



Independent Electricity  
System Operator

PROCEDURE

---

**Market Manual 2: Market Administration**

**Part 2.10: Connection  
Assessment and  
Approval**

---

**Issue 15.0**

**This document provides detailed procedures to be followed by *connection applicants* who wish to connect to the IESO-controlled grid.**

## Disclaimer

The posting of documents on this Web site is done for the convenience of *market participants* and other interested visitors to the *IESO* Web site. Please be advised that, while the *IESO* attempts to have all posted documents conform to the original, changes can result from the original, including changes resulting from the programs used to format the documents for posting on the Web site as well as from the programs used by the viewer to download and read the documents. The *IESO* makes no representation or warranty, express or implied that the documents on this Web site are exact reproductions of the original documents listed. In addition, the documents and information posted on this Web site are subject to change. The *IESO* may revise, withdraw or make final these materials at any time at its sole discretion without further notice. It is solely your responsibility to ensure that you are using up-to-date documents and information.

This *market manual* may contain a summary of a particular *market rule*. Where provided, the summary has been used because of the length of the *market rule* itself. The reader should be aware; however, that where a *market rule* is applicable, the obligation that needs to be met is as stated in the “*Market Rules*”. To the extent of any discrepancy or inconsistency between the provisions of a particular *market rule* and the summary, the provision of the *market rule* shall govern.

<b>Document ID</b>	MDP_PRO_0048
<b>Document Name</b>	Part 2.10: Connection Assessment and Approval
<b>Issue</b>	Issue 15.0
<b>Reason for Issue</b>	Issue released to include Demand Response Auction specifics
<b>Effective Date</b>	September 30, 2015

## Document Change History

Issue	Reason for Issue	Date
1.0	Board approved version released for Baseline 3	21 June, 2000
1.1	IMO Board approval	1 September, 2000
2.0	Board approved for Baseline 4.0	3 October, 2000
3.0	Released for Baseline 5.0	January 2, 2001
4.0	Issue released for Baseline 6.2	May 22, 2001
5.0	Issue released for Baseline 6.3	July 12, 2001
6.0	Issue released for Baseline 9.1	June 4, 2003
7.0	Issue released for Baseline 10.0	September 10, 2003
8.0	Issue released for Baseline 13.0	March 9, 2005
9.0	Issue released for Baseline 19.1	June 4, 2008
10.0	Issue released for Baseline 27.0	March 7, 2012
11.0	Issue released for Baseline 27.1	June 6, 2012
12.0	Issue released for Baseline 28.0	September 12, 2012
13.0	Issue issued for Baseline 30.1	December 4, 2013
14.0	Issue released for Baseline 32.0	September 10, 2014
15.0	Issue released in advance of Baseline 34.1 to include Demand Response Auction specifics	September 30, 2015

## Related Documents

Document ID	Document Title
N/A	

# Table of Contents

---

<b>Table of Contents</b> .....	<b>i</b>
<b>List of Tables</b> .....	<b>iv</b>
<b>Table of Changes</b> .....	<b>v</b>
<b>Market Manuals</b> .....	<b>1</b>
<b>1. Introduction</b> .....	<b>3</b>
1.1 Purpose.....	3
1.2 Scope.....	3
<b>2. Overview of the Connection Assessment and Approval Process</b> .....	<b>5</b>
2.1 Feasibility Study (Optional).....	5
2.2 System Impact Assessment/Expedited System Impact Assessment.....	6
2.2.1 System Impact Assessment.....	6
2.2.2 Expedited System Impact Assessment (ESIA).....	7
<b>3. Management of Connection Assessments</b> .....	<b>9</b>
3.1 Status of System Impact Assessment Applications List.....	9
3.2 Rules of Project Withdrawal.....	9
3.3 Queue Principles for Generation Projects.....	10
3.3.1 SIA Applications Received before April 30, 2005.....	10
3.3.2 SIA Applications Received On or After April 30, 2005.....	10
3.4 Loss of Queue Position.....	10
3.5 Milestones for Projects.....	11
<b>4. Criteria for Connection Assessments and Feasibility Studies</b> .....	<b>13</b>
<b>5. Responsibilities</b> .....	<b>15</b>
5.1 Connection Applicants.....	15
5.1.1 Distributor(s).....	16
5.2 Transmitter(s).....	16
5.3 Demand Response Auction Participants.....	17
5.4 IESO.....	17
5.5 Consultant (if applicable).....	18
<b>6. Submission and Response Methods</b> .....	<b>19</b>
<b>7. Feasibility Study</b> .....	<b>21</b>
7.1 Objectives.....	21
7.2 Scope.....	21
7.3 Submitting a Feasibility Study Application.....	21

7.3.1	Required Deposit .....	22
7.4	Missing Information and Information Clarification.....	22
7.5	Feasibility Study Agreement Execution.....	22
7.6	Timelines .....	23
7.7	Feasibility Study Report.....	23
7.8	Costs .....	23
<b>8.</b>	<b>System Impact Assessment .....</b>	<b>25</b>
8.1	Objectives.....	25
8.2	Scope .....	25
8.2.1	Basecase Assumptions.....	25
8.2.2	Other Studies .....	25
8.2.3	Consultants.....	26
8.3	IESO Study Activities.....	26
8.4	Submitting an SIA Application.....	26
8.4.1	Embedded Generators.....	27
8.4.2	Demand Response Auction.....	27
8.4.3	Required Deposit .....	28
8.5	Missing Information and Information Clarification.....	28
8.6	SIA Agreement Execution.....	28
8.6.1	Embedded Generators.....	29
8.6.2	Demand Response <i>Embedded Load Facilities</i> .....	29
8.7	Timelines .....	29
8.8	Final SIA Report .....	31
8.9	Notification of Conditional Approval or Notification of Disapproval with Reasons .....	31
8.10	Publication of the final SIA Report .....	31
8.11	Costs .....	32
<b>9.</b>	<b>Expedited System Impact Assessment.....</b>	<b>33</b>
9.1	Objectives.....	33
9.2	Guidelines for Determining if an ESIA is Appropriate .....	33
9.3	Submitting an Expedited SIA Application .....	34
9.3.1	Cost Recovery Agreement .....	34
9.4	Missing Information and Information Clarification.....	34
9.5	Timelines .....	34
9.6	ESIA Report .....	35
9.7	Notification of Conditional Approval, Notification of Final Approval or Notification of Disapproval with Reasons .....	35
9.8	Publication of ESIA Report .....	35
9.9	Costs .....	35
<b>10.</b>	<b>Project Status Reporting .....</b>	<b>37</b>

**11. Withdrawal ..... 39**

**12. Information Confidentiality..... 41**

**13. Connection Applicant Actions Subsequent to the Connection  
Assessment and Approval Process ..... 43**

**Appendix A: Procedural Steps ..... 45**

**Appendix B: Forms..... 63**

**References ..... 65**

Archive

# List of Tables

---

Table 3–A: Procedural Steps for the Feasibility Study (FS) .....46  
Table 3-B: Procedural Steps for the SIA.....51

Archive

## Table of Changes

---

Reference (Section and Paragraph)	Description of Change
Sections 1, 5 and 8	Added the requirements for <i>connection assessments</i> pertaining to demand response auction <i>facilities</i>

Archive



# Market Manuals

---

The *Market Manuals* consolidate the market procedures and associated forms, standards and policies that define the operation of the various areas within the *IESO-administered markets*. Market procedures provide more detailed descriptions of the requirements for various activities than are specified in the *Market Rules*. Where there is a discrepancy between the requirements in a document within a *Market Manual* and the *Market Rules*, the *Market Rules* shall prevail. Standards and policies appended to, or referenced in, these procedures provide a supporting framework.

## Market Procedures

The Market Administration Manual is Volume 2 of the *Market Manuals*, where this document forms Part 2.10: *Connection Assessment and Approval*.

A list of the other component parts of the Market Administration Manual is provided in Part 2.0: Market Administration Overview, in Section 2, About this Manual.

## Structure of Market Procedures

Each market procedure is composed of the following Sections:

1. **“Introduction”**, which contains general information about the procedure, including an overview, a description of the purpose and scope of the procedure, and information about roles and responsibilities of the parties involved in the procedure.
2. **“Procedural Work Flow”**, which contains a graphical representation of the steps and flow of information within the procedure.
3. **“Procedural Steps”**, which contains a table that describes each step and provides other detail related to each step.
4. **“Appendices”**, which may include such items as forms, standards, policies, and agreements.

## Conventions

The *market manual* standard conventions are as defined in the “Market Manual Overview” document. The standard conventions followed for *market manuals* are as follows:

- The word ‘shall’ denotes a mandatory requirement;
- Terms and acronyms used in this *market manual* including all Parts thereto that are italicized have the meanings ascribed thereto in Chapter 11 of the “*Market Rules*”;
- Double quotation marks are used to indicate titles of legislation, publications, forms and other documents.

Feasibility Study means an optional study that the *IESO* can perform at the request of a *connection applicant* to assess the technical acceptability of a new or modified connection to the *IESO-controlled grid* and to identify alternate or preferable options with respect to the *reliability* of the *integrated power system*.

System Impact Assessment (SIA) means a mandatory assessment conducted by the *IESO* pursuant to Section 6.1.5, Chapter 4 of the *market rules* to assess the impact of a new connection to the *IESO-controlled grid* or the modification of an existing connection to the *IESO-controlled grid* on the *reliability* of the *integrated power system*.

Expedited System Impact Assessment (ESIA) means a System Impact Assessment conducted by the *IESO* pursuant to Section 6.1.5, Chapter 4 of the *market rules* that only requires a simple study since it is expected to have no impact, or minimal impact on the *reliability* of the *integrated power system*.

*Connection applicant* has the meaning defined in Chapter 11 of the *Market Rules*;

Project means the new or modified *connection* to the *IESO controlled grid* that is the object of a *request for connection assessment* or request for a feasibility study, as applicable.

Regulated completion target(s) means the timelines the *IESO* must meet when providing the *connection assessment* results for specific project types as defined by regulation(s) made under the *Electricity Act, 1998* (i.e. Ontario regulation 326/09).

**- End of Section -**

# 1. Introduction

---

In accordance with the *market rules*, chapter 4, section 6, anyone planning to establish or modify a connection to the *IESO-controlled grid* must obtain *IESO* approval through the *Connection Assessment and Approval (CAA)* process. The CAA process allows the *IESO* to assess the impact of new or modified connections to the *IESO-controlled grid* on the *reliability* of the *integrated power system*.

A new or modified connection to the *IESO-controlled grid* includes, but is not limited<sup>2</sup> to:

- the connection of a new or modified *generation facility* or the connection of a new or modified *embedded generation facility* greater than 10 MW;
- the connection of a new or modified *transmission facility*;
- the connection of a new or modified *load facility* or an onetime addition of load greater than 10 MW;
- a new or an existing *load facility* (transmission connected *load facility* or *embedded load facility*) providing *demand response capacity* greater than 10 MW at the *IESO-controlled grid* connection point;
- the modification of protection systems; and
- the connection of a new or modified *ancillary services facility*.

A *connection applicant* does not have to be a *market participant* in order to apply for *connection assessment* and approval; however, the required *IESO* Market Entry process must be completed prior to participation in the *IESO-administered markets*<sup>1</sup>.

## 1.1 Purpose

This document is a guide for *connection applicants* seeking the *IESO*'s approval to establish or modify a connection to the *IESO-controlled grid*, in accordance with the *Market Rules*, Chapter 4, Section 6.

