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# **Appraising Singapore's Carbon Tax Through The Lens of Sustainability**

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# APPRAISING SINGAPORE'S CARBON TAX THROUGH THE LENS OF SUSTAINABILITY

Sean Douglas Tseng\*

## INTRODUCTION

As a low-lying island state, Singapore is particularly vulnerable to the onslaught of rising seas – a consequence of global climate change now seemingly foreordained. This incursive problem, together with global momentum to combat climate change in general, have meant reformation in laws and shifts in rhetoric focusing on environmental protection.<sup>1</sup> This has led to the enactment of a national carbon tax regime, a decision largely seen as progressive insofar as the Southeast Asian region is concerned.<sup>2</sup> Yet, the success of Singapore's carbon tax regime, known as the Carbon Pricing Act 2018 ("CPA"), cannot be judged solely on this basis alone. This requires a closer analysis of the statute itself.

This paper offers a critical evaluation of the CPA primarily through the theoretical framework of sustainability. The following section first outlines the general legal contours of the CPA relevant to the discussion that follows. This is followed by a critical appraisal of the Act. Viewed through the lens of one sustainability theory (because it is acknowledged there is more than one), it will become apparent that while the CPA is a step in the right direction, it still bends to the pull of economic priorities. The paper concludes by stating that the Singapore government will need to turn its indicative plans for the future into concrete and more robust commitments to ensure that the CPA achieves carbon reduction and thus its sustainability goals.

## BROAD FEATURES OF THE CARBON PRICING ACT 2019

The CPA was conceived of as part of Singapore's regulatory arsenal to meet its obligations agreed to in the Paris Agreement under the United Nations Framework Convention on Climate Change ("UNFCCC"). The rationale for the CPA becomes all the more

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<sup>1</sup> Other laws implemented as a result of or in connection with climate change include the Transboundary Haze Pollution Act 2014 and the Energy Conservation Act 2012. On 1 February 2021, the Singapore Parliament declared climate change a global emergency: Rei Kurohi, 'Singapore Parliament declares climate change a global emergency' (*The Straits Times*, 1 February 2021) <<https://www.straitstimes.com/singapore/politics/singapore-parliament-declares-climate-change-a-global-emergency>> accessed 9 January 2022. The government shortly thereafter, on 10 February 2021, unveiled the Singapore Green Plan which includes ambitions to reduce carbon emissions: Ang Hwee Min & Matthew Mohan, 'Singapore unveils Green Plan 2030, outlines green targets for next 10 years' (*Channel News Asia*, 10 February 2021) <<https://www.channelnewsasia.com/singapore/singapore-green-plan-2030-targets-10-years-1883021>> accessed 9 January 2022.

<sup>2</sup> Carbon Pricing Bill (20 March 2018), Vol 94 No 70, 34.

compelling when one considers that, while Singapore's overall carbon emissions are low, its per capita emissions are seen as high.<sup>3</sup> Singapore therefore pledged to reduce greenhouse gas ("GHG") emissions intensity by 36% from 2005 levels by 2030, with the aim of emissions peaking that same year. Later in March 2020, Singapore submitted its enhanced Nationally Determined Contribution ("NDC") to the UNFCCC which states 65MtCO<sub>2e</sub> as its absolute emissions target in 2030.<sup>4</sup> Alongside its enhanced NDC is its Long-Term Low-Emissions Development Strategy ("LEDS") which aspires to halve Singapore's emissions from this peak to 33MtCO<sub>2e</sub> by 2050, with a view to achieving net zero emissions as soon as viable in the second half of the century. While the CPA was promulgated before Singapore submitted its enhanced NDC and LEDS, it is clear that the CPA is a key tool for Singapore to achieve these targets of reducing its carbon emissions.

