



SINGAPORE CARBON PRICE BILL KEY ASPECTS

2018

Summary of key items relating to Singapore's Carbon Pricing Mechanism

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Recitals

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EXECUTIVE SUMMARY

Executive Summary

The Singapore Government is introducing a carbon tax that applies to facilities with emissions above the 25,000 t of GHG per annum threshold. Emissions occurring during calendar year 2019 will be taxable, with the first payments due in the second half of 2020. It is estimated that approximately 40 facilities will be considered to be taxable facilities and will have a direct liability. It is probable however that carbon costs applied to power generating facilities will be passed through to end customers, so all energy users may see increased costs.

The introduction of a carbon price is part of Singapore's overall strategy to achieve its emissions intensity reduction goals, set under the global agreement for climate action – the Paris Agreement. Importantly, the framework of this carbon price provides a way for Singapore to increase ambition under the Paris Agreement as countries' targets are progressively tightened in future. For the initial stages of the carbon price implementation in Singapore, the price will be set at \$5 SGD per tonne of CO₂-e. The Singapore Government has already flagged its intention to increase this to a target level of \$10 - \$20 per tonne in coming years, and it may need to be increased further as well, depending on future changes to the country's emissions reduction targets.

The carbon pricing bill itself manages emissions on a facility basis (as opposed to a corporation basis). Depending on the emissions generated by a facility, at a particular geographical location, it may either be a reportable facility or a taxable facility. A reportable facility is one with reportable emissions in excess of 2,000 t CO₂-e per annum (some emissions sources are excluded from reporting – hence “reportable emissions”). The key compliance requirements for a reportable facility are that emissions are reported to the Government annually. This does sound relatively simple but the detail of the emissions estimation methodologies to be employed is not yet defined. If emissions reporting is to be completed using an international standard such as the GHG Protocol or ISO 14064, then the emissions inventory must still conform to certain minimum requirements; namely, emissions inventories should be:

- Relevant – Appropriately reflect the emissions of a facility and be appropriate for the needs of users of this information
- Complete – Account for all emissions sources within the facility boundary
- Consistent – Use consistent methodologies such that comparisons of emissions can be made between facilities and over time for a particular facility
- Transparent – Have clear audit trails and documentation, with all assumptions and methodologies clearly explained
- Accurate – Be neither over nor underestimates of the true value, with uncertainties minimised

Larger facilities, with reportable emissions in excess of 25,000 t CO₂-e per annum are known as taxable facilities. The compliance requirements for a taxable facility are much greater than those for reportable facilities. Taxable facilities will need to provide a monitoring plan for emissions that detail the instrumentation and methodologies used to develop the inventory. These facilities will also be required to have their emissions reports verified by a third party. This is

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important as the emissions report will now represent a liability to a facility and should be recorded on a company balance sheet. Finally, taxable facilities, as suggested by their name, will be required to acquire carbon credits equivalent to their emissions for a calendar year – and then acquit those credits against their liability. The carbon price mechanism being employed by the Singapore Government acts as a tax – as the price is centrally set (in this case \$5) and may be adjusted as progress to overall emissions reduction goals is monitored.

Although functionally, the carbon price acts like a tax, it uses carbon credits as the basis. Currently, the only source of carbon credits is the Government – at a fixed price. Basically, a facility will receive an assessment of carbon tax payable from the Government. They will then need to acquire carbon credits to cover this liability and then acquit those credits to actually pay the assessment. The credits will then be removed from circulation to prevent them from being double counted. The important thing about this framework is that it leaves optionality for the Government to allow facilities flexible compliance mechanisms in the future, by allowing carbon credits from other schemes to be used, or by allowing companies to generate credits through emissions reduction activities – thus creating a secondary market domestically.

This document describes in detail, the contents of the Carbon Pricing Bill – and provides a summary of what facilities and businesses need to do to be compliant with the legislation. As mentioned previously, development of this framework is key to helping Singapore meet its overall climate goals. In addition, it provides the Government will a reasonable amount of flexibility to increase its level of ambition in future years, as other countries do the same through the UN process.

As far as what businesses should be doing now to prepare, it is recommended that businesses take time to understand the following points;

- What facilities exist in a particular corporate group?
- What are the boundaries of those facilities and who has Operational Control?
- What are the estimated reckonable emissions for each facility and will the facility be a reportable facility or a taxable facility?
- Does the facility require an emissions reporting system or database to streamline reporting activities?
- For facilities that are taxable facilities, the costs that will be applicable and whether these costs need to be included in budgets
- Potential pass through arrangements for carbon costs and documentation of pass through calculations to justify those decisions
- Potential of implementing abatement options to reduce exposure to the carbon price for liable entities
- Alternative energy arrangements such as lower carbon alternatives for companies indirectly exposed to carbon prices (e.g., through electricity import) to minimise cost impacts

1 Introduction

The Paris Agreement, created at the 21st Conference of Parties (COP21) under the United Nations Framework Convention on Climate Change (UNFCCC) requested that nations set individual targets relating to greenhouse gas (GHG) emissions. The so called Intended Nationally Determined Contributions (INDCs) – renamed Nationally Determined Contributions (NDCs) after ratifying the Agreement – are collated by the UNFCCC and then used to determine the effort pledged at a global level. These bottom up targets are combined, and the UN then determines the gap to the overall aim of a temperature rise of less than 2°C by the year 2100 – and reports this in their Emissions Gap Report.

Singapore formally ratified the Paris Agreement on the 21st of September, 2016 – thus formalising its INDC target as an NDC and committing to those emissions reduction targets. In the Singapore NDC, a target of 36% reduction in GHG intensity has been set. The carbon pricing bill is one method which Singapore intends to employ to help achieve this target. The most important thing about the Bill is that it provides a framework whereby Singapore can consider increasing the level of ambition under its NDC. As the Government continues to review domestic emissions and the state of ongoing global action, revised targets can be achieved by controlling the price of the carbon credits used by facilities to acquit liability.

