

# VALIDATION REPORT

**Do-inc. business B.V.**

**Title of CPA:**

CPA01 “Landfill gas capture and utilisation project at Shongweni Landfill”

**Title of PoA to which CPA is to be included:**


“Landfill gas Utilisation Programme of South Africa”

Report No CCL0021/LGEP/10112011

Revision No 04

# VALIDATION REPORT

CDM VALIDATION REPORT NO CCL0021/LGEP/10112011

<b>CPA Title:</b> CPA01 "Landfill gas capture and utilisation project at Shongweni Landfill"		<b>Country:</b> Republic of South Africa		<b>Estimated CERs (tCO<sub>2</sub>e):</b> 36,569 annual average (CPA- 01)	
<b>Project Participant (Client):</b> Do-inc. business B.V. Mauritskade 55-D Amsterdam, 1092 AD The Netherlands		<b>Managing Entity:</b> ENER-G Systems (PTY) LTD Unit 2, The Firs, 5 Humber Street, Johannesburg, Gauteng, South Africa		<b>CPA Implementer:</b> ENER-G Systems Natural Power (Pty.) Ltd. Unit 2, The Firs, 5 Humber Street, Johannesburg, Gauteng, South Africa	
<b>GHG reducing measure/technology of the CPAs of the PoA:</b>		The reduction in GHG emission for the CPA of the PoA could be attributed to capture of landfill gas (LFG) for flaring and/or electricity generation. LFG mainly consists of CH <sub>4</sub> , with a high Global warming potential. It is flared to release CO <sub>2</sub> , much less intensive in GWP.			
<b>Report No.:</b> CCL0021/LGEP/10112011		<b>Revision:</b> 04		<b>Date of this report:</b> 28/11/2012	
<b>Technical Reviewer:</b> Vikash Singh				<b>Date of Approval:</b> 27/11/2012	
<b>Approved by (Final Report):</b> Adam Simcock 				<b>Date of approval:</b> 28/11/2012	
<b>GPS coordinates of the first CPA:</b>		The verified range of geographic coordinates of the CPA is /B29: <b>Latitude: -29.8277° Longitude: 30.7485°</b>			
<b>Organisational Unit:</b> Carbon Check (Pty) Ltd					
<b>Report Distribution:</b> <input type="checkbox"/> Unrestricted Distribution <input type="checkbox"/> Limited Distribution <input checked="" type="checkbox"/> No Distribution (without permission from the Client or responsible organisational unit)					
<b>Methodology</b>					
<b>Number:</b> ACM0001	<b>Version:</b> Version 13	<b>Title:</b> Flaring or use of landfill gas	<b>Scale:</b> Large Scale	<b>SS(s):</b> 13 <b>TA (s):</b> 13.1	
Carbon Check Pty Ltd., (CCL) is commissioned by Do-inc. business B.V. (the PP) to perform the validation of the Program of activities "Landfill gas Utilisation Programme of South Africa", with regard to the relevant requirements for CDM activities.					
<b>Summary of the CPA Validation and inclusion Opinion:</b> <input checked="" type="checkbox"/> The review of the CPA design documentation and the subsequent follow-up interviews have provided CCL with sufficient evidence for the determination of the CPA's fulfillment of all stated criteria in the PoA. In our opinion, the CPA meets all relevant UNFCCC requirements for the CDM. Therefore, CCL recommends the CPA for inclusion under the PoA to the CDM Executive Board (CDM-EB). <input type="checkbox"/> The review of the CPA design documentation and the subsequent follow-up interviews has not provided CCL with sufficient evidence for the determination of the CPA's fulfillment of all stated criteria in the PoA. Therefore, CCL will not recommend the CPA for inclusion under the PoA and will inform the PoA managing entity, CPA implementer(s) and the CDM Executive Board of this decision.					

Validation Team		Role				
Full Name	Appointed for Sectoral scopes (Technical Areas)	Team Leader	Local Expert	Team Member (Auditor)	Technical Expert	Technical Reviewer
Ravi Shankar	1.2, 2.1, 2.2, 3.1, 13.1	X			X	
Adam Simcock	--		X			
Amit Anand	1.2			X		
Anubhav Dimri	--			X		
Vikash Kumar Singh	1.2, 3.1, 13.1					X

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Validation Phase	Validation Status
<input checked="" type="checkbox"/> Desk Review	<input type="checkbox"/> Corrective Actions / Clarifications requested
<input checked="" type="checkbox"/> Follow up interviews	<input checked="" type="checkbox"/> Full approval and submission for registration
<input checked="" type="checkbox"/> Resolution of outstanding issues	<input type="checkbox"/> Rejected

## Validation Opinion

Under the validation (by means of document review and on-site interviews with stakeholders), the validation team considers that the CPA description in CPA titled- "CPA01 "Landfill gas capture and utilisation project at Shongweni Landfill" as described in the CDM-CPA-DD of Date 12/11/2012, version 03.3 is accurate and complete; meets the requirements to be included in the PoA titled "Landfill gas Utilisation Programme of South Africa", version: 03.3 and correctly applies the baseline and monitoring methodology ACM0001, version 13.

Standard auditing techniques have been used for the validation of the project. An analysis, as provided by the applied methodology, demonstrates that the proposed CPA is not a likely baseline scenario. Emission reductions attributable to the CPA are additional to any that would occur in the absence of the project activity. Given that the CPA is implemented as designed, the project is likely to achieve the estimated amount of emission reductions as specified within the CPA-DD /02/.

The validation is based on the information made available to Carbon Check (Pty) Ltd., as well as the engagement conditions detailed in this report. The validation has been performed following the VVM requirements.

The validation was executed in the following steps so far:

- Receipt of PoA DD, CPA DD (generic) and CPA DD (real case) version 01, dated 21/11/2011 for global stakeholder comments.
- Global stakeholder comment process (24/11/2011 to 23/12/2011)
- On-site visit with stakeholder interviews (19/12/2011-20/12/2011)
- Issue of checklist with corrective action requests (CARs) and clarification requests (CLs) and the draft validation report and protocol
- Desk review of revised DDs applying ACM0001, version 13
- Review of responses for CARs/CLs
- Issue of the final validation report and protocol

During the course of validation a total of 08 Corrective Action Requests (CARs) and 03 Clarification Requests (CLs) were identified on webhosted CPA-DD/01/ (version 01). Upon evaluation of responses provided by the Project Participant (CPA implementer) all the identified issues were closed successfully. Two Forward Action Requests (FAR) have been raised during course of validation.

The single purpose of this report is its use during the inclusion process (of the real case CPA) at the time of requesting registration. The review of the CPA-DD /02/, subsequent follow-up interviews, and further verification of references have provided Carbon Check (Pty) Ltd., with sufficient evidence to determine the fulfilment of stated criteria in the PoA DD /04/ and CPA DD /02/. In the opinion of Carbon Check (Pty) Ltd., the CPA meets all relevant UNFCCC requirements for the CDM if the underlying assumptions do not change. Carbon Check (Pty) Ltd., recommends the real case CPA and the PoA for registration.

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## Abbreviations

BE	Baseline Emissions
CAR	Corrective Action Request
CC	Cross Check
CCL	Carbon Check (Pty) Ltd
CDM	Clean Development Mechanism
CDM M&P	Modalities and Procedures CDM
CER(s)	Certified Emission Reduction(s)
CH <sub>4</sub>	Methane
CL	Clarification Request
CO <sub>2</sub>	Carbon dioxide
CO <sub>2</sub> e	Carbon dioxide equivalent
CME	Coordinating/managing entity and participants of PoA
CPA	CDM Programme Activity
CPA-DD	CDM Programme Activity design document
DR	Document Review
DNA	Designated National Authority
DOE	Designated Operational Entity
EB	Executive Board
EIA	Environmental Impact assessment
ER	Emission Reductions
FAR	Forward Action Request
GHG(s)	Greenhouse gas(es)
GWP	Global Warming Potential
I	Interview or any follow up action
IPCC	Intergovernmental Panel on Climate Change
LFG	Land fill gas
LoA	Letter of Approval
MoV	Means of Verification
MP	Monitoring Plan
MR	Monitoring Report
NGO	Non-governmental Organization
ODA	Official Development Assistance
PE	Project Emission
PoA	Programme of Activities
PoA-DD	Programme of Activities design document
PP(s)	Project Participant(s)
Ref.	Document Reference
RSA	Republic of South Africa
SD	Sustainable Development
SS(s)	Sectoral Scope(s)
UNFCCC	United Nations Framework Convention on Climate Change
VVM	Validation and Verification Manual
ZAR	South African Rand

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## 1 INTRODUCTION

Do-inc. business B.V. (hereafter referred as “PP”) has commissioned the DOE, Carbon Check (Pty) Ltd., to assess the information in the CDM-CPA-DD for the CPA titled “CPA01 “Landfill gas capture and utilisation project at Shongweni Landfill”” (hereafter called “the CPA”) against the requirements for including CPAs to the PoA “Landfill gas Utilisation Programme of South Africa” and further documentation requirements for including CPAs to a PoA. ENER-G Systems (PTY) LTD is the CME for the PoA.

This report summarizes the findings of the validation of the CDM Programme Activity Design Document (CPA-DD), performed on the basis of UNFCCC criteria for the PoAs under the CDM, as well as criteria given to provide for consistent programme operations, monitoring and reporting. The term “UNFCCC criteria” refers to Article 12 of the Kyoto Protocol, the CDM modalities and procedures, the modalities and procedures for CDM project activities, and the subsequent decisions by the COP/MOP and CDM Executive Board. In addition to these criteria, host country criteria are also taken into account.

### 1.1 Objective

The assessment of a CPA requesting to be included in a PoA shall ensure that all the requirements determined in the PoA are met. The assessment was performed on the basis of the eligibility and additionality criteria established in the PoA and the UNFCCC criteria for including CPAs to programme of activities under the Clean Development Mechanism (CDM), as well as criteria given to provide for consistent project operations, monitoring and reporting according to ACM0001, version 13.

### 1.2 Scope

The validation scope is defined as an independent and objective review by a Designated Operational Entity (DOE) of the specific CDM-CPA-DD to be included in the PoA. The DOE shall scrutinize the information in the CDM-CPA-DD to assess compliance with the eligibility criteria and criteria for demonstrating additionality established by the PoA, to check correctly application of ACM0001, version 13 and to check compliance with documentation requirements for CPAs.

The validation is not meant to provide any consulting towards the programme participants. However, stated requests for clarifications and/or corrective actions may have provided input for improvement of the project design.

## 2 METHODOLOGY

The validation consists of the following four phases:

- I. A desk review of the specific CPA-DD with relevant information to be included in PoA.
- II. On-site visit and follow-up interviews with programme stakeholders; and
- III. The resolution of outstanding issues and the issuance of the final validation report and opinion.

The following sections outline each step in more detail.

### 2.1 Document Review

The following table lists the documentation that was reviewed during the validation.

Reference No.	Documents
/01/	CPA-DD (webhosted version) - CPA01 “Landfill gas capture and utilisation project at Shongweni Landfill”, Version 1.0, Date -21/11/2011
/02/	CPA-DD (final version) - CPA01 “Landfill gas capture and utilisation project at Shongweni Landfill”, Version 03.3, Date – 12/11/2012
/03/	PoA-DD (webhosted version), for “Landfill Gas Utilisation Programme of South

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	Africa", Version 1.0, Date - 21/11/2011
/04/	PoA-DD (final version) for "Landfill Gas Utilisation Programme of South Africa", Version 03.3, Date – 12/11/2012
/05/	g-CPA DD Generic CPA (webhosted version) – CPA [CPA number; format CPA00 where 00 is the next available number: 01, 02 etc.] "Landfill gas capture and utilisation project at [landfill name]Landfill", Version XX, Date – dd/mm/yyyy
/06/	Letter of Approval from the DNA of South Africa, dated 29/05/2012, authorizing the ENER-G Systems (Pty) Ltd, to participate as project participant and coordinating/managing entity to participate in the CDM project.
/07/	Letter of Approval from the DNA of Netherlands, dated 26/06/2012 concerning approval of the participation of Do-inc business BV in the CDM programme of activities "Landfill Gas Utilisation Programme of South Africa"
/08/	Emission reduction calculation spread sheet corresponding to /01/
/09/	Emission reduction calculation spread sheet corresponding to /02/
/10/	Emission factor calculation sheet dated 02/10/2012 corresponding to /04/(fixed at PoA level)
/11/	Shongweni LFG financial model version 02.1
/12/	Modalities of Communication dated 28/11/2012
/13/	Enviroserv Waste Management (Pty) Ltd: Agreement relating to the development of a landfill gas CDM project at the Shongweni Landfill Site dated 22/05/2009
/14/	Department of Water Affairs and Forestry: Minimum requirement for waste disposal by landfill, second edition, 1998
/15/	Department of Water Affairs and Forestry: Minimum requirement for waste disposal by landfill, draft third edition, 2005
/16/	Department of Water Affairs and Forestry: Sawic waste treatment report 2011
/17/	CDM Executive Board: Clarifications regarding the "Procedures for registration of a programme of activities as a single CDM project activity and issuance of certified emission reductions for a programme of activities" EB60 Annex 26, version 01 of 15/04/2011
/18/	Eskom: Tariffs & Charges Booklet 2011/12
/19/	Eskom: Integrated Report 2010
/20/	NERSA: "South Africa Renewable Energy Feed-in Tariff (REFIT) Regulatory Guidelines" of 26/03/2009
/21/	NERSA: Media Announcement "Delays on timelines for the approval of REFIT Review Tariff" of 24/05/2011
/22/	Engineering news online : "Nersa moves to cut Refit tariffs just as SA promises to boost renewables" of 22/03/2011
/23/	Landfill Gas Recovery in South Africa: Status, Issues and Markets
/24/	Deloitte: Corporate Tax Rates 2011
/25/	Clean Development Mechanism Project Inclusion and CER sale agreement relating to the name Landfill gas to energy project by and between ENER-G Systems (Pty) Ltd and ENER-G Systems Natural Power (Pty) Ltd dated 26/04/2012
/26/	ENER-G Systems (Pty) Ltd: Declaration of voluntary participation
/27/	ENER-G Systems (Pty) Ltd: Declaration of Non-use of Official Development Assistance by CME
/28/	ENER-G Systems Natural Power (Pty) Ltd: Declaration of Non-use of Official Development Assistance by CPA
/29/	Golder Associates Africa (Pty) Ltd: Environmental Due Diligence Report of March 2011
/30/	Golder Associates Africa (Pty) Ltd: Technical Due Diligence Report of March 2011
/31/	Golder Associates: Appendix C Technical Due Diligence on Project Costs
/32/	ENER-G Systems (Pty) Ltd: CME Manual /1/WI-CME-GEN-00 Rev 00 Landfill Gas Utilisation Programme of South Africa /2/WI-CME-GEN-16 Rev 04 Inclusion Agreement Template /3/WI-CME-GEN-18 Rev 04 Eligibility Check Procedure /4/WI-CME-GEN-19 Rev 04 Eligibility Check Sheet /5/WI-CME-GEN-20 Rev 00 quality management system manual /6/WI-CME-GEN-29 Rev 00 Operate Gas Meter

