



# **A Critical Review of South Africa's Future Carbon Tax Regime**

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9 March 2017

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## **Abstract**

The world is currently facing a global climate crisis largely associated with growing greenhouse gas emissions, of which carbon dioxide (CO<sub>2</sub>) emissions are a significant component. As the fourteenth largest emitter of CO<sub>2</sub> globally and the highest per capita CO<sub>2</sub> emitter in Africa, South Africa has a responsibility to implement legal and fiscal instruments to reduce its emissions. One instrument receiving growing global attention to reduce CO<sub>2</sub> emissions is carbon tax; a tax imposed directly on the emission of carbon or the use of products which generate carbon emissions. South Africa is following the global trend and has for the past decade sought to formulate a carbon tax regime which is effective in its operation, equitable in its impact across different sectors, and which does not result in the collapse of the country's economy. Whilst yet to be finalised, several policy documents have provided a clear indication of its anticipated form, and 2015 saw the publication of the *Draft Carbon Tax Bill* with the *Bill* being re-released in 2017, which by all accounts is due to be finalised for implementation in mid-2017. The time would accordingly appear ripe to critically review the country's anticipated carbon tax regime, and this forms the focus of this dissertation. This critical review was undertaken against several tax design elements identified by international commentators, namely: environmental effectiveness; tax revenue; support for the tax; legislative aspects; technical and administrative viability; competitiveness effects; distributional aspects and adjoining policy areas. The critical analysis of South Africa's imminent carbon tax regime against generally accepted tax elements has determined that it will be effective in its operation, equitable in its impact across different sectors and it will promote a more sustainable and resilient domestic economy.

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## List of Abbreviations/ Acronyms

AFOLU	Agriculture, forestry and other land use
Air Quality Act	National Environmental Management: Air Quality Act\
Carbon Tax Modelling Report	Modelling the Impact on South Africa's Economy of Introducing a Carbon Tax
Carbon Tax Policy Paper	Carbon Tax Policy Paper – Reducing Greenhouse Gas Emissions and Facilitating the Transition to a Green Economy
CCBS	Climate, Community and Biodiversity Standards
CDM	Clean Development Mechanism
CO <sub>2</sub>	Carbon dioxide
CO <sub>2</sub> e	Carbon dioxide equivalent
COP	Conference of the Parties
DEA	Department of Environmental Affairs
DEAT	Department of Environmental Affairs and Tourism
Discussion Paper on Carbon Taxes	Discussion Paper for Public Comment – Reducing Greenhouse Gas Emissions: The Carbon Tax Option
DoE	Department of Energy

Draft Policy Paper	Framework for Considering Market-based Instruments to Support Environmental Fiscal Reform in South Africa
GG	Government Gazette
GHG	Greenhouse gas
GN	Government Notice
GS	Gold Standard
IEP	Integrated Energy Plan
IPCC	Intergovernmental Panel on Climate Change
IRP	Integrated Resource Plan
LTMS	Long-Term Mitigation Scenarios Strategy
MBI	Market-based instrument
NAEIS	National Atmospheric Emissions Inventory System
NCCRP	National Climate Change Response Policy
NFSD	National Framework for Sustainable Development
NDP	National Development Plan: Vision for 2030
NPC	National Planning Commission
OECD	Organisation for Economic Co-operation and Development
SARS	South African Revenue Service
UNFCCC	United Nations Framework Convention on Climate Change

VCS

Verified Carbon Standard

White Paper on Energy Policy

White Paper on the Energy Policy of  
the Republic of South Africa

White Paper on Renewable Energy

White Paper on the Renewable  
Energy Policy of the Republic of  
South Africa

## Chapter 1: Introduction

### 1.1. Background

Society is presently facing a global climate crisis largely associated with increasing greenhouse gas (GHG) emissions, of which carbon dioxide (CO<sub>2</sub>) emissions are a significant component. GHG emissions as a result of human activities have rapidly risen since the pre-industrial period, predominately as a consequence of economic and population growth. Historical emissions have resulted in atmospheric CO<sub>2</sub> reaching a concentration that is unprecedented within the last 800 000 years; giving rise to an energy uptake in the atmosphere, temperature increase and change of the earth's energy budget.<sup>1</sup> The globally averaged combined land and ocean surface temperature illustrates a linear trend of a warming of 0.85°C for the period of 1880 to 2012.<sup>2</sup> The anthropogenic influence on the climatic system and the resultant warming is unequivocal. Climate change<sup>3</sup> is fact.<sup>4</sup>

In the past few decades, climatic changes have resulted in impacts on the biosphere and anthropogenic systems across all continents and ocean basins.<sup>5</sup> There is a sensitivity of these systems to the altered climate as the anthropogenic system becomes more exposed and vulnerable. Global mean surface warming and extreme weather and climate events among other implications have forced humans to move towards adaptation and mitigation measures.<sup>6</sup>

South Africa is the fourteenth largest emitter of CO<sub>2</sub> globally<sup>7</sup> and the highest per capita CO<sub>2</sub> emitter in Africa.<sup>8</sup> South Africa emitted 462 megatons of

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<sup>1</sup> Intergovernmental Panel on Climate Change *Climate Change 2014 Synthesis Report* (2014) Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, R.K. Pachauri and L.A. Meyer (eds.)] IPCC, Geneva, Switzerland 44.

<sup>2</sup> IPCC *Climate Change 2014 Synthesis Report* 40.

<sup>3</sup> Climate change is defined as: "a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods". Article 1 of United Nations Framework Convention on Climate Change, 1992 (1992) 31 ILM 849.

<sup>4</sup> IPCC *Climate Change 2014 Synthesis Report* 40.

<sup>5</sup> IPCC *Climate Change 2014 Synthesis Report* 49.

<sup>6</sup> IPCC *Climate Change 2014 Synthesis Report* 54.

<sup>7</sup> Global CO<sub>2</sub> emissions were approximately 36 262 Megaton CO<sub>2</sub>. Global Climate Project *Global Climate Atlas* (2015) <http://www.globalcarbonatlas.org/> (accessed 04.02.2017); Boden T A, Marland G & Andres R J *Global, Regional, and National Fossil-Fuel CO<sub>2</sub>*

carbon in 2015 and has an emission per capita of 8.5 tons in 2015.<sup>9</sup> South Africa's reliance on coal-based energy generation is the largest contributor to its national GHG emissions and accounts for approximately 70 percent of CO<sub>2</sub> emissions.<sup>10</sup> Furthermore, industry, transport and land use change are key CO<sub>2</sub> emission contributors.<sup>11</sup>

Actual impacts as a result of climatic change are being evidenced in South Africa. Rapid temperature and ecosystem change has resulted in a loss of biodiversity and the further threat of significant structural change of biomes.<sup>12</sup> The regional climate and weather changes has impacted the agricultural industry. Crop yield and quality as well as pest and diseases distribution has been affected. Of particular significance is the staple crop of maize for the summer rainfall region and wheat for the winter rainfall region of South Africa. Changing climatic systems has impacted the dynamic system of the hydrological cycle – rainfall intensity, distribution and timing of rainfall events has changed. Furthermore, there are changes in streamflow and extreme hydrological events with higher incidences of flooding and drought events with the latter impacting fresh water resource availability and facilitating wildfires. These factors have an impact on the anthropogenic system. There are negative consequences on social unrest, insurance damage claims and human health such as: deaths due to extreme climatic events, heat stress,

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*Emissions* (2016) Carbon Dioxide Information Analysis Center Oak Ridge National Laboratory U.S. Department of Energy Oak Ridge, Tennessee, USA [http://cdiac.esd.ornl.gov/trends/emis/em\\_cont.html](http://cdiac.esd.ornl.gov/trends/emis/em_cont.html) (accessed 03.03.2017).

<sup>8</sup> Global Climate Project *Global Climate Atlas*; Boden et al *Global, Regional, and National Fossil-Fuel CO<sub>2</sub> Emissions*.

<sup>9</sup> The global average of per capita carbon emissions is 4.9 tons of carbon. Global Climate Project *Global Climate Atlas*; Boden et al *Global, Regional, and National Fossil-Fuel CO<sub>2</sub> Emissions*.

<sup>10</sup> DEA *National Strategy for Sustainable Development and Action Plan (NSSD 1) 2011–2014* (2011) 31.

<sup>11</sup> *GHG National Inventory Report South Africa 2000-2010* (GN 371 in GG 37701 of 6 June 2014) 65.

<sup>12</sup> Ziervogel G, New M, Archer van Garderen E, Midgley G, Taylor A, Hamann R, Stuart-Hill S, Myers J & Warburton M "Climate Change Impacts and Adaptation in South Africa" 2014 *Climate Change* 608-610; Niang I, Oliver C R, Abdrabo M A, Ama E, Lennard C, Padgham J & Urquhart P "Africa" in Barros V R, Field C B, Dokken D J, Mastrandrea M D, Mach K J, Bilir T E, Chatterjee M, Ebi K L, Estrada Y O, Genova R C, Girma B, Kissel E S, Levy A N, MacCracken S, Mastrandrea P R & White L L (eds.) *Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part B: Regional Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* (2014) Cambridge University Press 1209-1225.

changing geographical range of vector-borne diseases (for example malaria) and food insecurity.

There is a growing consensus of the need for urgent global and local responses to climate change, particularly in relation to CO<sub>2</sub> emissions.<sup>13</sup> However, there are obstacles when measures to reduce CO<sub>2</sub> emissions are introduced. South Africa's heavy reliance on a coal-based economy, may for example, undermine its energy security as the focus shifts towards becoming a low-carbon economy. A consequent effect may be on maintaining its competitiveness within the international arena as these measures may impact economic growth.

A diversity of measures is available to regulate or restrict CO<sub>2</sub> emissions. Options may include renewable energy targets, emissions trading schemes, tax incentives for better energy efficiency and electricity generation emissions standards.<sup>14</sup> South Africa is on the trajectory to implement a range of mitigation measures in the near future. South Africa ratified the *United Nations Framework Convention on Climate Change (UNFCCC)* in 1997, which aims to stabilise atmospheric GHG concentrations to a level that precludes dangerous anthropogenic alteration with the climatic system. As party to the *UNFCCC*, South Africa should take precautionary measures to prevent or alleviate the triggers of climate change and mitigate its adverse effects.<sup>15</sup> Furthermore, South Africa is signatory to the *Kyoto Protocol*, but classified as a non-Annex I country has no specific emission targets that need to be met.<sup>16</sup> South Africa has voluntarily committed at the Copenhagen Summit<sup>17</sup> to reduce GHG emissions from the modelled business-as-usual scenario by 34 percent by 2020 and by 42 percent by 2025.<sup>18</sup> There are a

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<sup>13</sup> Menjah K & Wolde-Rufael Y "Energy Consumption, Pollutant Emissions and Economic Growth in South Africa" 2010 (32) *Energy Economics* 1374-1375.

<sup>14</sup> Australian Government Climate Change Authority *Global Action to Reduce Greenhouse Gas Emissions* (2013).

<sup>15</sup> Article 2, 3 and 11 of 31 ILM 849; *White Paper on the Renewable Energy Policy of the Republic of South Africa* (GN 513 in GG 26169 of 14 May 2004) viii.

<sup>16</sup> Article 1 and Annex B of Kyoto Protocol to the United Nations Framework Convention on Climate Change, 1998 (1998) 37 ILM 22.

<sup>17</sup> United Nations *United Nations Climate Change Conference* 2009.

<sup>18</sup> United Nations *Report of the Conference of the Parties on its Fifteenth Session, Held in Copenhagen from 7 to 19 December 2009* (2010) 6.

suite of relevant policies<sup>19</sup> and plans<sup>20</sup> to contextualise and coordinate imminent climate mitigation measures. In the legislative sphere, the *National Environmental Management: Air Quality Act*<sup>21</sup> (*Air Quality Act*) has been introduced to regulate atmospheric emissions and create national air quality norms and standards.<sup>22</sup>

Founded upon the South Africa's Intended Nationally Determined Contribution<sup>23</sup> submission to the *UNFCCC*, in anticipation of the Conference of the Parties (COP) 21 in Paris in 2015, South Africa's *Long-Term Mitigation Scenarios Strategy*<sup>24</sup> (*LTMS*, 2007) predicts that GHG emissions will peak by 2020, stabilise between 2020-2030 and decrease from 2035.<sup>25</sup> As signatory to the *Paris Agreement*, South Africa aims to limit the increase of the global average temperature to below 2°C according to pre-industrial levels, while pursuing efforts to cap warming at a 1.5°C increase.<sup>26</sup> Carbon tax appears to be one of the core options for achieving these targets.

Numerous international tax theorists have identified a series of tax design elements that should inform the development of any environmental tax.<sup>27</sup> These tax design components are environmental effectiveness; tax revenue;<sup>28</sup> support for the tax; legislative aspects; technical and

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<sup>19</sup> See generally: *White Paper on the Energy Policy of the Republic of South Africa* (GN 3007 in GG 19606 of 17 December 2004); GN 513 in GG 26169 of 14 May 2004; DEAT *Long Term Mitigation Scenarios: Scenario Document* (2007) Pretoria; *National Climate Change Response White Paper* (GN 757 in GG 34695 of 19 October 2011); DEAT *People – Planet – Prosperity: A National Framework for Sustainable Development in South Africa* (2008) Pretoria; DEA *National Strategy for Sustainable Development and Action Plan*.

<sup>20</sup> See generally: DoE *Integrated Resource Plan for Electricity (IRP) 2010-2010: Update Report 2013* (2013) and DoE *Integrated Energy Plan (IEP)* (2016).

<sup>21</sup> *National Environmental Management: Air Quality Act* 39 of 2004.

<sup>22</sup> National Treasury *A Framework for Considering Market-Based Instruments to Support Environmental Fiscal Reform in South Africa – Draft Policy Paper* (2006) 17.

<sup>23</sup> South African Government *South Africa's Intended Nationally Determined Contribution (INDC)* (2015).

<sup>24</sup> DEAT *Long Term Mitigation Scenarios*.

<sup>25</sup> South African Government *Intended Nationally Determined Contribution* 1-11; Ward J & de Battista G *Modelling the Impact on South Africa's Economy of Introducing a Carbon Tax* (2016) PMR Secretariat for the National Treasury of South Africa 1.

<sup>26</sup> Article 2 of United Nations *Paris Agreement* (2015).

<sup>27</sup> See generally: Baranzini A, Goldemberg J & Speck S "A Future for Carbon Taxes" 2000 (32) *Ecological Economics* 401-408; Fullerton D, Leicester A & Smith S "Environmental Taxes" in Adam S, Besley T, Blundell R, Bond S, Chote R, Gammie M, Johnson P, Myles G & Poterba J (eds) *Dimensions of Tax Design* (2010) Oxford University Press 423-536; Organisation for Economic Co-operation and Development *Environmental Taxation A Guide for Policy Makers* (2011) OECD 1-12.

<sup>28</sup> See generally: Pearce D "The Role of Carbon Taxes in Adjusting to Global Warming" 1991 (101) *The Economic Journal* 940-942; Oates W E "Green Taxes: Can We Protect the

administrative viability; competitiveness effects;<sup>29</sup> distributional aspects<sup>30</sup> and adjoining policy areas.<sup>31</sup>

Numerous jurisdictions<sup>32</sup> have implemented carbon tax in the past decade. South Africa has been somewhat delayed in its introduction of a carbon tax notwithstanding it having been mooted as a possibility several years ago.<sup>33</sup> South Africa is nonetheless following this international movement and has for the past decade pursued the formulation of a carbon tax regime which is effective in its operation, equitable in its impact across different sectors, and which does not result in the collapse of the country's economy.

There are several domestic policy documents and draft laws that are currently relevant to the country's attempt to implement a carbon tax regime in early 2017. The National Treasury released a discussion document named *A Framework for Considering Market-based Instruments to Support Environmental Fiscal Reform in South Africa (Draft Policy Paper)* in 2006. It is aimed at creating a broad policy framework for informing the future introduction of market-based instruments (MBIs) in support of sustainable development and environmental objectives of South Africa.<sup>34</sup> The *Discussion Paper on Carbon Taxes*, published for comment in December 2010, builds upon the understanding gained in the *Draft Policy Paper* of MBIs and concentrates on the economic rationale for the introduction of a carbon tax in

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Environment and Improve the Tax System at the Same Time?" 1995 *Southern Economic Journal* 915-922.

<sup>29</sup> See generally: Ekins P & Speck S "Competitiveness and Exemptions from Environmental Taxes in Europe" 1999 (13) *Environmental and Resource Economics* 385-391; Zhang Z & Baranzini A *What Do We Know about Carbon Taxes? An Inquiry into their Impacts on Competitiveness and Distribution of Income* (2003) East-West Center Working Papers 17-28; Andersen M S & Ekins P *Carbon-Energy Taxation* (2009) Oxford University Press New York.

<sup>30</sup> See generally: Speck S "Energy and Carbon Taxes and Their Distributional Implications" 1999 (27) *Energy Policy* 662-666; Zhang & Baranzini *Impacts on Competitiveness and Distribution of Income* 13-17.

<sup>31</sup> National Treasury *Market-Based Instruments: Draft Policy Paper* 58.

<sup>32</sup> These jurisdictions are inclusive but not exhaustive of Australia, British Columbia, Chile, Costa Rica, Denmark, Germany, Finland, France, Iceland, Ireland, Italy, Japan, Mexico, Norway, Slovenia Sweden, Switzerland and United Kingdom. See generally: Sumner S, Bird, L & Dobos H "Carbon Taxes: A Review of Experience and Policy Design Considerations" 2011 (11) *Climate Policy* 922-923.

<sup>33</sup> National Treasury *Discussion Paper for Public Comment – Reducing Greenhouse Gas Emissions: The Carbon Tax Option* (2010) 4.

<sup>34</sup> National Treasury *Market-Based Instruments: Draft Policy Paper* i.

South Africa.<sup>35</sup> Following, the *Carbon Tax Policy Paper – Reducing Greenhouse Gas Emissions and Facilitating the Transition to a Green Economy (Carbon Tax Policy Paper)*, published by the National Treasury in 2013, is a revision of the *Discussion Paper on Carbon Taxes*. The *Carbon Tax Policy Paper* expands on and frames the particular carbon tax design elements briefly considered in the 2012 Budget Review and argues for carbon pricing.<sup>36</sup>

The *Carbon Offsets Paper*, released by the National Treasury in 2014, contextualises a carbon offsets scheme as a complementary flexibility mechanism to carbon tax to address climate change and mitigate competitiveness and distributional concerns.<sup>37</sup> The *Draft Carbon Tax Bill*, was initially released in 2015<sup>38</sup> for public comments and stakeholder consultation. Following, the *Draft Carbon Tax Bill*<sup>39</sup> was re-released in 2017 and sets out the mooted legislative framework for the creation of a tax on the carbon dioxide equivalent (CO<sub>2</sub>e) of GHG emissions. This acknowledges the implications of rising anthropogenic GHG emissions and the necessity to manage the impacts of climate change.<sup>40</sup> Promulgated under the *Air Quality Act*, the *Draft National Greenhouse Gas Emission Reporting Regulations*<sup>41</sup> was published in 2015. These regulations set out a reporting mechanism necessary for the imminent carbon tax regime. In 2016, GHGs, inclusive of CO<sub>2</sub>, were declared as a priority air pollutant.<sup>42</sup> This necessitates, in accordance with the *Air Quality Act*, the submission of pollution prevention plans and the related monitoring, evaluating and reporting thereof.<sup>43</sup> The *Draft Regulations: Carbon Offsets*<sup>44</sup> were released in 2016 and details the

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<sup>35</sup> National Treasury *Discussion Paper: The Carbon Tax Option 4*.

<sup>36</sup> National Treasury *Carbon Tax Policy Paper – Reducing Greenhouse Gas Emissions and Facilitating the Transition to a Green Economy* (2013) 7-20.

<sup>37</sup> National Treasury *Carbon Offsets Paper* (2014) 6.

<sup>38</sup> National Treasury *Draft Carbon Tax Bill* (2015).

<sup>39</sup> National Treasury *Draft Carbon Tax Bill* (B – 2017) available at <http://www.treasury.gov.za/public%20comments/CarbonTaxBill2015/Carbon%20Tax%20Bill%20final%20for%20release%20for%20comment.pdf>.

<sup>40</sup> Preamble of *Draft Carbon Tax Bill*.

<sup>41</sup> *Draft National Greenhouse Gas Emission Reporting Regulations* (GN R 541 in GG 38857 of 5 June 2015).

<sup>42</sup> *Declaration of Greenhouse Gases as Priority Air Pollutants* (GN 6 in GG 39578 of 8 January 2016).

<sup>43</sup> Section 4 and 5 of GN 6 in GG 39578 of 8 January 2016.

