# Template for Organizing Framework for Scoping of PMR activities

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# Outline of Template

1. **Policy context: Domestic mitigation objectives and emissions profile**
    1. Policy context and objectives
    2. Overview of country's GHG emissions
2. **Technical building blocks of Market Readiness and role of market instrument(s)**
    1. Taking stock of relevant sectors (and/or target area)
    2. Core Readiness components
    3. Interest in market-based instrument(s)
3. **Organization and consultations**
    1. PMR contact
    2. Consultation process
    3. Partners in the formulation and implementation of the country's Market Readiness Proposal
4. **Other key relevant initiatives**
5. **Organization of work and estimated timeline**
6. **Other relevant information**
7. **Conclusions – Summary of market readiness priority areas for PMR support**

**For the purpose of the PMR, market instruments refer to domestic instruments (e.g., emissions trading scheme) and, without prejudging the outcomes under the United Nations Framework Convention on Climate Change negotiations, scaled-up market mechanisms.*

# 1. Policy context: Domestic mitigation objectives and emissions profile

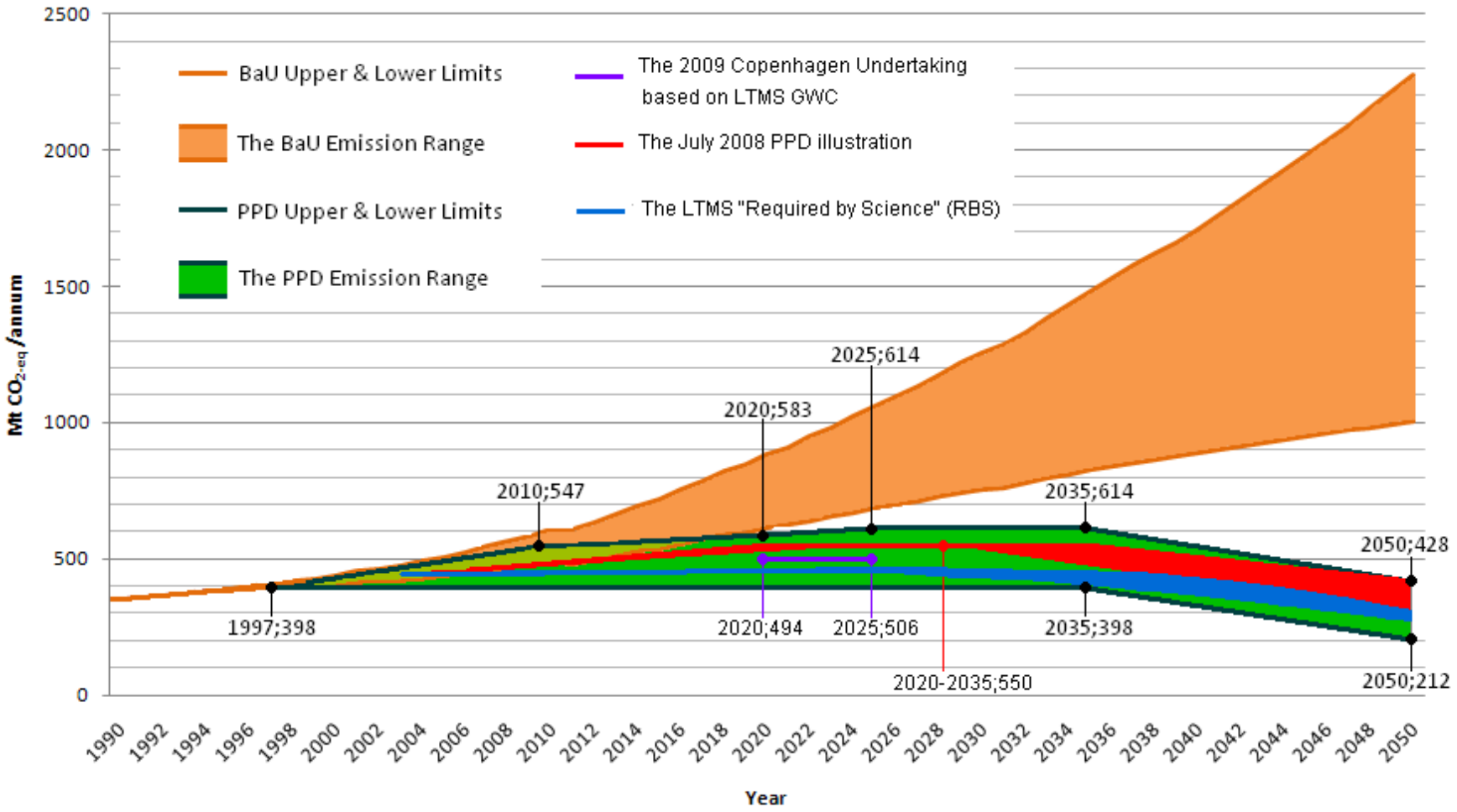
## 1.1 Policy context and objectives

- Taking into account equity and the common but differentiated responsibilities and respective capabilities of all nations as well as the inter-generational commitment of environmental rights contained in Section 24 the country's Constitution, South Africa's climate change response objective is to:
  - Effectively manage inevitable climate change impacts through interventions that build and sustain South Africa's social, economic and environmental resilience and emergency response capacity; and
  - Make a fair contribution to the global effort to stabilise GHG concentrations in the atmosphere at a level that avoids dangerous anthropogenic interference with the climate system within a timeframe that enables economic, social and environmental development to proceed in a sustainable manner
- South Africa is committed to contributing its fair share to the global GHG mitigation effort and has aspired to its emissions peaking between 2020 and 2025, remaining stable for a decade and declining in absolute terms from around 2035.
- In December 2009 at Copenhagen, South Africa announced it will reduce its GHG emissions by 34% by 2020 and 42% by 2025 below BAU, on condition that it receives the necessary finance, technology and support from the international community that will allow it to achieve this.

# 1. Policy context: Domestic mitigation objectives and emissions profile

## 1.1 Policy context and objectives

**The desired South African climate change mitigation outcome - the "Peak, Plateau and Decline" (PPD) greenhouse gas emission trajectory – comparison with other popularised conceptions of PPD**



