

# Package of measures to deal with climate change: The Carbon tax and energy efficiency tax incentive

*Economic Tax Analysis, Tax Policy Unit - March 2014*



**national treasury**

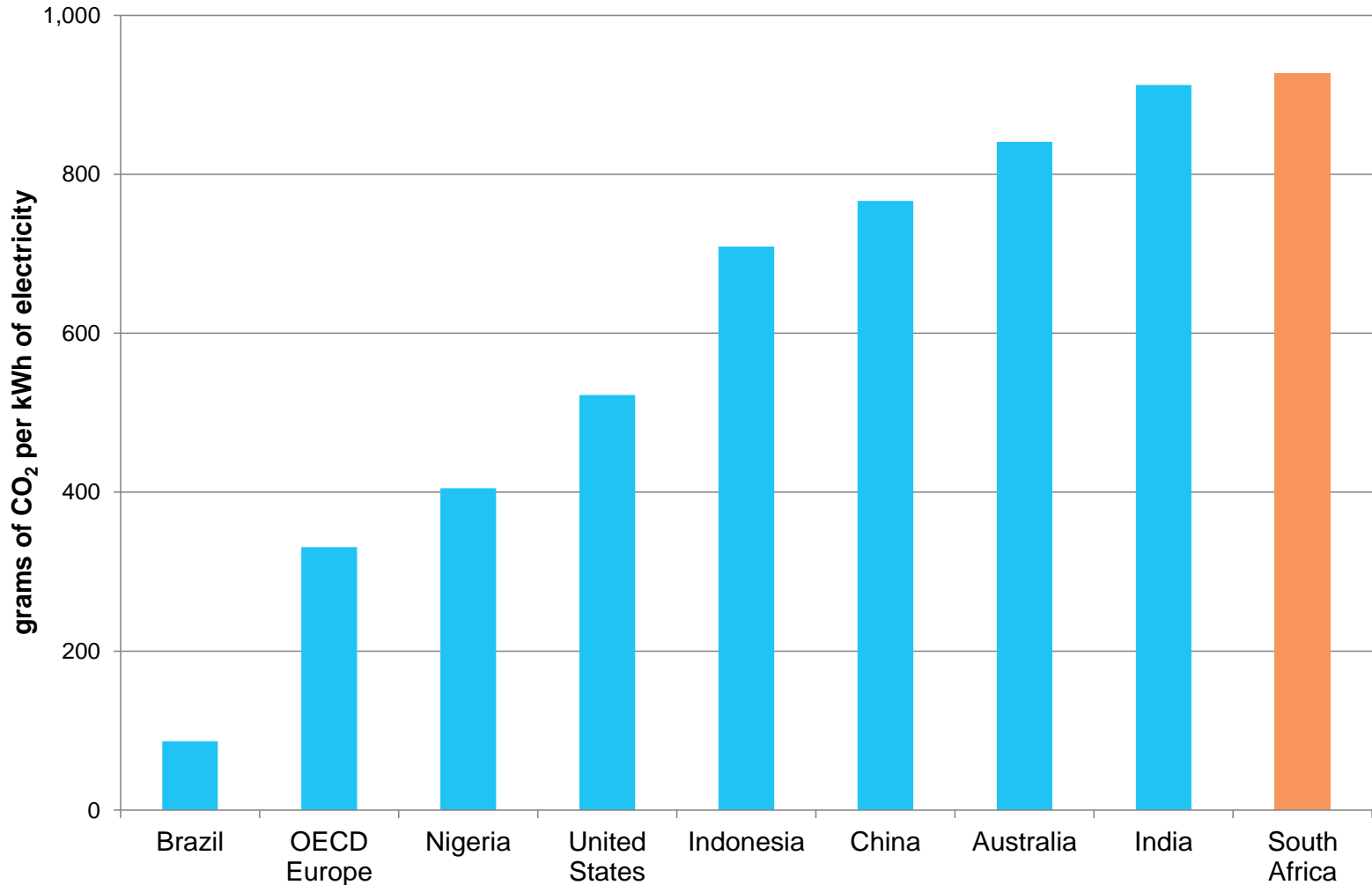
Department:  
National Treasury  
REPUBLIC OF SOUTH AFRICA

# Responding to the challenge (s)

- In acknowledging the need to take appropriate action to contribute towards international efforts to address the challenges as a result of climate change the government is proposing a package of measures to deal with both mitigation and adaptation.
- Energy is one of the key input resources for economic growth & development. It is important for poverty alleviation & improvement in quality of life.
- Fossil-fuel based (high carbon intensive) of especially our current electricity generation mix have negative environment consequences, contribute to climate change and local air pollution.
- Reducing the carbon intensity of the South African economy will *inter alia* be driven by improved energy efficiency and a reduction in the energy intensity of the economy.