## 1.2 Scope

This procedure provides a *connection applicant* with the required steps as well as an understanding of the roles played by the *connection applicant*, the *IESO*, consultants, the affected *distributor(s)* and the affected *transmitter(s)*. Work flows and procedural steps described in this document serve as a road map for *connection applicants*, *transmitters* and the *IESO*, and reflect the requirements set out in the *market rules*, applicable standards and *IESO* policies and procedures. The overview information in Section 2, provided for context purposes only, highlights the main actions that comprise the procedure.

---

<sup>2</sup> If in doubt, *connection applicants* are encouraged to contact the *IESO* for clarification.

Anyone who wishes to participate in the *IESO-administered markets* or that causes or permits electricity to be conveyed into, through or out of the *IESO-controlled grid* must complete the *IESO Market Entry* process. For information about being authorized as a *market participant*, refer to *Market Manual 1: Market Entry, Maintenance & Exit, Part 1.1: Participant Authorization, Maintenance & Exit*. For detailed *facility* registration procedures, refer to *Market Manual 1: Market Entry, Maintenance & Exit, Part 1.2: Facility Registration, Maintenance and De-registration*.

**- End of Section -**

Archive

---

<sup>1</sup> Before applying to the *IESO* for a connection assessment, *connection applicants* are strongly advised to initiate discussions with the affected *transmitter*.

## 2. Overview of the Connection Assessment and Approval Process

---

The System Impact Assessment (SIA) is a mandatory assessment conducted by the *IESO* pursuant to Section 6.1.5, Chapter 4 of the *market rules* to assess the impact of a new connection to the *IESO-controlled grid* or the modification of an existing connection to the *IESO-controlled grid* on the reliability of the *integrated power system*. If the *IESO* determines, based on the guidelines outlined in section 9.2, that a detailed study is not required, an Expedited System Impact Assessment (ESIA), which involves a simple study, will be performed.

The objective of the SIA/ESIA is to ensure the *reliability* of the *IESO-controlled grid* is not compromised. When completed, it provides the *connection applicant* with an SIA/ESIA report and Notification of Conditional Approval or a Notification of Disapproval with Reasons for the project as submitted to the *IESO*.

Before submitting the request for *connection assessment*, *connection applicants* may request a Feasibility Study, which is an optional and confidential study that the *IESO* performs at the request of a *connection applicant* to assess the technical acceptability of a new or modified connection to the *IESO-controlled grid*, or to identify alternate or preferable options with respect to the *reliability* of the *integrated power system*.

*Connection applicants* may choose to engage a consultant to perform *connection assessment* studies that would normally be performed by the *IESO*. The *IESO* will make use of the consultant's study results to the fullest extent possible when conducting the assessment.

The CAA process involves specific timelines that are specified by this document or regulated under the *Electricity Act, 1998*. While the *IESO*, the affected *transmitter(s)*, or the *connection applicant* may request an extension, any variation in the timing specified in this document requires the prior agreement of all affected parties to the extent allowed by the regulations made under the *Electricity Act, 1998*.

An overview of each of the above assessment types is provided below. Comprehensive descriptions are provided in sections 7, 8 and 9.

### 2.1 Feasibility Study (Optional)

To initiate a Feasibility Study, the *connection applicant* completes the appropriate Feasibility Study application form which can be found on the *IESO* Web site at <http://www.ieso.ca/imoweb/connassess/ca.asp> (see Appendix C: Forms).

Upon receipt of the appropriate application, the associated documents and the required deposit, the *IESO* and the *connection applicant* negotiate a Scope of Work, including timelines, and execute a Feasibility Study agreement based on the template located on the *IESO* Web site at: [http://www.ieso.ca/imoweb/pubs/forms/IMP\\_AGR\\_0001-FS-Agreement.pdf](http://www.ieso.ca/imoweb/pubs/forms/IMP_AGR_0001-FS-Agreement.pdf). Due to its optional nature, there are no regulated completion target(s) for Feasibility Studies.

Following the execution of the Feasibility Study agreement the *IESO* conducts the Feasibility Study within the timeline agreed upon. Upon completion, the *IESO* issues a Feasibility Study report to the *connection applicant* and an *invoice* detailing the total costs and expenses associated with the Feasibility Study. If the costs and expenses are less than the deposit amount, the *IESO* will issue a refund to the *connection applicant*.

Since the Feasibility Study is confidential, the Feasibility Study report and associated information will not be posted on the *IESO* Web site.

## 2.2 System Impact Assessment/Expedited System Impact Assessment

To initiate a request for *connection assessment*, the *connection applicant* completes the appropriate SIA application form which can be found on the *IESO* Web site at <http://www.ieso.ca/imoweb/connaassess/ca.asp> (see Appendix C: Forms).

In its response, the *IESO* will identify any additional information necessary to determine whether an SIA or ESIA is required<sup>4</sup> based on the guidelines described in Section 9.2. The *IESO* will notify the *connection applicant* if an SIA or an ESIA is required normally within five *business days* following receipt of all necessary information. The following two sections describe the processes associated with SIA and ESIA.

### 2.2.1 System Impact Assessment

Upon receipt of the required deposit and the associated documents, the *IESO* and the *connection applicant* negotiate a Scope of Work and execute an SIA agreement based on the template located on the *IESO* Web site at: [http://www.ieso.ca/imoweb/pubs/forms/IMP\\_AGR\\_0002-SIA-Agreement.pdf](http://www.ieso.ca/imoweb/pubs/forms/IMP_AGR_0002-SIA-Agreement.pdf). Upon execution of the SIA agreement, the project is posted on the Status of System Impact Assessment Applications list as described in section 3.1.

The *IESO* conducts an SIA within the timeline agreed upon with the *connection applicant*, which cannot exceed the regulated completion target(s)<sup>5</sup>. Upon completion, the *IESO* issues an SIA report and either a Notification of Conditional Approval or a Notification of Disapproval with Reasons for the project to the *connection applicant* and the affected *transmitter(s)*.

Upon completion, the SIA report will be posted on the *IESO* Web site as described in section 3.1.

The *IESO* then sends an *invoice* to the *connection applicant* detailing the total costs and expenses associated with the SIA, which includes the affected *transmitter(s)* costs as invoiced to the *IESO*. If the total costs and expenses are less than the deposit amount the *IESO* will issue a refund to the *connection applicant*.

---

<sup>4</sup> Due to their nature and complexity, connection applications for renewable energy *generation facilities*, as defined by Ontario *Regulation 328/09*, or other type of facility that has a regulated delivery timeline of the connection assessment, without exception, require an SIA.

<sup>5</sup> An example would be connection assessments for Renewable Energy *Generation Facilities* that, under Ontario *Regulation 326/09*, must be delivered within 150 days from receipt of a complete application.

The *connection applicant* must inform the *IESO* when their design and equipment procurement processes are concluded and provide the updated project related information. The *IESO* will analyze the final project specifications and indicate if the post-SIA changes need to be addressed in an addendum to the final SIA report.

The addendum to the final SIA report will be posted on the *IESO* web site as described in section 3.1.

Any subsequent costs incurred by the *IESO*, e.g. post-SIA changes to the project requested by the *connection applicant* that result in addenda to the SIA report, or *IESO* support and participation in regulatory proceedings will be separately invoiced to the *connection applicant*.

## 2.2.2 Expedited System Impact Assessment (ESIA)

Upon receipt of the appropriate application and the documents containing all relevant technical information and project details, the *IESO* will determine whether the project meets the ESIA guidelines described in Section 9.2. A Cost Recovery agreement which includes an obligation by the *connection applicant* to pay all costs and expenses incurred by the *IESO* in performing the assessment and preparing the ESIA report will be executed with each unique *connection applicant*.

The *IESO* then conducts an ESIA within the timeline agreed upon with the *connection applicant*. Upon completion, the *IESO* issues an ESIA report and either a Notification of Conditional Approval, a Notification of Final Approval or a Notification of Disapproval with Reasons for the project to the *connection applicant* and affected *transmitter(s)*.

The ESIA report will be posted on the *IESO* Web site as described in section 3.1.

The *IESO* sends an *invoice* to the *connection applicant* every quarter, if applicable, detailing the total costs and expenses associated with conducting all ESIA's for that *connection applicant* in the previous quarter, or quarters, if necessary.

**- End of Section -**

Archive



## 3. Management of Connection Assessments

---

### 3.1 Status of System Impact Assessment Applications List

A project will be placed on the “Status of System Impact Assessment Applications” [list](#) on the *IESO* Web site after the associated SIA or ESIA agreement has been executed by the *IESO*. This list contains all transmission, load, generation and *ancillary services* projects that have submitted an SIA application and have executed an associated SIA or ESIA agreement.

The list contains SIA status information and hyperlinks to completed SIA/ESIA reports, and is updated on a monthly basis<sup>6</sup> to reflect new entries and status changes.

### 3.2 Rules of Project Withdrawal

These rules of withdrawal are applicable to the projects referred to in Section 3.1.

1. A project will be withdrawn if a *connection applicant* submits a Notification of Withdrawal based on the template listed on the *IESO* Web site at [http://www.ieso.ca/imoweb/pubs/forms/IMO\\_FORM\\_1073-WithdrawalNotification.doc](http://www.ieso.ca/imoweb/pubs/forms/IMO_FORM_1073-WithdrawalNotification.doc); or
2. A project will be deemed by the *IESO* to have been withdrawn if:
  - a *connection applicant* declares that there is no intention to complete the project;
  - a *connection applicant* fails to respond to two consecutive requests made by the *IESO* for submission of a project status report in accordance with Section 10;
  - a *connection applicant* fails to meet milestones described in Section 3.5;
  - a *connection applicant* proposes any of the following changes that would have the potential to result in an unacceptable impact on the *reliability* of the *integrated power system*, or an adverse impact on other projects:
    - a change in *generation unit* active or reactive output capacity, or an increase in active or reactive peak load;
    - a change in the transmission *facilities* ratings;
    - a modification to the *connection point*, or *connection facilities*; or
    - a change to the normal mode of operation of the *connection facilities*.

---

<sup>6</sup> The *IESO* targets the last business day of each month to update this list. Connection Applicants with different targets for report *publishing* should contact the *IESO* in advance to arrange for off schedule updates.

A *connection applicant* may consider submitting a new request for *connection assessment* if the project is deemed withdrawn by the *IESO*.

In all cases listed at item 2 above the *IESO* will issue a Notification of Deemed Withdrawal (IMO\_FORM\_1049) to the *connection applicant*.

### 3.3 Queue Principles for Generation Projects

Transmission and load projects are not assigned a queue position. Generation projects will be assigned a queue position as described below. Different queue principles are applied to generation projects depending on whether the SIA application was received before or after April 30, 2005.

#### 3.3.1 SIA Applications Received before April 30, 2005

Independent of their type, SIA applications received before April 30, 2005 were assigned a sequential queue position based on the SIA agreement date. If a *connection applicant* had submitted more than one SIA application for a given site, each SIA application was assigned the same queue position.

A queue position does not confer rights to physical transmission capacity. However, a project earlier in the queue will not be financially disadvantaged in the *IESO-administered markets* as the result of a project later in the queue connecting first. This queue position confers the financial equivalent to physical transmission capacity rights for projects earlier in the queue that do not trigger the need for *reliability*-related transmission upgrades.

A generation project will receive a “Yes” in the “Committed” column of the “Status of System Impact Assessment Applications” list when it is deemed to be committed. A generation project is deemed to be committed by the *IESO* when the *connection applicant* has signed a power purchase contract or a Connection Cost Recovery Agreement (CCRA) with the *transmitter*.

#### 3.3.2 SIA Applications Received On or After April 30, 2005

SIA applications for generation projects received on or after April 30, 2005 are assigned a sequential queue position when the *connection applicant* signs a power purchase contract or a CCRA with the *transmitter* (it is then deemed “committed”).

