

# The future of “Zero Waste to Landfill” and the newly introduced Carbon Tax

Bertie Lourens, CEO, WastePlan

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## Introduction

Just short of a decade, the subject of carbon taxing was an ongoing debate in the halls of SA legislature. In November 2018 that conversation found some traction around the parliamentary table.

As of **June 1, 2019**, South Africa’s Carbon Tax bill will roll out and re-order the nation’s business as usual.

No doubt, you’re interested to know more for two reasons:

1. it’s co-aligning with your personal convictions to lower your fossil fuel-based energy consumption and invest in energy alternatives within your own organization;
2. it’s going to impact the way you do business and get **taxed** for it.

So we thought to offer you a basic framework when it comes to South Africa’s latest legislation. Of course it’s not tailored to answer every specific question as it pertains to your industry, but it will no doubt give you a better understanding of what you can expect and what has motivated this significant decision across the nation’s business landscape.

Here’s SA’s new Carbon Tax Bill in a nutshell:

## Setting The Stage

In December 2015 197 nations came together in Paris to reach a landmark agreement to actively combat climate change and build towards a sustainable low carbon future. Known as COP 21, or the Paris Agreement, this monumental United Nations Framework Convention on Climate Change (UNFCCC) was the first of its kind, with unanimous and unprecedented national commitments to stave off the rising tide of global warming and climate change.

The common ambition: to keep the average global temperatures from rising 2 degrees Celsius above pre-industrial levels and limit the increase even further to 1.5 degrees Celsius. Each country having pledged their own “nationally determined contributions” to the effort, the Convention met again in **Katowice, Poland, in December 2018** to revisit these commitments and hold themselves accountable to the agenda.

## South Africa’s Commitment

South Africa has continually joined this conversation with its own stained legacy at its back. Year after year the **world’s 169th most populous country ranks as 17th dirtiest energy producer on the planet** - out-polluting nations like UK and France. The carbon tax is an attempt to mitigate this consumer behavior and reduce high greenhouse gas emissions, whilst stimulating investor appetite in low carbon alternatives. Set against a ‘business as usual’ curve, the aim is to reduce carbon emission by **34% by the year 2020 and 42% by 2025**.

This level of effort will enable South Africa’s greenhouse gas emissions to peak between 2020 and 2025, plateau for approximately a decade and decline in absolute terms thereafter.

Here are some of the main take-aways from the proposed tax:

In order to ensure a smooth transition, the tax will be implemented in stages and phased in over time. Phase 1 will run from implementation up to December 2022.

The initial marginal carbon tax rate will be R120 per tonne of CO<sub>2</sub>e (carbon dioxide equivalent). With the below thresholds in mind, the effective tax rate is much lower and ranges between R6 and R48 per tonne.

A basic percentage-based threshold (up to 60%) applies for the first phase of implementation that is not tax payable, in order to help businesses transition and adopt low carbon alternatives. Additional tax-free allowances include:

An additional allowance of up to 10% for process emissions;

An additional allowance for trade exposed sectors, to a maximum of 10%;

An additional allowance of up to 5% based on performance against emissions intensity benchmarks. These benchmarks will be developed in due course.

A carbon offsets allowance of 5 to 10% per cent, depending on sector;

And finally, an additional 5% tax-free allowance for companies participating in phase 1 of the carbon budgeting system.

The combined effect of all of the above tax-free thresholds will be capped at 95%.

As part of the tax, the carbon offset mechanism also allows companies to participate in a market-based approach to reduce emissions.

## Ensuring Right Reporting

Carbon emissions are submitted to the Department of Environmental Affairs (DEA) through legislation known as the **National Greenhouse Gas Emission Reporting Regulation (NGER)**.

Here companies that rely on energy generation from their own equipment are obligated to report on all business-related activities for tax purposes.

Once the carbon tax has been calculated, it will be paid to (and administered by) National Treasury, who will determine any further tax allowances, based on trade exposure, business performance, etc. At this point the process could become quite abstruse and bogged down by litigative complexities, and you’ll need some expert assistance.

We would recommend getting a hold of experts like GCX, who can help you skillfully and seamlessly navigate your way through the tricky terrain of tax law.