<sup>44</sup> National Treasury *Draft Regulations: Carbon Offsets* (2016).

procedure for obtaining carbon offset allowances and the utilization of carbon offsets by taxpayers.<sup>45</sup> The implementation of a South African carbon tax regime was initially postponed from January 2015 to mid-2016. This deferral of implementation was justified by the need to align the design of the carbon tax to the desired emission reductions and to allow for consultation with stakeholders on the carbon tax legislation.<sup>46</sup> However, the *Draft Carbon Tax Bill* was further deferred to 2017 as further public consultations were held in 2016, following comments received on the *Draft Carbon Tax Bill*. Consequently, the *Draft Carbon Tax Bill* was re-released in 2017.<sup>47</sup> It is planned that a revised *Carbon Tax Bill* will be released for public consultation and tabled in Parliament by mid-2017.<sup>48</sup>

## 1.2. Scope, ambit and purpose

Given the pending finalisation of South Africa's anticipated carbon tax regime, the time seems fitting to critically review this regime. The tax design elements as aforementioned outlined<sup>49</sup> provide a useful lens through which to critically analyse South Africa's impending carbon tax regime. The purpose of this dissertation is therefore to critically review South Africa's future carbon tax regime against a series of generally accepted tax design elements. Furthermore, this dissertation aims to evaluate whether South Africa's future carbon tax regime provides a legal and policy framework which will be effective in its operation, equitable in its impact across different sectors and whether it will promote a more sustainable and resilient domestic economy.

## 1.3. Methodology and structure

This dissertation will comprise of a desk-top study involving a consideration of relevant policies, laws, regulations, jurisprudence and academic commentary relating to carbon tax theory generally, and the implementation of South Africa's carbon tax regime specifically. In order to fulfil its purpose

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<sup>45</sup> Regulation 2 and 7 of National Treasury *Draft Regulations: Carbon Offsets*.

<sup>46</sup> National Treasury *Budget Review* (2014) 55; Adeleke F, Kiragu E & Murombo T *Background Paper on Climate Change in South Africa and the Proposed Measures to Promote Environmental Sustainability* (2014) Mandela Institute 19-20.

<sup>47</sup> National Treasury *Draft Carbon Tax Bill*.

<sup>48</sup> National Treasury *Budget Review* (2017) 48.

<sup>49</sup> See part 1.1. above.

as stated above, the dissertation is effectively broken down into three main parts, each dealing with different key aspects of the broader enquiry.

Chapter 2 of the dissertation introduces the broader theoretical discourse relating to MBIs, environmental taxes and carbon taxes. It seeks to distil from the relevant literature, generally accepted tax design elements, which include: environmental effectiveness; tax revenue; support for the tax; legislative aspects; technical and administrative viability; competitiveness effects; distributional aspects and adjoining policy areas. In respect of each of these tax design elements, their nature and the factors influencing their form are examined. This effectively creates the necessary theoretical framework against which South Africa's proposed carbon tax regime will be critically evaluated in subsequent parts of the dissertation.

Prior to undertaking the detailed critical evaluation of South Africa's proposed carbon tax regime, it is necessary to briefly outline the myriad components of South Africa's future carbon tax regime and how they fit together to provide the necessary legal context for the subsequent detailed critical analysis. This forms the focus of Chapter 3, which provides this overview of the relevant laws, regulations and policies and how they relate to one another and the existing broader legal landscape.

Having created this necessary theoretical and legal context, Chapter 4 comprises of the critical review of South Africa's proposed carbon tax regime. To ensure consistency between the different components of the dissertation, this critical review uses the same design elements listed above as the basis of its structure. In respect of each of these elements, the strengths, weaknesses and options for improving South Africa's proposed carbon tax regime are considered.

## Chapter 2: Theoretical framework of carbon tax theory

### 2.1. Understanding the concepts

Prior to reviewing any country's legal framework, it is necessary to contextualise the relevant theoretical framework. In the context of this dissertation, this is carbon tax theory. Employing the broadest lens first, this chapter firstly outlines the basics of MBIs and the reasoning for their emergence. Following, environmental taxes will be outlined and contextualised in reference to the wider framing of MBIs. Finally, the formulation of carbon tax, a specific type of an environmental tax, will be examined in relation to its form, nature and purpose.

#### 2.1.1. Market-based instruments

The command-and-control approach to environment management is centered on the notion that the manner in which to regulate human behaviour impacting on the environment, is to prescribe a legislative framework, prohibitions, limitations and to sanction non-compliance.<sup>50</sup> However, there is a growing international and domestic consensus that this command-and-control approach is insufficient in numerous ways.<sup>51</sup> Firstly, this approach is costly in terms of the administration, compliance and enforcement that is necessary.<sup>52</sup> Secondly, legislative standards are often

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<sup>50</sup> Stavins R N "Experience with Market-Based Environmental Policy Instruments" in Maler K G & Vincent J R (eds) *Handbook of Environmental Economics* (2003) Elsevier Science 358.

<sup>51</sup> See generally: Stauth R & Baskind P "Chapter 3: Resource Economics" in Fuggle R F & Rabie M A (eds) *Environmental Concerns in South Africa: Technical and Legal Perspectives* (1983) Juta Cape Town 39-40; Pearce D, Markandya A & Barbier E *Blueprint for a Green Economy* (1989) Earthscan London 153-172; Westin R *Understanding Environmental Taxes* (1992) Unpublished Paper 3-6; Bruce N & Ellis G *Environmental Taxes and Policies for Developing Countries* (1993) World Bank Policy Research Working Paper No WPS1177; Henderson P "Fiscal incentives for Environmental Protection – Introduction" 1994 (1) *South African Journal of Environmental Law and Policy* 50-52; James D "Environmental Incentives: Australian Experience with Economic Instruments for Environmental Management" 1997 *Environmental Economics Research Paper* No 5. 13; Milne J *et al* (eds) *Critical Issues in Environmental Taxation Volume I: International and Comparative Perspectives* (2003) Richmond Law & Tax Richmond 27-51; Wilkie K *What is in it for me?: Exploring Natural Capital Incentives* (2005) Canada West Foundation Calgary 2-4; Paterson A "Tax Incentives – Valuable Tools for Biodiversity Conservation in South Africa" 2005 (122) *South African Law Journal* 182; and Paterson A "Property Tax a Friend or Foe for Landscape Protection in South Africa" 2005 (12) *South African Journal of Environmental Law and Policy* 97.

<sup>52</sup> Paterson A "Pruning the Money-Tree to Ensure Sustainable Growth: Facilitating Sustainable Development Through Market-based Instruments" 2006 (3) *Potchefstroom Electronic Law Journal* 1-2.

rigid in their application and do not adequately make provision for case by case differences. Thirdly, the command-and-control approach does not enable voluntary initiatives and largely does not encourage technological development. The focus on compliance and enforcement of legislative standards does not create an enabling environment for innovation. Finally, this approach does not address the market failure that accounts for the inclusion of environmental goods and services.

Traditional command-and-control mechanisms are commonly employed in conjunction with MBIs.<sup>53</sup> MBIs have emerged in the international as well as domestic policy context as significant mechanisms to realise environmental protection goals and better manage natural resources.<sup>54</sup> Endeavouring to better manage environmental goods and services, the function of MBIs has become increasingly significant.<sup>55</sup>

In general, markets aim to efficiently, although not necessarily equitably, allocate resources through the pricing mechanism.<sup>56</sup> In this competitive environment, the economic players are purposed to maximise profits and productivity. Importantly, in this arena driven by economic prosperity, some markets are presupposed to failure; those that are centrally focused on environmental goods and services. There is an inadequate consideration of the benefits and costs of environmental resources in market activities and prices. Therefore, markets are not a reliable means to guarantee the safeguarding of environmental standards and practices. Under this scenario, governmental invention is favourable to influence market decisions and encourage a more sustainable and conscious utilisation of environmental goods and services.

MBIs are a suite of policy instruments that are designed to address the environmentally-related market failures by way of the price mechanism. This

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<sup>53</sup> National Treasury *Market-Based Instruments: Draft Policy Paper 2*.

<sup>54</sup> Whitten S, Van Bueren M & Collins D "An Overview of Market-based Instruments and Environmental Policy in Australia" 2003 AARES Symposium 1.

<sup>55</sup> National Treasury *Market-Based Instruments: Draft Policy Paper 1*.

<sup>56</sup> Reinhardt F "Market Failure and the Environmental Policies of Firms: Economic Rationales for Beyond Compliance Behavior" 1999 (3) *Journal of Industrial Ecology* 10; National Treasury *Market-Based Instruments: Draft Policy Paper 41*.

aims to change the relative prices that affect individuals and firms.<sup>57</sup> By extension, this intends to internalise the previously non-appraised environmental benefits and costs by including them into price structures. This inclusion into the price structures will potentially impact on the decisions made with respect to them. In simple terms, an aspect of nature is given a price.<sup>58</sup> MBIs are regulations that encourage or discourage certain behaviour of individuals and firms through market signals instead of clear directives.<sup>59</sup> This serves a significant purpose in helping to guarantee that economic development is sustainable and socially and environmentally detrimental activities are discouraged.<sup>60</sup> Fiscal policy, more specifically tax policy, helps to create a beneficial environment wherein the alteration of relative prices can occur.<sup>61</sup> Thus, over and above creating revenue, MBIs can alter human behaviour, facilitate more efficient resource use and alleviate detrimental environmental impacts.<sup>62</sup> MBIs can be comprised of: the elimination of unfavourable subsidies; revenue raising instruments such as environmental taxes,<sup>63</sup> levies<sup>64</sup> and user-charges;<sup>65</sup> deposit-refund systems; and targeted subsidies.<sup>66</sup>

The utilisation of MBIs are considered by numerous commentators<sup>67</sup> as a more effective means to achieve environmental management in that they: are efficient; innately flexible and equitable; possibly reduce administration, compliance and enforcement costs; encourage individuals and firms to have

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<sup>57</sup> National Treasury *Market-Based Instruments: Draft Policy Paper* vi.

<sup>58</sup> National Treasury *Market-Based Instruments: Draft Policy Paper* 44.

<sup>59</sup> Stavins "Experience with Market-Based Environmental Policy Instruments" in *Handbook of Environmental Economics* 358.

<sup>60</sup> Paterson 2006 (3) *Potchefstroom Electronic Law Journal* 3.

<sup>61</sup> National Treasury *Market-Based Instruments: Draft Policy Paper* 1.

<sup>62</sup> Paterson 2006 (3) *Potchefstroom Electronic Law Journal* 3.

<sup>63</sup> An "environmental tax" is defined as a: "tax whose base is a physical unit (or proxy of it) that has a proven specific negative impact on the environment". National Treasury *Market-Based Instruments: Draft Policy Paper* 3.

<sup>64</sup> A "levy" is defined as a: compulsory statutorily prescribed payment. National Treasury *Market-Based Instruments: Draft Policy Paper* 5.

<sup>65</sup> A "user-charge" is defined as a: "required payment for a specific service rendered". National Treasury *Market-Based Instruments: Draft Policy Paper* 5.

<sup>66</sup> National Treasury *Market-Based Instruments: Draft Policy Paper* 43.

<sup>67</sup> Stauth & Baskind "Chapter 3: Resource Economics" in *Environmental Concerns in South Africa: Technical and Legal Perspectives* 39-40; Pearce et al *Blueprint for a Green Economy* 153-172; Westin *Understanding Environmental Taxes* 3-6; Bruce & Ellis *Environmental Taxes*; Henderson 1994 *SAJELP* 50-52; James *Environmental Incentives* 13; Milne et al (eds) *Critical Issues in Environmental Taxation* 27-51; Wilkie *Natural Capital Incentives* 2-4; Paterson 2005 (122) *SALJ* 182; and Paterson 2005 (12) *SAJELP* 97.

the freedom to choose the manner in which to adapt their activities in a cost effective approach and alleviate the market failure by including the use of environmental goods and services.<sup>68</sup> Environmental taxes, a type of MBI, forms the focus of the next section of discussion.<sup>69</sup>

### 2.1.2. Environmental taxes

The basis for environmental taxation is clear. Pollution creates environmental, economic and social costs borne by society that are not carried by the polluter.<sup>70</sup> When polluters only account for the private costs of their activities, without cognisance of the environmental and social costs, they will theoretically pollute to a greater degree than what is environmental and socially appropriate.<sup>71</sup> A reasonable response is therefore, to reduce pollution to a degree that fully accounts for the costs of pollution and the benefits gained by carrying out the polluting activity. Taxation is commonly an efficient means of regulation to achieve this as it alters the prices faced by polluters and thereby potentially drives a behavioural change. Effectively, this applies the polluter-pays principle.<sup>72</sup> Imposing a tax, commonly termed Pigovian tax,<sup>73</sup> guarantees that the polluter takes responsibility, or internalises, these broad ranging costs when engaged in polluting activities.<sup>74</sup> Pigovian tax is levied on economic activities according to their generation of negative environmental externalities. It is aimed at correcting the market failure.<sup>75</sup> Importantly, an imposition of a tax encourages changes by industry and business that are more cost effective.<sup>76</sup> Imposing a tax upon a polluting activity, creates an incentive for industry and business to implement innovative changes over time through new technologies or

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<sup>68</sup> Paterson 2006 (3) *Potchefstroom Electronic Law Journal* 4.

<sup>69</sup> Sprenger R U "Market-based Instruments in Environmental Policies: The Lessons of Experience" in Anderson M S & Sprenger R U (eds) *Market-Based Instruments for Environmental Management: Politics and Institutions* (2000) Edward Elgar Publishing 4.

<sup>70</sup> Mirrlees J, Adam S, Besley T, Blundell R, Bond S, Chote R, Gammie M, Johnson P, Myles G & Poterba J M "Environmental Taxation" in Institute for Fiscal Studies & Mirrlees J (eds) *Tax by Design* (2011) Oxford University Press 231.

<sup>71</sup> Mirrlees et al "Environmental Taxation" in *Tax by Design* 233.

<sup>72</sup> Mirrlees et al "Environmental Taxation" in *Tax by Design* 231-233.

<sup>73</sup> See generally: Pigou A C *The Economics of Welfare* (1920) Macmillan New York.

<sup>74</sup> Mirrlees et al "Environmental Taxation" in *Tax by Design* 231.

<sup>75</sup> Pirard R "Market-based Instruments for Biodiversity and Ecosystem Services: A lexicon" 2012 *Environmental Science & Policy* 60.

<sup>76</sup> Mirrlees et al "Environmental Taxation" in *Tax by Design* 233.

improvements on existing technologies. Therefore, the imposition of a tax may improve the overall efficiency of industry.<sup>77</sup>

Environmental taxes adopt a price mechanism in order to correct market failure and aim to positively contribute to the state of the environment.<sup>78</sup> The *Draft Policy Paper* defines an environmental tax “as a tax on an environmentally-harmful tax base”.<sup>79</sup> The tax base for an environmental tax is a physical unit or proxy thereof which has a proven detrimental impact on the environment.<sup>80</sup> Environmental taxes are broadly inclusive of taxes placed on transport fuels, motor vehicles, emissions, landfills and energy.<sup>81</sup> The notion of an environmental tax as a MBI is not an entirely new concept for the South African economy. There are a number of environmental taxes currently in application. These are inclusive but not exhaustive of taxes imposed on transport fuels namely the general fuel levy and the customs and excise levy; vehicles taxation; aviation taxes; product taxes such as the plastic shopping bags levy and electricity-related levies.<sup>82</sup>

Environmental taxes are also a means to raise revenue.<sup>83</sup> Environmental taxes thereby impose a tax that is beneficial to the environment as well as to the fiscus.<sup>84</sup> The National Treasury estimates that current environmental taxes contribute to approximately two percent of South Africa’s gross domestic product and ten percent to the total tax revenue; the majority of this tax revenue being derived from the general fuel levy.<sup>85</sup> However, these taxes are presently formulated to purely contribute to the national fiscus with

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<sup>77</sup> Mirrlees et al “Environmental Taxation” in *Tax by Design* 236.

<sup>78</sup> Stavins “Experience with Market-Based Environmental Policy Instruments” in *Handbook of Environmental Economics* 359-360; National Treasury *Market-Based Instruments: Draft Policy Paper* 3.

<sup>79</sup> National Treasury *Market-Based Instruments: Draft Policy Paper* 3.

<sup>80</sup> National Treasury *Market-Based Instruments: Draft Policy Paper* 3.

<sup>81</sup> National Treasury *Market-Based Instruments: Draft Policy Paper* 34.

<sup>82</sup> Kirby N & Pillay C “An Introduction to Environmental Taxes” 2008 *The Professional Accountant* 31; National Treasury *Market-Based Instruments: Draft Policy Paper* 34.

<sup>83</sup> Mirrlees et al “Environmental Taxation” in *Tax by Design* 236.

<sup>84</sup> Kirby & Pillay 2008 *The Professional Accountant* 31.

<sup>85</sup> National Treasury *Market-Based Instruments: Draft Policy Paper* 39.

minimal environmental advantages.<sup>86</sup> Following, in the next section of discussion, carbon tax, an environmental tax, will be considered.<sup>87</sup>

### 2.1.3. Carbon tax theory

Carbon tax has existed in the international arena for upwards of 25 years. In the 1990s, carbon taxes were developed in the northern European countries, with Finland as the first country to adopt a carbon tax in 1990.<sup>88</sup> Carbon taxes now exist in various forms across a myriad of nations.<sup>89</sup> Carbon taxes place a price on CO<sub>2</sub> emissions, thereby internalising a share of the costs related to their environmental impact. Primarily, carbon taxes are designed to reduce GHG emissions by placing a value on CO<sub>2</sub> emissions. However, carbon taxes can also raise revenues to feed into carbon mitigation programmes or generate market signals for consumers.<sup>90</sup>

The introduction of a carbon tax is predominantly guided by the notion that anthropogenic climate change and its impacts are caused by increased levels of GHG emissions and as a result, the polluter must pay. Thus, carbon tax is a reflection of the polluter-pays principle. Traditionally, the external costs of environmental degradation are not reflected in the final market prices which promotes the excessive allocation of the limited resource base for the production and consumption of commodities. Carbon tax, a Pigovian tax, thus aims to address climate change effects that predominantly derive from market failure.<sup>91</sup>

Carbon tax can either employ an upstream or downstream based approach. An upstream carbon tax targets CO<sub>2</sub> emissions occurring at source during fossil fuel production (oil, coal and natural gas). Essentially, a tax is imposed on fossil fuel inputs according to the CO<sub>2</sub> content of the fuel. This approach has the greatest capacity to guarantee that all sources of CO<sub>2</sub> emissions are

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<sup>86</sup> Kirby & Pillay 2008 *The Professional Accountant* 31.

<sup>87</sup> Mbadlanyana T "The Political Economy of Carbon Tax in South Africa" 2013 (43) *Africa Insight* 82.

<sup>88</sup> Sumner et al 2011 (11) *Climate Policy* 922.

<sup>89</sup> These jurisdictions are inclusive but not exhaustive of Australia, British Colombia, Chile, Costa Rica, Denmark, Germany, Finland, France, Iceland, Ireland, Italy, Japan, Mexico, Norway, Slovenia Sweden, Switzerland and United Kingdom. See generally: Sumner et al 2011 (11) *Climate Policy* 922-923.

<sup>90</sup> Sumner et al 2011 (11) *Climate Policy* 923.

<sup>91</sup> Mbadlanyana 2013 (43) *Africa Insight* 82.

targeted, as the point in which carbon enters the economy is focused upon.<sup>92</sup> Placing the carbon tax liability on fuel suppliers, will likely result in the increase in fuel costs for consumers. This essentially passes the tax down the producer-consumer chain, producing incentives for fuel alternatives and investments in energy-efficient technologies that decrease CO<sub>2</sub> emissions.<sup>93</sup> It is also an administratively feasible method of tax collection as a fewer number of source points are required to be regulated.<sup>94</sup>

Conversely, a downstream approach focuses on the facilities that are the chief sources of CO<sub>2</sub> emissions. Tax is imposed on the outputs derived from fossil fuels such as electricity. An efficiently designed downstream approach could similarly target all the relevant economic sectors, thus ensuring costs are evenly distributed as in an upstream approach. However, the potential drawback of the downstream approach is the large number and array of facilities that would need to be monitored. The intrinsic difficulty in incorporating all the relevant types of energy use, particularly motor vehicles and electricity, which are significant CO<sub>2</sub> emission contributors also pose challenges. The vast range of role-players that are required to be monitored puts pressure on the administrative capacity responsible for environmental monitoring, compliance and enforcement. Furthermore, it is unclear how individual energy use would be addressed.<sup>95</sup>

Given the discussion on the broader theoretical discourse relating to MBIs, environmental taxes and carbon taxes, the next section will distil from the relevant literature, the generally accepted elements impacting on the design of environmental taxes.

