IRAS e-Tax Guide

GST Guide for the Market Participants in the National Electricity Market of Singapore ("NEMS")
(Third Edition)

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Second revision on 28 Nov 2011 (Revision made to paragraph 4.4, and Appendix 1 and 2. Inserted paragraph 5.7)

TABLE OF CONTENTS

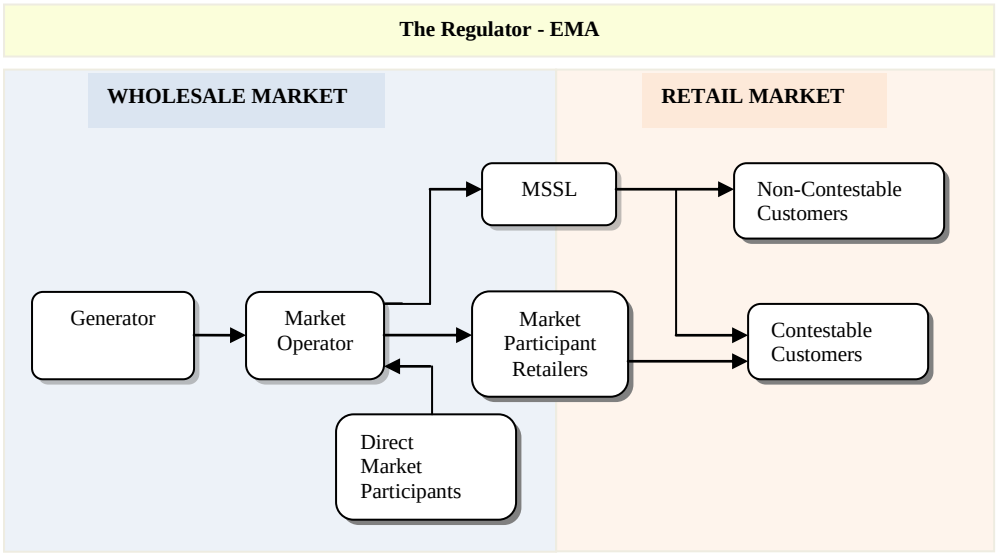
1 Overview

1.1 IRAS partners industry players in the Energy Market to give clarity and certainty to GST treatment for specific transactions in the National Electricity Market of Singapore (NEMS). The transactions covered in this Guide include the supply of electricity, bilateral financial contracts and price neutralization.

1.2 The second edition of this e-Tax Guide incorporates additional feedback received from the industry. It provides further clarity on the GST treatment applicable to passing of vesting debits/credits and price neutralization.

2 Outline of Industry

2.1 The NEMS started trading on 1 Jan 2003. It consists of a wholesale market and a retail market.



2.2 Electricity is traded in the wholesale market, operated by the Market Operator, through a "pool" system. Any company that intends to produce electricity is required to sell the electricity to the "pool" and any company that intends to purchase electricity has to buy the electricity from the "pool".

2.3 The Market Operator buys the electricity at the nodal prices[1] and sells the electricity at the Uniform Singapore Energy Prices[2] ("USEP"). These prices are determined half hourly at the wholesale market based on supply and demand.

2.4 The retail market is liberalised in phases. Contestability is granted to consumers in stages, starting with consumers with higher electricity consumption followed by those with lower electricity consumption. Eventually, all consumers in Singapore will become contestable.

[1] Nodal price is the market price for energy that dispatchable generator receives and varies according to the location on the network of the node to which the dispatchable generator has been assigned.

[2] Uniform Singapore Energy Price ("USEP") is a weighted average of the nodal prices at all of the off-nodes in each half-hour.

2.5 The key players in the NEMS include:

a) The Regulator
Energy Market Authority (EMA) is the regulator for the NEMS. It is responsible for ensuring the NEMS meets the needs of Singapore.

b) Market Operator
The Energy Market Company Pte Ltd (EMC) is the Market Operator. The Market Operator operates and administers the wholesale market. All of Singapore's electricity is bought and sold through the Market Operator in the NEMS.

c) Generator ("Gencos")
All Generators with significant size[3] have to be licensed by EMA and must be registered with the Market Operator. They generate electricity for injection into the power grid and they bid every half-hour to sell electricity into the wholesale electricity market.

d) Market Support Services Licensees ("MSSL")
MSSLs provide market support services such as meter reading and meter data management. They can also purchase electricity from the Market Operator and sell it to both contestable and non-contestable consumers.