SINGAPORE'S NDC TARGET

2 Singapore's NDC target

NDC targets in use by various nations around the world are all specified in different ways. Some are absolute targets for emissions in some future year against a particular historic year, some are absolute targets based on business as usual projections for some future year, while others – such as the Singapore target, are expressed as reductions in GHG intensity. Some examples of the different ways emissions targets are expressed are shown in the table below.

Table 2-1 - NDC targets

NDC TARGETS FOR DIFFERENT NATIONS						
NATION	TARGET TYPE	2005 EMISSIONS	BASE YEAR	TARGET YEAR	TARGET	2030 EMISSIONS ¹
China	GDP intensity	7,059	2005	2030	60% - 65% reduction in intensity per unit of GDP	61% - 133% increase
USA	Absolute	6,223	2005	2025	26% - 28% reduction	34% - 38% reduction ²
EU (28)	Absolute	5,178	1990	2030	-40%	35% reduction
Russia	Absolute	1,629	1990	2030	25% - 30% reduction	52% - 62% increase ³
Japan	Absolute	1,261	2013	2030	26% reduction	21% reduction
Canada	Absolute	736	2005	2030	30% reduction	30% reduction
Australia	Absolute	612	2005	2030	26% - 28% reduction	26% - 28% reduction

¹ Emissions compared to 2005 levels

² The US did not include a 2030 target so this is extrapolated

³ Russia's 1990 emissions were very high compared to current so this NDC represents an increase in emissions

SINGAPORE'S NDC TARGET

NATION	TARGET TYPE	2005 EMISSIONS	BASE YEAR	TARGET YEAR	TARGET	2030 EMISSIONS ¹
South Korea	BAU	557	n/a	2030	37% reduction from BAU emissions	4% reduction

Singapore has set an intensity target as its NDC target. This target is to reduce GHG intensity, measured in kg of CO₂-e/\$\$ of GDP by 36% in 2030, compared to 2005 levels. Some analysis has been completed using historical data, and a forecast of GDP to generate the following data so that the Singaporean target can be compared to others.

Table 2-2 - Singapore's NDC target

NDC TARGET FOR SINGAPORE						
NATION	TARGET TYPE	2005 EMISSIONS	BASE YEAR	TARGET YEAR	TARGET	2030 EMISSIONS
Singapore	GDP intensity	40.9	2005	2030	36% reduction in intensity per unit of GDP	61% increase

The trend for GHG intensity out to 2030 has been plotted as below in Figure 2-1. This trend was calculated by assuming a straight-line reduction from the current GHG intensity to the target intensity in 2030. Historic GHG intensity was determined by using GDP data for Singapore from the International Energy Agency and emissions data, as reported by Singapore to the UNFCCC. As the UNFCCC data only reports up to 2012 for total emissions, assumptions were made based on the IEA estimates for Singapore's emissions from energy combustion.

SINGAPORE'S NDC TARGET

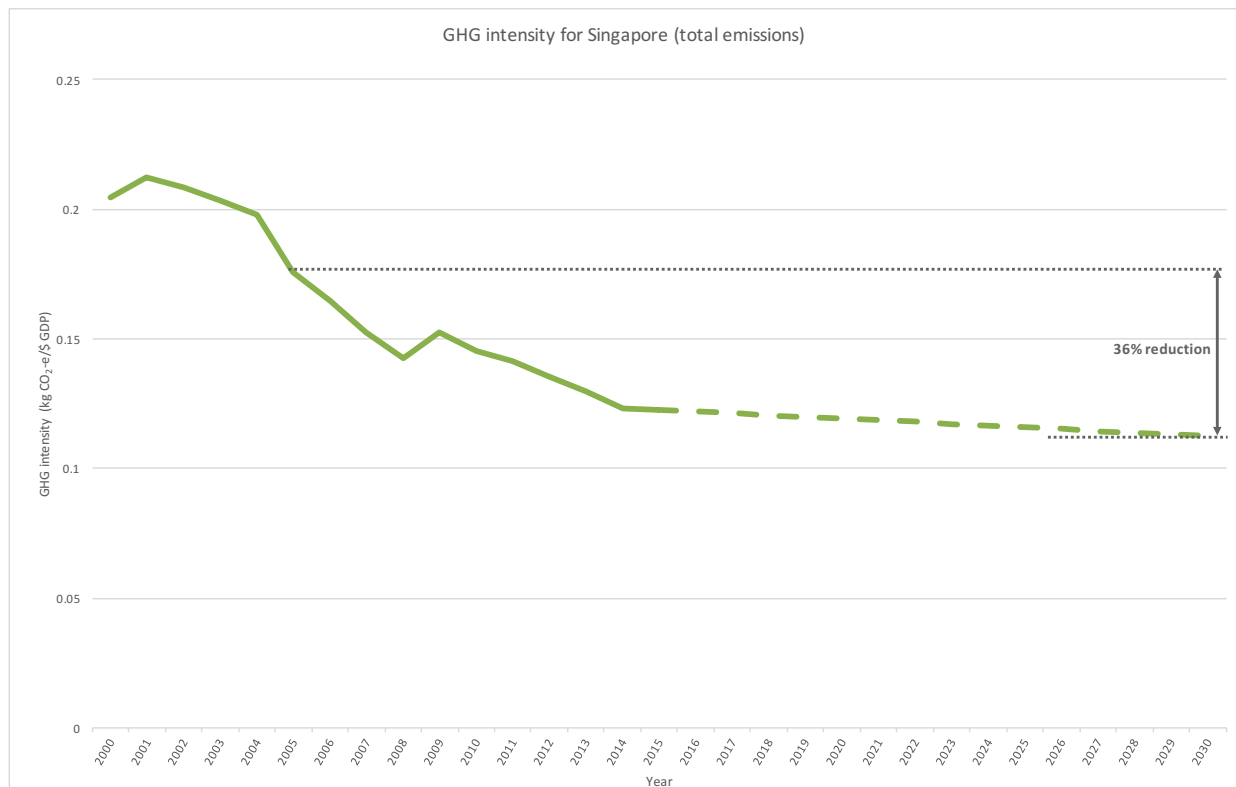


Figure 2-1 – Historic and required trend for Singapore's GHG intensity

The dashed line in the above chart shows the required pathway to meet the 36% reduction target.

