

OEB STAFF INTERROGATORY 25

6.0 Market Renewal Program

6.2 Are the IESO's forecast 2019 operational costs for the Market Renewal Program appropriate in the context of the scope and timing of the overall project?

Staff IR #25

INTERROGATORY

Reference: Exhibit C-2-1, Pg. 10 of 15, Exhibit C-2-1, pg. 6 of 15

Preamble: The 2019 MRP budget of \$11.7 million identified in Table 7: 2019 MRP Operating Budget by Work Stream represents a decrease of 3.3 million of the IESO's 2018 Forecast provided in Table 2: MRP results for 2018.

Questions:

- a) Given the MRP activities are ramping up in 2019 and subsequent years why is the IESO seeking a decrease in its MRP operating budget for 2019?
- b) How much of the forecasted 2019 MRP operating budget of \$11.7 million does the IESO anticipate spending before the business case is finalized and approved?
- c) How many MRP staff will be hired before the business case is finalized and approved?
- d) If applicable, please explain why the IESO considers it reasonable to hire and spend prior to the finalization of the MRP's business case?
- e) For both Energy and Capacity work streams what types of activities are associated with the Professional & Consulting cost category?
- f) What types of operating budget activities are associated with the General work stream?

RESPONSE

- a) As MRP transitions from high level design to detailed design, a large majority of the expenditure will be capitalized, and is therefore included in the capital budget.
- b) The IESO estimates that approximately \$8.0 million of the 2019 operating budget will be spent prior to the approval of the business case.

1 c) As of March 31, 2019 there were a total of 73 headcount for MRP. IESO is targeting to be
2 at a headcount of 97 at the time the business case is finalized.

3 d) As part of launching MRP, the IESO hired a third party to assess whether a
4 comprehensive market renewal program would yield benefits to the sector when
5 compared to the expected costs. As such, the 2017 Benefits Case concluded that MRP is
6 expected to deliver \$3.4B in net benefits over a 10-year period based on costs of
7 approximately \$200M. The significant difference between the benefits and cost of the
8 project provided the IESO with confidence that ongoing expenditure was warranted to
9 develop the high level designs necessary to advance the project.

10 Findings from the 2017 Benefits Case are supported by a number of prior studies,
11 including reports by the Market Surveillance Panel (MSP), the Auditor General (AG)
12 and the Market Reform study that provide both quantitative and qualitative analyses of
13 the benefits delivered by different elements of MRP.

14 Based on the high level design work that has been completed, the costs and benefits are
15 currently being refined and reassessed and will be included in the 2019 Business Case
16 which will be completed by the end of the year.

17 e) Please see the response to SEC Interrogatory 22, at Exhibit I, Tab 6.1, Schedule 10.22.

18 f) The types of operating budget activities associated with the General work stream
19 include: general labour, which includes administrative and general oversight; staff
20 expenses and training; recruiting services; the Participation in Ontario's Future
21 Electricity report and stakeholder engagement; and rent.

OEB STAFF INTERROGATORY 26

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Staff IR #26

INTERROGATORY

Reference: Exhibit C-2-1, Page 11 of 15

Preamble:

Table 8: 2019 MRP Capital Budget by Work Stream

Questions:

- a) Please describe each of the capital work initiatives within the Energy and Capacity work streams that the IESO anticipates completing in 2019 and their respective contribution to the \$38 million capital cost budget.
- b) Is the IESO on track to complete all projects described in response to part a) of this question as of April 9, 2019?
- c) In 2019, MRP capital costs are forecast to increase from \$4 million to \$38 million. What are the major capital work stream initiatives anticipated by the IESO that will drive this budget increase?
- d) How much of the forecasted 2019 MRP capital budget of \$38.0 million does the IESO anticipate spending before the business case is finalized and approved?
- e) If applicable, please explain why the IESO considers it reasonable to expend the capital budget prior to the finalization of the MRP's business case.

RESPONSE

- a) For each of the Energy and Capacity work streams, the capital initiative is the development of a detailed design. The Energy detail design activities started in January 2019 and will continue throughout the remainder of the year. \$25.9 million of the capital budget is allocated to Energy detailed design. \$10 million of this capital budget has been allocated in Q4-2019 to an initial payment for the Dispatch Scheduling and Optimization (DSO) Engine. The Capacity detail design activities will start in May and will continue throughout the remainder of the year. \$12.1 million of the capital budget is allocated to Capacity detailed design.
- b) Yes, the IESO on track to complete all projects described in response to part a) of this question as of April 9, 2019.
- c) Please see a) above.
- d) The IESO forecasts to spend approximately \$17.0 million of the 2019 MRP capital budget prior to the approval of the business case.
- e) Please see the response to OEB Staff Interrogatory 25 d), at Exhibit I, Tab 6.2, Schedule 1.2.

OEB STAFF INTERROGATORY 27

6.0 Market Renewal Program

6.2 Are the IESO's forecast 2019 operational costs for the Market Renewal Program appropriate in the context of the scope and timing of the overall project?

Staff-27

INTERROGATORY

Reference: Exhibit A-2-2, Pages 18-19 of 27

Preamble:

In the 2019-2021 business plan, the IESO states:

In 2019, market renewal costs will be predominantly classified as capital expenses, as the program plans to start the detailed designs related to the energy and capacity work streams. The capital budget for the program in 2019 is \$38.0 million. Operating expenses to support the program include the completion of high-level designs for the capacity work stream, work to enable participation in future markets, market rule amendments and program governance and administration. The operating budget for the program in 2019 is \$11.7 million.

Questions:

- a) Please confirm that the IESO has designated "detailed designs" as capital costs while "high-level designs" are designated as operating costs. If this is not the case, please provide a detailed explanation for how the Applicant determines what types of Market Renewal Program costs are forecast to be capitalized versus expensed.
- b) Please explain on what basis any capitalized costs for the Market Renewal Program are (or will be) amortized to the statement of operations (e.g. declining balance, straight-line, etc.).
- c) Please confirm that the capitalization and amortization policies identified in the responses to parts a) and b) above are in accordance with Public Sector Accounting Standards.
- d) Has the IESO discussed its proposed capitalization and/or amortization methodologies for the Market Renewal Program costs with its external auditors? If so, have the external

auditors raised any concerns with the proposed accounting treatment of these costs?

Please explain.

- e) During the audit of the 2018 financial statements, did the IESO amend its treatment of capitalized costs or amortization amounts with respect to the Market Renewal Program as a result of any recommendations from its external auditors? If so, does the current 2019 forecast of capital costs, operating costs, and amortization pertaining to the Market Renewal Program reflect those amendments?

RESPONSE

- a) Confirmed, the IESO has designated “detailed designs” as capital costs and “high-level designs” are designated as operating costs.

- b) The IESO intends to amortize the Market Renewal Program to the statement of operations using the straight-line method.

- c) Confirmed, the IESOs capitalization and amortization policies are in accordance with the Public Sector Accounting Standards.

- d) The IESOs capitalization policy was reviewed by the Auditor General who was our external auditor in 2018. They did not raise any concerns.

The amortization of the assets created by MRP is still under review and any amortization expenses to recover the capital costs of MRP will start in 2022, which is beyond the scope of the 2019 – 2021 business plan.

- e) The IESO’s external audit was conducted by the Office of the Auditor General in 2018 and no recommendations with respect to capitalization were received. The IESO capital policy was developed to appropriately treat all of the project elements of both small projects that are delivered annually and large multi-year projects such as the MRP.

APPrO INTERROGATORY 6

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6.2 Are the IESO's forecast 2019 operational costs for the Market Renewal Program appropriate in the context of the scope and timing of the overall project?

6.3 Are the IESO's forecast 2019 capital costs for the Market Renewal Program appropriate in the context of the scope and timing of the overall project?

APPRO INTERROGATORY 6

Reference: Exhibit A-2-2 p 23

Preamble: Page 23 of the IESO Business Plan states that a "cost efficiency" risk is that "The Market Renewal Program is adversely affected by system dependencies, and/or a lack of resources with market design and implementation expertise"

Questions:

- a) What is the potential impact of this risk on operational and capital budgets, for 2019 and in the context of the scope and timing of the overall project?
- b) What is the potential impact of this risk on the operational and capital budgets related to the capacity work stream specifically, for 2019 and in the context of the scope and timing of the overall project?
- c) What is the IESO doing to address this risk in relation to operational and capital budgets, for 2019 and in the context of the scope and timing of the overall project?
- d) What is the IESO doing to address this risk in relation to operational and capital budgets related to the capacity work stream specifically, for 2019 and in the context of the scope and timing of the overall project?
- e) Exhibit I, Tab 6.2 Sch 8.20 Attachment 17 p 1 filed in last year's EB-2018-0143 proceeding refers to KPMG being onboard as a risk consultant and working jointly with the MRP and Enterprise risk teams, who are working on the refinement of existing IESO risk assessment framework which includes gap analysis between the Project Risk Framework (PRF) and Enterprise Risk Management (ERM) and identifying leading best

practices to integrate with the PRF and ERM. Please provide all documents resulting from this process and relating to the MRP.

RESPONSE

a) Please see the response to OEB Staff Interrogatory 12, at Exhibit I, Tab 1.3, Schedule 1.12.

b) Please see the response to OEB Staff Interrogatory 12. The risks are the same for the capacity workstream as for the project.

c) Please see the response to OEB Staff Interrogatory 12.

d) Please see the response to OEB Staff Interrogatory 12. These risks will be addressed for the capacity workstream in the same way as for the project.

e) Below is an excerpt from the KPMG recommendations, as related to integration of IESO's ERM practices across strategic, operation and project risks, including MRP-related risks. Included are also management responses and action plans related to the recommendations.

Systemic Risk 2 - There is a risk that the IESO does not have a consistent framework to support strategic, major operational, key stakeholder and resource allocation decisions for MRP. This impedes consistent and agile decision-making resulting in competing and conflicting resourcing priorities for both MRP and IESO initiatives.		
KPMG Recommendation	Management Response	Action / Outcome
7 Establish an MRP Committee of the Board to assist the Board of Directors with the responsibility of supporting decisions regarding matters related to the design and development of market renewal. The MRP Committee should be supported by an independent advisory council with strong market, legal, regulatory public policy and IT experience.	<p>IESO Management will work with the IESO BoD to consider the creation of an MRP Committee of the Board.</p> <p>IESO Management will work with the IESO BoD to consider creating an Independent Advisory Council to support the MRP Committee of the Board.</p>	BoD decision on how to effectively support and oversee Market Renewal activities and decisions

Systemic Risk 2 - There is a risk that the IESO does not have a consistent framework to support strategic, major operational, key stakeholder and resource allocation decisions for MRP. This impedes consistent and agile decision-making resulting in competing and conflicting resourcing priorities for both MRP and IESO initiatives.		
KPMG Recommendation	Management Response	Action / Outcome
8 Enhance the current PMO and Enterprise Risk Management methods with a leading practice decision framework. Elements of the framework include: <ul style="list-style-type: none"> i. Appropriate decision framing; ii. Creative, doable alternatives; iii. Meaningful and reliable information sources to support evidence based decision-making; iv. Clear values and trade-offs; v. Logically correct reasoning; and vi. Commitment to action including clearly defined accountabilities and delivery dates. Key decisions and follow-up status should be documented at each MRESC meeting. 	The establishment of the Program Governance Framework, which will outline where types of decision should be made, will address this risk.	Rollout of the Program Governance Framework with the corresponding decision flow.
9 Integrate the framework into all key decision processes for MRP including Board, ELT, and MRP Executive Steering Committee (MRESC).	Management will incorporate any decision making framework established in response to recommendation 8 into the MRP.	Implementation of the Program Governance Framework

APPrO INTERROGATORY 7

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6.2 Are the IESO's forecast 2019 operational costs for the Market Renewal Program appropriate in the context of the scope and timing of the overall project?

6.3 Are the IESO's forecast 2019 capital costs for the Market Renewal Program appropriate in the context of the scope and timing of the overall project?

APPRO INTERROGATORY 7

Reference: Exhibit B-3-1 p 3 and Exhibit C-2-1 p 12-13

Preamble: The Application states at B-3-1 that operating results for the MRP were \$2.3 million above budget for 2018 while capital results were \$2.7 under budget for 2018 due to delayed completion of high level designs. The Application further states at Exhibit C-2-1 p 12 that "Additional resources were added to the program in order to complete HLD (high-level design) within the current schedule"

Questions:

- a) Please confirm that the \$2.7 million underspending on capital will still need to be spent in future years.
- b) Please confirm that the \$2.3 million overspending on operations was due to high level designs taking more time and work than anticipated.
- c) Please confirm that the \$2.3 million overspending on operations will result in a \$2.3 million overspending on the MRP overall (relative to previously estimated costs for the MRP).
- d) Please confirm that per Exhibit C-2-1 p 7 line 14, the full \$2.3 million overspending on operations for the MRP program in 2018 is \$2.3 million overspending on the capacity work stream.
- e) Why was so much more work required in relation to estimates for the capacity work stream?
- f) Is the capacity work stream and the incremental capacity auction more complicated than anticipated?

- 1 g) Is overspending anticipated for the capacity work stream and the incremental capacity
2 auction in 2019?
- 3 h) Exhibit I, Tab 6.2 Sch 8.20 Attachment 17 p 1 filed in last year's proceeding refers to
4 delays in re-procuring a consultant to support the incremental capacity auction project.
5 Please elaborate on this challenge and indicate whether it has been resolved. Please also
6 confirm that this challenge did not result in additional costs.
- 7 i) Has the IESO conducted a review of its responsibility for the inefficiencies in the
8 operation of the current market so that it can ensure that it does not repeat the problems
9 that led to the need to expend hundreds of millions of dollars to fix the inefficiencies in the
10 market?