# 1. Policy context: Domestic mitigation objectives and emissions profile

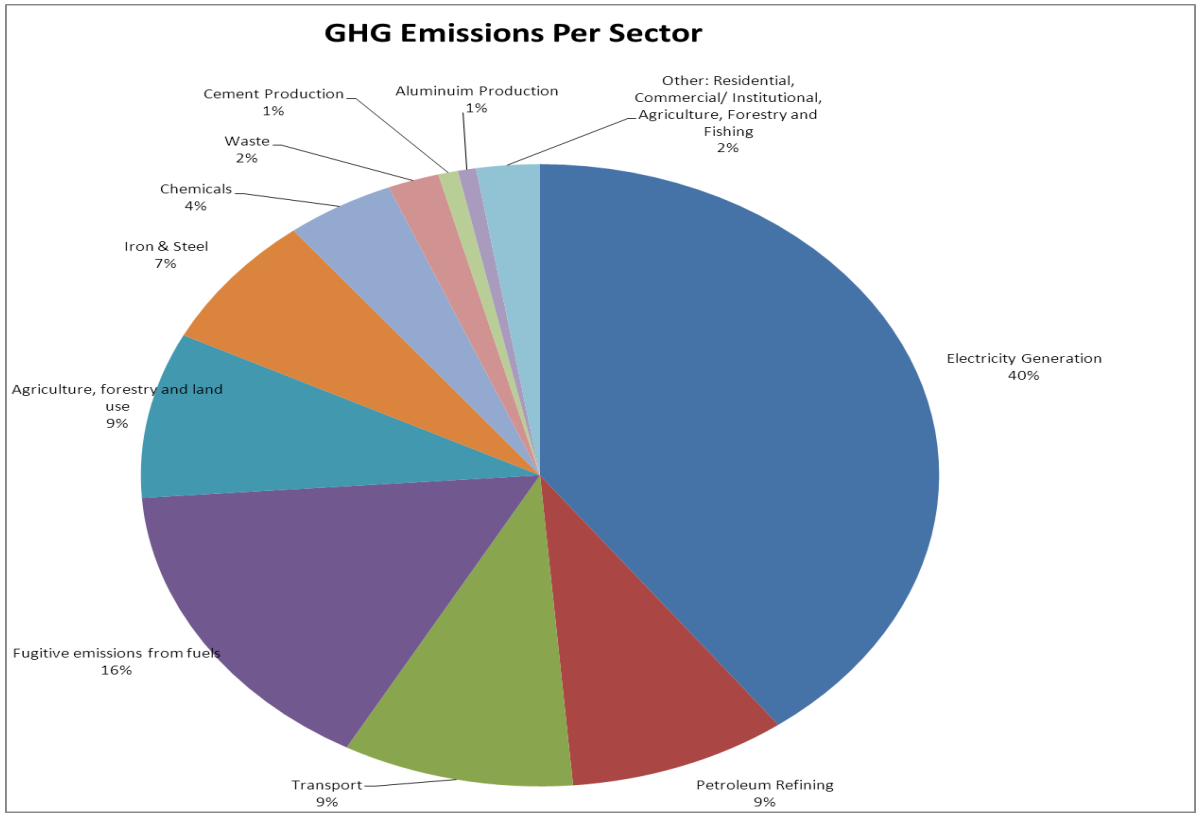
## 1.2 Overview of country's GHG emissions

- South Africa is ranked among the top 20 countries measured by absolute carbon dioxide ($CO_2$) emissions
- The key GHG emitted are carbon dioxide (79%), methane (16%) and nitrous oxide (5%) of total GHG emissions *(DEA, 2009, National GHG Inventory Report)*
- Emissions from perfluorocarbons generated from aluminium production contributed about 1% to total emissions
- In absolute terms, total GHG emissions in 1994 and 2000 amounted to 380 and 461 million tons respectively
- The energy sector emissions (i.e. electricity generation, petroleum refining) and transport accounted for more than 80% of total emissions in 2000
- Agricultural and industrial sectors (8.4 and 7% respectively)
- Power Utility (Eskom) accounts for 95% of total electricity generated in the country
- The main fuel is coal, which is abundantly available, accounting for more than 90% of fuel used in electricity generation

# 2. Technical building blocks of market-readiness

## 2.1 Taking stock of relevant sectors (and/or target areas)

- The energy sector is the largest contributor to greenhouse gas emissions, generating over 80% of South Africa's emissions
- Successful climate change mitigation in South Africa must inter alia focus on the energy sector



# 2. Technical building blocks of market-readiness

## 2.1 OPTIONAL - Assessment of readiness of sector/target area (*to be specified by country*)

- See discussion later on with respect to carbon tax design options and sector thresholds

# 2. Technical building blocks of market-readiness

## 2.2 Core Readiness Components - OPTIONAL – System for domestic monitoring, reporting and verification (MRV)

- The Department of Environmental Affairs (DEA) in partnership with the South African Weather Service, the host of the South African Air Quality Information System (SAAQIS), will prepare a GHG Emissions Inventory annually
- The inventory will conform to the IPCC's 2006 or later guidelines, and will be periodically reviewed by an international team of experts
- The inventory will also undertake and report analyses of emissions trends, including detailed reporting on changes in emissions intensity in the economy and a comparison of actual GHG emissions against the benchmark national GHG emission trajectory range

