

# Day-Ahead Commitment Enrolment Process

Project Advisory Group Meeting  
November 30, 2010



# Purpose

- Summary of registration requirements to participate in DACP
- Facilitate testing of the registration business processes
  - Utilize PAG as a control group for process testing
  - Requesting completion and submission of required forms from PAG members by December 17, 2010
  - New data provided will be used in further testing, including market trials

# Participation

- The IESO needs information from market participants to create a dependable view of the next day's supply and demand situation, and to make economically sound scheduling and commitment decisions.

# DACP Enrolment Process

- To participate in the Day-Ahead Commitment Process (DACP), market participants must ensure:
  - That they are authorized to participate in the IESO-administered markets.
  - The physical facilities that they intend to use to participate in the DACP have been registered with us to participate in the real-time markets.
  - *Generators* have additional registration requirements.

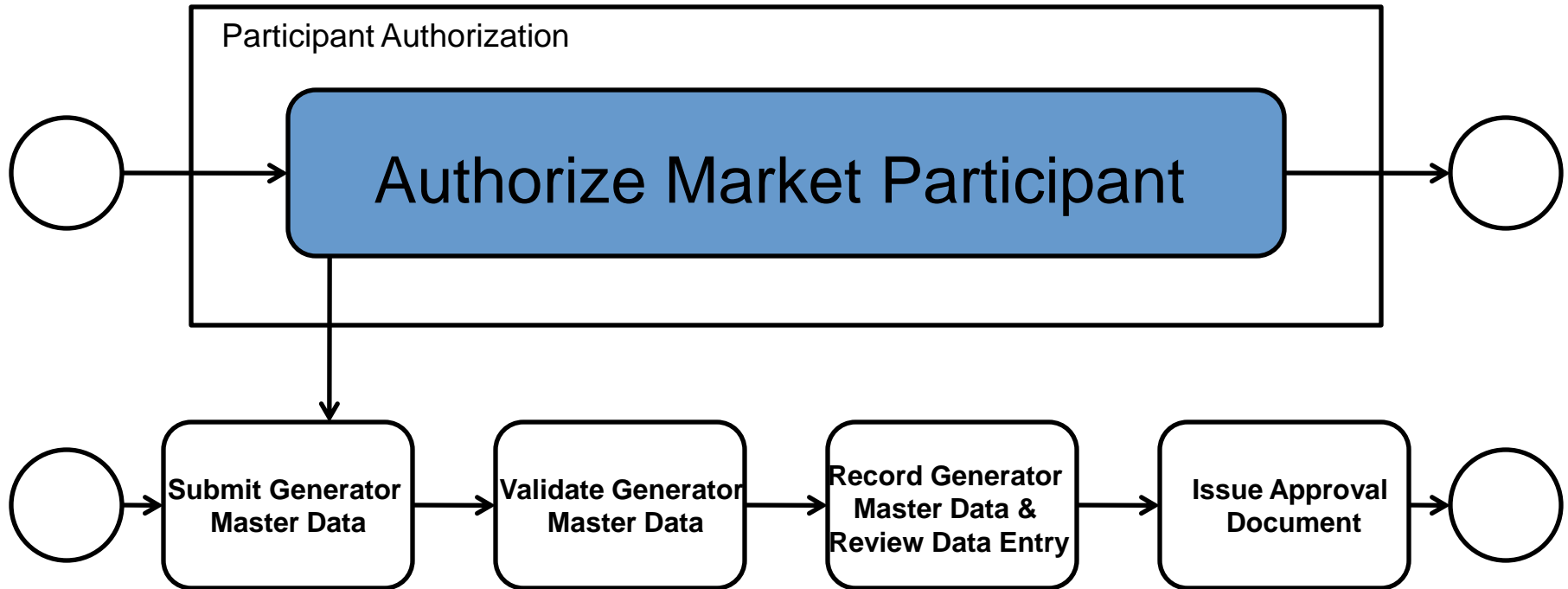
# Participant Registration Process

- Market Participant Registration involves the following processes:
  - **Authorize Market Participant**
  - **Facility Registration**
  - Meter Registration
- The EDAC project has made modifications to the first two processes only.