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	<p>/7/WI-CME-GEN-30 Rev 00 Calibration of Gas Meter          /8/WI-CME-GEN-38 Rev 00 Flare Monthly Trip Sheet Annex 1          /9/WI-CME-GEN-38 Rev 00 Flare Trip Procedure          /10/WI-CME-GEN-39 Rev 00 Calibrate Flare Fixed Gas Analyser          /11/WI-CME-GEN-45 Rev 00 Training Procedure          /12/WI-CME-GEN-47 Rev 00 Instrument Replacement Procedure          /13/WI-CME-GEN-50 Rev 00 Flare Data Management          /14/WI-CME-GEN-51 Rev 00 Span Gas Handling and Storage          /15/WI-CME-GEN-52 Rev 00 Flow Meter Replacement          /16/WI-CME-GEN-53 Rev 00 Thermocouple Replacement          /17/WI-CME-GEN-54 Rev 00 Continuous Improvement of PoA Management System          /18/WI-CME-GEN-55 Rev 00 Monthly Report          /19/WI-CME-GEN-56 Rev 00 Template for Declaration on Non-Use of Conditional ODA          /20/WI-CME-GEN-57 LFG fin model</p>
/33/	<p>ENER-G Systems (Pty) Ltd: On sites training documents &amp; info          /1/Natural Power Head Office and Engineering Staff          /2/Call Out          /3/Contents Induction Training Manual          /4/1030/1150 kW Typical Control Cabinet Layout          /5/Ener-G Systems Site Induction          /6/Engine Oil System          /7/Engine trips &amp; faults          /8/Company Health, Safety and Welfare Information          /9/Landfill Gas Field Monitoring          /10/On the Job Training Record          /11/Site forms</p>
/34/	<p>Moore Stephens Chartered Accountants (SA):          /1/Ener-G Systems (Pty) Ltd Annual Financial Statements 31/03/2009          /2/Ener-G Systems (Pty) Ltd Annual Financial Statements 31/03/2010          /3/Ener-G Systems (Pty) Ltd Annual Financial Statements 31/03/2011</p>
/35/	<p>Invoice receipts on import of Technology:          /1/ Approved EUR1 S7373946 Scanned          /2/ Final Commercial Invoice          /3/ Final Packing List          /4/ Original BL 11ARBE0140 Scanned</p>
/36/	<p>“List of registered CDM PoA with CDM Executive Board” snapshot on 23/04/2012          “List of registered CDM landfill projects in South Africa” snapshot on 23/04/2012          “Search result for Shongweni Landfill on UNFCCC website” snapshot on 23/04/2012</p>
/37/	<p>Department of Environment Affairs and Tourism: Shongweni landfill site Permit for Enviroserv waste management (Pty) Ltd of 26/03/2007</p>
/38/	<p>Department of Environment Affairs and Tourism: Waste Management License for Shongweni landfill site issued for Enviroserv waste management (Pty) Ltd of 14/02/2011</p>
/39/	<p>ENER-G Systems (Pty) Ltd and ENER-G Systems Natural Power (Pty) Ltd : Operations, maintenance and services agreement of 2010</p>
/40/	<p>ENER-G Natural Power Limited: Quotation for Generator of 14/10/2009</p>
/41/	<p>ENER-G Systems (Pty) Ltd: EPC Contract Summary revision 02 of 15/09/2011</p>
/42/	<p>Synergistics Environmental Services (Pty) Ltd : Basic Assessment Report – Shongweni Landfill site of 20/09/2010</p>
/43/	<p>Golder Associates: Gas Resource Assessment of 03/2011</p>
/44/	<p>Do-Inc: Waste composition of 07/09/2011</p>
/45/	<p><a href="http://www.eskom.co.za/c/article/236/cdm-calculations/">http://www.eskom.co.za/c/article/236/cdm-calculations/</a></p>
/46/	<p>ENER-G Systems (Pty) Ltd and ENER-G Systems Natural Power (Pty) Ltd: CDM project inclusion and CER sale agreement of 26/04/2012</p>
/47/	<p>ENER-G Systems (Pty) Ltd: Eligibility Check Sheet of 26/11/2012</p>
/48/	<p>ENER-G Systems (Pty) Ltd: CPA Questionnaire Landfill Information form of 23/08/2012</p>



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/49/	Department of Energy: Request for Qualification and proposals for new generation capacity under the IPP procurement programme of 05/03/2012
/50/	Enviroserv waste Management: Landfill Management Plan, Shongweni Operational Manual
/51/	Local Stakeholder Consultation /1/ ENER-G Systems (Pty) Ltd, Enviroserv Waste Management (Pty) Ltd, Synergistics Environmental Services (Pty) Ltd: Project Information Meeting of 15/04/2010 /2/ Proof of Site Notices /3/ Synergistics Environmental Services (Pty) Ltd: Notification of Waste Management License Application /4/ Synergistics Environmental Services (Pty) Ltd: Registered Interested and Affected Party Database /5/ Synergistics Environmental Services (Pty) Ltd: Interested and Affected Party comments and responses /6/ Airshed Planning Professionals (Pty) Ltd: Air Quality Impact Assessment /7/ Biogas Technology Limited: Biogas enclosed ground flare system and booster set, Technical Manual /8/ Proof of Advertisement: ILANGA – 1-3/04/2010 /9/ Proof of Advertisement: The Mercury – 01/04/2010 /10/ Proof of Advertisement: Highway mail – 02/04/2010 /11/ Synergistics Environmental Services (Pty) Ltd: Notification of Waste Management License of 14/02/2011
/52/	Waste recycling group: Gas Test results
/53/	ENER-G Systems (Pty) Ltd: Board Decision on ENER-G Systems (Pty) Ltd as the CME for the PoA
/54/	Natural Power Limited: Shongweni Proposed Gas Layout – 03/03/2010
/55/	Jones and Wagener Consulting: Shongweni Landfill Site CAD sections
/56/	Ethekwini Municipality: Cost and Time Frame for the Shongweni Landfill Site to Grid
/57/	Reserve Bank: Prime rate data 11/01/2006 – 11/01/2011
/58/	ENER-G Systems (Pty) Ltd.: Megaflex calculator for Shongweni
/59/	Do-inc: FOD model for Shongweni Landfill

Background investigation and other referred documents/websites:

Reference No.	Documents
/B01/	CDM Executive Board: EB 55 Annex 1 “Clean Development Mechanism Validation and Verification Manual” version 01.2 of 30/07/2010
/B02/	CDM Executive Board: EB 65 Annex 4 “Clean Development Mechanism Validation and Verification Standard” version 02 of 25/11/2011
/B03/	CDM Executive Board: Programme of Activities Design Document Form (CDM-PoA-DD) Version 01 of EB 33 Annex 41 of 27/07/2007
/B04/	CDM Executive Board: Clean Development Mechanism program activity design document form (CDM-CPA-DD) version 01 of EB 33 Annex 42 of 27/07/2007
/B05/	CDM Executive Board: Approved baseline and monitoring methodology ACM0001 Version 13.0.0 “Flaring or use of landfill gas” of 11/05/2012
/B06/	CDM Executive Board: “Combined tool to identify the baseline scenario and demonstrate additionality” version 04 of 02/03/2012
/B07/	CDM Executive Board: “Tool to calculate project or leakage CO2 emissions from fossil fuel combustion” version 02 of 02/08/2008
/B08/	CDM Executive Board: “Emissions from solid waste disposal sites” version 06.0.1 of 02/03/2012
/B09/	CDM Executive Board: “Tool to calculate baseline, project and/or leakage emissions from electricity consumption” version 01 of 16/08/2008
/B10/	CDM Executive Board: “Project emissions from flaring” version 02 of 20/07/2012
/B11/	CDM Executive Board: “Tool to determine the mass flow of a greenhouse gas in a gaseous stream” version 02 of 06/03/2011
/B12/	CDM Executive Board: “Tool to determine the baseline efficiency of thermal or

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	electric energy generation systems” version 01 of 17/07/2009
/B13/	CDM Executive Board: “Tool to determine the remaining lifetime of equipment” version 01 of 16/10/2009
/B14/	CDM Executive Board: EB65 Annex 3 “Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities” from 25/11/2011
/B15/	CDM Executive Board: EB62 Annex 05 “Guidelines on the assessment of investment analysis” version 05 of 15/07/2011
/B16/	CDM Executive Board: EB 62 Annex 13 “Guidelines for the demonstration and assessment of prior consideration of the CDM” version 04 of 15/07/2011
/B17/	CDM Executive Board: EB 55 Annex 38 “Procedures for registration of a Programme of Activities as a single CDM Project Activity and issuance of certified emission reductions for a Programme of Activities” version 04.1 of 02/08/2010
/B18/	CDM Executive Board: EB 33 Annex 42 Component Project Activity Design document form (CDM-CPA-DD) version 01 of 27/07/2007
/B19/	CDM Executive Board: Tool to calculate the emission factor for an electricity system, version 02.2.1 of 29/09/2011
/B20/	Glossary of CDM terms, version 06, EB 66 Annex 6
/B21/	<a href="http://www.sawic.org.za">http://www.sawic.org.za</a>
/B22/	<a href="http://cdm.unfccc.int/">http://cdm.unfccc.int/</a>
/B23/	<a href="http://www.ipcc-nggip.iges.or.jp/">http://www.ipcc-nggip.iges.or.jp/</a>
/B24/	<a href="http://www.resbank.co.za">http://www.resbank.co.za</a>
/B25/	<a href="http://www.eskom.co.za">http://www.eskom.co.za</a>
/B26/	<a href="http://www.eex.com">http://www.eex.com</a>
/B27/	<a href="http://www.sars.gov.za/">http://www.sars.gov.za/</a>
/B28/	Bloomberg: Research Note – Clean Energy of 13/09/2011
/B29/	<a href="http://maps.google.com">http://maps.google.com</a>

The changes between the CPA-DD version 01 (real case), published for the 30 days stakeholder commenting period /01/ and the final version submitted for registration /02/ are addressed in the table 2 of the validation protocol as a part of this report.

The main changes between the CPA-DD, version 01 /01/ published for the 30 days stakeholder commenting period and the final version /02/ submitted for registration are presented in the below table as follows:

Topic	CPA-DD – GSC/01/	Final CPA-DD/02/	Assessment
PoA title	“Landfill Gas Utilisation Programme of South Africa”	“Landfill Gas Utilisation Programme of South Africa”	No Change
CPA title	CPA01 “Landfill gas capture and utilisation project at Shongweni Landfill”	CPA01 “Landfill gas capture and utilisation project at Shongweni Landfill”	No Change
CPA Implementer	ENER-G Systems Natural Power (Pty.) Ltd	ENER-G Systems Natural Power (Pty.) Ltd	CAR 3 was raised regarding the consistency of the name of CPA implementer in A.4.6 and Annex 1 of CPA-DD in this regard and is successfully closed.
Scope	13: Waste handling and disposal	13: Waste handling and disposal	No change
Methodology / Activity	ACM0001 (Version 13) / Large scale	ACM0001 (Version 13) / Large scale	No change
Amount of	391,051	255,983	The difference

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emission reductions (tCO <sub>2</sub> )			between amount of emission reduction in CPA-DD - GSC/01/ (391,051) and Final CPA-DD/02/ (255,983) is caused because now the new version of the tool is applied "Emissions from solid waste disposal sites" (version 06.0.1)": $\phi = 0.75$ (was 0.9); MCF = 1.0 (was 0.5) and the new parameter $\eta_{PJ}$ "Efficiency of the LFG capture system that will be installed in the project activity" has been introduced and set to 50% default value as per tool. Also, the value is revised due to using a more conservative value for emission factor. CAR 9 was raised in this regard and has been addressed.
Real case CPA starting Date	01/05/2012 (The starting date of the CPA01 is set upon signing of the flare & extraction unit purchase)	30/09/2013 (The starting date of the CPA01 is set upon signing of the flare & extraction unit purchase)	Starting date has been changed to 30/09/2013. This is an expected date of start of CPA. The same will be checked and confirmed during verification. FAR 1 has been raised
CPA Location	The CPA landfill is located at Shongweni Drive, Hillcrest, Durban, approximately 30 km from the city centre.  Latitude: S 29°49'44.16 Longitude: E 30°44'52.59	The CPA landfill is located at Shongweni Drive, Hillcrest, Durban, approximately 30 km from the city centre.  Latitude: S 29°49'44.16 Longitude: E 30°44'52.59	No change

## 2.2 Follow-up actions

In order to reach to a Validation Opinion a site visit along with an interview was planned for 19/12/2011 to 20/12/2011. Prior to the interview salient points to be discussed were planned. Date of interview, interviewee and points discussed are given in the following table.