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<sup>92</sup> Avi-Yonah R S & Uhlmann D M "Combating global climate change: Why a Carbon Tax is a better response to global warming than cap and trade" 2009 (28) *Stanford Environmental Law Journal* 31; Mbadlanyana 2013 (43) *Africa Insight* 82.

<sup>93</sup> Aldy J E & Stavins R N "The Promise and Problems of Pricing Carbon: Theory and Experience" 2012 *Journal of Environment & Development* 5.

<sup>94</sup> Sumner et al 2011 (11) *Climate Policy* 924.

<sup>95</sup> Avi-Yonah & Uhlmann 2009 (28) *Stanford Environmental Law Journal* 31; Mbadlanyana 2013 (43) *Africa Insight* 82.

## 2.2. Generally accepted tax design elements

Similar to other tax instruments, environmental taxes should be aligned to the generally accepted principles of good taxation,<sup>96</sup> namely the principles of administrative efficiency, equity,<sup>97</sup> neutrality,<sup>98</sup> certainty,<sup>99</sup> simplicity<sup>100</sup> and cost effectiveness.

The basic criteria<sup>101</sup> that should be utilised and employed to assess the environmental taxes such as a carbon tax include: environmental effectiveness; tax revenue; support for the tax; legislative aspects; technical and administrative viability; competitiveness effects; distributional aspects and adjoining policy areas. These basic tax design elements, which have been accepted by a range of international commentators,<sup>102</sup> will each be outlined below in order to contextualize the subsequent critical review of South Africa's future carbon tax regime.

### 2.2.1. Environmental effectiveness

Concerning environmental effectiveness of an environmental tax, it is imperative that there is a well-defined taxable commodity that connects to the fundamental environmental goal. The primary environmental goal of carbon tax is to reduce GHG emissions, or more specifically, CO<sub>2</sub> emissions.<sup>103</sup> Ideally, the tax base should be directly targeted to the actual environmental objective and should be founded upon a clear and discretely

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<sup>96</sup> National Treasury *Market-Based Instruments: Draft Policy Paper* vii; Margo C S *Report of the Commission of Inquiry into the Tax Structure of the Republic of South Africa (The Margo Commission Report)* (2003) The Government Printer Pretoria para. 1.28(a).

<sup>97</sup> "Equity in the tax system is defined through the ability to pay principle. This principle is derived from the concept that a tax should be based upon some kind of person economic well-being". National Treasury *Market-Based Instruments: Draft Policy Paper* (2006) 26-27.

<sup>98</sup> "The principle of tax neutrality requires that the tax system should not unduly influence economic decision-making". National Treasury *Market-Based Instruments: Draft Policy Paper* 26.

<sup>99</sup> Certainty denotes that: "a taxpayer [must] be reasonably certain of what his or her tax liability will be in any given set of circumstances". National Treasury *Market-Based Instruments: Draft Policy Paper* 27.

<sup>100</sup> "Simplicity requires that a tax should be easily assessed, collected and administered in order to minimise costs". National Treasury *Market-Based Instruments: Draft Policy Paper* 27.

<sup>101</sup> National Treasury *Market-Based Instruments: Draft Policy Paper* 58.

<sup>102</sup> See generally: Baranzini et al 2000 (32) *Ecological Economics* 401-408; Fullerton et al "Environmental Taxes" in *Dimensions of Tax Design* 423-536; Organisation for Economic Co-operation and Development *Environmental Taxation A Guide for Policy Makers* 1-12.

<sup>103</sup> Baranzini et al 2000 (32) *Ecological Economics* 405; National Treasury *Market-Based Instruments: Draft Policy Paper* 59-61.

measurable unit of pollution. In this instance, there is a stronger incentive to alter the taxpayer's behaviour and unintentional outcomes are minimised. Under the circumstance wherein a direct linkage between the tax and the environmental externality cannot be reached, the closest linkage should ideally be employed through the identification of a suitable proxy.<sup>104</sup> In the context of carbon tax, the most suitable proxy would be taxation placed on the CO<sub>2</sub>e as this accounts for the radiative forcing of both CO<sub>2</sub> and other GHGs.<sup>105</sup> To determine the CO<sub>2</sub>e, the global warming potential<sup>106</sup> is calculated for a GHG and then is expressed relative to that of CO<sub>2</sub>.

To guarantee the environmental effectiveness of a tax, the best design should be the central goal.<sup>107</sup> The number of exemptions should be minimised to ease the constraint on administrative capacity. In some instances, allowances of exemptions may be essential in order to avoid the creation of unfavourable incentives that undermine the environmental effectiveness of the tax. By extension, if exceptions are to be considered, they should be structured as lower tax rates instead of complete exemptions.

### 2.2.2. Tax revenue

The level of tax revenues and the manner in which the revenue is utilised are important considerations. Tax revenue from carbon tax largely focuses on the rate of tax wherein the external environmental cost of CO<sub>2</sub> emissions is attempted to be aligned to the monetary value paid. The setting of the tax rate is a crucial design element as this directly relates to the environmental externality from which the tax is derived. However, it is challenging to essentially put a price on an aspect of nature through largely inexact estimates.<sup>108</sup> The tax needs to be designed to align with the particular environmental outcomes of the environmental tax.<sup>109</sup> The design of the

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<sup>104</sup> National Treasury *Market-Based Instruments: Draft Policy Paper* 59-61.

<sup>105</sup> Aldy & Stavins 2012 *Journal of Environment & Development* 4.

<sup>106</sup> The global warming potential for a specific GHG is the total of its climate-changing effect over a specific time period, accounting for the gradual atmospheric decay of the GHG. Williams III R C *Environmental Taxation Discussion Paper* (2016) Resources for the Future 10.

<sup>107</sup> Ekins & Speck 1999 (13) *Environmental and Resource Economics* 384; National Treasury *Market-Based Instruments: Draft Policy Paper* 59.

<sup>108</sup> Oates 1995 *Southern Economic Journal* 919; National Treasury *Market-Based Instruments: Draft Policy Paper* vii.

<sup>109</sup> See part 2.2.1. above.

environmental tax can be optimised by adopting a gradual phased in approach with tax rates increasing over time with an appropriate pre-announcement period. Alternatively, the proposed tax rate can be adopted from the onset. So as to allow taxpayers adequate time to adapt to the introduced tax, the gradual phased in approach with a pre-announcement is favourable.<sup>110</sup>

Environmental taxes generally have a great potential to garner significant tax revenue. This is especially true in the circumstance where the demand for the taxed good or service is fairly price inelastic. Taxing price inelastic goods and services is in general good tax practice as the decision-making of resource allocation is not improperly affected and revenues tend to be buoyant over time. Regarding the taxation of CO<sub>2</sub> emissions, this taxed environmental good is relatively price inelastic as it relates to the demand of energy.<sup>111</sup> Energy demands of industry, firms and consumers are fairly constant (excluding the long-term favouring of renewable energy). Carbon tax thus has a good potential to raise significant revenue.<sup>112</sup>

Equally, environmental taxes of a particular good or service that are greatly responsive to price changes, do not have a great potential to create significant revenue.<sup>113</sup> In this situation, a tax could incentivise taxpayers, producers or consumers to change their behaviour in favour of their interests. Accordingly, tax revenues are likely to be insignificant and further decrease over time.

It is important to consider that the introduction of a new environmental tax requires the reductions of tax liability in other contexts – this is the concept of tax shifting.<sup>114</sup> Effectively, the tax burden is redistributed or transferred to introduce a new tax or to allow an increase in a particular tax while the overall value of tax revenue is maintained.

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<sup>110</sup> National Treasury *Market-Based Instruments: Draft Policy Paper* 61.

<sup>111</sup> Pearce 1991 (101) *The Economic Journal* 940-942; National Treasury *Market-Based Instruments: Draft Policy Paper* 59.

<sup>112</sup> Metcalf G E & Weisbach D "The Design of a Carbon Tax" 2009 (33) *Harv. Envtl. L. Rev.* 512.

<sup>113</sup> National Treasury *Market-Based Instruments: Draft Policy Paper* 59.

<sup>114</sup> De Mooij T A & Bovenberg A L "Environmental Taxes, International Capital Mobility and Inefficient Tax Systems: Tax Burden vs. Tax Shifting" 1998 (5) *International Tax and Public Finance* 8.

The utilisation of tax revenue related to earmarking is a significant component of tax revenue considerations.<sup>115</sup> Earmarking dedicates revenue collected from a tax to a particular activity or programme. Under a full earmark, the earmarked revenue is the only source of revenue for the programme. Whereas, partial or soft earmarking supplements earmarked revenue with other monetary sources into a specific activity or programme.<sup>116</sup> Earmarking delivers a reliable and predictable funding certainty for a programme as competition with other budget priorities is eliminated. The reliability of funding facilitates long-term predictability that supports planning and budget allocation. Earmarking can garner support and acceptability of a tax as it provides a clear linkage between payments and benefits creating greater fiscal transparency.<sup>117</sup>

However, earmarking introduces inflexibility or rigidity into the budget allocation process that inhibits an integrated fiscal management practice.<sup>118</sup> Earmarking creates greater complexity within the budget environment and can create a disconnect between financial resource needs and allocations. The introduction of earmarking is not a surety to secure funding as behavioural responses in private consumption and the reallocation of funds may constrain the revenue generated. Earmarked revenues are the determining factor for the funding levels of particular programmes and may not be aligned to programmes' needs or outcomes. Earmarking favours the monetary interests of special interests over the broader public interest. There is typically a less comprehensive budget review on earmarked revenues as it is not subjected to continuous re-evaluation and adjustment. There are increased tax administration and compliance costs for earmarking as it requires separate structures to be put in place.

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<sup>115</sup> National Treasury *Market-Based Instruments: Draft Policy Paper* 60.

<sup>116</sup> National Treasury *Market-Based Instruments: Draft Policy Paper* 66, 101-103; Michael J *Earmarking State Tax Revenues* (2015) Research Department Minnesota House of Representatives 2-3.

<sup>117</sup> Michael *Earmarking State Tax Revenues* 4-5.

<sup>118</sup> Michael *Earmarking State Tax Revenues* 5-7; National Treasury *Market-Based Instruments: Draft Policy Paper* 101-102; Tahk S C "Public Choice Theory and Earmarked Taxes" 2014 (68) *Tax Law Review* 756.

### 2.2.3. Support for the tax

Taxes are obligatory to finance government activities and to provide the public with the necessary amenities.<sup>119</sup> The assessment of the support for the introduction of an environmental tax ties in with the standards of tax morality and compliance. The lack of opposition or general public support by consumers and business thereby improves the levels of tax morality and compliance.

There are various ways to garner support for the introduction of a new environmental tax.<sup>120</sup> A participatory process involving public consultation during the design and implementation phases of an environmental tax can be used to increase public support. Similarly, tax shifting can improve support for the environmental tax as the overall tax liability imposed on the public is maintained.<sup>121</sup> Exemptions or reduced rates of particular industries, individuals or firms can facilitate the acceptance of an environmental tax as it allows for an adjustment period. Similarly, the phased implementation of an environmental tax can be used to gain public support as it allows for a transition period to adjust to the economic and social effects of a new tax. A sectoral approach that is coordinated and integrates multiple role players and governmental spheres can also facilitate the support of an environmental tax as there is a cooperative effort among the relevant stakeholders.

The introduction of an environmental tax or the alteration of an existing instrument, is likely to result in winners and losers.<sup>122</sup> In the context of carbon tax, the evaluation of winners and losers may be delineated between firms and industries reliant on fossil fuels versus those that are reliant on renewable energy.<sup>123</sup> It is significant in assessing the support of an environmental tax, that the respective lobbying power and the sphere of influence of these role players are assessed. Along the same vein, the

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<sup>119</sup> National Treasury *Market-Based Instruments: Draft Policy Paper* vii, 60.

<sup>120</sup> Organisation for Economic Co-operation and Development *Environmental Taxation A Guide for Policy Makers* 10; Höhne N, Worrell E, Ellermann C, Vieweg M & Hagemann M *Sectoral Approach and Development* (2008) Ecofys 21.

<sup>121</sup> See part 2.2.2. above.

<sup>122</sup> National Treasury *Market-Based Instruments: Draft Policy Paper* 60.

<sup>123</sup> Ward & de Battista *Modelling the Impact on South Africa's Economy* viii.

assurance that all the relevant role players are involved and engaged is a vital component in garnering support for any tax reform or introduction.<sup>124</sup>

#### 2.2.4. Legislative aspects

The legal framework for an environmental tax, specifically a carbon tax, theoretically should contain provisions for a tax base,<sup>125</sup> tax-payers, utilisation of tax revenue across different governmental sectors,<sup>126</sup> administration, monitoring and enforcement.<sup>127</sup>

A carbon tax traverses both fiscal and environmental interests, as it combines the imposition of taxation with the environmental objective of the reduction of GHG emissions.<sup>128</sup> It is important that the economic and environmental parameters are clearly defined so as to develop appropriate measures that support the aims. This necessitates legislative alignment.<sup>129</sup> This is an important consideration as often carbon tax is regulated between different government sectors – finance department and environmental department.

The most efficient and cost-effective administrative option is to use existing tax authorities and to minimise the number of collection points.<sup>130</sup> A monitoring and reporting system is necessary to evaluate the concentration and emission of GHGs and whether required changes or adjustments are applicable. To maintain reliability of data, independent auditors are recommended. Complementary to a monitoring framework are compliance and enforcement provisions. Inclusion of these provisions within the legislative framework of a carbon tax is necessary to ensure adherence with the legislative provisions and achievement of the fiscal and environmental objectives.

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<sup>124</sup> National Treasury *Market-Based Instruments: Draft Policy Paper* 60.

<sup>125</sup> See part 2.2.2. above.

<sup>126</sup> See part 2.2.2. above

<sup>127</sup> National Treasury *Market-Based Instruments: Draft Policy Paper* 60-61.

<sup>128</sup> Baranzini et al 2000 (32) *Ecological Economics* 405.

<sup>129</sup> Scrimgeour F, Oxley L & Fatai K "Reducing Carbon Emissions? The Relative Effectiveness of Different Types of Environmental Tax: The Case of New Zealand" 2005 *Environmental Modelling & Software* 1440.

<sup>130</sup> Slemrod J & Yitzhaki S "Tax Avoidance, Evasion, and Administration" in Auerbach A J & Feldstein M (eds) *Handbook of Public Economics* (2002) Elsevier Science 1450.

### 2.2.5. Technical and administrative viability

Technical and administrative considerations are significant as they are often deciding factors influencing whether an environmental tax is appropriate and viable.<sup>131</sup> The implementation of a new environmental tax is often costly in terms of costs imposed on tax administrators as well as compliance costs for the relevant taxpayers.<sup>132</sup> It is important to consider the ratio of the tax revenue accrued to the collection costs to garner whether the revenue collected from the tax is sufficient to cover administrative costs.<sup>133</sup> With the intention of reducing set-up costs and minimising non-compliance activities, taxation at the source is favourable. This approach typically reduces the number of statutory taxpayers, which consequently minimises costs and leakages. Although, this may not necessarily align with the tax base that directly targets the actual environmental objective.<sup>134</sup> Carbon tax can either employ an upstream or downstream based approach.<sup>135</sup>

Of relevance to the technical and administrative viability are considerations of tax avoidance and tax evasion.<sup>136</sup> These are probable difficulties that should be addressed at the initial tax design stage. Significantly, attention should be paid that unfavourable incentives are not by omission imbedded in the tax design. The degree to which tax avoidance and evasion can be monitored and enforced is an important element that needs to be considered in order to safeguard environmental effectiveness and the level of tax revenue.

Furthermore, the collection costs are also affected by the responsible tax collection authority.<sup>137</sup> The costs of a new environmental tax are expected to be minimised through the appropriate usage of economies of scale and the existing administrative structures. In the instance that administrative structures are already in place with other associated environmental

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<sup>131</sup> National Treasury *Market-Based Instruments: Draft Policy Paper* vii.

<sup>132</sup> National Treasury *Market-Based Instruments: Draft Policy Paper* 62.

<sup>133</sup> National Treasury *Market-Based Instruments: Draft Policy Paper* 62.

<sup>134</sup> Avi-Yonah & Uhlmann 2009 (28) *Stanford Environmental Law* 31; Mbadlanyana 2013 (43) *Africa Insight* 82.

<sup>135</sup> See part 2.1.3. above.

<sup>136</sup> Slemrod & Yitzhaki "Tax Avoidance, Evasion, and Administration" in *Handbook of Public Economics* 1425-1470; National Treasury *Market-Based Instruments: Draft Policy Paper* 61.

<sup>137</sup> National Treasury *Market-Based Instruments: Draft Policy Paper* 62.

agencies, it may be more favourable to build on these existing structures instead of utilising new administrative structures to administer the particular environmental tax.

#### 2.2.6. Competitiveness effects

The competitiveness effects on local industries and businesses as well as other facets of the economy (for example employment, inflation and international competitiveness) is critical when evaluating an environmental tax and is also affected by the tax base and tax rate.<sup>138</sup> Implementing an environmental tax will result in economic effects as a policy intervention characteristically aims to change the behaviour of taxpayers. Garnering a sufficient understanding of the nature and magnitude of the economic knock-on effects is significant so as to reduce any unfavourable competitiveness consequences.

For a discussion concerning competitiveness effects, it is important to differentiate between the formal incidence of an environmental tax and effective incidence. The formal incidence concerns those who are legally obliged to pay the specific tax and effective incidence refers to those who bear the economic burden of a specific tax. Subject to the point of formal incidence, the imposition of an environmental tax may be filtered forward to consumers or conversely it may be filtered backwards along the the supply chain to producers or suppliers of natural resources, labour or capital.<sup>139</sup>

For industries and businesses that are predominantly situated in the local market, there is a possibility whereby the tax burden can be transferred through the utilisation of higher prices.<sup>140</sup> The degree to which this can be employed is dependent upon the price elasticity of demand for the good or service as well as the level of competition from imports. Second order impacts concerning investment, employment, inflation and other key elements also need to be deliberated.

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<sup>138</sup> Ekins & Speck 1999 (13) *Environmental and Resource Economics* 386; National Treasury *Market-Based Instruments: Draft Policy Paper* 62.

<sup>139</sup> National Treasury *Market-Based Instruments: Draft Policy Paper* 62.

<sup>140</sup> National Treasury *Market-Based Instruments: Draft Policy Paper* 63.

Concerns surrounding competitiveness are mostly expected to occur in the instance whereby environmental taxes are imposed on products or key elements of production that are internationally traded.<sup>141</sup> For the industries and firms that are subjected to international competition, the possibility to transfer the tax burden through the imposition of higher prices is largely limited. This is due to the restricted sphere of influence that local industries have on international price control.

Mitigation measures could be used to alleviate the adverse economic effects imposed by an environmental tax. These measures are inclusive of the following: reduced tax rates or tax exemptions; tax refunds; recycling revenues; gradual implementation and phased in approach of an environmental tax; border tax adjustment, tax harmonisation and carbon offsets.<sup>142</sup> Revenue recycling utilises revenue gained from an environmental tax and returns it for use in the annual budget for reductions in associated taxes or subsidisation.<sup>143</sup> Furthermore, revenue recycling measures concerning carbon tax could include the funding of efficiency investments and low-carbon projects and a tax incentive for energy efficiency.<sup>144</sup> Border tax adjustment is the imposition of a domestic tax on imported goods, wholly or partly excluding exported goods from the domestic tax so as to support domestic markets and remain internationally competitive.<sup>145</sup> Tax harmonisation is the international or regional coordination of an environmental tax with an attempt to “harmonise” or standardise a tax rate across a geographical region.<sup>146</sup> Carbon offsets are a mechanism to reduce the carbon tax liability of firms and industries.<sup>147</sup>

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<sup>141</sup> Ekins & Speck 1999 (13) *Environmental and Resource Economics* 386-388; National Treasury *Market-Based Instruments: Draft Policy Paper* 62.

<sup>142</sup> National Treasury *Market-Based Instruments: Draft Policy Paper* 63.

<sup>143</sup> OECD “Environmentally Related Taxes in OECD Countries: Issues and Strategies” 2001 OECD Paris 36.

<sup>144</sup> Yu L & Lu Y “The Economic Impact of Different Carbon Tax Revenue Recycling Schemes in China: A Model-Based Scenario Analysis” 2015 (141) *Applied Energy* 97.

<sup>145</sup> Ismer R & Neuhoff K “Border Tax Adjustment: A Feasible Way to Support Stringent Emission Trading” 2007 (24) *Eur J Law Econ* 141.

<sup>146</sup> Organisation for Economic Co-operation and Development *Environmentally Related Taxes in OECD Countries: Issues and Strategies* (2001) OECD Paris 117.

<sup>147</sup> National Treasury *Carbon Offsets Paper* 10.