The date used to assign the queue position is based on either the power purchase contract date or the CCRA date, but cannot be earlier than the SIA agreement execution date. All generation projects that are successful in a procurement process will be treated as having the same queue date as the date when the results of the procurement process are announced.

At the time a generation project is assigned a queue position, it receives a “Yes” in the “Committed” column of the Status of System Impact Assessment Applications list.

### 3.4 Loss of Queue Position

A generation project that has a “committed” status will lose that status when the project goes in service, is withdrawn as described in section 3.2, or upon cancellation of its power purchase contract or CCRA agreement with the *transmitter*.

### 3.5 Milestones for Projects

A project needs to meet the following milestones to demonstrate ongoing project viability and a *connection applicant's* commitment to complete the project:

1. The *connection applicant* has entered into a CCRA agreement with the *transmitter* either within 24 months from the completion of the SIA or by October 1<sup>st</sup>, 2014, whichever date is later; and
2. The *connection applicant's* project must be in-service within 36 months of signing the CCRA agreement with the *transmitter*.

If a milestone cannot be met due to circumstances beyond the *connection applicant's* control, the *connection applicant* may request an extension with the *IESO* by initiating a request email to [connection.assessments@ieso.ca](mailto:connection.assessments@ieso.ca). If an extension is not granted the project will be deemed withdrawn.

The *connection applicant* must confirm that a milestone has been met by notifying the *IESO* at [connection.assessments@ieso.ca](mailto:connection.assessments@ieso.ca).

- End of Section -

Archive

## 4. Criteria for Connection Assessments and Feasibility Studies

---

The criteria used by the *IESO* for *connection assessments* are contained in the "Ontario Resource and Transmission Assessment Criteria" posted on the *IESO* Web site at

[http://www.ieso.ca/imoweb/pubs/marketAdmin/IMO\\_REQ\\_0041\\_TransmissionAssessmentCriteria.pdf](http://www.ieso.ca/imoweb/pubs/marketAdmin/IMO_REQ_0041_TransmissionAssessmentCriteria.pdf)

and any applicable *NPCC* and *NERC* reliability standards.

- End of Section -

Archive

## 5. Responsibilities

---

The *IESO* is responsible for the overall administration and coordination of the CAA process. Depending on the assessment type, the *connection applicants*, *transmitter(s)*, the *IESO* and consultants have specific responsibilities as described below.

### 5.1 Connection Applicants

*Connection applicants* are required to:

1. initiate the request for *connection assessment* by submitting the appropriate SIA application form to the *IESO*, including the required deposit for generator *connection facilities*, transmission *connection facilities*, load *connection facilities* or *ancillary service facilities*, as described in this document;
2. review and provide comments to the *IESO* on the proposed Scope of Work prepared by the *IESO* for the applicable assessment type;
3. execute with the *IESO*, based on the type of assessment required, a Feasibility Study agreement, an SIA agreement or a Cost Recovery agreement for an ESIA;
4. submit responses to *IESO* requests for missing or supplementary information or clarification;
5. review and provide comments to the *IESO* on Feasibility Study reports or SIA reports;
6. adhere to the time lines stipulated in this document;
7. submit requests for time extensions, if required;
8. engage consultants to perform *connection assessment* studies, if applicable;
9. pay, upon receipt of an *invoice*, the costs and expenses incurred by the *IESO* and affected *transmitter(s)* in conducting the SIA or ESIA, and if applicable, in supporting and participating in regulatory proceedings associated with the *connection applicant's* project;
10. pay, upon receipt of an *invoice*, the costs and expenses incurred by the *IESO* in conducting the Feasibility Study;
11. provide project status reports when requested by the *IESO*; and
12. confirm when Section 3.5 milestones are met.

If a *connection applicant* retains a consultant to perform *connection assessment* studies, the *connection applicant* and their consultant are required to execute a non-disclosure agreement with the *IESO*.

### 5.1.1 Distributor(s)

*Distributor(s)* are required to:

1. initiate the request for *connection assessment* by submitting the appropriate SIA application for embedded generation projects greater than 10 MW, including the required deposit to the *IESO* on behalf of the *generator*, as required by the Distribution System Code<sup>7</sup>;
2. initiate the request for *connection assessment* by submitting the appropriate SIA application, including the required deposit, when the *IESO* informs the *demand response auction participant* that a *connection assessment* is required for a new or an existing *embedded load facility* providing a *demand response capacity* greater than 10 MW at the *IESO-controlled grid* connection point;
3. review and provide comments to the *IESO* on the proposed Scope of Work prepared by the *IESO* for the embedded generation project;
4. execute the SIA agreement with the *IESO*;
5. submit to the *IESO* a copy of the *distribution system* Impact Assessment provided for in the Distribution System Code as part of the SIA application; and
4. complete other applicable responsibilities identified in section 5.1.

### 5.2 Transmitter(s)

*Transmitter(s)* are required to:

1. provide *transmission system facilities* ratings<sup>8</sup> to the *IESO* on request;
2. assess the expected impact of project(s) on the *IESO-controlled grid* short circuit levels and protections when requested by the *IESO*;
3. assess compliance of the project with the Transmission System Code<sup>9</sup>, to the extent possible, based on the *connection applicant's* submission;
4. assess the expected impact of the project on the *reliability* of existing *transmission customers* via the Customer Impact Assessment (CIA), provided for in section 6.4 of the Transmission System Code;
5. submit the results of the CIA provided for in section 6.4 of the Transmission System Code to the *IESO* within an agreed-upon timeframe<sup>10</sup> consistent with the schedule for the SIA; and
6. prepare and issue *invoices* to the *IESO* to cover the costs of studies requested by the *IESO*, as applicable.

---

<sup>7</sup> In the event of any inconsistency between this Manual and the Distribution System Code, the Distribution System Code shall prevail to the extent of the inconsistency.

<sup>8</sup> Includes: line ratings, transformer ratings, breaker ratings, etc.

<sup>9</sup> In the event of any inconsistency between this Manual and the Transmission System Code, the Transmission System Code shall prevail to the extent of the inconsistency.

<sup>10</sup> For project types that have regulated completion targets, the *transmitter* must submit the CIA report to the *IESO* within the regulated timelines.



### 5.3 Demand Response Auction Participants

The *Demand Response Auction Participants* are required to:

1. initiate the request for *connection assessment* by submitting the appropriate SIA application form to the *IESO*, including the required deposit, when the *IESO* decides that a *connection assessment* is required for a new or an existing transmission-connected *load facility* providing *demand response capacity* greater than 10 MW; and
2. engage the *distributor* to request a *connection assessment* when the *IESO* informs the participant that a *connection assessment* is required for a new or an existing *embedded load facility* providing *demand response capacity* greater than 10 MW at the *IESO-controlled grid* connection point.

### 5.4 IESO

The *IESO* is required to perform some or all of the following depending on the assessment type:

1. inform the *demand response auction participant* if a *connection assessment* is required or not in response to a request from the *demand response auction participant*;
2. acknowledge and process all *requests for connection assessment* and related submissions;
3. inform the *connection applicant* of the assessment type to be followed;
4. provide the *connection applicant* a CAA ID number for the project(s);
5. review project data and issue requests for missing or supplementary information or clarification;
6. inform the affected *transmitter(s)* of the project;
7. inform the *connection applicant* of the requirement to contact the *transmitter* regarding the Customer Impact Assessment process;
8. establish the Scope of Work and execute with each *connection applicant*, based on the type of assessment required, a Feasibility Study agreement, an SIA agreement or a Cost Recovery agreement for ESIA;
9. place the project on the project list as described in section 3.1;
10. respect the time lines negotiated with the *connection applicant*, regulated under the *Electricity Act, 1998*, or otherwise stipulated within this document;
11. record all costs and expenses incurred in performing all *connection assessment* activities and, if applicable, in supporting and participating in regulatory proceedings associated with the *applicant's* project;
12. schedule and perform study activities;
13. in consultation with the affected *transmitter(s)*, prepare and negotiate the Scope of Study for short circuit analysis, if applicable;
14. inform the affected *transmitter(s)* of the SIA's findings, including *transmission system* reinforcement requirements, if applicable;
15. issue SIA or ESIA reports to the *connection applicant* and affected *transmitter(s)*;
16. if required by applicable standards or *operating agreements*, issue the SIA or ESIA reports to other affected internal and external entities;

17. issue Feasibility Study reports to the *connection applicant*;
18. *publish* the status of SIA/ESIA applications and reports on the *IESO* Web site as described in Section 3;
19. issue a Notification of Conditional Approval, a Notification of Final Approval or a Notification of Disapproval with Reasons for the project that was subject to an SIA/ESIA;
20. support and participate, as required, in regulatory proceedings related to Leave to Construct applications for the project;
21. issue *invoices* pertaining to performing all *connection assessment* activities and in supporting and participating in regulatory proceedings associated with the *connection applicant's* project; and
22. include, where applicable, projects in the baseline assumptions for future *IESO connection assessments* and other *IESO* forecast and *adequacy* studies.

If a *connection applicant* retains a consultant to perform SIA studies, the *IESO* is required to:

23. execute a non-disclosure agreement with the *connection applicant* and the consultant;
24. develop a Scope of Study for the consultant;
25. meet with the consultant to discuss the Scope of Study, as well as the reporting requirements and related assumptions that will be required; and
26. provide basecase, dynamic data and other data as may be required.

## 5.5 Consultant (if applicable)

If a *connection applicant* retains a consultant to perform SIA studies, the consultant is required to:

1. execute a non-disclosure agreement with the *connection applicant* and the *IESO*;
2. perform SIA studies in accordance with the Scope of Study developed by the *IESO*; and
3. prepare a study report in accordance with the reporting requirements identified in the Scope of Study.

- End of Section -

## 6. Submission and Response Methods

The CAA process requires the submission of various types of information. The preferred method of correspondence is via email to [connection.assessments@ieso.ca](mailto:connection.assessments@ieso.ca).

All application forms should be submitted by email<sup>11</sup>. Hard copies of the application forms and supporting documents are not required. Where the supporting documentation (e.g. single line diagram) is not suitable for email submission, it should be submitted by mail or courier to the following address.

IESO  
Attn. Connection Assessments  
2635 Lakeshore Rd. West  
Mississauga, ON  
L5J 4R9

The required deposit for a *connection assessment* can be made by cheque or by *electronic funds transfer* as per the details on the appropriate application form. If the required deposit is made by cheque it must be accompanied by a copy of the application.

The *IESO* will correspond with the *connection applicant* via email for requests or general notifications, and via mail or courier if an original *IESO* signature is involved. In cases in which a document bearing a signature is required, an electronic copy shall constitute a good-faith assurance that the signed document is forthcoming and the CAA process may continue.

The CAA process requires an extensive exchange of information between the *IESO* and the *connection applicant*, necessitating a large number of emails and telephone calls. Unless any of the parties requests otherwise, emails and phone calls will not require a follow-up paper copy.

**- End of Section -**

---

<sup>11</sup> To the extent possible, the documents and drawings should be submitted in .pdf format. Signed documents should be scanned in .pdf format. Connection applicants intending to send documents in a different format are encouraged to contact the *IESO* in advance.

Archive

## 7. Feasibility Study

---

### 7.1 Objectives

A Feasibility Study is an optional study *connection applicants* can request from the *IESO*. The purpose of the Feasibility Study is to:

1. identify general issues and concerns associated with a project(s) that may affect its feasibility;
2. identify the preferred connection alternative from an *integrated power system reliability* point of view; and
3. assist the *connection applicant* in finalizing high-level design details such as the *connection point* or the configuration of *facilities*, before applying for an SIA.