# Authorize Market Participant



# Enrolment Process Flow

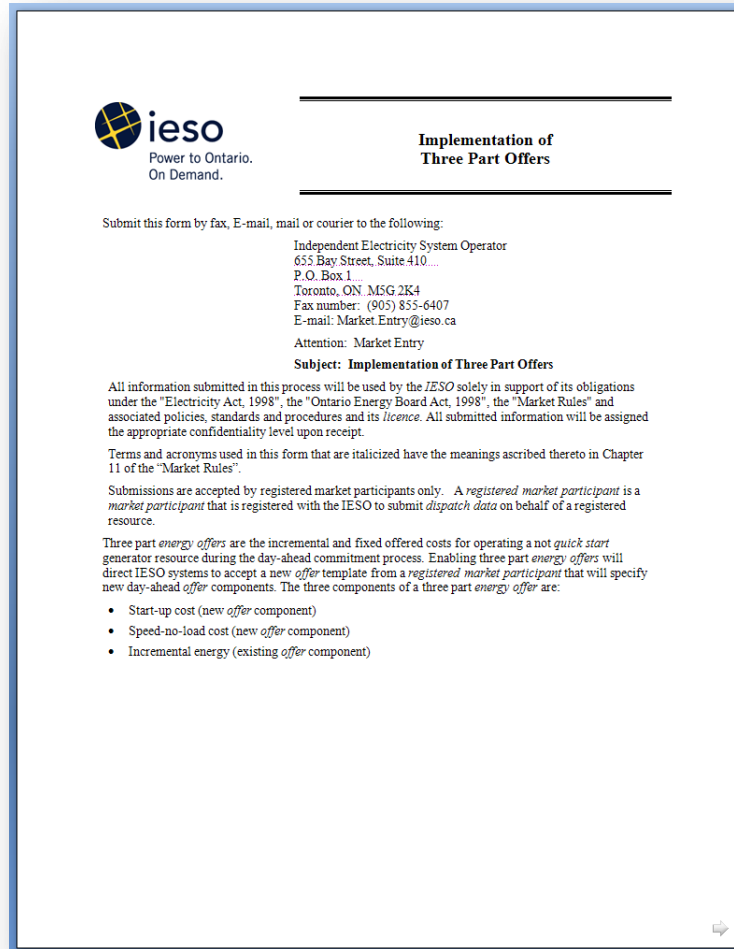


# Authorization Overview


- The Market Entry Process ensures participants have the applicable:
  - Government Documents
    - e.g., OEB Licence.
  - IESO Documents
    - e.g., Participation Agreement, Authorization to Participate, Certificate Subscriber Agreement, Contacts, Prudential Support, Emergency Preparedness Plan, etc.
- In addition, registered market participants must also indicate to the IESO whether they intend to submit three-part offers.
  - ✓ **IESO-FORM-1721** – *Implementation of Three Part Offers*

# IESO-FORM-1721

## Implementation of Three Part Offers



The image shows a document titled "Implementation of Three Part Offers" from IESO. The document includes the IESO logo, contact information for the Independent Electricity System Operator, and detailed instructions regarding the submission of three-part offers, including confidentiality and specific offer components.

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**Implementation of  
Three Part Offers**

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Submit this form by fax, E-mail, mail or courier to the following:

Independent Electricity System Operator  
655 Bay Street, Suite 410...  
P.O. Box 1...  
Toronto, ON M5G 2K4  
Fax number: (905) 855-6407  
E-mail: Market.Entry@ieso.ca  
Attention: Market Entry

**Subject: Implementation of Three Part Offers**

All information submitted in this process will be used by the IESO solely in support of its obligations under the "Electricity Act, 1998", the "Ontario Energy Board Act, 1998", the "Market Rules" and associated policies, standards and procedures and its *licence*. All submitted information will be assigned the appropriate confidentiality level upon receipt.

Terms and acronyms used in this form that are italicized have the meanings ascribed thereto in Chapter 11 of the "Market Rules".

Submissions are accepted by registered market participants only. A *registered market participant* is a *market participant* that is registered with the IESO to submit *dispatch data* on behalf of a registered resource.

Three part *energy offers* are the incremental and fixed offered costs for operating a not *quick start* generator resource during the day-ahead commitment process. Enabling three part *energy offers* will direct IESO systems to accept a new *offer* template from a *registered market participant* that will specify new day-ahead *offer* components. The three components of a three part *energy offer* are:

- Start-up cost (*new offer* component)
- Speed-no-load cost (*new offer* component)
- Incremental energy (*existing offer* component)

