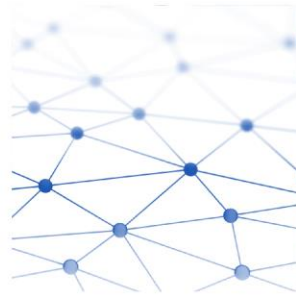


Guide to Participation in the Singapore Wholesale Electricity Market



1) Introduction

The National Electricity Market of Singapore (NEMS) commenced on January 2003, which was made possible by a number of structural reforms to Singapore's electricity industry. The NEMS introduces market mechanisms into the electricity industry, so as to:

- Increase economic efficiency through competition;
- Attract private investment;
- Send accurate price signals to guide production and consumption decisions;
- Encourage innovation; and
- Provide consumer choice.

The NEMS comprises a wholesale market and a retail market. The Energy Market Company (EMC) operates the wholesale electricity market and provides a competitive and transparent trading platform for wholesale electricity trading. Like a stock exchange for electricity, all of Singapore's electricity is bought and sold through the EMC. In addition to the EMC, the other stakeholders in the NEMS are:

- **Energy Market Authority (EMA)** – The EMA is the regulator of the electricity industry and has the ultimate responsibility for the market framework and ensuring that the interests of consumers are protected.
- **Power System Operator (PSO)** – The PSO (a division of the EMA) is responsible for ensuring the security of supply of electricity to consumers. The PSO controls the dispatch of generation facilities, coordinates scheduled outages and power system emergency planning, and directs the operation of the transmission network.
- **Market Support Services Licensee (MSSL)** – The MSSL is authorised to provide market support services, which include consumer registration and transfer, meter reading and meter data management, retail settlement and billing, and supplying electricity to all non-contestable consumers at regulated tariffs. SP Services is the only MSSL.
- **Transmission Licensee** – SP PowerAssets (SPPA) is the Transmission Licensee, which owns the electricity transmission and distribution networks of Singapore. It is also responsible for the operation and maintenance of the grid. SP PowerGrid is the Transmission Agent Licensee, which operates and maintains its transmission and distribution networks as the agent of SPPA.
- **Generation Licensees** – Singapore's three largest electricity generating companies are Senoko Energy Pte Ltd, PowerSeraya Ltd and Tuas Power Generation Pte Ltd. All companies that generate electricity require a Generation Licence if one or more of its generating units have an individual nameplate rating of 10MW or more.
- **Retail Electricity Licensees** – There are two types of licensed electricity retailers: market participant retailers (MPRs) and non-market participant retailers (NMPRs). MPRs have to be registered with the EMC to purchase electricity from the NEMS and sell that electricity on to contestable consumers. NMPRs do not have to register with the EMC to participate in the NEMS since they purchase electricity indirectly through SP Services, the MSSL.

- **Wholesaler Licensees** – Companies or contestable consumers will require a Wholesaler License to:
 - (a) sell electricity in the SWEM for generating unit with individual nameplate rating of less than 10MW but 1MW or more, and/or
 - (b) provide ancillary services or any electricity related product or service through a load reduction, and/or
 - (c) supply electricity from embedded generators¹, at specified premises², to sell or offer to sell to consumers at the same specified premises.

The rest of this guide describes the licence and registration requirements that a new entrant buyer or seller would need to fulfil, before participating in the wholesale spot market.

¹ Individual nameplate rating of less than 10MW but 1MW or more

² Specified premises mean any premises that: (a) are lawfully used or occupied by the Licensee for the purpose of generating electricity through a generating unit on the premises for supply and sale by the Licensee of the electricity to one or more consumers who lawfully use or occupy the premises for non-residential purposes; and (b) are also supplied electricity from a transmission system.

2) EMA Licence and EMC Registration Requirements

Under the Electricity Act, you are required to obtain an electricity licence from the EMA to carry out any of the following activities unless exempted³:

- Generation of electricity
- Retailing of electricity
- Transmission of electricity
- Import or export electricity
- Trade in any wholesale electricity market
- Provide any market support services

In addition, if you would like to participate in the wholesale electricity market, you are required to register with the EMC as detailed below, unless you are eligible for alternative schemes⁴:

- Register with the EMC as a Market Participant (MP); and
- Register with the EMC your facility providing the service (e.g. generator), if applicable.

