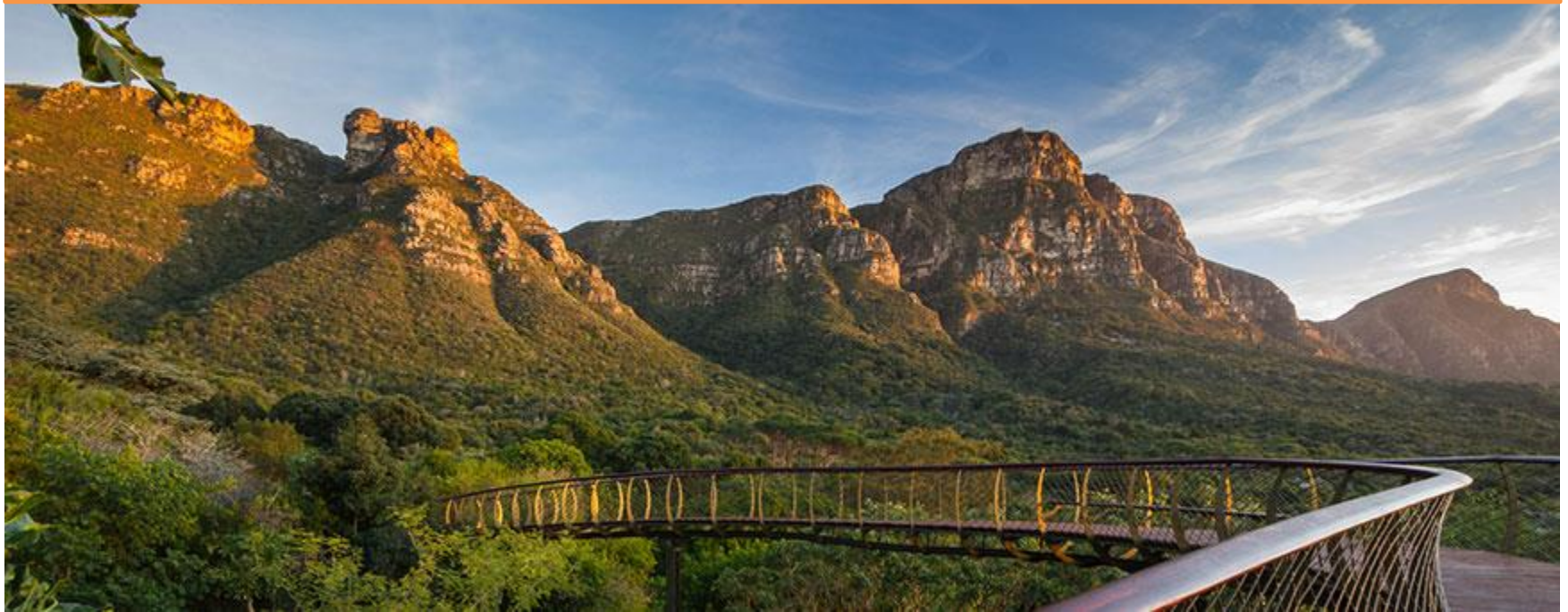


Renewable Energy Certificates (RECs) for carbon trading



Context



- Research project = sponsored by the British High Commission to South Africa
- Promethium Carbon = advisory firm specialising in climate change and carbon related issues
- Research purpose = establish viability of using Renewable Energy Certificates in the proposed offset scheme which will support the South African carbon tax (implementation date: early 2017)
- Results of the research indicates that Renewable Energy Certificates could complement the mainstream offsets credit options (CDM, GS and VCS)
- **Renewable energy certificates could be a starting point for future additional trading markets related to electricity in the region**