e) Market Participant Retailers ("Retailers")
Retailers must be licensed by the EMA and registered with the Market Operator in order to purchase electricity in the wholesale market. They are permitted to sell the electricity to contestable consumers.

f) Direct Market Participants
Direct Market Participants are companies licensed by the Regulator to trade in the wholesale electricity market. All the new embedded generators[4] with a certain capacity will need to be registered in the NEMS as Direct Market Participants.

g) Consumers
Consumers are categorised as contestable and non-contestable. Consumers who are granted contestability ("contestable consumers") can choose to purchase their electricity from MSSL or Retailers. Non-contestable consumers have to buy electricity from the MSSL (i.e. SP Services Ltd) at regulated tariffs.

3 GST Treatment on the Supply of Electricity

3.1 The supply of electricity in Singapore is a standard-rated supply of goods. Therefore, in the NEMS, all GST-registered suppliers of electricity (e.g. the Gencos, the Market Operator and the Retailers) are required to charge and

[3] The Singapore Electricity Market Rules set such requirement for facility registration.

[4] An embedded generator is a power generation plant that generates electricity for self-consumption.

account for GST at the prevailing rate on the supply of electricity in Singapore.

3.2 The supply of electricity is treated as taking place at the earlier of the date of issuance of tax invoice or the date of receipt of payment[5].

4 Bilateral Financial Contracts

4.1 Under the NEMS, the Gencos are exposed to a certain level of volatility as the prices of electricity fluctuate every half hour. To manage this price, the Gencos enter into bilateral financial contracts with Retailers to hedge against the price volatility. There is no physical delivery of the underlying electricity between the contracting parties under the bilateral financial contracts.

4.2 The key types of bilateral financial contracts that the Gencos enter into with Retailers are Contracts for Differences (CfDs). Essentially, CfD involves agreeing on a hedge price and the volume of energy that it covers. When the contract reference price exceeds the hedge price, the Gencos pays the Retailer the difference between the contract reference price and the hedge price. When the contract reference price is less than the hedge price, the Retailer pays the Gencos the difference between the contract reference price and the hedge price.

4.3 Another form of bilateral financial contracts, known as the Vesting Contracts, is imposed on the Gencos by the Regulator. Vesting Contracts are entered into between the Gencos and MSSL. The objective of the vesting contracts is to curb the exercise of market power by the larger incumbent Gencos and foster price stability for consumers.

4.4 Vesting contracts are revenue neutral to the MSSL as the gains (credits) and losses (debits) associated with the contracts are passed on to non-contestable consumers & Retailers. The Retailers, upon receiving the vesting debits or credits, would depend on the contractual terms in their electricity sale agreement with their contestable consumers to decide whether or not to pass on such debits or credits. If the vesting debits or credits are not passed on to the contestable consumers, the Retailers may instead, pass on the vesting debits or credits to their Gencos as part of the CfDs.

4.5 The bilateral financial contracts can be settled through the Market Operator. When the CfDs are settled through the Market Operator, the Market Operator will reduce the amount payable or due to the contracting parties by the hedge quantity at the USEP price. When the vesting contracts are settled through the Market Operator, the Market Operator will reduce the amount payable or due to the contracting parties by the hedge quantity at the

[5] Regulation 17 of the GST (General) Regulations.

difference between the hedge price[6] and the vesting contract reference price.

5 GST Treatment on Bilateral Contracts

5.1 The bilateral financial contract is an exempt supply since it is settled financially without physical delivery of the underlying electricity (akin to a financial hedging contract like "forward contract").

5.2 The proxy value for the exempt supply in each prescribed accounting period is the net realised gain or loss from bilateral contracts:

Exempt Supplies arising from CfDs between Gencos and Retailers:
Hedge quantity x (Contract Reference Price[7] – Hedge price)

Exempt Supplies arising from vesting contracts:
Hedge quantity x (Vesting Contract Reference Price – Hedge Price[8])

5.3 The aggregate sum of the net gains and losses realised from bilateral contracts should be reported as an absolute figure in the GST return[9]. The market participants should not report only the realised gains or the gross value of the bilateral contract as the value of exempt supplies.

5.4 Only the contracting parties (i.e. Gencos, MSSL and Retailers) should report the realised gain or loss as exempt supplies in their GST returns. The Market Operator, who is only a settlement agent and not a contractual party in the bilateral contract, is not the supplier of the exempt supplies. Therefore, it is not required to report the amount it receives or pays to the market participants as part of the payment settlement as its exempt supplies.