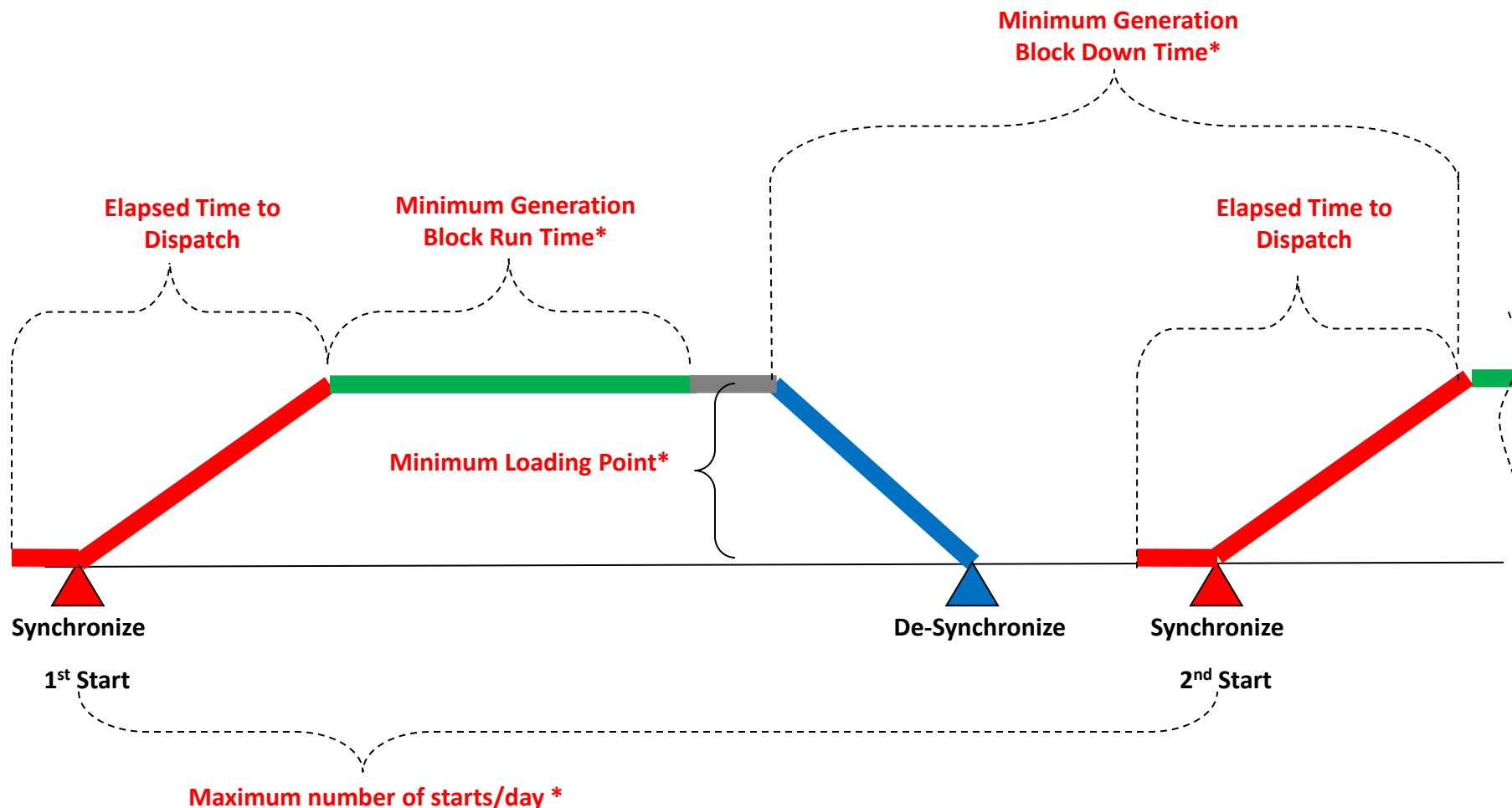
# Facility Registration



# Enrol Facility Overview

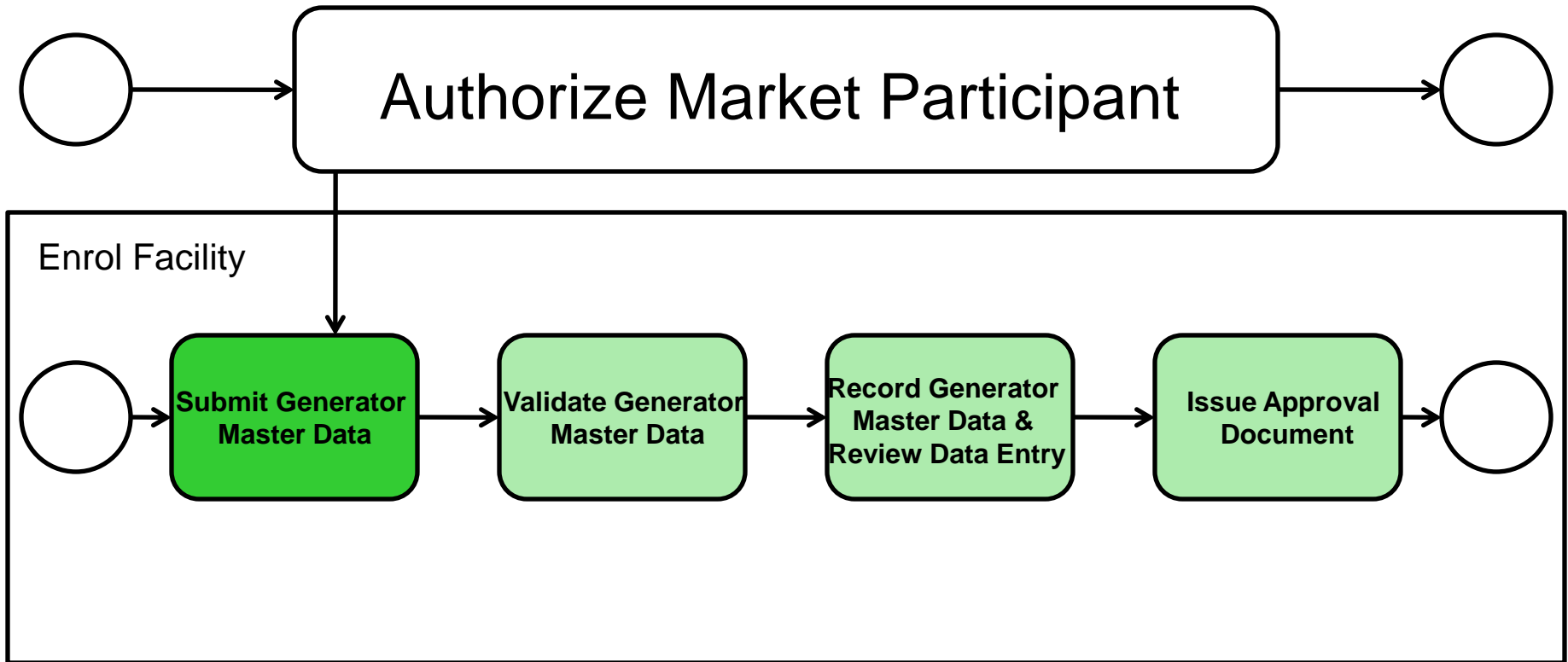
- As part of the DACP registration process, we collect specific operational data/information in order to determine the following:
  - Your Eligible Energy Limited Resource (EELR) status.
  - Your eligibility for DA-PCG.
  - Your resource's day-ahead commitments and schedules while respecting the resource technical data.
  - Your DA-PCG settlement amounts.

# Dispatchable Generator Technical Data



\*Daily values submitted through Daily Generator Data (DGD)

# Enrol Facility Process Flow



# Submit Generator Master Data

- *Generators* participating in the DACP must complete the following forms:
  - ✓ **IMO-FORM-1004** - *Generation Facilities*
  - ✓ **IMO\_FORM\_1181** – *Facility Profile*
  - ✓ **IESO\_FORM\_1702** – *Combined Cycle Plant Form*
  - ✓ **IMO\_FORM\_1552** – *SGOL and DA-PCG Form*

# IMO-FORM-1004

## Generation Facilities

- All generation facilities must complete this form to provide us with the following DACP specific registration data:
  - Primary Fuel Type.
  - Secondary Fuel Types.