Sr. No.	Date	Name and Role	Organization	Topic
/a/	19/12/2011 - 20/12/2011	David Cornish	ENER-G Systems (Pty) Ltd	<ul style="list-style-type: none"> <li>• CME coordinating CDM functions and responsibilities.</li> <li>• Discussion on eligibility criteria and inclusion of a</li> </ul>

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				<p>typical CPAs in the PoA including the real case CPA.</p> <ul style="list-style-type: none"> <li>• Discussion on Additionality justification on PoA level and on typical CPA level including the real case CPA.</li> <li>• Discussion on record keeping, monitoring plan and manual.</li> <li>• Discussion on double counting</li> <li>• Discussion on financing pattern(means of finance) of the CPAs(including real case) and involvement of public funding</li> <li>• Discussion on LSC (both on PoA level and real case CPA) and EIA done at CPA level including statutory clearances required for the implementation of the CPA.</li> </ul>
/b/	19/12/2011 - 20/12/2011	Kim van der Leeuw (Director)	Do-Inc	<ul style="list-style-type: none"> <li>• Project concept and design.</li> <li>• Decision to undertake the project as CDM project.</li> <li>• Discussion on stated goal and policy of the PoA.</li> <li>• Discussion on the operational and management arrangements of the PoA.</li> </ul>

Validation Team considered the views obtained in these interviews while arriving at Validation Opinion.

## 2.3 Resolution of outstanding issues

The objective of this phase of the validation is to resolve any outstanding issues, which need to be clarified prior to Carbon Check's conclusion on the CPA design. In order to ensure transparency a validation protocol is customised for the programme. The protocol shows in transparent manner criteria (requirements), means of verification and the results from validating the identified criteria. The validation protocol serves the following purposes:

- It organises, details and clarifies the requirements a CPA is expected to meet;
- It ensures a transparent validation process where the validator will document how a particular requirement has been validated and the result of the validation.

The completed validation protocol for the CPA01 "Landfill gas capture and utilisation project at Shongweni Landfill" is enclosed in Appendix A to this report.

Findings established during the validation could either be seen as a non-fulfilment of CDM criteria or where a risk to the fulfilment of programme objectives is identified. Corrective action requests (CAR) are issued, where:

- (i) The project participants have made mistakes that will influence the ability of the project activity to achieve real, measurable additional emission reductions;

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- (ii) The CDM requirements have not been met;
- (iii) There is a risk that emission reductions cannot be monitored or calculated.

A request for clarification (CL) may be raised if information is insufficient or not clear enough to determine whether the applicable CDM requirements have been met.

A forward action request (FAR) may be raised during validation to highlight issues related to project implementation that require review during the first verification of the project activity.

**Figure 1 Validation protocol tables**

<b>Validation Protocol, Table 1 - Requirement checklist</b>					
<b>Checklist Question</b>	<b>Ref.</b>	<b>MoV</b>	<b>Comments</b>	<b>Draft Conclusion</b>	<b>Final Conclusion</b>
The various requirements in Table 1 are linked to checklist questions the project should meet. The checklist is organized in seven different sections.	Makes reference to documents where the answer to the checklist question or item is found.	Explain how conformance with the checklist question is investigated. Examples are document review (DR), interview or any other follow-up actions (I), cross checking (CC) with available information relating to projects, (N/A) means not applicable.	The discussion on how the conclusion is arrived at and the conclusion on the compliance with checklist question so far.	OK is used if the information and evidence provided is adequate to demonstrate compliance with CDM requirements. For CAR, CL and FAR see the definitions above.	OK is used if the information and evidence provided is adequate to demonstrate compliance with CDM requirements.

<b>Validation Protocol, Table 2 - Resolution of Corrective Action Requests and Clarification</b>			
<b>Corrective action requests and/or clarification requests</b>	<b>Reference to Table 2</b>	<b>Response by project participants</b>	<b>Validation Conclusion</b>
The CAR and/or CLs raised in table 1 are repeated here.	Reference to the checklist question number in Table 1 where the CAR or CL is explained.	The responses given by the project participants to address the CARs and/or CLs.	The validation team's assessment and final conclusion of the CARs and/or CLs.

<b>Validation Protocol, Table 3 - Forward Action Requests</b>			
<b>Forward action request</b>	<b>Reference to Table 2</b>	<b>Response by project participants</b>	<b>Validation Conclusion</b>
The FAR raised in table 1 is repeated here.	Reference to the checklist question number in Table 1 where the FAR is explained.	Response by the project participants on how forward action request will be addressed prior to first verification.	

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## 2.4 Internal quality control

Before the assessment begins, members of the team covering the technical area(s), sectoral scope(s) and relevant host country experience for evaluating the CDM PoA/CPA are appointed. The validation report including the validation findings underwent a technical review. A technical reviewer qualified in accordance with Carbon Check's qualification scheme for CDM validation and verification performed the technical review.

## 2.5 Validation team and the technical reviewer(s)

The validation team and the technical reviewers consist of the following personnel:

Validation Team		Type of Involvement						
Full Name	Appointed for Sectoral scopes (Technical Areas)	Supervision of work	Desk review	Site visit & Interview	Report & protocol writing	Technical Expert Input	Reporting support	Technical Reviewer
Ravi Shankar	1.2, 2.1, 2.2, 3.1, 13.1	X	X	X		X		
Adam Simcock	--			X				
Amit Anand	1.2		X				X	
Anubhav Dimri	--		X		X		X	
Vikash Kumar Singh	1.2, 3.1, 13.1							X

## 3 VALIDATION SUMMARY

Through means of document review and on-site interviews with stakeholders, the validation team considers that the CPA description in CPA titled "CPA01 "Landfill gas capture and utilisation project at Shongweni Landfill"", as described in the CDM-CPA-DD of Date 12/11/2012, version 03.3 is accurate and complete; meets the requirements to be included in the PoA titled "Landfill gas Utilisation Programme of South Africa" and correctly applies the baseline and monitoring methodology ACM0001, version 13.

During the course of validation a total of 08 Corrective Action Requests (CARs) and 03 Clarification Requests (CLs) were identified on webhosted CPA-DD/01/ (version 01). Upon evaluation of responses provided by the Project Participant (CPA implementer) all the identified issues were closed successfully. Two Forward Action Requests (FAR) have been raised during course of validation.

The issues raised, PP response and the assessment by validation team are included in Table 2 and Table 3 of Appendix A of validation protocol.

### 3.1 CPA Design Document

The CPA-DD is compliant with relevant form and guidance as provided by the CPA-DD template /B04/ for the POA and UNFCCC requirements under the PoA.

CCL considers that the guidelines for the completion of the CPA documents in their most recent version have been followed. The Managing Entity and the CPA Implementer/s provided relevant information in the applicable CPA-DD sections.

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## 3.2 CPA Description

The following description of the proposed CDM programme activity as per CPA-DD /02/ was verified:

The project is developed under the Large-Scale Programme of Activities (PoA) entitled "Landfill gas Utilisation Programme of South Africa". This programme aims to reduce GHG emissions by capturing Landfill gas at solid waste disposal sites in South Africa. The CDM programme activities (CPAs) under the PoA will be implemented in the territory of the Republic of South Africa. Thus, the PoA aims to contribute to the sustainable development of South Africa, reduce Greenhouse Gas (GHG) emissions and adverse environmental effects of landfill gas; and increase the use of renewable energy sources in South Africa. The coordinating/management entity (CME) of this PoA is ENER-G Systems (Pty) Ltd.

The proposed large scale CDM Programme activity "CPA01 "Landfill gas capture and utilisation project at Shongweni Landfill"" (hereafter referred to as the "The CPA") is developed by ENER-G Systems Natural Power (Pty) Ltd. (hereafter referred to as "CPA implementer"). The CPA involves reduction of greenhouse gases through the destruction of methane gas and adverse environmental effects of the landfill gas through capturing the landfill gas at Shongweni Landfill. The CPA is located at Shongweni Drive, Hillcrest, Durban, approximately 30 km from the city centre. The CPA has GPS coordinates: 29°49'44.16 (-29.8277°) S; 30°44'52.59 (30.7485°) E. The CPA geo-coordinates and physical address details have been verified during the site visit including the geo-coordinates.

The Shongweni landfill is located approximately 30 km from Durban and is operational since 1976. The landfill currently covers an area of approximately 8 hectares. On average, some 202,000 tonnes of waste are deposited per year at the site. The technical lifetime of the equipment is 15 years based on technical due diligence report /30/, the operational lifetime of the CPA is 15 years. The Shongweni Landfill is owned and operated by Enviroserv Waste Management (Pty) Ltd. ENER-G Systems Natural Power (Pty.) Ltd. has obtained a gas rights agreement for the utilization of the landfill gas produced at Shongweni from Enviroserv Waste Management (Pty) Ltd. /13/

The CPA complies with the following technological scenario as described in the PoA-DD /04/ and the same has been verified from the onsite interview, communication with CME and agreement between site owner (Enviroserv Waste Management (Pty) Ltd) and CME (ENER-G Systems (Pty) Ltd/13/:

The CPA consists of two phases:

- Phase 1: capture & flaring of landfill gas.
- Phase 2: electricity generation from the captured landfill gas.

CPA includes both the types of CPA stated in PoA-DD:

- Type F
- Type EG

For phase 1 CPA type is F and for phase 2 CPA type is EG. This is in line with the requirements of the applicable methodology for PoAs *"In case the PoA contains several types of CPAs, the actual CPA-DD submitted for the purpose of registration of the PoA shall contain all information required as per the latest approved version of the "Guidelines for completing the component project activity design document form" for each type of actual CPA, to be validated by a DOE and submitted for the registration to the Board."*

In anticipation of the PPA, the CPA will invest only in the installations to capture and flare the landfill gas (phase 1) and only once the project has achieved CDM status to justify the investment. Phase 2 will commence once the Power Purchase Agreement (PPA) has been signed.

As per the CPA DD /02/, phase 1 of the technology comprises of:

- 1) Network of vertical and or horizontal wells;
- 2) Collection piping system;
- 3) Gas pre-treatment system;
- 4) Enclosed Flare;

and in phase 2 the following technology will be added:

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- 5) Electricity generation unit;
- 6) Transformers and grid connection.

The design and development phase of project has not started yet; it is scheduled to start on 02/09/2013 – 04/10/2013. The expected start date of commercial operation of the project is 01/05/2014 which is found to be satisfactory.

The CPA is expected to result in an average annual emission reduction of 36,569 tCO<sub>2</sub>e /02/, /08/ for renewable crediting period of 7 years /02/. The start date of crediting period of the CPA as per the CPA-DD /02/ is 01/05/2014 the date of the landfill gas extraction system starting operation at the Shongweni landfill or the date of including CPA01 under the registered PoA, whichever comes later. Moreover, the expected starting date of crediting period for the CPA is in-line with the provisions provided under registered CPA-DD template.

The CPA01 has not received and will not be seeking public funding from Annex 1 countries; hence no official development assistance (ODA) will be diverted from any funding from Annex 1 parties /28/. The expected starting date of the CPA01, 30/09/2013 is set upon signing of the flare & extraction unit purchase and is after the first publication for global stakeholder consultation. i.e. 24/11/2011.

The validation team has assessed from UNFCCC website /B22/ and on-site interviews /a/ /b/ that there is no other similar PoA or CDM project occurring in the CPA area and the CPA is neither registered as an individual CDM project activity or is part of another Registered PoA. The same has been confirmed by an inclusion agreement between CME and the CPA implementer /46/.

The information presented in the CPA documents is consistent with the actual planning and implementation of the activity confirmed in the following ways:

- A review and cross check of data and information.
- During site visit, via interviews of relevant stakeholder and personnel with project specific knowledge. In case of doubt, further cross checks through additional interviews were conducted.
- A review of information related to similar projects or technologies, which have been used if available to validate the accuracy and completeness of the project description.

CAR 2 was raised with regard to project description and is successfully closed.

In conclusion, CCL confirms that the CPA project description is sufficiently accurate and complete in order to comply with the requirements of the PoA.

## 3.2.1 CPA Boundary

The CPA boundary was assessed considering information gathered from the physical site inspection, interviews and secondary evidence received on the design of the CPA.