Under those premises, the CPA focuses its coverage to the seven (7) key GHGs most responsible for Singapore's overall carbon emissions.<sup>5</sup> These are collectively known as the "reckonable GHG emission". The CPA applies only to prescribed industry sectors, which are viewed as being upstream emitters. These include businesses carrying out manufacturing, supply of electricity and gas, and water supply and sewage waste management.<sup>6</sup>

Even if a particular facility producing GHGs is covered by the CPA by virtue of the above two criteria, whether it is subject to taxation, or merely reporting obligations, depends on the amount of reckonable GHG emission it produces. Specifically, a facility will be reportable once its reckonable GHG emission crosses the threshold of 2,000 tCO<sub>2e</sub> in a given year. However, such facilities will only be subject to taxation of its reckonable GHG emission if those are at least 25,000 tCO<sub>2e</sub> annually. Current data suggests that the tax will ultimately affect 30 to 40 companies, such as refineries, petrochemical plants, and semiconductor fabrication plants, accounting for about 79% of Singapore's GHG emissions.<sup>7</sup>

The dichotomy between facilities which are taxable and those which are merely reportable underpin the two main pillars of obligations under the CPA. One of those, as foreshadowed above, relates to emissions reporting. Broadly, the entity, by whom the facility emitting 2,000 tCO<sub>2e</sub> is operationally controlled, will be required to submit to the National Environmental Agency ("NEA") emission reports relating to the greenhouse gas emissions (other than those specifically excluded under the CPA) of the facility in question ("reportable facility") annually.<sup>8</sup> As may be surmised, the emission report would include the computation of greenhouse gas emission from each GHG emission stream from the reportable facility, as well as specifying the total amount of emissions arising therefrom.

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<sup>3</sup> Marai Francesh-Huidobro, 'Singapore Carbon Taxes: An Analysis of the Policy Context' (2019) *Regional Project Energy Security and Climate Change Asia-Pacific* <<https://www.kas.de/en/web/recap/single-title/-/content/singapore-carbon-taxes-1>> accessed 9 January 2022.

<sup>4</sup> NCCS, 'Submission of Singapore's Enhanced Nationally Determined Contribution and Long-Term Low-Emissions Development Strategy to the United Nations Framework Convention on Climate Change' <<https://www.nccs.gov.sg/media/press-release/submission-of-singapores-enhanced-nationally-determined-contribution-and-long-term-low-emissions-development-strategy>> accessed 9 January 2022.

<sup>5</sup> First Schedule, CPA.

<sup>6</sup> Regulation 3, Carbon Pricing (Registration and General Matters) Regulations 2018.

<sup>7</sup> NCCS, 'Annex B: Frequently Asked Questions' <<https://www.nccs.gov.sg/docs/default-source/default-document-library/annex-b.pdf>> accessed 9 January 2022.

<sup>8</sup> Sections 11 and 12, CPA.

Facilities that are moreover taxed, *i.e.*, facilities emitting more than 25,000 tCO<sub>2e</sub> annually, are similarly required to submit emission reports but have additionally robust obligations. Specifically, an emissions report of a taxable facility must be based off a monitoring plan submitted to and approved by the NEA, which requires methods and procedures used to compute total GHG emissions, as well as frameworks ensuring the integrity of such computations, to be laid bare.<sup>9</sup> Such checks are buttressed by the additional requirement for emission reports of taxable facilities to be verified by external auditors accredited by the NEA.<sup>10</sup>

These additional efforts at verification come across as being aimed at nullifying any propensity for taxable facilities to deploy possibly inscrutable methods of calculating its emissions that may lead to lower taxes than its actual emissions warrant. Yet, what one might regard as a comparatively low tax rate might make such propensities less acute. This leads to the second of the two pillars of obligations being the carbon tax levied on taxable facilities itself – carbon tax is charged on the total amount of reckonable GHG emissions a taxable facility emits. Pursuant to the CPA, the taxable rate on emissions is S\$5 per tCO<sub>2e</sub>.<sup>11</sup> Bearing in mind the requirement to be classified as a taxable facility, the floor of any taxable sum that an entity would pay as carbon tax for any assessed year would be S\$75,000.

## THROUGH THE LOOKING-GLASS OF SUSTAINABILITY

No doubt, the CPA is a bold and transformational piece of legislature. It indicates a tectonic shift in perception towards carbon-producing industries, and symbolises Singapore's commitment to its pledge under the Paris Agreement. More notably, however, is that the goal of sustainability underscores the CPA. During the second reading to the Carbon Pricing Bill (the “**Bill**”), then-Minister for the Environment and Water Resources Masagos Zulkifli (“**Minister Zulkifli**”), who moved the Bill, expressed the hope that the Bill would bring closer a “*liveable and sustainable Singapore*”. Another Member of Parliament observed the Bill to be “*premised on the desire and need to create a sustainable future for our children*”.<sup>12</sup>

