabling the grid transformation program. It will also include strengthening stakeholder and community connections, and continuing to build out workforce capacity and capabilities to promote a high-performing organization.

These investments are necessary to enable the IESO to play a critical role in driving and guiding the energy transformation underway.

The 2022 forecast is below approved budget due to significantly higher interest income, increased electricity demand thus higher revenue and lower expenses driven by project and staff hiring delays. The 2023 higher expenses are driven by incremental initiatives and amortization impacts of assets placed into service in late 2022. In 2024 and 2025, expenses are impacted by transition to post MRP integration functions and services including amortization impacts, and further investments most notably in initiatives to ensure resource acquisition to meet system needs by 2026. The 2023-2025 business plan has significantly higher interest income and revenue from registration fees used to offset the revenue requirement.

After rigorous review, staffing levels will increase in 2023 as a number of strategic positions are added to support key initiatives (including the MRP). For 2023, the IESO anticipates an average of 914 full-time equivalent employees to deliver on core electricity system responsibilities and initiatives, as well as to support the MRP. Staffing levels will remain relatively flat in 2024 as the MRP begins to wind-down, with certain staff returning to core functions, concluding the transition in 2025 when the average full-time equivalent number of employees will be reduced to 900.

As part of its mandate, the IESO operates several programs that are funded from other sources and are not included in this business plan, including: the smart metering entity, market rule enforcement and education, and energy-efficiency programs.

The IESO has approval from the Ontario Energy Board to maintain an operating reserve of \$10 million to manage cost or revenue variances from budgets caused by changes to the external environment that impact the IESO and may not be within its control or reasonably foreseeable. This practice is adopted by similar sector organizations. As the IESO enters into its first three-year business plan, and given the complexity and uncertainty around the transformation of the sector, there is potential for additional unplanned needs that may be material in scope. The IESO will be recommending to the OEB an increase to the operating reserve to a balance of \$15 million, to be funded through its forecasted 2022 surplus, to address these potential needs.

Detailed Financials

The following table outlines 2023-2025 business plan operating revenues and expenses:

Pro Forma Statement of Operations
For the Year Ended December 31
(in Millions of Canadian Dollars)

(\$ Millions)	2022 Budget	2022 Forecast	2023 Budget	2024 Budget	2025 Budget
Revenue					
IESO Usage Fee	201.5	204.1	208.4	218.4	229.7
Expenses					
Baseline Expenses	172.8	171.4	175.4	181.4	187.7
Resource and Transmission Adequacy	1.7	1.4	6.0	8.8	7.3
Enabling Resources	0.4	0.6	0.8	0.9	0.9
Pathway to Decarbonization	1.3	0.9	-	-	-
Other Government Priorities	4.6	4.3	2.9	2.5	2.5
MRP – ongoing operation of new functions	0.5	0.2	1.9	3.0	4.2
Cybersecurity	-	0.9	1.6	1.6	2.1
Strengthening Engagement	-	-	0.7	1.1	1.6
Culture, Employees and Capabilities	-	-	0.8	0.8	1.0
Sustaining Technology, Evolving Processes and Tools	-	-	1.9	2.3	2.2
Operating Expenses sub-total	181.3	179.7	192.0	202.2	209.4
Amortization	20.0	18.5	23.1	22.0	27.0
Net Interest	(5.0)	(10.4)	(11.5)	(9.7)	(9.2)
Registration Fee	-	(0.8)	(0.5)	(0.5)	-
Market Renewal Program	5.2	4.3	5.3	4.4	2.5
Total Expenses	201.5	191.3	208.4	218.4	229.7
<i>Uncontrollable Interest Variance</i>		<i>5.4</i>			
<i>Adjusted Total Expenses</i>	<i>201.5</i>	<i>196.7</i>	<i>208.4</i>	<i>218.4</i>	<i>229.7</i>
<i>Year over year variance</i>		<i>-</i>	<i>5.8%</i>	<i>4.8%</i>	<i>5.2%</i>
Operating Surplus/(Deficit)	-	12.8	-	-	-
Accumulated Operating Surplus	8.7	15.0	15.0	15.0	15.0
Potential Rebate to Market Participants	-	6.5	-	-	-

Capital

As with previous years, the business planning process establishes an appropriate capital envelope for core operating initiatives over the business planning timeframe, with commitments approved individually, on an ongoing basis.

There will be increased capital investments over the period of the business plan in order to make significant investments in the IESO's facilities (\$30 million) and backup operating and data centres

(\$10.4 million) that are required to maintain our facilities, drive business transformation and maintain reliable system and business operations.

In addition to these major investments, a number of other capital projects will be undertaken to fulfill our mandate and advance our refreshed strategy. Details for the larger initiatives are outlined in Appendix 3.

The Market Renewal Program capital costs for 2023-2025 in the table below are the latest estimate of program spending and are in alignment with the revised schedule and in-service date approved by the IESO board.

Project details and associated descriptions are included in Appendix 3.

Capital (\$ Millions)	2022 Budget	2022 Forecast	2023 Budget	2024 Budget	2025 Budget
Core Operations Initiatives	30.0	30.0	23.0	28.6	30.6
Space Needs Program & Facility Investment	-	-	7.0	10.0	13.0
Back Up Operating and Data Centre Relocation	-	-	5.0	5.0	-
Market Renewal Program	41.2	37.1	51.0	32.3	14.6
Total Capital Envelope	71.2	67.1	86.0	75.9	58.2

Full Time Equivalent (FTE) Staffing

In 2023, the average core operations FTEs of 805 is higher than 2022 levels by 91 FTEs due to delayed hiring of resources in 2022 and additional resources to support the IESO's initiatives on-boarded throughout 2023. Core operations FTE levels in 2024 increase to 838, mainly due to ramp-up of staff required to support additional energy procurements and prepare for the new market functions/services. In 2025, as Market Renewal Program (MRP) is completed, some resources will be returning to core operations as others conclude their temporary employments, thus the increase to 856 FTEs.

Staffing levels required to support the MRP implementation will reach 109 FTE in 2023, and are expected to decrease slightly in 2024 as the project moves to operations testing activities. In 2025 some staff are retained to provide market participants and internal staff with training, complete internal documentation, make tool changes post go-live and ensure that a framework is in place to measure the benefits.

Average FTEs	2022 Budget	2022 Forecast	2023 Budget	2024 Budget	2025 Budget
Full Time Equivalents (FTEs)					
Core Operations	730	714	805	838	856
Market Renewal Program	97	92	109	88	44
Total FTEs	827	806	914	926	900

Market Renewal Financials

As of 2021, the Market Renewal Program (MRP) has entered the final phase of the initiative: implementation. This phase of work will ensure both the IESO and market participants are prepared for the launch of the renewed market.

Market Renewal Program Baseline Schedule, Budget Update and Funding

The IESO has been working with vendors and stakeholders to refine and translate the design into system requirements and rules needed to finalize the delivery schedule for MRP. In August 2022, the IESO Board approved revised program funding and a refreshed schedule, including an in-service date of May 2025. The updated cost estimate for the delivery of MRP is \$233 million, including contingency, and is outweighed by the significant ratepayer benefits from project implementation. A recent review of the MRP business case determined the renewed market will deliver substantial net financial benefits of over \$700 million to Ontario consumers over the first 10 years of operation.

The capital activities for MRP include solution development deliverables and testing, which requires contracting external vendors as well as broad support from across the organization, including a significant complement of IT resources. MRP activities funded through operating costs include the development of market rules and related stakeholder activities, change management planning and coordination, and updates to internal and external manuals.

In 2025, the IESO will require funding post go-live to deliver market participant support and training, complete internal document updates, and start project closure activities while maintaining a capital budget for additional vendor support and internal IT costs for tool changes identified after the in-service date.

The annual MRP project costs from 2023-2025 are consistent with the Board-approved refreshed schedule and funding.

Appendix 1 – IESO Performance Management – Measures and Targets

The IESO's performance management program provides an important level of oversight for the organization and its stakeholders, and helps to ensure accountability and course correction, as needed.

Measures and targets have been reconstituted to align with the IESO's refreshed strategy and the 2023-2025 Business Plan. Since the strategy update this spring, Directors and ELT members have been engaged in an iterative process to contribute refreshed measures and identify annual targets. This set of measures is intended to help improve engagement and provide clear identification with how work efforts contribute to the IESO's over-all strategy success.

Strategic Alignment		Measure	Target			Measure Weight
			2023	2024	2025	
Outcomes	<ul style="list-style-type: none"> • Drive and guide the evolution of the system to ensure long-term reliability • Maintain affordability via competition and other mechanisms • Effectively respond to changes in policy and customer choices 	1. Market Renewal Program delivery: Total actual schedule complete percentage is within planned completion	80%	90%	100%	20%
		2. Maintaining Resource Adequacy: plans in place to ensure that resource adequacy reliability standards are met for the next 5 years	100%	100%	100%	10%
		3. Resource Adequacy procurement: number of supply offers in open and competitive mechanisms exceed the target capacity	20%	22%	24%	10%
		4. Enabling Resources Program delivery: Percentage complete of program plan	33%	44%	65%	10%

Strategic Alignment		Measure	Target			Measure Weight
			2023	2024	2025	
Enablers	<ul style="list-style-type: none"> Evolve the IESO's culture enabled by people, tools, and processes to promote a high-performing organization Effectively tell the IESO's story to strengthen stakeholders and community connections 	5. Employee pulse survey results for specific annual engagement areas of focus	4% average increase	4% average increase	4% average increase	15%
		6. Effectiveness of stakeholder engagement actions through positive survey results (within 2% ^{+/-} tolerance range)	80%	81%	82%	15%
Key Risk	<ul style="list-style-type: none"> Maintain vigilance on cyber security threats to the IESO and the system, and adapt as required 	7. Cyber threat intelligence technology implementation	90%	92%	94%	10%
		8. Phishing Metrics Trend	<5%	<4%	<3%	5%
		9. Determine pathway for assessment of appropriate regulatory instrument for system cyber risk mitigation*	Substantial Completion	TBD	TBD	5%

* 2023 is to develop a measure. Execution against cyber risk mitigation measure will occur in 2024-2025.

Appendix 2 – Enterprise Risk Management

At the IESO, risk management is an integrated discipline that supports informed decision-making throughout the organization. We recognize the pivotal role it plays in balancing strategic planning with business execution and compliance. This facilitates informed decision-making and a conscious evaluation of the upside opportunity and downside aspect of risk.

Our integrated approach to managing risk recognizes the need for clear, timely direction and support from our Board of Directors and senior, business unit and functional management.

Our starting point for managing risk is our strategic planning process, where key risks are identified from the internal and external threats and opportunities. Risks and opportunities are identified by observing, analyzing and anticipating trends along with macroeconomic, industry-specific, regional and local developments. Senior management assesses the risks to achieving our strategic objectives, and incorporates measures into corporate and operating plans to mitigate these risks if they exceed our target risk levels.

The IESO uses a risk management ranking methodology to assess the key risks specific to our achieving our strategic and business plan objectives. Our top strategic risks, aligned with the IESO's strategic objectives and their associated residual risk assessment, are as follows:

Risk	Risk Assessment: Critical
	Mitigating Actions
<p>Material undersupply of energy at a provincial and regional level</p> <p>Medium-term timelines are becoming more critical within our strategic planning time horizon. As the province's reliability coordinator, the IESO must comply with, oversee and enforce reliability standards and processes that are set by several regulatory bodies within and outside of Ontario. The concern about undersupply arises from not having sufficient time to address the long lead times needed to build infrastructure or the ability to respond to changes in demand.</p>	<ul style="list-style-type: none"> Advancing initiatives under the Resource Adequacy framework to design and execute procurements to acquire committed and contracted resources Expanding transmission planning programs to ensure new capacity can be connected Enhancing planning and forecasting tools for medium- and long-term energy supply Delivering annual acquisition report and annual planning outlook to provide stakeholders with much-needed insights into opportunities for existing and new resources Building alignment with government on how potential barriers to procurements and challenges to new facility development will be overcome

Risk	Risk Assessment: Critical
	Mitigating Actions
<p>IESO actions to identify and address supply shortfalls not seen as credible by the stakeholder community</p> <p>The stakeholder community authorizes the IESO to take action and provide the resources necessary to create value towards the achievement of cost-effective reliability. Not having credibility with the stakeholder community can impede the IESO's ability to deliver results.</p>	<ul style="list-style-type: none"> Advancing initiatives under the Resource Adequacy Framework to design and execute procurements to acquire new supply Consistently delivering on the Enabling Resources Program to introduce new grid-connected resources Developing and executing a purposeful approach to stakeholder and community engagement Enhancing external information sharing and reporting processes
Risk	Risk Assessment: High
	Mitigating Actions
<p>The IESO's information technology systems and data are disrupted by cybersecurity threats</p> <p>Cyber attacks on the IESO's information technology systems and data could be highly disruptive to reliability, business systems and data protection through exploiting vulnerabilities across people, processes, and technology. These threats from domestic and foreign threat actors may arise from malicious intent, financial motivation, ignorance and/or complacency. This risk needs to be monitored to protect the business, employees, and safeguard critical data, systems, and facilities from being compromised.</p>	<ul style="list-style-type: none"> Promoting a culture of cybersecurity awareness through policies and training Improving incident response capabilities and communications Implementing targeted solutions to help better identify and mitigate malicious threat actors from launching a successful attack Enhancing threat intelligence capabilities and upgrade network architecture, data management and security controls

Risk	Risk Assessment: High
	Mitigating Actions
<p>Cyberattack impacting non-IESO owned assets required for operating the IESO-controlled grid</p> <p>As cyberattacks targeting critical infrastructure are on the rise, a sector-wide, concerted cyber response is required from government, regulatory bodies, market participants and the IESO to augment response efforts. A holistic view and understanding of market participants' cybersecurity postures and program objectives is required to develop an informed and coordinated approach to cyber resiliency for the Ontario electricity sector.</p>	<ul style="list-style-type: none"> • Maintain robust reliability practices and contingency plans to respond to significant disruptions • Deliver Lighthouse services under OEB license to promote cyber information sharing and situational awareness across the sector • Conduct sector-wide threat assessments to identify vulnerabilities • Support external activities by developing playbooks and participating in broader groups and forums
Risk	Risk Assessment: High
	Mitigating Actions
<p>Competitive mechanisms not working as intended impairs the IESO's efficiency mandate</p> <p>The IESO is investing considerable time and resources to renew the wholesale electricity markets and operate the grid to drive reliability outcomes. The IESO's strategic priorities could be impacted if competition and supporting market mechanisms are impaired. If competition does not materialize as expected, the loss of stakeholder confidence could drive an emerging narrative that markets don't work thereby frustrating the IESO's efficiency mandate.</p>	<ul style="list-style-type: none"> • Design, development and testing of mechanisms as such as Market Power Mitigation under the Market Renewal Program • General Conduct Rule enforcement guidelines • Next phase of resource adequacy initiatives that involve competitive procurements and capacity auction as acquisition mechanisms

Risk	Risk Assessment: High
	Mitigating Actions
<p>Readiness of our culture, people, processes and tools to rapidly adapt and pivot to address transformation</p> <p>To deliver on the organization's goals and meet the demands of sector transformation, the IESO will need to transform. Meeting the demands of transformation is a complex process involving alignment of leadership, practices and culture. Evolving the maturity of the IESO's culture, people, processes and tools will require some necessary pre- and co-requisite change readiness supports.</p>	<ul style="list-style-type: none"> • Acquisition of business and grid control tools to support transformation • Resource planning and utilization: roles and accountabilities and workforce planning initiatives • Development of future capability: employee, leadership, technical, and business learning; succession planning • Culture transformation: Equity, diversity and inclusion (ED&I) Annual Plan and employee experience annual areas of focus • Evolve data and information governance practices

Appendix 3 – Capital Spending

Summary of 2023 - 2025 Capital Spending

Change Initiatives/Projects (\$ Millions)	2023 Budget	2024 Budget	2025 Budget
Replacement of the Settlement Systems	4.4	0.8	0.1
Data Excellence Program	0.5	0.8	0.5
Wide Area Visualization Environment (WAVE) - Phase 2	0.5	0.3	
Enabling Resources Program	0.3	0.6	3.3
Addressing Market Surveillance Panel (MSP) Recommendations	1.2	0.4	0.5
Dynamic Limits in Real-Time	2.8	0.2	
Enterprise Antivirus Replacement	0.3		
Resource Adequacy Program	1.0	1.2	1.3
Market Analysis and Simulation Toolset (MAST)	0.5	2.4	1.0
Long Term Demand Forecast Tool Replacement	1.0	0.8	
Core Network Refresh	2.0	0.6	
PMU Integration - Phase 3	1.0	1.0	1.0
Space Needs Program	7.0	10.0	13.0
Backup Operating and Data Centres Relocation Project	5.0	5.4	
Meter Data Management System Replacement (MDMS)	0.3	2.0	3.5
Enabling Grid Transformation Program	0.1	1.1	7.0
Lawson Refresh		0.2	1.9
Firewall Refresh	0.2	2.8	
Data Loss Prevention (DLP) Phase 2		1.5	1.0
Windows Infrastructure Refresh	1.9	0.1	
MIM Technical Refresh	1.1		
LogRhythm SIEM Refresh		2.9	0.1
Network WAN Infrastructure		1.6	0.1
Cybertec Refresh		0.9	0.1
Aspen File Server Refresh			2.1
Intrusion Prevention System (IPS) Refresh			1.4
Capital (1 million and above)	31.1	37.6	37.9
Other Initiatives/Projects (Less than a 1 million)	3.9	6.0	5.7
Total Without Market Renewal Program	35.0	43.6	43.6
Market Renewal Program	51.0	32.3	14.6
Total Including Market Renewal Program	86.0	75.9	58.2

2023-2025 Capital Plan Details

Project Name	Project Description
Replacement of the Settlement Systems	In replacing settlement systems that have been in operation since market opening in 2002, this project will address market re-design needs associated with implementation of the Market Renewal Program and enable systems to meet current and future business needs. In 2021, the IESO settled approximately \$22B in the IESO-Administered Markets, Ministry of Energy supported programs, and Global Adjustment through the settlement systems.
Data Excellence Program	To help harness the full value of IESO data, this program establishes an evolved data management and analytics framework to support the IESO's complex business needs. Data governance policies and tools (data catalogue), an updated data warehouse strategy and supporting applications for high-value use cases and a centre of excellence for advanced machine learning applications are in the scope of the program roadmap.
Wide Area Visualization Environment (WAVE) - Phase 2	This project will improve situational awareness and maintain ongoing compliance with NERC IRO standards by expanding modelling to neighbouring power systems (NYISO, PJM and Hydro-Quebec), improving the IESO's ability to monitor and respond to real-time conditions that may affect the IESO controlled grid.
Enabling Resources Program	Through the Program the IESO will prioritize and undertake the work to increase the number of resource types (e.g. hybrids, storage) that can participate in the IESO markets to deliver energy, capacity and ancillary services in order to increase options for reliability and competition to drive affordability.
Addressing Market Surveillance Panel (MSP) Recommendations	A portfolio of initiatives to develop, evolve and address inefficiencies in the electricity market in response to observations by the MSP and other stakeholders.
Dynamic Limits in Real-Time	In enabling the continuous assessment of real-time grid conditions, the Dynamic Limits in Real-Time (DLRT) Project will significantly improve the utilization of Ontario's transmission system, resulting in market and system operations efficiencies, and increased system security and resilience.
Enterprise Antivirus Replacement	The current antivirus solution which was commissioned in 2018 has approached end of support by the vendor on the solution lifecycle. The current vendor is moving to a cloud based service offering only, which will not meet the current NERC Critical Infrastructure Protection (CIP) standards. This project will replace the current antivirus solution with a new on-premise solution that will maintain the IESO's security posture and continue to meet the NERC CIP requirements.
Resource Adequacy Program	As part of its commitment to competitive mechanisms to meet Ontario's resource adequacy needs, the IESO is working with stakeholders to implement the Resource Adequacy framework to develop and execute multiple mechanisms, such as the Capacity Auction and Requests for Proposals to acquire products and services needed to maintain reliability cost-effectively.
Market Analysis and Simulation Toolset (MAST)	As the Market Renewal Program (MRP) is introducing wholesale market changes, current tools to monitor, assess and analyze the new market will be insufficient. MAST will deploy a common assessment tool environment that can be utilized in multiple business processes that will monitor, correct, improve or alter market design or operations over the day-ahead, pre-dispatch and real-time periods. The new tools are required after MRP go-live.