Validation team confirms that the project boundary for the CPAs is in accordance with the applied methodology /B05/ and the sources and gases within the boundary have been considered in a clear manner as detailed below:

A) For the purpose of determining project activity emissions, each CPA includes:

- CO<sub>2</sub> emissions on-site fossil fuel consumption due to the project activity other than for electricity generation;
- CO<sub>2</sub> emissions from on-site electricity use;

B) For the purpose of determining baseline emissions, each CPA includes the following emissions sources:

- CH<sub>4</sub> emissions from decomposition of waste at the landfill site;
- CO<sub>2</sub> emissions from electricity consumption.



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C) The spatial extent of each CPA comprises:

- All equipment installed and used as part of the project activity for the landfill and landfill gas collection system;
- Flaring, facilities installed and used as part of the project activity;
- All equipment installed and used as part of electricity generation facilities installed and used as part of the project activity;
- South African national grid.

Validation team based on the above confirms that the project boundary for all the technological scenarios as documented in the CPA-DD /02/ are justified for the project activity and are fully in line with the requirements set by the PoA-DD /04/ and the applied methodology /B05/.

Validation team has checked the geographical boundary, geo-coordinates and the map provided for the CPA from the CPA-DD and the interview and observation during the site visit. Validation team confirms that the CPA is within the geographical boundary of PoA, i.e. Republic of South Africa. The review of CPA DD /02/ reveals the geo-coordinates as: 29°49'44.16 (-29.8277°) S; 30°44'52.59 (30.7485°) E. The sources and gases within the boundary have been considered in a clear manner.

### 3.3 Eligibility Criteria for CPA Inclusion

Review of PoA DD /02/, g-CPA DD template /05/ and on-site interview with representatives of CME reveals that the CME of the PoA employs clear and unambiguous criteria for the inclusion of the CPAs. The eligibility criteria have been stated and validation team confirms the eligibility criteria are in line with requirement of § 14, annex 3 of EB 65 /B14/. Additionality and applicability of the applied methodology are the eligibility criteria as per the PoA DD, which is deemed appropriate and acceptable to the validation team. The eligibility criteria can be checked at the CPA level by the CME and shall be confirmed by the DOE before inclusion of the CPAs in the PoA. The subject CPA meets all eligibility criteria of the PoA as assessed below:

Sl. No	Eligibility Criteria as stated in section B.2 of the CPA-DD /02/ and section A.4.2.2 of the PoA-DD/04/	Status marked in CPA-DD /02/	Assessment by the validation team
1.	Ensure that the CPA is located within the Republic of South Africa and hence its boundary is consistent with the geographical boundary of the PoA.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> NO	<p>Through the validation of geographical coordinates provided in the CPA-DD during the site visit and the eligibility check sheet provided as evidence by CME, /47/ it was confirmed that CPA lies within the geographic boundary of South Africa.</p> <p><b>Conclusion:</b> Based on the above assessment, validation team concludes that the CPA complies with this eligibility criterion of the PoA.</p>
2.	Confirm that the CPA is neither registered as an individual CDM project nor included under another registered PoA.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> NO	<p>Validation team based on review of the signed inclusion agreement /46/ and the supporting documents provided as information from UNFCCC database /36/ confirms that the CPA is neither registered as an individual CDM project nor included under another registered</p>

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			<p>PoA.</p> <p><b>Conclusion:</b> Based on the above assessment, validation team concludes that this eligibility criteria of the PoA is complied by the subject CPA.</p>
3.	<p>Provide documentary evidence that the start date of the CPA is not prior to the commencement of validation of the programme of activities.</p>	<input checked="" type="checkbox"/> Yes  <input type="checkbox"/> NO	<p>Validation based on the expected start date of the CPA provided in CPA-DD is 30/09/2013. /02/ Also the timeline of events has been reviewed for this. No EPC contract/ major purchase order or similar has been signed prior to commencement of validation of the PoA. Hence, it is confirmed that the start date of the CPA is not prior to the commencement of validation of the programme of activities.</p> <p><b>Conclusion:</b> Based on the above assessment, validation team concludes that this eligibility criteria of the PoA is complied by the subject CPA.</p>
4.	<p>The CPA confirms that the following criteria apply: Either (a) OR (b): (a) The project activity involves the installation of a new LFG capture system in a new or existing SWDS; OR (b) The project activity concerns an investment into an existing LFG capture system to increase the recovery rate or change the use of the captured LFG, provided that: (i) The captured LFG was vented and not used prior to the implementation of the project activity; AND (c) The project activity concerns the flaring of LFG (CPA TYPE F) and/or use the captured LFG for generating electricity (CPA TYPE EG); AND (d) The project activity does not reduce the amount of organic waste that would be recycled in the absence of the project activity. Which relate to the applicability criteria of ACM001 version 13.</p>	<input checked="" type="checkbox"/> Yes  <input type="checkbox"/> NO	<p>Validation team based on review of Gas Resource Assessment Report /43/ , information provided in eligibility check sheet /47/ and observations and interviews during the site visit confirms that :</p> <ul style="list-style-type: none"> <li>• The project activity involves the installation of a new LFG capture system in a new or existing SWDS.</li> <li>• The project activity concerns the flaring of LFG (CPA TYPE F) and/or use the captured LFG for generating electricity (CPA TYPE EG);</li> <li>• The project activity does not reduce the amount of organic waste that would be recycled in the absence of the project activity.</li> </ul> <p><b>Conclusion:</b> Based on the above assessment, validation team concludes that this eligibility criteria of the PoA is complied by the subject CPA.</p>
5.	<p>Confirm that in the baseline scenario the most plausible baseline scenario is: a. Total release of LFG</p>	<input checked="" type="checkbox"/> Yes	<p>Validation team based on review of Due Diligence Report prepared by Golder Associates /30/ confirms that the baseline scenario is total release</p>

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	<p>from the SWDS</p> <p>b. In the case that the LFG is used in the project activity for generating electricity;</p> <p>(i) For electricity generation: that electricity would be generated in the grid (CPA TYPE EG only);</p> <p>Which relate to the applicability criteria of ACM001 version 13 and</p> <p>Confirm that the CPA mitigates methane emissions from a specific existing SWDS.</p> <p>Which relates to the application criteria "Application A" of the <i>Tool "Emissions from solid waste disposal sites" version 06.0.0</i></p>	<p><input type="checkbox"/> NO</p>	<p>of LFG from the SWDS.</p> <p>Based on the review of a quotation on cost and time frame for the connection of Shongweni Landfill Site to Grid/56/, and Technical Due Diligence Report /29/ which states that ERPA is being negotiated for the site, it can be confirmed that CPA has an intention of grid connectivity.</p> <p><b>Conclusion:</b> Based on the above assessment, validation team concludes that this eligibility criteria of the PoA is complied by the subject CPA.</p>
6.	<p>Confirm that the CPA complies with either scenario A or C.III of the <i>Tool to calculate baseline, project and/or leakage emissions from electricity consumption</i> (Version 01)</p>	<p><input checked="" type="checkbox"/> Yes</p> <p><input type="checkbox"/> NO</p>	<p>Validation team based on review of Agreement between the site owner and the CME /46/, dated 22/05/2009 confirms that the CPA complies with scenario C.III of the tool, i.e. electricity consumption from the grid/56/ /29/.</p> <p>The contract with the owner of the site stating that the CPA will have access to their electricity supply was provided.</p> <p><b>Conclusion:</b> Based on the above assessment, validation team concludes that this eligibility criteria of the PoA is complied by the subject CPA.</p>
7.	<p>Confirm that in the baseline no requirements to destroy methane nor an existing LFG capture and destruction system exists (hence that only Case 1 in Table 7 is applicable).</p>	<p><input checked="" type="checkbox"/> Yes</p> <p><input type="checkbox"/> NO</p>	<p>Validation team based on review of waste license /38/, confirms that neither requirements to destroy methane nor an existing LFG capture and destruction system exists.</p> <p><b>Conclusion:</b> Based on the above assessment, validation team concludes that this eligibility criteria of the PoA is complied by the subject CPA.</p>
8.	<p>Ensure the project IRR is used as the financial indicator for CPA TYPE F or TYPE EG when performing the investment analysis.</p>	<p><input checked="" type="checkbox"/> Yes</p> <p><input type="checkbox"/> NO</p>	<p>Validation team reviewed the following documents to assess the eligibility criteria: The data in financial model sheet provided /11/, and the CPA-DD /02/</p>

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			<p>confirms that project IRR is used as financial indicator for CPA type F. The evidence has been provided in the form of eligibility check sheet. /47/</p> <p>For the CPA type EG income from electricity generation is also included. The data in financial model sheet provided /11/, and the CPA-DD /02/ confirms project IRR is used as the financial indicator for CPA type EG. The evidence has been provided in the form of eligibility check sheet. /47/</p> <p><b>Conclusion:</b> Based on the above assessment, validation team concludes that the CPA 1 complies with eligibility criterion of the PoA.</p>
9.	Ensure that when performing investment analysis the guidance provided in <b>Table 6</b> of the PoA-DD is followed	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> NO	<p>The guidance provided in Table 6 of the PoA-DD has been followed for performing investment analysis of CPA 1. This table is in compliance of the “Guidelines on the assessment of Investment Analysis” EB 62 Annex 5, version 05. /B15/ The evidence has been provided in the form of eligibility check sheet stating that the parameters provided in the guidance have been used for the investment analysis. /47/</p> <p><b>Conclusion:</b> Based on the above assessment, validation team concludes that the CPA 1 complies with eligibility criterion of the PoA.</p>
10.	Ensure that a stakeholder consultation has been performed at CPA level and all stakeholder comments have been addressed.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> NO	<p>Validation team reviewed the documents provided as Local Stakeholder Consultation /51/ and include the proof of newspaper advertisement, letters to interested and affected parties, site notice, presentation of the project, air quality impact assessment, notification of waste management licence application, user and operation manuals and comments by interested and affected parties. It is confirmed that a stakeholder consultation has been performed at CPA level and all stakeholder comments have been addressed.</p> <p><b>Conclusion:</b> Based on the above assessment, validation team concludes that this eligibility criteria of the PoA is complied by the subject CPA.</p>

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11.	Ensure that, if required by relevant South African legislation, an Environmental Impact Assessment (EIA) has been performed and approved by the designated local environmental authority.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> NO	<p>Validation team based on review of Basic assessment report /42/, which includes EIA and the waste management license /37/ /38/, confirms that an Environmental Impact Assessment (EIA) has been performed and approved by the designated local environmental authority.</p> <p><b>Conclusion:</b> Based on the above assessment, validation team concludes that this eligibility criteria of the PoA is complied by the subject CPA.</p>
12.	Confirm that no diversion of official development assistance has taken place in case the CPA receives funding from an Annex I parties.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> NO	<p>Validation team based on review of the signed declaration from CPA /28/ implementer stating that no ODA is involved from the Annex I parties.</p> <p><b>Conclusion:</b> Based on the above assessment, validation team concludes that this eligibility criteria of the PoA is complied by the subject CPA.</p>
13.	The CPA owner shall provide evidence of the ownership of and/or permit for the use of the landfill gas produced at the project site.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> NO	<p>Validation team based on review of the agreement between the SWDS owner and the CPA owner on the use of the landfill gas at the project site /13/, and the waste management license /37//38/ for landfill gas extraction confirms that the CPA owner has provided evidence of the ownership of and/or permit for the use of the landfill gas produced at the project site.</p> <p><b>Conclusion:</b> Based on the above assessment, validation team concludes that this eligibility criteria of the PoA is complied by the subject CPA.</p>
14.	The CPA owner shall have contractually agreed with the CME on how the CERs or revenue generated are to be shared.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> NO	<p>Validation team based on review of the inclusion agreement /46/ pages 15 and 16 agreement that detail how the CERs and the revenue generated would be shared confirms that the CPA owner has contractually agreed with the CME on how the CERs or revenue generated are to be shared.</p> <p><b>Conclusion:</b> Based on the above assessment, validation team concludes that this eligibility criteria of the PoA is complied by the subject CPA.</p>
15	The CPA shall perform a Common practice analysis in the CPA-DD as per guidance provided in the PoA-DD.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> NO	<p>Validation team based on review of eligibility check sheet /47/ provided as evidence and the details provided in PoA-DD /04/ and CPA-DD /02/ confirms that CPA has performed</p>

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			<p>common practice analysis in the CPA-DD as per guidance provided in the PoA-DD.</p> <p><b>Conclusion:</b> Based on the above assessment, validation team concludes that this eligibility criteria of the PoA is complied by the subject CPA.</p>
16	Confirm that the CPA doesn't use methodology ACM0001 in combination with any other methodology.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> NO	<p>Validation team based on review of eligibility check sheet /47/ signed by CPA owner and CME and CPA DD /02/ provided as evidence confirms that the CPA doesn't use methodology ACM0001 in combination with any other methodology.</p> <p><b>Conclusion:</b> Based on the above assessment, validation team concludes that this eligibility criteria of the PoA is complied by the subject CPA.</p>
17	Confirm that the landfill sites included under the programme have received on average more than 5,000 tonnes of waste per month in the last year of operation or in the case of new landfills have been contracted to receive at least 5,000 tonnes of waste per month.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> NO	<p>Validation team based on review of Gas Management Report by Golder associates /43/ and Waste composition /44/ details at Shongweni provided by site owner confirms that sites receive on average approx. 160,000 tonnes of waste in 2011 (this is the sum of the actual waste available for year and the remaining is projected) or 13,500 tonnes of waste per month. It can be confirmed from this information that the landfill sites included under the programme have received on average more than 5,000 tonnes of waste per month in the last year of operation.</p> <p><b>Conclusion:</b> Based on the above assessment, validation team concludes that this eligibility criteria of the PoA is complied by the subject CPA.</p>
18	Confirm that the landfill sites included under the programme have more that 0.5 million tonnes of waste in position and a waste depth greater than 5m.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> NO	<p>Validation team based on review of Gas Management Report by Golder associates /43/, Waste composition /44/ details at Shongweni provided by site owner and details provide in CPA questionnaire /48/ confirm that the depth of the landfill site is 25 meters /54//55/ and site has more than 0.87 million tonnes of waste/44/. It has also been verified from page 126 of gas resource assessment report /43/ that it exceeds .5 million tonnes of waste. It can be confirmed that the landfill sites has a depth of more than 5 m</p>