It is the responsibility of the *connection applicant* and the *IESO* to carry out the relevant responsibilities described in section 5.

The exchange of information between the *connection applicant* and the *IESO* will follow the methods described in section 6.

### 7.2 Scope

The scope and timing of each Feasibility Study will be negotiated with the *connection applicant*, and will be based on the particular issues and concerns associated with the project under consideration.

*Connection applicants* may choose to engage a consultant to perform *connection assessment* studies. Upon request by a *connection applicant*, the *IESO* will provide a list of consultants who have indicated an interest in performing *connection assessment* studies. The *IESO* does not give any assurances regarding the performance of any consultant, nor does it assume any liability for performance by a consultant.

### 7.3 Submitting a Feasibility Study Application

A Feasibility Study is initiated by the submission of a Feasibility Study application package to the *IESO*, comprised of the appropriate completed Feasibility Study application form, the appropriate supporting documentation including a single-line diagram(s), and the required deposit as described in Section 7.3.1. The Feasibility Study application form (see Appendix C, Forms) can be downloaded from the *IESO* Web site at [http://www.ieso.ca/imoweb/connassess/caa\\_process.asp](http://www.ieso.ca/imoweb/connassess/caa_process.asp). It should be noted that there are specific Feasibility Study application forms for generator *connection facilities*, transmission *connection facilities*, load *connection facilities* or *ancillary service facilities*, respectively. The Feasibility Study application package must be submitted as described in section 6.

Relevant sections of this Feasibility Study application form must be completed, signed by an authorized representative of the *connection applicant* and submitted to the *IESO* with the required deposit.

Upon receipt of a Feasibility Study application package and the required deposit, the *IESO* will assign an ID number with the format YEAR-*nnn*, where the first four digits represent the year the Feasibility Study application was received, and the three digits following the year are a sequential number. The *IESO* then sends an email to the *connection applicant* acknowledging receipt of the Feasibility Study application and providing the ID number, normally within five *business days*. The ID number is to be referenced in all subsequent steps in the Feasibility Study process pertaining to the particular project.

### 7.3.1 Required Deposit

A deposit of \$20,000 must be remitted against the anticipated cost and expense of the Feasibility Study. Final costs are calculated after completion of the Feasibility Study, and an *invoice* is issued to the *connection applicant*, as described in Section 7.8. No guarantee is given that the final costs will be less than the deposit amount.

Feasibility Study applications submitted to the *IESO* with an *electronic funds transfer* will not be processed until the *IESO* confirms that the deposit has been received.

## 7.4 Missing Information and Information Clarification

If the *IESO*'s review of the submitted material reveals that any information is missing or requires clarification, the *connection applicant* will receive a request for additional information or clarification. If the *connection applicant* cannot provide specific equipment data, the *IESO*, in consultation with the *connection applicant*, may propose suitable typical values to be used in the Feasibility Study.

## 7.5 Feasibility Study Agreement Execution

The execution of a Feasibility Study agreement between the *IESO* and the *connection applicant* consists of the following steps:

1. When the *IESO* determines the information contained in the Feasibility Study application package is complete and the required deposit has been paid, the *IESO* prepares the draft Scope of Work for the Feasibility Study to be negotiated with the *connection applicant*. This Scope of Work is attached as Schedule 1 to the Feasibility Study agreement;
2. The *IESO* sends an undated copy of the Feasibility Study agreement, including a proposed Scope of Work, to the *connection applicant*;
3. Normally, within ten *business days* of the receipt of the Feasibility Study agreement from the *IESO*, the Scope of Work is negotiated between the *IESO* and the *connection applicant*. Once

the Scope of Work is agreed upon, the *connection applicant* prints, signs and returns to the *IESO* a scanned copy<sup>12</sup> of the Feasibility Study agreement;

4. The *IESO* produces two paper copies of the Feasibility Study agreement based on the files received from the *connection applicant*.
5. The *IESO* Chief Operating Officer (COO), or designate, signs each copy, and assigns a date to the Feasibility Study agreement (the agreement execution date).
6. Normally within ten *business days* of receipt of the Feasibility Study agreement signed by the *connection applicant*, the *IESO* mails one copy of the executed and dated Feasibility Study agreement to the *connection applicant*.
7. Any subsequent revisions to Schedule 1 (Scope of Work) that are agreed upon by the *connection applicant* and the *IESO* will be subject to the terms and conditions of the Feasibility Study agreement.

## 7.6 Timelines

The completion date for a Feasibility Study is negotiated between the *IESO* and the *connection applicant* as part of the Scope of Work. It depends on factors such as the agreed-upon set of study activities, the complexity of the project, and the availability of *IESO* resources.

## 7.7 Feasibility Study Report

The Feasibility Study report will indicate the following:

1. whether the project(s) satisfies applicable criteria, and areas where deficiencies have been noted;
2. significant issues or concerns associated with the project(s), and possible measures to address the issues or concerns;
3. advice with respect to a more preferable *connection point* or *facility* configuration;
4. potential requirements for new or modified system *facilities*; and
5. any specific issues that require further consideration in a subsequent SIA.

Due to its confidential nature, a Feasibility Study report will not be posted on the *IESO* Web site.

## 7.8 Costs

Once the Feasibility Study report has been issued, the *connection applicant* will receive an *invoice* from the *IESO* to cover the total costs and expenses incurred by the *IESO* in conducting the Feasibility Study. If the total costs and expenses are less than the deposit amount, the *connection applicant* will receive a refund for the difference.

The *IESO* will normally update the *connection applicant* during the 2<sup>nd</sup> and 4<sup>th</sup> quarters of the year of the estimated assessment costs and expenses incurred to date. The *connection applicant*

---

<sup>12</sup> *Connection applicants* that require original signatures on the FS agreement must mail or courier two signed paper copies to the *IESO* for execution.

can then decide whether or not to continue with the Feasibility Study. The costs and expenses provided by the *IESO* will be backdated two to four weeks due to the *IESO*'s internal financial processing schedules.

If the *connection applicant* withdraws or is deemed to have withdrawn its Feasibility Study application before the completion of the assessment, the *connection applicant* will receive an *invoice* from the *IESO* to cover the total costs and expenses incurred by the *IESO* in conducting the Feasibility Study up to and including the date of the *IESO*'s receipt of a Notification of Withdrawal. If the total costs and expenses are less than the deposit amount, the *connection applicant* will receive a refund for the difference.

Details of the cost recovery mechanism are found in the [Feasibility Study agreement template](#).

**- End of Section -**



## 8. System Impact Assessment

---

### 8.1 Objectives

An SIA is a mandatory phase of the CAA process. SIAs are conducted to determine the impact of projects on the *reliability* of the *integrated power system* and to identify enhancements to the *transmission system* that would be required by the *IESO* in order to mitigate any adverse *reliability* impacts. SIAs are conducted with input from the affected *transmitter(s)* and in consultation with the *connection applicant*.

It is the responsibility of the *connection applicant*, the affected *transmitter(s)* and the *IESO* to carry out the relevant responsibilities described in section 5.

The exchange of information between the *connection applicant* and the *IESO* will follow the methods described in section 6.

### 8.2 Scope

SIAs focus is on *reliability* issues related to the *integrated power system*. Studies are conducted to assess the extent to which all applicable assessment criteria noted in Section 4 are met, and where this is not the case, to identify the mitigating measures required by the *IESO*.

In an SIA, a single project, or a portfolio of projects, is assessed to determine the impact of the project or portfolio of projects on the *reliability* of the *integrated power system*, and to identify the *transmission system* upgrades required to mitigate any negative *reliability* impacts.

#### 8.2.1 Basecase Assumptions

The basecase used to perform SIA studies will include all existing *generation units* plus new *generation units* (including new capacity at existing *generating facilities*) that are committed.

The basecase will also include transmission projects that have obtained all necessary approvals or are under construction at the date of the assessment.

The *IESO* may need to confirm in-service dates of other projects in order to establish the study assumptions for the basecase. These updates will be obtained through requests to *connection applicants* as described in section 10. Generation projects that have lost their queue position in accordance with section 3.4 will be removed from basecase assumptions.

#### 8.2.2 Other Studies

*Connection applicants* should make available to the *IESO* any relevant studies that they have undertaken, or which have been undertaken on their behalf. The *IESO* will utilize the study results to the fullest extent possible in preparation of the SIA report. Where the *IESO* determines that the study is incomplete or inadequate, it will identify and conduct such further studies and assessments as may be required and will issue its SIA report accordingly.

### 8.2.3 Consultants

*Connection applicants* may choose to engage a consultant to perform SIA studies. Upon request by a *connection applicant*, the *IESO* will provide a list of consultants who have indicated an interest in performing SIA studies. The *IESO* does not give any assurances regarding the performance of any consultants, nor does it assume any liability for performance by a consultant.

## 8.3 IESO Study Activities

It is the responsibility of the *IESO* to:

1. establish basecase assumptions;
2. verify compliance of projects with the *market rules*, applicable standards and *IESO* policies and procedures;
3. assess dynamic performance of the *integrated power system* and the project using the criteria noted in section 4;
4. assess the expected impact of the project, using the criteria noted in section 4, on:
  - prevailing operating *security limits* and transfer capabilities of the *integrated power system*;
  - operating voltages of the *IESO-controlled grid*;
  - operating flexibility of the *IESO-controlled grid*; and
  - the ability of existing *connections* to deliver to or withdraw power from the *IESO-controlled grid*;
5. determine the need for additional *facilities* or for modifications to existing *facilities* that may be required to incorporate the project and mitigate any material adverse impacts on the *reliability* of the *integrated power system*;
6. provide the *transmitter(s)* with advance notification of SIA study results to facilitate completion of the Customer Impact Assessment (CIA) process; and
7. take into consideration the results of CIA(s) provided by the *transmitter(s)* in formulating *IESO* requirements for system modifications;

## 8.4 Submitting an SIA Application

A *request for connection assessment* is initiated by the submission of an SIA application package to the *IESO*, comprised of the appropriate completed<sup>13</sup> SIA application form, the appropriate supporting documentation including a single-line diagram(s), and the required deposit, as described in section 8.4.2. The appropriate SIA application forms (see Appendix C, Forms) can be downloaded from the *IESO* Web site at

[http://www.ieso.ca/imoweb/conassess/caa\\_process.asp](http://www.ieso.ca/imoweb/conassess/caa_process.asp). It should be noted that there are specific SIA application forms for generator *connection facilities*, transmission *connection facilities*, *load*

<sup>13</sup> For projects that have regulated completion timelines, the application form contains specific requirements for being deemed “complete”.

*connection facilities* or *ancillary service facilities* respectively. The SIA application package must be submitted as described in section 6.

Relevant sections of this SIA application form must be completed, signed by an authorized representative of the *connection applicant*, and submitted to the *IESO* with the required deposit.

Upon receipt of an SIA application and the required deposit, the *IESO* will assign an ID number with the format YEAR-*nnn*, where the first four digits represent the year the SIA application was received and the three digits following the year are a sequential number. The *IESO* will send an email to the *connection applicant* acknowledging receipt of the SIA application and including the ID number, normally within five *business days*. The ID number is to be referenced in all subsequent steps in the CAA process pertaining to the particular project. The *IESO* also notifies the applicable *transmitter(s)* of the SIA application.

### 8.4.1 Embedded Generators

For proposed generation projects greater than 10 MW planning to *connect to a distribution system* (including new capacity at existing *generating facilities*), the *distributor* is considered the official *connection applicant*. The *distributor* is required to initiate the *request for connection assessment* by submitting the SIA application package and the required deposit to the *IESO* on behalf of the *generator*.