# Electricity in South Africa is particularly carbon intensive due to the almost exclusive use of coal,

Energy system externalities in South Africa, vivideconomics, Jan 2014



# Preamble to the Regulations

- **SINCE** it has become necessary to promote the efficient utilisation of energy to safeguard the continued supply of energy and to combat the adverse effects of greenhouse gas emissions related to fossil fuel based energy use on climate change;
- **AND SINCE** energy efficiency saving may be considered as a potentially successful method to guarantee the efficient utilisation of energy;
- **AND SINCE** the intended purpose of a carbon tax is to mitigate greenhouse gas emissions and also to utilise (recycle) some of the revenue to be generated from such a tax to finance incentives to advance the further efficient utilisation of energy;
- **THEREFORE** a tax incentive as contained in section 12L of the Income Tax Act, 1962, and these Regulations is devised to encourage the efficient utilisation of energy.

# National Energy Efficiency Strategy of the Republic of South Africa – 1<sup>st</sup> Review October 2008

- “The White Paper of Energy Policy (1998) recognized that standards and appliance labeling should be the first measures to put in place in implementing energy efficiency (page i)”.
- “The Strategy set a national long term target for energy efficiency improvement of 12% by 2015. This target is expressed in relation to the forecast national energy demand at the time, and therefore allows for the current expectations of economic growth (page ii)”.
- “It should therefore not be confused with the Power Conservation Programme (PCP) for electricity. Conservation by nature is only used in emergencies where there is not sufficient supply of energy and therefore will have a negative impact on production, as the only alternative for the extreme short term is to shut down activities (page ii)”

## Incentives for cleaner production – energy efficiency

- A number of environmental statutes and regulations require the private sector to eliminate inefficiencies in the use of energy, water and raw materials. To complement these measures, market-based instruments are playing a greater role. Incentives for energy-efficient investments have been explored. Current legislation provides for a three year 50:30:20 per cent accelerated depreciation allowance for investments in renewable energy and biofuels production.
- It is proposed that investments by companies in energy-efficient equipment should qualify for an additional allowance of up to 15 per cent of condition that there is documentary proof of the resulting energy efficiency savings (after a two-or three year period), certified by the Energy Efficiency Agency.

# Energy Efficiency Savings - Definition

- **“energy efficiency”** means energy efficiency as defined in the standard;
- **“energy-efficiency savings”** means the difference between the actual amount of energy used in the carrying out of any activity or trade, in a specific period and the amount of energy that would have been used in the carrying out of the same activity or trade during the same period under the same conditions if the energy savings measure was not implemented;
- **“standard”** means the South African National Standard 50010 (SANS 50010, Measurement and Verification of Energy Savings), issued by the South African Bureau of Standards in terms of the Standards Act, 2008 (Act No. 8 of 2008),

**REGULATIONS IN TERMS OF SECTION 12L OF THE INCOME TAX ACT, 1962, ON THE ALLOWANCE FOR ENERGY-EFFICIENCY SAVINGS**

# Energy Efficiency Savings Tax Incentive: Policy Intent (1)

- Energy efficiency savings can indeed be viewed as one of the low-hanging fruits to help address climate change concerns and energy security.
- However, energy efficiency savings requires investment in EE technologies, process modification & behaviour change.
- The conversion of old technologies to new ones often involves a substantial amount of capital expenditure.
- The perceived long pay-back period tends to discourage business from making upfront investments relating to energy efficiency savings.
- Policy response:
  - Encourage energy efficient processes;
  - Accelerating uptake of cleaner technologies and innovation
  - Support the demand side management efforts.