Alternative Schemes:

- For consumers with embedded generators of nameplate ratings of less than 10MW and wish to sell their excess generation, you are required to register with the MSSL under the Enhanced Central Intermediary Scheme (ECIS) or Simplified Credit Treatment Scheme (SCT). For further enquiries, please email install@spgroup.com.sg.
- For a Retail Electricity Licensee, you could choose to register with the MSSL as an NMPR which does not require any EMC registrations.

Please refer to the following resources for more details:

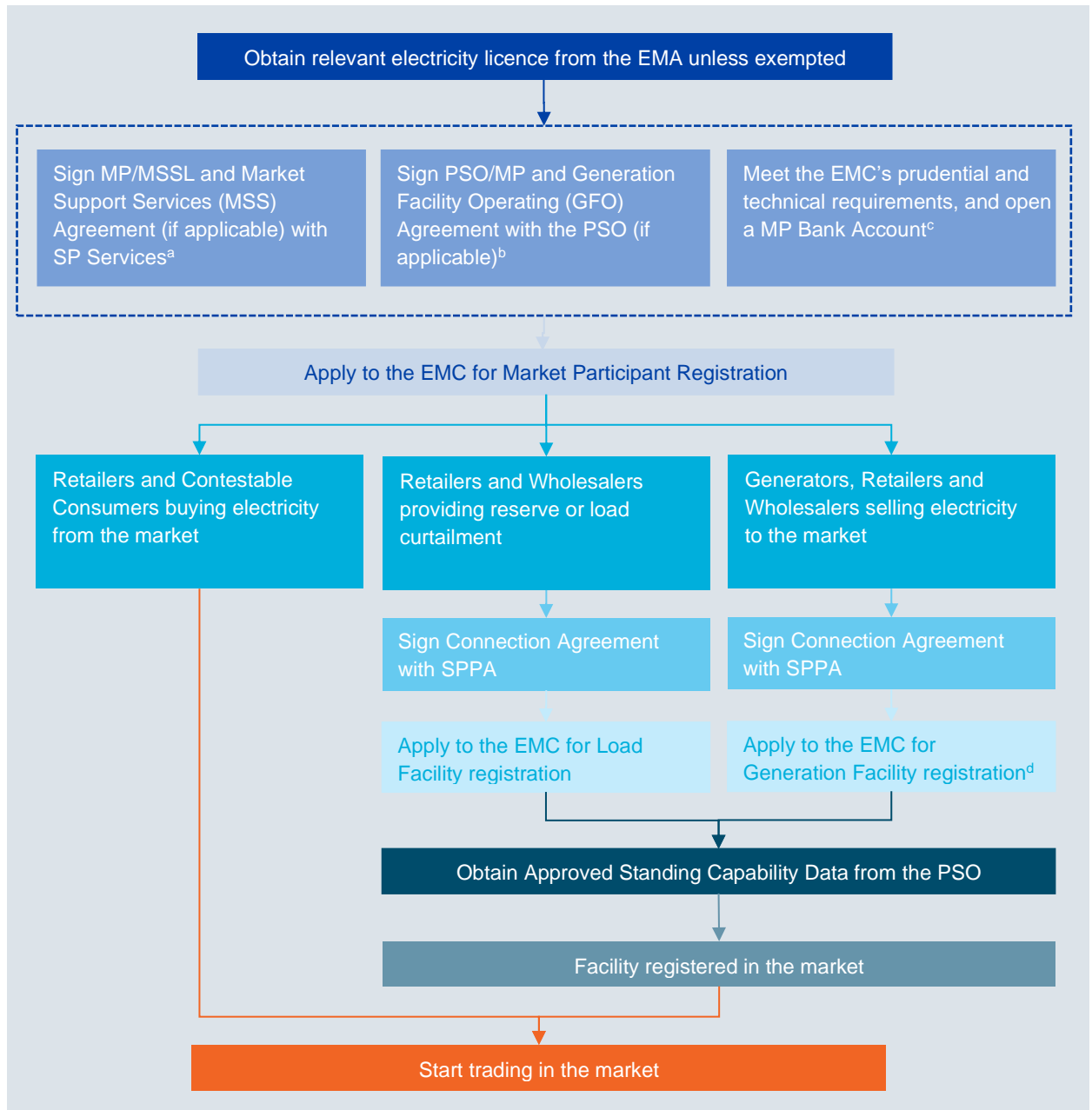
- **Annex A** – Reference Table for the exact type of EMA Licence and/or EMC Registration you should apply for
- **Annex B** – Description and Application Weblinks for EMA Licences
- **Annex C** – Description and Application Weblinks for EMC Registration