### 8.4.2 Demand Response Auction

A *demand response auction participant* shall be considered the *connection applicant* when the *IESO* informs the participant that a *connection assessment* is required for a new or an existing transmission-connected *load facility* providing *demand response capacity* greater than 10 MW,

The *distributor* shall be considered the official *connection applicant* when the *IESO* informs the participant that a *connection assessment* is required for the participation of a new or an existing *embedded load facility* having a *demand response capacity* greater than 10 MW at the *IESO controlled-grid* connection point. The *distributor* is required to initiate the *request for connection assessment* by submitting the SIA application package and the required deposit to the *IESO* on behalf of the *demand response auction participant*.

### 8.4.3 Required Deposit

Other than as approved by the *IESO* Chief Operating Officer (COO) or delegate, the following study deposits are required for SIAs:

Type of Project	Amount of Deposit
Demand Response <i>load facility</i>	\$10,000
<i>Load facility</i>	\$20,000
<i>Embedded generation facility</i>	\$20,000
<i>Ancillary services facility</i>	\$20,000
<i>Non-embedded generation facility</i>	\$30,000
<i>Transmission facility</i>	\$40,000

The above deposits must be remitted against the anticipated cost and expense of the SIA studies for the project. Final costs are calculated after completion of the SIA, and an *invoice* is issued to the *connection applicant*, as described in Section 8.11. No guarantee is given that the final costs will be less than the deposit amount.

SIA applications submitted to the *IESO* with an *electronic funds transfer* will not be processed until the *IESO* confirms that the deposit has been received.

## 8.5 Missing Information and Information Clarification

If the *IESO's* review of the submitted SIA application package reveals that any information is missing or requires clarification, the *connection applicant* will receive a request for additional information or clarification. If the *connection applicant* cannot provide specific equipment data, the *IESO*, in consultation with the *connection applicant*, may propose suitable typical values to be used in the study. If typical values are used, *connection applicants* must be aware that they are committing to these values as design specifications, and it is their responsibility to ensure that installed *facilities* have similar or better performance.

## 8.6 SIA Agreement Execution

The execution of an SIA agreement between the *IESO* and the *connection applicant* consists of the following steps:

1. When the *IESO* determines the information contained in the SIA application package is complete and the required deposit has been paid, the *IESO* prepares a draft Scope of Work for the SIA study to be negotiated with the *connection applicant*. This Scope of Work is attached as Schedule 1 to the SIA agreement.
2. The *IESO* sends an undated copy of the SIA agreement, including a proposed Scope of Work, to the *connection applicant*.

3. A Scope of Work is negotiated between the *IESO* and the *connection applicant*, normally within ten *business days* of the receipt of the SIA agreement from the *IESO*. Once the Scope of Work is agreed upon, the *connection applicant* prints, signs and returns to the *IESO* a scanned copy<sup>14</sup> of the SIA agreement.
4. The *IESO* produces two paper copies of the SIA agreement based on the files received from the *connection applicant*.
5. The *IESO* Chief Operating Officer (COO), or designate, signs each copy, and assigns a date to the SIA agreement (the agreement execution date).
6. Normally within ten *business days* of receipt of the SIA agreement signed by the *connection applicant*, the *IESO* mails one copy of the executed and dated SIA agreement to the *connection applicant*.
7. Any subsequent revisions to Schedule 1 (Scope of Work) that are agreed upon by the *connection applicant* and the *IESO* will be subject to the terms and conditions of the SIA agreement.

### 8.6.1 Embedded Generators

Upon receipt of the SIA application from the *distributor* for proposed generation project(s) planning to *connect* to a *distribution system* (including new capacity at existing *generating facilities*), the *IESO* and the *distributor* negotiate the Scope of Work.

An SIA agreement incorporating the agreed-upon Scope of Work is then executed with the *distributor* according to steps 2 through 7 outlined in section 8.6.

### 8.6.2 Demand Response *Embedded Load Facilities*

Upon receipt of the SIA application from the *distributor* for an *embedded load facility* proposing to participate in the Demand Response Auction with a *demand response capacity* greater than 10 MW at the *IESO controlled-grid* connection point, the *IESO* and the *distributor* negotiate the Scope of Work.

An SIA agreement incorporating the agreed-upon Scope of Work is then executed with the *distributor* according to steps 2 through 7 outlined in section 8.6.

## 8.7 Timelines

The order in which *connection assessments* are conducted will be determined by the *IESO* on an individual basis, in consultation with the *connection applicant*, to meet the needs of both the *connection applicant* and the *IESO*. Considerations will include regulated completion targets, *reliability* needs, the project in-service date and procurement process timelines.

In the case where several SIA applications are associated with the same procurement process, the order in which these assessments will be conducted will be based on the regulated completion targets or their executed SIA agreement date, whichever is applicable.

---

<sup>14</sup> *Connection applicants* that require original signatures on the SIA agreement must mail or courier two signed paper copies to the *IESO* for execution.

### Phase 1 - Production of draft SIA report

The draft SIA report will normally be completed within 120 calendar days of the start date of the *IESO* study activities or as mutually agreed by the *connection applicant* and the *IESO*, and will contain the information described in section 8.8.

For projects that have 150 days regulated completion target, the draft SIA report will normally be completed within 100 calendar days after receipt of the complete SIA application<sup>15</sup> for *connection assessment*. *Connection applicants* and *transmitters* are expected to provide their comments on the draft SIA report within 10 calendar days.

The draft SIA report will be submitted to the *connection applicant* and to the relevant *transmitter(s)* for review.

### Phase 2 - Production of revised draft SIA report

The revised draft report will be issued by the *IESO* to the *connection applicant* and the relevant *transmitter(s)*. The report will reflect comments received during Phase 1, any additional analysis or investigation required as a result of Phase 1 and, if applicable, preliminary Customer Impact Assessment results.

For projects that have 150 days regulated completion target, the *IESO* will normally prepare and issue the revised draft SIA report within 130 calendar days after receipt of the complete SIA application for *connection assessment* to address the comments received and include the relevant CIA findings provided by the affected *transmitter(s)*. The revised draft SIA report will normally be submitted to the *connection applicant* and affected *transmitter(s)* for a 10 calendar days review period.

### Phase 3 - Production of final SIA report

The final SIA report, based on the revised draft SIA report<sup>16</sup>, will be issued when the Notification of Conditional Approval or the Notification of Disapproval with Reasons are signed by the *IESO*.

For projects that have regulated completion targets, the final SIA report will be issued to the *connection applicant* and affected *transmitter(s)* within the timelines required under the applicable regulation(s).

The final SIA report will be posted on the *IESO* Web site typically at month end.

### Phase 4 – Production of addendum to final SIA report (if required)

More effective or economic solutions to implement the requirements of the SIA may be identified by the *connection applicant* or the relevant *transmitter(s)* when the detailed design work is undertaken. Additionally, the *connection applicant* may revise the original project assessed by the

---

<sup>15</sup> An application for *connection assessment* is complete when it contains information sufficient to allow both the *IESO* and the *transmitter* to carry out their *connection assessment* activities.

<sup>16</sup> For a period of time, due to procedural issues, the *IESO* posted a series of agreed draft SIA reports under the designation “final draft report”. For the affected projects a final SIA report was never produced. For those projects the “final draft report” should be considered “final SIA report”.

*IESO*. In these cases, the *IESO* will consider the proposed changes and will issue an addendum to the final SIA report, except when the conditions listed in section 3.2 apply.

Addenda to the final SIA reports are not subject to regulated completion targets. The completion date is negotiated between the *IESO* and the *connection applicant* and depends on factors such as the agreed-upon set of study activities, the complexity of the project changes and the availability of *IESO* resources. Best efforts will be made to accommodate the *connection applicant's* scheduled in-service date.

## 8.8 Final SIA Report

The final SIA report will contain the following information:

- the requirements for the project that must be satisfied before receiving final approval to *connect*;
- a description of the system modifications that are required by the *IESO* in order to mitigate adverse *reliability* impacts of the project;
- an assessment of whether or not the project satisfies applicable criteria and, if not, which criteria are not satisfied;
- a description of other inadequacies, if applicable, of the existing power system that were identified in the course of the studies but are not the result of the project; and
- a summary of relevant study results.

## 8.9 Notification of Conditional Approval or Notification of Disapproval with Reasons

If a project is acceptable to the *IESO*, subject to the implementation of any applicable requirements identified in the final SIA report, a Notification of Conditional Approval of the project is issued by the *IESO* to the *connection applicant*, affected *transmitter(s)* and to the *Ontario Energy Board*.

If there are no feasible system modifications that will mitigate the adverse *reliability* impacts of the project, the *connection applicant* and the affected *transmitter(s)* are notified by means of a Notification of Disapproval with Reasons of the project. The Notification of Disapproval with Reasons of the project is issued by the *IESO* to the *connection applicant*, affected *transmitter(s)* and to the *Ontario Energy Board*.

## 8.10 Publication of the final SIA Report

The final SIA report will be *published* on the *IESO* Web site after the Notification of Conditional Approval or Notification of Disapproval with Reasons and the final SIA report have been issued to the *connection applicant* and the affected *transmitter(s)*. Access to final SIA report is provided via hyperlinks within the project list, as described in Section 3.1 of this document.

## 8.11 Costs

Upon completion of the SIA, the *connection applicant* will receive an *invoice* from the *IESO* to cover the total costs and expenses incurred by the *IESO* and the affected *transmitter(s)* in conducting the SIA. If the total costs and expenses are less than the deposit amount, the *connection applicant* will receive a refund for the difference.

The *IESO* will normally update the *connection applicant* during the 2nd and 4th quarters of the year of the estimated assessment costs and expenses incurred to date. The *connection applicant* can then decide whether or not to continue with the SIA. The costs and expenses provided by the *IESO* will be backdated two to four weeks due to the *IESO's* internal financial processing schedules.

As indicated in section 2.2.1, the *connection applicant* must update their project information when their design and equipment procurement processes are concluded. The *IESO* will study the post-SIA changes and, if applicable, produce an addendum to the final SIA report.

If alternatives to the original project are proposed by either the *transmitter* or the *connection applicant* the *IESO* will study the post-SIA changes and, if applicable, produce an addendum to the SIA report.

In both cases above, the *connection applicant* will be separately invoiced by the *IESO* for any *IESO* costs and expenses incurred in the assessment of alternatives and the preparation of an addendum to the final SIA report.

If the *connection applicant* withdraws or is deemed to have withdrawn its project before the completion of the assessment, the *connection applicant* will receive an *invoice* from the *IESO* to cover the total costs and expenses incurred by the *IESO* in conducting the SIA up to and including the date of the *IESO's* receipt of a Notification of Withdrawal or submission of the Notification of Deemed Withdrawal. The costs and expenses of performing additional SIA studies as a result of the *connection applicant's* withdrawal of its request, up to an amount of \$15,000, will also be invoiced to the *connection applicant*. If the total costs and expenses are less than the deposit amount, the *connection applicant* will receive a refund for the difference.

The *connection applicant* will be separately invoiced by the *IESO* for any *IESO* costs and expenses incurred as the result of the *IESO* in supporting and participating in regulatory proceedings associated with the project.

Details of the cost recovery mechanism are found in the SIA agreement.

**- End of Section -**



## 9. Expedited System Impact Assessment

---

### 9.1 Objectives

A detailed SIA may not be necessary for projects that do not represent significant system changes and are not expected to have a major impact on the *reliability* of the *integrated power system*. In this case an expedited SIA (ESIA), which involves a simple study, will be conducted. The *IESO* will determine whether an SIA or an ESIA is appropriate upon receiving the request for *connection assessment*.

