



Eskom National CFL Programme: Residential Sector

**An overview of the Compact Fluorescent Lamp (CFL)
Clean Development Mechanism (CDM) POA**

UNFCCC & DNA Post-Registration Changes Workshop

12-14 FEBRUARY 2014

PRETORIA

CME & PROJECT DESCRIPTION

- Eskom and NERSA establishment
 - Operational environment of Eskom
- Eskom climate change strategy
 - Six point plan
- Description of national energy efficient lighting programme
 - CFL sustainability POA

POST-REGISTRATION CHALLENGES:

- M & V Activities continue post-registration
 - Measurement & verification (M&V) approaches
 - DOE site visits and verification requirements
- Importance of CPA efficiencies
- Timing of verification



SOUTH AFRICAN ELECTRICITY UTILITY



Establishment of Eskom & Regulator

- **Eskom was first established as a national utility in March 1923 through the Electricity Act 1922.**
 - It was then called Escom i.e. electricity supply commission
 - In 1987, Escom was renamed Eskom
 - Eskom was formed to supply most affordable electricity to all, in order to stimulate economic growth in South Africa
 - After an international survey in 1996, Eskom was found to charge the cheapest tariffs in the World
- **Electricity Regulator also established in 1922 as Electricity Board**
 - Renamed NER in 1994 empowered to ensure effective generation, transmission and distribution of electricity throughout South Africa
 - Eskom is regulated by now called National Energy Regulator of South Africa (NERSA) under the Electricity Act (41 of 1987) – replaced by Electricity Regulation Act (4 of 2006).

South African Government

Energy Policy
(Department Of Energy)

Public Enterprises
Shareholder

National Energy Regulator
of South Africa (NERSA)

Generation

Transmission

Distribution

Independent
Power
Producers,
imports and
cogeneration

Municipal
Generation

Industrial

Mining

International

Other

Commercial

Residential

Redistributors
(Municipalities)

Customers

ESKOM'S CLIMATE CHANGE STRATEGY

The Eskom Climate Change strategy unpacks its commitment in **Six Point Plan**:

1

Diversification of generation mix by increasing nuclear, gas, renewables, imports and clean coal

2

Energy efficiency –reduce demand by 3038 MW in the 2012-2017 period and Internal Energy Efficiency measures (billion kWh programme)

3

Adaptation to the impacts of climate change, e.g. by using dry-cooling on new plant. Eskom Adaptation strategy will be completed this year



Innovation through R&D, examples include solar thermal plant, smart grids, underground coal gasification

4

Carbon Financing and opportunities for trading in the global CO2 market. Eskom Green Financing strategy will be completed this year

5

Advocacy, partnership, and collaboration with national and international stakeholders

6

THE PROJECT – CFL SUSTAINABILITY PROGRAM

- National program to distribute between **20-40 million** CFLs free of charge to South African households (October 2011 – 2015)
 - CDM Programme formed of ~ 20 CDM Project Activities (CPAs)
- Distribution Approach: Free issued lamps exchanged through a combination of **door-to-door** installations and **exchange points**
- First phase will distribute ~6 million CFLs (Starting with Western Cape as **CPA1**)
 - Implementation period: October 2011 – 2013 (completed)
- Sustaining program by rolling-out in similar way to initial CFL projects as funding becomes available including **carbon revenue**

HISTORICAL ACHIEVEMENT THUS FAR!!!!

60 million CFLs installed in SA homes so far

Eskom | Thinking past today





PRC ACTIVITIES & CHALLENGES

REGISTRATION IS HALF-WAY TO ISSUANCE

Until the end of 2013 only 1% of the CERs from the total POA pipeline have been issued, this is a reminder of the fact that achieving registration, although it is an important milestone, it is only *half of the way*.

- Since 2009, 243 POAs have been registered by the EB with a total of 14 million CERs in the pipeline



- At the end of 2013, 17 POAs have undergone or are in the process of Verification with a DOE
- Out of those, 6 POAs have successfully issued a total of 140,610 CERs (1% of the total Pipeline)

TIMING OF VERIFICATION & MONITORING

- project owner should have a verification and issuance strategy that minimizes the costs associated with project (e.g. loans, payment for technologies).
- it is important that the project owner is aware of the monitoring intervals required by methodology or proposed in the monitoring plan during the crediting period
 - Facilitates verification and issuance activities

Monitoring is not Verification! So it is important to continue the required monitoring intervals even if it is decided to delay verification and issuance until more CERs are accumulated by the project.

- in the case of CFL project using AMS.II.J, methodology requires to undertake monitoring at particular intervals (e.g. minimum 3 years or 30% of the CLFs lifetime)

METERING LOGISTICS – CITY SELECTION



Gauteng Thembisa
Northern Cape Kuruman
North-West Potchefstroom
FreeState Tweespruit
KZN Umlazi
Western Cape Khayaletsha
Eastern Cape Fort Beaufort
Limpopo Mokopane area
Mpumalanga Witbank



M&V ACTIVITIES CONTINUE POST-REGISTRATION

Before



After meter installation



OUR FREE ISSUED CFLs ARE CLEARLY MARKED

ESKOM STAMP MARK

NOT FOR RESALE



PLANNING VERIFICATION SITE VISITS



DOE Site Visit

AUDIT CFLs IMPLEMENTED IN ALL LSM GROUPS



CHALLENGES POST-REGISTRATION

- Specific methodological requirements
 - Data management and record keeping requirements and timeframe for record keeping (up to 2 years after the end of the crediting period)
- The nature of CPAs inclusion; particularly for domestic Energy Efficiency (i.e. continue to employ large number of people, engaging with universities, logistics - project management companies and local municipalities negotiations for further rollouts)
- Market Uncertainty: South African PoAs not eligible for EU ETS if request registration after 2012. Other markets need to be explored (i.e. Japan bilateral credit mechanism, Australia, NZ, etc).

IMPORTANCE OF CPA EFFICIENCIES

- purpose of POAs is to create efficiencies that never existed compared to stand-alone activities registered as separate CDM Projects
 - Cost efficiencies are clearly recognized in the documentation, inclusion and verification of new CPAs (vs. stand alone projects)
- In order to maximize those efficiencies at the CPA inclusion level, the following two elements are of great importance:
 - Use of DOE familiar with the programme design, eligibility criteria and monitoring plan of the CPAs (e.g. the same DOE that validated the POA, if the experience was positive). ***This will make the inclusion process more efficient and quicker***
 - Maximize the emission reductions allowed in each CPA as per different project sizes (e.g. small scale, micro scale, etc.); by adding as many CFLs project interventions as possible
 - ***This will reduce the number of CPAs and therefore the documentation, inclusion and verifications costs.***

PROJECT BENEFITS POST-REGISTRATION

Sustainable Development intact:

- **Social:** people of South Africa millions of rands electricity bills per year
 - **Job creation:** historic CFL programs have employed more than 30 000 people in South Africa
 - **Skills:** POA estimated to employ and train more than 20,000 people
- **Grid:** reduces stress on the energy infrastructure, especially during peak times
- **Environment:** reduces GHG emissions over 7 million tons of CO₂e over ten year period
- **Carbon revenue:** from sale of issued carbon credits
 - Ultimate goal in order to continue implementation

KEEPING SAME PROJECT PARTICIPANTS



BNP PARIBAS



THANK YOU

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TOGETHER WE CAN MAKE A DIFFERENCE! !!!