To generate a view of future GDP for Singapore, a modest growth rate of 2.75% per annum was assumed. These values for future GDP, when combined with the pathway for future GHG intensity, provided an indication of absolute emissions, for that economic growth rate. This is summarized in Figure 2-2.

SINGAPORE'S NDC TARGET

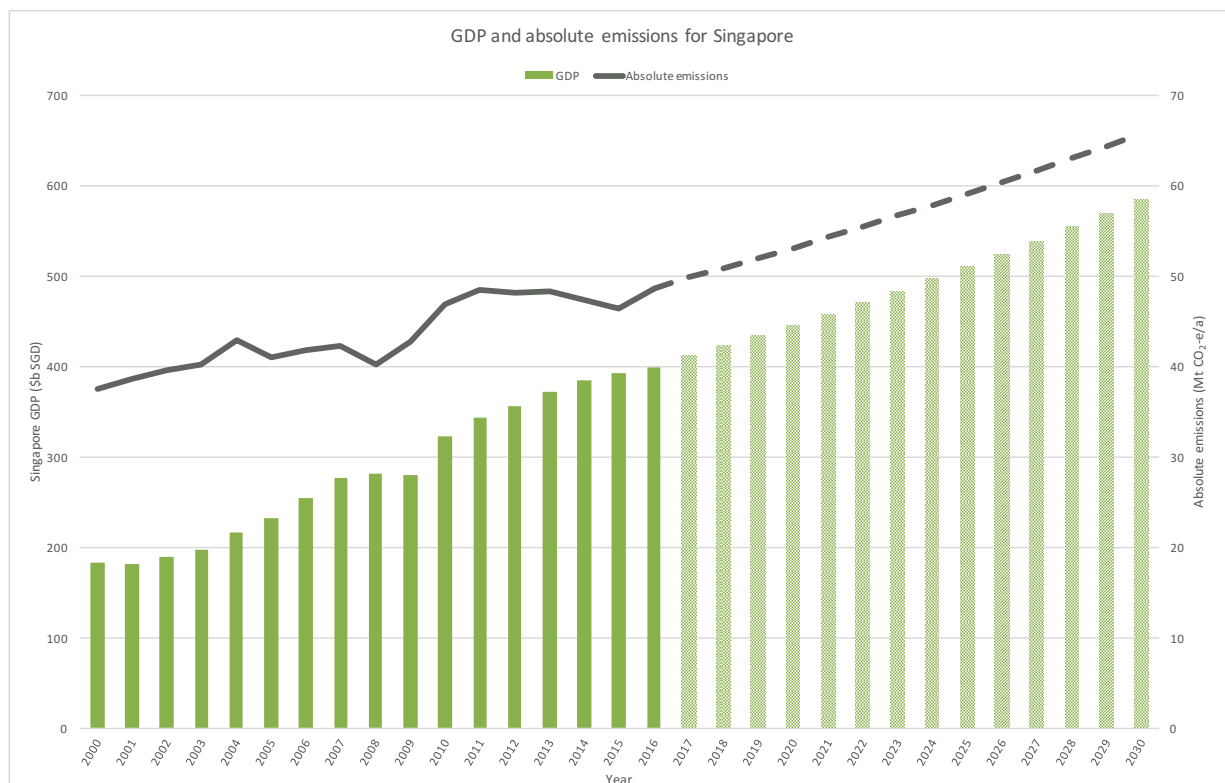


Figure 2-2 - Historic and potential future GDP and absolute emissions for Singapore

In the chart above, the green bars represent GDP, measured in billions of Singapore dollars per annum. The darker green bars show historic GDP, while the lighter green represents a future, assuming 2.75% growth in GDP year on year. The grey line represents absolute emissions for Singapore, both historic and potential future, based on the assumption for growth in GDP.

Given the make-up of Singapore's economy (displayed in Figure 2-3⁴), it is likely that the country's NDC target will be easily met. The service industry accounted for almost 70% of Singapore's 2016 GDP. Goods accounted for 26% and other (primarily ownership of dwellings) accounting for the remaining 4%. Typically, the service industry can maintain increases in economic output with only a modest increase in energy consumption and therefore emissions. Furthermore, the main contributor to emissions in the services industry is energy consumption in the built environment, which has relatively low-cost abatement available in the form of building energy efficiency.

