

DME
New and Renewable Energy

Tradable Renewable Energy Certificate (TREC) System Feasibility Study

Stakeholder Workshop
18 Jan 2007

Agenda

09:30 – 10:00	Coffee and Registration	
10:00 – 10:05	Welcome and introductions	DME (Mr. S. Tyatya)
10:05 – 10:10	Project Overview	(Mr. S. Mulaudzi Mr. A. Otto)
10:10 – 10:30	Introduction to TRECs Overview of the feasibility study	Nano Energy
10:30 – 11:00	Motivation and recommendations	Nano Energy
11:00 – 11:30	Implementation Plan.	Nano Energy
11:30 – 11:45	Coffee	
11:45 – 12:45	Group discussion	Workshop
12:45 – 13:00	Way forward & Closure	DME (Mr. S. Mulaudzi)
13:00	Lunch	

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Objectives

- 'to provide recommendations on the establishment of a voluntary TREC system for South Africa and the
- development of an implementation plan to set about this'.

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Interim report series

- South African TREC activity scan and market status
- Comparative country analysis with respect to TREC developments
- TREC system requirements, motivation and recommendation including legal and regulatory requirements
- System implementation plan
- TREC workshop report**
- TREC market analysis and projected renewable energy uptake contribution

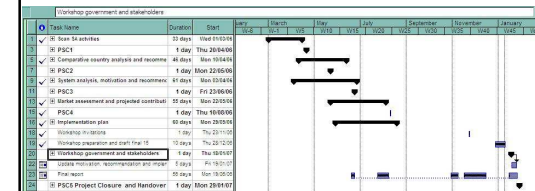
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PSC schedule

- A series of 5 project steering committee meetings Mar06
 - PSC1 (28 March): Appendix A
 - PSC2 (18 May): Appendix B
 - PSC3: (27 June) Appendices C, D and F and final report outline, workshop invitations
 - PSC4: (10 August) Workshop preparation, draft final report including workshop declaration (chapters 6 and/or 7)
 - Workshop: (5 September)
 - PSC5 Closure

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Project tasks and timeline

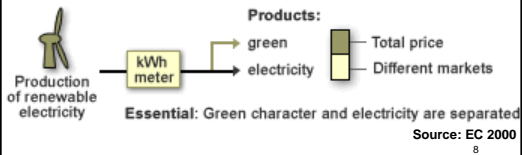


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Introduction to TRECs

TREC = Tradable Renewable Energy Certificate

- In practice, TRECs are electronic records that verify the origin of energy from registered renewable energy facilities.



Different revenue streams

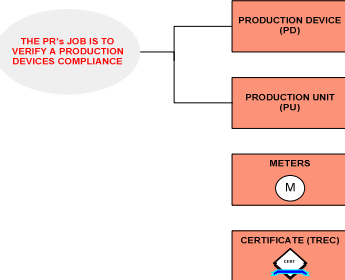
- Physical power
- Emissions reductions
 - consideration given to use of existing infrastructure (Designated National Authority (DNA) or generation licensing)
- TRECs – ‘green’ attributes
 - Attributes include:
 - Local environment
 - Public benefit – job creation...
 - Other externalities – avoided morbidity

TREC system process

- Device registration
- Certificates are issued upon production
- Record of transfer between market participant accounts and redemption is retained by the Issuing Body (IB) – not financial details of transaction
- Certificates are redeemed when they are no longer available to be traded.
- They are redeemed:
 - prior to green labelling in voluntary markets (products, events or general disclosure of environmental performance)
 - in claiming production-based support
 - in proof of compliance with purchase or supply obligations
 - upon international export (transfer to intl. customer's CRD account)

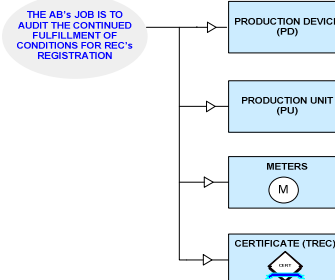
TRECS RESPONSIBILITY MATRIX (OVERSEEN BY ISSUING BODY)

PRODUCTION REGISTRAR (PR)