11 **RESPONSE**

- 12 a) Capital planned but not spent in 2018 is included in the 2019 plan.
- 13 b) Expense overspend is related to high level design requiring additional time and effort to
14 support the associated external stakeholder engagement, along with the additional work
15 related to the Non-Emitting Resources Sub-Committee and associated external
16 stakeholder engagement.
- 17 c) The IESO is not able to determine what impact, if any, this will have on the overall
18 project estimate at this time.
- 19 d) The IESO confirms that the operating costs for Capacity in 2018 were \$2.3 million
20 overspent.
- 21 e) When the estimate was created a number of the auction features were undefined.
22 Through the engagement on the auction design a number of features were carefully
23 considered and analyzed such as multi-year commitments and adding seasonality to the
24 auction. The IESO and stakeholders decided to pursue a unique Ontario design that
25 required review of other jurisdictions, analysis and extensive engagement. The High
26 Level of Design also includes a greater level of details such as demand curve analysis
27 than was originally anticipated.
- 28 f) The capacity work stream is not more complicated than anticipated. It is a project that is
29 designing and implementing an entirely new market structure for Ontario and as such
30 requires extensive research, analysis and stakeholder engagement. The IESO is working
31 diligently to ensure that best practices from other markets are examined and included,

1 or built on, as appropriate. Now that high level design is complete more detailed
2 information is available to determine a more precise schedule.

3 g) No. The IESO has provided its budget for 2019 for Capacity.

4 h) The IESO is subject to the Ontario Public Service Procurement Directive, December 2014
5 (the "Directive") as it applies to "Other Included Entities." The Directive sets out
6 mandatory requirements related to the procurement of goods and services to ensure a
7 fair, open and transparent process. To align with these principles, the IESO initiated a
8 competitive procurement process to secure consulting services related to the Incremental
9 Capacity Auction. Running a competitive procurement process does require additional
10 time to complete, which resulted in delays; however, this process was completed
11 successfully and the issue has been resolved. Additional incremental costs were not
12 incurred as a result of this procurement.

13 i) Please refer to OEB Staff Interrogatory 25 d), Exhibit I, Tab 6.2, Schedule 1.25

APPrO INTERROGATORY 8

6.0 Market Renewal Program

6.2 Are the IESO's forecast 2019 operational costs for the Market Renewal Program appropriate in the context of the scope and timing of the overall project?

6.3 Are the IESO's forecast 2019 capital costs for the Market Renewal Program appropriate in the context of the scope and timing of the overall project?

APPRO INTERROGATORY 8

Reference: Exhibit A-2-2 p 8 and Exhibit C-2-1 p 3

Preamble: Exhibit C-2-1 p 3 describes the Incremental Capacity Auction ("ICA") work stream and states at lines 11-13 that the ICA initiative will develop an enduring market-based mechanism that will secure incremental capacity to help ensure Ontario's reliability needs are met cost effectively. Exhibit A-2-2 p 8 states as follows (emphasis added):

With new capacity expected to be required as early as 2023, the introduction of an incremental capacity auction – a key part of the work currently being undertaken by the IESO's Market Renewal Program – will be core to meeting future needs. When the market is redesigned, improved price signals will provide a clearer picture of what and where services are needed, and help drive decisions that ensure reliability.

Questions: Please elaborate on the timing of the incremental capacity auction and the ICA work stream. Specifically:

a) If the incremental capacity auction is a key part of meeting future needs including new 2023 capacity, how will the incremental capacity auction be undertaken in time given that MRP work is not scheduled to be completed until 2022 the earliest, and has already been delayed?

b) How does the IESO currently determine what and where services are needed?

c) Why has the IESO failed to-date to present a clearer picture of what and where services are needed?

d) How does the proposed incremental capacity market provide a clearer picture of what and where services are needed than the status quo?

e) What steps has the IESO taken to ensure that it will not continue to procure resources that it does not require?

f) How will the capacity market solve the problem described in question e) above?

g) How do the costs of a capacity market procurement compare to the costs of an RFP for resources?

RESPONSE

a) The IESO currently plans to hold the first ICA in late 2022 for the 2025/26 commitment period. A transitional capacity auction is being introduced to deliver capacity for each year from 2020 to 2024.

In the fall of 2018, the IESO released a forecast showing that Ontario is emerging from a capacity surplus to a period of system need. In particular, it is expected that there will be a significant increase in the need for capacity from 2022 to 2023, arising as a result of expiring long-term generation contracts, and nuclear units being refurbished or retired.

In order to ensure that we are able to reliably meet the expected capacity requirement, the IESO is developing an auction mechanism for acquiring capacity in advance of MRP's Incremental Capacity Auction (ICA), the first auction of which will deliver capacity in 2025

To meet capacity needs prior to 2025, the Transitional Capacity Auction (TCA) will evolve the existing Demand Response Auction (DRA) to enable competition between additional resource types, starting in December 2019. Introducing the TCA now creates an opportunity to phase-in some of the design features contemplated for the more comprehensive ICA, allowing both the IESO and participants to learn and adjust before the expected period of significant system need. At the same time, the increased competition fostered by the TCA is expected to continue to be cost effective, further benefiting ratepayers in the nearer term¹.

b) The IESO currently identifies the system's long-term requirements through its planning processes which include planning outlooks, bulk transmission studies, regional plans

¹ Additional materials on the TCA are available at:
<http://www.ieso.ca/en/Sector-Participants/IESO-News/2019/02/Meeting-Ontarios-Capacity-Needs-2020-2024-materials-now-available>

1 and other studies, such as operability studies. These requirements inform infrastructure
2 investments and asset management decisions for future market development.

- 3 c) The IESO conducts system planning as part of an ongoing process and has been
4 reporting on system needs and requirements starting with the 2007 Integrated Power
5 System Plan. More recently, the IESO has focused on evolving its planning processes to
6 increase transparency and to align processes and outputs with the Market Renewal
7 Program, including the ICA.

8 As discussed in the reponse to APPrO Interrogatory 1 b), at Exhibit I, Tab 1.1,
9 Schedule 11.01 ,the IESO will be publishing its first annual planning outlook
10 September 2019, as part of its evolution of planning processes, and communicating
11 system needs on a regular basis. ²

- 12 d) Part of the changes being introduced by the IESO to support competitiveness is to
13 provide better information to the marketplace including regular, transparent long-term
14 forecasts and outlooks. The ICA process introduces additional planning elements such
15 as qualifying capacity, setting target capacities and executing a rules based process.

- 16 e) Please see b) above. Additionally, the IESO is in the process of formalizing its bulk
17 planning process to ensure system needs are identified in a transparent manner and that
18 the process is coordinated with market acquisition processes such as the Incremental
19 Capacity Auction (ICA). System requirements identified through planning processes
20 will guide market acquisitions. In addition, market acquisition processes themselves can
21 include mechanisms (e.g., the ICA's rebalancing auctions) to adjust acquisitions if
22 system requirements change. Together, both planning and market acquisitions
23 processes will ensure the IESO does not acquire resources it does not require.

- 24 f) The ICA is designed to ensure Ontario has adequate capacity and is focused on meeting
25 that need. Annual auctions provide more flexibility to adjust capacity commitments in
26 line with changes in demand as well as more flexibility in pursuing other market
27 changes and efficiencies which can be difficult with long term contracts.

² Further context on how system needs have evolved and information on past publications can be found in the most recent IESO Planning Outlook engagement on Resource Adequacy, dated April 12, 2019: <http://www.ieso.ca/-/media/Files/IESO/Document-Library/engage/20-year-planning-outlook/opo-20190412-presentation.pdf?la=en>

- 1 g) The 2017 Benefits Case report outlined in detail how the cost of procuring capacity
- 2 through a capacity market compared to the cost of procuring capacity through RFPs.
- 3 The report showed that operating a regular market for capacity, compared to periodic
- 4 procurements can lead to significant cost savings both in both the short and longer term.
- 5 The savings are mainly attributable to greater competition and better alignment with
- 6 system needs. The 2019 Business Case will provide a reassessment and further
- 7 refinement of these benefits.

APPrO INTERROGATORY 9

6.0 Market Renewal Program

6.2 Are the IESO's forecast 2019 operational costs for the Market Renewal Program appropriate in the context of the scope and timing of the overall project?

6.3 Are the IESO's forecast 2019 capital costs for the Market Renewal Program appropriate in the context of the scope and timing of the overall project?

APPRO INTERROGATORY 9

Reference: Exhibit C-2-1 p 2-3

Preamble: Pages 2 and 3 of Exhibit C-2-1 describe the four MRP initiatives which are grouped into two work streams, energy and capacity.

Questions: Please elaborate on the relationship between the energy and capacity work streams. Specifically:

- a) Is it necessary, in 2019 and/or in the context of the scope and timing of the overall project, for the IESO to move forward with the capacity work stream at the same time as the energy work stream, as currently planned?
- b) Is it cost efficient, in 2019 and/or in the context of the scope and timing of the overall project, for the IESO to move forward with the capacity work stream at the same time as the energy work stream, as currently planned?

RESPONSE

- a) The capacity work stream is developing an Incremental Capacity Auction (ICA) in order to meet Ontario's future capacity needs. Timing for the ICA is driven by the need to have a mechanism in place to procure capacity in a flexible and cost effective manner. Furthermore, as stated in the 2017 Benefits Case, the effectiveness of investment signals through a capacity market will be higher if combined with more efficient pricing in energy and ancillary services markets. Hence, pursuing both energy and capacity at the same time will amplify the benefits.
- b) There are cost efficiencies associated with designing and delivering the capacity work stream at the same time as the energy work stream. Incremental costs associated with

1 delivering a significant project such as dedicated project space, IT infrastructure, project
2 management and administration are shared. Both work streams will impact things such
3 as internal and external processes, market rules, interfaces, hardware, software and
4 infrastructure. Replacement or significant changes to these items incur costs, and those
5 costs can be minimized by making the changes necessary for energy and capacity work
6 stream scope at the same time as opposed to making one set of changes, then
7 subsequently going back and making a second set of changes.

APPrO INTERROGATORY 10

6.0 Market Renewal Program

6.2 Are the IESO's forecast 2019 operational costs for the Market Renewal Program appropriate in the context of the scope and timing of the overall project?

6.3 Are the IESO's forecast 2019 capital costs for the Market Renewal Program appropriate in the context of the scope and timing of the overall project?

APPrO INTERROGATORY 10

Reference: Exhibit C-2-1 p 3 and Exhibit C-2-1 p 14

Preamble: Exhibit C-2-1 p 14 states that the Brattle Group report provided a benefit-cost analysis of the MRP in 2017. Exhibit C-2-1 p 3 describes the ICA work stream and states that the ICA initiative will develop an enduring market-based mechanism that will secure incremental capacity to help ensure Ontario's reliability needs are met cost effectively.

Questions:

a) Did the Brattle Group report provide analysis of the costs to the IESO if the IESO pursued another option (i.e., aside from the ICA) to obtain capacity in 2023? If so, please provide.

b) If no, how can the IESO know that pursuing the ICA in 2019 (and beyond) is the most cost-effective/appropriate manner to secure capacity needed for 2023?

RESPONSE

a) The cost assessment in the 2017 Benefits Case took a conservative approach and only considered costs arising from implementation of the Market Renewal design. The alternative case of maintaining status quo (i.e. the cost of administering and supporting large centralized supply procurements) was considered, however costs were not included in the analysis. Other alternatives to obtain capacity were not considered in this analysis.

b) The 2017 Benefits Case determined significant net benefits, inclusive of costs, from implementation of the Market Renewal design. Net benefits from Market Renewal are expected to significantly outweigh the net benefits from the alternative case of maintaining status quo. The IESO's previous experience with demand response auctions and the experience of other jurisdictions with capacity auctions, led the IESO to pursue this option.

APPrO INTERROGATORY 11

6.0 Market Renewal Program

6.2 Are the IESO's forecast 2019 operational costs for the Market Renewal Program appropriate in the context of the scope and timing of the overall project?

6.3 Are the IESO's forecast 2019 capital costs for the Market Renewal Program appropriate in the context of the scope and timing of the overall project?

APPRO INTERROGATORY 11

Reference: Exhibit C-2-1 p 14

Preamble: Exhibit C-2-1 p 14 states that "the IESO will be better able to discuss the MRP's actual and projected cost savings, annually and cumulatively, by work stream" "with the development of the business case" expected to be completed Q4 2019. The IESO will also require "approval by the IESO Board of Directors" of the business case.

Questions:

- a) How can the OEB be confident that the quarter of the IESO's proposed revenue requirement which is allocated to the MRP for 2019 is appropriate if the IESO cannot currently discuss the actual and project cost savings anticipated as a result of its current spending on the MRP?
- b) Can the IESO complete the business case prior to the completion of the HLD process?
- c) Please advise as to steps that the IESO can take in order to complete the business case sooner than Q4 2019.
- d) What is the amount of resources that the IESO has committed to investment in Market Renewal to-date despite the lack of a business case?
- e) Does the IESO expect that its Board of Directors will approve the business case?
- f) If the IESO's Board of Directors does not approve the business case, what will be the next steps for the IESO?
- g) Is the IESO using a consultant to help prepare the business case?

- 1 h) Please provide the terms of reference for the consultant.
- 2 i) Exhibit I, Tab 6.2 Sch 8.23 SEC 23 filed in EB-2018-0143 lists the Brattle Group as
3 consultant for various tasks in 2018. Is the Brattle Group assisting the IESO in the
4 development of the business case to be completed this year?
- 5 j) If the answer to the above interrogatory is yes, wouldn't it be preferable from an
6 accuracy and risk perspective to use another consultant for the 2019 business case in
7 order to ensure any oversights in the 2017 cost benefit analysis are corrected by a new
8 set of eyes and perspective on MRP benefits and costs?
- 9 k) How will the IESO engage with stakeholders regarding the 2019 business case?