## Where is The Win ?

But there are things you can do now to anticipate this burden and reduce your waste to landfill so that less of your business is exposed to heavy carbon taxability.

We think these are some of the wins that could well emerge out of the new tax waters:

### Renewable energy investment.

Africa is uniquely poised to leapfrog fossil fuel, carbon heavy systems and adopt wind, solar and water energy on sustainable, large-scale levels. The prospect of punitive carbon taxing may help to catalyze renewable energy adoption.

### **Reduction in waste to landfill.**

The tax will take all your activities into account, including the activities related to your waste disposal on site. WastePlan can help you close in that tax window by reducing your waste streams and converting your rubbish into a profitable, recyclable commodity. This in turn benefits the environment and helps grow the economy.

### **Support of cool carbon projects.**

As a means of offsetting your carbon footprint, you can invest in effective and environmentally sustainable projects that come in under the marginal carbon tax rate of R120 for every tonne of CO<sub>2</sub>e. These partnerships are not only financially incentivizing; they help support worthwhile green initiatives in other parts of the world.

## **Short History of Bio-digesters in South Africa**

Biogas digesters is a well proven technology that converts organic waste into a clean and sustainable energy source. When organic waste such as discarded food waste is landfilled, it produces methane gas which is potent greenhouse gas, 24 times more than CO<sub>2</sub>.

The initial uptake of biogas digesters in South Africa since 2014 was good and the prospects for this industry looked promising. The Abattoir & Agricultural Industry was one of those that welcomed the technology as they required a sustainable solution for their organic waste generated. More than 10 facilities, ranging in size were installed over the course of a few years.

The most successful facility built was the Bio2Watt facility in Bronkhorstspuit, which produced electricity and successfully wheels the energy to the BMW factory in Rosslyn.

## **Lessons Learned**

Unfortunately, most of the installations did not perform, with several facilities having closed-down or running with severe performance constraints. The problems experienced can be largely attributed to a lack of experience and understanding of the organic feedstock as well as the availability of operational expertise. Low electrical energy costs also hampered the development of a sound business case.

There are however a handful of facilities that was able to overcome those challenges and which are continuing to operate, expand in size and improve their efficiencies and return on investment.

The most important lesson for successful implementation is the selection of an experienced local operational partner that assist in the development process from start to finish.

## **The Future of Zero Waste To Landfill**

Our country is fast approaching a situation of running out of landfill space. The inevitable “Day Full” is on our doorstep and companies are starting to take notice of this and looking for solutions to completely divert their waste from landfill. The Western Cape Government has also implemented

legislation that will completely ban organic waste to landfill by 2028 which will force companies to implement solutions for the waste.

New innovations is making Zero Waste to Landfill a reality. It requires an integrative approach with separation at source and effective down-stream waste management practises. This approach maximize recyclables recovery, while organic is isolated and treated using composting or biogas. The remaining waste consisting mainly of unrecyclable plastic packaging can then be converted, either into energy (such as electricity or oil) using Pyrolysis or, into bricks or concrete to build much needed infrastructure.

This method and approach was successfully implemented at the Wild Coast Sun. This Sun International resort achieved the first GBCSA’s **Net Zero Waste certification** on the African continent in **January 2019**. Many more companies are now taking on this challenge and becoming leaders in the industry.

## Conclusion

Undoubtedly, the Carbon Tax Bill is somewhat enshrouded in mystery, as we’ve never been this way before, but what we are sure of is that it will spark a series of innovation and investment into lower carbon technologies. The waste industry will enjoy much of this benefit, as it is a low hanging fruit in reducing carbon footprints of waste generators. The Waste2 Energy landscape in South Africa is also still in a vulnerable state, but we believe this will all soon change as our economy is shifting to a low carbon economy.



**Bertie Lourens is the CEO of WastePlan, a national waste management company.**

WastePlan specializes in the diversion of waste away from landfills by turning waste into valuable products. They operate in 7 cities and employ over 1600 people.

## Contact details

Email address bertie@wasteplan.co.za  
Website www.wasteplan.co.za  
Telephone 0861116699  
Twitter <https://twitter.com/WastePlanSA>

## References

## Footnotes