

1 **CCMBC INTERROGATORY 6**

2 Issue 3.0 Application and Reliable Integration Fee

3 3-CCMBC-6

4 **INTERROGATORY**

5 **Reference:** Exhibit C-3-1-1

6 **Preamble:** *"The IESO is seeking to expand its cost recovery activities and requests approval to*
7 *charge a Reliable Integration fee at an hourly rate to proponents for the activities to reliably*
8 *integrate new or modified facilities. The fee is proposed to be based on the average hourly cost*
9 *of IESO labour plus overhead recovery of \$145 per hour and would be calculated based on the*
10 *number of hours taken to perform the reliable integration activities."*

11 Please explain how the \$145 per hour fee was determined showing all calculations.

12 **RESPONSE**

13 a) See response to Schedule 1 – 3.1 OEB STAFF 16(c).

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EDA INTERROGATORY 8

2 Issue 3.1 Is the IESO’s proposal to charge proponents a Reliable Integration fee at an hourly
3 rate of \$145/hour for activities the IESO undertakes to reliably integrate new or
4 modified facilities to the IESO-Controlled Grid appropriate?

5 Issue 3.2 Application Fee for Market Participation.

6 3.0-EDA-8

7 **INTERROGATORY**

8 Evidence Reference: ExC-T3-S1

9 Question

- 10 a) Please provide the detailed derivation of the proposed hourly charge of \$145; please
11 state all assumptions and provide all data (e.g., direct labour costs, recovery of
12 overhead and indirect costs).
- 13 b) Please identify the expected level of revenues to be recovered through this proposed
14 charge.
- 15 c) Please provide the evidence reference that shows this expected level of revenues and
16 links this level of revenues to the proposed fees.

17 **RESPONSE**

- 18 a) See response to Schedule 1 – 3.1 OEB STAFF 16(c).
- 19 b) See response to Schedule 1 – 3.1 OEB STAFF 16(f).
- 20 c) See response to b).

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OSEA INTERROGATORY 3

2 Issue 3.1 Is the IESO’s proposal to charge proponents a Reliable Integration fee at an hourly
3 rate of \$145/hour for activities the IESO undertakes to reliably integrate new or
4 modified facilities to the IESO-Controlled Grid appropriate?

5 Issue 3.2 Application Fee for Market Participation.

6 3-OSEA-3

INTERROGATORY

8 *Reference:* Exhibit C-3-1

9 *Preamble:* The IESO is proposing to establish a Reliable Integration Fee for new or modified
10 facilities seeking connection. OSEA is interested in understanding the fairness of a Reliability
11 Integration Fee, the potential cost to customers, and the impact on small and community
12 projects.

13 Questions:

- 14 a) Please provide the IESO’s supporting documentation and analysis justifying the need to
15 collect fees from new or updated facilities for Reliable Integration, including (i) the
16 IESO’s rationale for pursuing fees and (ii) the impact of fees on competitiveness of new
17 or modified facilities seeking connection, especially small and community projects.
- 18 b) Examples of Reliable Integration activities include “updating existing system operating
19 limits (SOLs)”. How much of the Reliable Integration activities rely on information
20 provided by existing facilities?
- 21 c) As part of Reliable Integration activities, will the IESO seek updated information from
22 existing facilities? If so, will existing facilities be asked to fund the gathering and analysis
23 of the information? If existing facilities are not asked to fund the gathering and analysis
24 of the information, who does the IESO intend to collect those costs from?
- 25 d) DERs are expected to participate under aggregation schemes where multiple sites act as
26 a single resource in the IESO-Administered Market (“IAM”). Does the IESO intend to
27 apply Reliable Integration Fees to each individual DER or only to the DER Aggregator? In
28 either case, please explain the IESO’s rationale for applying integration fees in this
29 manner.
- 30 e) The IESO intends to complete Reliable Integration activities on a time and materials
31 basis at ~\$145/hour.
- 32 i. Please explain how the \$145/hour rate was determined. Please provide any
33 documentation, calculations and reasoning supporting how the \$145/hour rate
34 was determined.
- 35 ii. Market participants must manage costs when developing or expanding facilities,
36 especially small facilities. Hourly rates can become unmanageable if not tied to a

- 1 limit or scope of budget. Will market participants receive a budget for the
2 Reliable Integration activities? If not, please explain why not.
- 3 iii. What is the dispute resolution process for market participants to address
4 overages by the IESO on the estimated Reliable Integration activities budget? If
5 no dispute resolution process exists, explain why.
- 6 iv. Will the IESO consider a ceiling or cap on Reliable Integration Fees for small
7 projects?
- 8 v. Will the IESO consider a ceiling or amalgamated Reliability Integration Fee for
9 municipal or community energy projects?