### 2.2.7. Distributional aspects

The distributional aspects largely concern the income distribution effects and the impact the imposition of the tax has on variant income groups.<sup>148</sup> Furthermore, the basis of distributional aspects rests on the measures that are taken through the means of tax design or corresponding expenditure programmes where the burden of tax is attempted to be offset. The environmental tax should ideally deal with both vertical<sup>149</sup> and horizontal<sup>150</sup> equity concerns.

The imposition of carbon taxation generally results in a price increase of a product or service liable for the tax.<sup>151</sup> This has two distinct effects on consumer behaviour. Firstly, households purchasing energy products such as transport fuels and heating fuels and are directly affected by the carbon taxation. Secondly, through the purchase of goods and services that require the use of energy the consumer is indirectly affected by the imposition of the tax.

In the circumstance whereby an environmental tax imposes unacceptable distributional impacts, mitigation and compensation measures should be considered to ensure equity.<sup>152</sup> Mitigation measures aim to minimise the overall burden that is imposed on certain income groups. However, the incorporation of such mitigation measures into the tax design and the administration thereof may prove challenging. Conversely, the application of compensation measures could be considered whereby targeted interest groups are compensated through means such as tax refunds.

### 2.2.8. Adjoining policy areas

The degree to which an environmental tax aligns with reaching other policy goals is significant. In terms of environmental objectives, it is imperative that an environmental tax is in agreement with and supportive of complementary

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<sup>148</sup> National Treasury *Market-Based Instruments: Draft Policy Paper* vii, 62-63.

<sup>149</sup> "Vertical equity... requires that those in different economic circumstances bear appropriately different tax burdens". National Treasury *Market-Based Instruments: Draft Policy Paper* 27.

<sup>150</sup> "Horizontal equity requires that persons in the same economic situation be treated equally". National Treasury *Market-Based Instruments: Draft Policy Paper* 27.

<sup>151</sup> Speck 1999 (27) *Energy Policy* 662.

<sup>152</sup> National Treasury *Market-Based Instruments: Draft Policy Paper* 62-63.

measures such as voluntary agreements or regulation. In the instance of potential misalignment, this needs to be identified and sufficiently addressed.<sup>153</sup>

In the context of carbon tax, it is essential to weigh environmental, energy and fiscal objectives against one another.<sup>154</sup> The environmental objective of carbon tax aims to reduce GHG emissions (in the context of climate change) through a pricing mechanism.<sup>155</sup> This ties into the primary fiscal objective. Carbon tax is purposed to raise revenue to positively contribute to the overall fiscus.<sup>156</sup> The principal energy objective of carbon tax is to encourage a change in the energy mix from a society that is predominately reliant on energy from fossil fuels. Combusting fossil fuels to produce energy produces GHGs (of which CO<sub>2</sub> is significant) and applying the polluter pays principle through carbon taxation aims to move towards renewable or less carbon intensive energy sources.<sup>157</sup>

### 2.3. In summary

MBIs have emerged in the international as well as domestic policy context as significant mechanisms to realise environmental protection goals and better manage natural resources. They are a suite of policy instruments that are designed to address the environmentally-related market failures by way of the price mechanism. Environmental taxes, commonly termed Pigovian tax, adopts a price mechanism in order to correct market failure and aims to positively contribute to the state of the environment. An environmental tax effectively applies the polluter-pays principle and aims to generate a behavioural change of tax payers. Carbon taxes, an environmental tax, place a price on CO<sub>2</sub> emissions, thereby internalising a share of the costs related to their environmental impact. Primarily, carbon taxes are designed to reduce GHG emissions by placing a value on CO<sub>2</sub> emissions. The basic criteria that should be utilised and employed to assess the environmental taxes such as a carbon tax include: environmental effectiveness; tax revenue; support for

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<sup>153</sup> National Treasury *Market-Based Instruments: Draft Policy Paper* 64.

<sup>154</sup> National Treasury *Market-Based Instruments: Draft Policy Paper* 64.

<sup>155</sup> Reinhardt 1999 (3) *Journal of Industrial Ecology* 10; National Treasury *Market-Based Instruments: Draft Policy Paper* 41; 59-61.

<sup>156</sup> Mirrlees et al "Environmental Taxation" in *Tax by Design* 236.

<sup>157</sup> Herring H "Energy Efficiency – A Critical View" 2006 (31) *Energy* 19.

the tax; legislative aspects; technical and administrative viability; competitiveness effects; distributional aspects and adjoining policy areas.

## Chapter 3: An overview of South Africa's proposed carbon tax regime

There are a broad range of international and domestic policy documents and laws which have informed the decision to introduce a carbon tax in South Africa and have impacted on its form and nature. Prior to undertaking a detailed critical analysis of South Africa's carbon tax regime against the elements identified in Chapter 2, it is necessary to provide a broad overview of this relevant international and domestic policy and law context and summarise how the carbon tax will work. To ensure consistency between the different sub-sections of Chapter 3, this overview of South Africa's proposed carbon tax regime will address the different policies and laws under each sub-section in chronological order.

### 3.1. International law and policy context

This section will detail South Africa's reasoning to introduce a carbon tax regime under the influence of the wider international community. Voluntary commitments and obligations are imposed on South Africa through various international instruments which result in a domestic legislative or policy response.

Firstly, the *UNFCCC*,<sup>158</sup> an international environmental treaty, is an important international instrument relevant to discussion. The aim of the 1992 *UNFCCC* is to stabilise atmospheric GHG concentrations to a level that precludes dangerous anthropogenic alteration with the climatic system. However, no binding commitments for GHG emission reductions are set.<sup>159</sup> South Africa, as party to the *UNFCCC*, should take precautionary measures to prevent or alleviate the triggers of climate change and mitigate its adverse effects. In this respect, sustainable development is a fundamental element thereof.<sup>160</sup> South Africa ratified the *UNFCCC* in 1997, which allows the state to acquire monetary assistance for climate change related activities from the Global Environmental Facility.<sup>161</sup>

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<sup>158</sup> 31 ILM 849.

<sup>159</sup> Article 2 of 31 ILM 849.

<sup>160</sup> Article 3 of 31 ILM 849.

<sup>161</sup> Article 11 of 31 ILM 849; GN 513 in GG 26169 of 14 May 2004 viii.

The *Kyoto Protocol* of 1997 is an international agreement connected to the *UNFCCC*, which obligates its Parties through the establishment of internationally binding emission reduction targets. As party to the *Kyoto Protocol* of which South Africa ratified in 2002, there are certain emission reductions for signatory countries to encourage sustainable development while reducing GHG emissions.<sup>162</sup> South Africa as a non-Annex I country is a signatory to the *Kyoto Protocol* but being classified as a developing country does not have any specific emission targets to meet.<sup>163</sup> There is a distinction between developed and developing countries reasoned by common but differentiated responsibilities.<sup>164</sup> South Africa's commitment to the *Kyoto Protocol* is following evidenced by its preparation of a suite of policy frameworks<sup>165</sup> as well as the implementation of various environmental taxes.<sup>166</sup>

South Africa, as signatory to the *Paris Agreement* on 22 April 2016, is legally bound<sup>167</sup> to commit to this comprehensive framework which will guide international efforts to reduce GHG emissions and tackle the accompanying challenges posed by climate change. The first session of the COP serving as the Meeting of the Parties to the *Paris Agreement* was held in Marrakech, Morocco in November 2016.<sup>168</sup> To mitigate against the risks of climate change, signatories aim to limit the increase of the global average temperature to below 2°C according to pre-industrial levels, while pursuing efforts to cap warming at an 1.5°C increase.<sup>169</sup> This relates to South Africa's commitment to a national plan called the Intended Nationally Determined Contribution<sup>170</sup> which acknowledges climate change as an urgent anthropogenic and natural threat, necessitating broad-scale cooperation and commitment by all countries and relevant stakeholders.<sup>171</sup> Furthermore, the

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<sup>162</sup> Article 2 and 3 of 37 ILM 22.

<sup>163</sup> Article 1 and Annex B of 37 ILM 22.

<sup>164</sup> Article 10 of 37 ILM 22.

<sup>165</sup> See part 3.2. below.

<sup>166</sup> See part 2.1.2. above. Mbadlanyana 2013 (43) *Africa Insight* 80.

<sup>167</sup> South Africa ratified the Paris Agreement on 1 November 2016 and it entered force on 4 November 2016. United Nations "Paris Agreement" *United Nations Framework Convention on Climate Change* [http://unfccc.int/paris\\_agreement/items/9444.php](http://unfccc.int/paris_agreement/items/9444.php) (accessed 18.02.2017)

<sup>168</sup> United Nations "Paris Agreement".

<sup>169</sup> Article 2 of *Paris Agreement*.

<sup>170</sup> South African Government *Intended Nationally Determined Contribution*.

<sup>171</sup> Article 3 and 4 of *Paris Agreement*.

*Paris Agreement* is a significant tool in mobilising capital, technological support and capacity building for developing countries and the transition to low-carbon economies. It will also support the scaling up of the global effort to address and minimise loss and damage from climate change while increasing climate resilience.<sup>172</sup>

### 3.2. Domestic law and policy context

This section firstly outlines the domestic policies and plans applicable to the proposed carbon tax regime in South Africa. Following, the domestic laws of relevance to the imminent carbon tax regime will be discussed in relation to domestic environmental laws and domestic tax laws. Finally, the different institutions at play and the importance of cooperative governance will be examined.

#### 3.2.1. Relevant domestic policies and plans

In 1998, the *White Paper on the Energy Policy of the Republic of South Africa*<sup>173</sup> (*White Paper on Energy Policy*) was developed by Department of Minerals and Energy. This White Paper largely concentrates on the necessity to decrease the cost of energy and improve its efficiency.<sup>174</sup> This is canvassed in five policy objectives of: improving access to affordable energy provision; developing energy governance; promoting economic development; managing environmental and health impacts derived from energy-related activities and securing supply through the diversification of energy services.<sup>175</sup> These policy goals are notably more expansive than the historical emphasis on energy supply as they include environmental and societal considerations along with energy efficiency. Furthermore, the importance of heightening private investment in the domestic energy sector along with the diversification of energy sources, inclusive of renewable energy, is focused upon.<sup>176</sup> This ties into the focus paid to the issue of energy demand and the necessity to decrease GHG emissions. These factors contribute towards safeguarding the energy security of South Africa in

<sup>172</sup> Article 1 and 2 of *Paris Agreement*.

<sup>173</sup> GN 3007 in GG 19606 of 17 December 2004.

<sup>174</sup> GN 3007 in GG 19606 of 17 December 2004 3.

<sup>175</sup> GN 3007 in GG 19606 of 17 December 2004 8-9.

<sup>176</sup> GN 3007 in GG 19606 of 17 December 2004 14.

an integrated manner. Thus, the *White Paper on Energy Policy* creates the policy framework necessary for the energy sector to manage the challenges associated with mitigating against climate change impacts.<sup>177</sup>

Following, in 2003, a *White Paper on the Renewable Energy Policy of the Republic of South Africa*<sup>178</sup> (*White Paper on Renewable Energy*) was issued by the Department of Minerals and Energy and aims to provide certainty on the future energy trajectory of South Africa. This White Paper argued for the investment of national resources in renewable technologies in order to provide for the long-term sustainable domestic renewable energy sector.<sup>179</sup> This is in line with the potential of renewable energy as an alternative energy option to non-renewable fossil fuels in light of climate change.<sup>180</sup> Furthermore, the government regarded the development of the country's renewable energy potential is part of a strategic action plan to minimise the dependency on coal-based energy generation.<sup>181</sup>

In 2006, the *Draft Policy Paper*<sup>182</sup> was released. This document is purposed to structure the necessary background of the potential role of MBIs, specifically environmental taxes, in furthering sustainable development and environmental objectives of South Africa. The *Draft Policy Paper* outlines the avenues for environmental fiscal reform and importantly sets out specific tax elements to evaluate environmental tax proposals.<sup>183</sup> The *Draft Policy Paper* furthermore argues for carbon pricing by means of a carbon tax to internalise the external environmental costs.<sup>184</sup>

The Department of Environmental Affairs and Tourism (DEAT) released the strategic *LTMS*<sup>185</sup> document in 2007. The *LTMS* assesses the mitigation potential of South Africa's GHG emissions and creates a long-term climate mitigation policy. The focus is on mitigation options and their prospective

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<sup>177</sup> Mbadlanyana 2013 (43) *Africa Insight* 80; Tyler E "Aligning South African Energy and Climate Change Mitigation Policy" 2010 (10) *Climate Policy* 579.

<sup>178</sup> GN 513 in GG 26169 of 14 May 2004.

<sup>179</sup> GN 513 in GG 26169 of 14 May 2004 2.

<sup>180</sup> Mbadlanyana 2013 (43) *Africa Insight* 80.

<sup>181</sup> GN 513 in GG 26169 of 14 May 2004 3.

<sup>182</sup> National Treasury *Market-Based Instruments: Draft Policy Paper*.

<sup>183</sup> National Treasury *Market-Based Instruments: Draft Policy Paper* i.

<sup>184</sup> National Treasury *Market-Based Instruments: Draft Policy Paper* v.

<sup>185</sup> DEAT *Long Term Mitigation Scenarios*.

costs.<sup>186</sup> In accordance with the *LTMS* at the *UNFCCC COP 15* in 2009, South Africa made a voluntary commitment at this Copenhagen Summit<sup>187</sup> to reduce its GHG emissions from the modelled business-as-usual scenario by 34 percent by 2020 and by 42 percent by 2025 which is reflected in the Copenhagen Accord.<sup>188</sup> This reflects the political commitment by South Africa to support the global effort in mitigating climate change and moving toward a green economy.<sup>189</sup> Founded upon the South Africa's Intended Nationally Determined Contribution<sup>190</sup> submission to the *UNFCCC*, in anticipation of the Conference of the Parties (COP) 21 in Paris in 2015, South Africa's *LTMS* predicts that GHG emissions will peak by 2020, stabilise between 2020-2030 and decrease from 2035.<sup>191</sup>

The *National Framework for Sustainable Development*<sup>192</sup> (*NFSD*) released in 2008, aims to create a comprehensive framework for sustainable development in South Africa that sets the foundation for the *National Strategy for Sustainable Development and Action Plan*<sup>193</sup> (*NSSD*).<sup>194</sup> The *NFSD* is based on the understanding that the economic growth of South Africa should be rooted in sustainability to ensure the protection of the environmental resource base to meet the needs of present and future generations, underpinned by integrated and efficient governance.<sup>195</sup> This is in line with a number of principles such as: efficient and sustainable use of natural resources; integration and innovation; and consultation and participation.<sup>196</sup>

The *Discussion Paper on Carbon Taxes*, published for comment in December 2010, builds upon the understanding gained in the *Draft Policy Paper* of MBIs and concentrates on the economic rationale for the

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<sup>186</sup> DEAT *Long Term Mitigation Scenarios* 1.

<sup>187</sup> United Nations *Climate Change Conference*.

<sup>188</sup> United Nations *Report of the Conference of the Parties* 6.

<sup>189</sup> Ward & de Battista *Modelling the Impact on South Africa's Economy* 1.

<sup>190</sup> South African Government *Intended Nationally Determined Contribution*.

<sup>191</sup> South African Government *Intended Nationally Determined Contribution* 1-11; Ward & de Battista *Modelling the Impact on South Africa's Economy* 1.

<sup>192</sup> DEAT *National Framework for Sustainable Development*.

<sup>193</sup> DEA *National Strategy for Sustainable Development and Action Plan*.

<sup>194</sup> DEAT *National Framework for Sustainable Development* 6.

<sup>195</sup> National Treasury *Carbon Tax Policy Paper* 20; DEAT *National Framework for Sustainable Development* 8.

<sup>196</sup> DEAT *National Framework for Sustainable Development* 8-9, 20.

introduction of a carbon tax in South Africa.<sup>197</sup> Environmental taxes are an important tool to encourage activities that are socially, economically and environmentally sustainable while pursuing GHG emission reductions and revenue-raising goals.<sup>198</sup> It is argued that the utilisation of a carbon tax can support the reduction of GHG emissions at least cost to the economy and encourage behaviour change of firms, industries and consumers.<sup>199</sup>

The *National Climate Change Response Policy (NCCRP)*,<sup>200</sup> developed by the Department of Environmental Affairs (DEA) in 2011, aims to ensure a synchronized and coherent policy framework to address climate change, as well as, to align and frame efforts in this respect across the different governmental spheres.<sup>201</sup> Furthermore, the *NCCRP* outlines South Africa's plan to manage effective climate change response measures and the transition to a climate-resilient and low-carbon economy. This is largely by way of renewable energy and a green economy.<sup>202</sup> The *NCCRP* is established on the environmental right<sup>203</sup>, the objectives of the *National Environmental Management Act*<sup>204</sup> (*NEMA*) and international instruments such as the *UNFCCC*.<sup>205</sup> The *NCCRP* actively supports the development of carbon mitigation schemes.<sup>206</sup>

The *NCCRP* along with the *LTMS* are designed to be complementary policy measures to the existing policy framework.<sup>207</sup> They are also targeted to align with the country's commitment for accepting its global responsibility in the management of climate change. These documents favour the utilisation of MBIs, particularly carbon taxes, to alter the behaviour responsible for reducing GHG emissions. Arguably, the function of these measures in dealing with climate change and encouraging sustainable development has gained increased attention in recent years as they appear to reflect the

<sup>197</sup> National Treasury *Discussion Paper: The Carbon Tax Option 4*.

<sup>198</sup> National Treasury *Discussion Paper: The Carbon Tax Option 3*.

<sup>199</sup> National Treasury *Discussion Paper: The Carbon Tax Option 5*.

<sup>200</sup> GN 757 in GG 34695 of 19 October 2011.

<sup>201</sup> GN 757 in GG 34695 of 19 October 2011 14;

National Treasury *Carbon Tax Policy Paper 7-8*.

<sup>202</sup> GN 757 in GG 34695 of 19 October 2011 15-17.

<sup>203</sup> Section 24 of the *Constitution of the Republic of South Africa*, 1996.

<sup>204</sup> Act 107 of 1998.

<sup>205</sup> 31 ILM 849; GN 757 in GG 34695 of 19 October 2011 8.

<sup>206</sup> GN 757 in GG 34695 of 19 October 2011 24-29.

<sup>207</sup> Mbadlanyana 2013 (43) *Africa Insight* 81.

country's commitment to contributing to the global climate change mitigation effort.

The *National Development Plan: Vision for 2030*<sup>208</sup> (*NDP*) of 2011 concentrates on core focus areas to develop South Africa's economy until 2030. The state focuses on a holistic development plan to transition to a low-carbon and climate-resilient economy.<sup>209</sup> This is through various adaptation and mitigation policy measures that are focused upon poverty alleviation and equality. It builds upon the *LTMS* with the probability that the country's emissions will adhere to a peak-plateau-decline path between 2020 to 2035.<sup>210</sup> The *NDP* encourages the utilisation of carbon pricing, by means of a carbon tax, to mitigate climate change and effectively transition to a low-carbon economy that supports the internalisation of environmental and social consequences of GHG emissions.<sup>211</sup>

The *National Strategy for Sustainable Development and Action Plan*<sup>212</sup> (*NSSD*) released in 2011, builds upon the framework and vision for sustainable development as set out in the *NFSD*.<sup>213</sup> The *NSSD* creates a comprehensive roadmap for strategic sustainable development and supports the implementation of the *NFSD*. The vision and principles contained in the *NSSD* corresponded to those outlined in the *NFSD*.<sup>214</sup> Five key priorities are focused upon in the *NSSD*: enhancing systems for integrated planning and implementation, sustaining our ecosystems and using natural resources efficiently, moving towards a green economy, building sustainable communities and responding effectively to climate change.<sup>215</sup>

Following, the *Carbon Tax Policy Paper*,<sup>216</sup> published by the National Treasury in 2013, is a revision of the *Discussion Paper on Carbon Taxes*. It accounts for the comments received on the *Discussion Paper on Carbon*

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<sup>208</sup> National Planning Commission *National Development Plan: Vision for 2030* (2011).

<sup>209</sup> NPC *National Development Plan* 15.

<sup>210</sup> NPC *National Development Plan* 180-183; National Treasury *Carbon Tax Policy Paper* 26.

<sup>211</sup> NPC *National Development Plan* 189-190; National Treasury *Carbon Tax Policy Paper* 26.

<sup>212</sup> DEA *National Strategy for Sustainable Development and Action Plan*.

<sup>213</sup> DEA *National Strategy for Sustainable Development and Action Plan* 6.

<sup>214</sup> DEA *National Strategy for Sustainable Development and Action Plan* 9.

<sup>215</sup> DEA *National Strategy for Sustainable Development and Action Plan* 14-34.

<sup>216</sup> National Treasury *Carbon Tax Policy Paper*.

