



## Validation of the SAPP Grid Emission Factor

Carbon Check (Pty) Ltd, acting as a Designated Operating Entity (DOE), was contracted by GFA Envest GmbH under a capacity building program managed by the UNEP Risoe Centre on Energy, Climate and Sustainable Development in cooperation with the SAPP Co-ordination Centre under the auspices of the Southern African Development Community (SADC) to validate the Grid Emission Factor (GEF) for the Southern African Power Pool (SAPP). While comprised of 15 member utilities, the countries physically inter-connected to the SAPP are:

1. The Republic of Botswana
2. The Democratic Republic of Congo (DRC)
3. The Kingdom of Lesotho
4. The Republic of Mozambique
5. The Republic of Namibia
6. The Republic of South Africa
7. The Kingdom of Swaziland
8. The Republic of Zambia
9. Zimbabwe

Carbon Check (Pty) Ltd is accredited for the validation and verification of Clean Development Mechanism (CDM) projects under Sectorial Scope 1 – Energy Industries (Renewable/non-renewable sources) and is entitled to validate and verify such projects including the validation of related Grid Emission Factor (GEF).

The validation of GEF of the SAPP was conducted using the UNFCCC 'Tool to calculate the emission factor for an electricity system' (CDM EB63 – Annex 19, version 02.2.1), through which it was concluded that the Southern African Power Pool constitutes a Project Electricity System (PES). A conservative approach to the validation of the GEF data was adopted, including both desk review and a site visit to the Headquarters' of the Southern African Power Pool in Harare, Zimbabwe.

Carbon Check (Pty) Ltd hereby concludes that:

- I. the "tool to calculate the emission factor for an electricity system" has been applied in the calculations submitted by GFA Envest,
- II. that the GEF for the SAPP PES is both relevant and applicable to CDM projects under development in the aforementioned countries; and



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- III. changes in Host Country generation data, tools and methodology revisions need to be updated periodically
- IV. vintage period of supplied 'input data' is 2010

Supporting documentary evidence supplied, determined our approach and justified our outcome. To this end Carbon Check (Pty) Ltd concludes the following:

Grid Emission Factor (GEF) for the Southern African Power Pool (SAPP)	
OM (Operating Margin) Emission Factor (tCO <sub>2</sub> /MWh)	0.9346
BM (Build Margin) Emission Factor (tCO <sub>2</sub> /MWh)	0.9007
CM (Combined Margin) Grid Emission Factor	0.9176

Signed at Carbon Check (Pty) Ltd office Johannesburg on the 16 August 2012

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