This dovetails with the CPA being an express effort to meet Paris goals. Notably, the UNFCCC, under which auspices the Paris Agreement was agreed, was undergirded by, amongst others, the key principle of sustainable development.<sup>13</sup>

It must, however, be highlighted that terms such as ‘sustainability’ and ‘sustainable development’ have come to be increasingly bandied about as hackneyed rhetoric. Insufficient examination is given as to whether the products or policies it is used to describe are accurate embodiments of the term. Indeed, the political malleability of ‘sustainable development’ has led just as much to consensus-building among states to work towards a common objective,<sup>14</sup>

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<sup>9</sup> Regulation 6, Carbon Pricing (Measurement, Reporting, and Verification) Regulations 2018.

<sup>10</sup> Section 11, CPA.

<sup>11</sup> Part I to the Third Schedule, CPA

<sup>12</sup> Bill (n 2), 41

<sup>13</sup> UNFCCC (1992) 31 ILM 851, Article 3(4)

<sup>14</sup> Lavanya Rajamani, ‘From International Environmental Dialogue’ (2003) 12 Review of European Community and International Environmental Law 23, pp. 25–6

as it has to rising ambiguity about what those objectives truly are.<sup>15</sup> Criticism therefore exists that sustainable development is nothing but a banner under which businesses may perpetuate the status quo of pursuing capitalist interests.<sup>16</sup> Nevertheless, perhaps incontrovertible is the fact that the term has come to refer to the three-pillared notion of economic development, social development and environmental protection.<sup>17</sup> Yet, the prevalence of this notion has not led to a similar approbation of any hierarchy in which these pillars should be ordered.

Amongst environmental scholars, such woolliness in the concept has bred a multitude of theoretical frameworks for what sustainability or sustainable development means.<sup>18</sup> For simplicity, and in light of the objectives of this paper, only one of these frameworks will be adopted. This serves a functional purpose, *i.e.*, to provide a normative structure by which Singapore's CPA can be analysed. However, this by no means assumes nor asserts that such framework represents the only one, whether from a conceptual or definitional standpoint, that can (or ought to) be adopted. That warrants an entirely separate discourse.

The theoretical framework adopted sees sustainable development dichotomised into a 'weak' or 'strong' version. The most apposite is Jacobs' conceptualisation, in which the 'weak' version of sustainable development refers to the protection of environmental resources and amenities as being balanced against the pursuit of economic interests, with the former only committed to "*where possible*".<sup>19</sup> This is not entirely dissimilar to Vos' 'thin' version of sustainability, even if nuanced differences still exist – this version of sustainability seeks to "*reconcile economic growth with protecting the environment*".<sup>20</sup> It seeks to use sustainability as a business strategy: 'win-win' outcomes are achieved whereby the progress of ecological outcomes are used to progress business and gain competitive advantages.<sup>21</sup>

The 'strong' counterpart to sustainability enshrines notions of environmental limits, or 'carrying capacities' of the biosphere. It entails restraining the amount and type of economic activity to what the natural ecosystems can support without degrading to intolerable levels.<sup>22</sup> Interestingly, this mirrors the formulation as found in the Brundtland Commission report, often attributed for giving definition to the concept of sustainable development. In particular, the report notes sustainable development as importing the idea of limits, not only by the ability of the biosphere to absorb the effects of human activity, but by the present state of technology.<sup>23</sup> Implicit in this idea, then, is an appreciation that there is a point at which human activities must be contained so that environmental resources are preserved or allowed to regenerate; no advancements in technology or human ingenuity can upend the ultimate necessity for us to maintain this delicate balance.

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<sup>15</sup> Michael Jacobs, 'Sustainable Development as a Contested Concept' in A Dobson (ed), *Fairness and Futurity* (OUP, 1999), 21-45

<sup>16</sup> Jacobs (*ibid*), 22

<sup>17</sup> World Summit on Sustainable Development, *Johannesburg Declaration on Sustainable Development* (2002)

<sup>18</sup> Steven Connelly, 'Mapping Sustainable Development as Contested Concept' (2007) *Local Environment*, Vol 12:3, 259-278.

<sup>19</sup> Jacobs (n 15), 31.