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			and has more than 0.5 million tonnes of waste.  <b>Conclusion:</b> Based on the above assessment, validation team concludes that this eligibility criteria of the PoA is complied by the subject CPA.
19	Confirm that the landfill gas collection system included in the programme have an anticipated collection efficiency of above 20%.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> NO	Validation team based on review of Gas Management Report by Golder associates /43/ confirms that the efficiency of landfill gas collection system is 50-85% and is above the limit of 20%.  <b>Conclusion:</b> Based on the above assessment, validation team concludes that this eligibility criteria of the PoA is complied by the subject CPA.
20	Ensure that the capital, operations and maintenance costs budgeted are market related and comparable with other projects of similar size and scope and fall within a range of 20% above or below the selected benchmark and corrected for any differences in inflation or exchange rates applicable to the respective CPA.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> NO	Validation team based on review of Due Diligence Report by Golder associates /30/ confirms that the capital, operations and maintenance costs budgeted have been provided and based on signed eligibility check sheet /47/ it is confirmed that the capital, operations and maintenance costs budgeted are market related and comparable with other projects of similar size and scope and fall within a range of 20% above or below the selected benchmark and corrected for any differences in inflation or exchange rates applicable to the respective CPA.  <b>Conclusion:</b> Based on the above assessment, validation team concludes that this eligibility criteria of the PoA is complied by the subject CPA.
21	Confirm that the revenue received by the CPA is from a combination of but not limited to the following: <ul style="list-style-type: none"> <li>Income from CER sales (CPA TYPE F and CPA TYPE EG) and/or</li> <li>Income from Electricity (CPA TYPE EG only)</li> </ul> There is no limit to any fiscal incentives of subsidies.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> NO	Validation team based on review of Shongweni financial model /11/ and submitted application/49/ for new generation capacity signed by independent power producer procurement (IPP) programme, department of energy, Republic of South Africa confirms that the revenue received by the CPA is from combination of CER sales and income from electricity.  <b>Conclusion:</b> Based on the above assessment, validation team concludes that this eligibility criteria of the PoA is complied by the subject CPA.
22	Ensure that the CPA owner has properly defined the	<input checked="" type="checkbox"/> Yes	Validation team based on review of Gas Resource Management report

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	management of SWDS prior to the start of the project activity.	<input type="checkbox"/> NO	<p>/43/, Waste Management License /38/ and Landfill Management plan /50/ provides details of baseline characteristics of the landfill site. This includes among others:</p> <ul style="list-style-type: none"> <li>• waste placement</li> <li>• type of waste received</li> <li>• operational licenses (if applicable)</li> <li>• technical drawings and photographs (if available)</li> </ul> <p>Thus it is confirmed that the CPA owner has properly defined the management of SWDS prior to the start of the project activity.</p> <p><b>Conclusion:</b> Based on the above assessment, validation team concludes that this eligibility criteria of the PoA is complied by the subject CPA.</p>
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According to the requirements of § 17 and § 18 of annex 3 of EB 65 /B14/, the validation team by means of an onsite visit; interviews and through document review /32 / confirms that the CME is competent to check the features of the CPA. The CME system manual /32/ clearly mentions the roles, responsibilities and authorities within the managing entity. The validation team has also confirmed through document review and on site visit interviews the procedures to avoid double counting /32/, training and capacity development for personnel, records and documentation control process, Measures for continual improvements of the PoA management /32/.

In conclusion, CCL confirms that the CPA complies with the eligibility criteria requirements of the PoA.

## 3.4 Additionality

### 3.4.1 Prior consideration of CDM

As per § 4 of annex 13, EB 62 /B16/, “Guidelines for the demonstration and assessment of prior consideration of the CDM” do not apply to PoAs, as at present it is expected that no component of the programme will commence prior to the start date of validation. The expected start date of CPA/02/ is 30/09/2013 that would be set upon signing of the flare & extraction unit purchase. The activities implemented till now cannot be considered as real action as per CDM Glossary of terms/B20/.

### 3.4.2 Approach for demonstrating CPA additionality

Key criteria for assessing additionality at CPA level have been explained in section E.5.1 and E.5.2 of PoA-DD /04/. The additionality was justified in accordance with the requirements derived from ACM0001, version 13, Combined tool to identify the baseline scenario and demonstrate additionality (version 04.0).

The key criteria derived from assessment of additionality in section E.5.1 and E.5.2 of PoA-DD /04/ have been put forward as eligibility criteria for inclusion of CPA in PoA. The section E.5.2 of the PoA-DD /04/ clearly demonstrates that CPAs fulfilling these eligibility criteria would be deemed additional.

The criteria set out and justification of fulfillment is presented below:

Sl. No.	Eligibility Criteria as stated in section B.2 of the CPA-DD /02/ and section A.4.2.2 of the PoA-DD/04/	Status marked in CPA-DD /02/	Assessment by the validation team
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1.	Ensure the project IRR is used as the financial indicator for CPA TYPE F or TYPE EG when performing the investment analysis.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> NO	<p>Validation team reviewed the following documents to assess the eligibility criteria:          The data in financial model sheet provided /11/, and the CPA-DD /02/ confirms that project IRR is used as financial indicator for CPA type F. The evidence has been provided in the form of eligibility check sheet. /47/          For the CPA type EG income from electricity generation is also included. The data in financial model sheet provided /11/, and the CPA-DD /02/ confirms project IRR is used as the financial indicator for CPA type EG. The evidence has been provided in the form of eligibility check sheet. /47/</p> <p><b>Conclusion:</b>          Based on the above assessment, validation team concludes that the CPA 1 complies with eligibility criterion of the PoA.</p>
2.	Ensure that when performing investment analysis the guidance provided in Table 6 of the PoA-DD is followed	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> NO	<p>The guidance provided in Table 6 of the PoA-DD has been followed for performing investment analysis of CPA 1. This table is in compliance of the “Guidelines on the assessment of Investment Analysis” EB 62 Annex 5, version 05. /B15/ The evidence has been provided in the form of eligibility check sheet stating that the parameters provided in the guidance have been used for the investment analysis. /47/</p> <p><b>Conclusion:</b>          Based on the above assessment, validation team concludes that the CPA 1 complies with eligibility criterion of the PoA.</p>

Based on the assessment above the CCL confirms the following:

- The criteria are sufficient to demonstrate additionality of the 1st CPA under this PoA.
- The starting date of the CPA complies with the glossary of terms (version 06), and EB 66, Annex 48 guidelines.
- As per the “Combined tool to identify the baseline scenario and demonstrate additionality”, version 04, the project is additional, assessed below in section 3.4.4.
- All the arguments and parameters in the CPA-DD are well evidenced, assessed below in section 3.4.4.
- The baseline scenario is defined on PoA-level in the PoA DD /04, as assessed in PoA VR.

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## 3.4.3 Alternatives

The approved methodology ACM0001 version 13 prescribes the baseline scenario alternatives. Baseline scenario alternatives have been identified at the PoA level as per Step 1a of the tool used “Combined tool to identify the baseline scenario and demonstrate additionality”:

Scenario	Alternatives			Description of situation
	landfill gas	Electricity	Heat	
1	LFG 1	n.a.	n.a.	Project activity only flaring of LFG without being registered under CDM. (CPA TYPE F)
2	LFG 2	n.a.	n.a.	Atmospheric release of the LFG or capture of LFG and destruction through flaring to comply with regulations or contractual requirements, or to address safety and odour concerns. (CPA TYPE F)
3	LFG 1	E 1	n.a.	Project activity including power generation from LFG without being registered as a CDM project activity. (CPA TYPE EG)
4	LFG 2	E 3	n.a.	Atmospheric release of the LFG and electricity would have been generated by the existing grid connected power plants as continuation of the situation before the project activity. (CPA TYPE EG)

All the alternative scenarios identified in Step 1a comply with regulations indicated in CPA-DD/02/. The baseline scenario is defined on PoA-level in the PoA DD /04, as assessed in PoA VR.

## 3.4.4 Barrier Analysis

The barriers that have been identified are only applicable to scenarios 3 and 4 from Step 1. This investment barrier is due to the risk of implementation of REFIT programme in South Africa.

## 3.4.5 Investment Analysis

PP has chosen Step 3 of the combined tool used to demonstrate additionality /B06/, to compare the economic or financial attractiveness of the alternative scenarios. Scenarios 2 and 4 fall under S3 scenario identified under Step 1(a) from the tool/B06/. Scenario 4 does not involve any investment costs, O&M costs and revenue. Since the alternative scenarios correspond to situation described in S2 or S3 of Step 1(a) from the tool/B06/, then NPV or IRR is to be used as a financial indicator according to Step 3 of tool.

Appropriateness of the financial indicator and investment analysis: PP has used project IRR as the financial indicator as per the Step 3 of tool. As per §12 of the guidelines on investment analysis /B15/, Local commercial lending rate has been identified as the benchmark. Both the financial indicator and benchmark are justified as they comply with the tool and the guidelines on investment analysis.

PP has demonstrated that the financial returns of the proposed CDM project activity are insufficient to justify the required investment (conformity to Paragraph 108 (b) of VVM 01.2). For demonstrating the financial unattractiveness of the project activity, PP has chosen investment analysis and to demonstrate the unattractiveness of the project activity, has selected benchmark analysis. Validation team has assessed correctness of the chosen approach of investment analysis for CPA type EG and noted that since there is revenue in Scenario 3 (from sale of electricity) other than benefits from CDM related income in the project, hence option I the simple cost analysis is not applicable and correctly not considered by the PP. Furthermore, since there is no other alternative other than project activity without CDM, hence option II investment comparison analysis is also not applicable for the subject project. Since in this instant case baseline is outside the direct control of the project developer (grid connected power) and hence, the choice of the project developer is restricted to “invest or not to invest”, the benchmark approach is most suited as per the latest version of § 19 of Annex 5 of EB 62/B15/.

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Validation team has assessed the correctness of the chosen approach of investment analysis for CPA type F and noted that since baseline does not require investment for this type of CPA hence benchmark approach is used to demonstrate additionality. Hence, benchmark approach is most suited as per the latest version of § 19 of Annex 5 of EB 62/B15/.

*In the above background, as subsequent paragraphs would reveal, Validation Team concludes that the additionality justification given by the PP is in accordance with the requirements derived from the approved CDM methodology and the methodological tools referred therein as well as the guidance given by EB vide paragraphs 108-110 of VVM version 01.2.*

Additionality Tool and Guidance on Investment Analysis permit the use of project IRR as one of the financial indicators for additionality demonstration. The financial indicator chosen is, therefore, appropriate for the project type and decision making context.

Appropriateness of benchmark: The project developer has chosen local commercial lending rate or prime interest rate as a benchmark to demonstrate the additionality of the project. Guidance on the Assessment of Investment Analysis version 05 states, “*In cases where a benchmark approach is used the applied benchmark shall be appropriate to the type of IRR calculated. Local commercial lending rates or weighted average costs of capital (WACC) are appropriate benchmarks for a project IRR. Required/expected returns on equity are appropriate benchmarks for equity IRR. Benchmarks supplied by relevant national authorities are also appropriate if the DOE can validate that they are applicable to the project activity and the type of IRR calculation presented.*” (Cp Annex 5 of EB 62, Guidelines on the Assessment of Investment analysis, item 12). /B15/ Also, the benchmark, prime interest rate has to be pre-tax. Guidance on the Assessment of Investment Analysis version 05 states, “*Due to the impact of loan interest on income tax calculations it is recommended that when a project IRR is calculated to demonstrate additionality a pre-tax benchmark be applied. In cases where a post-tax benchmark is applied the DOE shall ensure that actual interest payable is taken into account in the calculation of income tax.*” (Cp Annex 5 of EB 62, Guidelines on the Assessment of Investment analysis, item 11).

The value of the prime interest rate benchmark is identified based on the average of prime interest rate for past five years. This is done to ensure a conservative value is taken for the prime interest rate. /B24/ /57/

The validation therefore concludes that the benchmark applied is suitable for the financial indicator selected and it is reasonable to assume that the investment would not have taken place at a return lower than the benchmark. Thus, the selected benchmark conforms to guidance 11 and 12 of Annex 5, EB 62 and paragraph 112 of VVM ver. 01.2 /B01/ {In this instance case only paragraph 112 (a) and (c) are applicable; 112 (b) is not applicable as the benchmark does not use any risk premium}. In the above background, validation team concludes that the selected benchmark is appropriate, conservative and conforms to various EB guidelines.