10 **RESPONSE**

- 11 a) Please see the response to OEB Staff Interrogatory 25 d), at Exhibit I, Tab 6.2,
12 Schedule 1.25.
- 13 b) The business case is currently under development and stakeholders will be engaged in
14 Q2 2019, prior to the start of the detailed design engagements for the work streams. The
15 business case analysis will reflect the published HLDs.
- 16 c) The Business Case is tracking for completion by the end of Q3 2019.
- 17 d) Please see the response to OEB Staff Interrogatory 14, at Exhibit I, Tab 1.3, Schedule 1.14.
- 18 e) Yes, the IESO expects that its Board of Directors will approve the business case.
- 19 f) The MRP business case is being developed in alignment with IESO's business planning
20 processes, including stakeholder engagement, key risk assessment and mitigation and
21 cost benefit analysis to fully inform IESO's Board. If any comments are provided by the
22 Board as a condition of approval, these will be implemented.
- 23 g) The Business Case is being developed by the IESO, with analytical support from the
24 Brattle Group for specific sections of the quantitative analysis to estimate the benefits
25 from Market Renewal.
- 26 h) The analytical support provided by the consultant for the specific sections of the
27 Business Case were procured as part of the RFP detailed in Attachment 1 to this
28 response.

- 1 i) Please see g) above.
- 2 j) The IESO ran an open and competitive procurement to contract with a third party for
- 3 analytical support for Future Market Evolution work, including the quantification of the
- 4 Market Renewal benefits to inform the Business Case. Based on assessment of the
- 5 submissions to RFP, the IESO selected the Brattle Group as the vendor that most
- 6 appropriately met the selection criteria.
- 7 k) The IESO will engage stakeholders on MRP-wide items, including development of the
- 8 Business Case through a series of MRP Stakeholder meetings, the first of which will be
- 9 in early May 2019. The IESO intends to share the methodology, approach and findings
- 10 with stakeholders in these meetings. The MRP meetings are open meetings that will run
- 11 in parallel with the more specific, technical engagement sessions to support the
- 12 development of the detailed designs for the Energy and Capacity streams. The MRP
- 13 meetings will engage stakeholders on a range of cross-cutting issues, including the
- 14 Business Case.



RFP-172

Future Market Evolution Request for Proposal

Date Issued: April 18, 2018
Submission Deadline: May 18, 2018 at 3:00 p.m.

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Part 1. Introduction

1.1 Invitation to Proponents

This Request for Proposals ("RFP") is an invitation by the Independent Electricity System Operator (the "IESO") to prospective Proponents to submit proposals for **the provision of expert consulting services related to the future of electricity markets and potential evolution of electricity market design**, as further described in Section 2 of Appendix C – IESO Information & Requirements (the "**Deliverables**"), for a period of **three (3) years**.

1.2 Context

Since Ontario's electricity market opened in 2002, Ontario's power sector has experienced significant change, including coal phase-out, thousands of megawatts (MWs) of new or refurbished generation and conservation, a growing role for demand response and increased amounts of distributed energy resources. Looking into the future, change is expected to accelerate with a greater penetration of non-emitting resources, smart grid technology implementation and the government's policy of further reducing its carbon footprint. A properly designed energy market will be essential to efficiently and reliably organize and adapt to a changing world.

The purpose of this RFP is to engage a Service Provider to provide consulting services to support the IESO with the design of the future market. This will include but is not limited to supporting the IESO in the design of future market enhancements and providing overall analytical and market design support and assistance with stakeholder engagements.

The following defines the specific areas in which the IESO is seeking expert consulting services.

1) Future Market Evolution

The IESO is currently working with its stakeholders to make a number of fundamental changes to Ontario's electricity markets through the "**Market Renewal Program**" or "**MRP**". These changes are being implemented to address existing inefficiencies and to prepare for future change.

Major trends in the electricity industry include: falling costs for non-emitting and emerging technologies like solar PV and storage resources, a drive towards decarbonization, and new technologies and business models that are enabling the growth of distributed resources and empowering the consumer. With all of this change there is potential for the electricity sector of the future to look substantially different than it does today.

The IESO is seeking to explore opportunities for future market evolution that will build upon the foundation put in place by the MRP to efficiently deliver on existing and emerging system needs.

2) Interim and Enduring System Flexibility/Operability Mechanisms

The need for more system flexibility to respond to intra-hour differences between expected and actual variable generation production and expected and actual Ontario demand continues to be a priority. As the output from the variable generation fleet continues to increase, the need for resources responding to dispatch signals and increasing their output within 30 minutes continues to increase.

While system flexibility is not currently an issue, a stakeholder engagement is underway to explore the nature of short-term flexibility needs in Ontario and implement an interim solution to meet those needs.

The IESO is also looking to explore potential longer-term flexibility solutions that are cohesive with the changes anticipated under the MRP and part of the future market evolution.

1.3 Background - Independent Electricity System Operator (IESO)

The Independent Electricity System Operator (“IESO”) works at the heart of Ontario's power system – ensuring there is enough power to meet the province's energy needs in real time while also planning and securing energy for the future. It does this by:

- balancing the supply of and demand for electricity in Ontario and directing its flow across the province's transmission lines;
- planning for the province's short term, medium term and long term energy needs and securing clean sources of supply to meet those needs;
- overseeing the electricity wholesale market where the market price of electricity is set; and
- engaging in activities that promote electricity conservation and the efficient use of electricity.

Proponents should be aware that the IESO has both unionized and non-unionized employees. There are two unions within the IESO, namely, the Power Workers’ Union and the Society of United Professionals.

1.4 RFP Not Binding

This RFP is not intended to create and does not create a formal legally binding bidding process. This RFP does not commit the IESO in any way to select a Preferred Proponent, or to proceed to negotiations for an Agreement, or to award any Agreement, and the IESO reserves the complete right, at any time to reject all Proposals, and to terminate this RFP process. This RFP is not

intended to create, and should not be construed as creating, contractual relations between the IESO and any Proponent.

1.5 RFP Timetable

The RFP timetable is tentative only and may be changed by the IESO in its discretion.

The following is the schedule for this RFP (all times noted in EDT, as applicable):

Issue Date of RFP	April 18, 2018
Proponents' Deadline for Questions	3:00 pm on April 30, 2018
Posting of Responses to Questions	May 4, 2018
Deadline for Issuing Addenda	May 4, 2018
Proposal Submission Deadline	3:00 pm on May 18, 2018

1.6 IESO Contact

Name : **Adam Igbon**, Senior Procurement Specialist

E-mail : adam.igbon@ieso.ca and rfp.info@ieso.ca

1.7 Definitions

Unless otherwise specified in this RFP, capitalized words and phrases have the following meaning in this RFP.

"Agreement" means the standard form of agreement between the IESO and a Preferred Proponent for the delivery of the Deliverables, as set out in Appendix E, or as may otherwise be agreed to by the IESO.

"Business Day" means any working day, Monday to Friday inclusive, but excluding statutory and other holidays which the IESO has elected to be closed for business.

"Conflict of Interest" has the meaning given to it in Appendix A (Registration Form).

"Deliverables" has the meaning given to it in Section 1.1

"IESO Contact" means the person identified in Section 1.6.

"Personal Information" has the meaning set out in the *Freedom of Information and Protection of Privacy Act*, R.S.O. 1990, as may be amended from time to time.

"Preferred Proponent" means a Proponent selected by the IESO to enter into negotiations for an Agreement.

"Proponent" means an entity who has submitted a response to this Request for Proposal.

"Proposal" means a Proponent's formal response to this RFP submitted in accordance with PART 4 – Proposal Submission Instructions.

"Service Provider" means a Preferred Proponent which ultimately executes an Agreement with the IESO.

"Technical Submission" means the content submitted by a Proponent as outlined in Section 3 of Appendix C, inclusive of all Curriculum Vitae (if requested), and exclusive of the appendices identified in PART 4.3i) and 4.3iv) of this RFP.

1.8 Discretion

Any reference to the IESO's discretion in this RFP shall mean the IESO's sole and absolute discretion.

[End of PART 1]

Part 2. Evaluation & Selection Process

The IESO will conduct the evaluation of the Proposals in the following four stages:

2.1 Stage I – Compliance with Submission Criteria

Stage I of the evaluation process will consist of a review of each Proposal to determine which Proposals comply with the submission criteria set out in PART 4 – Proposal Submission Instructions.

2.2 Stage II – General Criteria

Stage II of the evaluation process will consist of evaluating Proposals based on the criteria set out in Section 3 of Appendix C – Proposal Content and Rated Criteria.

2.3 Stage III – Evaluation of Pricing

Stage III of the evaluation process will consist of evaluating pricing based on the criteria set out in Section 3.1.3 of Appendix C – Proposal Content and Rated Criteria.

2.4 Stage IV – Short List and Further Evaluation

The IESO may, in its discretion, short list one or more Proponents for further evaluation, including by way of interview, presentation and/or demonstration, and/or request for references. At the conclusion of Stage IV, a Preferred Proponent or Preferred Proponents will, subject to the express and implied rights of the IESO, be selected.

2.5 Stage V – Negotiation of Agreement(s) and Award

If the IESO selects a Preferred Proponent or Preferred Proponents, then it may:

- (a) enter into an Agreement with the Preferred Proponent(s);
- (b) enter into discussions with the Preferred Proponent(s) to clarify any outstanding issues and attempt to finalize the terms of the Agreement(s), including financial terms; or
- (c) if at any time the IESO reasonably forms the opinion that a mutually acceptable Agreement is not likely to be reached within a reasonable time the IESO may then either open discussions with another Proponent or terminate the RFP and retain or obtain the Deliverables in some other manner.

[End of PART 2]

Part 3 - Terms & Conditions of the RFP Process

3.1 IESO's Information in RFP Only an Estimate

The IESO and its advisors make no representation, warranty or guarantee as to the accuracy of the information contained in this RFP or issued by way of addenda. Any quantities shown or data contained in this RFP or provided by way of addenda are estimates only and are for the sole purpose of indicating to Proponents the general volume of the work.

It is the Proponent's responsibility to avail itself of all the necessary information to prepare a Proposal in response to this RFP.

3.2 Proponents Shall Bear Their Own Costs

The Proponent shall bear all costs associated with or incurred in the preparation and presentation of its Proposal including, if applicable, costs incurred for interviews, presentations or demonstrations.

3.3 Communication during the Procurement Process

3.3.1 Proponents to Review RFP

Proponents are advised to examine all of the documents comprising this RFP and:

- (a) are requested to report any errors, omissions or ambiguities; and
- (b) may direct questions or seek additional information,

in writing by e-mail on or before the Proponents' Deadline for Questions to the IESO Contact. All questions submitted by Proponents by e-mail to the IESO Contact shall be deemed to be received once the e-mail has entered into the IESO Contact's e-mail inbox. No such communications should be directed to anyone other than the IESO Contact.

It is the responsibility of the Proponent to seek clarification from the IESO Contact on any matter it considers to be unclear. The IESO will not be responsible for any misunderstanding on the part of the Proponent concerning this RFP or its process.

The IESO is under no obligation to provide additional information but may do so at its discretion.

To ensure consistency and quality of information provided to Proponents, the IESO will, where appropriate, respond to enquiries of general concern by way of a written response communicated to all Proponents, without revealing the sources of the enquiries.

3.3.2 All New Information to Proponents by way of Addenda

This RFP will only be amended by way of addenda in accordance with this section. Such addenda will either be (a) posted on any site on which this RFP was posted, or (b) emailed if the RFP was not posted, by the date specified in the RFP timetable.

Each addendum shall form an integral part of this RFP and may contain important information, including significant changes to this RFP. Proponents are responsible for obtaining and reviewing all addenda issued by the IESO.

3.3.3 Post-Deadline Addenda and Extension of Proposal Submission Deadline

If any addendum is issued after the Deadline for Issuing Addenda, the IESO may at its discretion extend the Proposal Submission Deadline for a reasonable amount of time.

3.3.4 Prohibited Proponent Communications

The Proponents shall not engage in any communication which would constitute or create a Conflict of Interest and should take note of the Conflict of Interest declaration set out in the Registration Form.

Communication by a Proponent with any IESO representative other than the IESO Contact may result in disqualification of the Proponent's Proposal.

3.3.5 Proponent Not to Communicate With Media

A Proponent should not at any time directly or indirectly communicate with the media in relation to this RFP or any contract awarded pursuant to this RFP without first obtaining the written permission of the IESO Contact.

3.3.6 IESO May Contact Proponent for Clarification

The IESO may contact the Proponent to request clarification (or the submission of supplementary written information in relation thereto) with respect to the Proposal and incorporate a Proponent's response to the request for clarification into the Proponent's Proposal.

3.4 Conduct

3.4.1 Conflict of Interest

The IESO may disqualify a Proponent for any conduct, situation or circumstance that constitutes a real or perceived Conflict of Interest as determined by the IESO.

The IESO may also disqualify a Proponent for:

- (i) a failure to disclose an actual or potential Conflict of Interest;
- (ii) a failure to comply with any requirements prescribed by the IESO to resolve a Conflict of Interest; or
- (iii) a situation or circumstance where the Proponent's Conflict of Interest cannot be resolved.

3.4.2 Illegal or Unethical Conduct

Proponents shall not engage in any illegal bidding practices, including such activities as bid-rigging, price-fixing, bribery, fraud or collusion. Proponents shall not engage in any unethical conduct, including lobbying or other inappropriate communications, offers of gifts to IESO employees, officers or board members, deceitfulness, submitting Proposals containing misrepresentations or other misleading or inaccurate information, or any other conduct that compromises or may be seen to compromise the integrity of the Proponent and the competitive procurement process.