Carbon tax offset opportunity

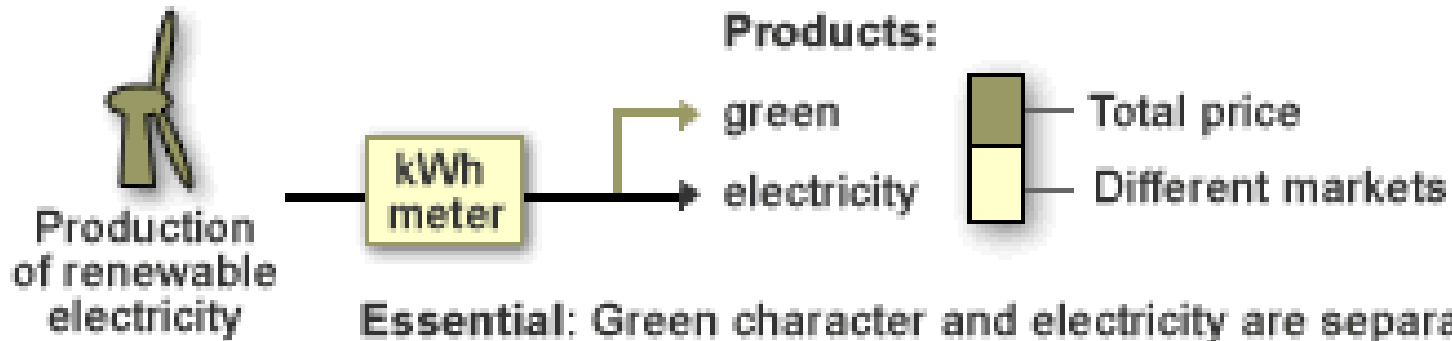
- High probability that the proposed SA carbon tax will have an associated **offset component**
- Under the current carbon tax design 5-10% of the carbon tax liability can be met through the purchasing of offset credits
- Starting level of carbon tax = R120 per ton CO₂. This is a positive incentive for offset providers to develop new emission reduction projects
- Currently eligible offset credits = Clean Development Mechanism, Voluntary Carbon Standard, Gold Standard
 - These schemes typically cater for the **larger projects** and the **development cost are high**. The **environmental integrity** of these credits is however guaranteed.
 - Co-benefit of including Renewable Energy Certificates = apply to **small scale renewable energy projects** that could meet **socio-economic development objectives**

<http://www.treasury.gov.za/>

Introduction to RECs

REC = Renewable Energy Certificate

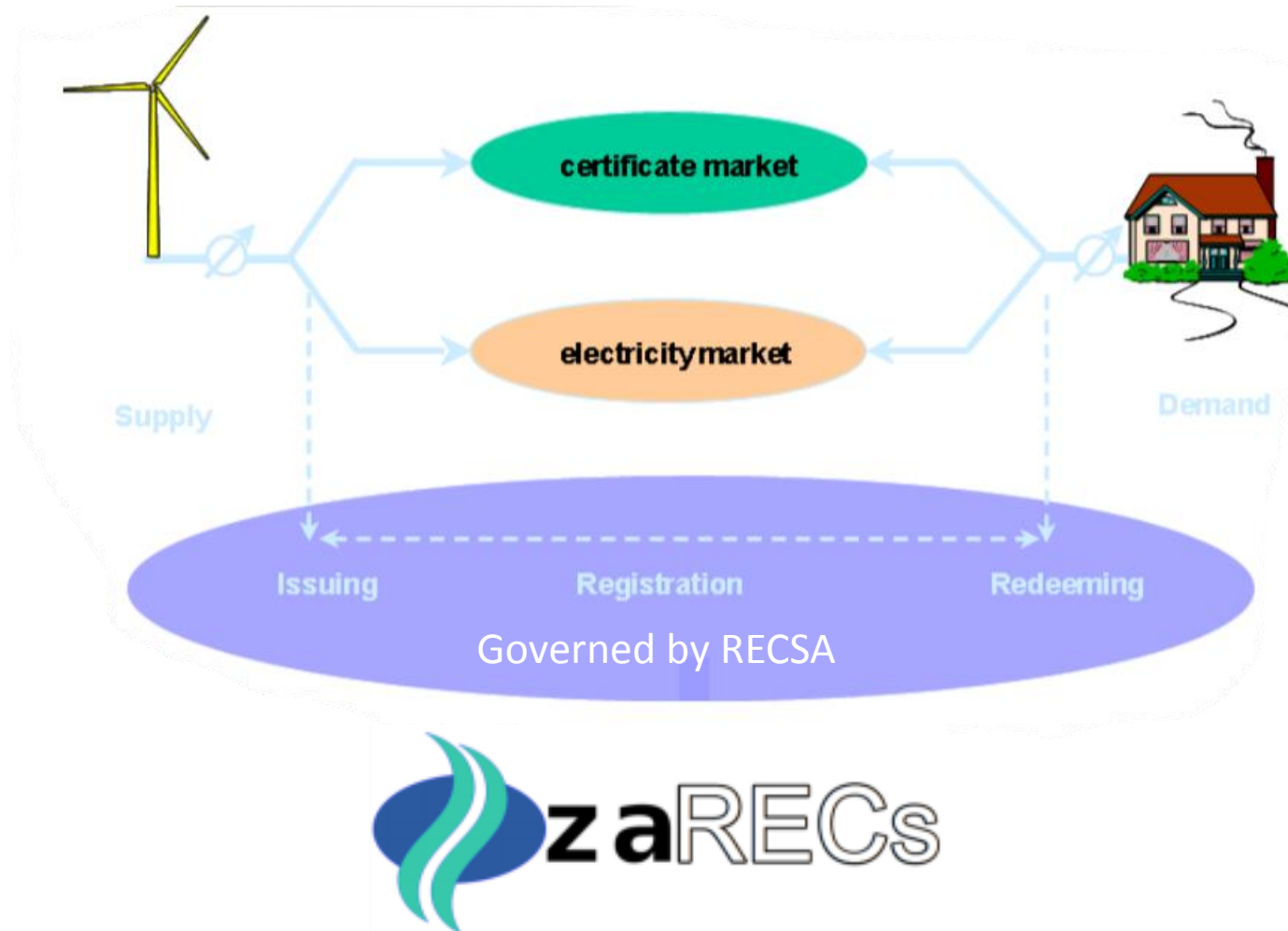
- Renewable Energy Certificates are electronic records that verify the origin of energy from registered renewable energy facilities
- **1 REC = 1 megawatt-hour (1 MWh) or 1000 kilowatt-hours (1000 kWh) of renewable electricity**
- Potential relevance to energy trading: sold separately from commodity electricity. Customers can buy green certificates regardless of whether they have access to the physical 'green' power