# Energy Efficiency Savings Tax Incentive: Policy Intent (2)

- Energy efficiency savings may be achieved through improved production processes including new equipment installations and / or processes
- Given the contribution that energy efficiency savings can make towards a reduction in the demand for energy (especially electricity) and resulting reduction in CO<sub>2</sub> emissions, it is deemed appropriate to encourage greater levels of energy efficiency savings.
- A carbon tax and tax incentives such as the energy efficiency tax incentive will provide appropriate price signals to help nudge the economy towards a more sustainable growth path.
- The Energy Efficiency Tax Incentive (EETI) is complementary mechanism (i.e. carrot) to the proposed carbon tax. Some of the carbon tax revenue will be recycled through this EES Tax Incentive.

# Legislation & Regulations: Energy Efficiency Savings Tax Incentive

- Section 12L of Income Tax Act 58 of 1962
- Regulations to give effect to this incentive as from 1 November 2013 was published in December 2013
- The EES incentive will run until January 2020
- The value of the incentive (i.e. a tax deduction) is 45 cents per kwh saved
- Taxpayers that can prove EES from implementing an energy efficiency measures can claim the allowance
- The implementation of the incentives relating to energy Efficiency requires adequate measuring, monitoring and verification of energy use and commensurate efficiencies.
- Only accredited measurement and verification professional can verify the EES
- The taxpayer baseline is adjusted annually with the amount of EES claimed

# In summary

- To facilitate the transition to a sustainable economy, the efficient use of natural resources such as energy, water and raw materials is vital.
- “Most energy efficiency investments pay for themselves within three years, but all require at least some up-front costs”. TIME, January 12, 2009. ‘Wasting our Watts’ by Michael Grunwald”.
- “When incentives are properly aligned, efficiency happens, and innovation does too”.
- “... as the world enters an age of economic and environmental limits, not all solutions are created equal. *Coal and oil are too dirty. Nuclear and solar are too costly. Wind is the fastest-growing source of new energy, but it’s still only some 1% of the supply. (However a lot has happened since 2009).* Efficiency is the only cost-effective energy source that addresses global warming, energy dependence and volatile prices. It may not be a silver bullet, but it’s the best bullet out there; it would be foolish to spend billions on inferior bullets until this one gets a fair shot”.

# Thank you

# National Energy Efficiency Strategy

## 1<sup>st</sup> Review October 2008 (2)

- “Achieving optimum energy performance sometimes involves the installation of costly plant and equipment, and investors may be reluctant to tie-up financial resources in long-term projects”.
- “ ... investors as well as local stakeholders and institutions should be encouraged to cost all externalities when considering energy efficiency investment opportunities”.
- “Furthermore, appropriate risk-weightings should be attributed to fossil fuel prices when considering plant lifetime running cost.
- The notion of introducing incentives on energy efficient appliance and equipment will be considered during the lifetime of this Strategy (page 11)”

# National Energy Efficiency Strategy

## 1<sup>st</sup> Review October 2008 (3)

### Policy, Mandate and Governance (page 22)

- “The DME will prepare appropriate legislation and regulations for the Governance and Implementation of this Energy Efficiency Strategy.
- The DME will ensure the National Energy Efficiency Agency, which has been in existence since April 2006, is appropriately funded to undertake its responsibilities”.

### Finance Instruments (pages 23 to 26)

- “Incentives;
- Financing the Public Sector Implementation Plan (Government buildings);
- Energy Service Companies (*ESCO sell energy services: audit service, financing mechanism, equipment procurement, installation and commissioning, operation and monitoring and performance guarantees*);
- Clean Development Mechanism (CDM) - UNFCCC, Kyoto Protocol;
- The Voluntary and retail markets - VER (verified emission reduction schemes)
- Demand Side Management & PCP;
- Energy Pricing: cost reflective prices. Energy pricing will be based on an assessment of the full economic, social and environmental costs and benefits of policies, plans programmes and activities of energy production and utilisation”.

# Energy efficiency tax incentive

## Option A equipment (not proceeded with)

### Qualifying Equipment

- based on investments in new qualifying energy-efficient equipment/ technology /apparatus
- investments in such new qualifying energy-efficient equipment would qualify for an additional “top-up” deduction / allowance of:
- Up to 15 per cent purchase price subject to the lodging of documentary proof:
  - of the resultant energy efficiency savings
  - over a two or three year period.