The IESO may disqualify the Proponent from the RFP process if the Proponent engages in any of the foregoing activities or conduct, or if the Proponent's Proposal contains misrepresentations or any other inaccurate, misleading or incomplete information.

3.5 References and Past Performance

The IESO's final selection of the Preferred Proponent(s) may consider any information provided by the Proponent's references or informed by past performance.

3.6 Negotiations

3.6.1 Timeframe for Negotiations

Proponents should note that the IESO does not intend to engage in lengthy negotiations with the Preferred Proponent(s). A Proponent that is invited to enter into contract negotiations with the IESO should therefore be prepared to provide any requested information in a timely manner and to conduct its negotiations expeditiously.

3.6.2 Process Rules for Negotiations

Any negotiations between the IESO and a Preferred Proponent will be subject to the process rules contained in this PART 3 – Terms and Conditions of the RFP Process and in the Registration Form (Appendix A) and will not constitute a legally binding offer to enter into a contract on the part of the IESO or the Preferred Proponent(s). Negotiations may include

requests by the IESO for supplementary information from the Preferred Proponent(s) to verify, clarify or supplement the information provided in its Proposal or to confirm the evaluation outcome, and may include requests by the IESO for improved pricing from the Preferred Proponent(s).

3.6.3 Terms and Conditions of Agreement

The standard terms and conditions of Agreement (Appendix E) will form the starting point for any negotiations between the IESO and the Preferred Proponent(s).

Proponents should note that the IESO makes no guarantee to accept changes to the standard terms and conditions that may have been negotiated previously between the IESO and a Proponent on any other engagement.

3.7 Security Checks

If required by the IESO, the Preferred Proponent shall provide documentation so that the IESO may conduct criminal record searches for all of the Preferred Proponent's personnel that will be assigned to perform the work, prior to any work under the Agreement commencing.

If such criminal record searches are required, the final Agreement between the IESO and the Preferred Proponent will be conditional upon all of the Preferred Proponent's personnel that will be assigned to perform the work under the Agreement passing all applicable criminal record searches prior to the required engagement start date.

The Preferred Proponent shall also require these personnel to confirm their commitment to abide by the security and confidentiality obligations of the IESO as set out under the Agreement, and as may otherwise be specified by the IESO, including the requirement to successfully complete any applicable IESO information security awareness training delivered by the IESO's security team prior to the required engagement start date.

3.8 Notification of Outcome and Debriefing

3.8.1 Notification to Proponents of Outcome of Procurement Process

Once the Preferred Proponent(s) and the IESO execute the Agreement, the other Proponents will be notified by the IESO in writing of the outcome of the procurement process, including the name(s) of the Preferred Proponent(s). If the procurement process is cancelled and no Agreement is entered into by the IESO and a Preferred Proponent(s), all Proponents will be notified of such cancellation by the IESO in writing.

3.8.2 Debriefing

The IESO may offer a debriefing once the Agreement between the IESO and a Preferred Proponent(s) has been executed or the procurement process has been cancelled. The IESO will notify Proponents of any such debriefing in writing concurrently with the outcome of the procurement process. If a debriefing is offered, Proponents may confirm a request for a debriefing within 30 days following the date of such written communication from the IESO. All requests should be in writing and addressed to the IESO Contact. The intent of the debriefing is to aid the Proponent in presenting a better Proposal in subsequent procurement opportunities. Any debriefing provided is not for the purpose of providing an opportunity to challenge the procurement process.

3.9 Freedom of Information and Protection of Privacy Act

The *Freedom of Information and Protection of Privacy Act*, R.S.O. 1990, c.F.31, as amended, applies to information provided to the IESO by a Proponent. A Proponent should clearly identify any information in its Proposal or any accompanying or supplemental documentation which is supplied in confidence and for which confidentiality is to be maintained by the IESO. The confidentiality of such information will be maintained by the IESO, except as otherwise required by law or by order of a court or other administrative body. Proponents are advised that their Proposals will, as necessary, be disclosed on a confidential basis, to the IESO's advisers retained for the purpose of evaluating or participating in the evaluation of their Proposals.

By submitting any Personal Information requested in this RFP, Proponents are agreeing to the use of such information as part of the evaluation process, for any audit of this procurement process and for contract management purposes.

3.10 Make Public Proponent Names

The IESO may make public the names of any or all Proponents who participated in this procurement process as well as any Proponents who may have been invited to submit a Proposal, but did not.

3.11 Acceptance of Proposals

The IESO may accept Proposals which do not comply with the requirements of this RFP.

3.12 No Incorporation by Reference

The entire content of the Proponent's Proposal should be submitted in a fixed form and the content of websites or other external documents incorporated by reference into the Proponent's Proposal will not be considered to form part of its Proposal.

3.13 Proposal to be Retained by the IESO

The IESO will not return the Proposal or any accompanying or supplemental documentation submitted by a Proponent, regardless of whether they are amended or withdrawn.

3.14 No Contract

By submitting a Proposal and participating in the process as outlined in this RFP, Proponents expressly agree that no contract or agreement of any kind is formed under, or arises from, this RFP, prior to the signing of a formal written Agreement.

3.15 IESO's Right to Select One or more Preferred Proponent(s)

The IESO reserves the right and discretion to divide up the Deliverables, either by scope, geographic area, or other basis as the IESO may decide, and to select one or more Preferred Proponents to enter into discussion with the IESO for one or more Agreements to perform a portion or portions of the Deliverables. If the IESO exercises its discretion to divide up the Deliverables, the IESO will do so reasonably having regard for the RFP and the basis of Proposals.

3.16 Governing Law of RFP Process

This RFP process shall be governed by and construed in accordance with the laws of the Province of Ontario and the federal laws of Canada applicable therein.

3.17 No Claims

Neither party shall have the right to make claims against the other (including any application or other proceeding for a review by any court or other body) with respect to this RFP process, the selection of any Proponent, the failure to be selected to enter into a formal written agreement, or the failure to honour submissions prior to the execution of a formal written agreement.

[End of PART 3]

Part 4. Proposal Submission Instructions

4.1 Proponents to Follow Instructions

Proponents should structure their Proposals in accordance with the instructions in this RFP. Where information is requested in this RFP, any response made in a Proposal should reference the applicable section numbers of this RFP where that request was made.

4.2 Proposals in English

All Proposals should be in English only. Any Proposals received by the IESO that are not entirely in the English language may be disqualified.

4.3 Proposals Submitted Only in Prescribed Manner

Proposals should be submitted by the following method:

A Proponent should submit **one (1) original** of the Proposal in either Microsoft Word or searchable .PDF format **by email** to the IESO Contact email address listed in PART 1.6 above. Proponents must submit separate electronic files for:

- i) Appendix A (Registration Form), Appendix B (Reference Form) and Appendix E (Standard Terms and Conditions of Agreement);
- ii) the documentation requested under Appendix F (Financial Capabilities);
- iii) the Technical Submission as outlined in Section 3 of Appendix C (Proposal Content) which cannot contain any information requested in the other Appendices; and
- iv) the pricing submission as outlined in Appendix D (Pricing Form), which is to be completed as specified only.

Proponents who fail to submit their responses in the manner outlined in this PART 4 may be deemed to be non-compliant and may be disqualified at the discretion of the IESO.

Proponents should note that the **total file size** (including all attachments and Appendices) may not exceed 30 MB. Proposal submission emails should reference the following in the subject line:

RFP for Future Market Evolution – (RFP-172)

4.4 Proposals Should Be Submitted On Time at Prescribed Location

Proposals should be submitted only in the prescribed manner on or before the Proposal Submission Deadline indicated in Section 1.5. Proposals submitted to another location or after

the Proposal Submission Deadline will be deemed late and may be disqualified. IESO is not responsible for any technical difficulties experienced by the Proponent in submitting its Proposal. Proposals submitted after the Proposal Submission Deadline as a result of technical difficulties will be deemed late and may be disqualified.

For the purpose of calculating time, if the prescribed manner of submission is by delivery in hard copy to any of the IESO's offices, the submission will be deemed to have been received by the IESO at the time indicated on the IESO's clock. If the prescribed manner of submission is electronic delivery, the submission will be deemed to have been received at the time indicated in the time stamp in the header of the email (i.e. the "sent" time) in the IESO Contact's email inbox.

4.5 Amending or Withdrawing Proposals Prior to Proposal Submission Deadline

At any time prior to the Proposal Submission Deadline, a Proponent may amend or withdraw a submitted Proposal. The right of Proponents to amend or withdraw includes amendments or withdrawals wholly initiated by Proponents and amendments or withdrawals in response to subsequent information provided by addenda.

Any amendment should clearly indicate what part(s) of the Proposal the amendment is intending to replace.

A notice of amendment or withdrawal should be sent to the IESO Contact prior to the Proposal Submission Deadline and should be signed by an authorized representative of the Proponent.

4.6 Withdrawing Proposals After the Proposal Submission Deadline

Proponents may withdraw a submitted Proposal at any time prior to the execution of an Agreement resulting from this RFP.

A written notice of withdrawal should be sent to the IESO Contact and should be signed by an authorized representative of the Proponent.

[End of PART 4]

Appendix A – Registration Form

TO : Independent Electricity System Operator

FROM : [Insert Name of Proponent]

RE : Future Market Evolution (RFP-172)

1. PROPONENT INFORMATION

- (a) The full legal name of the Proponent is:

- (b) If applicable, any other relevant name under which the Proponent carries on business is:

- (c) If applicable, the jurisdiction under which the Proponent was formed and governed by is:

- (d) The name, address, telephone number and e-mail address of the contact person for the Proponent is:

- (e) Whether the Proponent is an individual, a sole proprietorship, a corporation, a partnership, a joint venture, an incorporated consortium or a consortium that is a partnership or other legally recognized entity:

2. RFP NOT A BINDING PROCUREMENT PROCESS

The Proponent has carefully examined the RFP documents, including any addenda, and has a clear and comprehensive knowledge of the Deliverables required under the RFP. By submitting the Proposal, the Proponent acknowledges and confirms its understanding that the RFP is not a binding procurement process and that no contractual relations are created between the IESO and the Proponent as a result of the issuance of the RFP or the submission of the Proposal.

3. ADDENDA

The Proponent confirms that it has read and accepted all addenda issued by the IESO prior to the Deadline for Issuing Addenda. The onus remains on the Proponent to make any necessary amendments to its Proposal based on the addenda.

4. CONFLICT OF INTEREST

Prior to completing this portion of the Registration Form, Proponents should refer to the definition of Conflict of Interest set out below.

"**Conflict of Interest**" includes, but is not limited to, any situation or circumstance where:

- (a) in relation to the RFP process, the Proponent has an unfair advantage or engages in conduct, directly or indirectly, that may give it an unfair advantage, including but not limited to (i) having or having access to information in the preparation of its Proposal that is confidential to the IESO and not available to other Proponents; (ii) communicating with any person with a view to influencing preferred treatment in the RFP process; or (iii) engaging in conduct that compromises or could be seen to compromise the integrity of the competitive RFP process and render that process non-competitive and unfair; or
- (b) in relation to the performance of its contractual obligations in an IESO contract, the Proponent's other commitments, relationships or financial interests (i) could or could be seen to exercise an improper influence over the objective, unbiased and impartial exercise of its independent judgement; or (ii) could or could be seen to compromise, impair or be incompatible with the effective performance of its contractual obligations.

Proponents are instructed to select the correct statement below:

- ☐ The Proponent declares that there is **no** actual or potential Conflict of Interest relating to the preparation of its Proposal.
- ☐ The Proponent declares that there **is** an actual or potential Conflict of Interest relating to the preparation of its Proposal, and/or the Proponent foresees an actual or potential Conflict of Interest in performing the contractual obligations contemplated in the RFP.

If the Proponent declares an actual or potential Conflict of Interest by marking the box above, the Proponent must set out below details of the actual or potential Conflict of Interest:

5. PROOF OF FINANCIAL CAPABILITY

The Proponent must have the financial capability to undertake the Deliverables. To determine the Proponent's financial capability, the IESO requires the submission of some or all of the financial information detailed in Appendix F – Financial Capability.

6. INDEPENDENT CONTRACTORS & FORMER IESO EMPLOYEES

The following section is to be completed only if the Proponent is an independent contractor. If the Proponent is not an independent contractor, the following section need not be completed.

Proponents are instructed to select the correct statement below:

☐ The Proponent declares that they are **not** a former employee of the IESO or its predecessor organizations, which for greater certainty includes the Ontario Power Authority;

☐ The Proponent declares that they are a former employee of the IESO or its predecessor organizations, which for greater certainty includes the Ontario Power Authority.

The Proponent hereby acknowledges and agrees that where the Preferred Proponent is an independent contractor, the IESO may impose restrictions on the eligibility of such Preferred Proponent on the term or value of any Agreement with the Preferred Proponent resulting from this RFP.

7. IESO POLICIES

The Proponent hereby acknowledges that if it is the Preferred Proponent it will be required to read, understand and agree to comply with the IESO policies located on www.ieso.ca, and as may be outlined in the any Agreement resulting from this RFP.

8. DISCLOSURE OF INFORMATION

The Proponent hereby agrees that any information provided in this Proposal, even if it is identified as being supplied in confidence, may be disclosed by the IESO where required by law or if required by order of a court, tribunal or other governmental or administrative body. The Proponent hereby consents to the disclosure, on a confidential basis, of this Proposal by the IESO to the IESO's advisers retained for the purpose of evaluating or participating in the evaluation of this Proposal.

9. TAX REPRESENTATION

Please select one:

- ☐ The Proponent represents and warrants that the Proponent is a resident of Canada.
- ☐ The Proponent represents and warrants that the Proponent is a non-resident of Canada.