³ For the list of exemption orders granted by the EMA, please refer to the EMA's website at: <https://www.ema.gov.sg/regulations-licences/regulations/acts-regulations>

⁴ For more information on whether you qualify for these schemes, please refer to Annex A.

3) EMC Registration Process

An overview of the registration process is shown below:



^a Any MP who is (i) a Wholesaler Licensee and registering load facilities to provide only interruptible load service, or (ii) registered in the market for the sole purpose of registering Non-exporting Embedded Intermittent Generation Facilities (NEIGFs) does not need to sign a MP/MSSL agreement with SP Services.

^b The Generation Facility Operating (GFO) Agreement is required to establish a contractual relationship between the PSO and Generation Licensee. This is to allow the PSO to dispatch the Generation Licensee's generation facility(s).

^c Any MP who is registered in the market for the sole purpose of registering NEIGFs does not need to meet the EMC's prudential requirements or open a MP Bank Account.

^d As long as the commissioning of a Generation Facility requires it to be connected to the Grid, it should first be registered as a Commissioning Generation Facility (CGF).

Table 1 below details the estimated processing time for fulfilling the various requirements:

Table 1: Details of EMC Registration

Registration of	Key Requirements	Estimated Processing Time
Market Participant	<ul style="list-style-type: none"> a) <i>EMC's prudential requirements</i>⁵ b) <i>PSO-MP and PSO-GFO agreements (if applicable)</i>⁶ c) <i>MP-MSSL agreement</i>⁷ d) <i>Electricity licence unless exempted</i> e) <i>EMC's technical requirements</i> f) <i>MP bank account and direct debit authorisation</i> <p>* If an applicant intends to be registered as a MP for the sole purpose of registering NEIGFs, key requirements a), c) and f) are not applicable.</p>	20 business days from the receipt of complete form, with no further info requested by the EMC.
Facility (Commissioning Generation Facility, CGF)	<ul style="list-style-type: none"> a) <i>EMC's requirements</i>, which includes identifying a dispatch coordinator for the facility b) <i>PSO's requirements</i>, which includes completing the facility registration form c) <i>Connection agreement</i> d) <i>Metering requirements</i> e) <i>Certificate of Undertaking</i> of MP's operational control and authority over the facility 	30 business days from the receipt of complete form, with no further info requested by the EMC.
Facility (Generation Registered Facility, GRF; or Generation Settlement Facility, GSF; or Pseudo Generation Settlement Facility, PGSF)	<ul style="list-style-type: none"> a) <i>EMC's requirements</i> b) <i>PSO's requirements</i>, which includes completing facility registration form and respective supporting documents (e.g. test reports) c) <i>Connection agreement</i> d) <i>Metering requirements</i> e) <i>Certificate of Undertaking</i> of MP's operational control and authority over the facility 	30 business days from the EMC being satisfied that the facility meets all requirements for generation facility registration
Facility (Load Registered Facility, LRF)	<ul style="list-style-type: none"> a) <i>EMC's requirements</i> b) <i>PSO's requirements</i>, which includes completing the facility registration form and respective supporting documents (e.g. test reports) c) <i>Certificate of Undertaking</i> of MP's operational control and authority over the facility d) <i>Metering requirements</i>⁴ e) <i>Connection agreement</i>⁸ 	30 business days from the EMC being satisfied that the facility meets all requirements for load facility registration

⁵ If you satisfy only the key requirements (a) and (b), the EMC may conditionally register you as a MP, so that you may commence the process of registration of your facilities. However, you must satisfy all the key requirements stated above, before you can be registered as a MP and your facilities can be registered.

⁶ The Generation Facility Operating (GFO) Agreement is required to establish a contractual relationship between the PSO and Generation Licensee. This is to allow the PSO to dispatch the Generation Licensee's generation facility(s).