Taxes from a broad range of firms, academics, non-governmental organisations and international institutions. Additionally, the National Treasury hosted the Carbon Tax Consultation Workshop in 2011 to engage with the relevant stakeholders to refine the carbon tax design from the feedback received. The *Carbon Tax Policy Paper* expands on and frames the particular carbon tax design elements briefly considered in the 2012 Budget Review<sup>217</sup> such as tax revenue, competitiveness and distributional aspects. It argues for carbon pricing to alter producer and consumer behaviour and mitigate the effects of climate change. Carbon tax is a favoured MBI due to the oligopolistic nature of the South African energy market.<sup>218</sup>

The *Carbon Offsets Paper*,<sup>219</sup> published by the National Treasury in 2014, contextualises a carbon offsets scheme as a complementary flexibility mechanism to carbon tax that addresses climate change and mitigates competitiveness and distributional concerns. Carbon offsets reduce the carbon tax liability by an external investment that allows firms to acquire GHG mitigation schemes that is more cost-effective than investment in its own operations.<sup>220</sup> The *Carbon Offsets Paper* largely focuses on eligibility criteria, carbon offset principles, standards and potential in South Africa.<sup>221</sup>

The report on *Modelling the Impact on South Africa's Economy of Introducing a Carbon Tax*<sup>222</sup> (*Carbon Tax Modelling Report*) of 2016 was commissioned by the National Treasury to assess the potential consequences of a domestic carbon tax.<sup>223</sup> The focus areas are environmental effectiveness, competitiveness concerns and distributional aspects.<sup>224</sup>

The *Integrated Energy Plan*<sup>225</sup> (*IEP*) released in 2016 is related to the *White Paper on Energy Policy*.<sup>226</sup> It is a planning framework that sets the roadmap of South Africa's future energy mix which guides energy infrastructure

<sup>217</sup> National Treasury *Budget Review* (2012) 55-56.

<sup>218</sup> National Treasury *Carbon Tax Policy Paper* 7-20.

<sup>219</sup> National Treasury *Carbon Offsets Paper*.

<sup>220</sup> National Treasury *Carbon Offsets Paper* 6.

<sup>221</sup> National Treasury *Carbon Offsets Paper* 7-12.

<sup>222</sup> Ward & de Battista *Modelling the Impact on South Africa's Economy*.

<sup>223</sup> Ward & de Battista *Modelling the Impact on South Africa's Economy* v, vii.

<sup>224</sup> Ward & de Battista *Modelling the Impact on South Africa's Economy* vii-ix.

<sup>225</sup> *Integrated Energy Plan* (GN 1430 in GG 40445 of 25 November 2016).

<sup>226</sup> GN 3007 in GG 19606 of 17 December 2004.

investments and policy development. In the context of the need to balance energy provision with the consideration of social needs and environmental protection, the *IEP* is guided by a number of key objectives. These are: to ensure security of energy supply; minimise energy costs; promote the creation of jobs and localisation; minimise negative environmental impacts from the energy sector; promote the conservation of water; diversify supply sources and primary sources of energy; promote energy efficiency and increase the access to modern energy.<sup>227</sup>

The *Integrated Resource Plan Update*<sup>228</sup> (*IRP*) released in 2016 is a “living plan” that is connected with the *Integrated Energy Plan (IEP)*. The *IRP* focuses on the electricity-related features of the *IEP*.<sup>229</sup> It outlines South Africa’s expected long-term energy demand<sup>230</sup> and sets out how this demand can be met with supply through capacity generation<sup>231</sup> in the context of climate change and the need to reduce GHG emissions.<sup>232</sup>

The *Draft Post-2015 National Energy Efficiency Strategy*<sup>233</sup> (*National Energy Efficiency Strategy*) released in 2016 aims to balance the increasing energy demand with the improvement of resource use and the reduction of associated GHG emissions. Furthermore, the focus is on energy efficiency improvement by employing fiscal and financial incentives, a comprehensive legal and regulatory framework and enabling processes.<sup>234</sup>

### 3.2.2. Relevant domestic laws

#### 3.2.2.1. Domestic environmental laws

The Bill of Rights, in the *Constitution of the Republic of South Africa*,<sup>235</sup> creates the broad legal basis for the implementation of environmental taxes. The environmental right encased in section 24 states that:

<sup>227</sup> GN 1430 in GG 40445 of 25 November 2016 11-12.

<sup>228</sup> *Integrated Resource Plan Update* (GN 1431 in GG 40445 of 25 November 2016).

<sup>229</sup> GN 1431 in GG 40445 of 25 November 2016 2.

<sup>230</sup> GN 1431 in GG 40445 of 25 November 2016 6-7.

<sup>231</sup> GN 1431 in GG 40445 of 25 November 2016 7-9, 14.

<sup>232</sup> GN 1431 in GG 40445 of 25 November 2016 10-11.

<sup>233</sup> *Draft Post-2015 National Energy Efficiency Strategy* (GN 948 of GG 40515 of 23 December 2016).

<sup>234</sup> GN 948 of GG 40515 of 23 December 2016 1-2.

<sup>235</sup> *Constitution of the Republic of South Africa*, 1996.

“Everyone has the right

- a. to an environment that is not harmful to their health or well-being; and
- b. to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that
  - i. prevent pollution and ecological degradation;
  - ii. promote conservation; and
  - iii. secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.”<sup>236</sup>

The environmental right enshrined in the Bill of Rights acknowledges the changing nature of climate, and the need to ensure environmental protection in a manner that is sustained for future generations. Furthermore, there are constitutional imperatives to guarantee sustainable development, together with the utilisation of natural resources in a way that supports the necessary social and economic development. Carbon tax is a mitigation instrument that can facilitate sustainable development that balances the spheres of economic development, social integrity and environmental protection, in the light of climate change.<sup>237</sup>

The *NEMA*<sup>238</sup> serves as the general framework for environmental considerations, plans and policies.<sup>239</sup> It outlines a set of principles to guide any action that may significantly affect the environment.<sup>240</sup> Therefore, these principles are applicable for the imminent implementation of a domestic carbon tax regime.<sup>241</sup> Principles focus on areas such as the promotion of sustainable development,<sup>242</sup> environmental justice,<sup>243</sup> the precautionary

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<sup>236</sup> Section 24 of the *Constitution of the Republic of South Africa*.

<sup>237</sup> Kirby & Pillay 2008 *The Professional Accountant* 31-32; Adeleke et al *Background Paper on Climate Change in South Africa* 4.

<sup>238</sup> Act 107 of 1998.

<sup>239</sup> Section 2(1)(b) of *National Environmental Management Act 107 of 1998*.

<sup>240</sup> Section 2(1) of *NEMA*.

<sup>241</sup> Section 2 of *NEMA*.

<sup>242</sup> Section 2(3) of *NEMA*.

<sup>243</sup> Section 2(4)(c) of *NEMA*.

principle,<sup>244</sup> the preventative principle<sup>245</sup> and the polluter-pays principle.<sup>246</sup> Carbon tax, a Pigovian tax,<sup>247</sup> epitomises the polluter-pays principle – the polluter takes responsibility, or internalises, environmental costs when engaged in polluting activities that emit GHG emissions.<sup>248</sup>

The *Air Quality Act*<sup>249</sup> is the regulatory framework of relevance to monitoring, reporting and verification. It specifies the creation of the National Atmospheric Emissions Inventory System (NAEIS),<sup>250</sup> which will be utilised to verify self-reported CO<sub>2</sub> emissions.<sup>251</sup> The NAEIS is an online emission reporting system which is a part of the South African Air Quality Information System.<sup>252</sup> A data provider<sup>253</sup> is obligated to register on NAEIS and various reporting requirements are set out according to emission source<sup>254</sup> groups.<sup>255</sup> The *Air Quality Act* obligates the relevant authorities, when issuing atmospheric emissions licences, to indicate GHG emission measurements, monitoring and reporting requirements in the licence.<sup>256</sup> It is mandatory that holders of atmospheric emission licences submit an annual emissions monitoring report to the licensing authority.<sup>257</sup>

The *Draft Carbon Tax Bill* sets out the mooted legislative framework<sup>258</sup> for the creation of a tax on the CO<sub>2</sub>e of GHG emissions.<sup>259</sup> This acknowledges the implications of rising anthropogenic GHG emissions and the necessity to manage the impacts of climate change. The domestic carbon tax aims to feed into a sustainable future and to support the international effort to stabilise atmospheric GHG concentrations.

<sup>244</sup> Section 2(4)(a)(vii) of *NEMA*.

<sup>245</sup> Section 2(4)(a)(ii) of *NEMA*.

<sup>246</sup> Section 2(4)(p) of *NEMA*.

<sup>247</sup> Pigou *The Economics of Welfare*.

<sup>248</sup> Mirrlees et al “Environmental Taxation” in *Tax by Design* 231.

<sup>249</sup> Act 39 of 2004.

<sup>250</sup> Section 12(b) and (c) read with section 53(a), (o) and (p) of *Air Quality Act*.

<sup>251</sup> National Treasury *South Africa’s Carbon Tax Policy Proposal An Update: National Climate Change Response Dialogue* (2014) 24.

<sup>252</sup> Regulation 1 of *National Atmospheric Emission Reporting Regulations* (GN R 283 in GG 38633 of 2 April 2015).

<sup>253</sup> A data provider is: “any person as classified in regulation 4 and listed in Annexure 1 to these Regulations”. Regulation 1 of GN R 283 in GG 38633 of 2 April 2015.

<sup>254</sup> Annexure 1 of GN R 283 in GG 38633 of 2 April 2015.

<sup>255</sup> Regulation 4 and 5 of GN R 283 in GG 38633 of 2 April 2015.

<sup>256</sup> Section 43(1)(l) of *Air Quality Act*.

<sup>257</sup> Section 17 of *Air Quality Act*.

<sup>258</sup> See part 3.2.3. below for the detailed mooted legislative framework.

<sup>259</sup> Preamble of *Draft Carbon Tax Bill*.

Subsequent to the publication of the *Draft Carbon Tax Bill* in 2015, public discussions and a number of meetings were organised. Outcomes of these discussions produced concerns that the carbon tax design should be refined to mitigate undesirable affects on households and firms. Accounting for the feedback received from public consultations together with input from the DEA and the National Treasury, there was an impetus to align the carbon tax design and the projected emission reduction objectives. The implementation of a South African carbon tax regime was initially postponed from January 2015 to mid-2016. This deferral of implementation planned to allow the design of the carbon tax to be aligned with policies of relevant departments and to the desired emission reductions.<sup>260</sup> However, the *Draft Carbon Tax Bill* was further deferred to 2017 as further public consultations were held in 2016, following comments received on the *Draft Carbon Tax Bill*. Consequently, the *Draft Carbon Tax Bill* was re-released in 2017.<sup>261</sup> It is planned that a revised *Carbon Tax Bill* will be released for public consultation and tabled in Parliament by mid-2017.<sup>262</sup> Thus, there is the necessary time frame to ensure a coherent legislative and policy structure as well as technical alignment.<sup>263</sup>

Promulgated under the *Air Quality Act*, the *Draft National Greenhouse Gas Emission Reporting Regulations*<sup>264</sup> was published in 2015. These regulations set out a reporting mechanism necessary for the imminent carbon tax regime. They are purposed to create a single national reporting system for GHGs in order for South Africa to satisfy its international obligations under the *UNFCCC* and to build into the National Greenhouse Gas Inventory.<sup>265</sup> The applicable persons<sup>266</sup> must register with the NAEIS as a data provider<sup>267</sup> and are required to report total GHG emissions from each of the required

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<sup>260</sup> National Treasury *Budget Review* (2014) 55; Adeleke et al *Background Paper on Climate Change in South Africa* 19-20.

<sup>261</sup> National Treasury *Draft Carbon Tax Bill*.

<sup>262</sup> National Treasury *Budget Review* (2017) 48.

<sup>263</sup> National Treasury *Budget Review* (2014) 55; Adeleke et al *Background Paper on Climate Change in South Africa* 19-20.

<sup>264</sup> GN R 541 in GG 38857 of 5 June 2015.

<sup>265</sup> Regulation 2 of GN R 541 in GG 38857 of 5 June 2015.

<sup>266</sup> Regulation 3(1) of GN R 541 in GG 38857 of 5 June 2015.

<sup>267</sup> Regulation 5 of GN R 541 in GG 38857 of 5 June 2015.

activities to the NAEIS annually.<sup>268</sup> It will only be necessary to report emissions above a thermal capacity of 10 megawatts in the first phase of implementation.<sup>269</sup> There are also measures entrenched in the reporting process to ensure the validity of the information provided through a verification process.<sup>270</sup>

In 2016, GHGs<sup>271</sup> were declared as a priority air pollutant.<sup>272</sup> This necessitates, in accordance with the *Air Quality Act*,<sup>273</sup> the submission of pollution prevention plans<sup>274</sup> and the related monitoring, evaluating and reporting thereof.<sup>275</sup>

The *Draft Regulations: Carbon Offsets*<sup>276</sup> was released in 2016 in accordance with the *Draft Carbon Tax Bill*<sup>277</sup> and details the procedure for obtaining carbon offset allowances and the utilization of carbon offsets by taxpayers.<sup>278</sup> A carbon offset project includes a Clean Development Mechanism (CDM), Verified Carbon Standard (VCS), Gold Standard (GS) or any other applicable project as approved by the Minister of Energy or a delegated authority.<sup>279</sup> The offset of an approved project against an entity's carbon tax liability<sup>280</sup> is allowed in relation to any certified emission reductions in a specific time period.<sup>281</sup> Carbon offsets against carbon tax liability can only be used for a stipulated number of years according to the type of project.<sup>282</sup> There are also limitations imposed on the carbon offset allowance in relation to the overlap created by complementary laws.<sup>283</sup> The administration of the carbon offsets concerns the inspection and review of

<sup>268</sup> Regulation 7(1) of GN R 541 in GG 38857 of 5 June 2015.

<sup>269</sup> Regulation 9(2) of GN R 541 in GG 38857 of 5 June 2015.

<sup>270</sup> Regulation 12 of GN R 541 in GG 38857 of 5 June 2015.

<sup>271</sup> CO<sub>2</sub>, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulphur hexafluoride. Section 2 of GN 6 in GG 39578 of 8 January 2016.

<sup>272</sup> GN 6 in GG 39578 of 8 January 2016.

<sup>273</sup> Section 29(1) read with section 57(1) of *Air Quality Act*.

<sup>274</sup> Section 4 of GN 6 in GG 39578 of 8 January 2016.

<sup>275</sup> Section 5 of GN 6 in GG 39578 of 8 January 2016.

<sup>276</sup> National Treasury *Draft Regulations: Carbon Offsets*.

<sup>277</sup> Section 20(b) of *Draft Carbon Tax Bill*.

<sup>278</sup> Regulation 2 and 7 of National Treasury *Draft Regulations: Carbon Offsets*.

<sup>279</sup> Regulation 1 of National Treasury *Draft Regulations: Carbon Offsets*.

<sup>280</sup> Section 20 of *Draft Carbon Tax Bill*.

<sup>281</sup> Regulation 2 of National Treasury *Draft Regulations: Carbon Offsets*.

<sup>282</sup> Regulation 3 of National Treasury *Draft Regulations: Carbon Offsets*.

<sup>283</sup> Regulation 4 of National Treasury *Draft Regulations: Carbon Offsets*.

applications as well as the managing of the offset registry.<sup>284</sup> It is necessary that a taxpayer registers a carbon offset and obtains a certificate<sup>285</sup> in order for it to reflect against their carbon tax liability.<sup>286</sup>

### 3.2.2.2. Domestic tax laws

The proposed carbon tax intersects the environmental and fiscal arena as a price is essentially placed on the natural component of CO<sub>2</sub>.<sup>287</sup> Therefore, the legislative provisions must encompass domestic tax laws. The carbon tax is administered through the *Customs and Excise Act*.<sup>288</sup> The carbon tax will be administered by the Commissioner for SARS as an environmental levy<sup>289</sup> set out in the *Customs and Excise Act*.<sup>290</sup> An environmental levy can be levied on imported and domestic goods<sup>291</sup> and must be collected and paid in terms of a carbon tax.<sup>292</sup> Any administrative actions, requirements and procedures relating to account verification, collection and payment of carbon tax as an environmental levy that is not prescribed in the *Draft Carbon Tax Bill* can be prescribed by the Commissioner of SARS.<sup>293</sup> The environmental levy provisions as set out in the *Draft Carbon Tax Bill* will be discussed below.<sup>294</sup>

### 3.2.2.3. Relevant institutions and cooperative governance

The implementation of the proposed carbon tax necessitates an accurate system for monitoring, reporting and verifying emissions. The SARS will be the primary implementing administrative authority on tax liability assessment.<sup>295</sup> The tax collection and liability assessment will be administered by SARS by means of the *Customs and Excise Act*<sup>296</sup> as an

<sup>284</sup> Regulation 5, 6 and 8 of National Treasury *Draft Regulations: Carbon Offsets*.

<sup>285</sup> Regulation 9 and 10 of National Treasury *Draft Regulations: Carbon Offsets*.

<sup>286</sup> Regulation 7 of National Treasury *Draft Regulations: Carbon Offsets*.

<sup>287</sup> Sumner et al 2011 (11) *Climate Policy* 923.

<sup>288</sup> Section 7 of *Draft Carbon Tax Bill*.

<sup>289</sup> Section 15(1) of *Draft Carbon Tax Bill*.

<sup>290</sup> Section 54A of *Customs and Excise Act* 91 of 1964.

<sup>291</sup> This is specified in any item of Part 3 of Schedule 1. Section 54A of *Customs and Excise Act*.

<sup>292</sup> Section 54A of *Customs and Excise Act*.

<sup>293</sup> Section 54AA(1)(d) of *Customs and Excise Act*.

<sup>294</sup> See part 3.2.3. below.

<sup>295</sup> National Treasury *Draft Explanatory Memorandum for the Carbon Tax Bill* (2015) 6.

<sup>296</sup> Act 91 of 1964.

environmental levy.<sup>297</sup> The DEA will support the SARS in auditing and verifying the self-reported tax liability and associated GHG emissions.<sup>298</sup> The DEA will head the monitoring, reporting and verification process through the collection of the GHG emissions data which establishes the tax base. Carbon tax will thus be incorporated within the NAEIS.<sup>299</sup>

The DEA will partner with the Department of Energy (DoE) as a joint implementation partner concerning the monitoring, reporting and verification of carbon tax.<sup>300</sup> The DoE is mandated in terms of the *National Energy Act*<sup>301</sup> to gather and evaluate energy and fuel use data, together with, material on energy efficiency.<sup>302</sup> Concerning the different roles and responsibilities, the DEA will directly collect the GHG process emissions information and the DoE will provide energy combustion data to the NAEIS. The DoE is the designated national authority who will be the responsible entity for carbon offsets administration.<sup>303</sup>

Intergovernmental relations across different governmental spheres and all organs of state within each sphere must adhere to the principles of co-operative governance.<sup>304</sup> These principles which underpin co-operative governance must inform decision-making processes and is purposed to facilitate the coordination in the implementation of carbon tax in this instance. Co-operative governance, the integration and cooperation in terms of authority and decision-making of the different spheres of government, various departments and governmental officials within each sphere, is necessary to facilitate acceptable and sustainable intergovernmental relations and aims to minimise conflict.<sup>305</sup>

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<sup>297</sup> Section 54A of the *Customs and Excise Act*.

<sup>298</sup> National Treasury *South Africa's Carbon Tax Policy Proposal An Update* 22-23.

<sup>299</sup> National Treasury *Draft Memorandum* 6.

<sup>300</sup> National Treasury *Draft Memorandum* 6.

<sup>301</sup> Act 34 of 2008.

<sup>302</sup> National Treasury *South Africa's Carbon Tax Policy Proposal An Update* 23.

<sup>303</sup> National Treasury *Draft Memorandum* 6.

<sup>304</sup> Section 41(1) of the *Constitution of the Republic of South Africa*.

<sup>305</sup> Kotzé L J "Improving Unsustainable Environmental Governance in South Africa: The Case for Holistic Governance" 2006 (9) Potchefstroom Electronic Law Journal 24-25.

### 3.2.3. The basics of South Africa's proposed carbon tax regime

South Africa's proposed carbon tax regime takes administrative feasibility and the practicality to cover the most significant GHG emissions into account. It is also informed by the necessity for a gradual and smooth transition to a low carbon economy in a sustainable manner.<sup>306</sup>

Entities liable to carbon taxation are those who are engaged in activities<sup>307</sup> that emit GHG emissions.<sup>308</sup> The relevant GHGs are CO<sub>2</sub>, methane, nitrous oxide, perfluorocarbons, hydrofluorocarbons and sulphur hexafluoride.<sup>309</sup> This includes scope 1 emissions, that is, GHG emissions that directly result from fuel combustion and gasification and from non-energy industrial processes.<sup>310</sup> Therefore, entities engaged in fossil fuel combustion emissions, fugitive emissions and industrial and product use emissions will be liable for carbon taxation.<sup>311</sup>

There are various phases proposed for the carbon tax with the first phase occurring from 1 January 2017 to 31 December 2019 and the second phase from 1 January 2020 to 31 December 2025.<sup>312</sup> This ties in with the tax period that commences on 1 January 2017 and ends 31 December 2017 and similarly follows this period for subsequent years.<sup>313</sup> The current implementation of the carbon tax regime has been postponed to mid-2017 and revised versions of the *Draft Carbon Tax Bill* will accordingly have to alter the first tax period.<sup>314</sup>

Carbon tax is levied in terms of the sum of GHG emissions of a tax payer within the tax period that is expressed as the CO<sub>2</sub>e.<sup>315</sup> For each GHG gas,

<sup>306</sup> National Treasury *Draft Memorandum* 4.