It is the responsibility of the *connection applicant*, the affected *transmitter(s)* and the *IESO* to carry out the relevant responsibilities described in section 5.

The exchange of information between the *connection applicant* and the *IESO* will follow the methods described in section 6.

### 9.2 Guidelines for Determining if an ESIA is Appropriate

As a guideline, an ESIA will be appropriate for the following projects:

1. where the electrical characteristics of *generation facilities* are improved by less than 5%, do not exceed accepted design standards or tolerances, and are in conformance with Appendix 4.2 of the *market rules*;
2. like-for-like replacement of existing *transmission system facilities* where there is no connectivity change on the system, and no new contingencies are created;
3. where the electrical characteristics of a *transmission system facility* are changed by less than 10%;
4. *connection stations* and lines where the line tap is short, the total capacity is not expected to exceed 10 MW, the load does not include significant reactive power requirements such as those associated with large motors, furnaces or other similar *facilities*, and there is no significant change in system impedance;
5. addition of feeder breakers at system voltages less than 50 kV that are not expected to affect the total capacity by more than 10 MW;
6. reactive compensation devices *connected* at system voltages less than 50 kV (except at the tertiary of a transmission level autotransformer); or
7. protection changes, using approved standards and equipment, which are not expected to require studies to determine if there is an adverse impact on the *reliability* of the *integrated power system*.

## 9.3 Submitting an Expedited SIA Application

A *connection applicant* may initiate a *request for connection assessment* that appears to meet the guidelines described in Section 9.2 by submitting the appropriate SIA application and the documents containing all relevant technical information and project details. The appropriate SIA application form (see Appendix C, Forms) can be downloaded from the IESO Web site at [http://www.ieso.ca/imoweb/connassess/caa\\_process.asp](http://www.ieso.ca/imoweb/connassess/caa_process.asp). It should be noted that there are specific SIA application forms for generator *connection facilities*, transmission *connection facilities*, load *connection facilities* or *ancillary service facilities* respectively. The SIA application must be submitted as described in section 6.

The IESO will notify the *connection applicant* if an ESIA is appropriate for the project normally within five *business days* following receipt of the SIA application.

The IESO will assign a number with the format YEAR-EXnnn, where the first four digits are the year the SIA application was received and the three digits following the "EX" are a sequential number. The *connection applicant* will be notified if additional information is required. The ID number is to be referenced in all subsequent steps in the CAA process pertaining to the particular project. The IESO also notifies the applicable *transmitter(s)* of the SIA application.

### 9.3.1 Cost Recovery Agreement

The *connection applicant* will not be required to submit a deposit for an ESIA, but will be required to agree to pay for the total costs and expenses associated with all of their ESIA's by signing a Cost Recovery agreement. The IESO will negotiate a Cost Recovery agreement with each unique *connection applicant* before commencing the first ESIA for that *connection applicant*. This Cost Recovery agreement will also cover all subsequent ESIA's initiated by the *connection applicant*.

If the IESO determines that an SIA is required instead of an ESIA, the IESO and the *connection applicant* will follow the process described in section 8.

## 9.4 Missing Information and Information Clarification

If the IESO's review of the submitted material reveals that information is missing or requires clarification, the *connection applicant* will receive a request for additional information or clarification. If the *connection applicant* cannot provide specific equipment data, the IESO, in consultation with the *connection applicant*, may propose suitable typical values to be used in the ESIA. If typical values are used, *connection applicants* must be aware that they are committing to these values as design specifications, and it is the responsibility of the *connection applicant* to ensure that installed *facilities* have similar or better performance.

## 9.5 Timelines

The completion date for an ESIA is negotiated between the IESO and the *connection applicant* and usually depends on the in-service date of the project and the availability of IESO resources.

## 9.6 ESIA Report

The ESIA report will contain the following information:

- the requirements for the project that must be satisfied before receiving final approval to *connect*;
- an assessment of whether or not the project satisfies applicable criteria, and if not, which criteria are not satisfied;
- a description, if applicable, of other inadequacies of the existing power system that were identified in the course of the studies; and
- a summary of relevant study results, if applicable.

## 9.7 Notification of Conditional Approval, Notification of Final Approval or Notification of Disapproval with Reasons

If a project is acceptable to the *IESO*, subject to the implementation of any applicable requirements identified in the ESIA report, a Notification of Conditional Approval of the project is issued by the *IESO* to the *connection applicant* and the affected *transmitter(s)*.

If a project is acceptable to the *IESO*, with no requirements identified in the ESIA report, a Notification of Final Approval of the project is issued by the *IESO* to the *connection applicant* and the affected *transmitter(s)*.

If the project has an adverse *reliability* impact and no feasible mitigating measures can be identified, the *connection applicant* and the affected *transmitter(s)* are notified by means of a Notification of Disapproval with Reasons of the project. The Notification of Disapproval with Reasons of the project is issued by the *IESO* to the *connection applicant* and the affected *transmitter(s)*.

## 9.8 Publication of ESIA Report

The ESIA report will be *published* on the *IESO* Web site after the Notification of Conditional Approval, Notification of Final Approval or Notification of Disapproval with Reasons and the ESIA report have been issued to the *connection applicant* and the affected *transmitter(s)*. Access to ESIA report is provided via hyperlinks within the Status of System Impact Assessment Applications list, as described in Section 3.1 of this document.

## 9.9 Costs

The *IESO* sends an *invoice* to the *connection applicant* every quarter, if applicable, detailing the total costs and expenses associated with conducting all ESIA's for that *connection applicant* in the previous quarter or quarters, if necessary.

- End of Section -

Archive

## 10. Project Status Reporting

---

All *connection applicants* may periodically be requested by the *IESO* to provide a status report of their proposed connection with respect to its progress. The project status report form can be found on the *IESO* Web site at [http://www.ieso.ca/imoweb/pubs/caa/caa\\_f1399\\_StatusReport.doc](http://www.ieso.ca/imoweb/pubs/caa/caa_f1399_StatusReport.doc) (see Appendix C, Forms).

Such requests will be made by the *IESO* as often as required in order to establish baseline assumptions for the *IESO's* *reliability* outlook reports as described in the *market rules*, Chapter 5, Section 7.

The *IESO* may also make such requests before the start of an SIA where other projects may impact the SIA. Based on the information received, the *IESO* will determine the study assumptions for the SIA.

Projects for which the *connection applicants* fail to comply with the project status reporting requirements will be withdrawn as described in section 3.2.

**- End of Section -**

Archive

## 11. Withdrawal

---

At any point in the CAA process, a *connection applicant* can withdraw its project or the *IESO* may deem a project to be withdrawn based on the criteria outlined in Section 3.2

Where a *connection applicant* withdraws or is deemed to have withdrawn its project in accordance with the provisions of this document, the *connection applicant* remains responsible for any costs and expenses incurred by the *IESO*, as described in sections 8.11 and 9.9 for the applicable assessment type.

**- End of Section -**

Archive



## 12. Information Confidentiality

---

Except as described below, *confidential information* submitted by a *connection applicant* in support of its project, further to a request made by the *IESO* or as otherwise required by this document, shall be treated as *confidential information* by the *IESO* in the same manner as the *IESO* treats *confidential information* received from *market participants* under the *market rules*. Specifically, the *IESO* will deal with such *confidential information* in the manner set forth in Section 5.2 of Chapter 3 of the *market rules*, and the provisions of Section 5.3 of Chapter 3 of the *market rules* similarly apply to the *IESO* when dealing with such *confidential information*, in both cases as though the references in those sections to a *market participant* were references to the *connection applicant*.

By way of exception, and notwithstanding the preceding paragraph, the *IESO* may disclose *confidential information* received from a *connection applicant*:

- to affected *transmitter(s)*, where required to enable such *transmitter(s)* to carry out their responsibilities as described in Section 6 of Chapter 4 of the *market rules* and in this document, and for the purposes of the their associated obligations under the Transmission System Code; and
- where the *confidential information* is contemplated by this document or any form, letter or agreement referred to in this document to be disclosed by the *IESO* or the affected *transmitter(s)*.

Where the *IESO* discloses *confidential information* to a consultant or affected *transmitter*, such consultant or *transmitter* may not, except as permitted by Section 5.3 of Chapter 3 of the *market rules*<sup>2</sup>, disclose or use such information other than for the purpose of carrying out its responsibilities as described in Section 6 of Chapter 4 of the *market rules*, the Transmission System Code and this document.

Upon completion of an SIA, the final SIA report, including technical information associated with the project, will be posted on the *IESO* Web site. The *connection applicant* will have an opportunity to review the draft SIA reports for confidentiality issues prior to the posting.

**- End of Section -**

---

<sup>2</sup> For this purpose, references in that Section shall be considered references to an affected *transmitter*.

Archive

## 13. Connection Applicant Actions Subsequent to the Connection Assessment and Approval Process

---

Following receipt of a Notification of Conditional Approval for a project from the *IESO*, the *connection applicant* will be required to undertake some or all of the following actions in order to construct and operate new *generation*, transmission, *load* or *ancillary services facilities*.

- In accordance with Section 92 of the *Ontario Energy Board Act, 1998*, the *connection applicant* may be required to seek an order granting leave to construct from the *Ontario Energy Board*.
- The *connection applicant* may be required to enter into an agreement with the relevant *transmitter(s)* to cover the cost of preparing cost estimates for implementing the system modifications required by the *IESO*.
- In accordance with the Transmission System Code, the *connection applicant* is required to enter into a *Connection Agreement* with the relevant *transmitter(s)*.
- In accordance with the *market rules* and before final connection approval is issued by the *IESO*, the *connection applicant* is required to complete the Registration process with the *IESO* in order to *connect* and to participate in one or more of the *IESO-administered markets*. During the *IESO* Registration process, *connection applicants* will be required to demonstrate to the *IESO* that all requirements identified in the SIA report have been satisfied. Details with respect to the *IESO* Registration process can be found in the *IESO* Web site at <http://www.ieso.ca/imoweb/marketEntry/me.asp>.

- End of Section -

Archive

# Appendix A: Procedural Steps

---

This Section contains a table of the detailed tasks (steps) that comprise the *connection assessment* and approval procedure. The table contains the following seven columns:

**1. Ref.**

The reference number for the task.

**2. Task Name**

The task name as referenced in Appendix A.

**3. Task detail**

Information about the task, including areas of responsibility.

**4. When**

Information about when the task will be required.

**5. Resulting information**

A list of the information that results from the task, including related *IESO* correspondence. Table 3-1 provides a list of the letters utilized by the *IESO* during *connection assessment* and approval process:

**6. Method**

The format and method for completing the task.

**7. Completion events**

A list of all the circumstances in which the task should be deemed complete.

Table 3–A: Procedural Steps for the Feasibility Study (FS)

Ref.	Task Name	Task Detail	When	Resulting Information	Method	Completion Events
3A.01	Initiate request for FS with the <i>IESO</i> .	<i>Connection applicant</i> downloads, completes, signs and sends electronically the FS application form with all supporting documents, as set out in this procedure.	<i>Connection applicant</i> intends to submit a request for FS.	Completed forms: <ul style="list-style-type: none"> <li>Application form (signed) including cheque or proof of payment of deposit (Use IMO-FORM-1052, 1174, 1380 or 1381 as appropriate).</li> <li>Supporting documentation appropriate to connection type (see Section 7.3).</li> </ul>	Email (mail, courier, or fax also accepted)	Receipt by <i>IESO</i> .
3A.02	<i>IESO</i> acknowledges request for FS application package.	<i>IESO</i> acknowledges receipt of request for FS application package and assigns a unique CAA-ID number to be used throughout the process.	Request for FS application package received by <i>IESO</i> .		Email	Receipt by <i>connection applicant</i> .
3A.03	<i>Connection applicant</i> receives acknowledgement from the <i>IESO</i> including CAA_ID number.					