<sup>20</sup> Robert O. Vos, 'Perspective Defining sustainability: a conceptual orientation' (2007) *Journal of Chemical Technology and Biotechnology* 82: 334-339, 337.

<sup>21</sup> *Ibid*.

<sup>22</sup> Jacobs (n 15), 31-32.

<sup>23</sup> G Brundtland, 'Report of the World Commission on Environment and Development: Our Common Future' (1987), I(3), para 27.

In those premises, it is argued that the CPA exemplifies a form of ‘weak’ sustainability. However, it ought to be appreciated that ‘weak’ sustainability (or ‘strong’, for that matter) does not represent a singular version of sustainability which monolithically embodies one side of the dichotomy. Rather, it is better seen as a characterisation within which there exists a spectrum. The balancing act between the environment and economy, which is a hallmark of this brand of sustainability, leads to varying outcomes. At one extreme, sustainable development could well be construed as legitimising ‘business-as-usual’ patterns of economic growth.<sup>24</sup> In this connection, the balance between economy and environment, as seen in the CPA, appears to have been struck not only towards the former, but weightily so. This is exemplified through the two facets of the CPA – its features and its legislative context leading to its enactment.

### A MODEST PRICE FOR CARBON

The success of a scheme that internalises the carbon externality by producers is contingent on the extent it can induce behavioural change.<sup>25</sup> The change, it is hoped, is a shift of carbon emitting industries, and those that depend on it, towards practices that leads to the reduction of carbon emissions which, in the vocabulary of the present discussion, lead to more sustainable practices. It is reasonable to postulate that whether such changes are driven to occur is centrally dependent on the price of carbon.

Yet, at S\$5/tCO<sub>2</sub>e (less than US\$4/tCO<sub>2</sub>e), Singapore’s carbon tax stands as one of the lowest in the world.<sup>26</sup> Importantly, it is a far cry from the required carbon price of US\$40-80/tCO<sub>2</sub>e by 2020, and between US\$50-100/tCO<sub>2</sub> by 2030, that the High-Level Commission on Carbon Prices indicates is required for countries to deliver on the Paris Agreement (a pertinent point when considering that the CPA is meant to be Singapore’s direct response in meeting its obligations under the Paris Agreement).<sup>27</sup> This level for the price for carbon moreover stands in sharp relief to initial indications that it would be priced at S\$10-20/tCO<sub>2</sub>e.<sup>28</sup> Considering that this would have led a taxable facility to pay at least S\$250,000 – S\$500,000 per year (instead of the eventual S\$75,000), this comes across as a significant retrograde from original intimations.

The proof, of course, is in the pudding. Has Singapore’s carbon tax led any considerable decrease in its carbon emissions? The answer, so far at least, appears to be not really. At the time this paper was published, only the data till the end of 2020 was available. Based on this data, carbon emissions for 2019 (the year the CPA was enacted) saw a marginal decrease of 0.29 million tCO<sub>2</sub>, or 0.63%, from 2018, while 2020 saw a decrease of 0.21 million tCO<sub>2</sub>, or 0.46% from 2019 levels.<sup>29</sup> To put these figures into context, the cumulative decrease, i.e., of 0.5 million tCO<sub>2</sub> since the CPA was enacted, is not any different from the annual fluctuations that arose in Singapore’s emissions prior to the CPA. For example, the year 2016-2017 saw a

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<sup>24</sup> Andrea Ross, ‘Modern Interpretations of Sustainable Development’ (2009), *Journal of Law and Society*, Vol 36 No 1, 32-54, 34

<sup>25</sup> Gary Lucas Jr, ‘Behavioral Public Choice and the Carbon Tax’ (2017) *Utah Law Review* Vol 2017 No 1(3), 115-158, 123.

<sup>26</sup> World Bank Group, ‘State and Trends of Carbon Pricing 2019’ (Washington DC, June 2019) 15.

<sup>27</sup> High-Level Commission on Carbon Prices, *Report of the High-Level Commission on Carbon Prices* (Washington DC, 2017) 3.

<sup>28</sup> Annex B (n 7).

