



Environment Fiscal Reform and Tax Incentives relevant for Energy Sector

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Outline

- Introduction
- Energy, climate change and sustainable development
- National Treasury Environmental Fiscal Reform Process
- Summary Tax and Incentive Measures focusing on:
 - Electricity and transport sectors
 - Budgets 2005 to 2009
- Economic instruments to address climate change



Introduction

- The South African economy has recorded robust economic growth post 1994, until 2007.
- Economic growth slowdown in 2008 due to the world economic recessions and given the Q-on-Q negative growth rates in Q4,2008 and Q1,2009 South Africa is in a technical recession for the first time in 15 years.
- The National Framework for Sustainable development has identified the following areas that require action:
 - Excessive resource use for energy generation;
 - Rising waste levels;
 - Soil degradation;
 - Poor local air quality; and
 - Water scarcity and quality concerns.
- It's not just the **quantity** of growth that matters but also **quality**, and incorporating sustainable development considerations in policy development and decision making is actively being pursued.
- The role of market-based instruments particularly environmentally-related taxes to complement regulatory measures is being explored.



ENERGY AND CLIMATE CHANGE

- SA generates 90 per cent of electricity from coal - sufficient low cost coal supplies and historical excess electricity generation capacity manifests itself in low electricity prices and a highly energy intensive economy.
- Coal-based electricity responsible for bulk of GHG emissions in South Africa.
- SA ranks in the top 20 highest GHG emitters in the world and is the largest emitter in Africa accounting for 42 per cent of continent's carbon emissions.
- Energy pricing in SA –
 - can we begin to partially internalise externalities to facilitate a more efficient allocation of resources that would not compromise economic growth, and promote social and environmental benefits?



Energy prices

- Prices should in principle reflect:
 - Resource scarcity; and
 - External costs to ensure resource allocation efficiency
- Where market mechanism fails to appropriately account for both marginal social benefits and costs, corrective action could be considered.
- Low energy prices to “support” economic development is not sustainable and may lead to many distortions and inequities.



ENVIRONMENTAL FISCAL REFORM IN SOUTH AFRICA

- Environmental fiscal reform refers to the interface between ***environmental*** and ***fiscal*** policy measures.
- An opportunity exists to undertake reforms to existing MBIs and develop new environmental tax instruments to achieve environmental goals.
- The draft Environmental Fiscal Reform Policy Paper, published in April 2006 for public comment, provides the foundation to build on and support other environmentally related initiatives in South Africa.



INTERVENTION OPTIONS

- Command-and-control measures:
 - Use of legislative or administrative regulations that prescribe certain outcomes;
 - Usually target outputs or quantity, e.g. minimum ambient air quality standards, within which business must operate.
- Market-based instruments:
 - Policy instruments that attempt to internalise environmental externalities through the market by altering relative prices that consumers and firms face;
 - Utilise the price mechanism and complement command-and-control measures.



CRITERIA / DESIGN CONSIDERATIONS

- **Environmental effectiveness**
 - must be linked to the environmental externality and aim for best design possible (e.g. exemptions);
- **Tax revenue**
 - level of revenues and revenue use;
- **Support for the tax**
 - public support and acceptance is important (e.g. tax payer morality);
- **Legislative aspects**
 - implications need to be considered (also WTO, SADC);
- **Technical & administrative feasibility:**
- **Competitiveness impacts**
 - tax incidence is critical. May require adoption of mitigating measures;
- **Distributional impacts**
 - mitigation and compensation measures may need to be considered; and
- **Adjoining policy areas**
 - is the instrument capable of contributing to other social and economic objectives?



Focus of Public Comments

- Role of market-based instruments versus regulations
- Criterion for evaluating the impacts of environmentally related taxes
- Revenue earmarking
- Positive incentives



Energy Sector Externalities

- Economic growth normally characterised by continued increases in energy demand.
- This generates large scale societal benefits however, environmental and social costs such as increased greenhouse gas emissions and local air pollution are also incurred.
- These external costs are not reflected in the market price of energy, resulting in the excessive and inefficient consumption of many energy products.
- A number of measures can be used to reduce these externalities including the use of fiscal, esp tax, and regulatory measures to stimulate uptake of clean technologies.
- The price mechanism operates as a deterrent and induces behavioural change through production and consumption patterns.