Long Term Demand Forecast Tool Replacement	This project will replace the existing Long-Term Demand Forecast tools which have reached end of life and update the end-use load profiles used to develop the long-term forecasts. These tools are essential to support the planning processes that forecast system needs and provide infrastructure investment advice for the next 20 years.
Core Network Refresh	The IESO's Core and Data Centre networks provide the backbone of the IESO's network infrastructure, connecting all systems and locations in a robust and reliable high-performance network. The existing core and data centre infrastructure needs to be refreshed as it is approaching the end of manufacturer support.
PMU Integration - Phase 3	Phasor Measurement Units (PMUs) can continuously deliver high-quality, time synchronized real-time power system data at a high frequency (30-60 samples per second). Obtaining PMU data from across Ontario will improve real-time monitoring of the IESO-controlled grid; obtaining PMU data from other jurisdictions will improve wide-area view; and both will improve the IESO's overall situational awareness. PMUs also provide the IESO the ability to diagnose incidents and to more efficiently comply with several NERC reliability standards. Building on the earlier phases of this work, Phase 3 will integrate PMU data into the IESO's operations support tools and services, as well as live information into the Control Room. The Market Rules to support this change have been implemented and will become enforceable at the end of 2024 to give participants and the IESO sufficient time to implement these changes.
Space Needs Program	IESO owns and leases three office facilities in the Greater Toronto Area. Our primary location in Mississauga, which the IESO owns and operates, was built in 1989 and requires significant investments in its electrical, mechanical and structural systems over the next 4-5 years. Building on the experience from an office pilot project being undertaken in 2022, the results will define the path forward with respect to the IESO's overall office footprint and the modernization of the workspace. The modernization of the workspace will be critical to meet the needs of today's workforce and supports the attraction and retention of IESO staff
Backup Operating and Data Centres Relocation Project	As part of its system operator mandate, the IESO operates a Backup Operating Centre (BOC) and Backup Data Centre (BDC) to ensure continuous operation of Ontario's power system and IESO's business operations in event of an emergency affecting the power system or IESO's control centre. These facilities are also required in order to comply with North American Electric Reliability Corporation (NERC) reliability and critical infrastructure protection standards. The current BOC and BDC are reaching the end of their current lease terms and no longer meet the evolving needs of the IESO. This project will determine and secure a new location for these two critical facilities and make the necessary investments in order to meet both regulatory compliance and reliability needs.
Meter Data Management System Replacement (MDMS)	The current Meter Data Management solution that supports the IESO settlement processes is currently deployed on an application that cannot be upgraded. The business capabilities that the application supports will be delivered as part of an alternative solution through the Meter Data Management System Replacement project.

Enabling Grid Transformation Program	In conjunction with the PMU Phase 3, Wide Area Visualization - Phase 2 and Dynamic Limits In Real-Time projects, this program will implement new technologies, processes, and more dynamic tools to support the operation of the transforming grid with more diverse resource types and a more complex transmission system. This work is critical to support resource retirements/replacements, meet incremental system demand by adding supply resources to the system, as well as provide future options for de-carbonization.
Lawson Refresh	Lawson Financials, the current financial and accounting application that supports both the Market and Corporate accounts has been used at the IESO since 1998. The last Lawson refresh project was completed in 2020 and is approaching end of life. This project will refresh our current financial system to ensure that it continues to meet our future financial accounting needs with a vendor supported tool.
Firewall Refresh	The existing IESO firewalls which provide access control to critical parts of the network such as the DMZ and internal corporate network are nearing the end of vendor support and need to be upgraded. This project seeks to build on the strengths of the existing security architecture by upgrading the key security controls at the firewall perimeter of IESO's data network and allow the IESO to take advantage of features which are used to reduce the risk of evolving cyber attacks and ensure mitigation of security concerns related to the industry.
Data Loss Prevention (DLP) Phase 2	Data loss prevention (DLP) is an approach that seeks to improve information security and protect business information from data breaches. This project will implement a technological DLP solution that will provide features and benefits in a variety of situations, all of which will allow the IESO to better understand how high-value data is handled within the network and will automate the prevention of data sharing with unauthorized personnel.
Windows Infrastructure Refresh	The current version of Microsoft Windows Server operating system is nearing end-of-life at which time Microsoft no longer provides support for the product, including critical security patches. This project will move us to the latest supported version of the Windows operating system and refresh the underlying hardware.
MIM Technical Refresh	The Market Information Management (MIM) system is the IESO solution that receives Dispatch Information (bids/offers) from Market Participants and is the repository for the results of the Day Ahead Optimization System and Market Information System. This project will update the solution to use supported hardware and supported technology components.
LogRhythm SIEM Refresh	LogRhythm is IESO's Security Information and Event Monitoring (SIEM) solution which monitors security events by gathering log data across all IT connected systems. This project will refresh the LogRhythm solution to provide more computing capacity to accommodate the growth of IESO's IT systems.
Network WAN Infrastructure	The IESO Wide-Area Network (WAN) infrastructure is a collection of networks that communicate with one another between all IESO locations, and with Market Participants through a WAN provider. This project will replace all WAN infrastructure which is reaching end of life.
Cybertec Refresh	The IESO collects over 100,000 telemetry data points every two (2) seconds and pushes that data into IESO's Supervisory Control and Data Acquisition (SCADA) systems. The Cybertec gateways support this critical function. This project will refresh the existing Cybertec gateways that have reached the end of their useful life.

Aspen File Server Refresh	Aspen is IESO's corporate fileserver which stores much of IESO's business information. This project will replace the underlying hardware and software with new hardware and software and migrate data to the new platform.
Intrusion Prevention System (IPS) Refresh	The Intrusion Prevention System (IPS) prevents network security attacks such as brute force attacks, Denial of Service (DoS) attacks and vulnerability exploits. IPS continuously monitors network traffic to detect/prevent against known and unknown vulnerability. This project will refresh the current IPS as it reaches end of life.

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Resolution of the Board of Directors Independent Electricity System Operator

August 24th, 2022

In Respect of Approval of the 2023 – 2025 Business Plan

WHEREAS by approving the 2023 – 2025 Business Plan, the Board of Directors will be approving the following elements as set forth in the Business Plan: (i) the funding requirements incorporated within the 2023 – 2025 Business Plan; and (ii) the Performance Measures and Targets;

AND WHEREAS the Audit Committee has reviewed and recommends the approval of the 2023 – 2025 Business Plan by the Board of Directors;

NOW THEREFORE BE IT RESOLVED THAT, as recommended by the Audit Committee and presented and discussed at this meeting of the Board of Directors, the 2023 – 2025 Business Plan is approved.

1 **SEC INTERROGATORY 2**

2 Issue 1.1 Is the IESO's Fiscal Year 2023 revenue requirement of \$208.4 million appropriate?

3 1.0-SEC-2

4 **INTERROGATORY**

5 Reference:

6 Preamble:

7 Questions:

- 8 a) Please provide a copy of all documents that were provided to the Board of Directors in
9 their decision to approve the underlying budget contained in the Business Plan and this
10 Application.

11
12 **RESPONSE**

13 Please see Attachment 1 – August AC Material Business Plan and Attachment 2 – Board
14 Material BP Resolution, to this response.

AUGUST 15, 2022

Audit Committee of the IESO Board of Directors

2023-2025 Business Plan

Business Plan Overview and Approval

Lesley Gallinger, President & CEO, Independent Electricity System Operator
Barbara Anderson, Vice President, Corporate Services and CFO
Jeannette Briggs, Director Corporate Finance

Purpose and Summary

- **Purpose of Item:** Recommendation for approval by the Board
 - **Executive Summary:**
 - Aligning the three-year business plan with the refreshed strategy is setting a course for a future state that is decarbonized, decentralized and digitalized
 - The IESO's funding requirement for 2023-2025 represents 5.8%, 4.8% and 5.2% year over year increases
 - A modular approach was followed to articulate need for incremental investments while managing baseline cost pressures, as we did in the 2022-2024 Business Plan
- Significant Issues, Risks and Opportunities:** Talent acquisition required for the business plan may be challenged by the current workforce availability

Proposal and Analysis

- The refreshed strategy identified the energy transformation underway and how the IESO needs to address the significant growth in the industrial, mining and agricultural sectors, as well as major expansion in transportation electrification, which will collectively drive higher electricity demand than Ontario has seen in many years (increase by nearly two per cent per year during next 10 years)
- These demand increases are being compounded by nuclear retirements and refurbishments as well as the expiration of a large number of generator contracts, which impacts available supply
- Energy needs are emerging as early as 2025 and the 2023 – 2025 business plan enables the IESO to deliver on the first three years of the refreshed strategy, committed to helping drive and guide a transition to ensure a reliable, affordable and sustainable energy future

Proposal and Analysis

- The IESO continues work started in 2022 under Resource and Transmission Adequacy and Enabling Resources to secure additional supply and expansions needed to address the emerging electricity needs
- Various government initiatives are included - Class B and Interruptible rate pilots, programs to provide new contracts for existing small hydroelectric generation facilities, enhanced energy efficiency conservation and demand management programs
- MRP¹ will introduce new features and tools that require additional resources for market operations, monitoring and ongoing maintenance and support.

Next slide shows how the key initiatives enable the refreshed strategy

Proposal and Analysis - Initiatives Alignment to Strategy

Drive & Guide the Sector's Future

- Strengthening stakeholder and community connections
- Continue Enabling Resources Program

Ensure System Reliability while Supporting Cost Effectiveness

- MRP¹ support & maintenance to operate the renewed market
- Resource and Transmission Adequacy incremental investments

Drive Business Transformation

- Sustaining our critical IT systems, and evolving internal processes and tools

- Address various Government Initiatives

- Enhancing cybersecurity posture through reinforcing the resilience and integrity of the electricity grid
- Enabling the grid transformation program

Continuing to build out workforce culture, capacity and capabilities to promote a high-performing organization

5 ¹Market Renewal Program (MRP)

Initiatives Included in Business Plan

Incremental Initiatives (\$ Millions)	2022 Forecast	2023 Budget	2024 Budget	2025 Budget
Resource and Transmission Adequacy	1.4	6.0	8.8	7.3
Enabling Resources	0.6	0.8	0.9	0.9
Pathway to Decarbonization	0.9	-	-	-
Other Government Priorities	4.3	2.9	2.5	2.5
MRP ¹ - ongoing operation of new functions	0.2	1.9	3.0	4.2
Cybersecurity	0.9	1.6	1.6	2.1
Strengthening Engagement	-	0.7	1.1	1.6
Culture, Employees and Capabilities	-	0.8	0.8	1.0
Sustaining Technology, Evolving Processes and Tools	-	1.9	2.3	2.2
Total Incremental Initiatives	8.3	16.6	20.8	21.7

6 ¹Market Renewal Program (MRP)



What is Not Included Or Delayed

- No Clean Energy Credit Registry and Market investment beyond the initial subscription-based service to be introduced in January 2023
- No investment related to program options for the low carbon hydrogen technologies report due to Ministry of Energy by October 31, 2022
- Improvements to the use of Operating Reserve over our interties will be delayed until later in the business planning timeframe - starting work in mid-late 2024
- Reduced pace for the Grid Transformation Program – Focus initially on Phasor Measurement Unit Phase 3 and Electromagnetic Study Capability in 2023
- Information Governance Program advanced at a slower pace with only the first few initiatives being advanced over the business planning period

Financial Assumptions

- Upward pressures on salaries have been reflected in 2025 as Bill 124 (limiting salary increased to 1%), ceases in December 2024
- Rise in pension and OPEB expenses driven by liabilities increase and lower projected net return on plan assets
- Real estate strategy to support longer term IESO space needs will have material impact over the planning period (i.e. Cost of Upgrading and Renovating Clarkson, timing and degree of lease terminations, etc.)
- The rapid increase in the interest rate is forecasted to add \$5.4 million of surplus through interest income to the IESO in 2022 by year-end. This rate of increase (beginning the year 0.25% to 2.5% as of July 13, 2022) was not budgeted and surplus is deemed an uncontrollable variance that is excluded from the business plan percentage year over year increase between 2022 and 2023 funding requirement
- The proposed approval is a funding requirement for 5.8%, 4.8% and 5.2% year over year increases for 2023, 2024 and 2025 which results in an average residential electricity bill increase of 8.3 cents per month over the 2023-2025 planning period

IESO's Operating Reserve

- The IESO has approval from the Ontario Energy Board to maintain an operating reserve of \$10 million, to manage cost or revenue variances from budgets, as well as changes to the external environment that impact the IESO and may not be within its control or reasonably foreseeable, a practice adopted by similar sector organizations
- As the IESO enters into their first three year business plan and given the complexity and uncertainty around the transformation of the sector, there is potential for material unplanned work; therefore, the IESO will be recommending to the OEB an increase to the operating reserve to a balance of \$15 million funded through its forecasted 2022 surplus. The balance of the surplus will be returned to the market
- The Ministry has expressed support with this approach

Detailed Financials

- 2022 forecast expenses are below approved budget mainly due to significantly higher interest income and lower expenses driven by project delays and staff hiring delays
- 2023 higher expenses driven by incremental initiatives and amortization impacts of assets placed into service in late 2022
- 2024 and 2025 are impacted by MRP¹ ongoing operation of new functions, MRP/RSS¹ amortization impacts, and further investments most notably initiatives to ensure resource acquisition to meet system needs by 2026

Pro Forma Statement of Operations For the Year Ended December 31 (\$ Millions)					
	2022 Budget	2022 Forecast	2023 Budget	2024 Budget	2025 Budget
Revenue					
IESO Usage Fee	201.5	204.1	208.4	218.4	229.7
Total Revenue	201.5	204.1	208.4	218.4	229.7
Expenses					
Baseline Expenses	172.8	171.4	175.4	181.4	187.7
Initiatives	8.5	8.3	16.6	20.8	21.7
Sub-Total	181.3	179.7	192.0	202.2	209.4
Amortization	20.0	18.5	23.1	22.0	27.0
Net Interest	(5.0)	(10.4)	(11.5)	(9.7)	(9.2)
Registration fees	-	(0.8)	(0.5)	(0.5)	-
Market Renewal Program	5.2	4.3	5.3	4.4	2.5
Total Expenses	201.5	191.3	208.4	218.4	229.7
<i>Uncontrollable Interest Variance</i>		5.4	-	-	-
<i>Adjusted Total Expenses</i>	201.5	196.7	208.4	218.4	229.7
<i>Year-over-year variance</i>	-	-	5.8%	4.8%	5.2%
Operating Surplus/(Deficit)	-	12.8	-	-	-
Accumulated Operating Surplus	8.7	15.0	15.0	15.0	15.0
Potential Rebate to Market Participants	-	6.5	-	-	-

10 ¹Market Renewal Program (MRP), Replacement Settlement System (RSS)

Capital Projects

- Significant investments in IESO's facilities and backup operating and data centres are required to maintain reliable system and business operations. We will continue investment in Enabling Resources Program, complete RSS¹ and other key initiatives to support the IESO's refreshed strategy, advance cybersecurity program and maintain our critical systems and services through a number of core business projects
- MRP¹ capital spending includes solution development deliverables and testing to ensure both the IESO and market participants are prepared for the launch of the renewed market.