<sup>29</sup> Hannah Ritchie and Max Roser, ‘Singapore: CO<sub>2</sub> Country Profile’ (daily update) < <https://ourworldindata.org/co2/country/singapore> > accessed 9 January 2022.

decrease of 1.2 million tCO<sub>2</sub>, while 2017-2018 saw an increase of 6.93 million tCO<sub>2</sub>.<sup>30</sup> The range in the fluctuations in the prior years are just as extensive, if not more. One might be tempted to challenge these statistics by saying that these do not take into account population changes. However, the figure for per capita emissions is not too different – 2019 saw an approximate decrease from 7.99 tCO<sub>2</sub> to 7.87 tCO<sub>2</sub>, while 2020 saw a similarly slight decrease to 7.78 tCO<sub>2</sub>.<sup>31</sup>

There have only been about three years since the CPA was enacted and data over time might change. That is also not to mention the variety of reasons that could account for the increase or decrease in carbon emissions – in the world of possibilities, carbon emissions might have otherwise increased if it were not for the CPA. Ultimately, it is challenging to know, as a matter of certainty, what direct or specific impact the CPA has had on Singapore's emissions. Nonetheless, as rough and ready a picture as it admittedly is, that picture appears ultimately to be that the CPA has not led to a palpable decrease in Singapore's overall emissions since it has been in force.

On the premise that higher prices for carbon can lead to more tangible behavioural change, the CPA can be given real bite if the carbon price can be ratcheted up over time. Monetary Authority of Singapore managing director Ravi Menon also held the view that “carbon taxes in Singapore will have to move to a steeper trajectory, to help meet [Singapore's] climate commitments”.<sup>32</sup> When the CPA was enacted, the National Environmental Agency (“NEA”) also indicated that the price of carbon would be reviewed in 2023.<sup>33</sup> This was reaffirmed recently when it was stated in the press that Finance Minister Lawrence Wong would reveal details of a revised carbon tax rate for 2024 at the upcoming Budget 2022 statement slated for 18 February 2022.<sup>34</sup> There is, however, no indication of the nature of the revision, apart from remarks that “*today's carbon price is too low.*”<sup>35</sup>

Slightly more concrete an indication came back in 2018 when it was announced that price for carbon was to increase with a view of it being between S\$10 to S\$15/tCO<sub>2</sub>e by 2030.<sup>36</sup> In retrospect, the ambition to reach a S\$10/tCO<sub>2</sub>e level in nine years' time seems overly modest – not only in view of Singapore's enhanced NDC and LEDS (which were announced after the CPA was enacted), but against the backdrop of the levels recommended by the High-Level

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<sup>30</sup> *Ibid.*

<sup>31</sup> *Ibid.*

<sup>32</sup> Grace Ho, ‘Singapore can introduce higher carbon taxes and still stay competitive: MAS chief’ (*The Straits Times*, 14 July 2021) < [https://www.straitstimes.com/singapore/politics/singapore-can-introduce-higher-carbon-taxes-and-still-stay-competitive-mas-chief#:~:text=Singapore%20can%20introduce%20higher%20carbon%20taxes%20and%20still%20stay%20competitive%3A%20MAS%20chief,-A%20meaningful%20price&text=SINGAPORE%20%2D%20Singapore%20is%20an%20%22outlier,said%20Singapore's%20central%20bank%20chief](https://www.straitstimes.com/singapore/politics/singapore-can-introduce-higher-carbon-taxes-and-still-stay-competitive-mas-chief#:~:text=Singapore%20can%20introduce%20higher%20carbon%20taxes%20and%20still%20stay%20competitive%3A%20MAS%20chief,-A%20meaningful%20price&text=SINGAPORE%20%2D%20Singapore%20is%20an%20%22outlier,said%20Singapore's%20central%20bank%20chief.) > accessed 9 January 2022.

<sup>33</sup> NEA, ‘Carbon Tax’ <https://www.nea.gov.sg/our-services/climate-change-energy-efficiency/climate-change/carbon-tax> accessed 2 February 2020.

<sup>34</sup> Tay Hong Yi, ‘Finance Minister Lawrence Wong to unveil Budget 2022 in Parliament on Feb 18’ (*The Straits Times*, 30 Dec 2021) < <https://www.straitstimes.com/singapore/politics/finance-minister-lawrence-wong-to-unveil-budget-2022-in-parliament-on-feb-18> > accessed 9 January 2022.