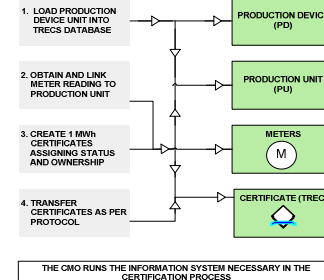
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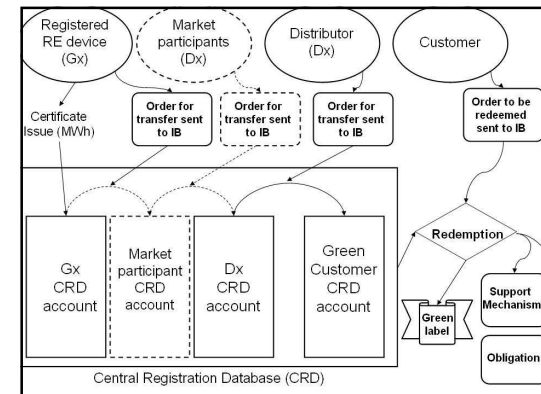
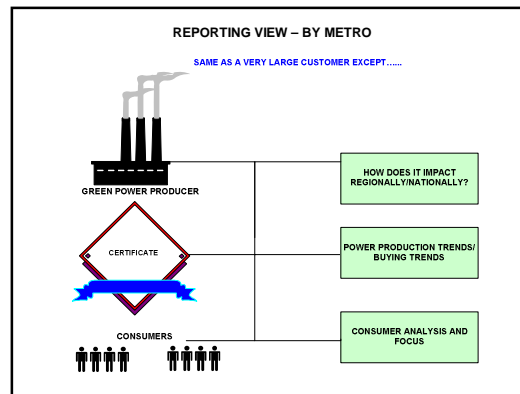
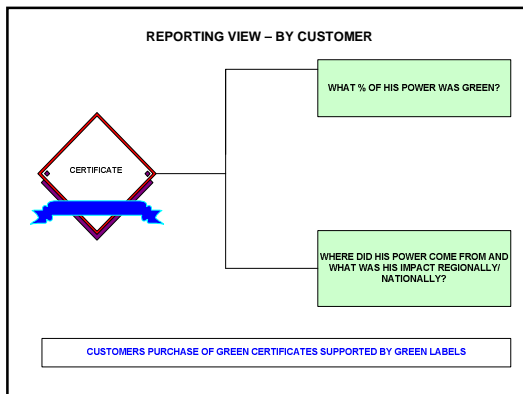
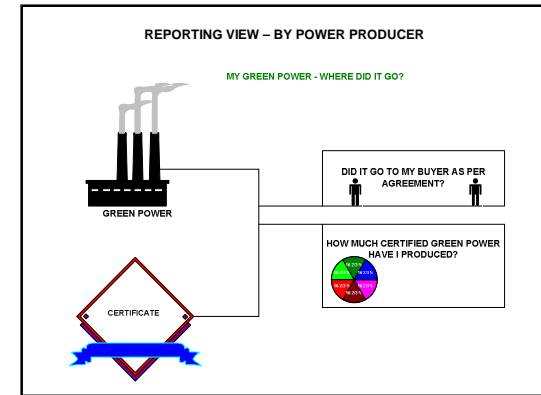
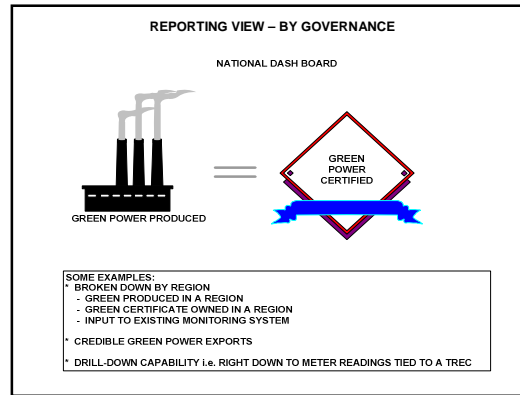
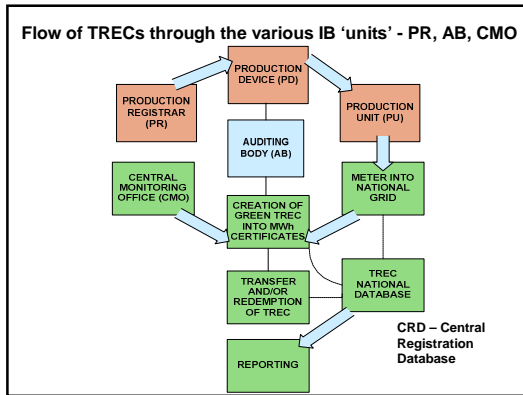
AUDITING BODY (AB)



TRECS RESPONSIBILITY MATRIX (OVERSEEN BY THE IB)

CENTRAL MONITORING OFFICE (CMO)