Source: EC 2000

Existing SA REC structure

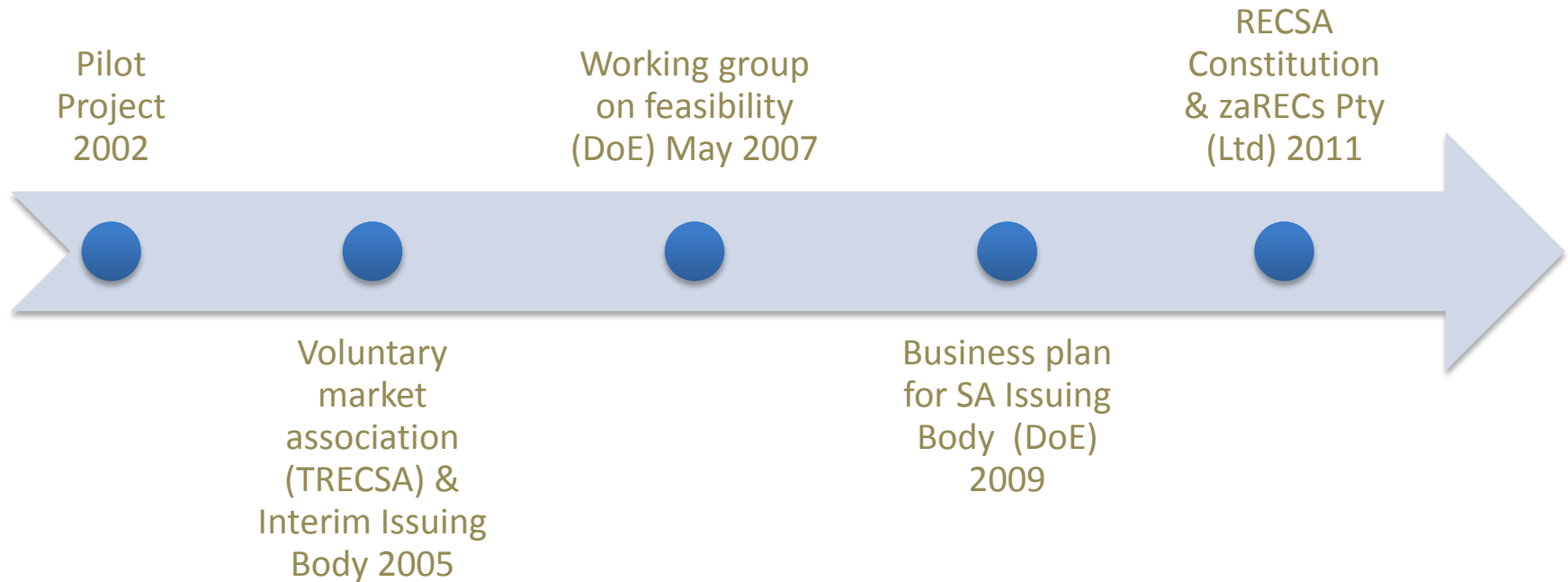
Certificate and electricity markets could be run on the same trading platform, for example the SAPP platform