Capital (\$ Millions)	2022 Budget	2022 Forecast	2023 Budget	2024 Budget	2025 Budget
Core Operations Initiatives	30.0	30.0	23.0	28.6	30.6
Space Needs Program & Facility Investment	-	-	7.0	10.0	13.0
Back Up Operating and Data Centre Relocation	-	-	5.0	5.0	-
Market Renewal Program ²	41.2	37.1	51.0	32.3	14.6
Total Capital Envelope	71.2	67.1	86.0	75.9	58.2

11

¹Market Renewal Program (MRP), Replacement Settlement System (RSS)

² Pending Approval



Market Renewal Program Financials

- The IESO is presenting to the Markets Committee on August 23 a revised program funding and a refreshed schedule for approval, including an in-service and an updated cost estimate for the delivery of Market Renewal
- In 2025, MRP¹ requires operating funding post go-live to deliver market participant support and training, complete internal document updates, and complete project closure activities (i.e. evaluate project performance, lesson learned documentation, etc.), and capital funding for changes identified after the in service date
- The business plan accommodates these revised cost estimates

Full Time Equivalent (FTE) Staffing

Key staffing related drivers:

- Core staff increases required to support resource adequacy strategy, to prepare for implementation of the new market functions/services, for enabling resources program, to address the various government priorities and to prepare the IESO for the rapidly changing Ontario power system
- MRP¹ resources increase in 2023 for market implementation and as the work shifts to operations testing and go-live some resources will begin to return to core operations. In 2025, staff is retained to provide training, complete internal documentation, tool changes post go-live and to ensure an effective framework to measure the benefits post go-live

Average FTEs Full Time Equivalent (FTEs)	2022 Budget	2022 Forecast	2023 Budget	2024 Budget	2025 Budget
Core Operations	730	714	805	838	856
Market Renewal Program	97	92	109	88	44
Total FTEs	827	806	914	926	900

13 ¹Market Renewal Program (MRP)

Strategic Risks and Corporate Performance Measures

- Strategic Risks and Performance Measures and Targets have been refreshed based on the new strategy
 - Strategic Risks: Starting in early 2022, Management commenced a process to re-assess strategic risks through a series of focused discussions in parallel with the strategy refresh work. These discussions have helped calibrate the thinking on our principal risks to achieving strategic outcomes and risk interdependencies with the Core Strategies
 - Performance Measures: Measures and targets have been reconstituted to align with the IESO's refreshed strategy and 2023-2025 Business Plan. Since the strategy update this spring, Directors and ELT members have been engaged in an iterative process to contribute refreshed measures and identify annual targets. This set of measures is intended to help improve engagement and provide clear identification with how work efforts contribute to the IESO's over-all strategy success

Strategic Risks

Risk #	Risk Event Description	Core Strategy		
		Drive & Guide the Sector's Future	Ensure System Reliability while Supporting Cost-Effectiveness	Drive Business Transformation
1	Material undersupply of energy at a provincial and regional level.	X	X	X
2	IESO actions to identify and address supply shortfalls not seen as credible by the stakeholder community.	X	X	
3	IESO's information technology systems and data are disrupted by cybersecurity threats.	X	X	X
4	Cyberattack impacting non-IESO owned assets required for operating the IESO-controlled grid.	X	X	
5	Competitive mechanisms not working as intended impairs the IESO's efficiency mandate.	X	X	
6	A regulatory decision or recommendation is made that impedes the ability to advance strategic priorities.	X	X	
7	Readiness of our culture, people, processes and tools to rapidly adapt and pivot to address transformation.	X	X	X

Performance Measures

Strategic Alignment		Measure	Target			Measure Weight
			2023	2024	2025	
Outcomes	<ul style="list-style-type: none"> • Drive and guide the evolution of the system to ensure long-term reliability • Maintain affordability via competition and other mechanisms • Effectively respond to changes in policy and customer choices 	1. Market Renewal Program delivery: actual schedule complete is within 10% of planned completion	80%	90%	100%	20%
		2. Maintaining Resource Adequacy: plans in place to ensure that resource adequacy reliability standards are met for the next 5 years	100%	100%	100%	10%
		3. Resource Adequacy procurement: number of supply offers in open and competitive mechanisms exceed the target capacity	20%	22%	24%	10%
		4. Enabling Resources Program delivery: Percentage complete vs. planned	33%	44%	65%	10%
Enablers	<ul style="list-style-type: none"> • Evolve the IESO's culture enabled by people, tools, and processes to promote a high-performing organization • Effectively tell the IESO's story to strengthen stakeholders and community connections 	5. Employee pulse survey results for specific annual engagement areas of focus	4% average increase	4% average increase	4% average increase	15%
		6. Effectiveness of stakeholder engagement actions through positive survey results (within 2%+/- tolerance range)	80%	81%	82%	15%
Key Risk	<ul style="list-style-type: none"> • Maintain vigilance on cyber security threats to the IESO and the system, and adapt as required <p>* 2023 is to develop a measure. Execution against cyber risk mitigation measure will occur in 2024-2025.</p>	7. Cyber threat intelligence technology implementation	90%	92%	94%	10%
		8. Phishing Metrics Trend	<5%	<4%	<3%	5%
		9. Determine pathway for assessment of appropriate regulatory instrument for system cyber risk mitigation*	Substantial Completion	TBD	TBD	5%

Next Steps/Implementation

- Through August: Briefings with Ministry on Business Plan
- August 24: Board approval of Business Plan
- September 1: Deliver Business Plan to the Minister of Energy
- October/November: File 2023-2025 revenue requirement submission with the Ontario Energy Board

Committee Recommendation

The Committee is asked to approve the following resolution:

WHEREAS the IESO presented a 2023 - 2025 Business Plan to the Audit Committee for its review and recommendation to the Board of Directors;

AND WHEREAS by approving the 2023 - 2025 Business Plan, the Board of Directors will be approving the following elements as set forth in the Business Plan: (i) the funding requirements incorporated within the 2023 - 2025 Business Plan; and (ii) the Performance Measures and Targets;

NOW THEREFORE the Audit Committee approves recommending the approval of the 2023 - 2025 Business Plan by the Board of Directors.

Resolution of the Board of Directors Independent Electricity System Operator

August 24th, 2022

In Respect of Approval of the 2023 – 2025 Business Plan

WHEREAS by approving the 2023 – 2025 Business Plan, the Board of Directors will be approving the following elements as set forth in the Business Plan: (i) the funding requirements incorporated within the 2023 – 2025 Business Plan; and (ii) the Performance Measures and Targets;

AND WHEREAS the Audit Committee has reviewed and recommends the approval of the 2023 – 2025 Business Plan by the Board of Directors;

NOW THEREFORE BE IT RESOLVED THAT, as recommended by the Audit Committee and presented and discussed at this meeting of the Board of Directors, the 2023 – 2025 Business Plan is approved.

1 **SEC INTERROGATORY 3**

2 Issue 1.1 Is the IESO's Fiscal Year 2023 revenue requirement of \$208.4 million appropriate?

3 1.0-SEC-3

4 **INTERROGATORY**

5 Reference:

6 Preamble:

7 Questions:

- 8 a) Please provide details of all productivity and efficiency measures the IESO undertook in
9 2022, and plans to undertake in 2023, 2024 and 2025. Please quantify the savings.

10
11 **RESPONSE**

- 12 a) See the response to 1.0 AMPCO Interrogatory 2 a).

SEC INTERROGATORY 4

Issue 1.1 Is the IESO's Fiscal Year 2023 revenue requirement of \$208.4 million appropriate?

1.0-SEC-4

INTERROGATORY

Reference: [A-2-1, p.7]

Preamble:

Questions:

- a) Please provide a full copy of the 2022 IESO Stakeholder and Community engagement survey results.

RESPONSE

- a) A summary report of the 2022 IESO Stakeholder and Community Survey results will be shared with the IESO Stakeholder Advisory Committee (SAC) at a future meeting. The materials will be available one week in advance of the meeting on the SAC webpage.¹

As noted in Exhibit A-2-1 – IESO Stakeholder Engagement, the 2022 survey results indicate that 74% of stakeholders and communities report that their experience with IESO engagement has met or exceeded expectations.

While it is unclear how the full survey results will help inform a review of the IESO's revenue requirement submission, the IESO is providing the survey provider's summary of the survey results as Attachment 1- IESO Stakeholder and Community Survey - Key Findings - Jan 2023, to this response.

¹<https://ieso.ca/en/Sector-Participants/Engagement-Initiatives/Strategic-Advisory-Committee/Meetings-and-Materials>

STAKEHOLDER & COMMUNITY SURVEY

2022 Annual Survey

Presentation of findings

January 2023

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Key Findings (1/3)

- **Attitudes towards the IESO and the electricity system in general have softened for a second consecutive year and stakeholders are much more pessimistic about the future of the system.**
- **Perceptions have declined across several metrics including satisfaction, advocacy and impressions of operational reliability and enforcement of market rules which play a key role in driving trust.**
- **Of the IESO's priorities, stakeholders feel it is most important to focus on planning to meet system needs, engaging on the future energy system and maintaining reliability in a cost-effective manner.**
- **Indigenous stakeholders hold a more positive impression of the IESO, while environmental advocacy groups continue to be the more critical.**
- **Year-over-year, sentiment has grown more negative most notably among energy services providers who are less satisfied, less likely to advocate on behalf of the organization and have weaker impressions of the enforcement of market rules and expertise of staff.**

Key Findings (2/3)

- Trust in the IESO is driven primarily by impressions of how well the organization operates a reliable system and in a cost-effective manner. The establishment and enforcement of market rules and aligning the engagement process with community needs also play a prominent role in influencing attitudes of trust.
- The greatest opportunities to build trust are to maintain strong performance on operational reliability and work to improve perceptions of how the IESO operates the system in a cost-effective manner and aligning the engagement process with community needs.
- Cost-effectiveness is best addressed through demonstrating transparency and providing rationale for decisions, while alignment of engagement activities to community need can be improved by demonstrating an openness to new ideas and balancing sector interests.

Key Findings (3/3)

- Most feel the stakeholder engagement process meets their needs; however satisfaction has declined and fewer feel it has led to effective change. A lack of collaboration is most commonly cited for the process falling short of expectations and has become a more salient concern, along with impressions of a slow process and the desire for higher quality information.
- The IESO performs well for clearly setting out the scope of activities, effective facilitation of sessions, and the timeliness of the process, while impressions are much lower for alignment with community needs, balancing sector interests, being open to new ideas and engaging early enough with stakeholders to impact outcomes.
- Satisfaction with stakeholder engagement is influenced by a variety of factors, of which aligning the process with community needs/ interests and demonstrating an openness to new ideas have the greatest impact.
- The greatest opportunities to improve satisfaction with stakeholder engagement are in working to better align the engagement process with community needs/interests, demonstrating an openness to new ideas and a in balancing the various sector interests in decision-making.

SEC INTERROGATORY 5

Issue 1.1 Is the IESO's Fiscal Year 2023 revenue requirement of \$208.4 million appropriate?

1.0-SEC-5

INTERROGATORY

Reference: [A-2-2]

Preamble:

Questions:

With respect to the 2023-2025 Performance Measures:

- a) Is any of the IESO's employee compensation tied to the achievement of these performance metrics? If so, please provide details.
- b) The IESO states that: "As part of ongoing monitoring of the effectiveness of performance measures and targets, the IESO may revisit and revise measures to remain aligned with the key strategies of the IESO." Does this mean that the IESO may adjust these measures and targets for 2024 and 2025?
- c) Please provide details regarding other measures that were considered and why they ultimately were not chosen.
- d) For each measure, please explain the basis of the target.
- e) The IESO proposes a measure of "Resource Adequacy procurement: number of supply offers in open and competitive mechanisms [that] exceed the target capacity".
 - i. Would the metric include all offers or only those offers that were deemed in compliance with any requirements in a given RFP?
 - ii. Please provide the total number of supply offers and the total capacity, both overall and those in compliance with the terms of the RFP, for the recently completed Expedited Long-Term RFP (E-LT RFP1)?
 - iii. Based on your answer to part (b), what would the measure score for the E-LT1 RFP be, please provide the full calculation.

RESPONSE

- a) The IESO's CEO and Vice-Presidents compensation is tied to the achievement of the performance measures. The details of the compensation plan are provided in Exhibit B, Tab 2, Schedule 1, page 44-45.
- b) Yes, as part of continuous improvement and oversight of the Corporate Performance Measures program, measures may be refined. For example, (i) if they are not providing a meaningful lens on performance; (ii) if the measure is no longer relevant or aligned to strategic outcomes; or (iii) influenced by factors outside of IESO control, then measures may be proposed to the Board of Directors for amendment.
- c) The measures chosen were aligned with the IESO's refreshed corporate strategy's outcomes, enablers and key risk. While the process to develop refreshed measures and identify annual targets is iterative, the measures reported in the 2023-2025 Business Plan reflect substantially the measures considered.
- d) In developing the target levels of performance, the IESO considered past performance, current and future business environment, commonality with recommended North American Electric Reliability Corporation (NERC) performance measures for reliability and desired strategic outcomes.
1. Market Renewal Program delivery: Percentage of key milestones complete according to implementation plan
- a. Target established based on schedule validation to meet in-service date of May 2025
2. Maintaining Resource Adequacy: plans in place to ensure that resource adequacy reliability standards are met for the next 5 years
- a. Target established based on NERC reliability standard adherence for long-term planning
3. Resource Adequacy procurement: Supply offers (MW) in open and competitive mechanisms exceed the target capacity (MW)
- a. Target established to measure liquidity in procurement process as a proxy for cost-effective outcomes.

- 1 4. Enabling Resources Program (ERP) delivery
- 2 a. Target established based on program plan and current state in the multi-year
- 3 lifecycle of the ERP
- 4 5. Employee pulse survey results for specific annual engagement areas of focus
- 5 a. Target based on past employee feedback, impact on employee engagement, and
- 6 desired improvement in annually selected focus areas
- 7 6. Effectiveness of stakeholder engagement actions through positive survey results (within
- 8 -2% tolerance range)
- 9 a. Target based on past measure experience
- 10 7. Cyber threat intelligence technology implementation
- 11 a. Target selected based on IESO's sector mandate to effectively provide cyber
- 12 security situational awareness and information sharing.
- 13 8. Phishing Metrics Trend
- 14 a. Target selected based on industry benchmarks for similar campaigns, evolving
- 15 nature of cyber threats, and expected gains in employee education/awareness of
- 16 phishing risks
- 17 9. Determine pathway for assessment of appropriate regulatory instrument for system
- 18 cyber risk mitigation
- 19 a. Target was established based on binary nature of the objective. The goal of this
- 20 measure is to report actions, controlled by the IESO, that will, in the post-2023
- 21 time frame, enable pathways for assessment under either:
- 22 a) tracking of audit effectiveness under NERC CIP standards; or
- 23 b) pursuing development of new rules within the IESO's mandate or
- 24 advocating for other entities to do so.

25 For 2023, the target is to assess which path to develop – better enforcement of current
26 rules, or development of better rules (followed by good enforcement of those).

27 e)

- 28 i. In order to encourage competitive tension in its procurements, and thus achieve cost
- 29 effective outcomes, the IESO aims to create interest among eligible procurement
- 30 proponents such that only a subset of submissions, being the most cost-effective ones,

1 are successful. Therefore, the metric is aimed at measuring all submitted proposals in
2 response to a Request for Proposals or other competitive mechanism. A submitted
3 proposal is one that has submitted non-refundable proposal fees as well as proposal
4 security, thus demonstrating financial capability and meaningful interest.

5 ii. The E-LT1 RFP is still undergoing evaluation and has not yet concluded. At the
6 conclusion of the entirety of the E-LT1 RFP, the IESO will be able to assess the
7 outcomes, including comparing the final results against the volume of proposals
8 submitted.

9 iii. See response to ii. The measure score will be a pass if the supply offers exceed the
10 current established target for 2023.

1 **SEC INTERROGATORY 6**

2 Issue 1.1 Is the IESO's Fiscal Year 2023 revenue requirement of \$208.4 million appropriate?

3 1.0-SEC-6

4 **INTERROGATORY**

5 Reference: [A-2-2, Attach 2]

6 Preamble:

7 Questions:

8 With respect to the 2022 Performance Measures:

9 a) Please identify and provide details of the two Strategic Initiatives that deviate from their
10 approved Project Plans.

11 b) Please explain why the results in the first page of the document are '2022 actuals' while
12 on the second page are 'year-to-date' numbers.

13 c) Please confirm that the IESO missed its target on 5 of the 7 measures.
14

15 **RESPONSE**

16 a) Please see the response for 5.0 OEB Staff Interrogatory 26 a).

17 b) Please see the response for 1.0 AMPCO Interrogatory 4 b).

18 c) The IESO did not meet its target on four of the seven performance measures i.e.
19 measure 1, 2, 4 and 7.

SEC INTERROGATORY 7

Issue 1.1 Is the IESO's Fiscal Year 2023 revenue requirement of \$208.4 million appropriate?

1.0-SEC-7

INTERROGATORY

Reference: [G-1-1]

Preamble:

Questions:

With respect to reporting requirements and previous commitments:

a) Is the IESO proposing in this application any public or regulatory reporting during the 2023 to 2025 term related to its performance? If so, please provide details.

b) Please detail which commitments from the EB-2022-0002 Settlement Agreement continue during after the conclusion of this application.

RESPONSE

a) The IESO has not proposed public or regulatory reporting related to performance in this application.

b) The following commitments will continue after conclusion of this application:

- Exhibit G-2-2 Annual Status Report on 2017 Auditor General Report Recommendations
- With respect to data on the application of the Reliable Integration Fee, the IESO will provide aggregated data associated with the costs recovered from various resource types and sizes in the 2026-2028 Revenue Requirement Submission.

- 1 • The IESO will undertake a third party evaluation of the Grid Innovation Fund
2 every two years and will publish those evaluations publicly soon after each is
3 completed.
- 4 • With respect to compensation, the IESO will continue to work to make progress
5 towards reaching the 50th percentile for total compensation.
- 6 • The IESO has planned the next benchmarking survey on Non-Executive Total
7 Remuneration Review for 2024 and plans to file it in its 2026-2028 Revenue
8 Requirement Submission.
- 9 • With respect to the IESO's Strategic Initiatives progressing on schedule and on
10 budget, the IESO will report on the results of the newly created performance
11 measures in the 2026-2028 Revenue Requirement Submission.
- 12 • With respect to further reporting on MRP, the IESO will provide quarterly reports
13 made public on the IESO website within 30 days of the end of each quarter
14 which will include as a minimum requirement the information outlined in Exhibit
15 G-1-1 page 7.