⁴ Data taken from the Singapore Department of Statistics

SINGAPORE'S NDC TARGET

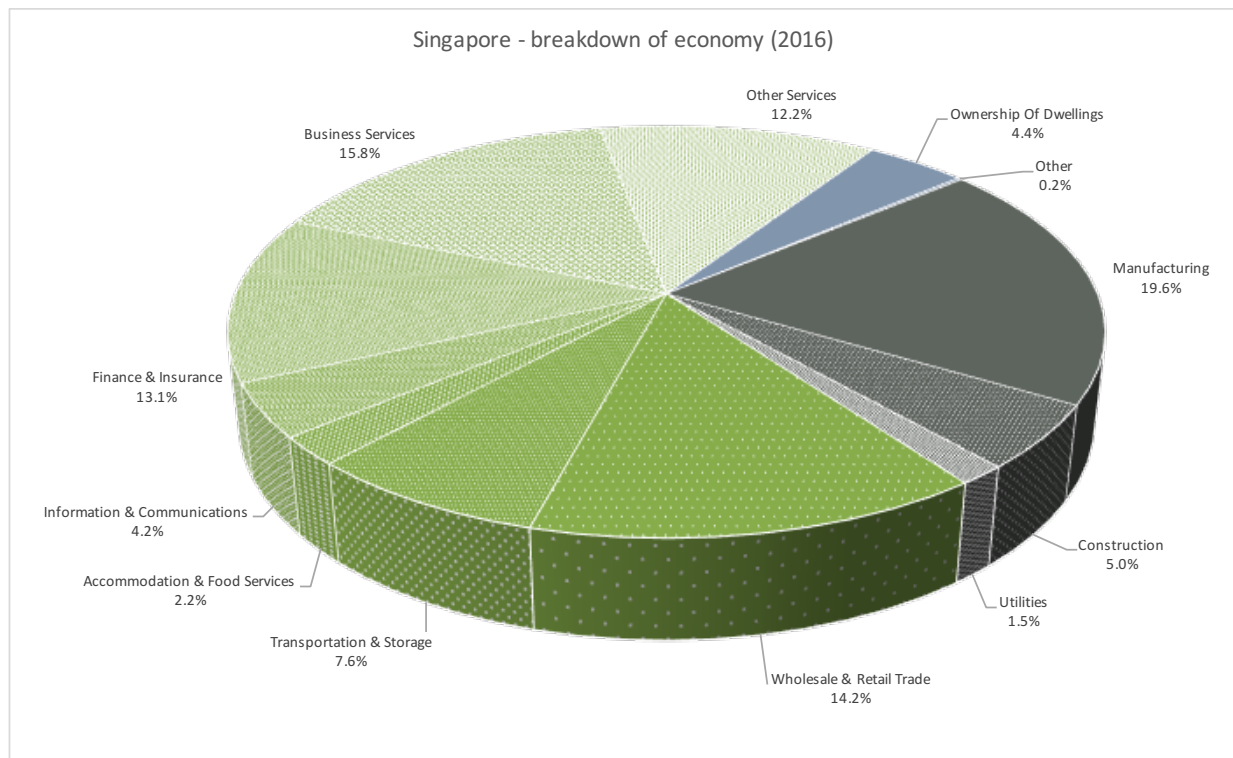


Figure 2-3 - Breakdown of Singapore GDP in 2016

One of the levers the Singapore Government is pulling to achieve the emissions intensity reduction target is to implement a price on carbon. Putting a price on GHG emissions will assist with emissions reductions and contribute to the business case for emissions reduction projects as reduced operating costs.

3 Carbon pricing in Singapore

3.1 FORM OF THE CARBON PRICE

Singapore has chosen to implement a carbon price in the form of a carbon tax. This is an easier scheme to implement, from an administrative point of view, than some of the alternatives. The key difference between a flat carbon tax, and a mechanism like a cap and trade emissions trading scheme, is that a carbon tax has a centrally set price. A cap and trade scheme sets the total number of emissions permits available (the cap) and allows for trading of permits so the market sets the price. The level of the cap is what is adjusted to enable the overall emissions reduction goals to be met. With a tax, the price is adjusted centrally to achieve the overall emissions targets. An important part of the ongoing monitoring and adjustment to the price of carbon is tracking of how the country is performing with respect to its overall target.

As with all carbon pricing mechanisms, the aim of the price is to drive change, by pricing an externality that currently has no cost associated with it. The national budget, in February 2018, indicated that the carbon price would be set at \$5 SGD per tonne of CO₂-e. This is comparable to the level of other carbon prices globally though it could be reasonably expected to be higher in coming years, most likely if global ambition under the Paris Agreement is increased. The important thing at this stage is that the framework is in place.

Although the carbon price in Singapore takes the form of a tax, it requires a liable entity to purchase and acquit **carbon credits** to cover their liability. This does provide a framework that could potentially be open to linking with international schemes in future to provide liable entities with flexible compliance options. At this stage however, the only permissible credits are those purchased from the Singapore Government at \$5 SGD each.

3.2 CARBON PRICING BILL 2018

In March 2018, the final carbon pricing bill was passed through the Singapore parliament. This bill consists of two main areas. The first part of the bill discusses greenhouse gas reporting, and the responsibilities of emitters to provide data to the Government. The second part of the bill defines the manner in which the carbon price will be paid for those reported emissions. This is appropriate given the fact that the emissions footprint of a company should be known to a reasonable level of accuracy if there is an expectation to pay for those emissions.

3.2.1 Thresholds for participation

There are two thresholds applicable under this scheme – emissions in excess of the first threshold trigger the requirement to report emissions to the Government. When the second threshold is breached, emissions must be reported and paid for.

To understand the thresholds, and whether companies are required to complete reporting, a “business facility” is defined in the bill. For the purposes of the legislation, a facility is defined as a single site at which a business activity, or a series or business activities, is carried out. This activity, or activities, also involves the release of greenhouse gases and forms a single undertaking or enterprise.

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Defining what constitutes a single undertaking or enterprise is relatively broad and necessarily so, as the Bill must be applicable to all sectors, and the different types of business activities that occur within those sectors. For the purposes of the Bill however, a single site is defined as a geographical location. A single site can constitute more than one parcel of land, provided that the multiple parcels of land are contiguous, adjacent or adjoining – or separated only by a road or path.

With regard to emissions, the definition in the bill states that GHG emissions associated with a facility are “the greenhouse gas emitted into the atmosphere directly from the business facility”. This implies that it is only Scope 1 emissions that are considered for the reporting threshold and only Scope 1 emissions that are paid for directly by the emitter. For reference, Scope 1, 2 and 3 emissions are defined in the picture below (from the World Resources Institute).