# 2. Technical building blocks of market-readiness

## 2.2 Core Readiness Components - OPTIONAL – Registry/tracking tool

- DEA contemplates a mandatory reporting of emissions data for entities (companies and installations) that emit more than 0.1 Mt of GHGs annually, or
- that consume electricity which results in more than 0.1 Mt of emissions from the electricity sector
- Qualifying entities will also be obliged to report energy use by energy carrier and other data as may be prescribed
- The emissions inventory will be a web-based GHG Emission Reporting System and will form part of the National Atmospheric Emission Inventory component of the SAAQIS
- It will be developed, tested and commissioned by approximately 2013

# 2. Technical building blocks of market-readiness

## 2.2 Core Readiness Components - OPTIONAL – Institutional/regulatory components

- The carbon tax proposal is overseen by National Treasury as the Minister of Finance is responsible for tax policy.
- The administration of taxes in South Africa is the responsibility of the South African Revenue Services (SARS)
- The Department of Environmental Affairs will be responsible for the measurement, reporting and verification of GHG emissions reduction

# 2. Technical building blocks of market-readiness

## 2.3 Interest in market-based instrument(s)

- In April 2006, National Treasury (NT) published a Draft Environmental Fiscal Reform Policy Paper entitled *"A Framework for Considering Market-Based Instruments to Support Environmental Fiscal Reform in South Africa"*.
- In December 2010, NT published a carbon tax discussion paper entitled *"Reducing Greenhouse Gas Emissions: The Carbon Tax Option"* for public comment:
  - elaborated on the role for carbon taxes as a policy measure to price carbon emissions. This will result in changes in relative prices and stimulate behaviour change towards less energy intensive, low carbon emitting alternatives
- In October 2011, Cabinet approved the National Climate Change Response Policy. It recognise that:
  - A mix of economic instruments including MBIs such as carbon taxes, ETS 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

# 2. Technical building blocks of market-readiness

## 2.3 Interest in market-based instrument(s)

- In Budget 2012, the National Treasury elaborated on the possible design of a proposed carbon tax

**Rationale for a Carbon Tax:**

- The negative external costs of GHG emissions are not reflected in market prices of certain goods and services, e.g. energy
- Is a means by which government intervenes to appropriately take into account the social costs resulting from carbon emissions
- It seeks to level the playing field between carbon-intensive (fossil-fuel based firms) and low carbon emitting sectors (renewable energy and energy efficient technologies)
- To provide the necessary, credible long term price signals to stimulate behaviour changes towards energy efficient and low carbon alternatives
- Although it does not set a fixed quantitative limit to carbon emission over the short term, a carbon tax at an appropriate level and phased in over time to the "correct" level will provide a strong price signal for behavioural change over the medium to long term

# 2. Technical building blocks of market-readiness

## 2.3 Interest in market-based instrument(s)

- A transparent, credible and competitive emissions trading mechanism is probably not feasible in South Africa over the medium term:
  - the oligopolistic structure of the energy sector is likely to reduce efficiency gains that would result from such a mechanism
  - The lack of a sufficient number of industry players and appropriate market structure with diverse abatement costs suggests limited opportunities for domestic trade that could result in inappropriate permit prices
  - The institutional capacity to manage an emissions trading system is lacking and will not be in place in the foreseeable future

# 2. Technical building blocks of market-readiness

## 2.3 Interest in market-based instrument(s)

**Carbon Tax: Proposed Design Features**

- The tax will cover carbon dioxide, methane and nitrous oxide emissions
- To apply to all direct, stationary (i.e. Scope 1) sources of emissions including process emissions
- Proposed rate is R120 per ton of CO2e emissions above a threshold
- Proposed date of implementation is October 2014:
  - Phase I – from 2014 to 2019
  - Phase II – from 2020 to 2025
  - Rate to increase annually at 10% until 2019/20
- For Phase 1 – temporary exemption threshold: basic threshold of 60% of actual emissions
- Additional 10% to allow for process emissions
- Additional 10% for trade exposed sectors to deal with competitiveness concerns
- An offset mechanism, similar to the CDM, to offset carbon tax liability up to a maximum of 5% and 10% for the different sectors