The Proponent understands that if it is a non-resident of Canada, in accordance with the provisions of the *Income Tax Act* (Canada), if the IESO enters into an Agreement with the Proponent, then the IESO will withhold and submit 15% of fees charged on each invoice for Deliverables performed in Canada unless the Contractor obtains from Canada Revenue Agency a waiver or reduction in the amount to be withheld.

Signature of Proponent's Authorized Representative

Name and Title : _____

Date : _____

Appendix B – Reference Form

Proponents are requested to provide at least three (3) references from clients who have, in the last five (5) years, obtained similar goods or services to those requested in this RFP from the Proponent.

Company Name	:
Company Address	:
Contact Name	:
Contact Telephone Number	:
Date Work Undertaken	:
Nature of Assignment	:

Company Name	:
Company Address	:
Contact Name	:
Contact Telephone Number	:
Date Work Undertaken	:
Nature of Assignment	:

Company Name	:
Company Address	:
Contact Name	:
Contact Telephone Number	:
Date Work Undertaken	:
Nature of Assignment	:

Appendix C – Information & Requirements

SECTION 1 – OVERVIEW

1.1 Context

The purpose of this RFP is to engage a Service Provider to provide consulting services to support the IESO with the design of the future market. This will include but is not limited to supporting the IESO in the design of future market enhancements and providing overall analytical and market design support and assistance with stakeholder engagements.

[End of Section 1]

SECTION 2 – DELIVERABLES

2.1 Objective

Obtain expert consulting services related to the future of electricity markets and potential evolution of electricity market design.

2.2 Tasks

The Service Provider will be responsible for the following tasks:

2.2.1 Task 1 – Consulting Services for Future Market Evolution

- a) Provide expert advice and analysis into the market trends that are currently shaping, or are expected to shape, future electricity market evolution in Ontario and in other wholesale electricity markets.
- b) Conduct analysis and modelling of the Ontario electricity sector, on an as needed basis, to develop an understanding of potential market impacts under a variety of future scenarios and market enhancements.
- c) Provide expert advice related to the integration of government policy (including but not limited to carbon policies) and the electricity sector.

- d) Provide expert advice and analysis on the changes in quantity and type of reliability services, as well as other market products, that may be required in the future (e.g., to integrate higher volumes of non-emitting and distributed resources).
- e) Provide research, analysis, and expert advice on the potential benefits and costs of a variety of existing, planned and potential market evolution initiatives.
- f) Provide advice and analysis on the relationship between potential future market evolution and (i) the initiatives being implemented under the MRP, and (ii) the approaches that are considered as operability enhancements, in order to ensure that near term market development is highly responsive to future change.

2.2.2 Task 2 – Interim and Enduring Flexibility/Operability Mechanisms

The Service Provider will provide consulting services to assist with the development, design, evaluation and implementation of interim and long-term solutions to improve flexibility and operability within the Ontario market.

The IESO is working with stakeholders on an interim flexibility mechanism through the use of operating reserve (OR) for flexibility described in the Enabling System Flexibility Stakeholder Engagement (<http://www.ieso.ca/en/sector-participants/market-renewal/enabling-system-flexibility>).

The Service Provider will assist the IESO with analytical, research, design and stakeholder engagement support regarding flexibility/operability mechanisms, including educating and informing the IESO and the sector on relevant current practices and initiatives for system flexibility from other jurisdictions. This will include, but not be limited to:

- a) Assessing and providing expert advice on emerging or innovative approaches to intertie trading (e.g. CTS, EIM, tie optimization, and other such frameworks), and usage/uptake of these approaches when compared to traditional methods of intertie trading;
- b) Assessing the impact on flexibility and operability resulting from the Market Renewal Program and the interim solution;
- c) Assessing the benefits and challenges of these mechanisms as a potential solution for interconnected interfaces in Ontario to improve market efficiency and meet operability needs; and
- d) Assisting the IESO in designing a long-term flexibility and operability solution that is consistent with the MRP and future market evolution

2.2.3 Task 3 – Stakeholder Engagement

- a) Participate in the IESO's stakeholder engagement processes by leading, facilitating and/or presenting at stakeholder meetings and/or workshops to promote the understanding, discussion and the exchange of ideas towards identified initiatives.
- b) Present to and work collaboratively with one or more groups of external stakeholders and IESO staff selected to assist in activities for this project.
- c) Develop reports, briefing notes, presentations or other documents on an as needed basis to promote stakeholder understanding of the market changes that are underway or that may be considered for the future.

Meetings will be coordinated and facilitated by the IESO, however, the Service Provider will be required to assist the IESO with preparing materials, presenting, coordinating and responding to feedback, as requested.

2.2.4 Task 4 – Advisory Services

- a) Prepare educational and background materials (including but not limited to research papers, briefing notes, analysis, presentations, etc.) and provide expert knowledge of lessons learned from other markets to the IESO and its stakeholders.
- b) Facilitate strategy and/or design sessions with IESO staff to advance market evolution, operability, market efficiency and reliability objectives.
- c) Advise on mechanisms/solutions to address other operability needs as identified by the IESO. For example, the IESO periodically publishes Operability Assessments: <http://www.ieso.ca/-/media/files/ieso/document-library/engage/esf/esf-20161208-2016-ieso-operability-assessment-summary.pdf?la=en>
- d) Conduct research, analysis, and assessments related to market evolution more broadly.
- e) Assist in the development of market designs for a variety of market development activities and initiatives, including the development of a broad road map and/or strategy for internal and external purposes.

2.3 Timelines

It is expected that the Service Provider will be engaged immediately upon executing an Agreement and that the IESO will work with the Service Provider to establish the required deliverables and associated timelines on an as needed basis.

The IESO and Service Provider will have regular meetings by conference call which will enable the IESO to apprise the Service Provider of upcoming work and hear progress on ongoing work. When services are required of the Service Provider, the Service Provider will submit to the IESO a written description of their understanding of the work, associated timelines and an estimation of the cost of completing the work. The IESO and Service Provider will work

together to finalize the scope of the required services and associated costs and the IESO will provide written confirmation if and when the Service Provider should undertake the work.

2.4 Material Disclosures

Material Disclosure #1 – Travel, Meal and Accommodation Expenses

The Service Provider will be expected to attend meetings in the Greater Toronto Area from time to time. Proponents should note that the IESO is not permitted to and will not pay or reimburse any hospitality, incidental or food expenses. All travel and accommodation expenses must be pre-approved, in writing, by the IESO and charged in accordance with the Management Board of Cabinet's Travel, Meal and Hospitality Expenses Directive (the "**MBC Directive**"), as may be amended or replaced from time to time. The IESO will not be responsible for any travel or accommodation expenses incurred by the Service Provider that are not pre-approved in writing by the IESO and are not charged in accordance with the MBC Directive.

Travel and accommodation expenses should not be included in completing the pricing form in Appendix D.

Material Disclosure #2 - Personnel

The nature of the services proposed under this RFP requires that the personnel proposed have a high level of experience, skills, qualifications and industry knowledge. The IESO expects that the individuals identified by the Proponents in their submissions (collectively the "**Personnel**"), including any proposed subcontractors, will be consistent throughout the term of any statement of work resulting from this RFP. Should the identified Personnel no longer be able to provide services under the statement of work for any reason whatsoever, the Service Provider will be required to make arrangements for replacement personnel with equivalent experience, skills, qualifications and industry knowledge required to perform the services and submit the name and qualifications of any replacement personnel to the IESO for its approval. The IESO, at its discretion, reserves the right to deny or request alternate options to Personnel changes or substitutions proposed by the Service Provider.

2.5.3 Material Disclosure #3 - Timetable

Proponents should ensure adequate resource availability to meet the stated Deliverables throughout the project timeframe. The Service Provider must provide sufficient flexibility to accommodate changes to the timeline, and be responsive to urgent service requests. The IESO expects that the Deliverables contemplated under this RFP will involve a significant amount of effort that may require a dedicated commitment over several weeks at a time to meet the IESO's business requirements.

Material Disclosure #4 – Project Management

The Service Provider will be required to assist the IESO in tracking the number of consultant hours allotted to any given task or work completed at the request of the IESO.

At the outset of any engagement, the Service Provider will be required to provide via email an estimate of the number of hours it will take to complete the assigned tasks as well as identify the assigned Personnel. Any invoices received from the Service Provider should contain a detailed list of dates, hours and assigned Personnel so that the above information can be accurately tracked and reconciled.

[END OF SECTION 2]

SECTION 3 PROPOSAL CONTENT AND RATED CRITERIA

3.1 Rated Criteria

The following content should be submitted with your Proposal and should conform to the following section headings and requirements. Failure to conform may impair the Proposal review process, possibly to the detriment of the Proponent.

Rated Criteria Category	Weighting (Points)
Stage II of Evaluation:	
Experience, Skills and Qualifications	60
Demonstrated understanding of scope & IESO Operability Needs and Future Market Evolution Needs	10
Total Points [for Stage II of Evaluation]:	70 points
Stage III of Evaluation: Pricing	
Consulting Fee for Scope of Work as Outlined	30
Total Points [for Stage III of Evaluation]	30 Points
Total Overall Points:	100 Points

Note: Proponents must meet a minimum technical score in Stage II of 49.0 points from the proposal content and rated criteria sections 3.1.1 and 3.1.2 (set out below) to be considered for evaluation in Stage III. Proponents who score below 49.0 points in Stage II will be disqualified from further consideration.

3.1.1 Experience, Skills and Qualifications

(60 points)

Each Proponent should provide the following in its proposal:

- a) A brief description of the Proponent, including the roles and responsibilities of the Proponent and any of its agents, employees and sub-contractors who will be involved in providing the Deliverables. The description should clearly set out the extent to which each Personnel is expected to be involved in the delivery of work for this RFP. **(5 points)**
- b) Provide for each Personnel listed: **(20 points)**
 - i. A high-level summary of the overall qualifications for the services required, including demonstrated relevant experience in providing design consultation for other ISOs/RTOs, the IESO, and/or other related or similar entities on the services required within this RFP, in particular related to the market design elements included in and related to this RFP; and
 - ii. A resume of no more than 4 pages outlining relevant expertise and experiences.
- c) Provide high level descriptions of relevant projects that the Proponent has undertaken for the IESO, other ISOs/RTOs, and/or other related or similar entities. The described projects should be directly relatable to the tasks set out in Section 2 of this Appendix C and the descriptions should clearly link the work and expertise required to deliver the described projects to the Deliverables set out in this RFP. The descriptions of these projects should also identify which Personnel contributed to the described projects and their roles within the projects. **(25 Points)**
- d) Provide samples of 3 reports, presentations or other documents prepared by the Proponent that best demonstrate the Proponent's ability to execute the Deliverables set out in this RFP and identify which Personnel were involved and what their roles were in the development of these documents. **(10 Points)**

3.1.2 Demonstrated Understanding of Scope & IESO Operability Needs and Future Market Evolution Needs (10 Points)

Each Proponent should provide the following in its proposal:

Demonstrated understanding of the scope of the services and the approach it will take to work with the IESO to develop required elements of the operability work and provide expertise designing the evolution of IESO future markets. In particular, Proponents will be evaluated on the following:

- a) Demonstrated understanding of the scope of work and the Deliverables, the IESO's Market Renewal Program, flexibility/operability needs and unique features of the Ontario electricity sector **(5 points)**.

- b) Provide an initial list of related topics to explore with the IESO, and a high level description of reasons why these proposed topics should be considered **(5 points)**.

3.1.3 Evaluation of Pricing

(30 points)

Proponents should review and complete the Pricing Forms as outlined in Appendix D.

The IESO will not pay or reimburse any hospitality, incidental or food expenses; such items should not be included in pricing submissions. The IESO will not be responsible for any travel or accommodation expenses incurred by the Service Provider that are not pre-approved in writing by the IESO and charged in accordance with *Management Board of Cabinet's Travel, Meal and Hospitality Expenses Directive*, as may be amended or replaced from time to time

Each Proponent will receive a percentage of the total possible points allocated to price based on the Proponent's blended price of services and the formula outlined below. The blended price will be calculated based on values submitted on Appendix D and according to the following formula:

$$\text{Blended Price} = \sum \text{Rate Per Hour} * \text{Percentage of Work Effort}$$

For example, if Personnel A has a rate of \$100 and will perform 10% of the work, and Personnel B has a rate of \$250 and will perform 90% of the work, the Blended Price would be:

Personnel	Hourly rate	% of Work Effort	(Rate * % of Work Effort)
"A"	\$100	10%	\$10
"B"	\$250	90%	\$225
Blended Price			\$235

Total points for price will be calculated based on the following formula:

$$\text{Pricing Points} = \left(\frac{\text{lowest Blended Price}}{\text{Vendor of Record Blended Price}} \right) \times \text{Total Potential Price Points}$$

For example, if the lowest Blended Price from a Proponent is \$120, it will receive 100% of the total potential price points (\$120/\$120 = 100%). A Proponent whose Project Proposal includes a Blended Price of \$150 would receive 80% of the total potential price points (\$120/\$150 = 80%), and a Proponent whose Project Proposal includes a Blended Price of \$240 would receive 50% of the total potential price points (\$120/\$240 = 50%).

[END OF APPENDIX C]

Appendix D – Pricing Form

Proponents are requested to complete the Pricing Form using the structure provided below only. All prices should be inclusive of all labour, equipment, local travel, and other applicable costs and incidentals. All prices must be reflected in Canadian dollars and are exclusive of applicable taxes.

Proponents should include in the table:

- The name and title of each member of its project team (the Personnel);
- The respective hourly rate for each member of its project team; and
- The estimated distribution of workload, provided as the total percentage of work effort (the sum of all percentages of work effort **must** equal 100%).

The distribution of workload will be used as a method of evaluating price only. Proponents should consider work effort as an estimate based on the Proponent's common or usual distribution of work, relevant to the scope of the Deliverables. For example, if the Proponent's senior level resources are usually only involved in high level meetings and intermediate and junior resources are usually responsible for most of the day to day work, the Proponent may propose 5% for its senior level Personnel, and the remaining 95% distributed across the rest of the project team.