10 **RESPONSE**

- 11 a)
- 12 i. See response to Schedule 12 – 3.1 PWU 5.
- 13 ii. See response to Schedule 8 – 3.1 ED 9(c).
- 14 b) The IESO maintains computer models of all equipment that is part of the IESO-
15 Controlled Grid. This information was provided by existing facilities at the time of their
16 connecting to the grid. These models are used to perform the studies and validations for
17 the activities that are subject to the Reliable Integration Fee. Each new or modified
18 project would be required to provide new data to the IESO in relation to the specific
19 equipment they are looking to introduce or modify on the grid.
- 20 c) No, the IESO will not require any additional information from existing facilities related to
21 charging the Reliable Integration Fee. Existing facilities would only be required to
22 provide additional information and be subject to the Reliable Integration Fee if they seek
23 to modify their equipment.
- 24 d) The proponent that triggers the costs will be charged for those costs. See response to
25 Schedule 12 – 3.1 PWU 5.
- 26 e)
- 27 i. See response to Schedule 1 – 3.1 OEB STAFF 16(c).
- 28 ii. The cost of reliable integration is dependent on the quality of data provided by
29 the proponent and also by the characteristics of the electrical infrastructure in
30 the connection area. As such, the IESO cannot provide an estimate of the
31 integration cost for particular projects up front. An estimated range of costs that
32 different types of projects are likely to incur is included in response to Schedule 1
33 – 3.1 OEB Staff 16(d).
- 34 iii. The established dispute resolution process described in section 2 of chapter 3 of
35 the Market Rules will apply to disputes related to the Reliable Integration Fee.
- 36 iv. Following the principle of cost-causality and reduced cross-subsidization, the
37 IESO intends to charge each proponent for the total cost the IESO incurs to
38 reliably integrate the proponent's new or modified connection. A cap would not
39 accomplish this objective and as such is not something the IESO has considered.

- 1 v. See response to Schedule 11 – 3.1 OSEA 3(e)(iv) above and see Schedule 8 –
2 3.1 ED 9(c) for comments on smaller projects connecting to the distribution
3 system.

1 **OEB STAFF INTERROGATORY 16**

2 Issue 3.1 Is the IESO’s proposal to charge proponents a Reliable Integration fee at an hourly
3 rate of \$145/hour for activities the IESO undertakes to reliably integrate new or
4 modified facilities to the IESO-Controlled Grid appropriate?

5 3-Staff-16

6 **INTERROGATORY**

7 a. Exhibit C / Tab 3 / Schedule 1

8

9 Preamble: The Application requests approval to charge proponents a Reliable Integration Fee at
10 an hourly rate of \$145/hr. The Application states that the fee will be charged for the activities
11 the IESO undertakes to reliably integrate new or modified
12 facilities to the IESO-Controlled Grid.

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14 Questions:

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- 16 a) Please identify the differences between the tasks normally undertaken by the IESO to
17 complete System Impact Assessments (SIA) versus the tasks the IESO proposes be
18 subject to the Reliable Integration Fee (RIF).
- 19 b) Please confirm if proponents are charged at any hourly rate of \$145/hr for the tasks the
20 IESO completes in support of SIAs and Technical Feasibility Studies.
- 21 i. If a different charge model is used, please describe the model.
- 22 c) Please describe how the IESO determined that a rate of \$145/hr was appropriate to
23 charge proponents of all applicable studies and assessments, including the requested
24 RIF.
- 25 d) Please identify the number of hours the IESO anticipates being required to fulfill the
26 tasks associated with a typical request subject to the RIF. Please confirm the total
27 amount that would be charged to the proponent for fulfillment of this typical request.
- 28 i. If each request is unique – i.e., a typical request does not exist – please provide
29 what the IESO considers to be a reasonable range of the number of hours and
30 costs that it anticipates incurring/charging to fulfil requests.
- 31 e) Please provide an estimate of the average amount charged by the IESO to proponents
32 for completion of SIAs.
- 33 f) On average, annually, what costs does the IESO incur to fulfil the tasks it proposes be
34 covered by the RIF?