<sup>307</sup> Entities who conduct the targeted activities listed in Annexure 1 to the Notice in respect to GN 6 in GG 39578 of 8 January 2016 under section 29(1) of the *Air Quality Act* read with section 57(1) of the *Air Quality Act* will be liable for carbon taxation. Section 3 of *Draft Carbon Tax Bill*.

<sup>308</sup> Section 3 of *Draft Carbon Tax Bill*.

<sup>309</sup> Penman J, Gytarsky M, Hiraishi T, Irving W & Krug T 2006 *IPCC Guidelines for National Greenhouse Gas Inventories* (2006) IPCC 7; National Treasury *Carbon Tax Policy Paper* 12; Section 1 of *Draft Carbon Tax Bill*.

<sup>310</sup> National Treasury *Carbon Tax Policy Paper* 12.

<sup>311</sup> National Treasury *Carbon Tax Policy Paper* 12; Section 4 of *Draft Carbon Tax Bill*.

<sup>312</sup> Strydom B & Crocker G "Draft Carbon Tax Bill – Legalese meets science speak" 2016 *Tax Talk* 58.

<sup>313</sup> Section 16 of *Draft Carbon Tax Bill*.

<sup>314</sup> See part 3.2.2.1. above.

<sup>315</sup> Section 4(1) of *Draft Carbon Tax Bill*.

there is a corresponding emission factor that quantifies the CO<sub>2</sub>e for different sectors and processes.<sup>316</sup> Combustion emission entities with an energy capacity above a threshold of 10 megawatts will be liable for carbon taxation in the first phase of implementation.<sup>317</sup> However, this proposed minimum threshold does not appear in the *Draft Carbon Tax Bill*. For non-stationary emissions, the carbon tax will be included in the fuel tax regime.<sup>318</sup>

The proposed carbon tax rate is R120 per ton of CO<sub>2</sub>e.<sup>319</sup> It is accompanied by a 10 percent increase per annum until the end of 2019, to set out a clear long-term price signal. This annual increase rate will be reconsidered during 2019, with the aim to announce a revised annual increase in the 2020 Budget.<sup>320</sup> The carbon tax liability is calculated as the total tax base (total volume of GHG emissions from combustion, fugitive emissions and industrial process and product use<sup>321</sup> proportionately reduced by the tax-free allowances) multiplied by the carbon tax rate.<sup>322</sup> Diesel and petrol emissions are subtracted from the total volume of GHG emissions as these are included in the fuel levy and double counting needs to be avoided.<sup>323</sup> The calculation of carbon tax liability by entities that generate electricity from fossil fuels is proportionately reduced by the renewable energy premium.<sup>324</sup>

Therefore, the effective tax rate is set between R6 and R48 per ton of CO<sub>2</sub>e<sup>325</sup> as there are various tax-free allowances<sup>326</sup> largely to mitigate competitiveness effects.<sup>327</sup> Revenue garnered from the proposed carbon tax will be paid into the National Revenue Fund.<sup>328</sup> The carbon tax will be revenue-neutral during the initial five years of implementation and include revenue recycling measures.<sup>329</sup>

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<sup>316</sup> Table 1, Table 2 and Table 3 of *Draft Carbon Tax Bill*.

<sup>317</sup> Regulation 9(2) of GN R 541 in GG 38857 of 5 June 2015.

<sup>318</sup> National Treasury *Draft Memorandum* 4-5.

<sup>319</sup> Section 5 of *Draft Carbon Tax Bill*.

<sup>320</sup> National Treasury *Carbon Tax Policy Paper* 58.

<sup>321</sup> Section 4(1)(a)-(c) of *Draft Carbon Tax Bill*.

<sup>322</sup> Section 6 of *Draft Carbon Tax Bill*; National Treasury *Draft Memorandum* 6.

<sup>323</sup> National Treasury *Draft Memorandum* 16.

<sup>324</sup> Section 6(2) of *Draft Carbon Tax Bill*; National Treasury *Draft Memorandum* 21.

<sup>325</sup> National Treasury *Carbon Tax Policy Paper* 54.

<sup>326</sup> Section 7-14 of *Draft Carbon Tax Bill*.

<sup>327</sup> See part 4.6. below.

<sup>328</sup> Section 2 of *Draft Carbon Tax Bill*.

<sup>329</sup> See part 4.2. below. National Treasury *Draft Memorandum* 4.

Entities liable for carbon tax have mandatory reporting requirements of GHG emissions<sup>330</sup> and will be required to submit their tax returns based on self-assessment of their GHG emissions to SARS.<sup>331</sup> This safeguard is to minimise tax evasion. The carbon tax is administered through the *Customs and Excise Act*.<sup>332</sup> The carbon tax will be administered by the Commissioner for SARS as an environmental levy<sup>333</sup> set out in the *Customs and Excise Act*.<sup>334</sup> The DEA will support SARS in auditing an entity's self-reported tax liability through the collection of GHG emissions data. It is mandatory for taxpayers who are liable to the carbon tax to submit bi-annual environmental levy accounts for tax periods commencing on 1 January to 30 June and on 1 July to 31 December of every year.<sup>335</sup> The Commissioner of the SARS must submit a report to the Minister of Finance every year, within six months of every tax period, which details the GHG emissions report and the amount of carbon tax collected for that particular tax period.<sup>336</sup>

The *Draft Carbon Tax Bill* includes anti-avoidance provisions. In the instance that the Commissioner of SARS is satisfied that an arrangement has the effect of providing a tax benefit to a person, they may determine the carbon tax liability as if the arrangement had not been entered into or carried out, or another suitable manner for the prevention or reduction of that tax benefit.<sup>337</sup>

### 3.3. In summary

South Africa has followed international trends to introduce a carbon tax under the wider influence of the *UNFCCC*, *Kyoto Protocol* and the *Paris Agreement*. This has resulted in a domestic policy and legislative response as a suite of environmental and tax policy and laws that has developed over the last few decades. The imminent carbon tax regime has different institutions at play and accordingly cooperative governance is very important. South Africa's proposed carbon tax regime takes administrative feasibility

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<sup>330</sup> Regulation 9(1) of GN R 541 in GG 38857 of 5 June 2015; Section 19 of *Draft Carbon Tax Bill*.

<sup>331</sup> National Treasury *Draft Memorandum* 10.

<sup>332</sup> Section 7 of *Draft Carbon Tax Bill*.

<sup>333</sup> Section 15(1) of *Draft Carbon Tax Bill*.

<sup>334</sup> Act 91 of 1964.

<sup>335</sup> Section 17 of *Draft Carbon Tax Bill*.

<sup>336</sup> Section 19 of *Draft Carbon Tax Bill*.

<sup>337</sup> Section 18 of *Draft Carbon Tax Bill*.

and the practicality to cover the most significant GHG emissions into account. It is also informed by the necessity for a gradual and smooth transition to a low carbon economy in a sustainable manner.

## Chapter 4: Critical review of the proposed carbon tax regime in South Africa

In order to contextualise the critical review of South Africa's carbon tax regime, the tax design elements and relevant theoretical framework were outlined in Chapter 2 and the international and domestic policy and law relevant to carbon tax were framed in Chapter 3. Chapter 4 comprises of the critical review of South Africa's proposed carbon tax regime. To ensure consistency between the different components of the dissertation, this critical review uses the same design elements as in Chapter 2 of: environmental effectiveness; tax revenue; support for the tax; legislative aspects; technical and administrative viability; competitiveness effects; distributional aspects and adjoining policy areas as the basis of its structure. Under each relevant heading the merits, challenges and the possible areas for reform will be discussed for each design element.

### 4.1. Environmental effectiveness

Tax theorists have identified the following as key issues impacting on the environmental effectiveness of environmental taxes: clear linkage to an environmental objective; based on a clear measurable unit of pollution and limited exemptions.<sup>338</sup> When assessing South Africa's proposed carbon tax regime against this element, the following is evident.

The environmental objective of carbon tax aims to reduce GHG emissions through a pricing mechanism.<sup>339</sup> The *Draft Carbon Tax Bill* clearly states South Africa's attempt to contribute to the global effort to stabilise GHGs through various measures inclusive of carbon tax in order to move towards a more sustainable growth path.<sup>340</sup> South Africa proposes a moderate initial carbon tax rate at R120 per ton of CO<sub>2</sub>e<sup>341</sup> with effective tax rate of between R6 and R48 per ton of CO<sub>2</sub>e.<sup>342</sup> This proposed carbon tax rate is accompanied with a proposed 10 percent increase per annum until the end

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<sup>338</sup> See part 2.2.1. above.

<sup>339</sup> National Treasury *Market-Based Instruments: Draft Policy Paper* 41, 59-61.

<sup>340</sup> Preamble of *Draft Carbon Tax Bill*.

<sup>341</sup> Section 5 of *Draft Carbon Tax Bill*.

<sup>342</sup> National Treasury *Carbon Tax Policy Paper* 54.

of 2019.<sup>343</sup> This low to moderate proposed carbon tax rate is not directly aligned to the external costs of GHG emissions. However, the carbon tax rate is proposed to increase and the tax-free thresholds to decrease in the second phase. This does connect with the rising costs of environmental harm associated with the accumulation of atmospheric CO<sub>2</sub>. This creates a market signal that CO<sub>2</sub> emissions will ultimately be heavily taxed.<sup>344</sup>

Modelled analysis suggests that the carbon tax will have a significant effect in decreasing the domestic GHG emissions.<sup>345</sup> The modelled results demonstrate an approximate GHG emission decrease of between 13 to 14.5 percent by 2025 and by 26 to 33 percent by 2035 compared to business-as-usual. The carbon tax regime therefore significantly supports the 42 percent emission reduction target by 2025.<sup>346</sup>

The environmental objective to reduce GHG emissions is best supported when the design includes specific procedures to periodically monitor and evaluate its effectiveness in GHG emission reductions. Establishing the environmental effectiveness of a carbon tax is challenging due to its complexity of evaluating all the relevant role players and including all the factors affecting the overall CO<sub>2</sub> emissions (such as economic growth rates and complementary programs and policies to mitigate climate change). Regardless of the challenges that are inherent in determining the environmental effectiveness of carbon taxes; measurement, monitoring and evaluations are significant in ascertaining the impact of the carbon tax, particularly if GHG emission reductions are the central goal.<sup>347</sup> There are provisions in the *Draft Carbon Tax Bill* for reporting, monitoring and verification.<sup>348</sup>

South Africa has introduced the *GHG Inventory Report*,<sup>349</sup> which is a basic metric to evaluate overall reductions in GHG emissions largely at national level. However, this method of evaluation does not purely include carbon tax

<sup>343</sup> National Treasury *Carbon Tax Policy Paper* 15.

<sup>344</sup> National Treasury *Carbon Tax Policy Paper* 15; Zhang & Baranzini *Impacts on Competitiveness and Distribution of Income* 7.

<sup>345</sup> Ward & de Battista *Modelling the Impact on South Africa's Economy* vii.

<sup>346</sup> United Nations *Report of the Conference of the Parties* 6.

<sup>347</sup> Sumner et al 2011 (11) *Climate Policy* 936.

<sup>348</sup> See part 3.2.2.3. and 3.2.3. above.

<sup>349</sup> GN 371 in GG 37701 of 6 June 2014.

effects but the total impact of carbon mitigation policies and other relevant factors – this lacks precision. Although, this metric does allow South Africa to determine whether they are achieving overall GHG reduction goals and whether the relevant policies, inclusive of carbon taxes, should be accordingly improved.<sup>350</sup>

For carbon tax to be environmentally effective, it is important that there is a well-defined taxable commodity. Ideally, the tax base should be directly targeted to the actual environmental objective of the reduction of GHG emissions. It should employ a discretely measurable unit of pollution or the usage of a suitable proxy.<sup>351</sup> The taxable commodity utilises a suitable proxy and is on CO<sub>2</sub>e of GHG emissions.<sup>352</sup>

The carbon tax is applicable to all sectors and activities but excludes the agriculture, forestry and other land use (AFOLU) and waste sectors. These sectors will be exempt in the first implementation phase of the carbon tax, as a result of measurement difficulties.<sup>353</sup> The complete exclusion of sectors from carbon tax is problematic in its aim to reduce CO<sub>2</sub> emissions.<sup>354</sup> By extension, if exemptions are to be permitted to the taxpayers furthering environmental damage, the concessions should be structured as lower tax rates instead of complete exemptions.<sup>355</sup>

South Africa's proposed carbon tax regime at face value appears to include environmental effectiveness considerations. The environmental objective to minimise GHGs is included within the Preamble of the *Draft Carbon Tax Bill*<sup>356</sup> and a suitable proxy of the CO<sub>2</sub>e is employed.<sup>357</sup> However, the low effective tax rate of between R6 and R48 per ton of CO<sub>2</sub>e<sup>358</sup> does not appear to tie in with the urgency to address climate change in order to become more resilient to its social, economic and environmental effects. The low to moderate tax rate is in line with carbon tax design being largely driven by

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<sup>350</sup> Sumner et al 2011 (11) *Climate Policy* 929, 936-937.

<sup>351</sup> National Treasury *Market-Based Instruments: Draft Policy Paper* 59-61.

<sup>352</sup> Section 4 of *Draft Carbon Tax Bill*.

<sup>353</sup> National Treasury *Carbon Tax Policy Paper* 54.

<sup>354</sup> Zhang & Baranzini *Impacts on Competitiveness and Distribution of Income* 22.

<sup>355</sup> National Treasury *Market-Based Instruments: Draft Policy Paper* 59.

<sup>356</sup> Preamble of *Draft Carbon Tax Bill*.

<sup>357</sup> Section 4 of *Draft Carbon Tax Bill*.

<sup>358</sup> National Treasury *Carbon Tax Policy Paper* 54.

political processes and influence and is therefore not likely to strictly follow the theoretical optimal design for GHG emission reductions.<sup>359</sup> A possible improvement is to introduce higher tax rates than planned and importantly accompany this with the gradual phasing out of tax-free thresholds.<sup>360</sup> Furthermore, the carbon tax could be structured to automatically increase if CO<sub>2</sub> emission reduction targets are not met.<sup>361</sup> It is also problematic that AFOLU and waste sectors are completely exempt during the first implementation phase instead of utilising lower tax rates.<sup>362</sup> In order to better monitor, evaluate and report on the environmental effectiveness of carbon tax, the *GHG Inventory Report* could be improved through including an exclusive evaluation of the environmental effectiveness impacts of the implementation of a carbon tax. This would present a more accurate measure of policy effectiveness and areas of improvement that can thus be accordingly implemented.<sup>363</sup>

Reducing GHG emissions through the polluter pays principle<sup>364</sup> of carbon tax does not occur in isolation of complementary measures. The environmental effectiveness of carbon tax will be partially dependent on the availability of mitigation technologies and process adjustments that can alleviate direct GHG emissions. This is inclusive of fuel switching,<sup>365</sup> improved energy efficiency and cleaner production methods.<sup>366</sup>

#### 4.2. Tax revenue

Central themes impacting on the tax revenue of environmental taxes have been identified throughout tax literature. These are summarised as: the level of tax revenues and the manner in which the revenue is utilised. The latter

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<sup>359</sup> Sumner et al 2011 (11) *Climate Policy* 927.

<sup>360</sup> Ward & de Battista *Modelling the Impact on South Africa's Economy* viii.

<sup>361</sup> Sumner et al 2011 (11) *Climate Policy* 927.

<sup>362</sup> National Treasury *Carbon Tax Policy Paper* 54; National Treasury *Market-Based Instruments: Draft Policy Paper* 59.

<sup>363</sup> Sumner et al 2011 (11) *Climate Policy* 929, 936-937.

<sup>364</sup> Preamble of *Draft Carbon Tax Bill*.

<sup>365</sup> Eskom Renewables Support Project and the National Solar Water-Heating Programme are examples of applicable programs and projects. See generally: The World Bank *Project Appraisal Document on a Proposed Loan from the Clean Technology Fund in the Amount of US\$250 Million to Eskom Holdings Soc Limited Guaranteed by the Republic of South Africa for the Eskom Renewables Support Project* (2011); DoE *National Solar Water-Heating Programme* (2006).

<sup>366</sup> National Treasury *Carbon Tax Policy Paper* 49.

includes earmarking and tax shifting considerations.<sup>367</sup> When evaluating South Africa's proposed carbon tax regime through the lens of this element, the following is evident.

As discussed above, a moderate carbon tax rate is proposed at R120 per ton of CO<sub>2</sub>e.<sup>368</sup> The proposed annual increase is important to provide a robust signal to industry, firms and consumers to change their behaviour.<sup>369</sup> The proposed carbon tax regime provides for the introduction of the carbon tax in a phased manner through the provision of tax-free thresholds. This gradual approach recognises the development challenges South Africa confronts and accepts international climate policy developments.<sup>370</sup> Sufficient preannouncement to the role players and general public has been provided through the gradual release of documentation pertaining to a domestic carbon tax regime and an extensive public participation process, as discussed above.<sup>371</sup>

The South African National Treasury does not support the full earmarking of funds obtained through tax revenues.<sup>372</sup> Full earmarking is viewed as undesirable because it establishes rigidities in the tax system and is not in accordance with sound fiscal management principles. Furthermore, full earmarking can produce disparities between resource needs and allocations and creates barriers to the continuous review and alteration of tax and spending objectives. The partial earmarking of funds is considered to be suitable to fund programs aligned with environmental protection and social equity.

The applicable programs for the proposed carbon tax regime include: the Independent Power Producer Procurement Programme, Free Basic Electricity programme and Carbon Capture and Storage rebate.<sup>373</sup> Partial

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<sup>367</sup> See part 2.2.2. above.

<sup>368</sup> See part 3.2.3. above.

<sup>369</sup> Sumner et al 2011 (11) *Climate Policy* 924; National Treasury *Carbon Tax Policy Paper* 15.

<sup>370</sup> Ward & de Battista *Modelling the Impact on South Africa's Economy* viii.

<sup>371</sup> See part 3.2.1. and 3.2.2.1. above.

<sup>372</sup> National Treasury *Market-Based Instruments: Draft Policy Paper* 102-103;

<sup>373</sup> National Treasury *South Africa's Carbon Tax Policy Proposal An Update* 15.

earmarking can aid public and political acceptance of the carbon tax thus strengthening support for the implementation of this environmental tax.<sup>374</sup>

The carbon tax will be revenue-neutral during the first five years of implementation and all revenue will be recycled.<sup>375</sup> Various revenue recycling measures are proposed to alleviate the tax liability imposed on consumers, firms and industry. Tax shifting exercises and tax incentives form the basis of the revenue recycling measures. Funding will be allocated to the existing energy efficiency tax incentive. As previously stated, there will be a reduction in the electricity levy. Additional tax relief will be provided for roof top solar photovoltaic energy. A credit will be offered for the premium charged for renewable energy. Further measures include the heightened free basic electricity provision for low-income households. There will also be greater investment into public transport and support for the installation of solar water geysers.<sup>376</sup>

There is a comprehensive consideration of carbon tax revenue and the manner in which the tax revenue is used. The design of the carbon tax regime has factored in concerns of an adequate and fair tax rate, an increase of the tax rate over time and broad-based and targeted revenue recycling measures together with revenue-neutrality. Moving forward, it is important that the carbon tax regime continues to place emphasis on revenue recycling measures and partial earmarking to maintain the connection to the environmental aim of the tax.

#### 4.3. Support for the tax

There has been agreement among tax theorists that the key issues impacting the support of an environmental tax deal with: the manner in which to garner support (participatory process, tax shifting, exemptions, phased implementation and a sectoral approach) and the identification of relevant

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<sup>374</sup> National Treasury *Market-Based Instruments: Draft Policy Paper* 102-103;

<sup>375</sup> National Treasury *Draft Memorandum* 4.

<sup>376</sup> Morden C & Janoska P *Carbon Tax Policy Paper* (2014) National Treasury 35; National Treasury *Media Statement: Publication of the Draft Carbon Tax Bill for Public Comment* (2015) 3-4; National Treasury *Draft Memorandum* 4.

role players.<sup>377</sup> The discussion which follows outlines the assessment of South Africa's proposed carbon tax regime against this element.