<sup>35</sup> Grace Ho, ‘S'pore's revised carbon tax rate for 2024 to be announced in Budget 2022: Lawrence Wong’ (*The Straits Times*, 15 October 2021) < <https://www.straitstimes.com/singapore/politics/revised-carbon-tax-rate-for-2024-what-to-expect-till-2030-to-be-announced-in> > accessed 9 January 2022.

<sup>36</sup> Ng Jun Sen, ‘Revised carbon pricing to be announced in next Budget, as current level is ‘too low’: Lawrence Wong’ (*Straits Times*, 15 October 2021) < <https://www.todayonline.com/singapore/revised-carbon-pricing-be-announced-next-budget-current-level-too-low-lawrence-wong> > accessed 9 January 2022.

Commission by the year 2030. In all likelihood, the Singapore government has come round to this view too, and the 2022 Budget statement looks as if it will see these prices being revised upwards. Yet, such increments are somewhat opaque at this juncture and in any event, do not translate to any firm framework that would ensure the increase of carbon prices over time. In other words, there is nothing to stop the price for carbon being reduced in the future.

No governmental publication has shed light on why a retreat to the lower price of S\$5/tCO<sub>2e</sub> was eventually decided. Nonetheless, such a decision was announced months following consultations conducted with various stakeholders,<sup>37</sup> when carbon price was still presumed to be at the S\$10 to S\$20 levels. Feedback obtained from public consultation was myriad. This included concerns that such pricing would be *insufficient* to impact business decisions.<sup>38</sup> On the other end of the spectrum, however, were reservations raised by those most affected, *i.e.*, the major greenhouse gas emitters, that the carbon tax may affect having affordable energy that was important to support economic growth and ensure Singapore's competitiveness.<sup>39</sup> It is clear that, no matter the diversity of views, it was the ones that ultimately led to the suppression of the carbon price, rather than the opposite, which held more sway.

Through the above, the continued prevalence of the economy as a central factor to be weighed against the environment can be inferred. Bearing in mind that the carbon tax only applies to companies emitting more than 25,000 tCO<sub>2e</sub>, indicative (though fairly-speaking, not conclusive) of its manufacturing and thereby financial capacity, the low price for carbon signals the economic trade-offs with the environment as being slight. Quite apart from questions on how effective the carbon price is to compel businesses to implement changes reducing their carbon footprint – which can best be described, thus far, as being negligible – it is clear that capitalist considerations narrated the manner in which the protection of the environment was to be bounded, hence exemplifying Jacobs' version of a 'weak' form of sustainable development.

## REVELATIONS FROM PARLIAMENTARY DEBATES

A review of the Bill's second reading lends even keener insights into the form of sustainability that was being employed, even if not consciously. What it reveals is intriguing not only for the focus of the topics that were raised, but for what was left omitted.

### *The language of economic competitiveness*

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<sup>37</sup> Audrey Tan, 'Singapore Budget 2018: Carbon tax of \$5 per tonne of greenhouse gas emission to be levied' (*The Straits Times*, 19 February 2018) <<https://www.straitstimes.com/singapore/singapore-budget-2018-carbon-tax-of-5-per-tonne-of-greenhouse-gas-emissions-to-be-levied>> accessed 9 January 2022.

<sup>38</sup> NCCS, 'Annex A: Responses to Feedback and Suggestions on the Carbon Tax' <<https://www.nccs.gov.sg/docs/default-source/default-document-library/annex-a.pdf>> accessed 9 January 2022.

<sup>39</sup> Aqil Haziq Mahmud, 'Large greenhouse gas emitters voice concerns as Government irons out details of carbon tax' (*Channel News Asia*, 23 January 2018) <<https://www.channelnewsasia.com/news/singapore/large-greenhouse-gas-emitters-concerns-carbon-tax-9887092>> accessed 2 February 2020; republished at <<https://wildsingaporenews.blogspot.com/2018/01/large-greenhouse-gas-emitters-voice.html>> accessed 9 January 2022.