RECSA and zaRECs

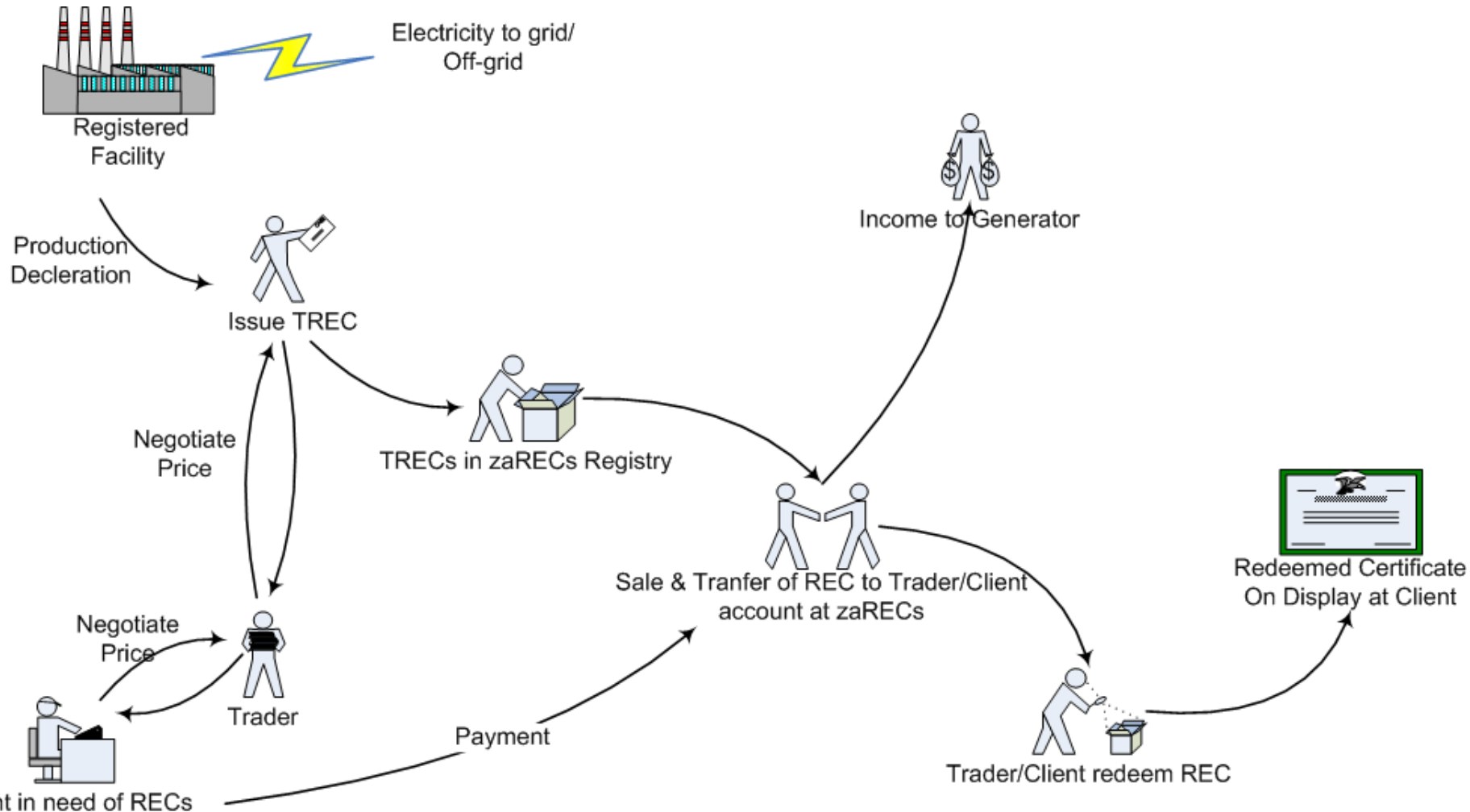
- RECSA is the South African Issuing Body that has established:
 - Domain Protocol for South Africa
 - Device Registration Protocols (Subsidiary Documents)
 - Generation declaration template
 - Transfer & Redemption Order
 - Certificate Registry
- zaRECs (Pty) Ltd administers the South African voluntary REC market along the lines of the EECS specifications on behalf of RECSA members