⁷ Not applicable if you are (i) registering Load Registered Facilities that are only providing interruptible load service.

⁸ Not applicable for a facility to be registered solely to be scheduled for energy withdrawal for the purposes of load curtailment and is comprised of more than one installation.

4) Frequently Asked Questions

General

Q) What is the typical settlement cycle for MPs participating in the market (i.e. when do I get paid and when do I need to pay?)

A) Based on the final settlement statement issued to the MP, on the 10th business day (BD) after the trading day (T), the EMC shall issue electronic funds transfer instructions to the clearing bank instructing the clearing bank to:

- Debit the net settlement amount from the MP's bank account, on the MP payment date (which is on the 20th calendar day after T, subject to BD convention), and/or
- Credit the net settlement amount to the MP's bank account, 1 day after the MP payment date, subject to BD convention.

Please refer to Chapter 7 of the Market Rules and the Settlement Market Manual for more details of this process.

Q) As a market participant, what are the fees applicable to me?

A) The EMC recovers EMC and PSO fees (on behalf of the PSO) from each MP in accordance with the schedule of fees approved by the EMA. Details of EMC and PSO fees could be found on the respective EMC and EMA websites:

- <https://www.home.emcsg.com/about-emc/EMC-Budget-and-Admin-Fees>
- <https://www.ema.gov.sg/regulations-licences/regulations/market-operations/budget-fees>

Generators

Q) If I am an embedded generation facility (EGF), what do I need to do and what information do I need to provide?

A) The EMA's approval is required for classification as an EGF⁹. As an EGF, you are able to enjoy Net Treatment on non-reserve charges and can apply to the EMA to be granted Price Neutralisation (PN). Please inform the EMC in advance if you are in the process of applying for EGF or PN status. Upon the EMA's approval, the EMC will classify your generation facility accordingly. You may refer to the EMA's guide on the conditions under which it will grant such an approval:

<https://www.ema.gov.sg/content/dam/corporate/licences/content-files/EMA-Industry-Licences-Info-Guide-for-Embedded-Generators.pdf.coredownload.pdf>

Q) Where can I find information on the energy prices my generation facility will be paid, and the associated charges and fees, for every MWh of electricity sold to the market?

A) For every MWh of electricity sold, you will be paid at the nodal energy price determined for your generation facility. At the same time, you will need to pay an Allocated Regulation Price

⁹The need for the EMA's approval does not apply to embedded intermittent generation facilities (IGFs). You may refer to the EMA's clarification paper on the eligibility criteria for embedded IGFs:

[https://www.ema.gov.sg/content/dam/corporate/consultation-data/regulatory-framework-for-intermittent-generation-sources-\(28-oct-2013\)/decision/update-\(24-feb-2015\)/EMA-Consultations-Update-Enhancements-Regulatory-Framework-Intermittent-Generation-Sources.pdf.coredownload.pdf](https://www.ema.gov.sg/content/dam/corporate/consultation-data/regulatory-framework-for-intermittent-generation-sources-(28-oct-2013)/decision/update-(24-feb-2015)/EMA-Consultations-Update-Enhancements-Regulatory-Framework-Intermittent-Generation-Sources.pdf.coredownload.pdf)

(AFP) charge, as well as PSO and EMC fees. You can find information on nodal energy prices, PSO/EMC fees and AFP charge from our website:

<https://www.nems.emcsg.com/nems-prices>.

To be able to view PSO/EMC variable fees and AFP charge, please download data on “Wholesale Electricity Prices”.

Consumers

Q) I am a contestable consumer who is currently using a retailer but would like to switch to being a Direct Market Participant (DMP). Other than registering as an MP to do so, what other documents or information should I provide the EMC to ensure a smooth process?

A) The EMC would need to submit a Customer Transfer Request (CTR) on your behalf to the MSSL before you can participate in the wholesale electricity market as a DMP. To do this, we need the following information from you: company name, account number, and postal code.

Other Sources of Information

If you require more information on Singapore’s electricity industry, in general or the related legislations or regulations, please visit the EMA website at www.ema.gov.sg.

For additional information on the wholesale electricity market of the NEMS (e.g. the Market Rules that govern the NEMS, market data, etc.), please visit the EMC website at <https://www.home.emcsg.com/>.