# Energy efficiency tax incentive: Option B “Process” (this option accepted)

## Process Energy Efficiency

- Companies that achieve energy efficiency savings
- through improved production processes (whether through new equipment, new procedures, etc.)
- An additional tax deduction / allowance equal to:
  - the energy efficiency savings in kWh or kWh equivalent
  - multiply **by** 45 cent
- incorporate adjustment of annualised energy efficiency savings in subsequent baseline energy efficiency determination



# Energy Efficiency (Savings) - Definitions

- “Energy efficiency (consuming less energy to get the same amount of heat, light and / or power) is regarded as one of the most effective and cheapest sources of ‘renewable’ energy”.
- “Efficiency is about doing the same or more with less”.  
(TIME magazine, January 12, 2009: ‘Wasting our Watts’, by Michael Grunwald).
- “A system is more energy efficient it uses less energy to provide the same level of service”. Wikipedia”
- “Energy Efficiency Savings are (therefore) the difference between the actual energy use under the current conditions of the considered period compared to what it would have been under these conditions if the energy efficiency measures were not implemented”. L J Grobler

# s12L of the Income Tax Act (1)

(1) For the purpose of determining the taxable income derived by any person from carrying on any trade in respect of any year of assessment ending before 1 January 2020, there must be allowed as a deduction from the income of that person an amount in respect of energy efficiency savings by that person in respect of that year of assessment determined in accordance with subsection (2), subject to subsection (3).

(2) The amount of the deduction contemplated in subsection (3) must be calculated at 45 cents per kilowatt hour or kilowatt hour equivalent of energy efficiency savings.

(3) A person claiming the deduction allowed in terms of subsection (2) during any year of assessment must obtain a certificate issued by an institution, board or body prescribed by the regulations contemplated in subsection (5) in respect of the energy efficiency savings for which a deduction is claimed in respect of that year of assessment containing-

# s12L of the Income Tax Act (2)

- (a) the baseline at the beginning of the year of assessment;
  - (b) the reporting period energy use at the end of the year of assessment;
  - (c) the annual energy efficiency savings expressed in kilowatt hours or kilowatt hours equivalent for the year of assessment including the full criteria and methodology used to calculate the energy efficiency savings; and
  - (d) any other information prescribed by the regulations contemplated in subsection (5).
- (4) A deduction must not be allowed in terms of this section if the person claiming the allowance receives any concurrent benefit in respect of energy efficiency savings.

# s12L of the Income Tax Act (1)

- 5) The Minister of Finance, in consultation with the Minister of Energy and the Minister of Trade and Industry, must make regulations prescribing-
- (a) the institution, board or body that must issue the certificate contemplated in subsection (3);
  - (b) the powers and responsibilities of the institution, board or body contemplated in paragraph (a);
  - (c) the information that must be contained in the certificate contemplated in subsection (3) in addition to the information contemplated in that subsection;
  - (d) those benefits that constitute concurrent benefits for the purpose of subsection (4); and
  - (e) any limitation of energy sources in respect of which the allowance may be claimed.

[S. 12L inserted by s. 27 of Act 17/2009, amended by s. 27 of Act 7/2010 and substituted by s. 29 of Act 22/2012 w.e.f. 1 November 2013]

# White certificate schemes

- “A white certificate, which is also referred to as an Energy Saving Certificate (ESC), or an Energy Efficiency Credit (EEC), is an instrument awarded by an authorisation body to guarantee that a specific amount of energy savings has been achieved.
- Each certificate is a unique and traceable commodity carrying a property right over a certain amount of additional energy savings and certifying that the benefit of these savings has not been accounted for elsewhere (EuroWhiteCert Project 2006)” (White certificates and white certificate trading schemes as greenhouse gas mitigation policy options for South Africa, Emily Tyler, Zelda Dunn & Michelle du Toit, ERC, UCT, March 2009).

# Energy Efficiency Certificates (EEC)

- “An EEC is an instrument issued by an authority or an authorised body providing a guarantee that a certain amount of energy efficiency savings has been achieved.
- Each certificate is a unique and traceable commodity that carries a property right over a certain amount of energy efficiency savings and guarantees that the benefit of these savings has not been accounted for elsewhere”
- “Energy savings refers to certification of genuine and durable increases in the level of energy efficiency beyond what have occurred in the absence of the energy efficiency intervention”.

(LG Grobler, Energy Cybernetics)