Renewable Energy Certificates in SA



- 60 546 MWh (RECs) have been issued (i.e. Listed on the registry)
- 55 480 MWh (RECs) have been redeemed (i.e. Sold or transferred)
- There are approximately 100 active market participants in the voluntary market association
- Certificates are readily available from typically small scale **rural PV, Bagasse and Hydro renewable energy facilities**

Trading in Renewable Energy Certificates



Project locations in SA

Registered:

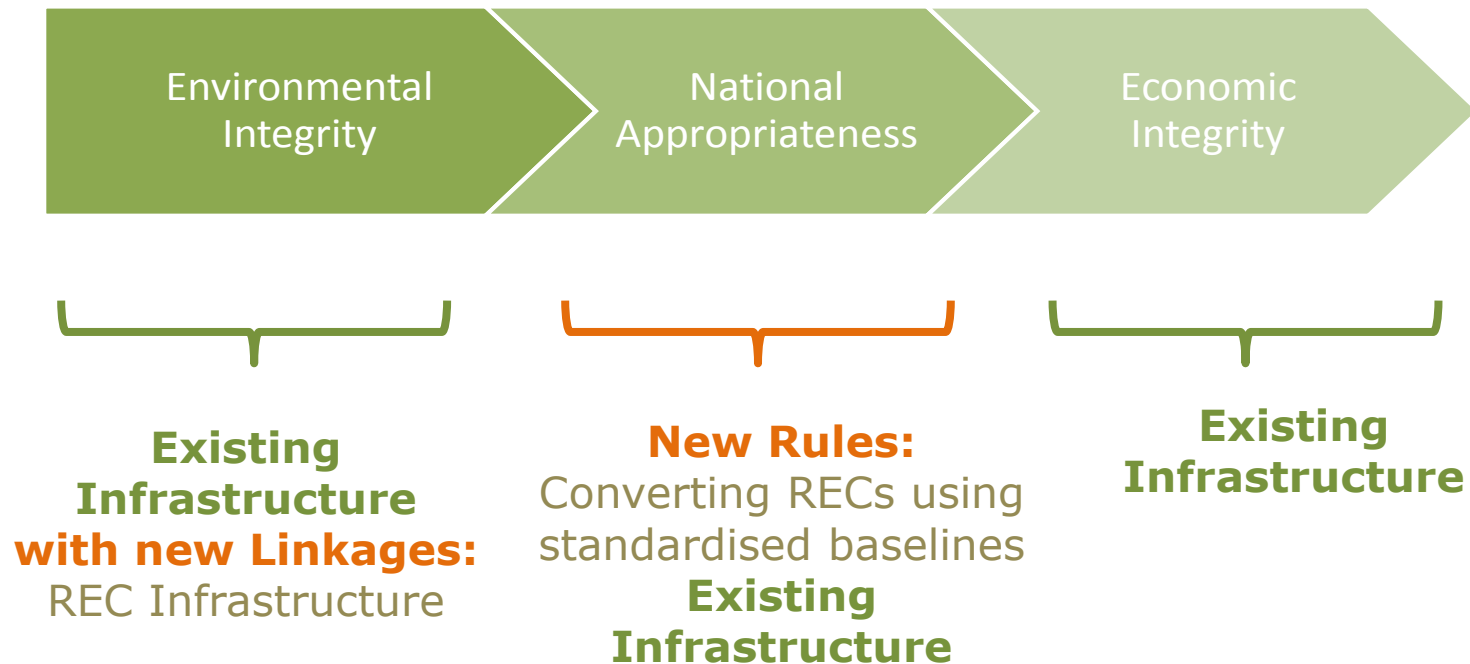
- Sugar – 6
- PV – 8
- Hydro – 1
- Hybrid – 2
- SWH – 1
- Wind – 2

Device Locations



Ensuring the Integrity of the System

Results of the research reveal three critical pillars for integrity:

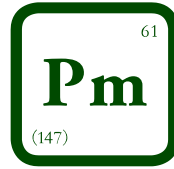


Conclusion

- The necessary infrastructure exists to trade Renewable Energy Certificates as carbon offsets in South Africa under the carbon tax
- **SAPP could provide an alternative infrastructure for trading Renewable Energy Certificates in the region**
- Renewable Energy Certificates could:
 - contribute to the carbon offset supply
 - create green jobs by overcoming the barriers associated with the development of small-scale renewable energy projects

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Thank you