5) Useful Contacts

You may find the following contacts useful if you have further queries on the respective issues.

Enquiry on	Organisation	Officer	Email	Phone Number
Licence from EMA Application for EGF and/or PN	EMA	Mr Aaron Koh Deputy Director, Economic Regulation and Licensing Dept Economic Regulation Division	aaron_koh@ema.gov .sg	63767567
Registration with the EMC and registration requirements	EMC	Ms Wang Jing Vice President, Market Administration Team	jing.wang@emcsg.co m	68711875
PSO-MP and PSO- GFO Agreements	PSO	Mr Chen Shuaixun Senior Principal Engineer, System Stability & Planning Department Power System Operation Division	Chen_Shuaixun@em a.gov.sg	65576002
MP-MSSL Agreement or Market Support Services (MSS) Agreement	MSSL	Mr Mohamed Salim Executive Officer, Metering Data Management	MOHAMEDSALIM@ spgroup.com.sg	69169336
Transmission Issues	SP PowerGrid	Ms Yao Dailin Principal Engineer, Transmission Planning For Intermittent Generation Facilities (IGFs): Ms Lim Huang Huang Principal Engineer, Distribution Planning	dailin@spgroup.com. sg huanghuang@spgrou p.com.sg	69168621 69168468

6) Glossary

aggregate nameplate

Total sum of the nameplate ratings of all generation facilities within a generation station.

contestable consumers

Those consumers that have the right to choose to purchase electricity from a retailer, directly from the wholesale market or indirectly from the wholesale market through the Market Support Services Licensee (MSSL), SP Services. Consumers qualify to be contestable based on their level of electricity consumption.

dispatchable load

A contestable consumer that participates in the wholesale market and is willing to adjust its consumption in response to spot prices, in exchange for load curtailment incentive payment.

dispatch schedule

A schedule produced by the market clearing engine every half-hour that is the basis for the supply or consumption of energy, reserve and regulation in the market.

embedded generation facility (EGF)

A generation facility installed to generate and supply electricity primarily for its own use at its own load facilities.

Intermittent generation facility (IGF)

A generation facility whose power output, in the course of its ordinary and proper operation, cannot be predicted or be directly or indirectly controlled or varied at will.

interruptible load (IL)

A contestable consumer that participates in the wholesale market and allows its supply of electricity to be interrupted in the event of a system disturbance in exchange for reserve payment.

market participant (MP)

A person who has an electricity licence issued by the Energy Market Authority (EMA) or is exempted from doing so, and has been registered with the EMC as a market participant

net treatment of non-reserve charges for embedded generation facility

Since June 2011, non-reserve charges (EMC fees, PSO fees, Monthly Energy Uplift Charges [MEUC] and Market Support Services [MSS] charges) for embedded generation facilities will be administered based on their amount of net withdrawal (consumption) from, or net injection (generation) into the grid. To qualify for this treatment, an embedded generation facility requires approval from the EMA and registration with the EMC as an embedded generation facility.

non-contestable consumers

Consumers that are not contestable consumers. They are supplied by the MSSL at a regulated tariff.

price neutralisation

The equalisation of the price differential between the electricity injection and withdrawal nodes using a credit/debit factor. The purpose of price neutralisation is to allow embedded generators that generate electricity for its own consumption to offset generation against their associated load so that only excess generation at each node is paid at the respective market energy price, or excess load is charged at (USEP+HEUC) in energy settlement.

regulation

Generation that is on-line to fine-tune the imbalance between generation and load.

reserve

On-line generation capacity or interruptible load that can be drawn upon when there is an unforeseen tripping of generating unit(s).

subject to dispatch

When a generation facility or a load facility is subject to dispatch, it means that the facility can generate or consume electricity only based on the dispatch schedule or upon the dispatch instructions of the PSO.

wholesale market

The transactions made between generation companies and retail companies.

Disclaimer

While Energy Market Company Pte Ltd has made reasonable efforts to ensure that the information contained in this registration guide is accurate and complete, this guide is prepared and provided for general information purposes only. As such, you should always consult a suitably qualified professional, refer to the relevant legislations and rules including the Electricity Act, Electricity Market Rules and Market Manuals and independently assess the information provided in this guide to make your decision. If you have any specific queries about this guide or its contents, contact us at MPRegistration@emcsg.com.