All values provided in the hourly rate and percentage of work effort columns must be provided as a fixed number.

Any Proponent who either (a) provides an hourly rate or percentage of work value as a range instead of a fixed number, or (b) provides pricing in a currency other than Canadian dollars, will not have their pricing evaluated and will, therefore, receive zero Stage III (Pricing) points.

Pricing will be scored in accordance with the methodology outlined in Appendix C.

Consulting Fees for Scope of Work/Deliverables as Outlined

Personnel Name	Title	Hourly Rate (\$CAD)	Percentage (%) of Work Effort

[END OF APPENDIX D]

Appendix E – Standard Terms & Conditions of Agreement

(See attached)

Appendix F – Financial Capabilities

The Proponent must have the financial capability to undertake the Deliverables. To determine the Proponent's financial capability, the IESO requires the submission of some or all of the financial information detailed below. The Proponent is responsible for determining the appropriate documentation to submit with its Proposal; however, all documentation provided may not be dated prior to January 2014.

1. Most recent independent third party credit ratings reports, if available.
2. Audited financial statements, if available, or the unaudited financial statements (prepared by the Proponent's independent accounting firm, if available, or prepared in-house if no external statements have been prepared) for the Proponent's last three fiscal years, or for the years that the Proponent has been in business if this is less than three years (including, as a minimum, the balance sheet, the statement of retained earnings, the income statement or similar, and any notes to these statements).
3. If the date of the financial statements above is more than five months before the Submission Deadline provided under PART 1.5, the Proponent must also provide, unless this is prohibited by legislation for public companies, the last quarterly financial statements (consisting of a balance sheet and a year-to-date income statement), as of two months before the Submission Deadline.
4. If the Proponent has not been in business for at least one full fiscal year, the following must be provided:
 - i. the opening balance sheet on commencement of business (in the case of a corporation, the date of incorporation); and
 - ii. the last quarterly financial statements (consisting of a balance sheet and a year-to-date income statement) as of two months before the Submission Deadline.
5. A certification from the Proponent's Chief Financial Officer or an authorized signing officer of the Proponent that the financial information provided is complete and accurate. In cases where no independent audited financial statements are provided, the Proponent's Chief Financial Officer or an authorized signing officer of the Proponent must provide a separate certification listing out the details (including amounts) of any claims and potential claims (including but not limited to: litigation claims; unrecognized environmental claims; income taxation claims; or disaster recovery claims) which may materially impact the Proponent's financial capability to provide the Deliverables, the Proponent's going concern status, and the Proponent's financial statements.
6. A confirmation letter from all of the financial institution(s) that have provided short-term financing to the Proponent outlining the total of lines of credit granted to the Proponent and the amount of credit that remains available and not drawn upon as of one month prior to the Submission Deadline.
7. A detailed monthly cash flow statement covering all the Proponent's activities for the first two years of the term for the provision of the Deliverables that are the subject of this RFP, including the Deliverables requested under this RFP, unless such disclosure is prohibited by legislation. This statement must detail the Proponent's major sources and amounts of cash

and the major items of cash expenditures on a monthly basis, for all the Proponent's activities. All assumptions made should be explained as well as details of how cash shortfalls will be financed.

8. A detailed monthly project cash flow statement covering the first two years of the term for the provision of the Deliverables that are the subject of this RFP, unless such disclosure is prohibited by legislation. This statement must detail the Proponents major sources and amounts of cash and the major items of cash expenditures, for the requirement, on a monthly basis. All assumptions made should be explained as well as details of how cash shortfalls will be financed.
9. If the Proponent is a joint venture, the financial information submitted must be provided for each member of the joint venture.
10. If the Proponent is a subsidiary of another company, then any financial information submitted must also be provided for the ultimate parent company. The provision of parent company financial information does not by itself satisfy the requirement for the provision of the financial information of the Proponent, and the financial capability of a parent cannot be substituted for the financial capability of the Proponent itself.
11. **Other Information:** The IESO reserves the right to request from the Proponent any other information that the IESO requires to conduct a complete financial capability assessment of the Proponent.
12. If requested by the IESO, the Proponent shall provide and pay for reports regarding the Proponent's business information as filed/maintained with Ontario's government business corporation registration records or similar or with any other government registration records service.

[END OF APPENDIX F]

APPrO INTERROGATORY 12

6.0 Market Renewal Program

6.2 Are the IESO's forecast 2019 operational costs for the Market Renewal Program appropriate in the context of the scope and timing of the overall project?

6.3 Are the IESO's forecast 2019 capital costs for the Market Renewal Program appropriate in the context of the scope and timing of the overall project?

APPRO INTERROGATORY 12

Reference: Exhibit A-2-2 p 17 and Exhibit C-2-1 p 12-14

Preamble: The IESO business plan states that total average FTEs for the IESO are expected to increase in 2019-2022 due to temporary resourcing required to support the MRP.

Exhibit C-2-1 p 13 states that in 2019, the MRP is continuing its staffing efforts.

Exhibit C-2-1 p 14 states that the Brattle Group report provided a benefit-cost analysis of the MRP in 2017.

Questions:

- a) Please comment on how the IESO's goals of efficient operation are affected by the hiring of temporary staff for the MRP. Please address this question taking into account the complexity of the MRP and the fact that it is intended to address problems in the IESO's market which have been known since market opening (i.e., temporary staff will presumably be significantly less familiar with problems that have been known since market opening as compared to the IESO's non-temporary staff).
- b) Please explain what is meant by the MRP continuing its staffing efforts. The IESO has referred to staffing challenges, please elaborate.
- c) How does the IESO ensure that temporary staff is efficient?
- d) Please provide the amount by which revenue requirement for 2019 is increased due to the need to train temporary staff.
- e) Please confirm that according to table 10 at C-2-1 p 13, the IESO had to hire 24 more people than anticipated/budgeted for in 2018.

- 1 f) If the above is confirmed, please provide the impact to revenue requirement for 2019 of
2 hiring 24 additional staff members.
- 3 g) Please advise as to whether Brattle group estimates in 2017 included the level of staffing
4 for the MRP which the IESO proposes for 2019.
- 5 h) In light of staffing challenges and overspending on the capacity work stream in
6 particular, would it be more efficient to focus the IESO's MRP resources in 2019 (and
7 beyond) by focusing on only one of the two proposed workstreams – for example,
8 focusing only on the energy work stream in the near future and address capacity needs
9 in 2023 by another process?

10 **RESPONSE**

- 11 a) Temporary staff refers to resources that have joined the IESO on a contract basis for a
12 fixed duration term. Temporary staff may work directly on the MRP, or alternately they
13 may backfill vacancies in the IESO core operations while full time employees rotate onto
14 the MRP for a fixed period of time. Resources obtained on a temporary basis bring
15 various skills needed for the IESO's success, which can include direct electricity sector-
16 specific skills and experience obtained in Ontario through a different employer or in
17 different jurisdictions, or alternately they may bring discipline-specific skills (e.g. project
18 management, business analysis, etc.) that are necessary for project work but not specific
19 to the electricity sector.
- 20 b) Please see the response to OEB Staff Interrogatory 12, at Exhibit I, Tab 1.3, Schedule 1.12.
- 21 c) The use of temporary staff to support a project such as MRP ensures that the IESO does
22 not over hire permanent resources that will not be required for regular business
23 activities once the MRP concludes.
- 24 d) The revenue requirement for 2019 has not been increased with any specific amount for
25 training of temporary staff. For regular staff, there was \$0.1 million allocated to the
26 program for external training costs. The expectation is that there is a significant amount
27 of learning and development on the job and that external training requests will be
28 minimal.
- 29 e) The IESO had to hire 24 more people than budgeted for in 2018.
- 30 f) All of the incremental resources hired in 2018 were also identified in the MRP staffing
31 plans in order to support both the detailed design and the implementation phase of the

1 program. The incremental cost of 24 resources is \$4.2 million, with the majority
2 budgeted under the capital budget.

3 g) The 2017 Benefits Case included a preliminary indication of implementation costs, but
4 did not estimate staffing requirements. Staffing levels included in the 2019 Business Plan
5 filing are based on the IESO's resourcing approach to implement MRP.

6 h) Please see the response to APPrO Interrogatory 9, at Exhibit I, Tab 6.2, Schedule 11.09
7 regarding cost efficiency. In terms of resources, there is not a direct overlap of skills and
8 experience required between the energy and capacity work streams. The energy stream
9 is making significant changes to existing processes and tools, and has a large IT
10 component. The capacity stream is developing many new processes, and has a large
11 resource planning component.

APPrO INTERROGATORY 13

6.0 Market Renewal Program

6.2 Are the IESO's forecast 2019 operational costs for the Market Renewal Program appropriate in the context of the scope and timing of the overall project?

6.3 Are the IESO's forecast 2019 capital costs for the Market Renewal Program appropriate in the context of the scope and timing of the overall project?

APPRO INTERROGATORY 13

Reference: Exhibit C-2-1 p 2-3 and Exhibit I, Tab 6.2 Sch 8.20 Attachment 1 in EB-2018-0143

Preamble: Exhibit C-2-1 describes MRP costs and Exhibit I, Tab 6.2 Sch 8.20 Attachment 1 p 12-13 in EB-2018-0143 includes a figure which includes "corporate governance" as a "strategic, MRP-related project".

Exhibit I, Tab 6.2 Sch 8.20 Attachment 1 in EB-2018-0143 also states at p 13 that the IESO has made specific organizational changes to enable the effective management of the MRP while continuing to deliver business as usual activities.

Questions:

- a) Please elaborate on the "corporate governance strategic MRP related project" and its relationship with the costs of (and resulting revenue requirement associated with) the MRP in 2019 and in the context of the scope and timing of the overall project.
- b) Please provide examples of the specific organizational changes made to enable the effective management of the MRP while continuing to deliver business as usual activities and how these affect the IESO's revenue requirement for 2019.

RESPONSE

a) The "corporate governance strategic MRP related project" referenced in the question is taken from the program charter prepared in September 2017. There are no costs related to this included in the MRP for 2019.

b) The question references text from the program charter prepared in September 2017. When the MRP was formalized as a program in early 2017, a separate program business unit was established to manage the MRP, separate from ongoing IESO business. The business unit was assigned a unique cost centre, to facilitate cost tracking and reporting for the program. Costs associated with MRP have been reported in the IESO's revenue requirement submissions in each of 2017, 2018, and 2019.

APPrO INTERROGATORY 14

6.0 Market Renewal Program

6.2 Are the IESO's forecast 2019 operational costs for the Market Renewal Program appropriate in the context of the scope and timing of the overall project?

6.3 Are the IESO's forecast 2019 capital costs for the Market Renewal Program appropriate in the context of the scope and timing of the overall project?

APPRO INTERROGATORY 14

Please provide a copy of all material provided to the Board of Directors and Senior Management regarding Market Renewal work plans, approvals, budget and updates that was not previously provided in EB-2018-0143.

RESPONSE

Please see the response to SEC Interrogatory 16, at Exhibit I, Tab 6.1, Schedule 10.16.

EDA INTERROGATORY 6

Issue 6.2

INTERROGATORY

EDA interrogatory 6

Reference: Exhibit A-3-1, pg. 7

Preamble: The IESO has recently announced that it will be launching a Transitional Capacity Auction (TCA) in 2019, replacing the current Demand Response Auction.

Questions

a) Please update the evidence with respect to TCA costs, IESO staffing implications and impacts on other initiatives underway at the IESO (e.g., MRP, DR Auction, DR Working Group).

b) Please provide a revised MRP implementation schedule linking the TCA, the launch of the first Incremental Capacity Auction (ICA), and the implementation of the Energy Workstream.

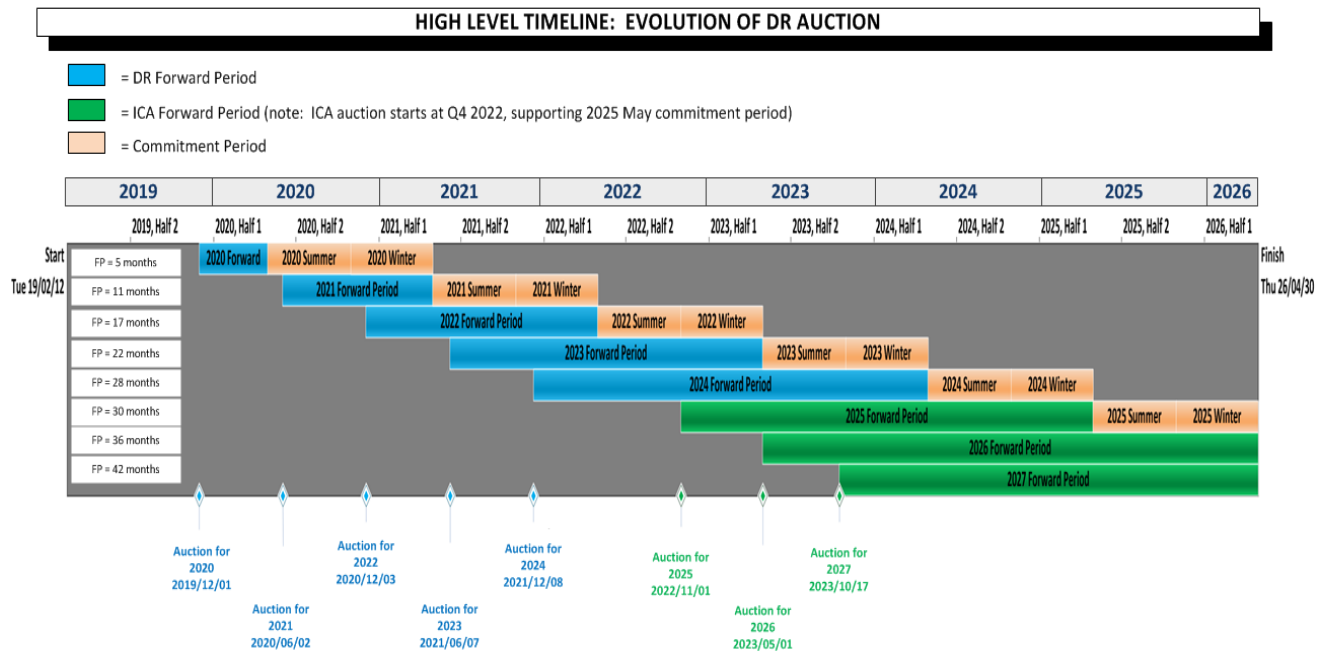
RESPONSE

a) The IESO estimates the 2019 cost for the Transitional Capacity Auction (TCA) project to be \$3.5 million (capital of \$1.9 million, operating expense of \$0.8 million) plus \$820 thousand (capital of \$580 thousand, operating expense of \$240 thousand) of contingency in 2019 to complete project planning work, execute Phase 1 and initiate planning work for Phase 2. Additonal estimate is underway for Phase 2.