# IMO-FORM-1004

## Generation Facilities

Nov 2, 2010 [Enter Market Participant Name] Page 1

**Generation Facilities**

Network Impact [Enter Facility Name] [Enter Operating Designation]

Unit Data	Type (e.g. salient pole, round rotor, induction)	[Enter type]
	Frequency (Hz)	[Enter number]
	Fuel type (e.g. water, coal, oil, nuclear)	[Enter type]
	NERC - Unit Type (see "NERC Fields - Valid Codes")	[Enter type]
	NERC - Cooling Water Source(s)*	[Enter source(s)]
	NERC - Fuel Type: Primary & Alternate (see "NERC Fields - Valid Codes")	[Enter type]   [Enter type]
	NERC - Disposition Method (see "NERC Fields - Valid Codes")	[Enter code]
	NERC - Primary fuel base rate at full load (Btu/kWh)	[Enter number]
	NERC - Status Code (see "NERC Fields - Valid Codes")	[Enter code]
	Rated capacity (MVA)	[Enter number]
	Rated voltage (kV)	[Enter number]
	Power Factor	[Enter number]
	Total rotational inertia of Generator and Turbine (s)	[Enter number]
	Unsaturated reactance to pu on machine base	Xd Xq Xd' Xq' Xd'' Xq''
	Open circuit time constants (s)	Tdo Tdq Tdo' Tdq'

\*Source(s) from which cooling water for thermal-electric plants and water for generating power for hydroelectric plants is directly obtained.

