South Africa's Carbon Pricing: PMR Technical Workshop

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Introduction

- “The South African government is committed to addressing the global threat of climate change but this will not come at the cost of growing the economy, creating jobs or boosting international competitiveness;
- Climate change itself poses a critical threat to socio-economic development, in areas as diverse as water and sanitation, food security, health, energy, industrial development and housing;
- …the goals of creating jobs, developing infrastructure and preserving our natural resources, are not at odds;
- …the conservation of the environment and economic development are not mutually exclusive, but are two sides of the same coin;
- The South African government recognises that the impacts of climate change have the potential to completely undermine development gains that have been made.” *Minister Edna Molewa, Pretoria News, November 9 2011*

South Africa's Climate Change Policy Context

- **2006 – Draft Environmental Fiscal Reform Policy Paper entitled** "A Framework for considering market-based instruments to support Environmental Fiscal Reform in South Africa"
- **2011 – National Climate Change Response White Paper recognises that:**
  - A mix of economic instruments including market-based instruments such as carbon taxes and emissions trading schemes and incentives complemented by appropriate regulatory policy measures are essential to driving and facilitating mitigation efforts and creating incentives for mitigation actions across a wide range of key economic sectors.
- **2010 – Publication of the carbon tax discussion paper entitled "Reducing Greenhouse Gas Emissions: The Carbon Tax Option"**
  - Role of carbon taxes as a policy measure to price carbon emissions stimulate behavioural change towards less energy intensive, low carbon emitting alternatives. Document currently being revised into a policy document for publication in 2012.

Carbon Pricing

- Market based instruments to deal with many of the environmental challenges we are facing are increasingly been viewed as complementary to traditional "command and control" measures such as regulations and standards;
- The use of market based instruments (such as taxes, user charges and incentives / subsidies) influence prices and appropriate price signals are critical to ensure the most optimal allocation of scares resources;
- It is thus important to emphasis that the use of market-based instruments to address environmental concerns are first and foremost to correct for market failures (to internalize externalities). The resulting revised price levels is expected to lead to changes in behaviour by both consumers and producers;
- "Placing a limit, hence a price, on emissions has the potential to change the things we produce, the way we produce them, and the things we buy (Australia - Carbon Pollution Reduction Scheme, 2008, page xxvi)".

Carbon Pricing & Revenue

- To the extent that market based instruments such as environmental taxes results in additional revenue for the fiscus, it is a bonus and could result in the "proverbial" double divided.
- How the revenue raised via a carbon tax (or the auctioning of permits under an emissions trading scheme) is used will:
  - impact on the overall economy of a country;
  - have distributional implications; and
  - Impact on competitiveness position of trade exposed and energy intensive sectors.
- Some form of tax shifting and /or revenue recycling might be appropriate:
  - Tax shifting – revenue from a carbon tax could be used to reduce other more distortionary taxes – such a payroll taxes.
  - Revenue recycling – revenue from a carbon tax could be used to fund initiatives to neutralize the impact on the poor, e.g. free basic electricity, subsidized public transport, subsidized solar heater geysers, temporary relief or incentives to industries.

Rationale for a Carbon Tax

- The external costs of GHG emissions are not reflected in the market prices of certain goods and services, e.g. energy
- A carbon tax is a means by which government intervene by way of a market based instrument to appropriate take into account the social costs resulting from carbon emissions
- A carbon tax seeks to level the playing field between carbon intensive (fossil fuel based firms) and low carbon emitting sectors (renewable energy and energy efficient technologies).
- An alternative or in some instance complementary mechanism to prices carbon by way of an emission trading scheme can be considered over the longer term, however such a mechanism is probably not feasible in South Africa over the medium term

Proposed Carbon Tax Design

- A carbon tax at R120 per ton of CO2e is proposed (equivalent to US$16);
- Effective from 2013/14, with annual increases of 10 per cent until 2019/20.
- The tax will apply to carbon dioxide equivalent (CO2e) emissions calculated using agreed methods;
- Phased implementation:
  - *First Phase from 2013/14 – 2019/20*
  - *Second Phase from 2020 – 2025*
- It will cover these sectors: *Electricity, Petroleum (coal to liquid), Petroleum (coal to liquid), Iron and steel, Aluminium, Cement, Glass & ceramics, Chemicals, Pulp & paper, Sugar & Fugitive emissions from coal mining;*
- To minimise adverse impacts on industry competitiveness and effectively manage the transition to a low-carbon economy, temporary thresholds are proposed below which an exemption from the carbon tax will be granted.

Proposed Carbon Tax Design….