SEC INTERROGATORY 8

Issue 1.1 Is the IESO's Fiscal Year 2023 revenue requirement of \$208.4 million appropriate?

1.0-SEC-8

INTERROGATORY

Reference: [D-1-1, p.7]

Preamble: One of the IESO's 2023-2025 key initiatives is "Strengthening Engagement".

Questions:

- a) Does the IESO plan to undertake any new or enhanced stakeholder engagement, specifically with non-market participant electricity consumers? If so, please provide details.

RESPONSE

- a) The IESO welcomes the participation of "non-market participant electricity consumers" in IESO engagements. To explore these opportunities, individuals are encouraged to subscribe¹ to the updates offered through the weekly IESO Bulletin newsletter providing timely information on all IESO engagements and corporate initiatives, as well as the regional electricity networks and regional planning activity updates tailored to specific areas of the province.

In late 2023, the IESO will be refreshing its current engagement framework² taking into consideration the evolution of electricity activities beyond traditional energy sector audiences. The refresh includes exploring the needs of newer audiences, and offering a wide array of participation opportunities.

¹ <https://www.ieso.ca/subscribe>

² <https://www.ieso.ca/en/Sector-Participants/Engagement-Initiatives/Stakeholder-Engagement-Framework>

SEC INTERROGATORY 9

Issue 1.1 Is the IESO's Fiscal Year 2023 revenue requirement of \$208.4 million appropriate?

1.0-SEC-9

INTERROGATORY

Reference: [D-1-2]

Preamble:

Questions:

- a) For each listed IESO business unit, please provide a more detailed breakdown of their OM&A actual/forecast spending for each year between 2019 and 2025.

RESPONSE

- a) See the response to 1.0 VECC Interrogatory 2 b). Note that due to the organization restructuring in 2021, the requested analysis for prior to 2021 would be onerous to produce and the IESO is unable to undertake the requested additional analysis within the timeframe provided for interrogatories within this proceeding.

SEC INTERROGATORY 10

Issue 1.4 Is the IESO's 2023 projected staffing levels and compensation (including salaries, benefits, pensions and other post-employment benefits) appropriate?

1.0-SEC-10

INTERROGATORY

Reference: [D-1-2, Attach 2, p. 2-10]

Preamble:

Questions:

- a) For each management position included in the organizational chart, please provide the number of employees that report to each position, broken down by category (management, non-union regular, non-union temporary).

RESPONSE

- a) The IESO is not able to produce this information within the timeframe available for this interrogatory process. Further, please also see the response to 1.0 EDA Interrogatory 3 d).

SEC INTERROGATORY 11

Issue 1.4 Is the IESO's 2023 projected staffing levels and compensation (including salaries, benefits, pensions and other post-employment benefits) appropriate?

1.0-SEC-11

INTERROGATORY

Reference: [D-1-3, Attach 1]

Preamble:

Questions:

- a) Please provide a revised version of Appendix 2-K that separates both non-management categories (regular and temporary) into each of PWU, Society, and non-union.

RESPONSE

- a) Please see the response to 1.0 SUP Interrogatory 2. Note that there are no non-management employees that are non-union.

SEC INTERROGATORY 12

Issue 1.4 Is the IESO's 2023 projected staffing levels and compensation (including salaries, benefits, pensions and other post-employment benefits) appropriate?

1.0-SEC-12

INTERROGATORY

Reference: [D-1-3, Attach 3]

Preamble:

Questions:

- a) Please place all interrogatory responses from EB-2020-0002 related to the Mercer Non-Executive Total Remuneration Review on the record in this proceeding (note: it is sufficient to simply deem the responses on the record as opposed to filing copies of them).

RESPONSE

- a) The IESO deems the responses on the record.

SEC INTERROGATORY 13

Issue 1.4 Is the IESO's 2023 projected staffing levels and compensation (including salaries, benefits, pensions and other post-employment benefits) appropriate?

1.0-SEC-13

INTERROGATORY

Reference: [D-1-2]

Preamble:

Questions:

- a) Please provide the Market Assessment and Compliance Division (MACD) actual and forecast OM&A spending for each year between 2019 and 2025, regardless of the source of revenue used.

RESPONSE

- a) See Table 1 below:

Table 1 – MACD OM&A Expense

Market Assessment and Compliance Division (\$ Millions)	2019 Budget	2019 Actual	2020 Actual	2021 Budget	2021 Actual	2022 Budget	2022 Actual	2023 Budget	2024 Budget	2025 Budget
OM&A	10.6	10.8	11.8	12.8	12.8	15.6	11.9	15.4	16.2	17.4

CME INTERROGATORY 1

Issue 1.4 Is the IESO's 2023 projected staffing levels and compensation (including salaries, benefits, pensions and other post-employment benefits) appropriate?

1.0-CME-1

INTERROGATORY

Reference: Exhibit D, Tab 1, Schedule 3, p. 1 of 11, and Table 1

Preamble:

At Table 1, the IESO sets out that the 2022 actual average number of employees is 799. The IESO states that the budget average number of FTEs for 2023 is 914, and increase of 115 full time employees. At page 1, the IESO stated that the increase from 774 to 799 (25 FTE increase) was the highest single-year staffing increase over the past three years due to its enhanced recruitment capabilities.

Questions:

- a) Please advise why the IESO believes that a staff increase of 115 full time employees between 2022 and 2023 is achievable given that the previous highest increase in FTEs was 25 (less than one quarter of the proposed increase budgeted in 2023). Please reference any changes in approach from the IESO or in the labour market that would account for the significant difference in the IESO's budget compared to historical actuals.

RESPONSE

- a) Please see the response to OEB Staff Interrogatory 7 b).

CME INTERROGATORY 2

Issue 1.4 Is the IESO's 2023 projected staffing levels and compensation (including salaries, benefits, pensions and other post-employment benefits) appropriate?

1.0-CME-2

INTERROGATORY

Reference: Exhibit D, Tab 1, Schedule 3, p. 5 of 11

Preamble:

At page 5, the IESO states that it has an upcoming arbitration on the reopener on wages for the 2022, 2023 and 2024 contracts stemming from the recent bill 124 ruling and subsequent appeal.

Questions:

a) Please confirm whether the reopener provision is only for the Society of United Professionals collective agreement, or whether there is a reopener provision in the Power Worker's Union collective agreement.

b) Please describe what actions, if any the IESO would take in response to changes for wages for the 2022, 2023, and 2024 contracts if an arbitrator were to provide for increases of greater than 1% in the arbitration. For instance, would the IESO apply to the Board to change usage rates?

RESPONSE

a) Confirmed. The reopener provision is only for the Society of United Professionals Collective Agreement.

b) The IESO will consider all options available, as appropriate, once a decision on wages is known and the financial impact is determined, including an application to the OEB as necessary as per the adjustment mechanism described in Exhibit F-1-1.

CME INTERROGATORY 3

Issue 1.4 Is the IESO's 2023 projected staffing levels and compensation (including salaries, benefits, pensions and other post-employment benefits) appropriate?

1.0-CME-3

INTERROGATORY

Reference: Exhibit D, Tab 1, Schedule 3, Attachment 3

Preamble:

At attachment 3, the IESO provides a study from Mercer on non-executive total remuneration.

Questions:

a) Please either provide the last two benchmarking studies on total remuneration commissioned by the IESO, or reproduce (to the extent possible) a table such as the one shown on page 5 of 13 outlining the salary, TTC and TREM for management, Society and PWU and how it compares to the Energy Sector, Public Sector and Private Sector.

b) Could Mercer please describe what, in its view, the impact would be of having the Society or, if applicable, the PWU succeed in increasing compensation as a result of the reopener provisions in their collective agreements. Specifically, does Mercer have an idea of how the results of the IESO's benchmarking would change if the Society were to be granted a 2% or 3% increase rather than the 1% mandated by Bill 124?

RESPONSE

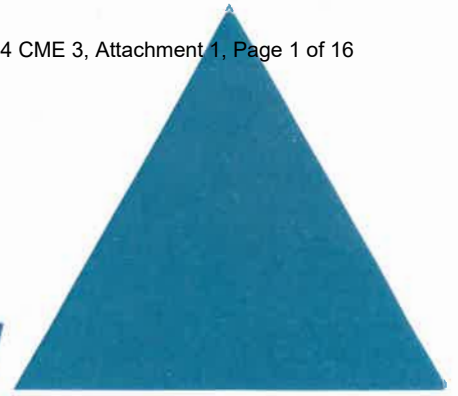
a) Please see Attachment 1 to this response which contains the benchmarking study completed by Mercer in 2018. No prior compensation benchmarking studies have been conducted.

b) Without doing a full Benchmarking report, Mercer cannot predict the impact how the IESO jobs would compare to the comparators used within the report. A full evaluation is required to be able to accurately surmise the impact of the different assumptions. As per

- 1 Exhibit G-1-1, in 2024 the IESO will undertake an updated total compensation study and
- 2 will file that study as evidence in the subsequent Revenue Requirement Submission.

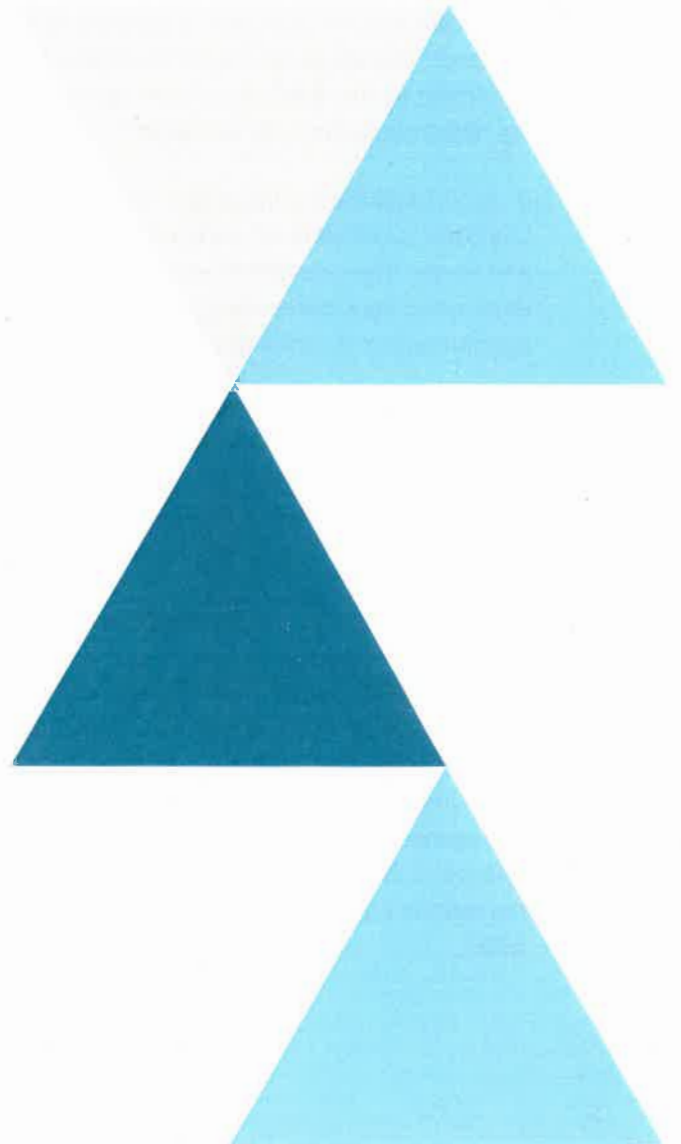
HEALTH WEALTH CAREER

NON-EXECUTIVE TOTAL REMUNERATION REVIEW



27 SEPTEMBER 2018

Independent Electricity System Operator



INTRODUCTION AND EXECUTIVE SUMMARY

Mercer Canada Limited ("Mercer") has been engaged by the Independent Electricity System Operator ("IESO") to assist the IESO in conducting a Total Remuneration review for non-executives within the IESO. The purpose of this review is to provide an independent, market-based assessment of the market positioning of the IESO's non-executive total remuneration that includes base salary, active employee benefits, post-retirement benefits and pensions relative to the markets the IESO competes with for talent. The IESO employee groups considered include non-executive management / non-union, as well as those positions represented by the Power Workers' Union ("PWU") and the Society of United Professionals ("the Society", or "SOC").

EXECUTIVE SUMMARY

This review approach is consistent with Mercer's standard market benchmarking methodologies, and relies on compensation, pension and benefits practices information provided by the Independent Electricity System Operator, in addition to Mercer's proprietary compensation databases and market research. Market comparisons are made to a group of peer organizations, selected by Mercer and confirmed by the IESO, which are representative of the energy, broader public and private sectors the IESO competes with for talent.

In conducting the compensation analysis, Mercer worked with the IESO to identify benchmark positions to compare to market that represent a valid cross sample of the organization's functions and levels. The breadth of benchmark positions selected is within the range of 50% to 75% of employees considered best practice when benchmarking on an organization basis. The benchmarking includes positions that represent approximately 52% of employees at the IESO.

Mercer considers compensation levels to be within a "competitive range" if they fall within 10% of the target market positioning on a position-by-position basis (where you have a smaller sample size and higher variability in observations) and 5% on an overall organization basis (where you have a larger sample size and smaller variability in observations) when compared to target positioning (e.g., the 50th percentile).

The IESO's total cash compensation (considering salaries and market short-term incentives), on an aggregate organization basis, is positioned within the market competitive range (i.e. within +/-5% of the market 50th percentile) for the energy sector. The energy sector reflects organizations that are the most similar to the IESO considering the relative roles, responsibilities and required industry knowledge for their positions, and the comparability of the IESO's operations. The IESO is positioned 5% above the market 50th percentile relative to the private sector peer group and 11% above the public sector peer group due to the overall higher positioning of bargaining unit pay relative to these sectors. Positioning for non-unionized jobs relative to the private sector is 8% below the market 50th percentile due to the absence of short-term incentive award opportunities at the IESO.

On an overall organization basis, the IESO's total remuneration, including the value of all cash compensation, benefit and pension plans is positioned 11%, 22% and 18% above the market 50th percentile for the energy, public and private sector peer groups respectively. Positioning above the 50th percentile on a total remuneration basis is primarily a result of the high employer provided value of pension plans in place at the IESO for PWU and the Society represented jobs. Overall, total remuneration for non-represented jobs is positioned within 5% of the market 50th percentile of the private and public sector peer groups. The IESO has made changes to pension plans to increase cost sharing and employee contributions. However, changes to bargaining unit plans are not yet comparable to the significant cost and risk sharing changes other comparator organizations have made to their defined benefits pension plans.

METHODOLOGY

Mercer worked with the IESO to determine the appropriate markets for comparison given the organizations they compete with for talent (i.e., organizations that the IESO might reasonably recruit employees from or lose employees to). Three specific peer groups were identified for the purposes of the total remuneration review:

- **Energy Sector Peer Group**
 - Reflects select regulated Canadian organizations in the energy sector. Findings reflect data from a proprietary custom survey that includes energy industry-specific roles, and data from Mercer's Benchmark Database ("MBD") that includes general industry roles in the energy sector
 - Organizations were selected considering the comparability of their operations and relative size of revenues when compared to the IESO, resulting in a peer group primarily consisting of other market operators, energy utilities and local distribution companies
- **Broader Public + Public Energy Sector Peer Group ("Public Sector")**
 - Reflects select Canadian public sector organizations from Mercer's Benchmark Database that the IESO competes with for talent, with an emphasis on public sector organizations within Ontario. It includes public sector energy organizations.
 - Where required to provide statistically significant market information for a specific position, the peer group was expanded to include the broader Canadian public sector
- **Private + Private Energy Sector Peer Group ("Private Sector")**
 - Reflects select Canadian private sector organizations from Mercer's Benchmark Database that the IESO competes with for talent, with an emphasis on private sector organizations within the Greater Toronto Area. It includes private sector energy organizations.
 - Organizations were selected considering the immediate geographical talent market for the IESO (i.e. the Greater Toronto Area) that includes predominant industries, such as, banking / financing, electrical and digital engineering, professional services and marketing
 - Where required to provide statistically significant market information for a specific position, the peer group is expanded to include the broader Ontario private sector

A sample of the IESO's jobs across all grades was benchmarked against equivalent roles within organizations from the defined peer groups. Equivalence was determined on the basis of overlaps in responsibilities between the IESO and survey position descriptions.

- A mixture of 39 non-union, including professional and management, and represented jobs at the IESO were matched to equivalent custom survey jobs and levels in the energy sector peer group, as these positions are generally energy industry-specific in their responsibilities
- 93 non-union, including professional and management, and represented jobs at the IESO were matched to equivalent survey jobs and levels in all three peer groups, as these positions are generally non-energy industry specific in their nature and exist across industries

Mercer's benchmarking objective with this review is to map a reasonable sample of the IESO's positions that best represent the total employee population across the different non-executive job levels in the organization. With this approach, our analysis includes 55 of the 136 (40%) management and professional employees and 353 of the 646 (55%) bargaining unit positions to make up 52% of the total population considered in-scope for this review. Mercer believes this to be a statistically reliable and representative sample for assessing the competitive levels of total remuneration for the IESO's employees.

For the retirement and benefits program review, Mercer benchmarked the IESO against the energy, private and public sector peer groups for organizations available in the Mercer Plan Design databases considering their relative **employer provided value** ("EPV"). Relative value analysis focuses only on the plan design as it sets all other cost drivers at a common level and is more consistent when comparing the value of the benefit programs of several organizations.

We note how benchmarking Total Value (TV) compares to Employer Provided Value (EPV) for the benefits analysis:



The relative value benchmarking results are presented as a percentage of base salary using base salary and bonus information. Plans for all comparator organizations have been valued using a set of consistent workforce profiles appropriate for the level of work of the position.

All compensation data is reflective of the most recently available data as of the completion of the analysis, and is presented effective for 2018.