1 **RESPONSE**

- 2 a) For System Impact Assessments (SIA) the tasks performed by IESO staff relate to
3 engineering studies that determine if connection of the proposed new or modified facility
4 results in any adverse impact on the reliability of the integrated power system and to
5 identify the upgrades necessary to mitigate any identified impact. For Reliable
6 Integration the tasks performed by IESO staff relate to integrating the new or modified
7 facility to the grid and wholesale market. This is accomplished by first verifying the as-
8 built data of the new or modified facility, including any upgrades that were identified
9 during the SIA. Next, a series of integrating activities are undertaken, including but not
10 limited to: confirming the performance of the new or modified facility, creating new or
11 updating existing system operating limits, and finally undertaking changes necessary in
12 IESO systems and tools used to maintain the reliability of the IESO-controlled grid and
13 to operate the IESO-administered markets.
- 14 b) Yes, the IESO currently charges the hourly rate of \$145/h for SIAs and Technical
15 Feasibility Studies.
- 16 c) The rate of \$145/h is the current IESO forecasted rate to recover labor and overhead
17 costs on an hourly basis. The labor costs represent the average total compensation per
18 working hours for the IESO as a general proxy for services rendered. The overhead rate
19 is in accordance with conclusions from the cost allocation study submitted as agreed to
20 in the IESO's 2017 Revenue Requirement Submission Settlement Agreement (EB-2017-
21 0150). The cost allocation study was filed as Exhibit C-3-1 of the IESO's 2018 Revenue
22 Requirement Submission (EB-2018-0143). See Table 1 below.

23
24 **Table 1: Breakdown of Rate of \$145/hr**

Category	\$/hour
Labor Costs	\$117
Recovery of Overhead	\$28
Total	\$145

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- 26 d) Given the high degree of variability in proponents' projects, it is not possible to provide
27 the number of hours anticipated to be spent on a typical request. Based on the IESO's
28 best estimates, it is expected that the majority of projects would incur costs that fall
29 within the ranges included in Table 2 below, which was provided to stakeholders in a
30 July 22, 2021 presentation during the IESO's engagement on the Cost Recovery for
31 Integrating System Changes.

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Table 2: Estimated Cost Ranges for Reliable Integration Fee

Type of Project	Indicative Cost	
	Low	High
Generation facility in non-congested area	\$30,000	\$70,000
Generation Facility in congested area	\$60,000	\$130,000
Load facility in non-congested area	\$20,000	\$40,000
Load facility in congested area	\$30,000	\$50,000
Transmission reinforcement or new transmission line	\$30,000	\$440,000
Small modifications	\$4,000	\$20,000
Registration only	\$2,000	\$10,000

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e) Over the past three years, the IESO has charged an average of \$40,000 to proponents for completion of an SIA. This average is not representative of a typical SIA cost, but rather an arithmetic result for a number of project costs ranging between \$2,000 and \$150,000 in accordance with the high degree of variability in the proponent's projects.

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f) The IESO estimated a maximum cost between \$1.6 million and \$3.0 million (assuming \$145/h). As explained in response to d) above, this number is highly dependent on the type of proponents' projects undergoing reliable integration during the year.

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1 **REASCWA INTERROGATORY 3**

2 Issue 3.1 Is the IESO’s proposal to charge proponents a Reliable Integration fee at an hourly
3 rate of \$145/hour for activities the IESO undertakes to reliably integrate new or
4 modified facilities to the IESO-Controlled Grid appropriate?

5 **3.1-REASCWA-3**

6 **INTERROGATORY**

7
8 Reference: Exhibit C, Tab 3, Schedule 1, Page 1 to 3

9 Preamble: Based on the increasing and significant supply resource needs required to maintain
10 the reliability of Ontario’s power system, significant amounts of new projects (e.g., generators,
11 energy storage, etc.) will need to site their projects, right size their projects, and work with the
12 IESO, transmitters, and distributors to connect their projects to the grid. Therefore, the IESO
13 proposed Reliable Integration Fee will add project development costs to these needed supply
14 resources.