- The proposed percentage-based rather than absolute emissions thresholds include:
  - A basic tax-free threshold of 60 per cent;
  - Further relief for the trade exposure (i.e. maximum 10%);
  - A flat allowance for sector process emissions (i.e. maximum 10%);
  - The use of offsets by companies to reduce their carbon tax liability (i.e. 5 or 10%);
- Additional relief will be considered for firms that reduce the carbon intensity of products
  - A formula to adjust the basic percentage tax-free threshold to take into account efforts already made by firms to reduce their emissions and to encourage firms to invest in low-carbon alternatives.

$$Z = Y / X$$

Where:

- *X is the average measured and verified carbon intensity of the output of a firm*
- *Y is the agreed benchmark carbon intensity for the sector.*

Proposed Carbon Tax Design….

- The adjustment (increase or decrease) to the tax-free threshold is then determined by multiplying the original percentage threshold by Z.
- The overall tax-free allowance for an entity will be capped at 90 per cent of actual verified emissions
- Tax-free thresholds will be reduced during the second phase and may be replaced with absolute emission thresholds thereafter;
- Agriculture, forestry and land use & Waste receive 100 per cent tax-free allowances

Existing Environmentally Related Fiscal Measures

Taxes

- **General fuel levy** applied to petrol, diesel (a component ?)
- **Electricity generation tax** applied to non-renewable based electricity generation (2.5c/kWh)
- **Motor vehicle emissions tax** – purchase tax of R75 gCO_2/km for each emission exceeding120gCO_2/km (passenger vehicles) and double cabs subject to tax of R100 for emissions exceeding 175gCO_2/km
- **Incandescent globe tax** of R3 per globe

Tax Incentives

- **Tax exemption for revenues earned from CERs** (CDM projects)
- **Accelerated depreciation allowances** for renewable electricity generation and biofuels production
- **R&D** tax incentives (**including green technologies**) - 150 per cent income tax deduction for R&D expenses
- Tax incentives for **biodiversity conservation**
- **Energy efficiency savings** tax allowance (in process …)

Interest in MBIs Initiatives and Support from PMR

- South Africa submitted an Expression of Interest (EoI) to the PMR in 2011 for assistance with the investigation of the role and appropriateness of emissions trading scheme and offset mechanisms to complement the carbon tax.
- Specifically, the support from PMR is in terms of understanding:
  - the interaction between carbon taxes and emissions trading policy to effectively stimulate behaviour changes and least cost emission reductions;
  - the key design aspects of emissions trading schemes and offset mechanisms that are implemented or are being proposed internationally;
  - the necessary institutional requirements and governance structures to effectively implement trading schemes / offsets mechanisms;
  - the necessary financial regulatory regime and the appropriate tax treatment of revenues and transactions related to emissions trading; and the optimal allocation and / or auctioning of permits.

Interest in MBIs Initiatives and Support from PMR…

The support for South Africa through the PMR initiative can be divided into three phases:

Phase 1:

- Assist with the design of the proposed carbon tax, ensure that the final design is in line with other government policy interventions and comment on the impact on economic growth and job creation.
- This phase to be completed by December 2012

Phase 2:

- How the carbon tax can be linked to regional and international sectoral credits (offsets) and later on possibly international sectoral trading.
- This phase can be undertaken during 2013 and 2014

Interest in MBIs Initiatives and Support from PMR…

Phase 3:

- The possibility of linking the proposed carbon tax with a domestic emission trading system.
  - What would be the required domestic market conditions to consider an emissions trading scheme.
  - What institutional arrangements would be required for such an emissions trading scheme.
  - Can a carbon tax and an emission trading scheme co-exist or not?
- Phase 3 could be explored during 2014.

Specific Details for Phase 1

The required technical assistance, during Phase 1 (by end of December 2012) from PMR includes the following:

- To provide assistance in determining the linkages and potential interaction between different government policies including the carbon tax, Integrated Resource Plan (IRP) and carbon budgets as proposed in the National Climate Change Response White paper;
- To review and provide technical comments on the carbon tax proposals as announced in Budget 2012 and in the draft policy paper to be published in May 2012;
- To provide assistance with economic modelling (i.e. the impact on economic growth and job creation);
- As part of the carbon tax proposals, an offset mechanism has been proposed to help firms to reduce their carbon tax liability. The PMR work could help with the development of a domestic offset system (possibly building on the CDM concept) and how such a scheme could possibly be expanded to a regional level.

Concluding Remarks

- A carbon tax seems to be the more appropriate mechanism to price carbon and thereby begin to internalize externalities associated with GHG (CO_2) emissions;
- An alternative or possibly a complementary mechanism to price carbon by way of an emission trading scheme will be considered over the longer term;
- However, the necessary and sufficient conditions to make an emissions trading work seems more complex;
- Therefore, South Africa will benefit from PMR assistance with the development of these complementary measures to the proposed carbon tax

Thank You