Annex A

Reference Table on EMA Licences and EMC Registration Requirements

I am a	I would like to	Licence needed from EMA	Registration needed from EMC
Generator with nameplate rating \geq 10MW	Be connected to the grid and generate	Licence to generate i.e. Generation Licence	Register as a MP Register generation facility as a CGF first, and then subsequently as a GRF ¹⁰
	Not be connected to the grid	No licence required	No registration required
Generator with nameplate rating \geq 1MW and $<$ 10MW, and aggregate nameplate rating ¹¹ \geq 10MW	Be connected to the grid and generate	Licence to trade in the wholesale electricity market e.g. Generation Licence, Retailer Licence, or Wholesaler Licence	Register as a MP Register generation facility as a CGF first, and then subsequently as a GRF ¹²
	Not be connected to the grid	No licence required	No registration required
Generator with nameplate rating \geq 1MW and $<$ 10MW, and aggregate nameplate rating $<$ 10MW	Be connected to the grid and generate subject to dispatch	Licence to trade in the wholesale electricity market e.g. Generation Licence, Retailer Licence, or Wholesaler Licence	Register as a MP Register generation facility as a CGF first, and then subsequently as a GRF ¹³
	Be connected to the grid and generate not subject to dispatch		Register as a MP Register generation facility as a GSF. However, if facility is required to connect to the grid for commissioning purposes, then it would need to be registered first as a CGF.
	Not be connected to the grid	No licence required	No registration required
Generator seeking to register multiple standalone ¹⁴ intermittent facilities under a single registration, with each facility possessing a nameplate rating $<$ 10MWac	Be connected to the grid and generate not subject to dispatch	Licence to trade in the wholesale electricity market e.g. Generation License, Retailer Licence, or Wholesaler Licence	Register as a MP Register the first facility as a PGSF. Need to apply to the MSSSL for any subsequent additions or removals of one or more facilities registered under a PGSF. ¹⁵

¹⁰ In this scenario, only an IGF is allowed to generate not subject to dispatch and be registered as a GSF. All GRFs shall generate subject to dispatch.

¹¹ Aggregate nameplate rating in this section refers to: if the facility is intermittent, the aggregate nameplate rating of all the intermittent generation facilities that are connected to the same substation; if the facility is non-intermittent, the aggregate nameplate rating of all the non-intermittent generation facilities that are connected to the same substation.

¹² Same as 8 above

¹³ Same as 8 above

¹⁴ Standalone refers to the facility or site being directly connected to the grid, as opposed to the EGF set-up where generation would have a connection to its onsite load.

¹⁵ The MP is to also, promptly and in a manner satisfactory to EMC and PSO, notify EMC and PSO in writing regarding such additions and removals with the latest maximum generation capacity of the PGSF.

I am a	I would like to	Licence needed from EMA	Registration needed from EMC
Generator with nameplate rating < 1MW	Be connected to the grid, generate and participate in the market to get paid for electricity exported to the grid	No licence required	Register as a MP Register generation facility as a GRF or GSF. However, if facility is required to connect to the grid for commissioning purposes, then it would need to be registered first as a CGF.
	Be connected to the grid, generate and participate in the market under another MP to get paid for electricity exported to the grid ¹⁶		Do not need to register as a MP. Register facility with the EMC through the other MP.
	Be connected to the grid and not get paid for electricity exported to the grid		No registration required
	Not be connected to the grid		No registration required
Retailer	Retail electricity via EMC	Licence to retail and trade electricity in the wholesale electricity market i.e. Retailer Licence	Register as a MP
	Retail electricity via MSSL		Need to register with the MSSL
	Register generation facilities (less than 1 MW) on behalf of my clients		Register as a MP Register generation facility as a GRF or GSF. However, if facility is required to connect to the grid for commissioning purposes, then it would need to be registered first as a CGF.
	Register generation facilities (less than 10 MW)		Register as a MP Register generation facility as a GRF or GSF. However, if facility is required to connect to the grid for commissioning purposes, then it would need to be registered first as a CGF.
	Register load facilities on behalf of my clients		Register as a MP Register load facility as a LRF
Non-contestable Consumers with embedded generating unit below 1MW ¹⁷	Generate and get paid by the MSSL for electricity generated	No licence required	No registration with the EMC is required. Need to inform the MSSL for credit adjustment by the MSSL

¹⁶ Small generators (nameplate rating < 1MW) can choose for their facilities to be registered by the EMC under another MP who hold an electricity licence to trade in the wholesale electricity market (e.g. retailers). In this case, the MP will be responsible for ensuring that the generator complies with the market rules.