- 15 a) Did the IESO research whether other Canadian and/or U.S. wholesale electricity market
16 and system operators (e.g., AESO, NYISO, ISO-NE, MISO, SPP, CAISO, ERCOT) charge
17 Reliable Integration Fees or similar? If so, please provide the results of this research,
18 including all comparable fees, charges, costs, etc. borne by project developers relating
19 to the market or system operator’s work to integrate projects to the grid.
- 20 b) Did the IESO research whether other Canadian and/or U.S. utilities (e.g., Hydro-
21 Québec, Nova Scotia Power, SaskPower, ConEdison, Eversource, TVA, Exel Energy,
22 PG&E, Duke Energy, etc.) charge Reliable Integration Fees or similar? If so, please
23 provide the results of this research, including all comparable fees, charges, costs, etc.
24 borne by project developers relating to the utility’s work to integrate projects to the grid.

25 **RESPONSE**

26 a) The IESO contacted a number of wholesale electricity market and system operators
27 around Canada and US and requested information on their cost recovery fees and
28 received answers from Manitoba Hydro, ISO-NE and NYISO. There are differences in the
29 processes used amongst jurisdictions based on the make-up of their systems but the
30 IESO’s outreach indicated that each have mechanisms for recovering costs incurred to
31 reliably integrate new or modified facilities into their system and market operations.

32 The IESO received the following responses from Manitoba Hydro, NE-ISO and NYISO
33 regarding their direct cost recovery practices:

- 34 i. Manitoba Hydro: no direct charges for connections, customers are fully
35 responsible for all cost pertaining to studies and system upgrades.
- 36 ii. NE-ISO: no direct charges for registration, customers pay for connection
37 assessments the actual cost of employee payroll plus a burden adder.

1 iii. NYISO: recovers cost for connection assessments, meter service administration
2 and deactivation (“de-registration”) of generators.

3 While variations exist in specific approaches, the survey responses indicate that the
4 framework being proposed by the IESO is generally aligned with that of neighbouring
5 jurisdictions.

6 b) See response to a).

1 **ED INTERROGATORY 9**

2 Issue 3.1 Is the IESO's proposal to charge proponents a Reliable Integration fee at an hourly
3 rate of \$145/hour for activities the IESO undertakes to reliably integrate new or
4 modified facilities to the IESO-Controlled Grid appropriate?

5 3.1-ED-9

6 **INTERROGATORY**

7 Reference: Exhibit C, Tab 3, Schedule 1

8 Preamble:

9 As set out in Exhibit A-1-2 – 2022 Submission, the IESO is requesting approval to charge
10 proponents a fee for the activities the IESO undertakes to reliably integrate new or
11 modified facilities to the IESO-Controlled Grid (ICG).

12 Question(s):

- 13 a) Please confirm whether the reliable integration fee will be applied to customers seeking
14 to connect to a local distribution company's grid.
- 15 b) Please defined the IESO-controlled grid and provide a map or figure differentiating the
16 ICG from electricity distribution systems.
- 17 c) Is there a MW threshold under which a project will would not be charged a reliable
18 integration fee?
- 19 d) Approximately how much would the IESO anticipate charging through the reliable
20 integration fee on an annual basis?
- 21 e) Approximately how much will the reliable integration fee cost on a per-project basis?
22 Please provide a response on a rough, best-estimate basis with caveats as necessary.
23 Please also differentiate by the size of the facility (MW).
- 24 f) Are certain kinds of generation more or less likely to raise reliability issues in the
25 connection assessments undertaken by the IESO through this fee?

26 **RESPONSE**

- 27 a) The Reliable Integration Fee will only be applied to distribution connected customers
28 that become market participants or have obligations to register with the IESO.
- 29 b) The IESO-Controlled Grid is defined in Chapter 11 of the Market Rules. It consists of the
30 transmission systems that operate at voltage levels higher than 50 kV and are owned
31 and/or operated by licensed transmitters. Electricity distribution systems operate at
32 voltage levels below 50 kV and are owned and/or operated by licensed distributors.