The parliamentary debates on the CPA reinforce a palpable sense of the overarching centrality of the economy. The tenor that was to characterise the debates was portended by the opening remarks by Minister Zulkilfi that identified climate change as presenting new opportunities for Singapore's companies to enhance their "*competitiveness*". At various junctures, the imperative to "*stay competitive*" was invoked for the reason to undertake early climate action, given its potential to spur growth in the "eco-industry".<sup>40</sup>

It was then, perhaps, unsurprising that the rationality of company-competitiveness as underlying the carbon tax defined the paradigm of many issues discussed during the debates. Several Members of Parliament, while in support of the Bill, drew attention to the potential of the carbon tax to "*impact the competitiveness of our industry*". In totality, of the nine members of parliament speaking, all but two had raised concerns of the like. In going full circle, Minister Zulkilfi noted how the carbon price was decided carefully having taken into account "*both economic competitiveness and environmental considerations*".<sup>41</sup>

Whether the syntax was deliberate or a subconscious arrangement, Minister Zulkilfi's ordering of these two competing objectives appears to have represented how the CPA was to treat their relative importance. Under the rubric of the 'weak' version of sustainable development, the CPA sees economic imperatives not only balanced against environmental justifications, but reigning dominant. In some ways, the environmental goals of the CPA could be seen as being pursued only to the extent needed to motivate companies to maintain their competitiveness in a "low carbon future".<sup>42</sup>

There is, of course, nothing wrong, in and of itself, in appreciating the potential for a carbon tax to yield capitalist gain. However, some danger lies in choosing a utilitarian frame that sees the carbon tax predominantly as a "*strategy to stay competitive*".<sup>43</sup> Invoking such an instrumental rationality not only obviates the more meaningful challenge to revisit our preoccupation with the economy but, instead, reinforces it. In doing so, the opportunity on embarking on a more ambitious framework for sustainability is lost.

### The missing discussion on consumption patterns

Indeed, the capability of a carbon tax to induce more sustainable consumption patterns was left largely untouched in the parliamentary debates. Andrea Ross, in promoting ecological sustainability as acting as a normative core of sustainable development, argued that a focus on new technologies to combat climate change militates any desire to alter human behaviour so as to consume fewer resources; and yet, the most effective way of contributing to sustainable development is to "*reduce our consumption of energy*".<sup>44</sup> Incidentally, this perspective aligns with the Paris Agreement itself, which enshrines the recognition that sustainable patterns of consumption are important to address climate change.<sup>45</sup> The above thereby makes the

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<sup>40</sup> Bill (n 2).

<sup>41</sup> Bill (n 2), 44.

<sup>42</sup> Bill (n 2), 47.

<sup>43</sup> Bill (n 2), 44.

<sup>44</sup> Ross (n 24), 51.

<sup>45</sup> Preambular recital 16, Paris Agreement.

omission of the parliamentary debates engaging in any meaningful discussion on the public's need to reckon with reducing their consumption, driven by the carbon tax, noticeable.

In fact, rather interestingly, the idea of added costs being borne by consumers resulting from the CPA was considered anathema. Ms K Thanatchimi raised issue on how "Singaporeans are still concerned that companies will pass down the cost of carbon tax to the consumers".<sup>46</sup> In seeking to assuage concerns, Minister Zulkilfi reassured that the impact on consumers was small, resulting in increases of roughly 1% of total electricity and gas expenses. Moreover, some households would receive rebates that would offset any expected increase in such expenses.<sup>47</sup>

It is understandable that Singaporeans would be worried over increase prices in electricity. However, that is, it is argued, part of the point – serving as a financial deterrent leading to the tightening of consumption habits is a key mechanical function of a carbon tax. However, not only minimising but neutralising any impact on consumers is arguably inimical to objectives. Consequently, what the parliamentary debates suggest is that no 'stronger' sense of sustainability that incorporated changes in consumer behaviour appeared to have guided the carbon price decided. This is underpinned by the analysis above that the CPA appeared aimed primarily to spur an "eco-industry" that would maintain – and perhaps even advance – the country's competitive edge.

#### LOOKING TOWARDS A SUSTAINABLE FUTURE

Evidently, these theoretical frameworks of sustainable development deployed here to analyse the CPA were never at the front, nor perhaps even the back, of the legislators' minds. They nonetheless highlight the differences that exist between rhetoric and reality, and suggest the preeminence of particular interests even within an ostensibly environmental statute.