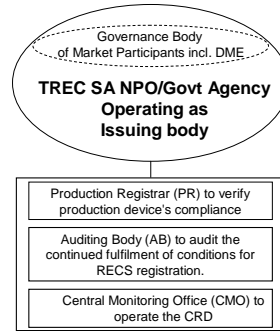




Issuing Body

- Market participants or government appoint IB
- Either:
 - Market participants form Association which appoints IB;
 - Market participants, among others, form IB as voluntary association and are members;
 - Government (by law) forms IB.
- IB cannot be:
 - financially dependent on market participants
 - subsidiary, parent or affiliate of market players

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Issuing Body

- If separate Assoc of Market Participants appoints separate IB, needs to be some body/method of controlling, monitoring and ensuring impartiality of IB.
- Possible membership of Assoc/IB:
 - Assoc of Market Participants, with no majority vote
 - Eskom
 - NERSA
 - CEF
 - DME
 - EIUG
 - SALGA
 - AMEU
 - REDS
- No single group or special interest can dominate

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Suitable status of IB

- Voluntary association
- Voluntary association can have legal personality
- Section 21 company, only if main object is promotion of
 - Science
 - Charity
 - Other social activity or communal or group interests
- Non-profit Organisations Act 1997
 - Promotes governance, transparency and accountability
 - Welfare Dept issues good-practice codes
 - Organisation may be registered under Act
 - Files yearly reports and financial statements

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Establishment of IB

- Constitution of voluntary association incorporate RECS Basic Commitment/PRO
- Basic Commitment/PRO covers
 - RECS certificates
 - Renewable energy declarations
 - Inspection of production devices
 - No duplicate certificates from rival bodies
 - Registration of production devices
 - Issue of RECS certificates
 - Transfer of RECS certificates
 - Redemption of RECS certificates
 - Central registration database
 - Verification, audits and reports

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Energy Policy and RE

- May 2004 - renewable-energy white paper (White Paper on the Renewable Energy Policy, November 2003, General Notice 513 of 14 May 2004),
 - government's vision is an energy economy in which modern renewable energy increases its share of energy consumed and provides affordable access to energy, thus contributing to sustainable development and environmental conservation (para 1.1).
 - energy bill which was proposed in 2003 which would allow the minister to make regulations regarding minimum contributions to the national energy supply from renewable energy resources (para 3.1.6).
 - to meet the long-term goal of a sustainable renewable-energy industry, the government has set a target that approximately four percent of the estimated electricity demand by 2013 should be contributed by renewable energy, mainly from biomass, wind, solar and small-scale hydro (para 5).
 - A renewable-energy strategy would be developed to translate the goals and objectives in the white paper into a practical implementation plan (para 11).

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Electricity Regulation Act

- The Bill, as introduced in 2005 and subsequently enacted as an Act of Parliament (Electricity Regulation Act 4 of 2006 - 5 July 2006) states that the Minister may, in consultation with the National Energy Regulator,
 - determine the types of energy sources from which electricity must be generated, and the percentages of electricity that must be generated from such sources (s 46(1)(b))
 - determine that electricity thus produced may only be sold to the persons or in the manner set out in such notice (s 46(1)(c)),
 - determine that electricity thus produced must be purchased by the persons set out in such notice (s 46(1)(d)). The Regulator, in issuing a generation licence, is bound by any such ministerial determination (s 46(3)(a))
 - may facilitate the conclusion of an agreement to buy and sell power between the generator and the purchaser of that electricity (s 46(3)(b))
 - the Minister may, by notice in the Gazette, make regulations regarding the types of energy sources from which electricity must be generated (s 47(4)(n))
 - the percentages of electricity that must be generated from different energy sources (s 47(4)(o)).

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Recommendation

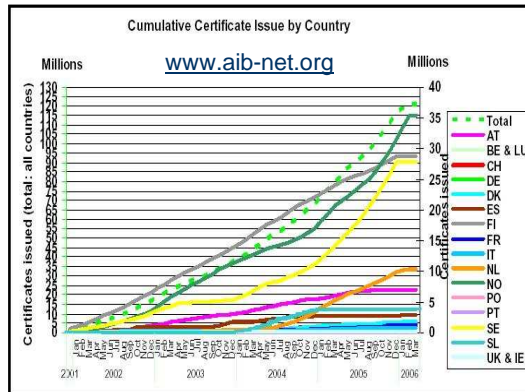
- Adopt the Basic Commitment as amended by the Principles and Rules of Operation (PRO)**
- RECS
 - provides a simple, clear, practical, implementable, administratively efficient method of operation and rules
 - presents a basis for clear definition of eligible TREC renewable energy resources and technologies
 - is a tried and tested system, is manageable yet robust, reducing the likelihood of error or fraud
 - will be supplementary and compatible with existing policy, legal and regulatory framework, and self sustainable with minimum Government involvement and
 - as the basis for many other international TREC systems is compatible with and provides potential for co-operation with other prominent TREC systems including the European Electricity Certification System (EECS)