# 2. Technical building blocks of market-readiness

## 2.3 Interest in market-based instrument(s)

| Sector | Basic tax free threshold (%) below which no carbon tax will be payable during the first phase (2013 to 2019) | Maximum Additional allowance for Trade Exposure | Additional allowance for "process" emissions | Total | Maximum Offset percentage |
|---|---|---|---|---|---|
| **Electricity** | 60% | - | - | 60% | 10% |
| **Petroleum (Coal to Liquid)** | 60% | 10% | - | 70% | 10% |
| **Petroleum – Oil refinery** | 60% | 10% | - | 70% | 10% |
| **Iron and Steel** | 60% | 10% | 10% | 80% | 5% |
| **Cement** | 60% | 10% | 10% | 80% | 5% |
| **Glass & Ceramics** | 60% | 10% | 10% | 80% | 5% |
| **Chemicals** | 60% | 10% | 10% | 80% | 5% |
| **Pulp & Paper** | 60% | 10% | - | 70% | 10% |
| **Sugar** | 60% | 10% | - | 70% | 10% |
| **Agriculture, Forestry and Land Use** | 60% | - | 40% | 100% | 0% |
| **Waste** | 60% | - | 40% | 100% | 0% |
| **Fugitive emissions: Coal mining** | 60% | 10% | 10% | 80% | 5% |
| **Other** | 60% | 10% | - | 70% | 10% |

# 2. Technical building blocks of market-readiness

## 2.3 Interest in market-based instrument(s)

- In addition to the proposed percentage threshold, firms will be encouraged to reduce carbon intensity of their products during the first phase of the schemes
- This could be accommodated by adjusting the basic percentage tax-free threshold of 60% by increasing or decreasing it by a factor (Z).

$$Z = Y / X$$

  - 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

*Example:*

Assuming an agreed benchmark carbon emission intensity is 0.91tCO2e/ton output. If the absolute level of GHG emissions for three different firms (A, B & C) is 100 000 tons CO2e for each firm. The carbon emissions intensity for Firm A is 0.9tCO2e/ton of output, for Firm B is 0.85CO2e/t of output and for Firm C is 1.1tCO2e/ton of output.

*Results:*

Firm A: Z = 0.91 / 09.1 = 1.00 (e.g. basic threshold of 60% remain unchanged)

Firm B: Z = 0.91 / 0.85 = 1.0706 (e.g. basic threshold increase to 64.2%)

Firm C: Z = 0.91 / 1.1 = 0.8273 (e.g. basic threshold decrease to 49.6%)

- The total tax free allowance for a firm will be capped at 90 per cent

# 2. Technical building blocks of market-readiness

## 2.3 Interest in market-based instrument(s)

### Environmentally-related taxes

- General fuel levy applied to petrol, diesel
- Electricity generation tax applied to non-renewable based electricity generation (3.5c/kWh)
- Motor vehicle emissions tax – purchase tax of R75 per gCO2/km for each emission exceeding 120 gCO2/km (passenger vehicles) and double cabs subject to tax of R100 for emissions exceeding 175 gCO2/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 …)

# 3. Organization and consultations

## 3.1 PMR contact point

**For PMR:**
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# 3. Organization and consultations

## 3.2 Consultation process

- South Africa has an established forum called the National Committee on Climate Change (NCCC) through which such climate change related initiatives will be coordinated
- The NCCC has representation from all Ministries, Civil Society, Business and Labour organisations

# 3. Organization and consultations

## 3.3 Partners in the formulation and implementation of the country's Market Readiness Proposal (MRP)

- South Africa has an established forum called the National Committee on Climate Change (NCCC) through which climate change related initiatives are coordinated.
- The NCCC has representation from all government departments, civil society, business, academia, and labour
- The Department of Environmental Affairs and National Treasury are the leading departments responsible for the coordination and implementation of the country's market readiness proposal through the Intergovernmental Committee on Climate Change (IGCCC) which has representation from all Ministries within the country