Parameters and assumptions used: The project IRR for this project activity has been calculated on the basis of relevant costs, revenues and investments.

Validation team has based the investment analysis on the project costs, based on the values in draft EPC contract, invoices etc., revenues based on the tariff rates and expected electricity generation etc. These values are cross-checked against Technical Due Diligence report/30/ [Feasibility Study Report (FSR)].

The profitability estimates of the project, which forms the basis for IRR calculation is based on operation costs, generator costs and revenue. Major input parameters used in the additionality demonstration, basis thereof and the appropriateness of the value used are given in the following table:

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Parameter	Unit	Value	Data source/Justification and assessment by the validation team
<p>Operations Labour (technicians)</p> <p>Applicable to both scenario 1 and 3 (CPA Type F and EG)</p>	ZAR	<p>Fixed (170,000) + Variable (90,000)</p>	<p>The values for operations labour in financial model/11/ is checked through operations and maintenance costs provided by ENER-G Systems (Pty) Limited/39/. This is further cross checked against third party technical feasibility report /30/.</p> <p>The consolidated fixed O &amp; M costs for the project are ZAR 970,000, which gives a value of 126 ZAR/MWh. In addition to that O &amp; M for generator is ZAR 0.23/kWh. So, this gives a total value as ZAR 356/MWh (sum of 126 ZAR/MWh and ZAR 0.23/kWh or ZAR 230/MWh. The independent 3<sup>rd</sup> party engineers' report /30/ gives the value of O &amp; M costs as ZAR 337/MWh for Shongweni Landfill. This is marginally lower than the value provided by the PP due to the fact of relatively low installed capacity of 1MW at a single site.</p> <p>Validation team checked the technical due diligence report /30/ and found the value to be correct. This also confirms to the requirement of guidance 6 of annex 5 of EB 62 and hence acceptable to the validation team/B15/. The operational labour cost is consistent with the value provided in investment sheet/11/ and CPA-DD/02/.</p>

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<p>Utilities &amp; Services (SPV Direct Cost)</p> <p>Applicable to both scenario 1 and 3 (CPA Type F and EG)</p>	<p>ZAR</p>	<p>75000 (Fixed)</p>	<p>The values for utilities &amp; services in financial model/11/ is checked through operations and maintenance costs provided by ENER-G Systems (Pty) Limited/39/. This is further cross checked against third party technical feasibility report /30/.</p> <p>The consolidated fixed O &amp; M costs for the project are ZAR 970,000, which gives a value of 126 ZAR/MWh. In addition to that O &amp; M for generator is ZAR 0.23/kWh. So, this gives a total value as ZAR 356/MWh (sum of 126 ZAR/MWh and ZAR 0.23/kWh or ZAR 230/MWh. The independent 3rd party engineers' report /30/ gives the value of O &amp; M costs as ZAR 337/MWh for Shongweni Landfill. This is marginally lower than the value provided by the PP due to the fact of relatively low installed capacity of 1MW at a single site.</p> <p>Validation team checked the technical due diligence report /30/ and found the value to be correct. This also confirms to the requirement of guidance 6 of annex 5 of EB 62 and hence acceptable to the validation team/B15/. The utilities &amp; services cost is consistent with the value provided in investment sheet/11/ and CPA-DD/02/.</p>
<p>Insurance, Audit Fees, Local Taxes (SPV Direct Cost)</p> <p>Applicable to both scenario 1 and 3 (CPA Type F and EG)</p>	<p>ZAR</p>	<p>Fixed (225,000) + Variable (90,000)</p>	<p>The values for Insurance, Audit Fees, Local Taxes in financial model/11/ is checked through operations and maintenance costs provided by ENER-G Systems (Pty) Limited/39/. This is further cross checked against third party technical feasibility report /30/.</p> <p>The consolidated fixed O &amp; M costs for the project are ZAR 970,000, which gives a value of 126 ZAR/MWh. In addition to that O &amp; M for generator is ZAR 0.23/kWh. So, this gives a total value as ZAR 356/MWh (sum of 126 ZAR/MWh and ZAR 0.23/kWh or ZAR 230/MWh. The independent 3rd party engineers' report /30/ gives the value of O &amp; M costs as ZAR 337/MWh for Shongweni Landfill. This is marginally lower than the value provided by the PP due to the fact of relatively low installed capacity of 1MW at a single site.</p> <p>Validation team checked the technical due diligence report /30/ and found the value to be correct. This also confirms to the requirement of guidance 6 of annex 5 of EB 62 and hence acceptable to the validation team/B15/. The Insurance, Audit Fees, Local Taxes cost is consistent with the value provided in investment sheet/11/ and CPA-DD/02/.</p>

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<p>Site CDM and data management costs (included in O&amp;M contract)</p> <p>Applicable to both scenario 1 and 3 (CPA Type F and EG)</p>	<p>ZAR</p>	<p>Fixed (200,000)</p>	<p>The values for Site CDM and data management costs in financial model/11/ is checked through operations and maintenance costs provided by ENER-G Systems (Pty) Limited/39/. This is further cross checked against third party technical feasibility report /30/.</p> <p>The consolidated fixed O &amp; M costs for the project are ZAR 970,000, which gives a value of 126 ZAR/MWh. In addition to that O &amp; M for generator is ZAR 0.23/kWh. So, this gives a total value as ZAR 356/MWh (sum of 126 ZAR/MWh and ZAR 0.23/kWh or ZAR 230/MWh. The independent 3rd party engineers' report /30/ gives the value of O &amp; M costs as ZAR 337/MWh for Shongweni Landfill. This is marginally lower than the value provided by the PP due to the fact of relatively low installed capacity of 1MW at a single site. Validation team checked operations, management and services agreement /39/ and compared the values with the 3<sup>rd</sup> party engineers' report and found the value to be correct. This also confirms to the requirement of guidance 6 of annex 5 of EB 62 and hence acceptable to the validation team/B15/. The site CDM and data management costs is consistent with the value provided in investment sheet/11/ and CPA-DD/02/.</p>
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<p>Accountancy, admin and overhead contribution (included in O&amp;M Contract)</p> <p>Applicable to both scenario 1 and 3 (CPA Type F and EG)</p>	<p>ZAR</p>	<p>Fixed (300,000)</p>	<p>The values for accountancy, admin and overhead contribution costs in financial model/11/ is checked through operations and maintenance costs provided by ENER-G Systems (Pty) Limited/39/. This is further cross checked against third party technical feasibility report /30/.</p> <p>The consolidated fixed O &amp; M costs for the project are ZAR 970,000, which gives a value of 126 ZAR/MWh. In addition to that O &amp; M for generator is ZAR 0.23/kWh. So, this gives a total value as ZAR 356/MWh (sum of 126 ZAR/MWh and ZAR 0.23/kWh or ZAR 230/MWh. The independent 3rd party engineers' report /30/ gives the value of O &amp; M costs as ZAR 337/MWh for Shongweni Landfill. This is marginally lower than the value provided by the PP due to the fact of relatively low installed capacity of 1MW at a single site. Validation team checked operations, management and services agreement /39/ and compared the values with the 3<sup>rd</sup> party engineers' report and found the value to be correct. This also confirms to the requirement of guidance 6 of annex 5 of EB 62 and hence acceptable to the validation team/B15/. The accountancy, admin and overhead contribution costs is consistent with the value provided in investment sheet/11/ and CPA-DD/02/.</p>
<p>Generator costs</p> <p>Applicable to scenario 3 (CPA Type EG)</p>	<p>ZAR</p>	<p>7,604,779</p>	<p>The cost for a generator in financial model/11/ is based on generator quote/40/ and the import duties and transport. This is further cross checked against third party technical feasibility report /30/.</p> <p>This also confirms to the requirement of guidance 6 of annex 5 of EB 62 and hence acceptable to the validation team/B15/.</p> <p>This is consistent with the value provided in investment sheet/11/ and CPA-DD/02/.</p>
<p>Commissioning costs</p> <p>Applicable to scenario 3 (CPA Type EG)</p>	<p>ZAR</p>	<p>174,302</p>	<p>The commissioning cost for a generator in financial model/11/ has been taken from EPC contract price summary/41/. This is further cross checked against third party technical feasibility report /30/.</p> <p>This also confirms to the requirement of guidance 6 of annex 5 of EB 62 and hence acceptable to the validation team/B15/. This is consistent with the value provided in investment sheet/11/ and CPA-DD/02/.</p>

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<p>Project management costs</p> <p>Applicable to scenario 3 (CPA Type EG)</p>	<p>ZAR</p>	<p>367,500</p>	<p>The project management costs in financial model/11/ has been taken from EPC contract price summary/41/. This is further cross checked against third party technical feasibility report /30/.</p> <p>This also confirms to the requirement of guidance 6 of annex 5 of EB 62 and hence acceptable to the validation team/B15/. This is consistent with the value provided in investment sheet/11/ and CPA-DD/02/.</p>
<p>Gas collection system Construction</p> <p>Applicable to scenario 3 (CPA Type EG)</p>	<p>ZAR</p>	<p>2,425,089</p>	<p>The gas collection system Construction costs in financial model/11/ has been taken from EPC contract price summary/41/. This is further cross checked against third party technical feasibility report /30/.</p> <p>This also confirms to the requirement of guidance 6 of annex 5 of EB 62 and hence acceptable to the validation team/B15/. This is consistent with the value provided in investment sheet/11/ and CPA-DD/02/.</p>
<p>Operating hours per annum</p> <p>Applicable to scenario 3 (CPA Type EG)</p>	<p>hours</p>	<p>7700</p>	<p>Operating hours per annum assumption in financial model/11/ is based on a 3<sup>rd</sup> party technical due diligence report prepared by Golder Associates /30/.</p> <p>These values are provided by a third party engineers' report. This also confirms to the requirement of guidance 6 of annex 5 of EB 62 and hence acceptable to the validation team/B15/. The Operating hours per annum is consistent with the value provided in investment sheet/11/ and CPA-DD/02/.</p>



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<p>ES Maintenance Charge (CPA Type EG)</p>	<p>ZAR per kWh</p>	<p>0.23</p>	<p>The values for ES Maintenance Charge in financial model/11/ is checked through operations and maintenance costs provided by ENER-G Systems (Pty) Limited/39/. This is further cross checked against third party technical feasibility report /30/.</p> <p>The consolidated fixed O &amp; M costs for the project are ZAR 970,000, which gives a value of 126 ZAR/MWh. In addition to that O &amp; M for generator is ZAR 0.23/kWh. So, this gives a total value as ZAR 356/MWh (sum of 126 ZAR/MWh and ZAR 0.23/kWh or ZAR 230/MWh. The independent 3rd party engineers' report /30/ gives the value of O &amp; M costs as ZAR 337/MWh for Shongweni Landfill. This is marginally lower than the value provided by the PP due to the fact of relatively low installed capacity of 1MW at a single site. Validation team checked ES Maintenance Charge /39/ and found them to be comparable with the value from 3<sup>rd</sup> party engineers' report/30/ and found the value to be correct. This also confirms to the requirement of guidance 6 of annex 5 of EB 62 and hence acceptable to the validation team/B15/. The ES Maintenance Charge is consistent with the value provided in investment sheet/11/ and CPA-DD/02/.</p>
<p>Electricity Price assumptions (CPA Type EG)</p>	<p>ZAR</p>	<p>(Megaflex rate) 0.540 (REFIT rate) 0.840</p>	<p>The value for megaflex rate of electricity price in financial model/11/ has been taken from eskom tariff brochure/18/ and for REFIT from NERSA provided guidelines/20/.</p> <p>The megaflex tariff rate has been checked at Eskom website/B25/ and compared with the tariff booklet available for 2011-2012. The complete calculation for megaflex rate has been provided in megaflex calculator for Shongweni/58/. The values for transmission zone 300 to 600 are taken and voltage limit of 500 V to 66 kV is chosen as this is the range. As stated in 3<sup>rd</sup> party engineers' report/30/, power is exported at 11 kV to the grid. Hence this value is deemed appropriate.</p> <p>Investment analysis has been done for REFIT rates as well/20/. The REFIT rates were cross checked against the values on Eskom website/B25/.</p> <p>This also confirms to the requirement of guidance 6 of annex 5 of EB 62 and hence acceptable to the validation team/B15/. Validation team checked and confirmed the value in investment analysis sheet/11/ and CPA-DD/02/.</p>

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Emissions Credits Value	Euros/tonne	6	<p>Validation team checked and confirmed the value in investment analysis sheet/11/ and CPA-DD/02/.</p> <p>The value for emission credits value has been estimated and has been cross-checked against current market rates at European energy exchange and is considered a very conservative figure./B26/</p> <p>This also confirms to the requirement of guidance 6 of annex 5 of EB 62 and hence acceptable to the validation team/B15/.</p>
Tax charge - dividends received	%	10	<p>The value for tax rates has been taken from Deloitte report on corporate tax/24/. Validation team checked and confirmed the value in investment analysis sheet/11/ and CPA-DD/02/.</p> <p>A dividend tax of 10 % is deemed conservative as there is no surety of dividends being paid to shareholders, so a withholding tax of 10 % is imposed on the companies. This value has been cross-checked at the website of South African Revenue Service (SARS)/B27/. This also confirms to the requirement of guidance 6 of annex 5 of EB 62 and hence acceptable to the validation team/B15/.</p>
Tax charge - operating profits	%	28	<p>The value for tax rates has been taken from Deloitte report on corporate tax/24/. Validation team checked and confirmed the value in investment analysis sheet/11/ and CPA-DD/02/.</p> <p>This value has been cross-checked at the website of South African Revenue Service (SARS)/B27/. This also confirms to the requirement of guidance 6 of annex 5 of EB 62 and hence acceptable to the validation team/B15/.</p>
Assessment period of investment analysis	years	15	<p>Assessment period for investment analysis in financial model/11/ has been taken as 15 years, due to the refurbishment costs that would occur after 15 years on flares and generators /31/.</p> <p>This is confirmed by a third party engineers' report/30/. This also confirms to the requirement of guidance 6 of annex 5 of EB 62 and hence acceptable to the validation team/B15/.</p> <p>Validation team checked and confirmed the value in investment analysis sheet/11/ and CPA-DD/02/.</p>

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Capacity (CPA Type EG)	MW	Different for different years	The value for capacity of electricity generation in financial model/11/ is based on the availability of landfill gas in the project activity. These values are based on historical waste disposal data for the site and have been calculated in the FOD model for Shongweni landfill/59/. This also confirms to the requirement of guidance 6 of annex 5 of EB 62 and hence acceptable to the validation team/B15/. Validation team checked and confirmed the value in investment analysis sheet/11/.
Power Generation (CPA Type EG)	MWh	Different for different years	The value for power is based on the capacity of plant, site load and operating hours per annum. Value for power generation and operating hours per annum is already validated by the validation team. The value for base load is provided in FOD model for Shongweni landfill/59/. This value is 40 kW and has been confirmed by a 3 <sup>rd</sup> party engineers' report/30/. This also confirms to the requirement of guidance 6 of annex 5 of EB 62 and hence acceptable to the validation team/B15/. Validation team checked and confirmed the value in investment analysis sheet/11/.