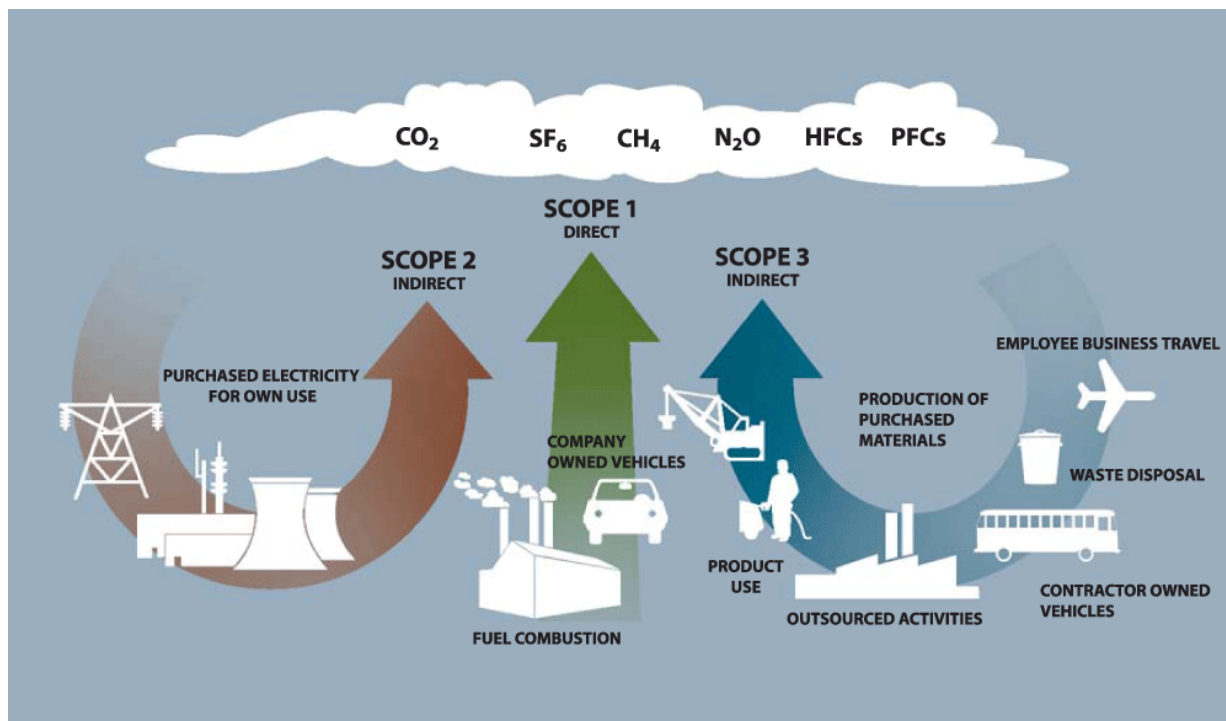


Figure 3-1 - Scope 1, 2 and 3 emissions

Scope 1 emissions are defined as direct emissions that occur within the boundaries of a site. All six greenhouse gases in the above figure are included in the bill, although there are some emissions sources that are excluded. The Bill refers to “reckonable” and “non-reckonable” emissions. Non-reckonable emissions sources are excluded, with everything else being a reckonable emission – and covered by the carbon pricing bill.

The following types of emissions are deemed to be non-reckonable emissions for the purposes of this bill:

- Nitrogen trifluoride emitted for any reason

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- Sulphur hexafluoride emitted when manufacturing, installing, using or disposing of electrical equipment (SF₆ is often used as an insulating gas in switchgear)
- Carbon dioxide used in purging, blasting, lubrication and generated from combustion of biofuels/biomass
- Hydrofluorocarbon emissions from using refrigeration or air conditioning equipment (non-manufacturing purposes)
- Perfluorocarbon emissions from using refrigeration or air conditioning equipment (non-manufacturing purposes)
- GHG emissions generated from
 - Use of fire protection equipment
 - Fugitive emissions – not including flaring and venting
 - The use of any vehicle to transport goods or people
 - Combustion of motor gasoline, diesel and natural gas for transport purposes (compressed natural gas or liquefied natural gas)
 - Activities relating to agriculture, forestry and land use

From this, it can be surmised that reportable emissions include items such as combustion of natural gas for power generation, heating or other industrial uses, flaring and venting of hydrocarbons in oil and gas processing, emissions of fluorinated gases from semiconductor manufacturing, combustion of liquefied petroleum gas and others.

The emissions thresholds applicable to this bill are:

- First emissions threshold – 2,000 t CO₂-e (this triggers the requirement to report emissions)
- Second emissions threshold – 25,000 t CO₂-e (this triggers the requirement to pay for emissions)

The figure below shows what consumption of different fuels, for some common fuel types, needs to be to trigger the thresholds. Liquid hydrocarbon fuels such as diesel and gasoline have been included on this diagram for reference though they are considered to be non-reckonable emissions for the purposes of this Bill.