**Connection**

Unit Data	Manufacturer	[Enter name]
	Serial Number	[Enter number]
	Speed (RPM)	[Enter number]
	Station load (MW, MW)	[Enter number]   [Enter number]
	Maximum continuous rating in summer and winter (MW)	[Enter number]   [Enter number]
	Minimum power (MW)	[Enter number]
	Normal ramp rate (MW/min)	[Enter number]
	Emergency ramp rate (MW/min)	[Enter number]
	Armature (RA) and field resistance (Rf)* (Ω)	[Enter number]   [Enter number]
	Saturation at rated voltage (S1.0) and 20% above (S1.2)	[Enter number]   [Enter number]
	Inertia constant for machine only (s) (on request)	[Enter number]
	Damping	[Enter number]
	Base field current (A)	[Enter number]
	Base field voltage (Volts)	[Enter number]
	Losses at 1.0 and 0.9 power factor at maximum continuous rating(MW)	[Enter number]   [Enter number]

Characteristics

Open circuit saturation curve	[Attach file]
Short circuit curve	[Attach file]
V curve	[Attach file]
Capability curve	[Attach file]

\*Field resistance for hydraulic units should be specified at 75°C and at 100°C for thermal units.

**EXCITATION SYSTEM MODEL**

A block diagram suitable for stability studies or an IEEE standard model type with all in-service parameter values for the exciter. Models for stabilizers, under-excitation limiters, and over-excitation limiters shall be provided where applicable. (For each unit 10 MVA or larger)	[Attach file]
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**GOVERNOR AND PRIME MOVER SYSTEM MODEL**

A block diagram suitable for stability studies or an IEEE standard model type with all in-service parameters values for the governor and prime mover (turbine). More detailed models would be required if off-nominal frequency or shaft torsional studies are required. (For each unit 10 MVA or larger)	[Attach file]
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IMO-FORM-1004 v.1.3 Public  
NEW-00-06


# IMO-FORM-1181

## Facility/Resource Profile

- All dispatchable generators must complete IMO-FORM-1181 *Facility/Resource Profile*. This form includes appropriate drop-down menus and check boxes on a per resource basis, as well as the following registered technical data:
  - Elapsed Time to Dispatch.
  - Daily Cascading Hydroelectric Dependency.
  - Identification of the cascading hydroelectric dependent generation resource.
  - Quick start capability.

# IMO-FORM-1181

## Facility/Resource Profile



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**Facility/Resource Profile**

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Submit this form electronically to [market\\_entry@ieso.ca](mailto:market_entry@ieso.ca) or electronically on disk or CD by mail or courier to the following address:

The IESO  
655 Bay Street, Suite 410  
P. O. Box 1  
Toronto, ON M5G 2K4  
Attention: Market Entry  
**Subject: Facility Registration**

All information submitted in this process will be used by the IESO solely in support of its obligations under the "Electricity Act, 1998", the "Ontario Energy Board Act, 1998", the "Market Rules" and associated policies, standards, and procedures and its license. All submitted information will be assigned the appropriate confidentiality level upon receipt.

Terms and acronyms used in this Form that are italicized have the meanings ascribed thereto in Chapter 11 of the "Market Rules".

**PART 1 – GENERAL INFORMATION**

Market Participant Name: <input type="text"/>	
Market Participant ID: <input type="text"/>	
Facility Name: <input type="text"/>	Facility ID: <input type="text"/>
Submitted Date: <input type="text"/>	Effective Date: <input type="text"/>

**PART 2 – FACILITY OWNER/OPERATOR LICENSE:**

Have you requested and obtained a new or amended Ontario Energy Board license, as applicable, for authorization to own and/or operate the facility? <input type="text"/>
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# IMO-FORM-1552

## SGOL and DA-PCG Data Form


- This form is used to provide the following Registered Technical Data (RTD) for each of their resources:
  - Minimum Loading Point (MLP).
  - Minimum Generation Block Run-Time (MGBRT).
  - Minimum Run Time (MRT).
- Minimum Loading Point (MLP) is shared with the Spare Generation On-Line (SGOL) program and the Multiple Interval Optimization sequence in real-time. Market participants must also indicate whether they want to participate in the SGOL program on this form.

# DA-PCG Eligibility

- The *IESO* will determine a market participant's eligibility for the Day-Ahead Production Cost Guarantee (DA-PCG).
- Market participants no longer have to indicate that they want their dispatchable generation facilities to be considered for the Day-Ahead Production Cost Guarantee (DA-PCG).