Summary of EFR and Tax Incentive Measures

- Using the Draft EFR policy paper as a basis, Treasury has introduced a range of measures targeted at achieving environmental objectives.
- The following apply to the energy sector:
 - Electricity generation levy on non-renewables
 - Energy efficiency savings incentives
 - Income tax exemption for revenues earned from the sale of CERs
 - Motor vehicle ad valorem excise duty reforms to include a carbon component
 - Depreciation allowances for the production of renewables and biofuels
 - Biofuels fuel tax concession



Electricity generation levy

- Application of levy to the production of electricity from non-renewables including coal, petroleum-based fuels, natural gas and nuclear
- Achieve 2 objectives:
 - Complement demand side management efforts
 - As a first step towards developing a carbon tax to achieve long term climate change objectives
- Means that electricity generated from renewables will be excluded from the levy.
- Also proposed exemption of cogeneration from the levy.
- Levy to be implemented on 1 July 2009.



Energy efficiency savings tax incentive regime

- Seeks to encourage:
 - Energy efficient processes;
 - Accelerating uptake of cleaner technologies (plant, apparatus such as machinery, equipment) and innovation
 - Support the demand side management efforts.



Option 1: Qualifying Equipment

- Based on investments in new qualifying energy efficient equipment
- Investments in these qualifying equipment would qualify for an additional top-up deduction allowance of:
 - Up to 15 per cent of purchase price to the extent that
 - Documentary proof of actual energy efficiency savings
 - Over a 2 or 3 year period
- This option is implemented in a number of countries, e.g. UK, Singapore.
- However, given that South Africa does not have a local equipment labeling system in place this options proves not to be implementable at this stage.
- Option 2 is currently under consideration.



Option 2: Process energy efficiency

- Companies that achieve energy efficiency savings through improved production processes including **new equipment installations** and **procedures**.
- Using baseline energy efficiency model, companies would qualify for:
 - Additional tax deduction / allowance of up to 50 % of the monetary value of the energy efficiency savings
 - The monetary value of annualised energy efficiency savings is calculated as follows:

Energy efficiency savings (kWh) * lowest NERSA prescribed feed-in-tariff (R/kWh)

- Claims lodged at end of year assessment and incorporated adjustment of annualised savings in subsequent baseline energy efficiency determination.
- To enable claims, companies need to provide SARS with a copy of the energy efficiency savings certificate.



Energy efficiency savings certificate

- Certificate to be issued by National Energy Efficiency Agency (NEEA), division within SANEDI.
- Certificate to specify:
 - Actual energy efficiency savings
 - Determined using baseline model
 - By a registered and accredited M&V professional
- Baseline model describes:
 - Measured energy consumption and demand
 - Resultant energy efficiencies:
 - Difference between energy use prior to operation adjustments (either process or equipment) and post
 - Annualised to coincide with tax year



Income Tax Exemption for CERS

- The uptake of Clean Development Mechanism (CDM) projects in South Africa has been relatively slow.
- Also, the tax framework for the disposal of CERs has created further uncertainty on CDM projects.
- It is proposed that revenues earned from the sale of certified emission reduction (CERs) units in terms of the CDM will be exempt from income taxes.
- Seeks to reduce uncertainty and stimulate further project development.



Motor vehicle Tax Reform

- Motor vehicle use and transport fuel combustion contributes to both greenhouse gas and local air emissions.
- Proposed adjustment to ad valorem excise duties applied to new motor vehicles sales (passenger cars and light commercial vehicles) to include a carbon emissions component.
- The ad valorem excise duty will comprise a luxury component and an environment (carbon) component.
- The carbon component will be determined as follows:

$$\text{Tax rate (\%)} = \text{CO2 emissions (g/km)} / 15 - 8$$

- Proposed rate adjustments to become effective from 1 March 2010.