SUMMARY OF FINDINGS

Our commentary describes the competitiveness of the IESO's base salary, short-term incentive, total cash compensation and total remuneration relative to the 50th percentile of the respective market. Based on Mercer's compensation practices and policy research, the majority of organizations target compensation at the 50th percentile of their competitive market, which balances fiduciary and cost

considerations with the need to attract and retain talent. Mercer considers the IESO to be within the competitive range if they fall within 10% of the target market positioning on a position-by-position basis and 5% on the overall organization basis.

The table below presents the IESO's **base salaries**, **target total cash compensation ("TTC")** and **total remuneration ("TRem")** at an aggregate level, compared to the market 50th percentile across the three comparator markets:

Above Comparator Market (>5%) Within Comparator Market (±5%) Below Comparator Market (<5%)

Compensation values are stated in CAD \$000s

		IESO			ENERGY SECTOR			PUBLIC SECTOR			PRIVATE SECTOR		
GROUP	GRADE	Base (\$) ¹	TTC (\$) ²	TREM (\$) ³	BASE SALARY (\$)	TTC (\$)	TREM (\$)	BASE SALARY (\$)	TTC (\$)	TREM (\$)	BASE SALARY (\$)	TTC (\$)	TREM (\$)
MGMT	MANAGEMENT TOTAL	\$151	\$151	\$187	\$144	\$165	\$197	\$135	\$148	\$176	\$137	\$163	\$189
					2%	-11%	-7%	10%	0%	5%	10%	-8%	-1%
SOC	SOCIETY TOTAL	\$121	\$121	\$160	\$108	\$117	\$139	\$104	\$107	\$126	\$106	\$115	\$133
					11%	3%	15%	17%	12%	27%	15%	6%	22%
PWU ⁴	PWU TOTAL	\$86	\$86	\$116	\$81	\$85	\$101	\$68	\$68	\$84	\$64	\$68	\$81
					5%	1%	15%	26%	23%	37%	34%	26%	43%
	OVERALL	\$122	\$122	\$160	\$111	\$121	\$144	\$105	\$109	\$130	\$107	\$117	\$136
					9%	0%	15%	16%	11%	22%	16%	5%	16%

(1) Reflects salary structure job rates, which consider target compensation for a fully competent employee. Typically the midpoint or endpoint of a range.

(2) Reflects IESO salary structure job rates as the IESO does not provide short-term incentives. In the market, it includes salaries plus target short-term incentives, if provided.

(3) Total remuneration ("TRem") reflects target total cash compensation plus the value of long-term incentives (if provided), pensions, active benefits and post-retirement benefits.

Detailed findings by grade and employee group are presented in **Appendix C**.

Cash Compensation

The IESO's **base salaries**, on an aggregate organization basis, are within a competitive range (i.e. within +/-5% of the market 50th percentile) against the energy sector peer group for non-unionized and PWU roles; positioning for non-unionized jobs increases to 10% above the market 50th percentile relative to the private and public sector peer groups. Represented jobs are positioned between 15% to 34% above the market 50th percentile relative to the public and private sector peer groups. This reflects the impact of the energy industry and representation relative to these sectors.

The IESO **does not provide short-term incentives** to non-executives. However, short-term incentives continue to be offered in the market. On an aggregate basis, across the three peer groups, **short-term incentive** levels are highest amongst non-unionized jobs in the energy sector and private sector peer groups. Short-term incentives are lower for unionized jobs, though still prevalent across all peer groups.

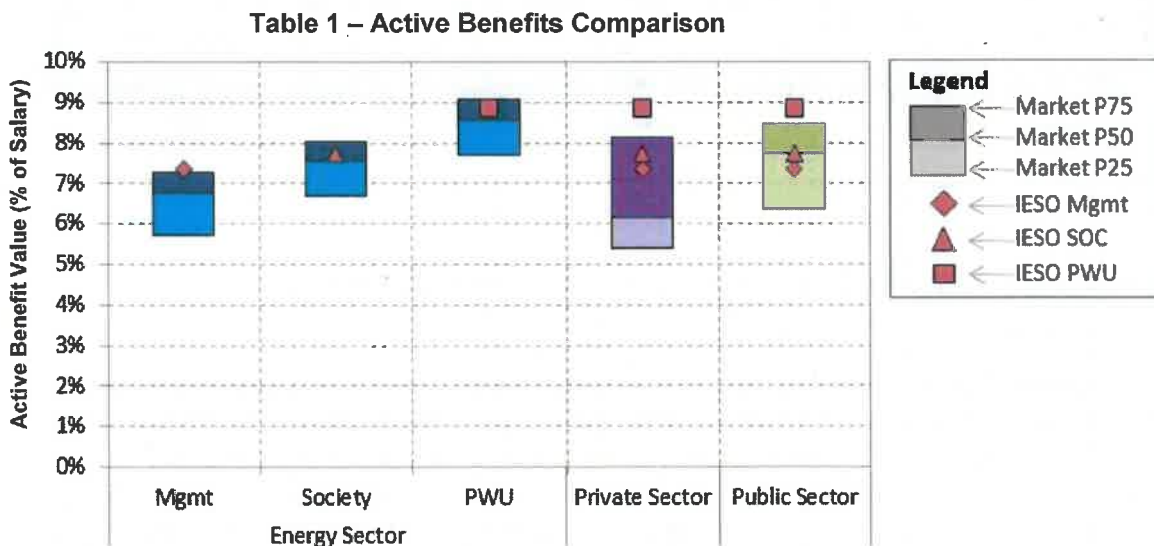
The IESO's **total cash compensation** levels, on an aggregate organization basis, are within the competitive range for the energy sector peer group. Non-unionized jobs are positioned 11% and 8% below the market 50th percentile against the energy sector and private sector, but positioned at the market 50th percentile relative to the public sector peer group. Society and PWU represented jobs are closely aligned with the market 50th percentile of the energy sector.

Total Remuneration

Overall, the IESO's compensation program, on a **total remuneration** basis, is positioned 11%, 22% and 18% above the market 50th percentile for the energy, public and private sector peer groups. Positioning above the 50th percentile on a total remuneration basis is primarily a result of the high employer provided value of pension plans in place at the IESO for PWU and the Society represented jobs. The non-bargaining group is below the market competitive range of the energy peer group at -7% of the 50th percentile and within the market competitive range of the public and private sector peer groups at 5% and -1% respectively.

Active Benefits

The table below presents the IESO's **active benefits (Table 1)** value for each employee group considering employer-provided value, compared to the market across the three peer groups. Market results for the private and public sector has been combined to reflect all data due to the absence of the PWU and Society unions in some of these markets.



When compared to the energy sector peer group, the IESO is generally within 1% of the market 50th percentile considering the overall value of active benefits (including life insurance, accidental death and dismemberment, short-term disability, long-term disability, health, dental and health-care spending accounts) across all employee groups. When compared to the private and public sector, the IESO provides a top quartile active benefits plan to its PWU employee group.

Pension and Savings Programs

The following tables present the IESO's **pension** value for each employee group considering employer-provided value compared only to those employers that also provide a defined benefit pension (**Table 2**), and compared to all employers considering the value of defined benefit, defined contribution and savings plans (**Table 3**) across the three peer groups. Market results for the private and public sector has been combined to reflect all data due to the absence of the PWU and Society unions in some of these markets.

Table 2 – Defined Benefit Pension Only (%) Comparison

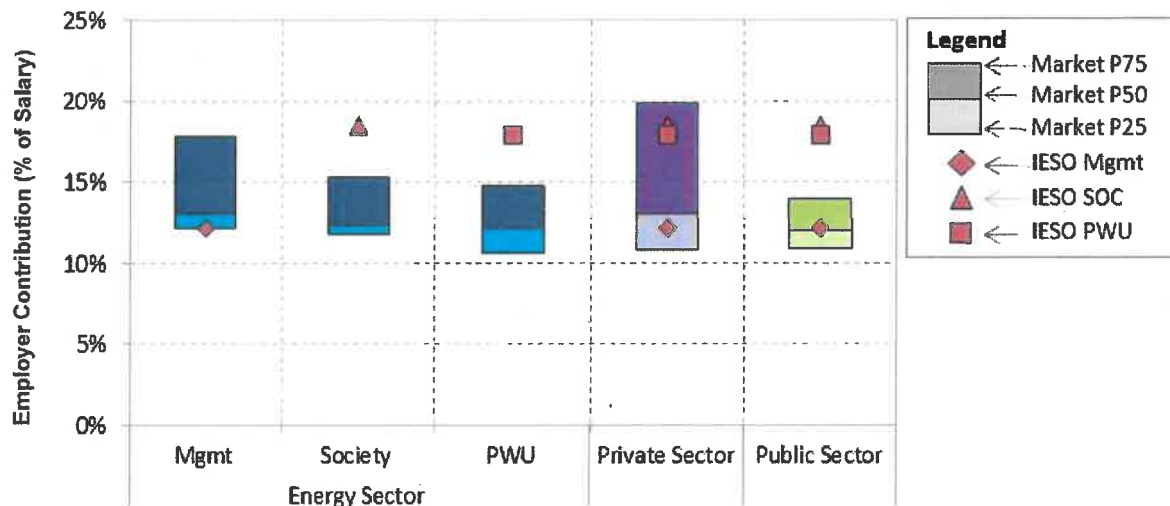
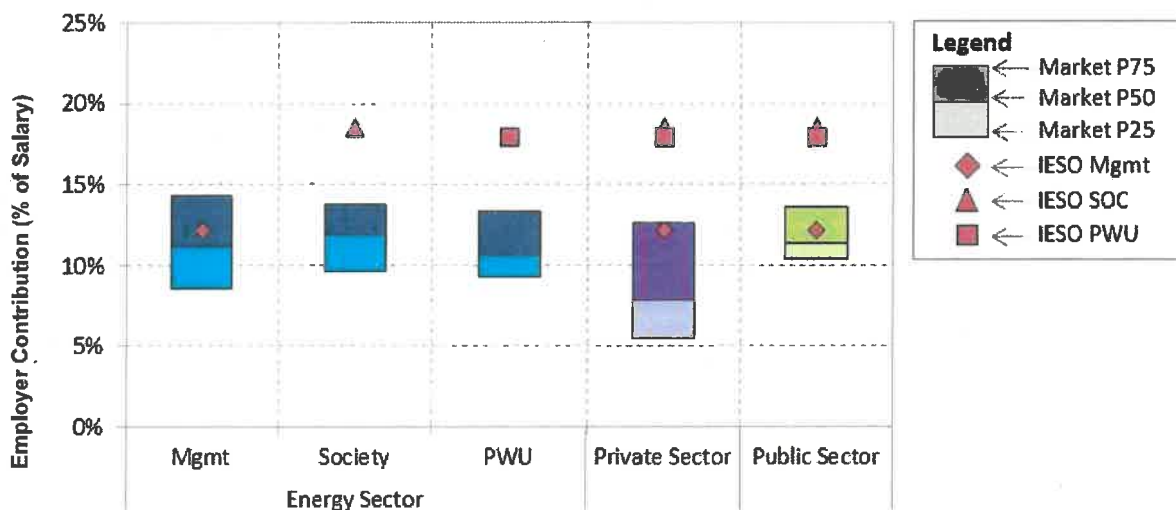


Table 3 – DB and DC Pension and Savings Programs (%) Comparison



The IESO's pension arrangements for the PWU and Society bargaining units reflect the legacy defined benefits Ontario Hydro plan, with an introduction of cost sharing and increase to employee

contributions. However, changes to bargaining unit plans are not yet comparable to the significant cost and risk sharing changes other comparator organizations have made to their defined benefits pension plans. As such, the IESO's pension arrangements for the PWU and Society bargaining units are above the market 75th percentile of the **employer provided value** of other defined benefits ("DB") plans among the energy sector and public sector comparator groups. Pension arrangement positioning, for the PWU and Society bargaining units, is between the market 50th and 75th percentile when compared to the private sector.

In comparison, the IESO's pension arrangement for the management group reflects a 50% cost sharing plan; as such, pension arrangement for this non-unionized group is positioned at the market 25th percentile relative to the energy sector, between market 25th and 50th percentile relative to the private sector and at market 50th percentile in comparison to the public sector peer group.

Many of the comparators provide a defined contribution plan. When defined contribution plans are taken into account to determine the overall market, relative positioning increases for the IESO's pension arrangement for all employee groups. Market positioning for the non-represented group pension plan, on an employee provided value basis, increases to between the market 50th and 75th percentile across all comparator groups.

APPENDIX A

The following companies comprise the **energy peer group** used for the purposes of the review:

ENERGY SECTOR COMPARATOR COMPANIES	
1) Alberta Electricity System Operator	13) Hydro-Québec
2) Alectra Inc.	14) London Hydro
3) Altalink	15) Manitoba Hydro
4) ATCO Ltd	16) Nalcor Energy
5) BC Hydro Power & Authority	17) Ontario Energy Board
6) Bruce Power	18) Ontario Power Generation
7) Emera, Inc.	19) SaskPower
8) ENMAX Corporation	20) Toronto Hydro Corporation
9) EPCOR Utilities, Inc.	21) TransAlta Corporation
10) Fortis Alberta	22) TransCanada Corporation
11) Fortis BC - Gas and Electric	23) Veridian Corporation
12) Hydro One Networks Inc	

The following companies comprise the **Broader Public + Public Energy peer group** used in the review:

BROADER PUBLIC + PUBLIC ENERGY COMPARATOR COMPANIES	
1) Alberta Electricity System Operator [^]	15) Ontario Energy Board [^]
2) Alectra Inc. [^]	16) Ontario Lottery and Gaming Corporation
3) BC Hydro Power & Authority [^]	17) Ontario Power Generation [^]
4) BC Transit	18) Ontario Public Service
5) Canada Post Corporation	19) Ontario Securities Commission
6) Canadian Broadcasting Corporation	20) Ontario Teachers' Pension Plan
7) ENMAX Corporation [^]	21) SaskPower [^]
8) EPCOR Utilities, Inc. [^]	22) Technical Standards and Safety Authority
9) Hydro One Networks Inc [^]	23) Toronto Hydro Corporation [^]
10) Hydro-Québec [^]	24) Treasury Board of Canada Secretariat
11) London Hydro [^]	25) Veridian Corporation [^]
12) Manitoba Hydro [^]	26) VIA Rail Canada
13) Nalcor Energy [^]	27) Workers Compensation Board (Alberta)
14) National Energy Board	28) Workplace Safety & Insurance Board

([^]) Supplemental public sector companies from the Energy peer group

The following companies comprise the **Private Sector + Private Energy peer group** used in the review:

PRIVATE SECTOR + PRIVATE ENERGY COMPARATOR COMPANIES	
1) 3M Canada Company	28) Grass Valley, A Belden Brand
2) AC Nielsen Company Of Canada	29) Hatch, Ltd.
3) Aecon Group, Inc. - Aecon Energy	30) HP, Inc.
4) Altalink^	31) Kiewit Energy Canada Co.
5) Amazon	32) Lockheed Martin Canada, Inc.
6) AMEC NSS, LTD.	33) Moneris Solutions Corporation
7) ATCO Ltd^	34) National Bank of Canada
8) Babcock & Wilcox Power Generation Group Canada Corp.	35) Nav Canada
9) Bank of Montréal	36) NovAtel, Inc.
10) Bombardier Transport Canada, Inc.	37) Oracle Canada, ULC
11) Bosch Rexroth Canada Corp.	38) Philips Electronics, Ltd.
12) Bruce Power^	39) RCM Technologies Canada Corp
13) Canadian Imperial Bank of Commerce	40) Rockwell Automation Canada, Ltd.
14) Capital Power Corporation	41) Royal Bank of Canada
15) Echologics Engineering, Inc.	42) RTDS Technologies, Inc.
16) Emera, Inc.^	43) Samsung Electronics Canada, Inc.
17) Emerson Automation Solutions	44) Stantec, Inc.
18) Enerflex Ltd.	45) Startco Engineering, Ltd.
19) Epson Canada, Ltd.	46) Suncor Energy
20) Federated Co-operative, Ltd. - Co-op Refinery Complex	47) TD Bank Group
21) Fluor Canada, Ltd.	48) Tesla Motors Canada
22) Fortis Alberta^	49) The Bank of Nova Scotia
23) Fortis BC - Gas and Electric^	50) Thomson Reuters Canada, Ltd.
24) FundSERV, Inc.	51) TransAlta Corporation^
25) Ganotec, Inc.	52) TransCanada Corporation^
26) GE Canada	53) WorleyParsons Canada Services, Ltd.
27) General Motors of Canada, Ltd.	