Table 3–A: Procedural Steps for the Feasibility Study (FS)

Ref.	Task Name	Task Detail	When	Resulting Information	Method	Completion Events
3A.04	<i>IESO</i> reviews information and requests missing information/clarification if required.	If the application is incomplete, or requires clarification, <i>IESO</i> requests missing information/clarification	Within the time specified in the acknowledgement of receipt of request for FS application package.		Email.	Receipt of email by <i>connection applicant</i> .
3A.05	<i>Connection applicant</i> submits missing information/clarification to <i>IESO</i> .	<i>Connection applicant</i> supplies missing information/clarification to support the request for FS application.	Within the time specified in email at step 3A.04.	All information requested in email with authorized signatures where required.	Email (fax, mail or courier also accepted).	Receipt of information by <i>IESO</i> .
3A.06	<i>IESO</i> submits draft Scope of Work (SoW) for the FS to be reviewed by the <i>connection applicant</i> .	<i>IESO</i> prepares draft Scope of Work for the FS and sends the proposed FS agreement and draft SoW to the <i>connection applicant</i> . The <i>connection applicant</i> reviews and request changes if applicable.	Normally within 10 <i>business days</i> of receipt of complete FS application package.	FS agreement, which includes the FS SoW specifying planned completion date for the FS.	Email.	Receipt by <i>connection applicant</i> .
3A.07	<i>Connection applicant</i> submits signed FS agreement.	<i>Connection applicant</i> signs FS agreement (in duplicate if the <i>connection applicant</i> requires original signature).	Within 10 <i>business days</i> of receipt date of FS agreement.	Scanned copy of the signed original of FS agreement ready for <i>IESO</i> signature (signed original of the FS agreement if the <i>connection applicant</i> requires original signature).	Email (mail or courier if the <i>connection applicant</i> requires both signatures in original).	Receipt by <i>IESO</i> .

Table 3–A: Procedural Steps for the Feasibility Study (FS)

Ref.	Task Name	Task Detail	When	Resulting Information	Method	Completion Events
3A.08	<i>IESO</i> dates, executes and returns one original of the FS agreement.	<i>IESO</i> prints (if scanned copy) and signs the FS agreement.	Normally within 10 <i>business days</i> of <i>IESO's</i> receipt of FS agreement signed by <i>connection applicant</i> .	One copy of FS agreement signed by the <i>IESO</i> attached.	Paper copy by mail or courier.	Receipt by <i>connection applicant</i> .
3A.09	<i>Connection applicant</i> receives a duly executed FS agreement.		Step 3A.08 is completed.			Receipt by <i>connection applicant</i> .
3A.10	<i>IESO</i> conducts a FS in consultation with <i>connection applicant</i> .	<i>IESO</i> , in consultation with <i>connection applicant</i> , conducts a FS, and issues requests for additional information, if required.	Feasibility Study completed in the time specified in the FS SoW	FS report finalized upon completion of FS.		FS report issued.
3A.11	<i>IESO</i> updates <i>connection applicant</i> of estimated assessment costs and expenses incurred to date.	<i>IESO</i> updates the <i>connection applicant</i> of the estimated assessment costs and expenses incurred to date.	In the 2 <sup>nd</sup> and 4 <sup>th</sup> quarters of the year	Estimated assessment costs and expenses incurred to date.	Email.	<i>Connection applicant</i> takes decision on whether or not to continue assessment.
3A.12	<i>Connection applicant</i> notifies the <i>IESO</i> of decision to withdraw.	If <i>connection applicant</i> withdraws the <i>request for connection assessment</i> , the <i>IESO</i> terminates the FS.	Anytime during the study.	<i>Connection applicant</i> downloads and submits Notification of Withdrawal form from the <i>IESO</i> Web site, IMO-FORM-1073.	Email (mail or courier also accepted).	Withdrawal by <i>connection applicant</i> and termination of the FS.
3A.13	<i>IESO</i> acknowledges withdrawal and terminates assessment.	If <i>connection applicant</i> withdraws the <i>IESO</i> terminates the FS.	When requested by <i>connection applicant</i> .		Email	Termination of FS.



Table 3–A: Procedural Steps for the Feasibility Study (FS)

Ref.	Task Name	Task Detail	When	Resulting Information	Method	Completion Events
3A.14	<i>Connection applicant</i> receives acknowledgement of Notification of Withdrawal.					Receipt by <i>connection applicant</i> .
3A.15	<i>IESO</i> issues FS report.	<i>IESO</i> completes and provides the FS report.	Date indicated in the FS agreement by the <i>IESO</i> or date agreed upon subsequently with <i>connection applicant</i> .	<i>IESO</i> issues FS report to <i>connection applicant</i> .	Email.	FS report.
3A.16	<i>Connection applicant</i> receives FS report.		Date indicated in FS agreement by the <i>IESO</i> .		Email.	Receipt by <i>connection applicant</i> .
3A.17	<i>IESO</i> issues <i>invoice</i> or refund statement.	<i>IESO</i> prepares <i>invoice</i> or refund statement to cover costs and expenses incurred by the <i>IESO</i> during FS.	Following release of FS report or upon withdrawal of the request for <i>connection assessment</i> .	<i>Invoice</i> or refund amount, including all <i>IESO</i> costs and expenses, less <i>connection applicant's</i> initial deposit.	Mail or email.	Receipt by <i>connection applicant</i> .
3A.18	<i>Connection applicant</i> receives <i>invoice</i> /refund statement and forwards/receives payment/refund to/from the <i>IESO</i> .	<i>Connection applicant</i> submits cheque or proof of <i>electronic funds transfer</i> to <i>IESO</i> ; or <i>Connection applicant</i> receives refund by cheque or <i>electronic funds transfer</i> .	Within 10 <i>business days</i> of receipt of an <i>invoice</i> .		Courier or <i>electronic funds transfer</i> .	<i>IESO</i> or <i>connection applicant</i> receipt of payment.

Table 3–A: Procedural Steps for the Feasibility Study (FS)

Ref.	Task Name	Task Detail	When	Resulting Information	Method	Completion Events
3A.19	<i>IESO</i> receives payment if balance outstanding; or notifies <i>IESO</i> compliance unit if payment not received within 10 <i>business days</i> .		<i>IESO</i> compliance unit is notified if payment not received within 10 <i>business days</i> of receipt of an <i>invoice</i> .		<i>IESO</i> internal email.	<i>IESO</i> compliance unit receives notification of <i>connection applicant's</i> failure to make payment within 10 <i>business days</i> .

Table 3-B: Procedural Steps for the SIA

Ref.	Task Name	Task Detail	When	Resulting Information	Method	Completion Events
3B.01	Initiate <i>request for connection assessment</i> .	<i>Connection applicant</i> downloads SIA application, completes, signs, scans and sends the form to the <i>IESO</i> electronically with all supporting documents, as set out in this procedure.	<i>Connection applicant</i> intends to submit a <i>request for connection assessment</i> .	Completed forms: <ul style="list-style-type: none"> <li>Application form (signed) including cheque or proof of payment of deposit (Use IMO-FORM-1536, 1537, 1538, 1539, IESO-FORM-1706 or 1707 as appropriate).</li> <li>Supporting documentation appropriate to connection type.</li> </ul>	Email (mail, courier, or fax can also be used).	Receipt by <i>IESO</i> .
3B.02	<i>IESO</i> acknowledges <i>request for connection assessment</i> application package.	<i>IESO</i> acknowledges receipt of <i>request for connection assessment</i> application package material and assigns a unique CAA ID number to be used throughout the assessment process.	<i>Request for connection assessment</i> application package received by <i>IESO</i> .		Email.	Receipt by <i>connection applicant</i> .
3B.03	<i>Connection applicant</i> receives acknowledgement from the <i>IESO</i> , including CAA ID number.				Email.	

Table 3-B: Procedural Steps for the SIA

Ref.	Task Name	Task Detail	When	Resulting Information	Method	Completion Events
3B.04	<i>IESO</i> reviews information and requests missing information/clarification (if required).	If the application is incomplete, or requires clarification, <i>IESO</i> requests missing information/clarification	Within the time specified in the acknowledgement of receipt of <i>request for connection assessment</i> application package or normally within 10 calendar days for projects with 150 days regulated completion target.		Email.	Receipt of email by <i>connection applicant</i> .
3B.05	<i>Connection applicant</i> submits missing information/clarification in line with request.	<i>Connection applicant</i> supplies missing information/clarification to support the <i>request for connection assessment</i> application.	Within the time specified in email at step 3B.04.	All information requested in email with authorized signatures where required.	Email (fax, mail or courier can also be used).	Receipt of information by <i>IESO</i> .
3B.06	<i>IESO</i> issues reminder notice for missing information/clarification, including warning of deemed withdrawal.	If no response to step 3B.04 is received by the <i>IESO</i> within the specified time, a reminder notice is issued.	After time indicated in Step 3B.04 has lapsed and no response was received.		Email	Receipt by <i>connection applicant</i> .

Table 3-B: Procedural Steps for the SIA

Ref.	Task Name	Task Detail	When	Resulting Information	Method	Completion Events
3B.07	<i>IESO</i> deems <i>request for connection assessment</i> to have been withdrawn.	If no response is received by the <i>IESO</i> , <i>request for connection assessment</i> may be deemed to have been withdrawn by the <i>IESO</i> .	At least two weeks after date indicated in <i>IESO</i> request for additional information if no response received.	IMO-FORM-1049, "Notification of Deemed Withdrawal".	Email	Receipt by <i>connection applicant</i> .
3B.08	<i>Connection applicant</i> receives Notification of Deemed Withdrawal.		Step 3B.07 is completed.		Email	Receipt by <i>connection applicant</i> .
3B.09	<i>IESO</i> prepares draft scope of work (SoW) for SIA study for negotiation with <i>connection applicant</i> .	<i>IESO</i> submits draft SoW to the <i>connection applicant</i> to establish an agreed-upon SoW for the SIA.	Normally within 10 <i>business days</i> of receipt of complete <i>connection assessment</i> application package.	SIA agreement, which includes SIA scope of work specifying, planned completion date for the SIA.	Email.	Receipt by <i>connection applicant</i> .
3B.10	<i>Connection applicant</i> submits signed SIA agreement (in duplicate if they require both party signatures in original).	<i>Connection applicant</i> signs SIA agreement (in duplicate if they require both party signatures in original).	Within 10 <i>business days</i> of receipt date of SIA agreement.	Signed original of SIA agreement signature page ready for <i>IESO</i> signature.	Email (mail or courier should be used if the <i>connection applicant</i> requires both party signatures in original).	Receipt by <i>IESO</i> .