- 1 c) All new or modified connections to the IESO-Controlled Grid (voltage levels above 50 kV
2 at their point of connection) will be subject to the Reliable Integration Fee, irrespective
3 of their installed capacity. Also, new or modified connections to a distribution system
4 (voltage levels of less than 50 kV at their point of connection) that register with the
5 IESO to participate in the IESO-Administered Markets or market programs will be subject
6 to the Reliable Integration Fee, irrespective of their installed capacity.
- 7 d) See response to Schedule 1 – 3.1 OEB STAFF 16(f).
- 8 e) See response to Schedule 1 – 3.1 OEB STAFF 16(d).
- 9 f) No, reliability concerns are generally not related to the generation technology that is
10 seeking to connect, as the current technologies have the ability to meet or exceed the
11 performance requirements in the Market Rules. Reliability concerns are generally related
12 to the particularities of the grid in the area of the proposed connection.

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PWU INTERROGATORY 5

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Issue 3.1 Is the IESO’s proposal to charge proponents a Reliable Integration fee at an hourly rate of \$145/hour for activities the IESO undertakes to reliably integrate new or modified facilities to the IESO-Controlled Grid appropriate?

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3-PWU-5

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INTERROGATORY

7

Ref: Exhibit C/Tab 3/Schedule 1/Plus Attachment(s)/Page 1

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The reference indicates that the IESO is requesting approval to charge a Reliable Integration fee at an hourly rate to proponents for the activities to reliably integrate new or modified facilities and that these costs are currently socialized through the IESO’s usage fees.

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Question:

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- a) Please describe the reason for the change in the methodology of cost recovery for activities relating to integration of new or modified facilities

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RESPONSE

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- a) The IESO is proposing to implement a cost-causality approach for reliable integration, such that the proponent that triggers the costs is charged for those costs rather than have those costs socialized through the IESO’s Usage Fees. Given proponents will now pay directly for the reliable integration activities, the IESO anticipates the quality of data provided to the IESO will improve and increase the efficiency of integrating new or modified facilities.

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SEC INTERROGATORY 15

2 Issue 3.1 Is the IESO’s proposal to charge proponents a Reliable Integration fee at an hourly
3 rate of \$145/hour for activities the IESO undertakes to reliably integrate new or
4 modified facilities to the IESO-Controlled Grid appropriate?

5 3-SEC-15

6 **INTERROGATORY**

7 3.1-SEC-15 [C-3-1, p.1] With respect to the proposed Reliability Integration Fee:

- 8 a) For each of the last 3 years, how many new or modified facilities require reliability
9 integration activities? Does the Applicant expect that over time, the number of projects
10 will increase?
- 11 b) How much has the Applicant collected in fees related to connection assessments for
12 each of the last 3 years?
- 13 c) Once fully implemented, please provide the Applicant’s best estimate of the amount of
14 revenue expected to achieve on an annual basis.
- 15 d) The IESO states that the “[i]mplementation of this change is expected to be phased-in
16 during late 2022 or early 2023 following OEB approval of the fee and the required
17 updates to the Market Manuals.” Please explain the specific approval that the IESO is
18 seeking for the Reliability Integration Fee that would allow it to phase in the fee or
19 delay implementation as proposed, as opposed to being required to apply the fee when
20 any approval of the Applicant is made effective.

21 **RESPONSE**

22 a) See Table 1 below.

23 **Table 1: Registration Approval Notifications**

Year	Registration Approval Notifications Issued
2019	276
2020	406
2021	384

24 The IESO only currently tracks Registration Approval Notifications (RAN). Some new
25 or modified facilities may have multiple RANs, reflecting key milestones in the
26 integration process. Other new or modified facilities are documented in a single RAN.
27 Some reflect a few hours of effort, while others reflect effort that spans several

- 1 calendar years. Based on the anticipated supply needs over the next several years,
2 these numbers are expected to increase.
- 3 b) The IESO collected \$1.3 million in 2021, \$0.8 million in 2020 and \$0.9 million in 2019
4 under the connection assessments fee.
- 5 c) See response to Schedule 1 – 3.1 OEB STAFF 16(f).
- 6 d) The IESO is seeking approval to charge proponents a Reliable Integration fee at an
7 hourly rate of \$145/hour for activities the IESO undertakes to reliably integrate new
8 or modified facilities to the IESO-Controlled Grid. If approved by the OEB, while the
9 IESO would have the authority to charge the fee to proponents, the IESO will need to
10 make required updates to Market Manual 1.5: Market Registration Procedures in
11 order to operationalize the charging of the fee. This Market Manual contains the
12 procedures for reliable integration and will have to be updated to align with the new
13 approval.