Naturally, it remains to be seen what the longer-term empirical effect of the CPA will be on Singapore's carbon emissions over the next few years. While, as mentioned above, preliminary signs have not been the most encouraging, the attention and sense of urgent rhetoric given to address climate change has risen in prominence in the past year.<sup>48</sup> However, with the carbon price still relatively low and its genesis rationalised from business sensibilities, the protection of the environment that is aimed by the CPA becomes vulnerable to the danger of having to compete with, and be disadvantaged by, shorter term economic gain.<sup>49</sup> In those premises, the Singapore government may well benefit from being cognisant of, and resisting, the possibility that the environment may get squeezed out of sustainable development.<sup>50</sup> It means a 'stronger' version of sustainability may well need to be engaged to ensure Singapore's environmental pursuits are more resiliently endorsed.

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<sup>46</sup> Bill (n 2), 40.

<sup>47</sup> Bill (n 2), 46.

<sup>48</sup> See Kurohi (n 1).

<sup>49</sup> Jane Holder, Maria Lee, 'Sustainable Developmental: Quality of Life and the Future' in *Environmental Protection, Law and Policy* (2<sup>nd</sup> Ed, Cambridge University Press, 2007), 246.

<sup>50</sup> Andrea Ross-Robertson, 'Is the Environment Getting Squeezed Out of Sustainable Development?' (2003) *Public Law* 249, 251-252.

Within parliament, a comfy consensus appears to have emerged that “*environmental sustainability and economic growth are not a matter of trade-offs*”.<sup>51</sup> However, believing and acting as if that were so ignores the reality of human limitations, and places faith in technological innovation being capable of redefining earth’s ecological limits, of which it cannot do. Moving towards a ‘stronger’ version of sustainability means understanding and confronting those limits; it means realising why engaging the public on consumption habits is paramount. Ultimately, it means accepting that trade-offs must, in the medium term, be made.<sup>52</sup>

The environmental success of the CPA hence turns on, for starters, whether indicative plans relating to the carbon tax are seen through. This includes the progressive raising of the presently modest carbon tax price, and hypothecating carbon tax revenue for green initiatives. The temptation to withdraw from such plans should economic indicia spell diminished profits for the carbon-producing industries must be resisted.

In the longer term, a more comprehensive framework for lower emissions will need to confront Singapore’s heavy reliance on carbon for energy production. With Singapore’s growing population, the inevitability of rising energy consumption compels the adoption of renewable energy as the only viable method of reducing emissions meaningfully. While it is beyond the present scope to detail the contributions of renewable energy, or to discuss how the challenges in Singapore’s adoption of the same could be overcome, it suffices to say that studies demonstrate the paramount importance it has in the progress towards sustainability.<sup>53</sup> Considering that the CPA is meant to usher in Singapore’s “*low-carbon global future*”, institutionalising a gradual transition to a greater usage of renewable energy therefore appears ineluctable.

## CONCLUSION

The CPA certainly makes strides towards Singapore’s goals of building a sustainable future. However, a deeper examination of the CPA, and its legislative context, reveal a more nuanced picture. The carbon price, in and of itself, is illuminating in its modesty. Deeper insights are then gleaned from parliamentary debates of the Bill, which form a picture of economic concerns battling and, at times, overriding environmental pursuits. From a theoretical perspective, the CPA therefore not only embodies a ‘weak’ version of sustainability, but one in which the predominance of capitalist priorities diminish the ability of more ambitious environmental targets being realised. Nevertheless, the 2022 Budget statement promises to raise the price of carbon in acknowledgment of how low that price presently is. How much higher and whether such an increase will move the needle on carbon emissions remains to be seen. More pertinent to the present discussion is whether profit and capitalist concerns will continue to dictate the price of carbon, and thereby lead to its reduction if economic interests are affected.

Ultimately, if ever a ‘stronger’ version of sustainability is to emerge, an awareness and greater focus on ecological limits is necessary – it compels a reevaluation of whether boundless economic growth can be presumed, and a confrontation of more difficult issues of consumption habits and the adoption of cleaner energies. The new price for carbon – and its

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<sup>51</sup> Bill (n2), 44.

<sup>52</sup> Holder (n 49), 255-256.

<sup>53</sup> Taner Güney, ‘Renewable energy, non-renewable energy and sustainable development’ (2019), *International Journal of Sustainable Development & World Ecology*, 26(5): 389-397.

rationalisation – that will be announced at Budget 2022 may provide insight as to whether Singapore is headed towards this ‘stronger’ sense of sustainability or not.