Fuel Taxes

- Applies to fuel levy goods including petrol, diesel and biodiesel.
- 50 per cent fuel tax concession for biodiesel
- Following rates apply:

	93 octane petrol (c/l)	Diesel (c/l)
General fuel levy	150	135
Road Accident fund	64	64
Customs and excise	4	4
Illuminating paraffin marker	0	0.01
Total	218	203.01
Pump price	643.3	649.35



Depreciation allowances

- Accelerated depreciation allowances of 50:30:20 per cent over three years applies to:
 - Biofuel production including biodiesel and bioethanol
 - Electricity generated from renewables including wind, hydro, solar and biomass.



Future work: Carbon Pricing

- SA is a significant Green House Gas (GHG) emitter.
- Coal combustion responsible for more than 40 per cent of carbon emissions.
- Recent reports on the *Economics of Climate Change* emphasized the use of appropriate market-based instruments (**carbon taxes, tradable permits and incentives**) to support and complement regulatory measures to address concerns wrt to emissions in general and climate change in particular.
- The National Treasury will in consultation with DEAT and other stakeholders further investigate specific instruments to address concerns about both climate change and local air pollution.
- The electricity levy should be viewed as a first step in this direction.



CONCLUDING REMARKS

- MBIs can play an important role in achieving environmental goals.
- Develop appropriate regulatory measures and institutional capacities to properly monitor and enforce such interventions and enhance their effectiveness.
- The effective (global and coordinated) implementation of appropriate MBIs (environmentally-related taxes, charges and incentives) is key to address some of the complex environmental challenges we are facing – especially climate change.



Thank you.

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Ad Valorem emissions tax rate on motor vehicles (Y)

Emission component	
CO ₂ g/km	CO ₂ emissions tax rate
100	0.0%
110	0.0%
120	0.0%
140	1.3%
160	2.7%
180	4.0%
200	5.3%
220	6.7%
240	8.0%
260	9.3%
280	10.7%
300	12.0%
320	12.0%



Ad Valorem "luxury" excise duty rates on motor vehicles (X)

Ad Valorem "luxury" excise duty rates on motor vehicles (X)			
Retail Price	Current rate	Proposed rate	Deviation
50,000	0.5%	0.0%	-0.5%
100,000	1.7%	0.6%	-1.1%
150,000	2.9%	1.4%	-1.5%
200,000	4.1%	2.2%	-1.9%
300,000	6.5%	3.8%	-2.7%
400,000	8.9%	5.4%	-3.5%
500,000	11.3%	7.0%	-4.3%
600,000	13.7%	8.6%	-5.1%
800,000	18.5%	11.8%	-6.7%
864,500	20.0%	12.8%	-7.2%
1,000,000	20.0%	15.0%	-5.0%
1,312,500	20.0%	20.0%	0.0%



Fuel taxes

Table 4.8 Total combined fuel levy on leaded petrol and diesel, 2005/06 – 2007/08

	2005/06		2006/07		2007/08	
	93 Octane petrol	Diesel	93 Octane petrol	Diesel	93 Octane petrol	Diesel
General fuel levy	116,0	100,0	116,0	100,0	121,0	105,0
Road Accident Fund levy	31,5	31,5	36,5	36,5	41,5	41,5
Customs and Excise levy	4,0	4,0	4,0	4,0	4,0	4,0
Equalization Fund levy	–	–	–	–	–	–
Illuminating Paraffin marker	–	0,01	–	0,01	–	0,01
Total	151,5	135,5	156,5	140,5	166,5	150,5
Pump price: Gauteng (as in February) ¹	420,0	384,5	550,0	517,8	561,0	542,1
<i>Taxes as % of pump price</i>	36,1%	35,2%	28,5%	27,1%	29,7%	27,8%

1. Diesel (0,05% sulphur) wholesale price (retail price not regulated).