# IMO-FORM-1552

## SGOL and DA-PCG Data Form



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**Spare Generation On-Line and Day Ahead  
Production Cost Guarantee Data Form**

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Submit this form electronically to [market\\_entry@ieso.ca](mailto:market_entry@ieso.ca)


**Subject: Declaration of participation in the Real time SGOL program and election of eligibility for the Day Ahead Production Cost Guarantee (DA-PCG).**

All information submitted in this process will be used by the IESO solely in support of its obligations under the "Electricity Act, 1998", the "Ontario Energy Board Act, 1998", the "Market Rules" and associated policies, standards and procedures and its license. All submitted information will be assigned the appropriate confidentiality level upon receipt.

Terms and acronyms used in this Form that are italicized have the meanings ascribed thereto in Chapter 11 of the "Market Rules".

**PART 1 – GENERAL INFORMATION**


Market Participant Name: <input type="text"/>	
Facility Name: <input type="text"/>	
Market Participant ID: <input type="text"/>	Submitted Date: <input type="text"/>
Facility ID: <input type="text"/>	Effective Date: <input type="text"/>



- This form is required for *generation facilities* that are part of a combined cycle plant. This form includes the following registered technical data:
  - Physical CT and ST Resource Names and Resource IDs
  - Steam Turbine MLPs for n-on-1 CT-to-ST configuration
  - Declaration to use pseudo unit model
    - Steam Turbine Percentage Share of Pseudo Unit
    - Steam Turbine Duct Firing Capacity
- *Generation facilities* that are physically aggregated do not need to submit this form

# IESO-FORM-1702

## Combined Cycle Plant Form



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**Combined Cycle Plant  
Form**

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Submit this form electronically to [market.entry@ieso.ca](mailto:market.entry@ieso.ca)

All information submitted in this process will be used by the IESO solely in support of its obligations under the "Electricity Act, 1998", the "Ontario Energy Board Act, 1998", the "Market Rules" and associated policies, standards and procedures and its license. All submitted information will be assigned the appropriate confidentiality level upon receipt.

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**PART 1 – GENERAL INFORMATION**

Market Participant Name:

Facility Name:

Market Participant ID:  Submitted Date:

Facility ID:  Effective Date:

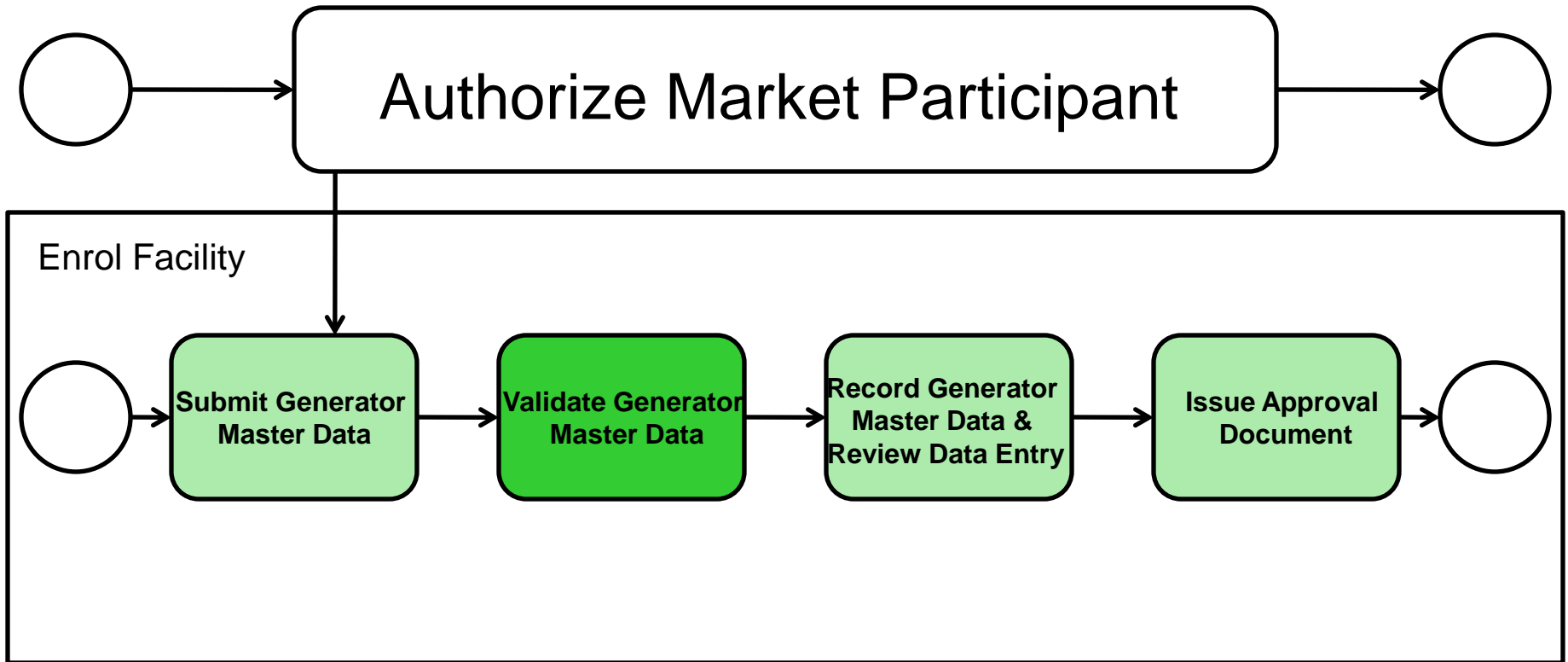
**PART 2 – CERTIFICATION & VERIFICATION**