1 **OEB STAFF INTERROGATORY 17**

2 Issue 3.2 Application Fee for Market Participation.

3 3-Staff-17

4 **INTERROGATORY**

5 Preamble: The market participation application fee is charged to organizations that wish to
6 participate in the IESO-administered market. The purpose of the fee is to compensate the IESO
7 for the administrative effort its employees expend to register and authorize market and
8 program participation. The current \$1,000 fee was last approved by the OEB in its decision on
9 the IESO’s 2020/2021 revenue requirement application.

10 OEB staff’s questions relate to whether a flat fee approach remains appropriate, given the
11 IESO’s recent requests for OEB approval to charge for comparable services on a cost recovery
12 basis as further described below.

13 The Application seeks OEB approval to charge a RIF that will allow the IESO to recover from
14 organizations the costs it incurs to reliably integrate new or modified facilities to the IESO-
15 controlled grid. The proposed RIF is \$145 per hour and would be calculated based on the total
16 number of hours taken to perform the reliable integration activities. The IESO states that:

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- 18 • the RIF fee proposal is consistent with the fees the IESO charges for System Impact
 - 19 Assessments and optional Technical Feasibility Studies¹, and
 - 20 • the objective of the RIF is to reduce cross-subsidization by identifying and recovering
 - 21 the costs directly attributable to a proponent seeking to reliably integrate its new or
 - 22 modified facilities into the IESO-controlled grid.²
- 23

24 In another instance, the IESO (in its capacity as the Smart Metering Entity) requested OEB
25 approval of a similar cost-recovery model in its application to provide third-party access to de-
26 identified electricity consumption data.³ Consistent with that proceeding’s settlement proposal,
27 the OEB decision established that the IESO would charge third parties a rate of \$145 per hour –
28 the IESO’s stated fully allocated labour cost – to complete both standard and non-standard data
29 requests.

30
31 Questions:
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¹ Application, C-3-1, p. 1.

² Application, C-3-1, p. 2.

³ EB-2021-0292

- 1 a) The market participation application, RIF and third-party access fees serve the same
2 purpose: to compensate the IESO for the costs it incurs to provide a service.
3 Accordingly, please describe why or why not it would be appropriate to transition the
4 market participant application fee from a flat to variable fee, consistent with the
5 requested RIF and OEB-approved third-party access charges.
- 6 b) Please identify the number of hours the IESO normally requires to complete the tasks
7 associated with a typical market participation application.
- 8 i. If each undertaking is unique – i.e., a standard number of hours isn't available –
9 please provide what the IESO considers to be a reasonable range of hours it
10 spends to fulfil requests.
- 11 c) In the IESO's view, are there reasons why a rate of \$145/hr would not be an
12 appropriate rate to apply to the activities it completes in support of the market
13 participation application fee? That is, would an hourly rate other than \$145/hr better
14 reflect the actual costs the IESO incurs to complete related tasks? If so, what rate would
15 the IESO propose and why does the IESO believe the alternative rate is more
16 appropriate.

17 **RESPONSE**

- 18 a) One of the principles the IESO cited in the Reliable Integration Fee stakeholder
19 consultation for the purpose of seeking cost recovery was materiality, and that the
20 administrative burden of charging the costs must not be greater than the cost recovered
21 from the proponent. For administrative simplicity, the IESO has not proposed to change
22 the flat market participation fee.
- 23 b) The effort to process a new organization or participation is typically about 7 hours.
- 24 c) See response to Schedule 1 – 3.1 OEB STAFF 16(c). While the rate of \$145/hr could
25 apply to the activities completed in support of the market participation application fee,
26 as outlined in response to a) and b), it would be administratively burdensome to track a
27 small number of hours and invoice market participants accordingly. For administrative
28 simplicity, and respecting the principle of materiality, the IESO has not proposed
29 changing the market participation fee.