(^) Supplemental private sector companies from the Energy peer group

APPENDIX B

Mercer worked closely with the IESO to select jobs that best represent the total employee population across the different job levels in the organization. The following 39 non-represented jobs were included within the scope of the review:

IESO JOB TITLE	GRADE	IESO JOB TITLE	GRADE
1) Director Market Operations	Band 3A	21) Sr Mgr Transmission	Band 4
2) Gnrl Counsel Secretary & CRCO	Band 3A	22) Engineering Mgr Power Systems	Band 5A
3) Director Business Solutions	Band 3B	23) Legal Counsel	Band 5A
4) Director Contract Management	Band 3B	24) Legal Counsel 2	Band 5A
5) Director Corp & Comrd Law Grp	Band 3B	25) Mgr Finance & Accounting	Band 5A
6) Director Crprte & Indgns Rltns	Band 3B	26) Mgr HR Business Partner	Band 5A
7) Director Energy Efficiency	Band 3B	27) Mgr Information & Tech Svcs	Band 5A
8) Director Finance & Corp Cntrlr	Band 3B	28) Mgr Infrastructure	Band 5A
9) Director Financial Plng & Alys	Band 3B	29) Mgr Learning & Orgl Developmnt	Band 5A
10) Director Human Resources	Band 3B	30) Mgr Market Opns & Forecast Sys	Band 5A
11) Director Treasury & Pension Opns	Band 3B	31) Mgr Operations Planning	Band 5A
12) Senior Legal Counsel	Band 4	32) Mgr Procurement Operations	Band 5A
13) Sr Mgr Cstmr Stkhldr&Cmnty Engmt	Band 4	33) Mgr Rev Mtrg & Stlmts Sys Sprt	Band 5A
14) Sr Mgr Employee & Labour Rltns	Band 4	34) Sr Project & Portfolio Mgr	Band 5A
15) Sr Mgr Meter Data Management	Band 4	35) Human Resources Advisor	Band 5B
16) Sr Mgr Regulatory Affairs	Band 4	36) Mgr Enterprise Risk & Crp Perf	Band 5B
17) Sr Mgr Rule Compliance	Band 4	37) Sprvsr Compensation & Benefits	Band 5B
18) Sr Mgr Talent Acquisition	Band 4	38) Executive Assistant - VP	Band 6B
19) Sr Mgr Technology Support	Band 4	39) HR Associate	Band 6B
20) Sr Mgr Total Rewards	Band 4		

The following 93 represented jobs were included within the scope of the review:

IESO JOB TITLE	UNION	GRADE	IESO JOB TITLE	UNION	GRADE
1) Regional Maintainer Electrical	PWU	28-01	48) Advisor Regulatory Affairs	Society	MP4
2) Regional Maintainer Mechanical	PWU	28-01	49) Advisor Risk & Corp Performance	Society	MP4
3) Handyperson	PWU	25-05	50) Advisor Training	Society	MP4
4) IESO Site Maintainer Jrnyperson	PWU	25-03	51) Compliance Officer Conservation	Society	MP4
5) Digital Media Specialist	PWU	20-64	52) Engineer Revenue Metering	Society	MP4
6) Funds Finance Analyst	PWU	20-64	53) Planner	Society	MP4
7) Sr Engineering Technologist	PWU	20-64	54) Power System Engineer	Society	MP4
8) Service & Helpdesk Suppt Anlyt	PWU	20-63	55) Procurement Specialist	Society	MP4
9) Network Administration Tech	PWU	20-62	56) Program Advisor	Society	MP4
10) Pay Services Associate	PWU	20-61	57) Specialist Compliance	Society	MP4
11) Treasury Associate	PWU	20-61	58) Specialist Contracts	Society	MP4
12) Facilities Services Coordinator	PWU	20-60	59) Specialist Data Management	Society	MP4
13) Finance Clerk	PWU	20-60	60) Specialist Information Security	Society	MP4
14) Finance Coordinator	PWU	20-60	61) Specialist Operations Training	Society	MP4
15) Inventory Technician	PWU	20-60	62) Specialist Program Design	Society	MP4
16) Procurement Assistant	PWU	20-60	63) Specialist Project Support	Society	MP4
17) Sr Computer & LAN Services Tech	PWU	20-60	64) Specialist Solutions	Society	MP4
18) Security Guard	PWU	20-59	65) Specialist Systems	Society	MP4
19) Administrative Assistant	PWU	20-58	66) Specialist Web Services	Society	MP4
20) Engineering Sprvsr Revenue Mtrg	Society	MP6	67) System Operator	Society	MP4
21) Sprvsr Business Analysis Svcs	Society	MP6	68) Tech Officer Conservation	Society	MP4
22) Sprvsr Market Settlements	Society	MP6	69) Project Cost Controller	Society	MP3
23) Sprvsr Media Rlns & Edtrl Svcs	Society	MP6	70) Project Officer	Society	MP3
24) Supervisor Contract Management	Society	MP6	71) Project Scheduler	Society	MP3
25) Supervisor Customer Relations	Society	MP6	72) Senior Analyst Reporting	Society	MP3
26) Supervisor Government Affairs	Society	MP6	73) Sr Analyst Applications	Society	MP3
27) Supervisor Information Mgmt	Society	MP6	74) Sr Analyst Contract Management	Society	MP3
28) Supervisor Market Development	Society	MP6	75) Sr Analyst Contracts	Society	MP3
29) Supervisor Meter Data Mgmt	Society	MP6	76) Sr Analyst Stkhlder Engagement	Society	MP3
30) Supervisor Operational Risk	Society	MP6	77) Analyst Communication Services	Society	MP2
31) Supervisor Project Mgmt Office	Society	MP6	78) Analyst I&TS Support	Society	MP2
32) Supervisor Quality Assurance	Society	MP6	79) Analyst Internal Communications	Society	MP2
33) Sr Advisor Communications	Society	MP5	80) Analyst Marketing	Society	MP2
34) Sr Advisor Regulatory Affairs	Society	MP5	81) Analyst Media Relations	Society	MP2
35) Sr Analyst Compl & Dispute Rsltn	Society	MP5	82) Analyst Reporting	Society	MP2
36) Sr Auditor	Society	MP5	83) Analyst Settlements	Society	MP2
37) Sr Planner	Society	MP5	84) Analyst Solutions	Society	MP2
38) Sr Power System Engineer	Society	MP5	85) Analyst Stakeholder Relations	Society	MP2
39) Sr Specialist Bus Continuity	Society	MP5	86) Analyst Training & Support	Society	MP2

Non-Executive Total Remuneration Review

Independent Electricity System Operator

IESO JOB TITLE	UNION	GRADE	IESO JOB TITLE	UNION	GRADE
40) Sr Specialist Operations Trng	Society	MP5	87) Assistant System Operator	Society	MP2
41) Sr Specialist Project Mgmt	Society	MP5	88) Financial Analyst Payroll	Society	MP2
42) Sr Specialist Solutions	Society	MP5	89) Financial Anlys Accts Payable	Society	MP2
43) Sr System Operator	Society	MP5	90) Financial Anlys Corp Accnting	Society	MP2
44) Team Lead Records Management	Society	MP5	91) Planning Analyst	Society	MP2
45) Advisor Communications	Society	MP4	92) Power System Analyst	Society	MP2
46) Advisor Financial Plng & Anlys	Society	MP4	93) Procurement Program Analyst	Society	MP2
47) Advisor Government Affairs	Society	MP4			

APPENDIX C

The table below presents the detailed findings, at an employee group and aggregate level, for the IESO in comparison to the market 50th percentile across the three comparator markets:

Above Comparator Market (>5%) Within Comparator Market (±5%) Below Comparator Market (<5%)

Compensation values are
stated in CAD \$000s

GROUP	GRADE	IESO			ENERGY SECTOR			PUBLIC SECTOR			PRIVATE SECTOR		
		Base (\$) ¹	TTC (\$) ²	TREM (\$) ³	BASE SALARY (\$)	TTC (\$)	TREM (\$)	BASE SALARY (\$)	TTC (\$)	TREM (\$)	BASE SALARY (\$)	TTC (\$)	TREM (\$)
MGMT	Band 3A	\$263	\$263	\$320	\$217	\$272	\$355	\$206	\$241	\$280	\$212	\$305	\$375
					21%	-3%	-10%	28%	9%	14%	24%	-14%	-15%
	Band 3B	\$197	\$197	\$241	\$169	\$199	\$234	\$164	\$185	\$219	\$171	\$213	\$249
					16%	-1%	3%	20%	6%	10%	15%	-8%	-3%
	Band 4	\$160	\$160	\$198	\$149	\$168	\$196	\$131	\$142	\$170	\$136	\$160	\$183
					8%	-5%	1%	22%	13%	17%	18%	0%	9%
	Band 5A	\$133	\$133	\$166	\$142	\$159	\$188	\$136	\$146	\$175	\$133	\$150	\$172
					-6%	-16%	-12%	-2%	-9%	-5%	0%	-11%	-4%
SOC	Band 5B	\$118	\$118	\$148	\$139	\$160	\$186	\$101	\$109	\$131	\$105	\$124	\$141
					-15%	-26%	-20%	16%	8%	13%	13%	-5%	5%
	Band 6B	\$80	\$80	\$104	\$78	\$87	\$103	\$68	\$75	\$90	\$70	\$72	\$85
					2%	-8%	1%	17%	38%	15%	14%	45%	22%
	MANAGEMENT TOTAL	\$151	\$151	\$187	\$144	\$165	\$197	\$135	\$148	\$176	\$137	\$163	\$189
					2%	-11%	-7%	10%	0%	5%	10%	-8%	-1%
	MP6	\$142	\$142	\$187	\$120	\$129	\$153	\$115	\$123	\$146	\$115	\$124	\$144
					19%	10%	22%	23%	16%	28%	24%	15%	30%
PWU ⁴	MP5	\$134	\$134	\$176	\$116	\$128	\$152	\$119	\$124	\$146	\$119	\$130	\$148
					15%	4%	16%	13%	8%	21%	13%	3%	18%
	MP4	\$125	\$125	\$166	\$108	\$115	\$137	\$102	\$103	\$124	\$105	\$112	\$130
					16%	9%	21%	23%	21%	34%	19%	12%	28%
	MP3	\$103	\$103	\$138	\$106	\$108	\$130	\$93	\$94	\$113	\$93	\$101	\$117
					-3%	-4%	7%	11%	10%	23%	11%	3%	18%
	MP2	\$97	\$97	\$130	\$97	\$104	\$124	\$90	\$94	\$111	\$90	\$98	\$115
					0%	-7%	5%	8%	3%	18%	8%	-1%	13%
OVERALL	SOCIETY TOTAL	\$121	\$121	\$160	\$108	\$117	\$139	\$104	\$107	\$126	\$106	\$115	\$133
					11%	3%	15%	17%	17%	27%	15%	6%	22%
OVERALL	PWU TOTAL	\$86	\$86	\$116	\$81	\$85	\$101	\$68	\$69	\$84	\$64	\$68	\$81
					5%	1%	13%	25%	23%	37%	34%	25%	43%
OVERALL		\$122	\$122	\$160	\$111	\$121	\$144	\$105	\$109	\$130	\$107	\$117	\$136
					9%	0%	11%	16%	11%	22%	15%	5%	18%

(1) Reflects salary structure job rates, which consider target compensation for a fully competent employee. Typically the midpoint or endpoint of a range.

(2) Reflects IESO salary structure job rates as the IESO does not provide short-term incentives. In the market, it includes salaries plus target short-term incentives, if provided.

(3) Total remuneration ("TREM") reflects target total cash compensation plus the value of long-term incentives (if provided), pensions, active benefits and post-retirement benefits.

(4) PWU market findings are shown in aggregate to minimize grade-by-grade variations resulting from a higher number of grades and lower number of jobs.

Note: Figures are rounded to the nearest thousand (dollars) or percent. Percentages represent weighted averages to better reflect the distribution of employees

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PWU INTERROGATORY 1

Issue 1.4 Is the IESO's 2023 projected staffing levels and compensation (including salaries, benefits, pensions and other post-employment benefits) appropriate?

1.0-PWU-1

INTERROGATORY

Preamble: Ref 1: Exhibit A/ Tab 1/ Schedule 5/Page 5 of 7

Budgeted compensation expenses are based on Bill 124, a provincial law affecting wages for Society and Power Worker Union employees by limiting economic salary increases over the corresponding moderation periods. Bill 124 was struck down by the Ontario Superior Court of Justice on November 29, 2022; however, the Ontario government filed an appeal in response and Bill 124 remains in effect (See Exhibit D-1-3 Staffing and Compensation for additional information).

Questions:

- a) Have the PWU and/or The Society indicated to the IESO that they may be seeking enhanced wages for the periods their members' compensation has or would have been restrained due to Bill 124?
- b) In the event that the Superior Court's ruling is upheld and the unions seek to recover compensation lost due to Bill 124, how is the IESO prepared to address the revenue requirements deficits thereof?
- c) In preparing the current application, did the IESO consider the establishment of a variance account to record potential revenue requirement impacts resulting from the Court's decision?

RESPONSE

- a) See the response to 1.0 VECC Interrogatory 5.
- b) See the response to 1.4 CME Interrogatory 2 b)

- 1 c) See the response to 3.0 SUP Interrogatory 6.

PWU INTERROGATORY 2

Issue 1.4 Is the IESO's 2023 projected staffing levels and compensation (including salaries, benefits, pensions and other post-employment benefits) appropriate?

1.0-PWU-2

INTERROGATORY

Preamble: Ref 1: Exhibit D/Tab 1/Schedule 3 Plus Attachment(s) Page 1 of 11

The 2022 average FTEs of 799 was below 2022 OEB approved budget levels of 827 average FTEs as a result of labour market conditions which led to an increase in voluntary attrition and retirements beginning in late 2021 and continuing through 2022.

Questions:

- a) Please describe the labour market conditions that led to an increase in voluntary attrition and retirements beginning in late 2021 and continuing through 2022.
- b) Were the actual voluntary attritions and retirements stated in Ref. 1 higher than budgeted/planned by the IESO?
- c) Did the IESO make an effort to hire staff to deal with the staff attrition and retirements?
- d) How did IESO deal with the impact, if any, of the staff attrition on its core operations and execution of initiatives? Were there initiatives and projects that were deferred?

RESPONSE

- a) Please see response to 1.0 EDA Interrogatory 3 a).
- b) Yes, the voluntary and retirement attrition rates were higher than budgeted/planned by the IESO in 2022, please see response to 1.0 EDA Interrogatory 3 a).

- 1 c) Yes, the IESO has and continues to make efforts to hire staff for all existing
2 vacancies. In 2022, the IESO filled 402 requisitions with internal and external
3 candidates, these recruitment efforts resulted in an increase of 25 FTEs compared to
4 2021, representing the highest single-year staffing increase over the 5 past three
5 years. Please also refer to the response to 1.0 OEB Staff Interrogatory 3 a) and b).
- 6 d) Due to staffing attrition, there were delays in the initiation of a number of larger
7 projects that resulted in later than anticipated project completion for some of the
8 planned and in flight projects. Staff also incurred in overtime when necessary to
9 ensure delivery of IESO's commitments.

PWU INTERROGATORY 3

Issue 1.4 Is the IESO's 2023 projected staffing levels and compensation (including salaries, benefits, pensions and other post-employment benefits) appropriate?

1.0-PWU-3

INTERROGATORY

Preamble: Ref 1: Exhibit D/Tab 1/Schedule 3 Plus Attachment(s) Page 1 of 11

For 2023, the IESO has a budget of 914 FTEs to deliver on key initiatives that are critical to maintaining its core operations, to support the significant transformation of the electricity sector, and to support the Market Renewal Program (MRP).

Questions:

a) The 2023 FTE of 914 represents an increase of 115 FTEs over the 2022 FTEs of 799. Please break down the 115 FTEs by representation – Management, PWU, Society

b) How many of the 115 FTEs have been filled so far in 2023?

RESPONSE

a) The breakdown of the increase of 115 FTEs by representation is as follows:

Table 1 – Breakdown of FTEs

Average FTE (Capital and Operating expenses)	2022 Actual	2023 Budget	Change
Management	147	166	19
PWU	66	67	1
Society	586	681	95
Total	799	914	115

- 1 b) The net average FTE increase to April 2023 is 28. Please see the response to OEB Staff
- 2 Interrogatory 7 a) for further details.

PWU INTERROGATORY 4

Issue 1.4 Is the IESO's 2023 projected staffing levels and compensation (including salaries, benefits, pensions and other post-employment benefits) appropriate?

1.0-PWU-4

INTERROGATORY

Preamble: Ref 1: Exhibit D/Tab 1/ Schedule 3 Plus Attachment(s) Page 2 of 11, Table 1:
Staffing and Operating Compensation Expenses

Questions:

- a) Please reproduce Table 1 showing the breakdown of Non-management Regular and Temporary by union representation – PWU and Society

RESPONSE

- a) See the response to 1.0 SUP Interrogatory 2 a).

PWU INTERROGATORY 5

Issue 1.4 Is the IESO's 2023 projected staffing levels and compensation (including salaries, benefits, pensions and other post-employment benefits) appropriate?

1.0-PWU-5

INTERROGATORY

Preamble: Ref 1: Exhibit G/Tab 2/ Schedule 1 Page 10 of 10, Table 9: 2023 - 2025 Full Time Equivalents

Questions:

a) Please reproduce Table 9 showing the breakdown of FTEs by employee representation – PWU, Society, etc.

RESPONSE

a) Table 1 below provides the breakdown of FTEs by employee representation:

Table 1 – 2023 - 2025 Average Full Time Equivalent (FTE) by representation

Representation	2023 Budget	2024 Budget	2025 Budget
Management	13	12	8
Society	96	76	36
PWU	-	-	-
MRP FTE's Total	109	88	44

PWU INTERROGATORY 6

Issue 1.4 Is the IESO's 2023 projected staffing levels and compensation (including salaries, benefits, pensions and other post-employment benefits) appropriate?

1.0-PWU-6

INTERROGATORY

Preamble: Exhibit D/Tab 1/ Schedule 3 Plus Attachment(s) Page 6 of 11

Questions:

a) The reference indicates that the IESO plans to undertake negotiated plan changes with respect to pension including changes to: (i) the undiscounted early retirement rule from Rule 85 to Rule 82 and (ii) the average period required to qualify for pensionable retirement - from 36 months to 60 months. Please describe the status of the negotiations/agreements with the PWU and The Society with respect to these two planned changes.

RESPONSE

a) These two pension changes in question have both been previously negotiated (2016) and will be implemented in line with the March 31st 2025 effective date.

CME INTERROGATORY 4

Issue 1.6 Is the IESO's 2025 projected staffing levels and compensation (including salaries, benefits, pensions and other post-employment benefits) appropriate?

1.0-CME-4

INTERROGATORY

Reference: Exhibit B, Tab 1, Schedule 2, 2023-2025 business plan, p. 19 of 32; Exhibit D, Tab 1, Schedule 3, p. 1 of 11.

Preamble: At page 19 of the business plan, the IESO shows that core operations staff is increasing from 714 forecast in 2022 to 856 in the 2025 budget (a 17% increase).

At page 1 of Exhibit D, the IESO states that the average FTE levels in 2023 are required to support energy procurements and prepare for the new MRP market functions/services.

At attachment 3, the IESO provides a study from Mercer on non-executive total remuneration.

Questions:

- a) Please break out the increase of FTE's in core operations to the various departments or areas of the IESO are that are driving the increase, and provide a brief explanation of what tasks/responsibilities within those departments for which the new FTEs will be responsible. For instance, the description at Exhibit D for 2025 discusses the overall decline in FTEs but not the increase in core operations staff in each year between 2022 and 2025.