As could be observed all the input values are based on Operations & maintenance agreement/39/, tariff brochure/18/, generator quotes/11/, tax rates report from Deloitte/24/, FOD model/59/ and EPC contract /41/. These values have been cross checked against third party technical feasibility report /30/ or other independent web references. Technical feasibility report/30/ has been prepared by an independent third party, i.e. Golder associates.

As evident from the details given above, the validation had evaluated the parameters used in the financial calculations and the validation team confirms that the underlying assumptions are appropriate and the financial calculations are correct.

Assessment of correctness of computation: The assessment involved checking the data input extracted from operations, management and services agreement between ENER-G Systems (Pty) Ltd (CME) and ENER-G Systems Natural Power (Pty) Ltd (CPA implementer) /39/, generator quote/40/, EPC contract price summary/41/, eskom tariff brochure/18/, REFIT from NERSA provided guidelines/20/, REFIT from NERSA provided guidelines/20/ and other published reference documents, and arithmetical accuracy. The accounting principles adopted with respect to computation of depreciation was found to be in order. The arithmetical accuracy was also found to be correct. Thus, the validation has taken into consideration the guidance given by EB vide paragraphs 111 and 113 of the VVM version 01.2.

The project IRR has been computed for a period of 16 years of operation based on discounted cash flow model, and meets the requirements of § 3 of EB 62 Annex 5 and Annex 15 of EB 50.

Based on the above, the project IRR for scenario 1 without CER cannot be calculated and with CER works out to 11.40 % as compared to the benchmark of 11.8%. For scenario 3 using megaflex rate without CER cannot be calculated and with CER it works out to it works out to 11.9 %. For scenario 3 with REFIT without CER is 5 % and with CER works out to 23.2 %.

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## 3.4.5.1 Sensitivity Analysis

According to paragraph 20 of the “Guidelines on the assessment of investment analysis” (Version 05) only variables that constitute more than 20% of either total project costs or total project revenues should be included in the sensitivity analysis. As per guidance 21 of “Guidelines on the assessment of investment analysis” (Version 05), As a general point of departure variations in the sensitivity analysis should at least cover a range of +10% and -10%, unless this is not deemed appropriate in the context of the specific project circumstances. In the specific project circumstances for the project activity a range of +10% and -10% is not appropriate as for expenses, capital expenditure and operating expenditure these values, if increased would not be able to achieve benchmark and in case of revenue if decreased would not be able to achieve benchmark.

Since there is no income involved in scenario 1, project activity under only flaring of LFG without being registered under CDM (TYPE F CPA), no sensitivity analysis has been done.

For Scenario 3, Project activity including power generation from LFG without being registered as a CDM project activity (CPA TYPE EG), variables which constitute more than 20 % of either total project costs or total project revenues are included in the sensitivity analysis.

The following variables were included in the sensitivity analysis:

- Capital expenditure
- Operational & Maintenance expenditure
- Revenue from electricity sales

The results of the sensitivity analysis are shown in Table below:

Variable	Passes Benchmark	Comments	Assessment by Validation Team
Capital expenditure (decrease)	-84.12 %	Quotes received and general market data show that a CAPEX decrease of this magnitude is unlikely to happen.	Decrease in capital expenditure of that magnitude is highly unlikely, on current quotes provided by PP on capital expenses which have been compared against third party report/30/.
Operational & Maintenance expenditure increase (decrease)	-97.7 %	A cost reduction of 97.7% in the O&M expenditure seems highly unlikely if not impossible since 33 - 50% of the total O&M costs are based on agreed fixed cost. A cost reduction of that proportion on the variable part of the O&M costs is not achievable without severely jeopardizing efficient operation, since it would require the discontinuation of required maintenance and repair of technical equipment.	Since most of the values in O & M costs are based on fixed costs based on O & M agreement and is validated against the values from 3 <sup>rd</sup> party engineers' report/30/, decrease in O & M expenditure of that magnitude is highly unlikely.
Revenue from electricity sales increase (decrease)	72.5 %	If the PPA is delayed and/ or if REFIT tariff is not obtained by the CPA then the project IRR doesn't pass the Benchmark. See Step 3 barrier analysis Prevailing Practice.	Increase in revenue of that magnitude is highly unlikely. Even with REFIT scheme increase in revenue of that magnitude is highly unlikely. For megaflex rate, increase in revenues from electricity by 72.5 %, is highly unlikely considering

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			the past trend of tariff in the country /B25/ and as the electricity generation capacity is based on the generator capacity; it limits such a variance in the revenue from electricity sales.
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As per para20, EB62, Annex5, capital expenditure in the plant, LFG plant O&M and revenue from CERs and electricity sales that would contribute to 20% of the total project cost and hence, PP has included sensitivity of these parameters in the PDD. There are no other costs which account for more than 20% of project cost or revenue. Guidance on the assessment analysis, version 05 (EB62 Annex5) states that as a general point of departure, variation in the sensitivity analysis should at least cover a range of -10% and +10%.

Furthermore, PP has provided the range of sensitivity to the extent when the IRR would cross benchmark. This is in-line with § 21 of investment guidance. A summary of the sensitivity analysis is given below.

The results of the sensitivity analysis demonstrate that an investment in the project activity, in the absence of CER revenues, is unattractive.

Validation Team is in agreement with PP's submission regarding additionality. Having regard to the assessment of conformity of additionality demonstration and benchmark selection to the latest version of the Guidance issued by EB on the assessment of investment analysis, plausibility and appropriateness of parameters used and correctness of financial calculations, Validation Team concludes that the project scenario is not economically feasible and the project developer would not have ventured into this project without CDM benefits.

### 3.4.6 Common Practice Analysis

Project developer has carried out a common practice analysis as a credibility check as required by the additionality Tool /B06/ and § 119 of VVM (version 01.2). /B01/

Referring to Step 4 of additionality Tool (version 04.0, annex 48 of EB 66) /B06/, Validation team confirms that PP has rightly considered this paragraph to demonstrate common practice analysis. This test is a credibility check to demonstrate additionality and complements the barrier analysis and investment analysis (where applicable). Therefore, the common practice analysis is carried out according to the Step 4 of the additionality tool./B06/

**Step 4a (1)** of the identified paragraph refers to calculate applicable output range as +/-50% of the design output or capacity of the proposed project activity. Since the output capacity of the project is 36,569 CERs or 1 MW electricity generation. Hence, the range covers from 18,744 CERs to 56,233.5 CERs and from 500 kW to 1.5 MW. The same is checked and confirmed by the validation team.

**Step 4a (2)** of the identified paragraph refers identification of applicable geographical area and identification of all plants that deliver the same output or capacity, within the applicable output range calculated in Step 4a(1), as the proposed project activity and that have started commercial operation before the start of Validation i.e. GSC which is earlier than the start date of the project (as the start date of the proposed project activity is not yet fixed). Validation team confirms that the chosen geographical area i.e. South Africa (entire host country as a default) is in line with the requirement of additionality tool, checked by the validation team. Furthermore, CPA-DD has transparently taken all plants inventoried from South Africa Waste Information Centre (SAWIC) /B21/ that deliver the same output or capacity, within the applicable output range calculated in Step 4a(1), as the proposed project activity and have started commercial operation before the start of validation. Review of the landfill sites at SAWIC /B21/ reveals the fact that there are no non-CDM projects in South Africa in the range identified in Step 4a (1). Hence the  $N_{all} = 0$ , checked and confirmed by the validation team.

**Step 4a (3)** of the identified paragraph identifies those power plants that apply technologies different than the technology applied in the proposed project activity. This step is not applicable as there are no

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plants that have been developed that are applying a different technology. Therefore the number of plants with different technologies,  $N_{diff}$ , is equal to 0.

**Step 4a (4)** of the identified paragraph finds the value of factor  $F=1-N_{diff}/N_{all}$ , representing the share of plants using technology similar to the technology used in the proposed project activity in all plants that deliver the same output or capacity as the proposed project activity.

$F$ , is calculated as  $1-0/0 = 1$ .

According to the tool, the proposed project activity is a “common practice” within a sector in the applicable geographical area if both the following conditions are fulfilled:

- (a) the factor  $F$  is greater than 0.2, and
- (b)  $N_{all}-N_{diff}$  is greater than 3.

The calculation is correct and in line with the additionality tool checked and confirmed by the validation team. Since, the value of  $F$  is lower than 0.2 and  $N_{all} - N_{diff}$  is lower than 3, the proposed project activity is a not common practice within a sector in the applicable geographical area as per the additionality tool.

Based on above assessment validation team confirms that subject project under consideration is not a common practice.

Thus, the validation team had taken into consideration the directions given vide §119 to 121 of VVM version 01.2. /B01/

## 3.5 Emission Reduction

### 3.5.1 Parameters determined ex-ante

The parameters that are determined ex-ante are:

Data/ Parameter	Unit	Value	Source of data	Assessment validation team by
$OX_{top\_layer}$	Dimensionless	0.1	Based on an extensive review of published literature on this subject, including the IPCC 2006 Guidelines for National Greenhouse Gas Inventories	Oxidation factor has been calculated fixed ex-ante which is in line with the applied methodology ACM0001, version 13. /B05/
$GWP_{CH_4}$	tCO <sub>2</sub> e/tCH <sub>4</sub>	21	IPCC default value	Global warming potential of methane has been fixed ex-ante, which is in accordance with the applied methodology ACM0001, version 13. /B05/
$\eta_{PJ}$	%	50%	Default value as per applied methodology.	Efficiency of the LFG capture system that will be installed in the project activity is fixed ex-ante, which is in accordance with the applied methodology ACM0001, version 13. /B05/
$\phi_y$	Dimensionless	0.75	The value of 0.75 is applicable since the tool is used to	Model correction factor to account for model uncertainties has been

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			calculate baseline emissions and Application A of the Tool. The value of 0.75 is applicable to both dry and wet climate conditions.	fixed ex-ante in accordance with the tool, "Emissions from solid waste disposal sites" version 06.0.1. It is applicable to Application A "The CDM project activity mitigates methane emissions from a specific existing SWDS", and is applicable to both dry and wet conditions, which is in accordance with the applied methodology ACM0001, version 13. /B05/
OX	Dimensionless	0.1	Based on an extensive review of published literature on this subject, including the IPCC 2006 Guidelines for National Greenhouse Gas Inventories	Oxidation factor is in accordance with the tool, "Emissions from solid waste disposal sites" version 06.0.1 and has been calculated fixed ex-ante which is in line with the applied methodology ACM0001, version 13. /B05/
F	-	0.5	IPCC default value	Volumetric fraction of methane in the landfill gas is in accordance with the tool, "Emissions from solid waste disposal sites" version 06.0.1 and has been calculated fixed ex-ante which is in line with the applied methodology ACM0001, version 13. /B05/
DOC <sub>f,y</sub>	Weight fraction	0.5	IPCC default value	Default value for the fraction of degradable organic carbon (DOC) in MSW that decomposes in the SWDS is in accordance with the tool, "Emissions from solid waste disposal sites" version 06.0.1 and has been calculated fixed ex-ante which is in line with the applied methodology ACM0001, version 13. /B05/
MCF <sub>y</sub>	-	1.0	Default value as per the applied tool. 1.0, for anaerobic managed solid waste disposal sites.	Methane correction factor is in accordance with the tool, "Emissions from solid waste disposal sites" version 06.0.1. 1.0 for anaerobic managed solid waste disposal sites. It is fixed ex-ante and, which is in accordance with the applied methodology