The proposed carbon tax regime has gone through an extensive public participatory process to engage with the concerns of the relevant role players. This has included various public discussions, meetings and opportunities for comment along the policy and draft legislation development phase as discussed above.<sup>378</sup> Furthermore, the implementation of the carbon tax regime was postponed from January 2015 to mid-2017 to ensure a coherent legislative and policy structure and the integration of public comments.<sup>379</sup> As discussed above,<sup>380</sup> there are various tax shifting measures that have been included within the proposed carbon tax regime. The complete exemptions of the AFOLU and waste sectors, as discussed above,<sup>381</sup> have unfavourable consequences for the environmental effectiveness of the tax, but have a differing effect in terms of gaining support for the tax. An adjustment period allowed by the exemptions for AFOLU and waste sectors is favourable for these limited sectors, however, other sectors may resent their inclusion within the carbon tax regime as not all sectors are liable for carbon taxation. This may negatively effect tax morality and compliance with the proposed carbon tax regime.<sup>382</sup>

The introduction of carbon tax is likely to create sectoral winners and losers.<sup>383</sup> The non-fossil fuel energy sector (nuclear, wind, hydro, gas and solar) are modelled to have a 200 percent greater output in 2035 than in the absence of a carbon tax. This follows the basic intuition that these low-carbon energy sources will become more cost competitive under the imposition of a carbon tax. Conversely, coal generation is predicted to become less cost competitive and, consequently, have a 46 percent lower output in 2035 than without a carbon tax. Comparably, the petroleum

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<sup>377</sup> See part 2.2.3. above.

<sup>378</sup> See part 3.2.1. and 3.2.2.1. above.

<sup>379</sup> National Treasury *Budget Review* (2014) 55; Adeleke et al *Background Paper on Climate Change in South Africa* 19-20; National Treasury *Market-Based Instruments: Draft Policy Paper* 60; National Treasury *Budget Review* (2017) 48.

<sup>380</sup> See part 4.2. above.

<sup>381</sup> See part 4.1. above.

<sup>382</sup> National Treasury *Market-Based Instruments: Draft Policy Paper* vii, 60.

<sup>383</sup> Ward & de Battista *Modelling the Impact on South Africa's Economy* viii.

refining, coke production and electricity supply sector are proposed to experience a similar output decline. However, it must be noted that figures are values of “relative decline”, as all the above sectors are projected to grow in absolute terms even in the context of a carbon tax. It is proposed that the majority of sectors are predominately unaffected by the imposition of a carbon tax such as: financial services; metal ores industry and agriculture. This demonstrates that carbon tax costs are a comparatively small cost driver for many sectors and the benefits that many sectors will gain through revenue recycling.

The carbon tax is theoretically transparent in its application thus facilitating public understanding and the ability to be implemented by the relevant stakeholders, reducing the opportunity for manipulation.<sup>384</sup> However, the manner in which the formulae for the calculation of the amount of tax payable are technically complicated for the layman to understand.<sup>385</sup> The release of the *Draft Explanatory Memorandum for the Carbon Tax Bill*<sup>386</sup> and its inclusion of the calculation formulae examples has aided understanding.

The domestic carbon tax regime has included various considerations to garner support for the tax: a participatory process; tax shifting; exemptions and a phased implementation. The introduction of a carbon tax is likely to create sectoral winners and losers where sectors based on low-carbon energy sources will become more cost competitive compared to sectors based on fossil fuels. The South African government needs to garner confidence of those liable for carbon taxation by outlining and proving the benefits of its implementation. This ties in with a possible environmental education programme educating the relevant role players and public on the basics of carbon taxation and its benefits. This further relates to the South African government stating its intended use of the tax revenues accrued from the proposed carbon tax through partial earmarking as discussed above.<sup>387</sup> Partial earmarking can aid public and political acceptance of the carbon tax

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<sup>384</sup> Mbadlanyana 2013 (43) *Africa Insight* 82.

<sup>385</sup> Section 6 of *Draft Carbon Tax Bill*.

<sup>386</sup> National Treasury *Draft Memorandum* 11-21.

<sup>387</sup> See part 4.2. above.

thus strengthening support for the implementation of this environmental tax.<sup>388</sup>

#### 4.4. Legislative aspects

Central themes impacting on the legislative aspects of environmental taxes have been identified throughout tax literature. These are summarised as: the legal framework and legislative alignment.<sup>389</sup> When evaluating South Africa's proposed carbon tax regime through the lens of this element, the following is evident.

The legislative framework of a carbon tax is generally constituted of: the tax base; tax payers; utilisation of tax revenue across different government sectors; administration, monitoring and enforcement. As discussed above, the tax base is comprised of the CO<sub>2</sub>e and the relevant tax payers are defined in the *Draft Carbon Tax Bill*.<sup>390</sup> The tax revenue will be fed into various revenue recycling regimes with the tax being revenue-neutral during the first implementation phases, as discussed above.<sup>391</sup> The existing administrative structures will be used as this is the most efficient and cost effective option.<sup>392</sup>

Legislative alignment between financial and environmental governmental departments is essential to create a coherent carbon tax regime. This largely rests on cooperative governance and the manner in which the administrative structures and relationships are established.<sup>393</sup> There is a complementary legislative framework that has been established between the fiscal and environmental interests.<sup>394</sup>

The imminent carbon tax regime has a comprehensive legislative framework, which is generally still in draft format. The elements of a tax base; tax payers; utilisation of tax revenue across different government sectors; administration, monitoring and enforcement have been broadly covered by the legislative and policy framework. Attention has been paid to the legislative alignment

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<sup>388</sup> National Treasury *Market-Based Instruments: Draft Policy Paper* 102-103.

<sup>389</sup> See part 2.2.4. above.

<sup>390</sup> See part 3.2.3. above.

<sup>391</sup> See part 4.2. above.

<sup>392</sup> See part 3.2.2.3. and 3.2.3. above.

<sup>393</sup> See part 3.2.2.3. above.

<sup>394</sup> See part 3.2.2.1. and 3.2.2.2. above.

between financial and environmental government departments through the principles of cooperative governance and the manner in which the administrative structures have been established. Comments from public consultations has resulted in a thorough formulation of the legislative regime. A revised regulation for the carbon offset allowance is planned to be published by mid-2017.<sup>395</sup> It is important that the most relevant policies, laws and regulations and their progress on finalisation is clearly communicated to the public.

#### 4.5. Technical and administrative viability

Tax theorists have recognised the following as pertinent issues on the technical and administrative viability of environmental taxes: tax design (upstream or downstream approach); administrative structures in place to minimise tax collection and compliance costs and tax avoidance and tax evasion, together with monitoring and enforcement provisions, in the tax design.<sup>396</sup> The discussion which follows outlines the assessment of South Africa's proposed carbon tax regime against this element.

An upstream carbon tax approach is proposed which targets CO<sub>2</sub> emissions occurring at source during fossil fuel production. A tax is imposed on fossil fuel inputs according to the CO<sub>2</sub> content of the fuel.<sup>397</sup> As discussed above,<sup>398</sup> carbon tax is assigned to a proxy for CO<sub>2</sub> emissions: the CO<sub>2</sub>e of GHG emissions.<sup>399</sup> As discussed above,<sup>400</sup> the tax base covers emissions from fossil fuel combustion, emissions from industrial process and product use and fugitive emissions. Carbon tax on liquid fuels, petrol and diesel, will be levied at source, as an addition to the current fuel taxes.<sup>401</sup> The upstream approach has the greatest capacity to guarantee that all sources of CO<sub>2</sub>

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<sup>395</sup> National Treasury *Budget Review* (2017) 48.

<sup>396</sup> See part 2.2.5. above.

<sup>397</sup> Section 4 of *Draft Carbon Tax Bill*; Avi-Yonah & Uhlmann 2009 (28) *Stanford Environmental Law Journal* 31; Mbadlanyana 2013 (43) *Africa Insight* 82.

<sup>398</sup> See part 4.1. above.

<sup>399</sup> Section 4 of *Draft Carbon Tax Bill*.

<sup>400</sup> See part 3.2.3. above.

<sup>401</sup> National Treasury *Carbon Tax Policy Paper* 47 and 53; Table 1-3 of *Draft Carbon Tax Bill*.

emissions are targeted.<sup>402</sup> It is also an administratively feasible method of tax collection as a fewer number of source points are required to be regulated.<sup>403</sup>

As discussed above,<sup>404</sup> the carbon tax will primarily be administered by SARS together with the DEA. The collection costs for the carbon tax are expected to be minimised through the appropriate usage of economies of scale and the existing administrative structures. It is therefore favourable that these existing structures of SARS and the DEA are utilised to minimise the administrative burden.<sup>405</sup>

As discussed above,<sup>406</sup> the proposed carbon tax regime includes tax avoidance and tax evasion provisions together with monitoring and enforcement in the design of the carbon tax. This illustrates that safeguards and legislative structures are in place. Industries and firms will be responsible for their compliance costs and this relates to the provisions of tax avoidance and evasion.<sup>407</sup> Unfavourable incentives could be created through the complete exclusion of AFOLU and waste sectors as discussed above,<sup>408</sup> as other sectors may attempt to be re-categorised in order to fall into this exemption bracket.

The imminent carbon tax regime is relatively simple in its formulation. Employing the upstream approach of carbon tax design, there are a fewer number of relevant role players involved and thus a lower administrative cost.<sup>409</sup> The upstream approach is also more widely inclusive of all the sources of GHGs. The proposed carbon tax regime has an efficient administrative structure in place, namely the existing revenue authority of SARS together with the DEA. This therefore has a low administrative burden. The proposed carbon tax regime includes tax avoidance and tax evasion provisions, together with monitoring and enforcement, in the design of the carbon tax. These technical and administrative considerations present the

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<sup>402</sup> Avi-Yonah & Uhlmann 2009 (28) *Stanford Environmental Law Journal* 31; Mbadlanyana 2013 (43) *Africa Insight* 82.

<sup>403</sup> Sumner et al 2011 (11) *Climate Policy* 924.

<sup>404</sup> See part 3.2.2.3. and 3.2.3. above.

<sup>405</sup> National Treasury *Market-Based Instruments: Draft Policy Paper* 62.

<sup>406</sup> See part 3.2.3 above.

<sup>407</sup> National Treasury *Carbon Tax Policy Paper* 8.

<sup>408</sup> See part 3.2.3. above.

<sup>409</sup> Mbadlanyana 2013 (43) *Africa Insight* 82.

proposed carbon tax to be an appropriate and viable option for climate change mitigation.<sup>410</sup>

#### 4.6. Competitiveness effects

Tax theorists have identified the following as key issues impacting on the competitiveness effects of environmental taxes: effect on local industry, firms and international competitiveness; formal and effective incidence of tax and the possible mitigation measures (reduced tax rates or tax exemptions, tax refunds, recycling revenues, gradual implementation and phased in approach of an environmental tax, border tax adjustment, tax harmonisation and carbon offsets).<sup>411</sup> When assessing South Africa's proposed carbon tax regime against this element, the following is evident.

The impact of carbon tax on businesses compared to other carbon mitigation schemes can be viewed as favourable, as taxes create a definite, long-term price signal that can be included into economic projections.<sup>412</sup> Furthermore, it sets out certain levels of predictability of energy prices and impacted products.

The effect of carbon tax on the international competitiveness of local firms and industries is largely determined by the type of goods or services traded, the market structure, and whether the producers are price takers or price setters in the international arena.<sup>413</sup> A clear price trajectory of carbon tax coupled with timeframes for tax rate increases, provides the required price signal. This guides investment decisions into research and development and technology innovation to move towards a low-carbon economy.

There is projected to be sustained economic growth of South Africa under the introduction of a carbon tax.<sup>414</sup> There is a modest projected economic impact of a reduction in the annual average growth rate of between 0.05 to 0.15 percent. Exports are simulated to be 3.5 percent higher in 2035 under the imposition of the carbon tax. This suggests a combination of benefits from revenue recycling and the restructuring of domestic production to the

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<sup>410</sup> National Treasury *Market-Based Instruments: Draft Policy Paper* vii.

<sup>411</sup> See part 2.2.6. above.

<sup>412</sup> Sumner et al 2011 (11) *Climate Policy* 927.

<sup>413</sup> National Treasury *Carbon Tax Policy Paper* 58.

<sup>414</sup> Ward & de Battista *Modelling the Impact on South Africa's Economy* vii-viii.

international arena. However, the coke oven and iron and steel sectors are projected to receive export declines. Therefore, South Africa is projected to remain competitive in the domestic and international arena. It appears the competitiveness concerns were overstated. By extension, it is predicted that there is a moderate effect on the formal and effective incidence of tax.

There are various measures imbedded in the proposed carbon tax design that is aimed at mitigating unfavourable competitiveness effects. A phased approach is set out for the implementation of the carbon tax with the announcement of the introduction of a carbon tax in advance. This transition period will set out temporary thresholds below which an exemption from the carbon tax will be given.<sup>415</sup> The tax-free thresholds are designed as a percentage-based threshold of actual emissions instead of absolute emissions thresholds.<sup>416</sup> The basic tax-free threshold is set at 60 percent.<sup>417</sup> Tax-free thresholds and offsets, total to a maximum of 95 percent, allow for a reasonably smooth transition to a lower-carbon economy, under the imposition of a carbon tax.<sup>418</sup> Furthermore, there are additional tax-free allowances for industrial process emissions<sup>419</sup> and a 10 percent allowance for fugitive emissions.<sup>420</sup> Similarly trade exposed sectors, such as iron, steel and cement,<sup>421</sup> receive an additional tax-free threshold of 10 percent.<sup>422</sup> A further tax-free allowance of up to 5 percent is allocated to the performance against emissions intensity benchmarks or above average performance.<sup>423</sup> There is an additional 5 percent tax-free threshold for firms partaking in phase 1 of the carbon budgeting system.<sup>424</sup> Finally, carbon offsets create a tax-free threshold of 5 to 10 percent, sector dependent.<sup>425</sup> Tax-free thresholds are a more viable mitigation measure compared to tax refunds as the carbon tax will be revenue-neutral during the first phase of

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<sup>415</sup> National Treasury *Carbon Tax Policy Paper* 53.

<sup>416</sup> National Treasury *Carbon Tax Policy Paper* 53.

<sup>417</sup> Section 7 of *Draft Carbon Tax Bill*.

<sup>418</sup> National Treasury *Carbon Tax Policy Paper* 46.

<sup>419</sup> Section 8 of *Draft Carbon Tax Bill*.

<sup>420</sup> Section 9 of *Draft Carbon Tax Bill*.

<sup>421</sup> National Treasury *Carbon Tax Policy Paper* 59.

<sup>422</sup> Section 10 of *Draft Carbon Tax Bill*.

<sup>423</sup> Section 11 of *Draft Carbon Tax Bill*.

<sup>424</sup> Section 12 of *Draft Carbon Tax Bill*.

<sup>425</sup> Section 13 of *Draft Carbon Tax Bill*.

implementation.<sup>426</sup> There are also various revenue recycling schemes, as discussed above.<sup>427</sup>

The exemptions of specific sectors from carbon tax liability is problematic, not only as outlined above.<sup>428</sup> Industries which are exempt from carbon tax will likely garner a more competitive position compared with those industries which are not exempt. Consequently, demand will favour the products of these exempt energy-intensive industries, which is counterintuitive to the goals of carbon tax. Furthermore, firms and industries on which carbon tax liability is imposed will attempt to be re-categorised as exempt industries, therefore restricting the effect of carbon tax on energy consumption and CO<sub>2</sub> emissions.<sup>429</sup>

Carbon offsets are a mechanism to reduce the carbon tax liability of firms and industries.<sup>430</sup> A carbon offset is a: “measurable avoidance, reduction or sequestration of CO<sub>2</sub> or other GHG emissions.”<sup>431</sup> Carbon offsets are commonly project-based as they predominately involve particular projects tasked as mitigating CO<sub>2</sub> emissions. Investments in carbon offset projects allows firms and industries to minimise their carbon tax liability in a way that is commonly more cost-effective than investment in their own operations.<sup>432</sup>

Carbon offset principles guide carbon offset projects and will need to be followed in order to obtain a tradable credit under a specific standard.<sup>433</sup> These principles are: additionality,<sup>434</sup> permanence,<sup>435</sup> real,<sup>436</sup> measurability,<sup>437</sup> monitoring and verification,<sup>438</sup> leakage,<sup>439</sup> double counting,<sup>440</sup> synchronisation,<sup>441</sup> enforceability<sup>442</sup> and co-benefits.<sup>443</sup>

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<sup>426</sup> National Treasury *Draft Memorandum 4*.

<sup>427</sup> See part 4.2. above.

<sup>428</sup> See part 4.1. above.

<sup>429</sup> Zhang & Baranzini *Impacts on Competitiveness and Distribution of Income 22*.

<sup>430</sup> National Treasury *Carbon Offsets Paper 10*.

<sup>431</sup> National Treasury *Carbon Offsets Paper 12*.

<sup>432</sup> National Treasury *Carbon Offsets Paper 12*.

<sup>433</sup> National Treasury *Carbon Offsets Paper 12-13*.

<sup>434</sup> The GHG emission reduction from the carbon offset project is in addition to the common business-as-usual scenario.

<sup>435</sup> There is a permanent GHG emission reduction achieved from a specific project.

<sup>436</sup> There is tangible carbon offset projects with assurance that they will happen or have happened.

<sup>437</sup> The GHG emissions are measurable by credible methodologies.

There are various eligibility criteria to facilitate the successful realisation of a carbon offsets mechanism that supports the shift to a low-carbon economy and the achievement of the relevant climate change response policy goals. Purely South African-based credits are eligible to support domestic project development and local climate mitigation. To avoid the double counting of the carbon mitigation effort, carbon offset projects must be exclusive of activities liable to carbon taxation. Initially, a list of eligible projects will be provided as a foundation to create certainty and promote investment and project development of carbon offsets. Importantly, this regulated approach is flexible in nature as other methodologies can be included to increase the list of eligible projects that fit the desired eligibility criteria. Projects that have been introduced prior to the implementation of the carbon tax regime will have to meet specific criteria in order to be accepted. This creates a comprehensive and efficient carbon offsets scheme.<sup>444</sup>

There are various carbon offset standards that have been created through voluntary and compliance schemes and some are specific to particular geographical regions.<sup>445</sup> Specific to South Africa, four carbon offset standards are applicable<sup>446</sup> – CDM,<sup>447</sup> VCS,<sup>448</sup> GS<sup>449</sup> and Climate,

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<sup>438</sup> An independent third party verifier should be employed to monitor GHG emission reductions and verification requirements should be strict to guarantee appropriate knowledge.

<sup>439</sup> A carbon offset project should not trigger carbon leakage to other sectors, projects or activities.

<sup>440</sup> Carbon offset projects must be exclusive of activities liable to carbon taxation and should be registered with a specific registry to prevent the utilisation of the same offset project twice.

<sup>441</sup> The timing of emission reductions should follow emission trajectories.

<sup>442</sup> Carbon offset projects should be grounded in legislature to provide validity and transparency.

<sup>443</sup> Carbon offset projects should have the additional social and economic advantages.

<sup>444</sup> National Treasury *Carbon Offsets Paper 7*.

<sup>445</sup> National Treasury *Carbon Offsets Paper 8*, 16-17.

<sup>446</sup> National Treasury *Carbon Offsets Paper 13-14*.

<sup>447</sup> The CDM is in connection with the Kyoto Protocol, which has garnered far reaching acceptance and credibility in the global carbon markets, creates carbon offset projects in non-Annex I countries to be sold to Annex I countries.

<sup>448</sup> The VCS is a voluntary carbon offset standard that is utilised by projects to validate and issue carbon credits as a GHG accounting scheme.

<sup>449</sup> The GS is largely targets renewable energy and energy efficiency projects and requires projects to co-benefit the local communities affected by the project as well as the environment.

Community and Biodiversity Standards (CCBS).<sup>450</sup> To support the establishment of a domestic carbon offsets scheme, the carbon offsets that are set out under the above-mentioned standards are eligible projects, conditional on meeting certain criteria.<sup>451</sup> Presently, there are presently 111 registered carbon offset projects in South Africa.<sup>452</sup> The implementation of a South African carbon offsets standards is an option for medium-term development to support the cost-efficient development of a domestic scheme. The necessary technical requirements are an administrator, accredited independent third party verifiers, a carbon offsets registry and an option for a carbon trading platform.<sup>453</sup>

It is rationalised that the implementation of a domestic carbon tax, without equivalent policies in the international arena for mitigating climate change, could impact the competitiveness of particular carbon-intensive industries as energy costs increase. This could consequently result in carbon leakage – the transferral of emissions from one country to another through the relocation of industry. The relocated industries favour countries without robust climate change legislation or policies, thus increasing CO<sub>2</sub> emissions in these sites and counteracting some of the environmental benefits of the carbon tax.<sup>454</sup> The *Carbon Tax Policy Paper* outlines that the concern about carbon leakage can be partly mitigated through the allocation of free allowances which is contained in the proposed carbon tax design.<sup>455</sup> South Africa has acknowledged any possible impacts on trade with countries that proposed border carbon adjustments,<sup>456</sup> a class of border tax adjustments,

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<sup>450</sup> The CCBS is a voluntary standards scheme focused on land management activities that intersect climate change concerns, sustainability, development and biodiversity conservation.