¹⁷ Non-contestable consumers with generating unit below 1MW are exempted from registering with the EMC to participate in the market and get paid for the electricity they export to the grid. This will be done via credit adjustments made by SP Services to their electricity bill – for more details on this scheme, refer to the EMA's decision paper:

I am a	I would like to	Licence needed from EMA	Registration needed from EMC
Contestable Consumer with embedded generating unit below 1MW	Generate and get paid for electricity exported to the grid	No licence required	Need to register with the MSSL under the Enhanced Central Intermediary Scheme (ECIS) ¹⁸ .
	Be connected to the grid and not get paid for electricity exported to the grid		No registration required
Contestable Consumer with embedded generating unit of \geq 1MW and $<$ 10MW	Generate and get paid for electricity exported to the grid	Licence to trade in the wholesale electricity market e.g. Generation Licence, Retailer Licence, or Wholesaler Licence	Need to register with the MSSL under the ECIS.
	Be connected to the grid and not get paid for electricity exported to the grid (for embedded intermittent generators only)		Register as a MP ¹⁹ Register generation facility as a NEIGF ²⁰ and pay for fixed market-related charges in advance every half-yearly. Daily settlement is not required for NEIGFs.
Contestable Consumer with embedded generating unit of \geq 10MW	Generate and get paid for electricity exported to the grid	Licence to generate i.e. Generation Licence	Register as a MP Register generation facility as a CGF first, and then subsequently as a GRF ²¹

<https://www.ema.gov.sg/content/dam/corporate/consultation-data/policy-on-generation-with-less-than-1mw-in-installed-capacity/decision/EMA-Consultations-Final-Determination-EMA-Consultations-Review-Policy-Generation-with-Less-Than-1MW-Installed-Capacity.pdf.coredownload.pdf>

¹⁸ For more details on the ECIS, you may refer to the EMA's determination paper:

<https://www.ema.gov.sg/content/dam/corporate/consultation-data/central-intermediary-scheme-for-embedded-generation/decision/EMA-Consultations-Final-Determination-Enhancements-to-Central-Intermediary-Scheme-Embedded-Generation.pdf.coredownload.pdf>

¹⁹ If an applicant intends to be registered as a MP for the sole purpose of registering NEIGFs, certain key requirements of MP registration are not applicable. Please refer to Table 1 in Section 3 of this guide.

²⁰ For more details on NEIGFs, you may refer to the EMA's determination paper:

<https://www.ema.gov.sg/content/dam/corporate/consultation-data/regulatory-framework-for-intermittent-generation-sources/decision/EMA-Consultations-Final-Determination-Regulatory-Framework-Intermittent-Generation-Sources.pdf.coredownload.pdf>

²¹ In this scenario, only an IGF is allowed to generate not subject to dispatch and be registered as a GSF. All GRFs shall generate subject to dispatch.

I am a	I would like to	Licence needed from EMA	Registration needed from EMC
Contestable Consumer	Purchase my own consumption of electricity directly from the market ²²	No licence required	Register as a MP
	Get paid for allowing the PSO to interrupt or curtail my load in a contingency event	Licence to trade or sell interruptible load in the wholesale electricity market e.g. Retailer licence or Wholesaler Licence	Register as a MP Register load facility as a LRF
	Get paid for (voluntarily) curtailing my load in response to spot price	Licence to trade or participate in demand side activities in the wholesale electricity market e.g. Retailer licence or Wholesaler Licence	
	Participate in the market under another MP to get paid for allowing the PSO to interrupt or curtail my load in a contingency event; and/or (voluntarily) curtailing my load in response to spot price ²³	No licence required	Do not need to register as a MP. Register facility with the EMC through the other MP.