This section is to be signed by the individual identified as the 'Main Executive Contact' or the 'Full Access User' in the "Application for Authorization to Participate".

<input type="text"/>	<input type="text"/>
Name (Please Print)	Title
<input type="text"/>	<input type="text"/>
Email Address	Phone Number
<input type="text"/>	<input type="text"/>
Signature	Date

IESO FORM 1702

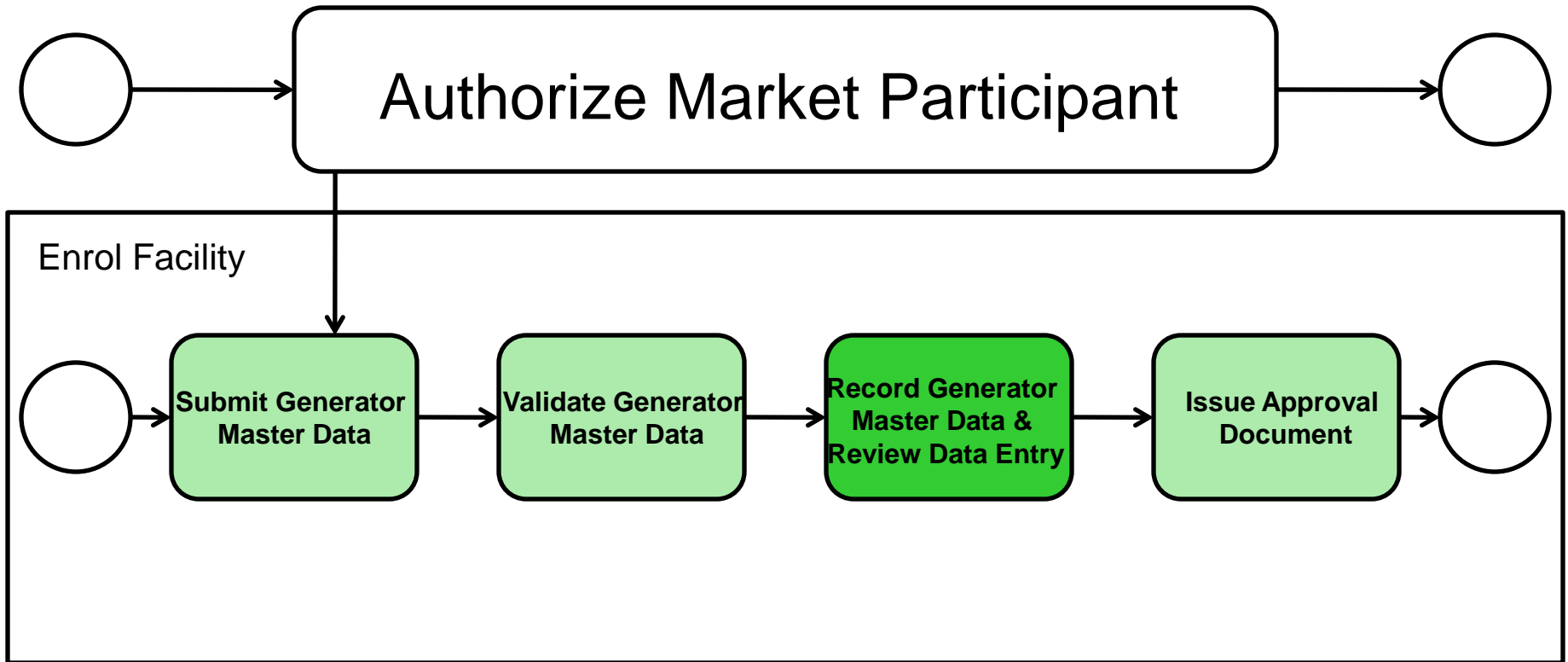
# Enrol Facility Process Flow



# Validate Generator Master Data

- A Market Entry project manager is assigned to you and oversees the facility registration task.
- The project manager reviews the submitted forms and validates the submissions.
- Participants will be notified of incorrect/invalid information.