<sup>451</sup> The specified criteria are: (1) compliance with eligibility criteria for carbon offset projects and (2) acquire an CO<sub>2</sub>e reduction certificate of progress and eligibility screening by the Designated National Authority. National Treasury *Carbon Offsets Paper* 8.

<sup>452</sup> National Treasury *Carbon Offsets Paper* 23.

<sup>453</sup> National Treasury *Carbon Offsets Paper* 7-8.

<sup>454</sup> National Treasury *Carbon Tax Policy Paper* 58; Aldy & Stavins 2012 *Journal of Environment & Development* 5.

<sup>455</sup> National Treasury *Carbon Tax Policy Paper* 58.

<sup>456</sup> Border carbon adjustment is a trade measure that attempts to “level the playing field between domestic producers facing costly climate change measures and foreign producers facing very few”. Cosby A Border Carbon Adjustment (2008) International Institute for Sustainable Development 1.

which are purposed to address competitiveness concerns and carbon leakage.<sup>457</sup>

There is a wide-ranging and extensive consideration of competitiveness concerns for the domestic carbon tax regime. There is a comprehensive suite of mitigation measures for industry and firms to remain locally and internationally competitive — reduced tax rates or tax exemptions, recycling revenues, gradual implementation and phased in approach of an environmental tax, border tax adjustment and carbon offsets. South Africa is projected to remain competitive in the domestic and international arena through the analysis of the modelled economic impact and effect on exports. It appears the competitiveness concerns were overstated. Possible areas of reform are to thoroughly consider tax harmonisation. Secondly, it is important that the public, industry and firms are informed that the competitiveness concerns seem to be overstated to gain more support for the tax.

#### 4.7. Distributional aspects

The subsequent central issues have been noted by tax theorists as impacting on the distributional aspects of environmental taxes: impacts on income distribution and on different income groups; mitigation and compensation measures and equity concerns.<sup>458</sup> When evaluating the domestic carbon tax regime against this element, the following is evident.

The effect of a carbon tax on income distribution is a central factor controlling its acceptability.<sup>459</sup> Similar to middle-income countries across the world, South Africa is characterised by inequitable energy consumption. The energy usage pattern is epitomised by over-consumption by the upper segment of the economy and under-consumption by the middle to lower economic segment.<sup>460</sup>

The imposition of carbon tax has commonly had a direct regressive effect on the income distribution of households – a greater tax burden is placed on

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<sup>457</sup> Cosbey *Border Carbon Adjustment* iv; Ward & de Battista *Modelling the Impact on South Africa's Economy* 1.

<sup>458</sup> See part 2.2.7. above.

<sup>459</sup> Zhang & Baranzini *Impacts on Competitiveness and Distribution of Income* 13; Mbadlanyana 2013 (43) *Africa Insight* 84.

<sup>460</sup> Mbadlanyana 2013 (43) *Africa Insight* 84.

poorer households who have a lower adaptive capacity. Low-income households spend a higher percentage of their income on energy compared to high-income households. Carbon tax increases electricity costs as the national electricity provider of ESKOM is a major GHG emitter. Thereby, a common criticism of a carbon tax is one concerning the distributional aspects; that is carbon tax disproportionately afflicts poorer households.<sup>461</sup> However, importantly there will be no impact on the price of electricity during the first phase of implementation (until 2020).<sup>462</sup>

Modelled results suggest that carbon tax will have a minimal impact on macroeconomic variables, such as employment, consumption and real wages. These provide a proxy for the distributional aspects.<sup>463</sup> Therefore, the proposed effects of a carbon tax on distributional aspects encompass concerns of equity, fairness and justice.<sup>464</sup>

In order to address distributional concerns, it is necessary that the South African Government puts in place measures to mitigate the disproportionate share of the tax burden, by supporting poverty alleviation and access to basic and cost-effective energy for low-income households.<sup>465</sup> Mitigation measures are important as the implementation of a tax is more directly perceived with price increases compared to traditional command-and-control measures.<sup>466</sup> The reduction in the electricity levy is a measure to help alleviate the distributional inequity of the implementation of a carbon tax on poorer households. Further mitigation measures include the heightened free basic electricity provision for low-income households, greater investment into public transport and support for the installation of solar water geysers.<sup>467</sup>

The imposition of carbon tax affects individual consumers in general as the tax liability is essentially passed down the producer-consumer chain.<sup>468</sup> Carbon tax will thus alter the relative prices faced by consumers and the

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<sup>461</sup> Sumner et al 2011 (11) *Climate Policy* 927, 939-940; Zhang & Baranzini *Impacts on Competitiveness and Distribution of Income* 13; Mbadlanyana 2013 (43) *Africa Insight* 84.

<sup>462</sup> National Treasury *Budget Review* (2017) 48.

<sup>463</sup> Ward & de Battista *Modelling the Impact on South Africa's Economy* vii.

<sup>464</sup> Mbadlanyana 2013 (43) *Africa Insight* 84.

<sup>465</sup> Mbadlanyana 2013 (43) *Africa Insight* 84.

<sup>466</sup> Zhang & Baranzini *Impacts on Competitiveness and Distribution of Income* 14.

<sup>467</sup> Morden & Janoska *Carbon Tax Policy Paper* 35.

<sup>468</sup> Aldy & Stavins 2012 *Journal of Environment & Development* 5.

effect of which is dependent on the expenditure patterns. The heightened prices of energy result in producers increasing prices to maintain profit.<sup>469</sup> A possible area of reform is to implement direct tax rebates whereby the impact on consumers is minimised.<sup>470</sup>

Distributional concerns of carbon tax need to be addressed in the policy and design phase.<sup>471</sup> The domestic carbon tax regime has attempted to achieve this in a targeted and transparent approach. Modelled results suggest that carbon tax will have a minimal impact on the macroeconomic variables used as a proxy for the distributional aspects. Mitigation measures include a zero impact on the electricity price, improved targeted delivery of electricity through the reduction in the electricity levy, greater free basic electricity provision and the development of the provision of energy alternatives for low-income households.<sup>472</sup> Addressing distributional concerns in an inclusive way, should facilitate acceptance of the carbon tax and effective implementation.<sup>473</sup> To address distributional concerns in a more comprehensive manner that fully includes the prioritisation of climate change mitigation and adaptation, human dignity and the poor, it should endeavour for social equity and economic sustainability. In order to further these aspects, earmarking of funds should be considered that feed into job creation and incentives for the poor.<sup>474</sup>

#### 4.8. Adjoining policy areas

The following principle issues have been noted by tax theorists as impacting on the adjoining policy areas of environmental taxes: degree of alignment with other policy areas; identification of potential misalignment and options to address misalignment. In terms of carbon tax, it is important to weigh environmental, energy and fiscal objectives against one another.<sup>475</sup> For the following discussion to be comprehensive, the relevant policies as well as other documents and plans of relevance will be discussed. Furthermore, this

<sup>469</sup> Mbadlanyana 2013 (43) *Africa Insight* 85-86.

<sup>470</sup> Sumner et al 2011 (11) *Climate Policy* 927, 939-940.

<sup>471</sup> Mbadlanyana 2013 (43) *Africa Insight* 86.

<sup>472</sup> Sumner et al 2011 (11) *Climate Policy* 927, 939-940; Morden & Janoska *Carbon Tax Policy Paper* 35.

<sup>473</sup> Mbadlanyana 2013 (43) *Africa Insight* 86.

<sup>474</sup> Mbadlanyana 2013 (43) *Africa Insight* 86.

<sup>475</sup> See part 2.2.8. above.

is not an exhaustive list of applicable policies, plans and other documents. When evaluating the domestic carbon tax regime against this element, the following is evident.

Policies, plans and other documents of specific relevance to the energy objectives of carbon tax are: the *White Paper on Energy Policy*,<sup>476</sup> the *White Paper on Renewable Energy*,<sup>477</sup> the *IEP*,<sup>478</sup> the *IRP*<sup>479</sup> and the *National Energy Efficiency Strategy*.<sup>480</sup> One of the key objectives contained in the *White Paper on Energy Policy* is the diversification of energy services.<sup>481</sup> This is inclusive of renewable energy and ties into the focus paid to the issue of energy demand and the need to decrease GHG emissions. The emphasis on renewable energy also relates to the *White Paper on Renewable Energy* which argues for the investment of national resources in renewable technologies in order to provide for the long-term sustainable domestic renewable energy sector.<sup>482</sup> The *IEP* sets the roadmap of South Africa's future energy mix<sup>483</sup> and is connected to the "living plan" of the *IRP*.<sup>484</sup> Although the *IEP* and *IRP* emphasise the need to meet energy demand in the context of reducing GHGs, the proposed energy mix for the country still places a heavy emphasis on fossil fuels and nuclear energy compared to cleaner renewable energies. This disconnect will hopefully be addressed before the *IRP* is finalised.<sup>485</sup> The *National Energy Efficiency Strategy* emphasises the need to improve energy efficiency through resource use as reducing GHG emissions are a priority.<sup>486</sup>

The *LTMS*,<sup>487</sup> *NCCRP*<sup>488</sup> and *NDP*<sup>489</sup> are documents of particular relevance to the environmental objective of carbon tax. The *LTMS* sets out the

<sup>476</sup> GN 3007 in GG 19606 of 17 December 2004.

<sup>477</sup> GN 513 in GG 26169 of 14 May 2004.

<sup>478</sup> GN 1430 in GG 40445 of 25 November 2016.

<sup>479</sup> GN 1431 in GG 40445 of 25 November 2016.

<sup>480</sup> GN 948 of GG 40515 of 23 December 2016.

<sup>481</sup> GN 3007 in GG 19606 of 17 December 2004 8-9.

<sup>482</sup> GN 513 in GG 26169 of 14 May 2004 2.

<sup>483</sup> GN 1430 in GG 40445 of 25 November 2016 11-12.

<sup>484</sup> GN 1431 in GG 40445 of 25 November 2016 2.

<sup>485</sup> Konrad T, Mathews A, Krumm P & Petruccione F "Drop Nuclear to Power SA" *Cape Times* (02.03.2017) 7.

<sup>486</sup> GN 948 of GG 40515 of 23 December 2016 1-2.

<sup>487</sup> DEAT *Long Term Mitigation Scenarios*.

<sup>488</sup> GN 757 in GG 34695 of 19 October 2011.

<sup>489</sup> National Planning Commission *National Development Plan: Vision for 2030* (2011).

emission trajectory that GHG emissions will peak by 2020, stabilise between 2020-2030 and decrease from 2035<sup>490</sup> which is in line with the carbon tax aim of GHG emission reductions. The *NCCRP* creates a national policy framework to address climate change which is a necessary contextualisation for the implementation of a domestic carbon tax. The overall aim of the *NDP* to transition to a low-carbon and climate-resilient economy and supports the utilisation of carbon pricing, by means of a carbon tax.<sup>491</sup>

*NFSD*<sup>492</sup> and *NSSD*<sup>493</sup> are of relevance to the fiscal objectives of carbon tax. These documents focus on sustainable development and the triple bottom line which concerns revenue generation and the applicability of carbon taxation.<sup>494</sup>

The policies, plans and other documents that constitute the adjoining policy areas of the domestic carbon tax are generally in agreement of: the reductions of GHG emissions, the diversification of the energy mix and the increase of revenue. However, there is potential misalignment with the *IEP* and *IRP*'s emphasis on nuclear and coal energy being the most cost effective energy option. To address this misalignment, the public should comment on the draft *IRP* and pressurise the Department of Energy to update their study statistics to accurately reflect renewable energies as the most cost effective option.<sup>495</sup>

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<sup>490</sup> South African Government *Intended Nationally Determined Contribution* 1-11; Ward & de Battista *Modelling the Impact on South Africa's Economy* 1.

<sup>491</sup> NPC *National Development Plan* 15, 189-190; National Treasury *Carbon Tax Policy Paper* 26.

<sup>492</sup> DEAT *National Framework for Sustainable Development*.

<sup>493</sup> DEA *National Strategy for Sustainable Development and Action Plan*.

<sup>494</sup> DEAT *National Framework for Sustainable Development* 6.

<sup>495</sup> Konrad et al *Cape Times* (02.03.2017) 7.

## Chapter 5: Conclusion

As should be evident from the above critical review of South Africa's proposed carbon tax regime, it would appear to largely provide the necessary legal and policy framework for ensuring that it will be effective in its operation, equitable in its impact across different sectors and that it will achieve the objective underpinning its introduction, namely to promote a more sustainable and resilient domestic economy in the context of climate change. If one were to summarise the main strengths, weaknesses and possible areas requiring reform relating to each of the tax design elements reviewed in Chapter 2, they would be as follows.

South Africa's proposed carbon tax regime at face value appears to include environmental effectiveness considerations. The environmental objective to minimise GHGs is included within the Preamble of the *Draft Carbon Tax Bill*<sup>496</sup> and a suitable proxy of the CO<sub>2</sub>e is employed.<sup>497</sup> However, the low effective tax rate of between R6 and R48 per ton of CO<sub>2</sub>e<sup>498</sup> does not appear to tie in with the urgency to address climate change in order to become more resilient to its social, economic and environmental effects. The low to moderate tax rate is in line with carbon tax design being largely driven by political processes and influence and is therefore not likely to strictly follow the theoretical optimal design for GHG emission reductions.<sup>499</sup> A possible improvement is to introduce higher tax rates than planned and importantly accompany this with the gradual phasing out of tax-free thresholds.<sup>500</sup> Furthermore, the carbon tax could be structured to automatically increase if CO<sub>2</sub> emission reduction targets are not met.<sup>501</sup> It is also problematic that AFOLU and waste sectors are completely exempt during the first implementation phase instead of utilising lower tax rates.<sup>502</sup> In order to better monitor, evaluate and report on the environmental effectiveness of carbon tax, the *GHG Inventory Report* could be improved through including a

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<sup>496</sup> Preamble of *Draft Carbon Tax Bill*.

<sup>497</sup> Section 4 of *Draft Carbon Tax Bill*.

<sup>498</sup> National Treasury *Carbon Tax Policy Paper* 54.

<sup>499</sup> Sumner et al 2011 (11) *Climate Policy* 927.

<sup>500</sup> Ward & de Battista *Modelling the Impact on South Africa's Economy* viii.

<sup>501</sup> Sumner et al 2011 (11) *Climate Policy* 927.

<sup>502</sup> National Treasury *Carbon Tax Policy Paper* 54; National Treasury *Market-Based Instruments: Draft Policy Paper* 59.

exclusive evaluation of the environmental effectiveness impacts of the implementation of a carbon tax. This would present a more accurate measure of policy effectiveness and areas of improvement that can thus be accordingly implemented.<sup>503</sup>

There is a comprehensive consideration of carbon tax revenue and the manner in which the tax revenue is used. The design of the carbon tax regime has factored in concerns of an adequate and fair tax rate, an increase of the tax rate over time and broad-based and targeted revenue recycling measures together with revenue-neutrality. Moving forward, it is important that the carbon tax regime continues to place emphasis on revenue recycling measures and partial earmarking to maintain the connection to the environmental aim of the tax.

The domestic carbon tax regime has included various considerations to garner support for the tax: a participatory process; tax shifting; exemptions and a phased implementation. The introduction of a carbon tax is likely to create sectoral winners and losers where sectors based on low-carbon energy sources will become more cost competitive compared to sectors based on fossil fuels. The South African government needs to garner confidence of those liable for carbon taxation by outlining and proving the benefits of its implementation. This ties in with a possible environmental education programme educating the relevant role players and public on the basics of carbon taxation and its benefits. This further relates to the South African government stating its intended use of the tax revenues accrued from the proposed carbon tax through partial earmarking as discussed above.<sup>504</sup> Partial earmarking can aid public and political acceptance of the carbon tax thus strengthening support for the implementation of this environmental tax.<sup>505</sup>

The imminent carbon tax regime has a comprehensive legislative framework, which is generally still in draft format. The elements of a tax base; tax payers; utilisation of tax revenue across different government sectors; administration,

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<sup>503</sup> Sumner et al 2011 (11) *Climate Policy* 929, 936-937.

<sup>504</sup> See part 4.2. above.

<sup>505</sup> National Treasury *Market-Based Instruments: Draft Policy Paper* 102-103.

monitoring and enforcement have been broadly covered by the legislative and policy framework. Attention has been paid to the legislative alignment between financial and environmental government departments through the principles of cooperative governance and the manner in which the administrative structures have been established. Comments from public consultations has resulted in a thorough formulation of the legislative regime. A revised regulation for the carbon offset allowance is planned to be published by mid-2017.<sup>506</sup> It is important that the most relevant policies, laws and regulations and their progress on finalisation is clearly communicated to the public.

The imminent carbon tax regime is relatively simple in its formulation. Employing the upstream approach of carbon tax design, there are a fewer number of relevant role players involved and thus a lower administrative cost.<sup>507</sup> The upstream approach is also more widely inclusive of all the sources of GHGs. The proposed carbon tax regime has an efficient administrative structure in place, namely the existing revenue authority of SARS together with the DEA. This therefore has a low administrative burden. The proposed carbon tax regime includes tax avoidance and tax evasion provisions, together with monitoring and enforcement, in the design of the carbon tax. These technical and administrative considerations present the proposed carbon tax to be an appropriate and viable option for climate change mitigation.<sup>508</sup>

There is a wide-ranging and extensive consideration of competitiveness concerns for the domestic carbon tax regime. There is a comprehensive suite of mitigation measures for industry and firms to remain locally and internationally competitive — reduced tax rates or tax exemptions, recycling revenues, gradual implementation and phased in approach of an environmental tax, border tax adjustment and carbon offsets. South Africa is projected to remain competitive in the domestic and international arena through the analysis of the modelled economic impact and effect on exports. It appears the competitiveness concerns were overstated. Possible areas of

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<sup>506</sup> National Treasury *Budget Review* (2017) 48.

<sup>507</sup> Mbadlanyana 2013 (43) *Africa Insight* 82.

<sup>508</sup> National Treasury *Market-Based Instruments: Draft Policy Paper* vii.

reform are to thoroughly consider tax harmonisation. It is also important that the public, industry and firms are informed that the competitiveness concerns seem to be overstated to gain more support for the tax.

Distributional concerns of carbon tax need to be addressed in the policy and design phase.<sup>509</sup> The domestic carbon tax regime has attempted to achieve this in a targeted and transparent approach. Modelled results suggest that carbon tax will have a minimal impact on the macroeconomic variables used as a proxy for the distributional aspects. Mitigation measures include a zero impact on the electricity price, improved targeted delivery of electricity through the reduction in the electricity levy, greater free basic electricity provision and the development of the provision of energy alternatives for low-income households.<sup>510</sup> Addressing distributional concerns in an inclusive way, should facilitate acceptance of the carbon tax and effective implementation.<sup>511</sup> To address distributional concerns in a more comprehensive manner that fully includes the prioritisation of climate change mitigation and adaptation, human dignity and the poor, it should endeavour for social equity and economic sustainability. In order to further these aspects, earmarking of funds should be considered that feed into job creation and incentives for the poor.<sup>512</sup>

The policies, plans and other documents that constitute the adjoining policy areas of the domestic carbon tax are generally in agreement of: the reductions of GHG emissions, the diversification of the energy mix and the increase of revenue. However, there is potential misalignment with the *IEP* and *IRP*'s emphasis on nuclear and coal energy being the most cost effective energy option. To address this misalignment, the public should comment on the draft *IRP* and pressurise the Department of Energy to update their study statistics to accurately reflect renewable energies as the most cost effective option.<sup>513</sup>

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<sup>509</sup> Mbadlanyana 2013 (43) *Africa Insight* 86.

<sup>510</sup> Sumner et al 2011 (11) *Climate Policy* 927, 939-940; Morden & Janoska *Carbon Tax Policy Paper* 35.

<sup>511</sup> Mbadlanyana 2013 (43) *Africa Insight* 86.

<sup>512</sup> Mbadlanyana 2013 (43) *Africa Insight* 86.

<sup>513</sup> Konrad et al *Cape Times* (02.03.2017) 7.

This critical analysis of South Africa's proposed carbon tax regime is theoretically based. It is going to be interesting whether the theoretical framings of the proposed carbon tax regime as effective in its operation, equitable in its impact across different sectors and promoting a more sustainable and resilient domestic economy will be translated into reality.

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