²² For more details on purchasing electricity for your own consumption directly from the market and the ensuing MP registration with the EMC, please refer to the EMC's website on Direct Market Consumers:

<https://www.home.emcsg.com/register/DMC-EMC-Registration>

²³ Load facilities can choose for their facilities to be registered by the EMC under another MP who hold an electricity licence to trade or participate in the relevant activity in the wholesale electricity market (e.g. retailers). In this case, the MP will be responsible for ensuring that the load facility complies with the market rules.

Annex B

EMA Licences

The key types of licences granted by the EMA are shown in the table below:

Table B1: Types of EMA Licences

Type of Licence	Required by	Link for Application
Generation Licensee	A person who generates electricity via a generating unit with nameplate rating of 10MW and above. The licence must authorise the licensee to trade in the wholesale market.	
Retail Electricity Licensee	A person who sells electricity to contestable consumers. The licence must authorise the licensee to trade in the wholesale market.	
Wholesaler License	<ul style="list-style-type: none"> ▪ A person who sells electricity generated via generating unit(s) with nameplate rating of 1MW or more but less than 10MW and connected to the transmission system, ▪ A person who chooses to bid into the SWEM and voluntarily curtail the consumption of electricity from its load facility in response to spot prices, in return for incentive payment, ▪ A person who offers reserve into the SWEM, by opting to interrupt its load facility's consumption of electricity, for payment, and/or ▪ A person who supplies electricity from embedded generators to sell to on-site load. 	https://www.ema.gov.sg/regulations/licences/licences/industry-licences

Annex C

EMC Registration

The EMC website has published the registration forms for each type of registration. To register as a MP or register a facility, you should download, complete and submit the relevant form(s) to the EMC²⁴. Each form contains explanatory notes and a checklist to help you complete the form. The key types of registration by the EMC are shown in the table below:

Table C1: Types of EMC Registration

Type of Registration	Description	Link for Application
Market Participant	A person who is registered, in accordance with the market rules, to participate in the SWEM by injecting electricity into the grid and/or trading (buy/sell electricity or be paid for offering reserve) in the SWEM.	https://www.home.emcsg.com/register/Market-Participant-Registration
Generation Facility Registration		
Commissioning Generation Facility (CGF)	<p>All GRFs must first be registered as CGFs to undergo commissioning tests.</p> <p>Generation facilities who wish to be registered as a GSF would need to be registered as a CGF first if the facility is required to connect to the grid for commissioning purposes.</p> <p>CGF registration is an interim arrangement that expires upon the PSO's approval of your generation facility's final commissioning test²⁵.</p> <p>Market rules applying to a generation facility will similarly apply to a CGF, including payment for every MWh of electricity injected into the grid, along with the associated charges and fees.</p>	https://www.home.emcsg.com/register/Generation-Facility-Registration
Generation Registered Facility (GRF)	<p>A generation facility which generates, subject to dispatch, and injects electricity into the grid.</p> <p>Being subject to dispatch means that the GRF is required to offer its expected generation quantities for every dispatch period, and to generate according to its dispatch schedule.</p>	
Generation Settlement Facility (GSF)	A generation facility which generates, not subject to dispatch, and injects electricity into the grid.	
Pseudo Generation Settlement Facility (PGSF)	<p>A generation facility that may comprise the aggregation of one or more intermittent generation facilities, which are connected directly to the grid, with each aggregated facility possessing name-plate ratings of less than 10MWac.</p> <p>A PGSF is a generation facility which generates, not subject to dispatch, and injects electricity into the grid.</p>	
Non-exporting Embedded Intermittent Generation Facility (NEIGF)	An embedded intermittent generation facility which does not intend to receive payments for export of energy (if any) to the grid.	

²⁴ If you hold more than one electricity licence and, pursuant to those licences, intend to perform different functions in the SWEM, you must submit separate applications for each function.

²⁵ If you intend for your generation facility to continue generating and injecting into the grid, you should submit your application for GRF registration in tandem with your CGF registration and work with PSO/EMC to ensure that your GRF registration will be approved on the day that your CGF registration expires.

Type of Registration	Description	Link for Application
Load Facility Registration		
Load Registered Facility (LRF)	A load facility whose consumption of electricity could be interrupted, based on its offers of reserve into the SWEM, or whose consumption of electricity could be adjusted in response to spot prices and according to its dispatch schedule.	https://www.home.emcsg.com/register/Load-Facility-Registration