Passing of vesting debits/credits between the MSSL and the Retailers

5.5 The passing of vesting debits/credits between MSSL and Retailers does not give rise to any supply for GST purposes. Hence, the MSSL and the Retailers do not need to declare such transactions in their GST returns.

Passing of vesting debits/credits between MSSL/Retailers to consumers

5.6 The passing of vesting debits/credits from MSSL/Retailers to non-contestable and contestable consumers arise from the supply of electricity

[6] Vesting contract hedge price to consumers, termed as the Payment Reference Price (PRP), is calculated by the MSSL every quarter to recover the expected cost of the contracts allocated to generation companies.

[7] Contract reference price includes Uniform Singapore Energy Price (USEP).

[8] This is also commonly referred to as payment reference price in vesting contract.

[9] Exempt supplies are computed by adding up the absolute value for all categories of exempt supplies. As both CfDs and vesting contracts are forward contracts, the net realised gains or losses derived from them can be net off against each other and the absolute amount be taken as the exempt supply.

and is therefore part of the consideration received for the supply of electricity. Hence, this is a standard-rated supply.

Passing of vesting debits/credits between Retailers and Gencos

5.7 The passing of vesting debits/credits between the Retailers and the Gencos as part of the CfDs between them is an exempt supply. Hence, the Retailers and Gencos should report the net gains or losses in their GST returns (refer to footnote 9 on the reporting of exempt supplies).

6 Price Neutralisation for Embedded Generator

6.1 Embedded generators ("EGs") of a certain capacity that are connected to the grid are required to hold a generation license and become a direct market participant.

6.2 Although EGs generate electricity only for its own consumption, under the market rules, they need to sell the electricity generated to the Market Operator, like all other Gencos. The EGs will in turn, purchase the electricity for its consumption from the Market Operator.

6.3 The market rules require the EGs to pay the Uniform Singapore Energy Price (USEP) to the Market Operator for their gross consumption. They will in turn, receive payment from the Market Operator for their gross generation at their respective nodal prices. Hence, the Market Operator will bill the EGs for the amount of electricity consumed regardless of the amount of electricity that the EGs generate.

6.4 Price neutralization was introduced to allow the EGs to only pay for the electricity consumed in excess of its injection. To effect the price neutralization, the Market Operator will issue a credit note to the EG to reduce the amount payable by EG when the price of electricity injection is lower than the price of electricity withdrawn. Where the price of electricity injection is higher than price of electricity withdrawn, the Market Operator will then invoice EG for the difference.

6.5 Under a new initiative effective 1 Feb 2007, one more avenue is available to the EG for the purchase of electricity. The EG can choose to purchase the electricity from the Retailers instead of solely purchasing the electricity from the Market Operator.

6.6 Notwithstanding EG's purchase of electricity from the Retailers, the Market Operator will continue to provide EG with the price neutralization.

7 GST Treatment on Price Neutralisation for Embedded Generator (EG)

7.1 On the premise that the price-neutralization is statutorily mandated and given that the price paid by the EGs to the Retailers is independent of the sale from the EGs to the Market Operator, the price neutralization provided by the Market Operator is treated as a "no supply" for GST purposes.

7.2 Hence, the Market Operator and EGs should not charge or reflect GST in its invoice or payment voucher issued for such transactions. They also do not have to declare the price neutralization transactions in their GST returns.

8 Recovery of Input Tax

Input tax directly attributable to taxable supplies

8.1 Market participants are allowed to claim the input tax if it is incurred for the making of taxable supplies and the input tax is not disallowed under Regulation 26 and 27 of the GST Act (General Regulations). The input tax claims must also be supported by valid tax invoices issued to the market participants.

Input tax directly attributable to exempt supplies

8.2 Market participants making both taxable and exempt supplies would not be allowed to claim input tax directly attributable to the exempt supplies made unless such input tax at the end of any prescribed accounting period satisfies the following conditions:

a) the total value of the average exempt supplies does not exceed $40,000 per month[10] and 5% of the total value of all taxable and exempt supplies made in that period. This is known as the De Minimis rule under Regulation 28 of the GST (General) Regulations; or

b) the input tax falls within the meaning of Regulation 33[11] and the market participant is not carrying on a business listed in Regulation 34.