CARBON PRICING IN SINGAPORE

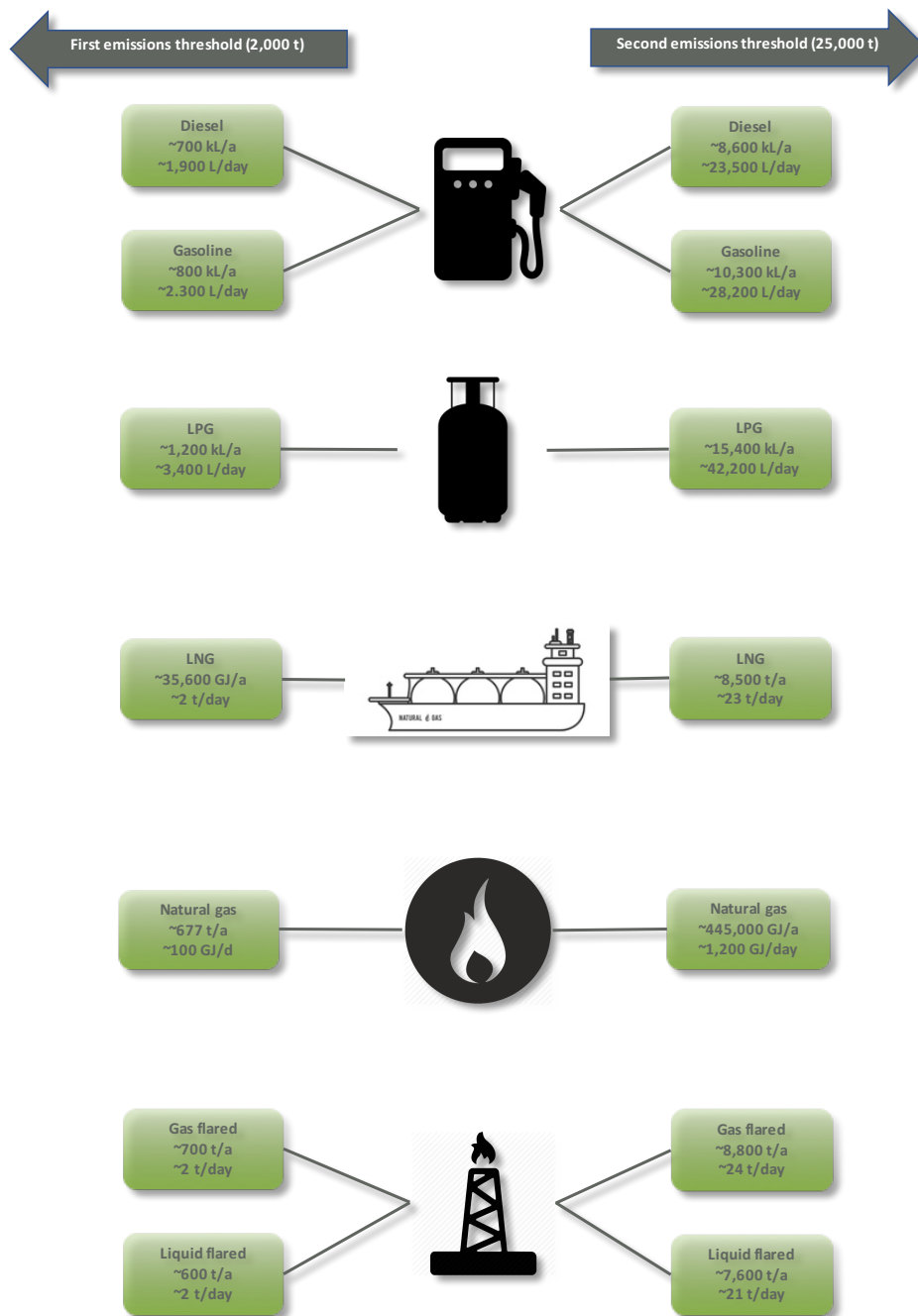


Figure 3-2 - Combustion amounts for different fuels

The thresholds, particularly those to trigger a reporting requirement (i.e., 2,000 t CO₂-e), are relatively low. However, given the nature of industry in Singapore, with the majority of energy consumption for a facility coming from imported electricity (Scope 2 emissions), it is possible that the number of reporting facilities is still relatively small. The restriction of the regulations to direct

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emissions only (i.e., not including Scope 2 emissions) will act to reduce the number of facilities directly impacted by a reporting requirement. There will still be a financial impact however, as detailed in Section 3.2.4. Not shown in Figure 3-2 is the amount of synthetic greenhouse gases (HFCs, PFCs and SF₆) that trigger either of the thresholds. These gases often have global warming potentials⁵ in excess of 1,000 t CO₂-e/t of gas so only a relatively small amount is required to breach the thresholds but the actual GHG emissions for a particular facility is dependent on the type of HFC or PFC being emitted. Venting of hydrocarbons is also not shown in the diagram as the emissions, expressed as CO₂-e are dependent on composition of the gas being vented. As a guide however, for a gas stream that's largely methane, venting ~95.5 tonnes of gas in a year will be enough to breach the reporting threshold and venting ~1,200 tonnes of gas will breach the taxable facility threshold⁶.

In the bill, the concept of Operational Control is introduced. Operational control determines who holds the responsibility for reporting for a particular facility. The person with operational control is the person who has the authority to introduce and implement operating policy, health and safety policy and environmental policy for that facility. In the event that more than one person can introduce and implement these policies, the person with operational control is the one who has the greatest authority to introduce and implement operating policy and environmental policy (health and safety policy is not considered in this case). Companies should document decisions made and justifications for determining who has operational control in the event that there are multiple parties that could have operational control.

3.2.2 Registration of facilities

The compliance year under the Carbon Pricing Bill is a calendar year, January 1 – December 31. If a facility breaches either of the emissions thresholds during a calendar year, it will be required to complete a registration process under this bill. The basic registration process is as follows.

- A facility breaches either the reporting threshold or the taxable threshold during a particular calendar year
- Prior to 30 June of the following year, the “Registered Person” needs to register as such with the Agency⁷
 - The registered person will most likely be the person with operational control
- The Registered Person must also register the facilities under their control as either reportable facilities or taxable facilities by 30 June

The detail of what is involved with registration, and the form of registration, are still to be worked out. There is provision in the bill that states that these details can be defined in regulations, rather

⁵ The global warming potential is a measure of the relative heat trapping potential of a particular greenhouse gas and is measured with reference to 1 tonne of CO₂. In this Bill, the global warming potentials from the second assessment report of the Intergovernmental Panel on Climate Change are used.

⁶ Using a global warming potential of 21 t CO₂-e/t CH₄

⁷ For this Bill, the Agency referred to is the National Environment Agency.