Table 3-B: Procedural Steps for the SIA

Ref.	Task Name	Task Detail	When	Resulting Information	Method	Completion Events
3B.11	<i>IESO</i> issues requests for project status update for committed projects from previous <i>connection applicants</i> .	<i>IESO</i> contacts <i>connection applicants</i> and requests project status information.	When baseline assumptions need to be updated.	Status of approved projects IMO-FORM 1399 "Project Status Report".	Email	Committed projects status information received by the <i>IESO</i> .
3B.12	<i>Connection applicants</i> provide information on the current status of the committed projects.		Upon receipt of request from the <i>IESO</i> .		Email (fax or mail can also be used).	Receipt by the <i>IESO</i> .
3B.13	<i>IESO</i> dates, executes and returns one original SIA agreement, places project on project list and updates status on <i>IESO</i> Web site.	<i>IESO</i> signs the SIA agreement. <i>IESO</i> updates the <i>Connection Assessment</i> Application Status Summary page on the <i>IESO</i> Web site accordingly.	Normally within 10 <i>business days</i> of <i>IESO</i> 's receipt of SIA agreement signed by <i>connection applicant</i> .	One copy of SIA agreement signed by the <i>IESO</i> attached. <i>Connection Assessment</i> Application Status Summary page on the <i>IESO</i> Web site updated.	Paper copy by mail or courier. <i>IESO</i> Web site is updated.	<i>Connection Assessment</i> Application Status Summary page updated to include new request.
3B.14	<i>Connection applicant</i> receives a duly executed SIA agreement.		Step 3B.10 is completed.		Paper copy by mail or courier.	Receipt by <i>connection applicant</i> .
3B.15	<i>IESO</i> updates baseline assumptions accordingly.	<i>IESO</i> creates base cases to be used in the current SIA.	Upon receiving the approved projects information.	Current SIA base case.		Base case completed.

Table 3-B: Procedural Steps for the SIA

Ref.	Task Name	Task Detail	When	Resulting Information	Method	Completion Events
3B.16	<i>IESO</i> and affected <i>transmitter(s)</i> conduct coordinated SIA.	<i>IESO</i> and affected <i>transmitter(s)</i> in consultation with <i>connection applicant</i> conduct an SIA, and issue requests for additional information, if required. If a request for additional information is not met, the <i>IESO</i> may deem the <i>request for connection assessment</i> to have been withdrawn.	SIA completed in the time specified in the SIA scope of work.	Finalized SIA report.		SIA report and Notification of Approval or Disapproval with Reasons if appropriate.
3B.17	<i>Transmitter(s)</i> to submit results of Customer Impact Assessment (CIA) to be integrated in the SIA.		Upon agreed date between <i>transmitter</i> and the <i>IESO</i> .		Email (fax or mail can also be used).	
3B.18	<i>IESO</i> updates <i>connection applicant</i> of estimated assessment costs and expenses incurred to date.	<i>IESO</i> updates the <i>connection applicant</i> of the estimated assessment costs and expenses incurred to date.	In the 2 <sup>nd</sup> and 4 <sup>th</sup> quarters of the year.	Estimated costs and expenses incurred to date.	Email.	<i>Connection applicant</i> takes decision on whether or not to continue assessment.
3B.19	Notify the <i>IESO</i> of decision to withdraw.	<i>Connection applicant</i> downloads and submits Notification of Withdrawal form from the <i>IESO</i> Web site, (IMO-FORM-1073).	Anytime during the study.	Notification of Withdrawal form from the <i>IESO</i> Web site, (IMO-FORM-1073)	Email (mail or courier can also be used).	Withdrawal by <i>connection applicant</i> and termination of SIA.

Table 3-B: Procedural Steps for the SIA

Ref.	Task Name	Task Detail	When	Resulting Information	Method	Completion Events
3B.20	<i>IESO</i> acknowledges withdrawal and terminates assessment.	If <i>connection applicant</i> withdraws the <i>IESO</i> terminates the SIA.	When requested by <i>connection applicant</i> .	<i>IESO</i> acknowledges the Notification of Withdrawal.	Email.	Receipt by <i>connection applicant</i> .
3B.22	<i>IESO</i> issues draft SIA report to <i>connection applicant</i> and <i>transmitter</i> for review.	<i>IESO</i> completes a draft SIA report and provides to <i>connection applicant</i> and affected <i>transmitter(s)</i> .	Normally within 120 calendar <i>days</i> of the start date of the <i>IESO</i> study activities or by a mutually agreed date; normally within 100 calendar days from receipt of a complete application for projects with 150 days regulated completion targets	Draft SIA report.	Email.	
3B.22 A	For projects with regulated completion targets the <i>IESO</i> issues a revised draft SIA report to <i>connection applicant</i> and <i>transmitter</i> for review.	<i>IESO</i> completes a revised draft SIA report to include the applicable CIA findings and provides it to <i>connection applicant</i> and affected <i>transmitter(s)</i> .	Normally within 130 days from receipt of a complete application	Revised draft SIA report.	Email.	



**Table 3-B: Procedural Steps for the SIA**

<b>Ref.</b>	<b>Task Name</b>	<b>Task Detail</b>	<b>When</b>	<b>Resulting Information</b>	<b>Method</b>	<b>Completion Events</b>
3B.22 B	For projects with regulated completion targets the <i>connection applicant</i> reviews the revised draft SIA report and submits comments to the <i>IESO</i>		Normally within 10 days from receipt of the revised draft SIA report	Revised draft SIA report.	Email.	
3B.22 C	For projects with regulated completion targets the <i>Transmitter</i> reviews revised draft SIA report and submits comments to the <i>IESO</i> .		Normally within 10 calendar days from receipt of the draft SIA report		Email.	
3B.23	<i>Connection applicant</i> reviews draft SIA report and submits comments to the <i>IESO</i> .		Upon completion of review, within 10 calendar days for projects with 150 days regulated completion targets		Email or fax.	

Table 3-B: Procedural Steps for the SIA

Ref.	Task Name	Task Detail	When	Resulting Information	Method	Completion Events
3B.24	<i>Transmitter(s)</i> to submit results of <i>Customer Impact Assessment</i> to be integrated in the SIA.		Upon agreed date between <i>transmitter</i> and the <i>IESO</i> , For projects with 150 days regulated completion targets the <i>transmitter</i> normally submits the list of CIA findings within 120 calendar days from receipt of a complete application		Email or fax.	
3B.25	<i>Transmitter</i> reviews draft SIA report and submits comments to the <i>IESO</i> .		Upon completion of review, normally within 10 calendar days for projects with 150 days regulated completion targets		Email or fax.	

**Table 3-B: Procedural Steps for the SIA**

<b>Ref.</b>	<b>Task Name</b>	<b>Task Detail</b>	<b>When</b>	<b>Resulting Information</b>	<b>Method</b>	<b>Completion Events</b>
3B.26	<i>IESO</i> issues final SIA report and Notification of Conditional Approval of the project or Notification of Disapproval with Reasons of the project. <i>IESO</i> updates status on the <i>IESO</i> Web site.	<i>IESO</i> completes the SIA report and provides to <i>connection applicant</i> , affected <i>transmitter(s)</i> , <i>OEB</i> and other affected parties as required under <i>IESO's</i> obligations resulting from reliability standards or agreements  <i>IESO</i> updates the <i>Connection Assessment Application Status Summary</i> pages on the <i>IESO</i> Web site.	Normally within 5 <i>business days</i> of issuance of Draft SIA report or by a mutually agreed date. Within the allocated time for projects with regulated completion targets.	SIA report and either:  Notification of Conditional Approval of the project, or  Notification of Disapproval with Reasons of the project.  <i>Connection Assessment Application Status Summary</i> and the SIA report and Study summary pages updated.	Email	<i>Connection Assessment Application Status Summary</i> and the SIA report and Study summary pages updated, and SIA report made publicly available on the <i>IESO</i> Web site.
3B.27	<i>Connection applicant</i> receives SIA report and Notification of Conditional Approval of the project or Notification of Disapproval with Reasons of the project.		Upon SIA completion.		Email	

Table 3-B: Procedural Steps for the SIA

Ref.	Task Name	Task Detail	When	Resulting Information	Method	Completion Events
3B.28	<i>Ontario Energy Board (OEB) and transmitter(s) receive SIA report and Notification of Conditional Approval of the project or Notifications of Disapproval with Reasons of the project.</i>		Upon SIA completion.		Email	
3B.29	<i>IESO issues invoice/refund statement to connection applicant.</i>	<i>IESO prepares invoice/refund statement to cover costs and expenses incurred by the IESO and affected transmitter(s) during SIA.</i>	Following release of SIA report.	<i>Invoice amount for each connection applicant.</i>	Mail or email.	<i>Receipt by connection applicant.</i>
3B.30	<i>Connection applicant receives invoice/refund statement and forwards/receives payment/refund to/from IESO.</i>	<i>Connection applicant submits cheque or proof of electronic funds transfer to IESO.</i>	Within 10 business days of receipt of an invoice.		Courier or electronic funds transfer.	<i>IESO receipt of payment.</i>
3B.31	<i>Connection applicant reviews SIA report.</i>	<i>Connection applicant review of SIA report, including discussion with affected transmitter(s) where appropriate.</i>		Clarification amongst connection applicant and transmitter(s) of any issues that impact either party.		

Table 3-B: Procedural Steps for the SIA

Ref.	Task Name	Task Detail	When	Resulting Information	Method	Completion Events
3B.32	<i>IESO</i> action for compliance.	<i>IESO</i> compliance unit is notified of failure by <i>connection applicant</i> to make payment within specified time frame.	If payment not received within 10 <i>business days</i> of receipt of an <i>invoice</i> .		Internal email.	<i>IESO</i> compliance unit receives notification of <i>connection applicant's</i> failure to make payment.
3B.33	Alternative solutions are proposed to meet <i>IESO</i> requirements.		After SIA report has been issued.	Alternative solutions proposed to <i>IESO</i> .	Email.	<i>IESO</i> receives description of alternative solution.
3B.34	<i>IESO</i> initiates review of alternative solution and produces addendum to the final SIA report.		Following receipt of description of alternative solution.	<i>IESO</i> assessment of proposed alternative solution.	Email.	Addendum to final SIA report.

– End of Section –

Archive

## Appendix B: Forms

The following forms, letters and agreements are used in this Procedure.

<b>Form Name</b>	<b>Form Number</b>
Feasibility Study Application – Generation Facilities	IMO_FORM_1380
Feasibility Study Application – Transmission Facilities	IMO_FORM_1381
Feasibility Study Application – Load Facilities	IMO_FORM_1052
Feasibility Study Application – Ancillary Services Facilities	IMO_FORM_1174
System Impact Assessment Application (IESO)/ Customer Impact Assessment Application (Hydro One) for Generation Facilities	IMO_FORM_1536
System Impact Assessment Application – Transmission Facilities	IMO_FORM_1537
System Impact Assessment Application (IESO)/ Customer Impact Assessment Application (Hydro One) for Load Facilities	IMO_FORM_1538
System Impact Assessment Application – Ancillary Services Facilities	IMO_FORM_1539
System Impact Assessment Application - Renewable Energy Generation Facility Application to Request a Connection Assessment for Hydro One	IESO_FORM_1706
System Impact Assessment Application - Renewable Energy Generation Facility Application to Request a Connection Assessment for GLP Transmission	IESO_FORM_1707
Notification of Withdrawal	IMO_FORM_1073
Feasibility Study Agreement	IMP_AGR_0001
System Impact Assessment Agreement	IMP_AGR_0002
Notification of Deemed Withdrawal	IMO_FORM_1049
Project Status Report	IMO_FORM_1399

–End of Section–

Archive



## References

---

<b>Document ID</b>	<b>Document Title</b>
MDP_RUL_0002	Market Rules
MDP_PRO_0014	Market Manual 1: Market Entry, Maintenance & Exit, Part 1.1: Participant Authorization, Maintenance & Exit
MDP_PRO_0016	Market Manual 2: Market Entry, Maintenance & Exit, Part 1.2: Facility Registration, Maintenance and De-registration
IMO_REQ_0041	Ontario Resource and Transmission Assessment Criteria
N/A	Ontario Energy Board Act, 1998

**- End of Document -**