8.3 With effect from 1 Apr 2008, the hedging of any utility price arising from the making of taxable supplies is included as an exempt supply under Regulation 33. This includes the CfDs and the vesting contracts. Hence, market participants making only exempt supplies under Regulation 33 would be able to claim the input tax attributable to such exempt supplies.

8.4 For more details and information on input tax recovery for partially exempt traders, please refer to the e-Tax guide on "Partially Exempt Traders and Input tax Recovery."

Input tax directly attributable to 'No supplies"

8.5 Market participants making 'no supplies' arising from the passing of vesting debits/credits and the price neutralization can claim the input tax incurred in

[10] Prior to 1 Apr 2008, the threshold for the De Minimis Rule is $20,000 per month. With effect from 1 Apr 2008, the threshold has been revised to $40,000 per month.

[11] Input tax incurred in the making of Regulation 33 exempt supplies will only be claimable if non-Regulation 33 exempt supplies is less than or equal to 5% of the total value of all taxable and exempt supplies (Regulation 33 and non-Regulation 33 exempt supplies) made in that period - referred to as "Regulation 35 test".

making the 'no supply' if they are wholly carrying on a business towards the making of taxable supplies.

8.6 For more details and information on the input tax recovery for no supply, please refer to the e-Tax guide on "GST on Non-Business Receipts".

Residual input tax

8.7 Input tax that cannot be directly identified as incurred in the making of either taxable, exempt or 'no' supplies are known as residual input tax and they have to be apportioned as follows:

On / After 1 Apr 2008

a) If the market participants is not carrying on a Regulation 34 business and Regulation 35 test is satisfied

Recoverable residual input tax	=	Total residual input tax	X	Taxable supplies + Regulation 33 exempt supplies / Total supplies[#]

b) Otherwise

Recoverable residual input tax	=	Total residual input tax	X	Taxable supplies / Total supplies[#]

[#] The value of total supplies includes the value of taxable supplies and exempt supplies (Regulation 33 and non-Regulation 33 exempt supplies). If you have obtained prior approval from the Comptroller to treat certain exempt supplies as incidental exempt supplies under Regulation 29(3), you can deduct such exempt supplies from the value of total supplies.

8.8 Market Participants will therefore be able to claim all the input tax incurred (except those which are disallowed under Regulation 26& 27) if they only make exempt supplies that fall within Regulation 33 and they are wholly carrying on business activities.

9 Contact Information

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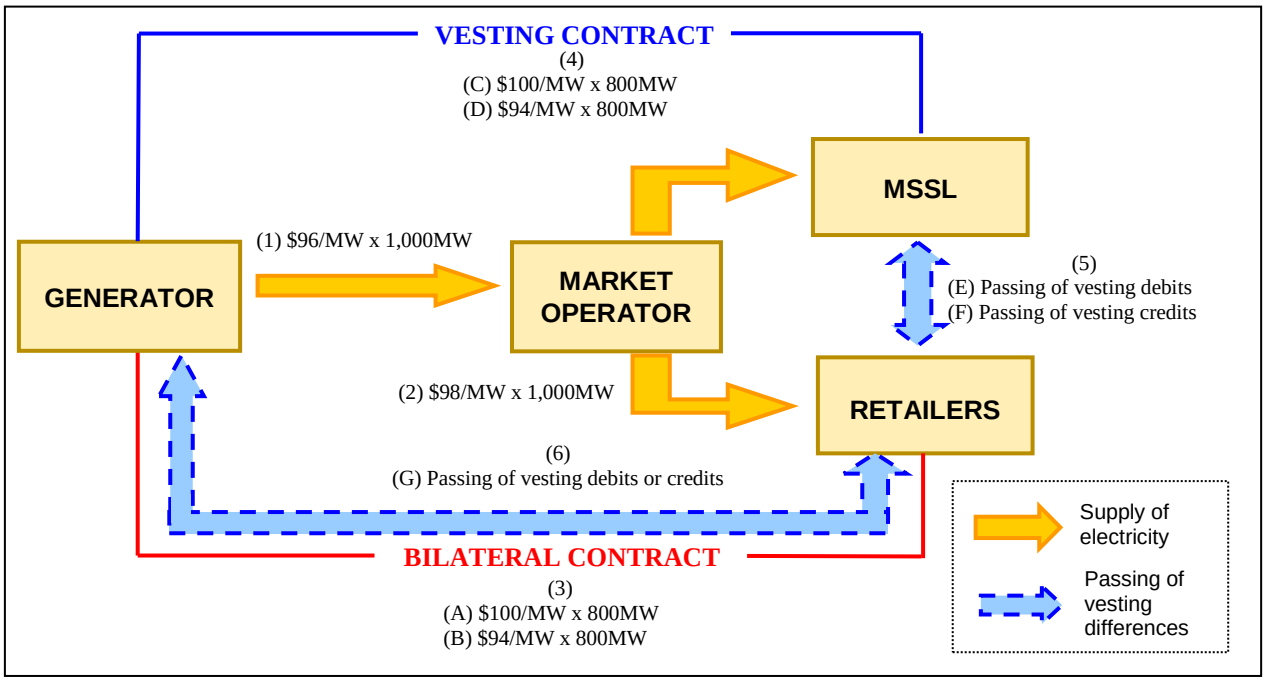
Appendix 1: Summary Table on GST Treatment