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than in the bill itself so there is an expectation that this will be defined in the supporting regulations.

3.2.3 Emissions reporting

The emissions reporting requirements differ slightly, depending on whether the facility is a reportable facility (greater than 2,000 t CO₂-e/a and less than 25,000 t CO₂-e/a) or a taxable facility (greater than 25,000 t CO₂-e/a). Basically, taxable facilities have greater rigour applied to their reported emissions – as should be the case where a financial liability is associated with them.

Reportable facilities

The requirement for reportable facilities is that they report their emissions for the previous calendar year. Detail has not yet been provided on exactly how emissions calculations should be completed but, as a minimum, it is likely that they will be required to follow the guidelines in a recognized international system such as the Greenhouse Gas Protocol or ISO 14064. Furthermore, the dates for submission of emissions reports are not fully detailed in the Bill. They are able to be defined in the regulations however. If an international standard is followed to complete the reporting of emissions for reportable facilities, they will still have to meet minimum standards for GHG inventories. As per the GHG Protocol, the high-level guidelines for emissions inventories are that they should be:

- Relevant – Appropriately reflect the emissions of a facility and be appropriate for the needs of users of this information
- Complete – Account for all emissions sources within the facility boundary
- Consistent – Use consistent methodologies such that comparisons of emissions can be made between facilities and over time for a particular facility
- Transparent – Have clear audit trails and documentation, with all assumptions and methodologies clearly explained
- Accurate – Be neither over nor underestimates of the true value, with uncertainties minimised

Facilities with a compliance obligation as a reportable facility will still have some work to do to ensure these high level guidelines are met.

Taxable facilities

The requirements in place to support emissions reporting for taxable facilities provide more confidence in the numbers that are being reported. Taxable facilities are first required to produce, a monitoring plan for GHG emissions. In some cases, the Agency may request that this monitoring plan is verified by an external auditor. The monitoring plan must set out how the registered person will ensure the quality of the data that is used to generate the emissions numbers. It should detail all emissions points (for reckonable emissions) relating to a facility and also provide information on the instruments used to either measure emissions directly (continuous or periodic emissions monitoring) or estimate emissions indirectly from fuel combustion. Detail on maintenance and calibration of key instruments may also be required. A relatively detailed information flow diagram, that tracks the flow of, and transformations to,

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information from an instrument, through the control system to the emissions reporting system is recommended, as is a basis of preparation for the emissions dataset. These items will assist with a smooth verification process

Once the monitoring plan is approved by the Agency, the emissions report can be completed and submitted. As the emissions for taxable facilities are going to have a value associated with them (and be recorded on balance sheets for companies), the emissions report must be verified by an independent third-party verification. Detail on whether limited or reasonable assurance will be required has not yet been worked out completely in the Bill. Verification requirements are called out specifically as an item that can be addressed in the supporting regulations.

For both reportable facilities and taxable facilities, the Agency will check that the data being submitted is accurate. They will also check to ensure that all facilities that should be completing registration have actually registered as a reportable or a taxable facility. In the event that the Agency determines that a report has errors or omits information, they may direct the Registered Person to fix the errors and resubmit the report within a specified time frame.

3.2.4 Paying for emissions

Once the verified emissions report is approved by the Agency, a carbon tax assessment is issued. The emissions for a particular facility are rounded to the nearest tonne and the amount payable determined. The price, as detailed in the Bill, is \$5 SGD per tonne of CO₂-e.

Although the carbon price functions like a tax (i.e., it is a centrally determined, fixed price), it uses carbon credits as the means of acquitting liability. At this stage, there is only one source for carbon credits, and that is the Singapore Government. It is not yet clear whether carbon credits will have a vintage year (i.e., they may only be applicable for a certain year, or time period). Upon receiving the assessment of carbon tax liability from the Agency, liable entities will have to purchase carbon credits, which will be credited into the registry for the facility. The facility then acquits those credits against their liability – and those particular credits will be cancelled. Typically, in this sort of system, the credits will each have a unique identifier. When they are cancelled as part of the acquittal, the unique identifier ensures that a particular credit cannot be used twice.

As previously mentioned, there is currently only one source for carbon credits – the Government. Importantly however, this framework does create the potential for more flexible compliance mechanisms in the future. Firstly, the framework could be fairly easily adapted to allow for companies to create carbon credits through verifiable emissions abatement activities occurring on a different facility. For example, a liable entity could eventually be able to generate carbon credits by funding a grid connected renewable energy project. Care needs to be taken to ensure that abatement is not double counted but this is a feasible future option.

The other thing that this framework could be opened up to is offsets and abatement in the international market. Greater care needs to be taken with these projects to ensure that verifiable, non-additional emissions reductions are utilised to generate credits – and countries often place limits on the type and number of international permits that are used as a result. In addition, the final rules for trading of emissions abatement between nations are being finalised

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in upcoming international negotiations⁸ so no decisions should be made with regard to international permits until that happens. Given the nature of Singapore's economy, future increases in ambition and reductions in absolute emissions (which is necessary to meet the overall aims of the Paris Agreement) will necessarily require the use of international offsets of some sort. The country is unlikely reach net zero emissions as it doesn't have the land space for large scale reforestation, nor the ability for very high renewables penetration.

Opening up the carbon credit market to other sources of credits will then enable companies to achieve compliance in the way that is most cost effective for them.

It is estimated that there are approximately 40 facilities that will have a direct liability under the carbon tax. While this is true, as there aren't that many facilities that will breach the 25,000 t CO₂-e/a threshold, it is important to remember that the fossil fuel powered electricity generation facilities will be liable entities. As their operating costs will increase as a result of the carbon price, it is likely that the additional costs will be passed through to consumers. This then distributes the price signal through the economy and should create change. The emissions intensity of a combined cycle power plant, running on natural gas at 60% efficiency is approximately 0.3 t CO₂-e/MWh⁹. At this intensity, the carbon cost is approximately \$1.50/MWh – which would likely be passed through to consumers. It must be noted that \$1.50/MWh is only a small percentage increase on the current electricity tariff in Singapore.