RESPONSE

- a) Please see the response to 1.0 EDA Interrogatory 3 d) for a break out of FTE's by the various IESO business units. The increase in core operations staff between 2022 and 2025 is driven by resources required to support the various key initiatives and work identified by the IESO as key to achieving its corporate strategy. Particularly in 2025, the increase is primarily due to Information Technology & Services staff returning from MRP

- 1 to support core capital work, and Market Assessment and Compliance staff re-allocating
- 2 from MRP to perform Market Power Mitigation work after MRP goes live.

1 **AMPCO INTERROGATORY 16**

2 Issue 1.7 Is the IESO's 2023 capital expenditure budget of \$86.0 million appropriate?

3 1.0-AMPCO-16

4 **INTERROGATORY**

5 **Reference:** E-2-1 Attachment 9 p.8

6 **Preamble:** The SCADA/Energy Management System (EMS) Upgrade project is progressing
7 according to the latest approved project plan and is expected to be complete Q1 2023.

8 Questions:

9 a) Please confirm the project was completed in Q1 2023. If not, please explain.

10
11 **RESPONSE**

12 a) Confirmed.

AMPCO INTERROGATORY 17

Issue 1.7 Is the IESO's 2023 capital expenditure budget of \$86.0 million appropriate?

1.0-AMPCO-17

INTERROGATORY

Reference: E-2-1 Attachment 10 p.25-26

Preamble: With respect to the Hub Intranet Redevelopment project:

Questions:

- a) Please provide the original budget and completion date.
- b) Please provide a copy of the Project Exception Report and confirm it was approved.
- c) Please confirm the project will be completed in Q2 2023. If not, please explain.

RESPONSE

- a) Original approved budget: \$2.0 million, original completion date: June 2022.
- b) See the approved Project Exception Report provided as Attachment 1 HUB Exception Report.
- c) The new Hub Internet site was launched in May 2023 however the additional work required to meet the IESO's Information Governance standards for an Authorized Record Repository is expected to be complete in Q4 2023.

Exception Report No. 2 for: Hub Intranet Redevelopment Project

Document ID:	██████████	Author:	██████████
Issue:	1.0	Sponsor:	██████████
Effective Date:	March 30, 2023	Project ID:	██████████

Purpose:

This document has been produced to advise the Project Sponsor and the Project Charter's approver that the project has exceeded the current approved tolerance levels, due to the addition of work related to governance, which surfaced during the life of the project. The deviation has become imminent for reasons explained below. An analysis of available options to address the deviation are also included in the report.

Due to required change in scope to include InfoGov Governance requirements, it became necessary to have Accenture perform an evaluation and estimate of the scope of work to make changes to the Hub or IESO's intranet, to allow its utilization as a temporary repository of company information (also known as ARMS). This consists of an increase in scope to apply InfoGov requirements and changes in work conditions identified during the life of the project; an exception report is required to request additional funds.

This Project Exception Report will seek for an additional \$505K of capital funds, inclusive of contingency (\$80K from previous PER-112 and \$80K from current PER-118), to complete the project by extending the schedule for 5 additional months inclusive of contingency. The project is scheduled to complete by November 30, 2023, inclusive of 2 months of contingency.

Approval of the exception report will result in the re-baselining of the project's capital budget and schedule. It should be noted that the project work to refresh the present Hub will not be affected and will be completed on the original schedule with a separate cutover. It will be put into service and will remain in service while the additional work or scope covered in this project exception report is executed.

1. Summary of Previous Exception Reports

PER-112 was previously submitted for this project seeking additional capital and schedule to account for scope changes largely due to resource constraints and parking of the project for many months.

This is the second Exception Report for the Hub Intranet Redevelopment Project.

2. Describe Deviation, Cause and Consequence

The project team has determined that there is a significant amount of content on the existing Hub, which does not comply with InfoGov and Communications policy. Therefore, new procedures are needed, including revisiting Hub governance, which is a critical component and was previously not part of the project. This includes work on the [REDACTED] platform, where the new Hub will reside. Due to increase in project scope and unanticipated discoveries on the existing intranet, it was deemed necessary by the PSC to have an evaluation/feasibility of the scope, cost and schedule performed as part of the Hub Intranet Redevelopment Project. This was deemed necessary, to make optimal use of existing project team resources, who are well versed with the work, with the possibility that this work may be considered as an add-on to the existing project.

If added to the existing project, where the full project team is presently at work on the final phase of Execution, would save up to 8 months of schedule and cost, vs. starting from scratch.

Once the Exception Report is approved, deployment will be done in two phases i.e. Phase 1 deployment on April, 2023 and Phase 2 deployment, latest by November, 2023. as part of this project, it will be part of a 2nd Go-Live.

3. Available Options to Address the Deviation(s)

We have considered the following options to address the deviation:

Option 1: Do-Nothing Option [Not Recommended]

This option is not recommended, as the refreshed Hub will be put into service in the first half of 2023. The soft cutover date is tentatively scheduled for April, 2023.

This option will not alleviate any of the problems and Hub will still be required to be used as a temporary repository. The cost if done as an extension to the project is approximately half of a standalone project. It would also defer a significant expenditure of funds into 2024 and introduce uncertainty into future estimating of cost for this project. Until the Governance is updated, Hub will not be in conformance with InfoGov policy. There are reputational considerations in addition to the non-conformance, with a remote possibility that other higher profile projects may defer or delay this project beyond 2024.

Option 2: Perform a feasibility study, determine cost & schedule and subsequently complete remaining scope with available or existing in-house resources [Not Recommended]

This option would result in completing the project and meeting all Business Objectives in the Project Charter but with significant schedule delays between 4-8 months additional

delays and would add extra scope to the project, as well as schedule. It will add expenditure of capital in 2023 beyond the approved budget. In-house resources in various business groups are in high demand and not available. In-house capability with the [REDACTED] platform is limited and would have to be developed.

Option 3: Use External Resources to complete the project feasibility or evaluation and add capital cost for this work to the existing project. [Recommended]

By using external contractors, work can be done, or managed, with external daily participation by external contractors, who also have the capacity to perform this evaluation using existing resources prior to redeploying them to other non-IESO work. Resources familiar with the present [REDACTED] platform will perform the work and project team (including external contractors), familiar with the present Business Requirements Document (BRD), wireframes and user stories, will provide guidance to [REDACTED]. IESO does not have capability to perform work on user stories and wireframes. This recently started with the Hub project and is now being considered as an added future role for IESO's BAS (Business Analysis Services) business unit.

This option requires an additional \$505K inclusive of \$80K contingency in capital (no change to the opex budget) and 5 additional months to the schedule inclusive of 2 months of contingency. The project is scheduled to complete by November 30, 2023, inclusive of contingency.

4. Options Analysis and Recommendation

As options 1 and 2 are not recommended, they were not considered further.

The Sponsor and stakeholders acknowledge and recommended option 3 to increase project capital cost by \$505K inclusive of contingency and complete the project by extending timelines by 5 months inclusive of contingency using external resources. This option also enables a majority of the project work or capital expenditure to occur in 2023.

The Option to do the work as a standalone project was also not deemed feasible. Performing this work after issue of a new Intake would be significantly more cost and would take 4 to 8 months longer, with the possibility that the actual costs would come in significantly higher after completion of the Planning Phase of a future project.

5. Changes to Business Objectives

This exception report has an impact on the business objectives by adding governance for InfoGov to the project.

A note is added to the Business Objective #1 as follows:

Ref #	Business Objective	Procedure for Measures (identify how the performance will be measured)	Measured when and by whom?
1	Improve the employee experience in using the IESO intranet by streamlining access to employee, departmental and company information and tools.	<p>Measure improvement by conducting heuristic audits.</p> <p>Governance and content maintenance procedures are in place. Roles and responsibilities are documented to support optimized intranet content throughout its lifecycle.</p> <p><i>Note: The governance for use of Hub as a repository of company information will be updated by InfoGov, outside of the project.</i></p>	<p>When: Project go live</p> <p>Whom: Manager, Internal Communications</p>
2	Sustain employee engagement and promote employee community in a distributed workforce, by ensuring the Intranet presents timely and relevant information	Measure engagement by conducting a user survey.	<p>When: 6 months' post project Closure</p> <p>Whom: Manager, Internal Communications</p>
3	Sustain the intranet by mitigating the risk of the use of unsupported technology by moving to a supported platform with vendor support for 5 years.	New Content Management System platform is in service and has appropriate licensing in place for five years.	<p>When: Project Closure</p> <p>Whom: Manager, Customer Information Management</p>

Cost Report

Capital Budget

Description	Project Charter - Approved Budget	PSC Approved Decision for release of Contingency	Past Exception Report	Present Exception Report	Current Approved Budget	Actual as 03/04/23	Forecast to Complete	Forecast at Complete	Variance from Budget
Total Internal Labor	\$812,000			200,000	\$1,012,000	\$692,714	\$225,000	\$917,714	-\$94,286
Total Contract/Computer Services	\$894,000	256,000	400,000	225,000	\$1, 775,000	\$1,455,408	\$205,000	\$1,660,408	-\$114,592
Total Hardware and Building Services						\$159,988	\$	\$159,988	\$159,988
Total Miscellaneous						\$21,502	\$27,300	\$48,802	\$48,802
CapEx Budget without Contingency	\$1,706,000	\$256,000	\$400,000	\$425,000	\$2,787,000	\$2,329,613	\$457,300	\$2,786,913	-\$87
Contingency	\$256,000	-\$256,000	80,000	80,000	160,000				
Total Capital Budget	\$1,962,000	\$0	\$480,000	505,000	\$2,947,000	\$2,329,613	\$457,300	\$2,786,913	-\$87

Operating Budget

Description	Project Charter - Approved Budget	PSC Approved Decision for release of Contingency	Past Exception Report	Present Exception Report	Current Approved Budget	Actual as 03/04/23	Forecast to Complete	Forecast at Complete	Variance from Budget
Total Internal Labor	\$366,200				\$366,200	\$151,978	\$35,000	\$186,978	-\$179,222
Total Contract/Computer Services						\$178,717	\$0	\$178,717	\$178,717
Total Hardware and Building Services									
Total Miscellaneous									
OpEx Budget without Contingency	\$366,200	\$0	\$0	\$0	\$366,200	\$330,695	\$35,000	\$365,695	-\$505
Contingency	\$55,000				55,000				
Total Opex Budget	\$421,200	\$0	\$0	\$0	\$421,200	\$330,695	\$35,000	\$365,695	-\$505
Total	\$2,383,200	\$256,000	\$480,000	\$480,000	\$3,368,200	\$2,660,307	\$417,300	\$3,077,607	-\$592

Document Control

Note: * indicates which roles will be required to approve in [REDACTED] workflow, however, document will be reviewed by all other roles identified.

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[REDACTED]	Project Steering Committee Member

Recommended by:

Recommended by	Role
[REDACTED]	Project Sponsor*

OAR Approval:

Approved by	Role
██████████	Vice-President, Corporate Relations Stakeholder Engagement & Innovation
██████████	Director, Corporate Communications* (delegated by Carla Nell)

Distribution List

Name	Organization
██████████	IESO
Finance	IESO
Project Management Office	IESO

AMPCO INTERROGATORY 18

Issue 1.7 Is the IESO's 2023 capital expenditure budget of \$86.0 million appropriate?

1.0-AMPCO-18

INTERROGATORY

Reference: E-2-1 Attachment 10 p.32-33

Preamble: With respect to the IESO Space Needs Program – Office Pilot project:

Questions:

- a) Please provide the original budget and completion date.
- b) Please provide a copy of the Project Exception Report.
- c) Please confirm the project will be completed in Q2 2023. If not, please explain.

RESPONSE

- a) Although the original estimate was less than \$1 million dollars the approved project budget was \$2.7 million of capital including \$0.3 million of contingency with an approved completion date of June 30, 2023.
- b) There was no Exception Report required.
- c) The project is expected to be completed by Q2 2023. The IESO is currently in the Closing Phase of the Project.

1 **CME INTERROGATORY 5**

2 Issue 1.7 Is the IESO's 2023 capital expenditure budget of \$86 million for appropriate?

3
4 1.0-CME-5

5 **INTERROGATORY**

6 Reference: Exhibit G, Tab 2, Schedule 3; Exhibit A, Tab 2, Schedule 2, Attachment 2

7 Preamble: At Exhibit G, the IESO provides its 2023-2025 regulatory scorecard. It outlines
8 whether the 2022 target was met or not. To the extent possible, please provide the following:

9 Questions:
10

11 a) The 2020 and 2021 target values for each performance category; and

12 b) The 2020 and 2021 actual results for each performance category
13

14 **RESPONSE**

15 a) Please see Attachment 1 – 2020-2021 Target and Actual Values, to this response.

16 b) Please see the response a) above.

SEC INTERROGATORY 14

Issue 1.7 Is the IESO's 2023 capital expenditure budget of \$86 million for appropriate?

1.0-SEC-14

INTERROGATORY

Reference: [D-1-1, p.7]

Preamble:

Questions:

For each of the Resource and Transmission Adequacy, and Enabling Resources key initiatives, please provide the following information:

a) For each of 2023, 2024 and 2025, a detailed breakdown of initiative costs.

b) The document(s) used internally that identifies the initiatives (and its underlying projects) scope, the deliverables, work plan schedules, identifies risks and mitigation strategies, and includes its budget.

RESPONSE

a) Please see the tables below:

1 **Table 1 – Resource and Transmission Adequacy Capital and OM&A**

Resource and Transmission Adequacy (\$ millions)	2023	2024	2025
Operating Expenses	6.0	8.8	7.3
Capital Initiatives	1.0	1.2	1.3
Resource Adequacy Program			
1. Capacity Auction Enhancements	0.2	0.0	0.0
2. Forward Capacity Auction	0.8	1.2	1.3

2 **Table 2 – Enabling Resources Projects Capital and OM&A**

Enabling Resources (\$ millions)	2023	2024	2025
Operating Expenses	0.8	0.9	0.9
Capital Initiatives:			
1. Foundational Hybrid Participation Model Design	0.3	1.4	0.7
2. Distributed Energy Resource (DER)	0	1.00	1.45
3. Automatic Approval of State-of-Charge	0	0.2	1.4
4. Supporting Changes for Storage in the Automatic Generation Control (AGC)	0	0	0.5

- 3 b) See E-2-1 Attachment 3 - Project Charter – Enabling Resources Program, E-2-1
4 Attachment 9 page 3 - Resource Adequacy Program as well as the descriptions below in
5 Table 3. IESO is working on updating the program charter and plan to be completed by

- 1 end of Q3 2023. The revised program charter will have updated scope, deliverables,
- 2 schedule, risks and mitigation strategies and budget.

3 **Table 3 – ERP Projects Descriptions**

	Description
Enabling Resources Program (ERP)	Through the program the IESO will prioritize and undertake the work required to increase the number of resources (e.g., hybrids, storage) that can participate in the IESO markets to deliver energy, capacity and ancillary services in order to increase options for reliability and competition to drive affordability.
Foundational Hybrid Participation Model Design	As part of the Enabling Resources Program (ERP), the IESO launched the Hybrid Integration Project (HIP) which identified two (2) potential hybrid participation models for participation in the IESO-administered markets. A hybrid participation model will allow for synergies through a coupling of storage technology and generation resources, including variable generation. This project is to develop the market design for the two identified "foundational" hybrid participation models so that hybrid resources are efficiently and reliably integrated into the IESO markets. The design work will also ensure external stakeholders have all the information required to participate as a hybrid resource in the upcoming procurements, including clarity on capacity and bid-to-bill design for participation in the renewed IESO markets.
DER	This initiative includes the market design (second phase) and implementation (third phase) of the DER Market Vision and Design project. The design work in phase 2 will provide external stakeholders with information required to participate as a DER resource in subsequent procurements or capacity auctions. Following the design, the 3rd phase of this project to implement changes to systems and tools that

	will be required to recognize DERs in system modelling, dispatch, and any other requirements that were identified in previous phases.
Automatic Approval of State-of-Charge Changes	The objective of the Automatic Approval of State-of-Charge Changes project is to reduce the impact of SoC changes on the control room and to ensure that the IESO is prepared to manage an increased volume of storage resources in the interim period.
Supporting Changes for Storage in the AGC Tool	The objective of this Change Initiative is to integrate electricity storage resources (ESRs) into the IESO's Automatic Generation Control (AGC) tool in order to enable ESRs to compete fairly with other resources to provide regulation, an essential reliability service.

SEC INTERROGATORY 15

Issue 1.7 Is the IESO's 2023 capital expenditure budget of \$86 million for appropriate?

1.0-SEC-15

INTERROGATORY

Reference: [E-2-1]

Preamble:

Questions:

SEC seeks to understand the IESO's ability to execute major capital projects. Please provide a table that shows for all material capital projects *completed* in the last 10 years, i) the initial approved budget, ii) final actual costs, iii) initial approved completion date, and iv) actual completion date. For each project where either the budget variance was +/-10%, or the schedule variance was +/- 1 year, please briefly explain the reasons, and the lessons learned.