# 4. Other key relevant initiatives

- A partnership with the German government on the development of MRV capacity in the country is underway. There is potential for linkage with the PMR

# 5. Organization of work and estimated timeline

## 5.1 Overview of organization of work/tasks envisioned prepare the Market Readiness Proposal (MRP)

It is proposed that MRP initiative in South Africa be grouped into three phases:

- Phase 1:
  - Refine the design features of the proposed carbon tax and the offset mechanism
- Phase 2:
  - Explore international crediting mechanism
- Phase 3:
  - Investigate possible emissions trading mechanism to complement carbon tax

# 5. Organization of work and estimated timeline

## 5.1 Overview of organization of work/tasks envisioned prepare the Market Readiness Proposal (MRP)

**Phase 1: [to be undertaken during 2012 & 2013]**

- To provide assistance in determining the linkages and potential interaction between different government policies:
  - Carbon Tax
  - Integrated Resource Plan (IRP) and
  - Carbon Budgets as proposed in the National Climate Change Response Policy
- To review and provide technical comments on carbon tax proposal of Budget 2012 and proposals in the draft policy paper to be published later this year;
- To provide assistance with economic modeling of the carbon tax proposal impact on economic growth and job creation;
- The carbon tax proposals includes an offset mechanism:
  - Assistance needed to develop a domestic offset system (possibly building on the CDM concept) and
  - how such a scheme could possibly be expanded to a regional level and internationally on a bilateral basis

# 5. Organization of work and estimated timeline

## 5.1 Overview of organization of work/tasks envisioned prepare the Market Readiness Proposal (MRP)

**Phase 1:**

**Context for CDM Projects in South Africa:**

- To date, there are 301 CDM projects submitted to the Designated National Authority (DNA)
- 226 Project Idea Notes (PINs) and 75 Project Design Documents (PDDs)
- Out of 75 PDDs, 21 have been registered by the CDM Executive Board (8 Issued with CER's), and 54 are at different stages of the project cycle – DNA approval, validation stage and/or request for review
- These projects cover bio-fuels, energy efficiency, waste management, cogeneration, fuel switching and hydro-power, and from sectors like manufacturing, mining, agriculture, energy, waste management, housing, transport and residential
- The EU recently enacted restrictions on Certified Emission Reductions (CERs) which prohibits the use of new-project (CERs) beyond 2013, unless they are from Least Developing Countries (LDCs) or can be swapped for CERs from LDCs
- Hence projects in South Africa will no longer be able to qualify for CERs linked to the EU ETS system

# 5. Organization of work and estimated timeline

## 5.2 Overview of estimated timeline for formulation of Market Readiness Proposal

**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 to be undertaken during 2014

**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 2015

# 6. Other relevant information

**Proposed Energy Efficiency Savings (EES) Tax Incentive:**

- Aimed at helping to address climate change related challenges through improvement in energy use and address energy security concerns
- It is complementary mechanism (i.e. carrot) in anticipation of the implementation of the proposed carbon tax. Some of the carbon tax revenue will be recycled through this EES Tax Incentive
- 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
- Only accredited measurement and verification professional can verify the EES
- The South African National Energy Development Institute (SANEDI), a government agency, is responsible for endorsing and issuing EES certificates
- The taxpayer baseline is adjusted annually with the amount of EES claimed
- The legislation is already in place and the Regulations to effect the incentive are being finalised
- The EES incentive will run until January 2020

# 7. Conclusions – Summary of market readiness priority areas for PMR support

*Given the proposed implementation of a carbon tax in South Africa, the required technical assistance, in the immediate term, from PMR include 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;
- To provide some assistance in evaluating the economic modelling work that has already been completed by the Treasury;
- As part of the carbon tax proposals, an offset mechanism has been proposed to help firms reduce their carbon tax liability. The PMR work could help with the development of a domestic offset system and how such a scheme could be expanded to a regional level.
- Explore alternatives for CDM programme given the restrictions post 2012 on SA's ability to access carbon market from the EU ETS

# Thank You