3.2.5 Flowchart for compliance with bill

The figure below shows a high-level flowchart of the key activities required to achieve and maintain compliance with the carbon pricing bill.

⁸ This is referred to in Article 6 of the Paris Agreement – and the use of Internationally Transferred Mitigation Outcomes (ITMOs). These ITMOs are effectively agreements between nations where abatement in one country can be used to offset the emissions of another country.

⁹ Singapore's average grid intensity is higher than this due to a mix of energy generation plant and the requirement to run spinning reserve to maintain grid stability.

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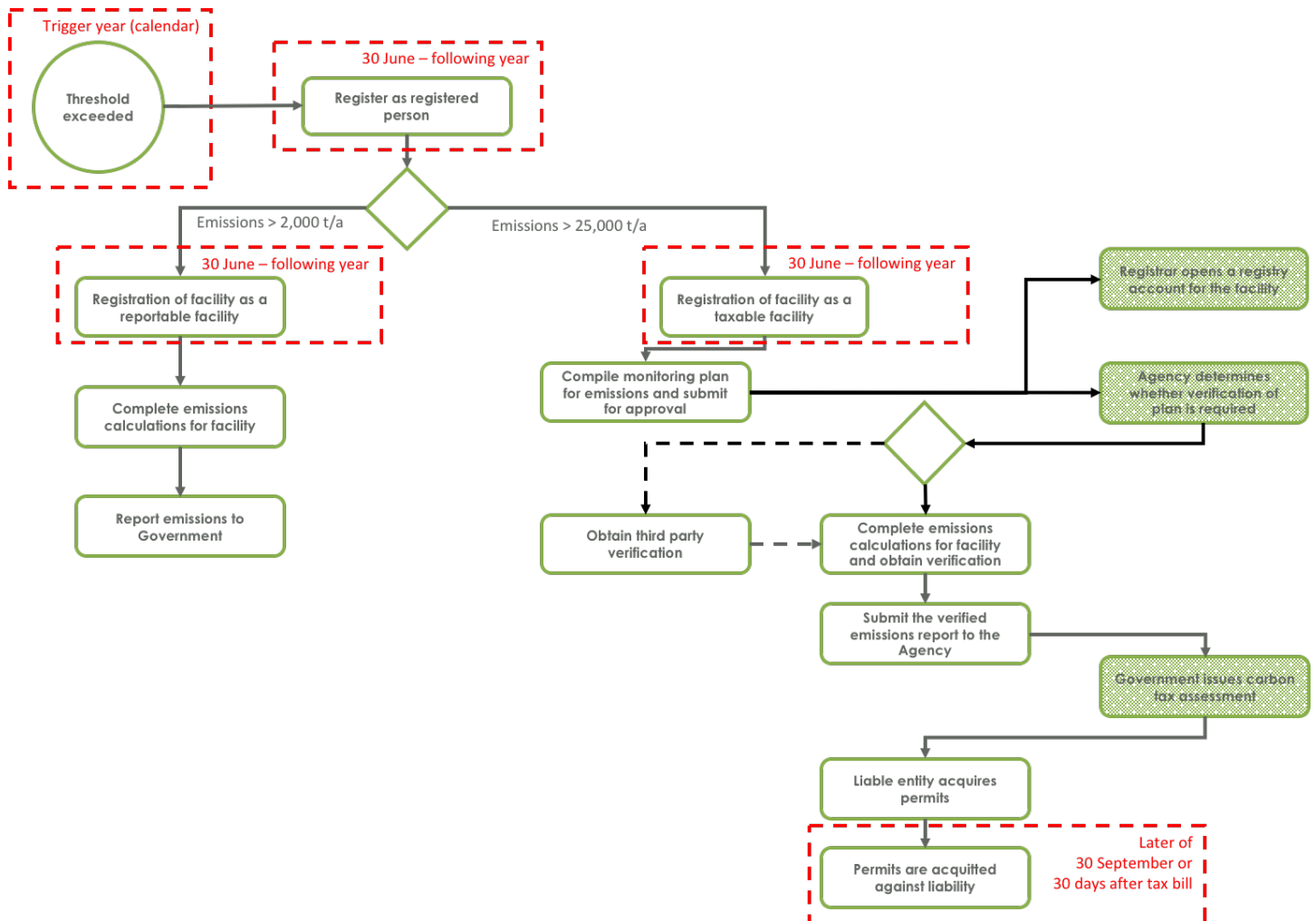


Figure 3-3 - Key tasks for compliance

The flowchart showing the key tasks for compliance after the threshold for participation is exceeded is relatively simple. Some dates are still to be determined and may appear in associated guidelines and/or regulation. For example, there are no firm dates for the submission of the monitoring plan, or indeed the emissions report as yet.

4 Recommendations

The key thing for businesses to understand at this point in time is whether they have to complete any compliance activities under the Carbon Pricing Bill. This includes determination of:

- What facilities exist in a particular corporate group?
- What are the boundaries of those facilities and who has Operational Control?
- What are the estimated reckonable emissions for each facility and will the facility be a reportable facility or a taxable facility?
- Does the facility require an emissions reporting system or database to streamline reporting activities?
- For facilities that are taxable facilities, the costs that will be applicable and whether these costs need to be included in budgets
- Potential pass through arrangements for carbon costs and documentation of pass through calculations to justify those decisions
- Potential of implementing abatement options to reduce exposure to the carbon price for liable entities
- Alternative energy arrangements such as lower carbon alternatives for companies indirectly exposed to carbon prices (e.g., through electricity import) to minimise cost impacts

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