Receipts / Payments	GST Treatment
Sale of electricity	Standard-rated supply
Purchase of electricity	Taxable purchase
Contract for Differences	
▪ Net gain or loss realised by Generator / Retailer Hedge Quantity x (Contract Reference Price – Hedge Price)	Exempt supply
▪ Settlement through Market Operator Hedge Quantity X USEP Price	No supply
▪ Payment for bilateral contract outside Market Operator Hedge Quantity X Hedge Price	No supply
Vesting contract	
▪ Vesting contract gain or loss realised by Generator / MSSL Hedge Quantity x (Vesting Contract Reference Price – Hedge Price)	Exempt supply
▪ Passing of vesting debits/credits by MSSL to Retailer	No supply
▪ Passing of vesting debits/credits by MSSL/Retailer to contestable consumer	Taxable supply
▪ Passing of vesting debits/credits by Retailer to Genco (as part of the CfDs between them)	Exempt supply
▪ Passing of vesting debits/credits by MSSL to non-contestable consumer	Taxable supply
▪ Settlement through Market Operator Hedge Quantity x (Vesting Contract Reference Price – Hedge Price)	No supply
Price neutralization for EG	No supply

Appendix 2: Numerical illustration of the GST treatment on the supply of electricity in the wholesale market



In this illustration:

(1) The Generator injects 1,000MW of electricity into the transmission system. The Market Operator pays the Generator for the electricity injected at the nodal price of $96/MW.

(2) The Retailer withdraws 1,000MW of electricity from the transmission system and pays the Market Operator at the USEP price of $98/MW.

(3) The Generator has a bilateral contract with the Retailer. They settle the bilateral contract through the Market Operator at the hedge quantity of 800MW and hedge price of:

- $100/MW (Scenario A)
- $94/MW (Scenario B).

Settlement through the Market Operator is at USEP price. The Market Operator reduces their settlement accounts by the amount of hedge quantity at USEP price. The Generator and Retailer will have a net gain or loss from the bilateral contract based on the formula: hedge quantity x (contract reference price – hedge price).

(4) The Generator also has a vesting contract with the MSSL. They settle the vesting contract through the Market Operator at the vested quantity of 800MW at the reference price of $97/MW and hedge price of:

- $100/MW (Scenario C)
- $94/MW (Scenario D)

The Market Operator makes payment to either the Generator or MSSL and collects payment from the contracting parties by the amount of hedge quantity x (vesting contract reference price – hedge price). The Generator and MSSL will have a net gain or loss from the vesting contract (vesting contract difference) based on the formula: hedge quantity x (vesting contract reference price – hedge price).

(5) Since the vesting contracts should be revenue neutral to the MSSL, MSSL will distribute the losses (debits – Scenario E) and gains (credits – Scenario F) associated with the contracts to the Retailers and consumers.