There are no implications on the Energy stream of MRP. The Incremental Capacity Auction (ICA) team and TCA team are working closely together to ensure alignment. As the IESO noted, the early design decision of the TCA are expected to benefit and inform the ICA design. Therefore, no significant staffing implications are affecting ICA as the work is complementary. The IESO estimates approximately ICA 4 FTEs are supporting TCA on a part-time basis.

The DR Auction will be transitioned to the TCA. No staffing implciations as the DR Auction will cease to operating in 2019.

- 1 The IESO will continue to support and enable DRWG and its associated workplan; however, we
 2 expect DRWG participants will be focused on the TCA design and implementation in 2019.
- 3 b) The IESO's TCA and ICA execution timelines are noted below. The Energy stream is
 4 scheduled to go live in 2022.



Assumptions:

- 1) Auctions take place approximately semi-annually until forward period = 2.5 yrs.
 2) First ICA takes place by Q4 2022.

EDA INTERROGATORY 7

Issue 6.2

INTERROGATORY

EDA interrogatory 7

References: Exhibit C-2-1, Appendix A, pg., 1-2, Attachment 1, Attachment 2

Preamble: The IESO has provided an MRP stakeholder engagement schedule for the Energy and Capacity workstreams for 2019 and the first quarter of 2020, and the IESO's Business Plan states that the in-service date for the Energy Workstream is approximately 2022 and the in-service date for the Capacity Workstream is approximately 2023.

Questions

- a) Please provide the stakeholder engagement plan for the MRP through to implementation.
- b) Please provide additional information within the stakeholder engagement plan related to the implementation of MRP to with other impacted parties, such as the OEB (e.g., timelines to update codes, RRP, etc.) and LDCs (e.g., billing/settlement systems, customer communications, etc.).
- c) Please demonstrate that the IESO will engage with other impacted parties in 2019 so as to ensure that the IESO can meet its MRP implementation timelines.

RESPONSE

- a) The stakeholder engagement plan for MRP will evolve as the project moves through different phases. Since early 2017, the IESO began stakeholder engagement on MRP with a review of the benefits case that outlined the rationale and value in pursuing this significant undertaking. With the foundation in place, the IESO then launched engagement forums to help make high level design decisions for the main initiatives of MRP. The interaction with stakeholders during this high level design phase of MRP, and input that was collected over the course of the engagement, was critical in producing well-informed high level designs (HLD) for each program initiative.

1 With the MRP HLDs published by the end of Q1-2019, the IESO is transitioning from
2 high level design to detailed design phase for both Energy and Capacity work streams.
3 The IESO is currently developing stakeholder engagement plans for detailed design
4 with the expectation that these engagements will commence in Q3 2019. Once the
5 detailed design phase is complete, stakeholder engagement plans will be developed to
6 support future phases of MRP including the review of draft market rules, marketplace
7 training and potentially market trials that may be required to ensure customer readiness.

8 b) As noted above, the IESO is currently developing engagement plans for the detailed
9 design phase for MRP. Stakeholders, including the OEB and LDCs, will have the
10 opportunity to participate in those engagements and materials will be publically posted
11 on the IESO website. Where the OEB makes inquiries with respect to MRP, the IESO will
12 respond accordingly. Stakeholder engagement plans for MRP implementation will be
13 developed following the completion of the detailed design phase.

14 c) The IESO remains committed to engaging with all interested stakeholders, especially
15 impacted parties, during the detailed design phase of MRP in 2019 and beyond. In
16 addition to the formal engagements that have been established for each respective MRP
17 initiative, the IESO organized education and awareness-building workshops for a broad
18 range of stakeholders. Specifically, Local Distribution Companies were provided LDC-
19 tailored webinars on how MRP will impact them. The LDC sessions took place in
20 August and September of 2018 with additional presentations delivered in-person at
21 EDA council meetings in the fall and winter of 2018.

22 Additionally, the IESO hosted introductory MRP sessions for stakeholders who were not
23 in any way involved in the MRP engagement activity in an effort to build a basic
24 foundation of understanding to a wider audience on what is being enhanced through
25 Market Renewal. Those sessions took place in November and December of 2018 and
26 attracted a wide range of new stakeholders, including LDCs. Both the LDC and
27 introductory MRP outreach initiatives can be reviewed on the IESO webpage here:
28 <http://www.ieso.ca/Market-Renewal/Background/Education-and-Information-Sessions>.
29 Engagement on the detailed design phase of MRP will begin in Q3 2019.

AMPCO INTERROGATORY 21

6.2 Are the IESO's forecast 2019 operational costs for the Market Renewal Program appropriate in the context of the scope and timing of the overall project?

6.3 Are the IESO's forecast 2019 capital costs for the Market Renewal Program appropriate in the context of the scope and timing of the overall project?

AMPCO-21

INTERROGATORY

Ref: EB-2018-0143, Schedule 8.21 Sec 21 Updated October 2, 2018

Ref 2: C-2-1 Page 12

Preamble: In 2018, at reference #1, the IESO estimated the total MRP budget at \$217.6 million. At reference #2, the IESO estimates the current total MRP budget at \$246.9 million.

a) Please indicate if the 2019 budget estimate of \$246.9 million includes the Operability workstream.

b) Please provide a cost variance analysis between the 2018 and 2019 MRP total budget estimates.

c) Please discuss any significant changes in scope between the two estimates.

RESPONSE

a) The 2019 budget estimate does not include an Operability work stream.

b) The operating budget for MRP has reduced by \$1.0 million as resources will start to work on detailed design, which is a capital expense, in 2019. This was offset by work to enable participation in future markets, as well as legal and consulting support for the development of market rules.

The capital budget has increased by \$34.0 million to support the development of detailed design and the start of the implementation phase at the end of 2019.

Budget (In \$ millions)	2018	2019	Variance
Compensation & Benefits	7.4	5.7	(1.7)
Professional & Consulting	4.1	4.8	0.7
Operating & Administration	1.2	1.2	0.0
Operating Total	12.7	11.7	(1.0)
Compensation & Benefits	1.9	17.1	15.2
Professional & Consulting	1.4	7.1	5.7
Operating & Administration	0.7	13.8	13.1
Capital Total	4.0	38.0	34.0
Compensation & Benefits	9.3	22.8	13.5
Professional & Consulting	5.5	11.9	6.4
Operating & Administration	1.9	15.0	13.1
Program Total	16.7	49.7	33.0

- 1
- 2 c) As MRP continues to plan, engage and refine estimates, updates on estimate ranges will be
- 3 provided. No additional scope has been included.

1 **AMPCO INTERROGATORY 22**

2 **6.2 Are the IESO's forecast 2019 operational costs for the Market Renewal Program**
3 **appropriate in the context of the scope and timing of the overall project?**

4 **6.3 Are the IESO's forecast 2019 capital costs for the Market Renewal Program**
5 **appropriate in the context of the scope and timing of the overall project?**

6 **AMPCO-22**

7 **INTERROGATORY**

8 Ref: EB-2018-0143, Schedule 8.22 Sec 22

9 Please update the table in SEC 22 to reflect the latest MRP milestones.

10 **RESPONSE**

11 Please see the response to SEC Interrogatory 18, at Exhibit I, Tab 6.1, Schedule 10.18.

AMPCO INTERROGATORY 23

6.2 Are the IESO's forecast 2019 operational costs for the Market Renewal Program appropriate in the context of the scope and timing of the overall project?

6.3 Are the IESO's forecast 2019 capital costs for the Market Renewal Program appropriate in the context of the scope and timing of the overall project?

AMPCO-23

INTERROGATORY

Ref: Exhibit A-2-2, Page 19

Preamble: The Business Plan indicates resourcing for the market renewal program continues to be a challenge and has resulted in later completion of high-level design for the capacity work stream.

Please explain further the nature of the challenges to resource the market renewal program.

RESPONSE

Please see the response to OEB Staff Interrogatory 12, at Exhibit I, Tab 1.3, Schedule 1.12.

AMPCO INTERROGATORY 24

6.2 Are the IESO's forecast 2019 operational costs for the Market Renewal Program appropriate in the context of the scope and timing of the overall project?

6.3 Are the IESO's forecast 2019 capital costs for the Market Renewal Program appropriate in the context of the scope and timing of the overall project?

AMPCO-24

INTERROGATORY

Ref: A-2-2, Page 23

Preamble: Under Key 2019 Risks, the IESO indicates the Market Renewal

Program is adversely affected by system dependencies, and/or a lack of resources with market design and implementation expertise.

a) Please explain further the issue of system dependencies and how this risk can be mitigated.

b) Please explain how the IESO plans to address the lack of resources with market design and implementation expertise.

RESPONSE

a) The IESO defines the system interdependency or integration risk as a risk that the resource requirements and interdependencies across the organization have not been adequately accounted for in planning of projects, initiatives and operational activities.

To mitigate this risk, the IESO is implementing a portfolio management approach for all major IESO and MRP projects, initiatives and operational activities. This process increases the understanding of the interdependencies and resource requirements for all major initiatives as well as operational requirements across the organization. This allows for risk-informed decision making in consideration of trade-offs to optimize resource allocation and achieve efficient execution of IESO's mandate, inclusive of MRP. Please also see the response to SEC Interrogatory 1 a), at Exhibit I, Tab 1.1, Schedule 10.01 for further details on this process.

The resource requirements and interdependencies of all IESO's major initiatives including MRP require the consistent application of decision criteria to prioritize and ensure MRP is elevated both strategically and culturally within the IESO.

b) Please see the response to OEB Staff Interrogatory 12 d), Exhibit I, Tab 1.3, Schedule 1.12.

1 **AMPCO INTERROGATORY 25**

2 **6.2 Are the IESO's forecast 2019 operational costs for the Market Renewal Program**
3 **appropriate in the context of the scope and timing of the overall project?**

4 **6.3 Are the IESO's forecast 2019 capital costs for the Market Renewal Program**
5 **appropriate in the context of the scope and timing of the overall project?**

6 **AMPCO-25**

7 **INTERROGATORY**

8 Ref: C-2-1 Page 3

9 Preamble: The IESO indicates a draft version of the Incremental Capacity Auction High Level
10 Design (HLD) is targeted for publication prior to the end of Q2.

11 Please provide the latest target date and confirm it will be met.

12 **RESPONSE**

13 The Incremental Capacity Auction HLD was published on March 22, 2019.

AMPCO INTERROGATORY 26

6.2 Are the IESO's forecast 2019 operational costs for the Market Renewal Program appropriate in the context of the scope and timing of the overall project?

6.3 Are the IESO's forecast 2019 capital costs for the Market Renewal Program appropriate in the context of the scope and timing of the overall project?

AMPCO-26

INTERROGATORY

Ref: C-2-1 Page 4

Preamble: The IESO indicates in 2019 a number of MRP milestones are expected to be achieved.

Please provide a table that sets out the key 2019 MRP milestones.

RESPONSE

The table below sets out the key MRP milestones for 2019:

MRP Key Milestones 2019							
Phase	Milestone	Workstream	Target Date	Revised date	Actual date	Status	Comments
High Level Design	Publish High Level Designs (DAM&ERUC)	Energy	31-Dec-18	N/A	22-Dec-18	Completed	
High Level Design	Approve High Level Designs (SSM,DAM&ERUC)	Energy	15-May-19	12-Jun-19		Planned	Aligned with June IESO Board of Directors Meeting
High Level Design	Publish ICA High Level Design	Capacity	01-Apr-19	N/A	22-Mar-19	Completed	
High Level Design	Approve ICA High Level Design	Capacity	01-Aug-19	28-Aug-19		Planned	Aligned with August IESO Board of Directors Meeting
High Level Design	MRP Business Case	General	30-Sep-19	28-Aug-19		Planned	Aligned with August IESO Board of Directors Meeting

AMPCO INTERROGATORY 27

6.2 Are the IESO's forecast 2019 operational costs for the Market Renewal Program appropriate in the context of the scope and timing of the overall project?

6.3 Are the IESO's forecast 2019 capital costs for the Market Renewal Program appropriate in the context of the scope and timing of the overall project?

AMPCO-27

INTERROGATORY

Ref: C-2-1 Page 4

Preamble: The IESO indicates the business case will be provided to the IESO Board of Directors for approval in Q3 2019 and to stakeholders thereafter.

- a) Please provide the current status of completion of the business case compared to plan.
- b) Will stakeholders be provided with a draft business case for review and comment prior to IESO Board approval? If not, why not?