RESPONSE

The IESO has provided information for all material capital projects completed over the past 8 years as this coincides with the merger of the former IESO and Ontario Power Authority on January 1st 2015:

Table 1 – Material Capital Projects Completed in the Last 8 Years (\$ in millions)

Project Name	Initial Approved Budget*	Final Actual Cost	Initial Approved Completion Date*	Actual Completion Date	Reason for Variance & Lessons Learned
Revenue Metering System Upgrade	7.4	10.2	Sep 2015	Sep 2015	<p>Variance in cost is due to a number design changes and extension of vendor engagement to provide support for testing and production deployment to mitigate project risks.</p> <p>Lessons Learned: More clarity of the high-level requirements/capabilities earlier in the project would have allowed for better planning, vendor selection and the appropriate allocation of contingency to reflect the level of uncertainty</p>
Energy Management System (EMS) Refresh	10.4	11.2	Oct 2015	Feb 2017	<p>Variance in cost and schedule are due to a number of vendor change requests that were required to achieve the project's business objectives.</p> <p>Lessons Learned: The criticality of clearly defining the deliverables, requirements and acceptance criteria for those</p>

					deliverables during the Planning Phase of the project.
Market Information Management (MIM) Refresh	4.2	4.4	Sep 2016	Oct 2016	Cost variance is less than +/-10% and schedule variance is less than +/- 1 year
NERC Critical Infrastructure Protection (CIP) projects	7.7	6	Apr 2016	Sep 2016	Variance in schedule is due to delays in finalization of the NERC CIP standard. The program delivered all required results by the new mandated compliance date for NERC CIP V5 of July 1, 2016. Project underspend was a result of less vendor support than was originally anticipated.
Market Information System (MIS) Refresh	7.3	8.9	May 2017	Oct 2018	<p>The initial budget and timeline were approved based on a budgetary estimate provided by the vendor. Subsequent Statement of Work preparation and negotiation with the vendor revealed additional vendor tasks that were not contemplated in budgetary estimate.</p> <p>Lessons Learned: For large scale projects with high degrees of uncertainty complete Statement of Work and contract negotiations prior to the completion of the Planning Phase to ensure full costs are understood and approved before proceeding into the Execution Phase.</p>

Demand Response Auction	5.1	4.6	Oct 2016	May 2019	<p>Variance in schedule is due to key IESO IT resource constraints and significant additional time required to develop, test and deploy the changes into sandbox and production environments.</p> <p>Lessons Learned: Assess organizational priorities and critical resource availability when planning project timelines.</p>
Operation Readiness Initiative (ORI) Program	5.2	5	Jan 2020	Sep 2020	<p>Cost variance is less than +/-10% and schedule variance is less than +/- 1 year</p>
Capacity Auction	8.2	3.6	Jun 2022	Oct 2021	<p>Cost and schedule variance was the result of de-scoping the December 2021 Auction which supported the May 1, 2022 commitment period. This work and associated cost and budget were transferred to a later project.</p> <p>Lessons Learned: Timeline for successive auctions were too short based on scope of work. December 2021 Auction was de-scoped to evolve the design features under a future Capacity Auction Project</p>
SCADA/Energy Management System (EMS) Upgrade	14.3	12.4	Mar 2023	Mar 2023	<p>Variance in cost is due to the unused cost contingency.</p> <p>Lessons Learned:</p>

					<p>The key IT and business resources on the project¹ have experienced one or more upgrades to our EMS/SCADA system with this vendor. They were able to use their past experience to better plan the delivery and testing.</p> <p>Getting more involved with the vendor product development team from the beginning of the project allowed the team to ensure that our Use Cases are considered in the design decisions.</p>
--	--	--	--	--	--

2 * Initial approved budget and schedule includes approved contingency.

SEC INTERROGATORY 16

Issue 1.7 Is the IESO's 2023 capital expenditure budget of \$86 million for appropriate?

1.0-SEC-16

INTERROGATORY

Reference: [E-2-1, Attach 6, p.1-2]

Preamble:

Questions:

In the context of its Backup Operating Centre and Backup Data Centre Replacement Project, the IESO states: "Due to the high level of uncertainty all costs include 50% contingency which will be further refined in the planning phase of the project. It should be noted that the cost estimates of \$10.4 million shown in Appendix 3 of the 2023-2025 Business Plan does not reflect this contingency amount. Contingency is not allocated for each item within the Business Plan but rather managed across the overall portfolio of projects as part of our regular monitoring activities." SEC has reviewed other major capital project budgets in the application and they include contingency amounts within the project budgets (for example, see E-2-1, Attachments 2, 3, 6, and 9). Please explain the difference.

RESPONSE

Although each individual project estimate (for projects that have not been initiated) or budget does include contingency that is reflective of the level of cost and schedule uncertainty for the specific project, these contingency amounts are not reflected in the budgets that make up the IESO's overall capital envelope. If the budget amounts included in Appendix 3 of the 2023-2025 Business Plan were all to include the individual project contingencies, the overall capital budget request would become inflated and would likely result in significant capital underspends in each year. This is due to the fact that most

1 projects do not typically need to utilize their full approved budget contingency. It is therefore
2 more appropriate and prudent to manage contingency across the portfolio and make the
3 necessary tradeoffs if/when required as part of our monitoring activities to stay within the
4 overall approved capital envelope. This is consistent with the IESO's past practices and has
5 proven effective.

SEC INTERROGATORY 17

Issue 1.7 Is the IESO's 2023 capital expenditure budget of \$86 million for appropriate?

1.0-SEC-17

INTERROGATORY

Reference: [E-2-1, p.5]

Preamble:

Questions:

With respect to the Replacement of the Settlement Systems Project:

- a) Please explain the 2022 cost variance for the Replacement Settlement Systems project.
- b) Please provide the total capital project cost forecast at the time of the 2022 application and the revised total project capital cost forecast.
- c) Please provide a copy of any briefing information, or other internal documentation, provided to the IESO senior management team regarding the cost overrun.
- d) Please provide a copy of the most recent project update, or similar document, used internally to track the progress of the project.

RESPONSE

- a) As stated in E-2-1 Capital Projects (Appendix 2-AA) the 2022 cost variance of \$3.5 million was an increase in spending due to change requests to support software usability that introduced additional hardware and software requirements.
- b) The total capital project cost forecast at the time of the 2022 application was \$34.2 million and the revised total project capital cost forecast is \$34 million as of March 2023.
- c) There has been no cost overrun against the approved project budget. Cash flow variances are managed by the Project Manager and the Project Steering Committee and

- 1 do not require senior leadership approval.
- 2 d) Phase 1 of the project is in service. Please see Attachment 1 – RSS Status Update ESC 5-
- 3 30-23 to this response.

MAY 30, 2023

RSS Project Update Executive Steering Committee

Key Messages

Overall Status:

- **So far so good! Daily operations are proceeding well.**
- **May Preliminary Settlement Statements (PSS) have posted as expected**
- **Feedback from OPG and Hydro One has indicated they had no issue with their systems accepting the May PSS**
- **First Financial Market Invoices have processed as expected**
- **Online Settlement Form Enhancements and Notice of Disagreement System Enhancements have been deployed into production**
- **Priority Defects have been resolved ahead of Final Settlement Statement production**

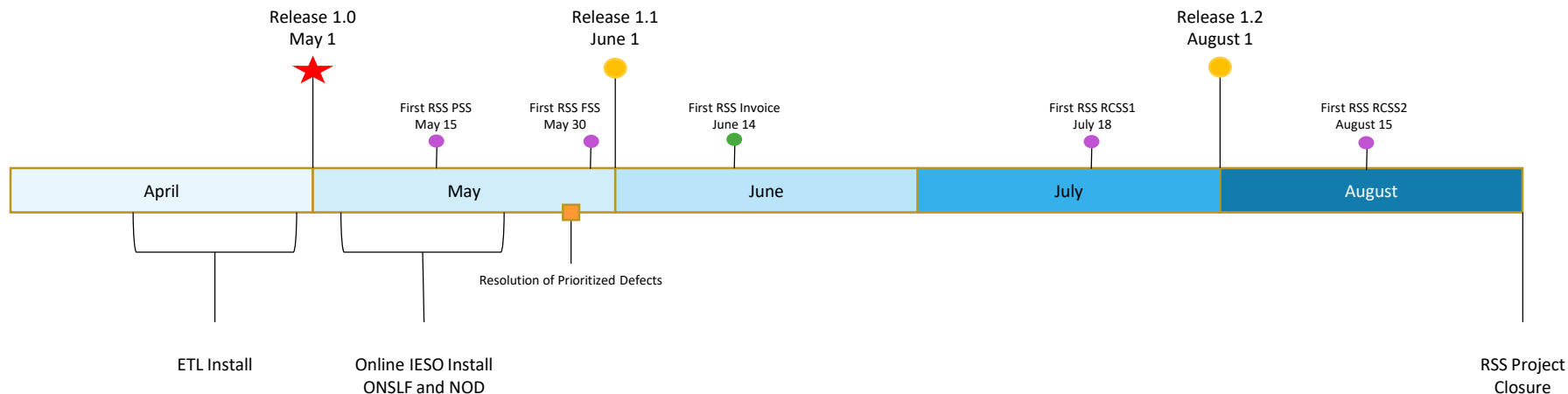
Issue Management:

- Post- Go-Live issue related to Prudentials was temporarily resolved via an RFC data correction and the calculations worked as intended. Permanent fix has been developed and has been deployed into production.
- 12 NODs submitted related to an incorrect view in an ETL for CT 104. The fix has been deployed and the adjustment will be made on the Final Settlement Statement.
- RSS Disaster Recovery related fall back and fall forward activities were successfully completed.

Releases 1.1 and 1.2:

- GA Rates, Ultra Low Time of Use and Capacity Auction Enhancement charges have been developed and are being tested ahead of June 2 deployment.
- Interruptible Rate Pilot scope removed from RSS Release 1.2. Existing CT 147 will be used to settle the pilot using data from the pilot's End User Computing Tool. Remaining 1.2 scope will complete What-If Functionality, Archive Functionality, and outstanding change requests.

High-Level Release Schedule



Milestones – Stage 1

Status Legend

On Track: Progress has not yet started but will be ready to start as per schedule

In Progress: Milestone progress is underway and is tracking to schedule

At Risk: Milestone completion may be delayed unless successfully mitigated

Delayed: Milestone will not be completed as per schedule

Project Area	Milestone	Start Date	End Date	Status
Go-Live Preparation	Cut-over preparations <ul style="list-style-type: none"> Freeze on code changes ahead of go-live 	April 16, 2023	May 1, 2023	Complete
Go-Live Preparation	ETL Install	April 12, 2023	April 28, 2023	Complete
Go-Live	Go-Live of RSS 1.0	May 1, 2023	May 1, 2023	Complete
Go-Live	Online IESO: ONSLF & NOD Install	May 5, 2023	May 19, 2023	Complete
Post-Go-Live	Resolution of Prioritized Defects	April 24, 2023	May 26, 2023	Complete

Upcoming Milestones – Stage 1.x

Status Legend

On Track: Progress has not yet started but will be ready to start as per schedule

In Progress: Milestone progress is underway and is tracking to schedule

At Risk: Milestone completion may be delayed unless successfully mitigated

Delayed: Milestone will not be completed as per schedule

Project Area	Milestone	Start Date	End Date	Status
Solution Testing	Release 1.1 Testing (GA Rate, ULO & CAE Settlement)	April 15, 2023	May 26, 2023	On-Track
Solution Development	Interruptible Rate Pilot Settlement	April 16, 2023	May 26, 2023	On-Track
Go-Live	Release 1.1 Go Live	June 1, 2023	June 1, 2023	On-Track
Solution Testing	Release 1.2 Testing (Interruptible Rate Pilot)	June 5, 2023	July 15, 2023	On-Track
Solution Testing	Release 1.2 Testing (What-If Functionality, Archive Functionality, and approved change requests)	June 6, 2023	July 28, 2023	On-Track
Go-Live	Release 1.2 Go-Live	Aug 1, 2023	Aug 1, 2023	On-Track

RSS Risk Dashboard

The two Critical/High risks have planned mitigation actions to reduce the risk levels to Medium

Risk #	Risk Event Description	Management Risk Assessment		Risk Trend	Mitigation Status
		Residual Risk Level	Target Risk Level		
1	GA Rate calculations are not available for deployment June 1.	High	Medium	↓	● in progress
2	Unable to remediate critical defects in a timely manner resulting in system outages and loss of services to the market participants.	Medium	Medium	↓	● in progress

RISK TREND

- × Closed risk or risk is no longer applicable
- No change

- ↓ Residual Risk Level is on a downward trend/Residual Risk Level has lowered
- ↑ Residual Risk Level is on an upward trend/Residual Risk Level has increased

MITIGATION STATUS (descriptions in Exhibit 5)

- At Risk
- Developing
- In Progress
- Completed

Financial Status

Cost Tracking for RSS 1.0, 1.1, and 1.2

Description	Budget	Contingency	Total	Actuals as of 4/18/2023	Forecast at Complete	Variance from Budget
Capital Budget (\$M)	24.2	7.1	31.3	27.9	30.9	-0.4
Operating Budget (\$M)	1.1	-	1.1	0.3	0.7	-0.4
Total Budget (\$M)	25.3	7.1	32.4	28.2	31.6	-0.8

Schedule Status

Milestone	Completion Date	Status
RSS 1.0 Go-Live	1-May-23	Complete
RSS 1.1 – Capacity Auction Enhancement/Ultra Low Time of Use Rate/GA Rates	1-Jun-23	On-Track
RSS 1.2 – What-If Functionality, Archive Functionality, and approved change requests	1-Aug-23	On-Track

The project (RSS 1.0 -1.2) is progressing within the schedule contingency, and within the budget contingency.



Appendix A – Key Risks

1 RISK EVENT				Risk Owner: Phil	
GA Rate calculations are not available for deployment June 1.		Impact	Likelihood	Risk Score	Trend
Risk Description: Requirements for Global Adjustment Rate related data was completed on February 13, 2023 and Symphono has delivered the code in late March 2023. This will not be part of the 1.0 release and will need to be tested in the month of April and May as part of release 1.1.	RESIDUAL	Significant [4]	Possible [3]	High [12]	↓
	TARGET	Significant [4]	Unlikely [2]	Medium [8]	

Mitigation	Due	Previous % Complete	Current % Complete	Comments
Defer it for Post 1.0 release Risk to May 1 go-live is being mitigated by deferring implementation of this feature until June 1	Mar - 2023	5%	100%	The solution will be part of release 1.1 and implemented for June 1.
Move to Release 1.1 testing The testing of the GA Rate solution is being removed from 1.0 UAT test plan as it can be tested as part of release 1.1.	May - 2023	0%	90%	The testing of this feature will be completed independently outside of 1.0 UAT by the project team starting April 15 and reviewed by the Line of business for acceptance as part of release 1.1.

2	RISK EVENT				Risk Owner: Phil	
Unable to remediate critical defects in a timely manner resulting in system outages and loss of services to the market participants			Impact	Likelihood	Risk Score	Trend
Risk Description: Symphono will be providing a release for defect fixes and remaining requirements March 15 that will need to be installed and further tested. Additional time is required to go though second round of Operational Dry Run Cycle (daily statements until invoice issue for the month of March) from March 7, 2023 to April 16, 2023 will result in potential critical defects being found soon after going live.			RESIDUAL	Significant [4]	Unlikely [2]	Medium[8]
			TARGET	Significant [4]	Unlikely [2]	Medium[8]
Consequences						
System outages for Line of Business, potentially statements and invoices not issued to market participants on time						
Controls/Control Effectiveness						Score
Real time collaboration: Real time collaboration with the Accenture team to reduce time lag for defect fixes and follow up with the administrative work.						1
Mitigation	Due	Previous % Complete	Current % Complete	Comments		
Second Round of Operational Dry Run Use 1 month of time contingency to initiate a second round of Operational Dry Run in order to complete another invoice cycle	03-2023	0%	100%	This mitigation has started.		

SEC INTERROGATORY 18

Issue 1.7 Is the IESO's 2023 capital expenditure budget of \$86 million for appropriate?

1.0-SEC-18

INTERROGATORY

Reference: [E-2-1, p.7]

Preamble:

Questions:

For the purposed performance measure, please provide a list of the 'Strategic Initiatives' and their specific project charter or integrated project plan which sets out the approved schedule and/or budget that will be used for the purpose of assessing performance of the two measures.

RESPONSE

As of Q1 2023, the following are the list of proposed and in-flight strategic initiatives. References to project charters, project summaries, project updates in the current and past proceedings for Strategic Initiatives that are also material capital projects and capital projects between \$1 million - \$4 million are included in parentheses below:

1 **Table 1 - Strategic Initiatives Schedule and Budget**

Strategic Initiative	Project Phase	Approved Completion Date Including Contingency	Approved Capital Budget Including Contingency \$ in millions
Market Renewal Program – Energy (EB-2020-0230 – Exhibit G-2-1 Attachment 1 – MRP Energy Stream Business Case)	Execution	May 2025	\$180.9
Enabling Resources Program (Exhibit E-2-1 Attachment 3)	Execution	Dec 2026	\$9.0
Resource Adequacy Program - Capacity Auction Enhancements (Exhibit E-2-1 Attachment 9 page 3)	Execution	Oct 2023	\$3.9
Addressing Market Surveillance Panel (MSP) Recommendations - Transmission Rights Market Enhancement and Platform Refresh (Exhibit E-2-1 Attachment 10 page 6)	Execution	Oct 2024	\$3.1

Addressing Market Surveillance Panel (MSP) Recommendations - Improving Accessibility of Operating Reserve (Exhibit E-2-1 Attachment 10 page 6)	Execution	Jun 2023	\$0.1
Data Excellence Program (Exhibit E-2-1 Attachment 10 page 1)	Execution	Dec 2023	\$3.0
Clean Energy Credit Registry & Market	Execution	Oct 2023	\$1.5
Interruptible Rate Pilot	Planning	Sep 2023	\$0.0
Space Needs Program - Office Pilot Exhibit E-2-1 Attachment 10 page 32)	Execution	Jun 2023	\$2.7
Space Needs Program – Phase 3 Implement and Transition (Exhibit E-2-1 Attachment 4)	Proposed	TBD	TBD
Dynamic Limits in Real-Time	Planning	Jan 2025	\$4.6

(EB-2022-0002 Exhibit E-2-1 Attachment 2)			
Replacement of the Settlement Systems (Exhibit E-2-1 Attachment 9 page 1 & EB-2020-0230 Exhibit E-2-1 Attachment 1)	Execution	Apr 2025	\$36.8
Strategic Human Resource Workforce Planning & Analytics	Planning	Jun 2024	\$0.9
Identity Access Management - Project 4 Process & Technology Conformance	Execution	Dec 2023	\$0.4
PMU Integration - Phase 3 (Exhibit E-2-1 Attachment 10 page 11)	Proposed	TBD	TBD

1 Note: Bolded text in the table above indicates where the work is being performed as part of a Program.