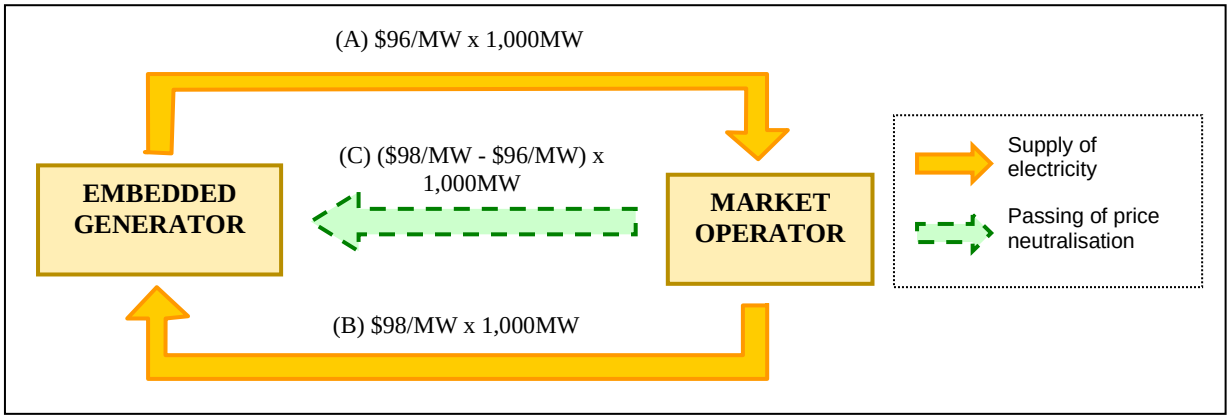
(6) Upon receipt of the vesting debits or credits from MSSL, the Retailers may pass on the vesting debits or credits (Scenario G) to the Generators as part of the CfDs between them. This occurs when such passing is not provided in the electricity sale agreements with the contestable consumers.

Description	Scenario	Generator	Market Operator	Retailer / MSSL
Supply of electricity	Scenario 1: Genco sale of electricity	Standard-rated supply 1,000MW x $96/MW = $96,000 Output tax $96,000 x 7% = $6,720	Taxable purchase 1,000 x $96/MW = $96,000 Input tax $96,000 x 7% = $6,720	
	Scenario 2: Market Operator sale of electricity		Standard-rated supply 1,000MW x $98/MW = $98,000 Output tax $98,000 x 7% = $6,860	Taxable purchase 1,000 x $98/MW = $98,000 Input tax $98,000 x 7% = $6,860
Bilateral contract	Scenario 3(A): where Hedge Price > Contract Reference Price	Exempt supply 800MW x ($100/MW - $98/MW) = $1,600 (Gain)		Exempt supply 800MW x ($100/MW - $98/MW) = $1,600 (Loss)
		No supply 800MW x $98/MW = $78,400	No supply Amt reduced from Generator's and Retailer's account: 800MW x $98/MW = $78,400	No supply 800MW x $98/MW = $78,400
	Scenario 3(B): where Hedge Price < Contract Reference Price	Exempt supply 800MW x ($94/MW - $98/MW) = ($3,200) (Loss)		Exempt supply 800MW x ($94/MW - $98/MW) = ($3,200) (Gain)
		No supply 800MW x $98/MW = $78,400	No supply Amt reduced from Generator's and Retailer's account: 800MW x $98/MW = $78,400	No supply 800MW x $98/MW = $78,400

Description	Scenario	Generator	Market Operator	Retailer / MSSL
Vesting contract	Scenario 4(C): where Vesting Contract Reference Price > Hedge Price	Exempt supply 800MW x ($100/MW - $97/MW) = $2,400 (Gain)		Exempt supply 800MW x ($100/MW - $97/MW) = $2,400 (Loss)
			No supply 800MW x ($100/MW - $97/MW) = $2,400 No supply 800MW x ($100/MW - $97/MW) = $2,400	
	Scenario 4(D): where Vesting Contract Reference Price < Hedge Price	Exempt supply 800MW x ($94/MW - $97/MW) = ($2,400) (Loss)		Exempt supply 800MW x ($94/MW - $97/MW) = ($2,400) (Gain)
			No supply 800MW x ($94/MW - $97/MW) = ($2,400) No supply 800MW x ($94/MW - $97/MW) = ($2,400)	
	Scenario 5(E): Passing of Vesting Debit			No supply
	Scenario 5(F): Passing of Vesting Credit			No supply
	Scenario 6(G): Passing of Vesting Debit or Credit	Exempt supply		Exempt supply

Appendix 3: Numerical illustration of Price Neutralization for Embedded Generator

Illustration 1: Purchase of electricity from Market Operator



In this illustration:

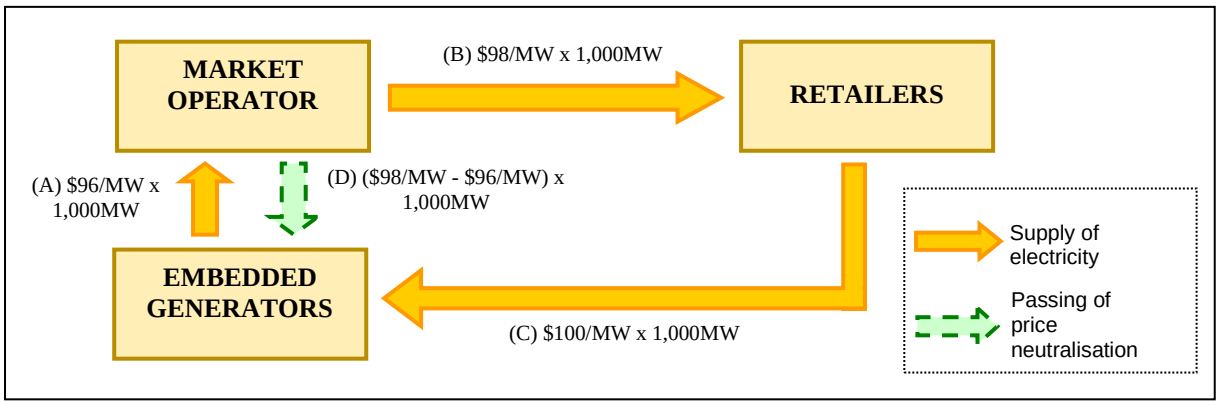
(A) The Embedded Generator injects 1,000MW of electricity into the transmission system. The Market Operator pays them for the electricity injected at the nodal price of $96/MW.

(B) The Embedded Generator withdraws 1,000MW of electricity from the transmission system for its own consumption. The Market Operator charges it for the electricity withdrawn at the USEP price of $98/MW.

(C) For the Embedded Generator not to be worse off due to their supply of electricity to the Market Operator, the Market Operator will have to provide price neutralization based on the formula: Injection Quantity x (USEP Price – Nodal Price).

Description	Scenario	Embedded Generator	Market Operator
Price Neutralization	Scenario (A): Embedded Generator sale of electricity	Standard-rated supply 1,000MW x $96/MW = $96,000 Output tax $96,000 x 7% = $6,720	Taxable purchase 1,000 x $96/MW = $96,000 Input tax $96,000 x 7% = $6,720
	Scenario (B): Market Operator sale of electricity	Taxable purchase 1,000 x $98/MW = $98,000 Input tax $98,000 x 7% = $6,860	Standard-rated supply 1,000MW x $98/MW = $98,000 Output tax $98,000 x 7% = $6,860
	Scenario (C): Price Neutralization	No Supply 1,000MW x ($98/MW - $96/MW) = $2,000	No Supply 1,000MW x ($98/MW - $96/MW) = $2,000

Illustration 2: Purchase of electricity from Retailer



In this illustration:

(A) The Embedded Generator injects 1,000MW of electricity into the transmission system. The Market Operator pays it for the electricity injected at the nodal price of $96/MW.

(B) The Retailer withdraws 1,000MW of electricity from the transmission system and pays the Market Operator at the USEP price of $98/MW.

(C) The Retailer supplies electricity to the Embedded Generator for 1,000MW at $100/MW.

(D) For the Embedded Generator not to be worse off due to their supply of electricity to the Market Operator, the Market Operator will have to provide price neutralization based on the formula: Injection Quantity x (USEP Price – Nodal Price).

Description	Scenario	Embedded Generator	Market Operator	Retailer / MSSL
Price Neutralization	Scenario (A): Embedded Generator sale of electricity	Standard-rated supply 1,000MW x $96/MW = $96,000 Output tax $96,000 x 7% = $6,720	Taxable purchase 1,000 x $96/MW = $96,000 Input tax $96,000 x 7% = $6,720	
	Scenario (B): Market Operator sale of electricity		Standard-rated supply 1,000MW x $98/MW = $98,000 Output tax $98,000 x 7% = $6,860	Taxable purchase 1,000 x $98/MW = $98,000 Input tax $98,000 x 7% = $6,860
	Scenario (C): Retailer sale of electricity to Embedded Generator	Taxable purchase 1,000MW x $100/MW = $100,000 Output tax $100,000 x 7% = $7,000		Standard-rated supply 1,000MW x $100/MW = $100,000 Output tax $100,000 x 7% = $7,000
	Scenario (D) : Price Neutralization	No Supply 1,000MW x ($98/MW - $96/MW) = $2,000	No Supply 1,000MW x ($98/MW - $96/MW) = $2,000	