RESPONSE

- a) The Business Case is currently under development and is on track to be completed by the end of Q3 2019.
- b) Please see the response to APPrO Interrogatory 11 k), at Exhibit I, Tab 6.2, Schedule 11.11.

AMPCO INTERROGATORY 28

6.2 Are the IESO's forecast 2019 operational costs for the Market Renewal Program appropriate in the context of the scope and timing of the overall project?

6.3 Are the IESO's forecast 2019 capital costs for the Market Renewal Program appropriate in the context of the scope and timing of the overall project?

AMPCO-28

INTERROGATORY

Ref: C-2-1 Page 5

Preamble: The IESO indicates the Market Renewal Working Group (MRWG) will be replaced with a new Market Development Advisory Group (MDAG) whose scope will be broader than the MRP.

Please provide the Terms of Reference for the MGAD.

RESPONSE

The Terms of Reference for the MDAG is provided as Attachment 1 to this response.

IESO Market Development Advisory Group

Draft Terms of Reference

April 16, 2019

I. Introduction

The IESO is in the process of renewing its electricity markets to ensure the IESO can continue to deliver a reliable system cost-effectively in the future. This work commenced with the Market Renewal Program and will need to continue to ensure the IESO can adapt effectively to the changes that are taking place in the broader electricity sector.

As part of this comprehensive market development work, it will be important to work with our market participants and stakeholders. A key element of the IESO's engagement approach will be the establishment of a Market Development Advisory Group ("MDAG"). The MDAG will be expected to contribute to the overall success of market development by providing advice, guidance and support for the development of electricity markets in Ontario.

One of the ways the MDAG will practically do this is through the discussion of an IESO Markets and Acquisition Work Plan ("Work Plan") which is a process to support the IESO's future market vision and is aligned with the IESO's planning initiatives.

For clarity, the MDAG is not a forum that designs, develops and implements market development initiatives; those activities will take place through unique engagement initiatives.

The activities of the MDAG are guided by the IESO [Engagement Principles](#). These Terms of Reference will outline the role of the MDAG and how it relates to the engagement processes.

II. Objectives and Scope

The main objective of the MDAG is to support IESO efforts to evolve the Ontario electricity market, beyond the Market Renewal Program, to cost-effectively ensure reliability in the near and longer terms. The MDAG will take a forward-looking approach to its discussions by:

- Discussing group member and IESO market experience and technical expertise from Ontario and other electricity markets
- Providing guidance and advice that support the development and evolution of the IESO markets in accordance with the future market vision
- Informing the IESO on broader sector developments that may impact the IESO's approach to market development

- Providing input to the Work Plan

Additionally, the MDAG will provide a forum to ensure that in-flight initiatives are developed, designed and implemented in an effective and timely manner by:

- Providing advice and guidance to the IESO on issues that may arise in market development initiatives and how those issues correlate to the IESO's overall principles for market development
- Discussing IESO customer readiness for initiatives prior to project implementation
- Ensuring effective communication and education of market participants and stakeholders

The MDAG will also be focused on bringing learnings, experience or education from other jurisdictions to Ontario to ensure best practices are taken into account. The expertise of the MDAG will also be leveraged to provide advice and considerations to the IESO in its selection of members to the IESO Technical Panel and Dispute Resolution Panel.

These Terms of Reference will be reviewed annually by the Advisory Group to ensure that the objectives and scope for the MDAG continue to be relevant in the current and future Ontario electricity marketplace

III. Approach

It is expected that the MDAG will have regular quarterly meetings, or as needed. The materials supporting all MDAG meetings will be made available publicly along with a summary of the meetings.

The IESO recognizes the importance of ensuring that all stakeholders have the ability to participate in forward-looking markets discussions and considerations. MDAG discussions will take place in two ways:

- Public meetings: to ensure that the broader marketplace will have regular opportunities to provide information and input
- In-camera meetings: members to provide strategic advice on current and future discussions of the MDAG

When the MDAG invites presentations from market participants/stakeholders, public notice will be provided through the MDAG engagement [webpage](#) and the [IESO bulletin](#).

IV. Organization and Administration of Meetings

Meeting authority and normal order of business:

- (a) An IESO representative from the Markets division will chair the meetings.

- (b) An IESO representative from the Stakeholder Engagement team will act as the facilitator for the meetings, or a separate independent facilitator may be used.
- (c) The IESO will endeavor to provide all meeting agendas and support material five business days in advance of the meeting. MDAG will have opportunities to participate in agenda development.
- (d) MDAG members will have opportunities to make presentations in addition to regular participation in MDAG discussions. It is expected that MDAG members will endeavor to provide materials in advance when making a presentation.
- (e) The IESO will take meeting notes including actionable items and their resolution. The IESO will circulate meeting summaries and materials to all MDAG members before posting the materials publicly.
- (f) The IESO will coordinate attendance through on-line meeting invitations. These invitations are intended for members only and are not to be forwarded to any other parties without the consent of the Chair.

V. Composition of the MDAG

The MDAG will be chaired by a representative of the IESO. There will be a maximum of 20 members that will comprise a balanced representation of different stakeholder communities that participate in or are affected by Ontario's electricity markets. Members are expected to be committed to ensure the success of electricity market evolution in Ontario.

The composition will place a strong preference on existing or future market participants and strive to find a balance between various sectors that represent geographical and sector diversity within Ontario's electricity market. Members should be able to speak to their individual experience within electricity markets as well as how broader sector trends or developments impact electricity markets.

Advisory Group members are expected to be able to commit time and resources to support the work of the MDAG. Expectations for members include:

- Regular attendance and active participation in scheduled meetings
- Actively provide feedback, either during meetings or in writing
- Review information/materials
- Demonstrated knowledge and/or experience in IESO electricity markets and preferably with markets in other jurisdictions

Adherence of members to these expectations will be reviewed on an annual basis. The IESO may make changes to the membership based on this review, and/or to ensure a balanced representation on the Advisory Group. Decisions regarding membership will be made by the IESO through a nomination process.

The IESO reserves the right to terminate any member's membership due to low attendance, lack of participation, or a change in employment status that changes the balanced representation of the group. Members with more than two consecutive absences without prior notice and justifiable rationale may warrant replacement of that member. No alternates will be permitted unless approved by the IESO at least one week in advance of the meeting.

Prospective members will be selected by nomination by a call for members, made through the [IESO Bulletin](#) and the MDAG [webpage](#).

VI. Communications

- (a) Meeting materials, information and updates for the MDAG will be shared with stakeholders and the broader community through the MDAG webpage on the IESO website and in the IESO's weekly email Bulletin.
- (b) The webpage will include the MDAG Terms of Reference, meeting agendas, formal materials and meeting notes.
- (c) Information provided through the abovementioned methods should be considered public and can be shared freely.

AMPCO INTERROGATORY 29

6.2 Are the IESO's forecast 2019 operational costs for the Market Renewal Program appropriate in the context of the scope and timing of the overall project?

6.3 Are the IESO's forecast 2019 capital costs for the Market Renewal Program appropriate in the context of the scope and timing of the overall project?

AMPCO-29

INTERROGATORY

Ref: C-2-1 Page 6

Preamble: The IESO provides the MRP's 2018 actual results and variances against the 2018 budget. At the program level, MRP was underspent by \$0.4 million or 3% in 2018. Operating results were \$2.3 million above budget, while capital results were \$2.7 million under budget. This variance corresponds to the delayed completion of the HLDs.

Please provide the schedule variance and explain the reason for the delayed completion of the HLDs.

RESPONSE

The schedule variance is provided below:

Phase	Milestone	Workstream	Target Date	Revised Date	Actual date	Status
High Level Design	Publish SSM High Level Design	Energy	30-Sep-18	N/A	27-Sep-18	Completed
High Level Design	Publish DAM High Level Design	Energy	31-Dec-18	N/A	22-Dec-18	Completed
High Level Design	Publish ERUC High Level Design	Energy	31-Dec-18	N/A	22-Dec-18	Completed
High Level Design	Publish ICA High Level Design	Capacity	31-Dec-18	30-Apr-19	22-Mar-19	Completed

The schedule delay on publication of the Capacity High Level Design was primarily due to the need to run an RFP process for a consultant, a slower than expected timeframe to bring on employees and a decision to incorporate more decision and detail in the final High Level Design than originally planned.

AMPCO INTERROGATORY 30

6.2 Are the IESO's forecast 2019 operational costs for the Market Renewal Program appropriate in the context of the scope and timing of the overall project?

6.3 Are the IESO's forecast 2019 capital costs for the Market Renewal Program appropriate in the context of the scope and timing of the overall project?

AMPCO-30

INTERROGATORY

Ref: C-2-1 Page 13

- a) Table 10: Please provide the basis for the 2018 Staffing information: FTEs versus headcount.
- b) Table 11: Please provide the basis for the 2019 Staffing information: FTEs versus headcount; average budget versus Dec 31, 2019 budget.
- c) Please provide a Q1 update to the MRP staffing figures.

RESPONSE

- a) Table 10 provides both FTE and Headcount numbers for 2018.
- b) Table 11 provides FTE values for 2019.
- c) Please see the response to OEB Staff Interrogatory 14 b), at Exhibit I, Tab 1.3, Schedule 1.14.

AMPCO INTERROGATORY 31

6.2 Are the IESO's forecast 2019 operational costs for the Market Renewal Program appropriate in the context of the scope and timing of the overall project?

6.3 Are the IESO's forecast 2019 capital costs for the Market Renewal Program appropriate in the context of the scope and timing of the overall project?

AMPCO-31

INTERROGATORY

Ref: C-2-1 Page 10 Table 6

a) Please provide the contingency amount included in the 2019 MRP budget and explain how it was derived.

b) Please explain how the cancellation of Cap and Trade affects the IESO's MRP projected savings.

RESPONSE

a) The table below includes the contingency amount included in the 2019 MRP budget. As operating expenditure was well defined and understood; a lower contingency percentage was applied. For capital costs there was greater risk exposure for professional and consulting estimates, and the initial payment for the Dispatch Scheduling and Optimization (DSO) Engine, and therefore a larger percentage of contingency was applied.

	Operating (\$M)	Capital (\$M)
BP Budget	\$ 11.2	\$ 34.4
Contingency	\$ 0.4	\$ 3.6
BP approved (incl Cont.)	\$ 11.6	\$ 38.0
% of Cont.	3.6%	10.5%

b) MRP net benefits will be modelled in the forthcoming Business Case to comply with the Federal Carbon Backstop as a proxy for future carbon costs which are, at this time, uncertain. The previous Provincial Cap and Trade program, now cancelled, will not be considered as part of the Business Case modelling exercise.

AMPCO INTERROGATORY 32

6.2 Are the IESO's forecast 2019 operational costs for the Market Renewal Program appropriate in the context of the scope and timing of the overall project?

6.3 Are the IESO's forecast 2019 capital costs for the Market Renewal Program appropriate in the context of the scope and timing of the overall project?

AMPCO-32

INTERROGATORY

Ref: C-2-1 Page 10 Table 6

a) Please provide a breakdown of both 2018 actual and 2019 planned Operating and Capital Professional & Consulting Market Renewal costs.

RESPONSE

a) Please see the response to SEC Interrogatory 22, at Exhibit I, Tab 6.1, Schedule 10.22.

AMPCO INTERROGATORY 33

6.2 Are the IESO's forecast 2019 operational costs for the Market Renewal Program appropriate in the context of the scope and timing of the overall project?

6.3 Are the IESO's forecast 2019 capital costs for the Market Renewal Program appropriate in the context of the scope and timing of the overall project?

AMPCO-33

INTERROGATORY

Ref: A-2-2 Appendix 3

Please provide a breakdown and description of MRP capital projects for 2019 to 2021.

RESPONSE

Please see the response to OEB Staff Interrogatory 26 a), at Exhibit I, Tab 6.2, Schedule 1.26.

Once the detailed designs are complete for each of the Energy and Capacity work streams, the capital spend will correspond to the implementation of those designs in any following years.

AMPCO INTERROGATORY 34

6.2 Are the IESO's forecast 2019 operational costs for the Market Renewal Program appropriate in the context of the scope and timing of the overall project?

6.3 Are the IESO's forecast 2019 capital costs for the Market Renewal Program appropriate in the context of the scope and timing of the overall project?

AMPCO-34

INTERROGATORY

Ref: A-2-2 Page 10

Preamble: The IESO indicates the MRP, is expected to deliver an average of \$3.4 billion in efficiency savings over a 10-year period, most of which will flow to Ontario's consumers. In EB-2018-0143 (A2-2 Page 7), the IESO indicates the proposed Market Renewal initiatives could result in an estimated benefit of up to \$5.2 billion over 10 years, the majority of which will be realized by consumers.

On what basis has the IESO reduced the MRP efficiency savings from \$5.2 billion to \$3.4 billion?

RESPONSE

The \$3.4 billion is the expected net benefits under base case assumptions reflecting low to moderate load growth. The \$5.2 billion is potential net benefits under higher load growth scenarios which may occur, but are considered less likely than the base case.

1 **ENERGY PROBE INTERROGATORY 20**

2 **Issue 6.3 Are the IESO's forecast 2019 capital costs for the Market Renewal Program**
3 **appropriate in the context of the scope and timing of the overall project?**

4 **INTERROGATORY**

5 **EP-20**

6 **Reference:** EB-2017-0143 Exhibit C, Tab 2, Schedule 1, page 5

7 **Preamble:** *"Prior to the start of detailed design for each of the initiatives, and commencing any*
8 *significant capital spending, the IESO will develop a business case for the MRP, which will be provided*
9 *to the IESO Board of Directors for approval, and to stakeholders thereafter."*

10 Have additional business cases been completed in 2018 or 1Q 2019? If so, please provide these.

11 **RESPONSE**

12 The benefits case was completed in 2017. The Business Case will be completed by the end of
13 Q3 2019. No additional business cases have been completed.

