



Comparing apples with apples when offsetting carbon emissions

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The author offers a second article in a series on Carbon Tax in South Africa, regulation of which is expected to become official in January 2017. The first article was published in *Electricity+Control* in May 2016.

Following last year's publication of The Draft Carbon Tax Bill, the Draft Regulations on Carbon Offsets were made available for public comment on 20 June 2016. These proposed regulations are providing content to Section 20(b) of the Bill: 'The Minister must make regulations in respect of carbon offsets'. The publication of these Regulations is a strong signal that the making of provisions for the actual implementation of the tax, is in progress.

The Carbon Tax can be classified as a negative incentive to change behaviour by penalising industry in a financial manner by putting a price on its carbon emissions. The carbon offset mechanism, as proposed in these Draft Regulations, contains complementary 'positive' incentives aimed at encouraging businesses to take actions with the same effect as envisaged by the carbon tax: an accelerated transition to a low carbon economy. The Draft Regulations on Carbon Offsets are targeting both the sectors that are liable to paying carbon tax and sectors that are not covered by the carbon tax. Moreover, the proposed scheme is facilitating a synergy between these two groups of sectors:

- For liable entities, the Draft Regulations on Carbon Offsets offer an alternative to paying carbon tax on a maximum of 10% of a company's total carbon emissions [1] and at a cost lower than the costs associated with tax payable
- Through these Regulations, sectors that are not covered by the carbon tax, are encouraged to invest in projects that avoid, reduce or sequester greenhouse gas emissions thus generating carbon credits
- These credits (or offsets) can be sold to liable entities for the purpose of reducing carbon tax liability

The Draft Regulations released on 20 June 2016 by National Treasury, present the proposed system for achieving the above goals and objectives, capturing four core-elements:

Eligibility Criteria: Which types of carbon credits [2] can be used as carbon offsets [3] for reducing one's carbon tax liability?

The Offset Duration Period: For how long can a carbon credit be used as a carbon offset in order to reduce one's tax liability?

Limitations to qualifying technologies: What types of projects are excluded from generating carbon offsets in respect of these Regulations?

Administration of the carbon offset system: What are the procedures for claiming the carbon offset allowance?

Following the publication of these Regulations, several stakeholders have commented on the content. Often the focus is on the limitations to qualifying projects (regulation 4 of the Draft Regulations), which makes sense as this is a crucial element for potential project-developers. For example, projects that destroy industrial gases such as trifluoromethane (HFC-23) or nitrous oxide (N₂O) from adipic acid production cannot generate credits for the purpose of offsetting carbon tax liability. This is in line with international trends such as the ban on the use of these types of credits in the EU Emissions Trading System.

Instead of elaborating on ineligible projects in respect of offset origination, this article zooms in on another element of the proposed carbon offset system: the 'Offset Duration Period' (regulation 3 of the Draft Regulations). The Offset Duration Period, as presented in the Regulations, relates to the period after the generation of a carbon



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offset. In other words, the time window during which a purchased carbon offset can be used for reducing one's carbon tax liability. This article aims at clarifying why this is an important element for a well-functioning offset mechanism.

The typical feature of an offset mechanism is to compensate one action with another action made elsewhere: emissions reductions made in e.g. the Northern Cape Province are compensating the carbon emissions of a Johannesburg based manufacturing plant. The net atmospheric emissions are zero. Such a mechanism can only work if measures are in place to safeguard that the amount of carbon dioxide equivalent [4] emitted in Johannesburg is exactly the same quantity as the emissions reduced in the Northern Cape. Without going into too much detail, the methodologies adopted by the respective carbon standards (CDM, VCS and Gold Standard) stipulate exactly how the actual emissions reduced by an approved project [5] must be calculated and verified. However, as scientific research develops over time, new climate-change related evidence is released regularly which may call for a revision of facts and consequently the amendment of the standards' methodologies [6]. The international standards are dealing with this issue through the introduction of crediting periods. A crediting period is a period during which an approved project can generate carbon credits in accordance with the baseline conditions at the beginning of that period and by application of the same methodology throughout that crediting period. Upon renewal of the crediting period these conditions have to be reviewed and adjusted if new information has become available since the start of the project.