- The project manager then uses the data to determine a number of facility parameters:
  - Eligible Energy Limited Resource.
  - DA-PCG Eligible Resource.
  - Three Part Offer and DGD submission eligible.
  - Electrical Zone.

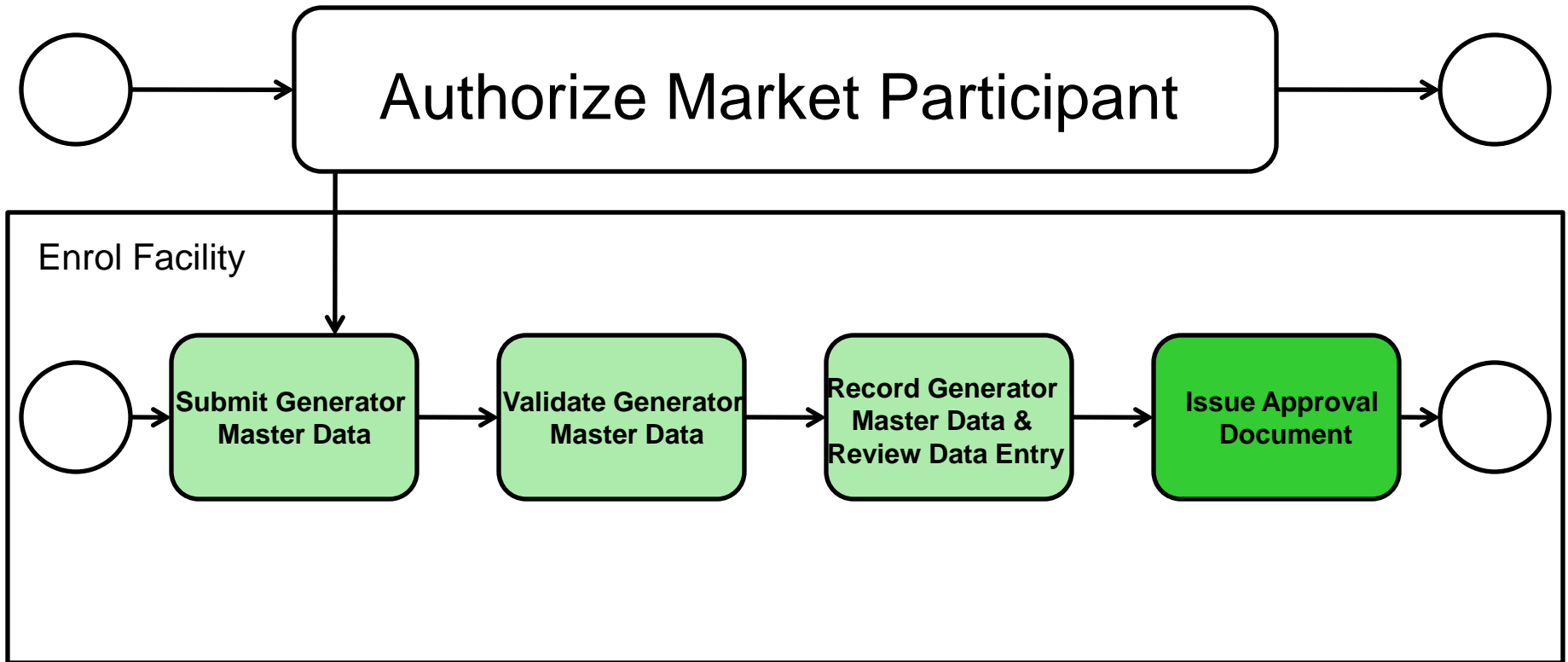
# Enrol Facility Process Flow



# Record Generator Master Data

- The project manager inputs the Registered Technical Data (RTD) into the IESO registration system within 6 business days ensuring RTD is moved to production for desired trade date.

# Enrol Facility Process Flow



# Submission Timeline for Testing

- Fax or e-mail completed forms to the EDAC project at:
  - Fax: 905-403-6902
  - E-mail: [edac@ieso.ca](mailto:edac@ieso.ca)
- Please submit your completed facility enrolment forms by December 17<sup>th</sup>.