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Motivation

- Monitoring of policy measures
 - be it support or obligation
- Separation of green attributes from physical power
- Avoidance of double-counting
- A tool to underpin market stimulation
- Export potential
 - USA, Canada, Pakistan and Jamaica
 - Iceland - even though it is not interconnected to any other country - is now selling renewable benefit into Austria, having acceded to the EC Renewables Directive (along with Norway).

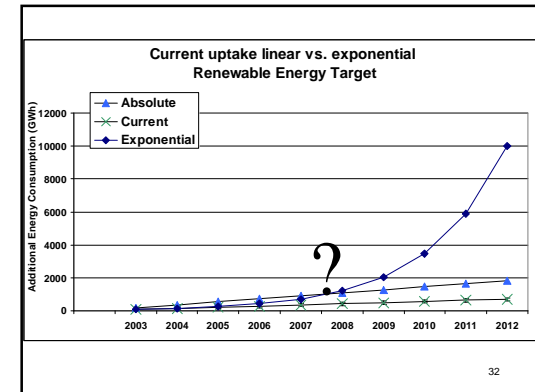
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Market assessment and contribution

- Current rate is insufficient & without Government support the 10 000 GWh will not be attained
 - Market price for renewable energy is unlikely to reach competitive levels at this point in time because of Eskom price pool.
 - TRECS will support the environment to reach the target set 2013.
- The present SA energy industry structure is not conducive to (RE) TRECS development and will need government support for sustainable dev.
- Results from existing market assessments
 - 1% of National consumers equivalent to RE target of 1780GWh.
 - Surveys reflects estimates of a much higher willingness to pay for TRECS
- European market has a market potential of 6 394 TRECS.
- TRECS will enable supply to geographically dispersed green customers, circumventing physical trade barriers.
- SA TRECS (compatible to RECS system of AIB) with the support of the Government, will open up the TREC'S markets world wide to energy generators & traders (including SA green products).

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Electrical RE regulation

- The Electricity Regulation Act 2006 envisages regulations regarding the type of energy sources from which electricity must be generated, and the percentages of electricity that must be generated from these different energy sources.
 - production/distribution/consumption obligation
- The introduction of a Tradable Renewable Energy Certificate (TREC) system will allow for monitoring and administration of obligations or other support mechanism
 - such as a 'top-up feed-in tariff'

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Levels of participation

- Considered by the project steering committee
 - None
 - Market participants create, govern and fund IB
 - Ministerial affirmatory statement supporting approach to establishment of voluntary system.
 - Basic Commitment as the basis for system
 - Association of market participants
 - DME facilitates
 - Funding
 - Notice of establishment of IB – government agency
- Early facilitation of the process
- Market demand through linkage of TREC system as a tool to administer support mechanism or ensure compliance with obligation.

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Implementation plan

- Activity summary and costs
- Critical Success Factors
 - Stakeholder buy-in and support
- Assumptions
 - Stakeholder availability
 - Funding

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Implementation timeline

Formation of National TREC Team				January	March	May	July	September	November	1st
1	Establish SA/TREC System	254 days	Thu 01/02/07							
2	Formation of National TREC Team	29 days	Thu 01/02/07							
3	Funding provision	41 days	Mon 05/02/07							
4	Establishment of the IB	145 days	Mon 12/03/07							
5	Prepare Domain Protocol	187 days	Mon 19/04/07							
6	Central Registration Database	188 days	Mon 19/04/07							
7	Demand stimulation policy, awareness camps	151 days	Mon 19/03/07							

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Implementation plan activities

- Formation of the 'National Team' analogous to that outlined in AIB 'Developing a National RECS framework' guidelines
- Capabilities/Appointments to support activities of the issuing body
 - Production Registrar (PR) to verify production device's compliance
 - Auditing Body (AB) to audit the continued fulfilment of conditions for RECS registration.
 - Central Monitoring Office (CMO) to operate the CRD
- Approval of Minister of TRECs NPO (Pvt. Sector or Govt Agency)
- NPO in consultation with Min acquire and invest funding
- NPO adopt PRO as national TRECs
- IB business plan developed
- Preparation, adoption and maintenance of Domain Protocol
- Implement relevant functions including PR, AB & CMO including
- Develop and commission registry software

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Thank you.



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