In summary: two types of time frames need to be considered in respect of a carbon offset in respect of the Draft Regulations on Carbon Offsets:

1. The period during which the carbon credit can be generated (this is the crediting period as explained above)
2. The period during which one can 'retire' a carbon credit, e.g. by utilising it for offsetting one's carbon tax liability (as earlier mentioned the so-called Offset Duration Period)

Coupling these two time-frames is a means to ensure that apples are compared with apples: an essential requirement for an offset scheme as proposed in the Draft Regulations on Carbon Offsets. In other words: **A carbon offset generated by a specific project can only be utilised for purposes of reducing tax liability during the crediting period (and/or renewal period if eligible) of that project.**

The duration of the Offset Duration Period of a specific carbon offset depends on:

1. The type of project (i.e.: CDM, VCS or Gold Standard) that generated the carbon offset
2. The point in time within the crediting period of that project when the offset was generated

For detailed information on the crediting periods applied by the international standards, reference is made to the CDM, VCS, and Gold Standard rules and requirements as well as the text stipulated in regulation 3 of the Draft Regulations on Carbon Offsets and its Explanatory Note.

Acknowledging the importance of putting a limit to the validity of a carbon offset, as outlined above, an Offset Duration Period may in addition be vital for protecting the carbon market. Given the phased character of the Carbon Tax implementation process, it is likely that the price of one tonne of CO₂e will increase over time from the current R 120 a tonne [7]. When companies are buying bulk carbon credits at current prices in order to offset more expensive future liabilities, this may have an undesirable effect on the carbon market. The question that arises here is whether the allocated time window as proposed by the Regulations might be too long? It is not clear whether the protection of the carbon market was one of the reasons for introducing the Offset Duration Period, but it is surely something that can be given some thought.

As an appendix to this article, the other elements of the proposed mechanism are summarised.

Credits meeting the following criteria are eligible for use of carbon offsets in respect of these Regulations:

- Credits generated by a registered CDM, VCS, or Gold Standard project (or other standard if approved by Minister of Energy)
- Credit generating project is located in SA
- This project is not subject to carbon tax
- Project is registered after implementation of the tax [8] (unless rules in respect to transfer into SA Registry are met)
- Credits have co-benefits in line with SA's development priorities.

Non-eligible projects:

- Projects owned or controlled by liable entities
- Projects benefiting from 12L tax incentive
- Projects developed under REIPPPP
- Industrial gas destruction projects

Procedure for claiming tax allowance:

- Pre-screening of project ideas and carbon credits, by the Designated National Authority (DNA) within the Department of Energy
- Transferring credit from international registry into SA Registry
- Issuance of carbon offset certificate
- Submission of certificate to SARS

Notes

1. Depending on sector, as determined in Schedule 2 of the Bill.
2. A carbon credit is a general term representing the verified reduction of 1 tonne CO₂e emissions.
3. A carbon offset is a carbon credit that has been made elsewhere and that one can purchase to compensate for one's own carbon emissions. In other words: a carbon offset is a carbon credit but a carbon credit is not necessarily a carbon offset.
4. Carbon dioxide equivalent (CO₂e) refers to the quantity of CO₂ (kg) that would have the same global warming potential (GWP) of a specific greenhouse gas when measured over e.g. 100 years, e.g.: GWP_{CO₂e} = 1, GWP_{CH₄} = 25, GWP_{N₂O} = 298.
5. An approved project is: a CDM-, VCS-, or Gold Standard- project; or a project that complies with another standard that is approved by the Minister of Energy; and that meets the South Africa specific supplementary criteria.
6. An example is that as of 1 January 2013, the GWP of methane is 25 tCO₂e/tCH₄ instead of 21 which was the value used up till then. This would result in an increase of credits potentially to be generated for the same activity as a result of a change in verification methodology.
7. The price as set out in the Draft Carbon Tax Bill of 2015.
8. Credits generated before implementation of the carbon tax may be eligible as long as specific requirements relating to the transfer from international registries into the South African Registry are met.

In the previous article written by Silvana Claassen - Carbon Tax in South Africa (Electricity+Control, May 2016):

- MtCO_{2e} should have appeared as MtCO₂e
- CDM - Clean Development Mechanism (not Climatological Dispersion Mode)
- UNFCCC - United Nations Framework Convention on Climate Change

Editor



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