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				ACM0001, version 13. /B05/
DOC <sub>j</sub>	Dimensionless	Wood and wood products – 43 % Pulp, paper and cardboard (other than sludge) – 40 % Food, food waste, beverages and tobacco (other than sludge) – 15 % Textiles – 24 % Garden, yard and park waste – 20 % Glass, plastic, metal, other inert waste – 0 % Industrial sludge – 9% Domestic sludge – 5 %	IPCC default value	Fraction of degradable organic carbon in the waste type applied based on the CPA landfill specific conditions is in accordance with the tool, “Emissions from solid waste disposal sites” version 06.0.1 and has been calculated fixed ex-ante which is in line with the applied methodology ACM0001, version 13. /B05/
k <sub>j</sub>	1/year	0.085	IPCC default value	Decay rate for the waste type applied based on the CPA landfill specific conditions. Industrial and domestic sludge have similar characteristics as rapidly degrading waste a conservative value of 0.085 from the table for the value for parameter has been applied. This is in accordance with the tool, “Emissions from solid waste disposal sites” version 06.0.1 and has been calculated fixed ex-ante which is in line with the applied methodology ACM0001, version 13. /B05/
W <sub>j,x</sub>	tonnes	Year tonnes 1993 7,485 1994 12,490 1995 20,800 1996 34,650 1997 57,800 1998 63,800 1999 117,000 2000 118,000 2001 132,000 2002 146,000 2003 133,000 2004 166,000 2005 187,000 2006 195,000	SWDS operator or owner of the SWDS and from interviews with senior employees.	Total amount of solid waste type <i>j</i> disposed in the CPA in year <i>x</i> . Data has been taken from historical records of landfill operation and aggregated annually. This has been calculated fixed ex-ante which is in line with the applied methodology ACM0001, version 13. /B05/



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		2007 207,060 2008 280,456 2009 202,545 2010 155,051 2011 162,414 2012 202,225 2013 202,225 2014 202,225 2015 202,225 2016 202,225 2017 202,225 2018 202,225 2019 202,225 2020 202,225		
$EF_{EL,j,y}$ $EF_{grid,CM,y}$	= tCO <sub>2</sub> e/MWh	0.94	Calculated using the “Tool to calculate the emission factor for an electricity system”, version 02.2.1	Emission factor for electricity supplied by the grid. This parameter refers to the combined margin emission factor of the South African grid. This has been calculated fixed ex-ante for the whole crediting period. It is in line with the applied methodology ACM0001, version 13. /B05/
$TDL_{j,y}$	%	5.68	Eskom Holdings Limited: Integrated Report 2010 /19/	Average technical transmission and distribution losses for providing grid electricity for source j in year y. This has been provided by Eskom and is fixed ex-ante. It is in line with the applied methodology ACM0001, version 13. /B05/
$\rho_{CH_4,n}$	Kg/m <sup>3</sup>	0.716	Default value from tool “Tool to determine project emissions from flaring gases containing methane” (Version 01)	Density of methane at normal conditions. Default value taken from “Tool to determine project emissions from flaring gases containing methane” (Version 01). It has been fixed ex-ante and is in line with the applied methodology ACM0001, version 13. /B05/
$\eta_{flare,h}$	Dimensionless	0% if the temperature in the exhaust gas of the flare ( $T_{flare}$ ) is below 500 °C for more than 20 minutes during the hour h. 50%, if the temperature in the exhaust gas of the flare ( $T_{flare}$ )	Default values as per “Tool to determine project emissions from flaring gases containing methane” (Version 01)	Flare efficiency in the hour, calculated according to the “Tool to determine project emissions from flaring gases containing methane” (Version 01). The value is based on $T_{flare}$ . Flare efficiency has been fixed ex-ante and is in line with the applied methodology ACM0001, version 13. /B05/

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		is above 500 °C for more than 40 minutes during hour $h$ , but the manufacturer's specifications on proper operation of the flare are not met at any point in time during the hour $h$ . 90%, if the temperature in the exhaust gas of the flare ( $T_{flare}$ ) is above 500 °C for more than 40 minutes during the hour $h$ and the manufacturer's specifications on proper operation of the flare are met continuously during the hour $h$ .		
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In summary, the parameters determined ex-ante has been presented correctly according to requirements.

## 3.5.2 Emission reduction calculation

The CPA-DD confirms to meet the procedures provided in the methodology /B05/ and PoA-DD /04/. The formulae are correctly presented for the determination of emission reductions.

CCL has assessed the calculations of emission reductions and emissions factor. Corresponding calculations have been carried out based on calculation spreadsheets /08/. The parameters and equations presented in the CPA-DD, as well as other applicable documents, have been compared with the information and requirements presented in the PoA-DD /04/, CPA-DD template /B04/ and the methodology /08/.

The monitoring of all parameters is sufficiently addressed. It consists of the monitoring of the parameters like management of SWDS, amount of methane in the LFG which is flared due to a requirement, fraction of LFG that is required to be flared due to a requirement, net amount of electricity generated using LFG, operation of the power generation equipment (gen sets) that consumes the LFG, operation of the flare equipment that consumes the LFG, quantity of electricity consumed by the project electricity consumption source  $j$ , fraction of methane captured at the SWDS and flared, combusted or used in another manner that prevents the emissions of methane to the atmosphere in year  $y$ , mass fraction of methane in the residual gas on a dry basis in hour  $h$ , volumetric flow rate of the residual gas in dry basis at normal conditions in the hour  $h$ , temperature in the exhaust gas of the flare, mass fraction of  $CH_4$  in in the gaseous stream to the flare and electricity generation equipment in time interval  $t$ , mass flow of the gaseous stream to the flare in time interval  $t$  at normal conditions, mass flow of the gaseous stream to the electricity generation equipment in time interval  $t$  at normal conditions. If a system within the CPA is found to be non-functional it during inspection / verification, it is deemed to be in this condition since the last inspection / verification and emission reductions will not be claimed.

Data monitored for CDM purposes will be collected, calculated and recorded in electronic and paper form. All the data will be kept until two years after the end of the crediting period or the last issuance of CERs of this project, whichever occurs later.

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A detailed monitoring manual is designed by CME /32/ to ensure that the monitoring plan is implemented and all the monitoring arrangements are feasible within the PoA design.

All other parameters used in Emission Reduction calculations are prescribed by the applied approved methodology ACM0001, version 13. In summary, the calculations of emission reductions are considered to be correct and according to requirements.

## 3.6 Monitoring Plan

The monitoring plan presented in the CPA-DD /02/ complies with the requirements of the PoA-DD /04/, the applied monitoring methodology /08/. The assessment team has verified all parameters in the monitoring plan against the requirements of the methodology and no deviations have been found.

The assessment team through document review and interviews with the relevant personnel has reviewed the procedures. The information provided has allowed the assessment team to confirm that the proposed monitoring plan is feasible within the project design. The relevant points of monitoring plan have been discussed with the PoA managing entity and the CPA implementer. Specifically, these points include the monitoring methodology, data management, quality assurance and quality control procedures to be implemented in the context of the activity.

The parameters that are to be monitored ex-post are:

- Management of SWDS
- Amount of methane in the LFG which is flared due to a requirement in year  $y$  ( $F_{CH_4,BL,R,y}$ )
- Fraction of LFG that is required to be flared due to a requirement in year  $y$  ( $\rho_{reg,y}$ )
- Net amount of electricity generated using LFG in year  $y$  ( $EG_{PJ,y} = EC_{BL,y}$ )
- Operation of the power generation equipment (gen sets) that consumes the LFG ( $Op_{EL,h}$ )
- Operation of the flare equipment that consumes the LFG ( $Op_{flare,h}$ )
- Quantity of electricity consumed by the project electricity consumption source  $j$  in year  $y$  ( $EC_{PJ,j,y} = EC_{PJ,y}$ )
- Fraction of methane captured at the SWDS and flared, combusted or used in another manner that prevents the emissions of methane to the atmosphere in year  $y$  ( $f_y = f$ )
- Mass fraction of methane in the residual gas on a dry basis in hour  $h$  (dimensionless) ( $fm_{CH_4,RG,h}$ )
- Volumetric flow rate of the residual gas in dry basis at normal conditions in the hour  $h$  ( $FM_{RG,h}$ )
- Temperature in the exhaust gas of the flare ( $T_{flare}$ )
- Mass fraction of  $CH_4$  in the gaseous stream to the flare and electricity generation equipment in time interval  $t$  ( $m_{CH_4,t}$ )
- Mass flow of the gaseous stream to the flare in time interval  $t$  at normal conditions ( $M_{t,n, sent flare}$ )
- Mass flow of the gaseous stream to the electricity generation equipment in time interval  $t$  at normal conditions ( $M_{t,n,EL}$ )

In summary, the parameters determined ex-post have been presented correctly according to requirements and are considered in accordance with the applied methodology /08/.

The responsibilities and institutional arrangements for data collection and archiving have been clearly provided. The information provided in the CPA-DD /02/ could be confirmed based on the on-site interviews and also through the submitted documentary evidence namely CME management manual /32/ covering all requirements as stated in section E.7.2 of PoA DD /04/. Based on the same, it can be confirmed that the PoA managing entity and the CPA implementer will be able to implement the monitoring plan and the achieved emission reductions can be reported ex-post and verified.

## 3.7 Stakeholder Consultation

It has been indicated in the PoA DD /04/ that the local stakeholder consultation shall be done at the CPA Level as the PoA boundary covers the entire territory South Africa, the stakeholder consultation is performed on a CPA level in order to ensure that comments from locally affected people can be taken into consideration. This is deemed appropriate and acceptable to the validation team.

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A local stakeholder consultation was at the Shongweni Landfill Site (SLS) at the Assegay Hotel on 15 April 2010 to introduce the landfill gas to electricity project. Various interested and affected parties were invited through adverts in the local newspaper and through posters erected at the site to attend a public meeting regarding the project and its activities. This has been verified from the provided documents /51/. This LSC is before the publication of programme DDs on the UNFCCC website for GSP and hence deemed appropriate.

The validation team noted that all the relevant stakeholders identified are in line with the definition of stakeholders as per latest version of CDM Glossary of terms /B20/. Continued public consultation at the Shongweni landfill site is facilitated through regular meetings of the Shongweni Landfill Monitoring Committee (SLMC). All members on the Shongweni Landfill Monitoring Committee (SLMC) mailing list were notified of the project and invited to attend a special meeting to introduce the project and discuss the basic assessment process. Land owners and other potentially interested and affected parties were also notified and consulted.

Interested and affected parties identified by the project proponent and/or listed in the landfills stakeholder registry were contacted by mail and received a personal invitation to the meeting. Additionally, site posters were erected and newspaper advertisements were placed to invite potential stakeholders that could not be reached by mail. Likewise, a notification advertisement was placed in the Mercury, Highway Mail and the Ilanga newspapers in April 2010. The local stakeholder consultation was attended by approximately 20 people.

A summary of the comments received and a note on how due account was taken of the concerns raised in the above public consultation are included in section D.3 of the CPA DD /02/. From the background of the stakeholders, it was reasonably believed that the general attitude of the local residents, who were likely to be affected by the project, was positive towards the project and it has been verified from the onsite visit interviews with the local stakeholders. Validation team reviewed all relevant information of local stakeholder consultation meeting and confirms that the LSC meeting meets to the requirement of § 127 of VVM, version 01.2 /B01/.

The validation team confirms that the process for conducting the local stakeholders meeting is adequate and credible.

## 3.8 Environmental Analysis

It has been indicated in the PoA DD /04/ that environmental analysis shall be provided at the CPA level. This is deemed appropriate and acceptable to the validation team.

The CPA involves landfill gas capture and utilisation for electricity at Shongweni Landfill in South Africa. Referring to § 132 of VVM version 01.2, /B01/ validation team, based on document review, using official source i.e. Environmental Impact Assessment Regulations (GN 385, 21 April 2006) of the National Environmental Management Act No 107 of 1998. According to regulations, a basic environmental impact assessment (EIA) is required for a typical CPA included under the PoA.

ENER-G Systems (Pty) Ltd, commissioned an Environmental Impact Assessment (EIA) of the CPA01 activity at the Shongweni Landfill Site (SLS) as required by the South African environmental regulation in place. EIA process involved consideration of the environmental status of the project location, the purpose and need for the project, views and concerns of interested and affected parties, and compliance with environmental legislation and guidelines.

Potential negative effects of the landfill gas to electricity project may relate to the production of hazardous air pollutants in the combustion emissions and certain occupational health risks. However, the assessment concludes that these compounds would be in very small amounts and do not pose significant risks./42/

The validation team confirms that the environmental impact assessment is adequate and credible.

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## APPENDIX A

### THE VALIDATION PROTOCOL FOR CDM PROGRAMME OF ACTIVITIES CPA01 “LANDFILL GAS CAPTURE AND UTILISATION PROJECT AT SHONGWENI LANDFILL” REPORT No. CCL0021/LGEP/10112011

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**Table 1: Conformity of CDM Programme of Activities**

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	GSP	Final
<b>A. GENERAL DESCRIPTION OF CDM PROGRAMME ACTIVITY (CPA)</b>				
<b>A.1. Title of the CPA:</b>				
A.1.1. Does the used CPA title clearly enable to identify the unique CDM programme activity?	/01/, /02/	The title of the CPA (CDM-CPA-DD) is clearly enables to identify the unique CDM programme of activities (CDM-PoA-DD). However, LoA is required to be submitted by the PP to verify the same.  <del>CAR-1: Letter of Approval (LoA) from the host country (Republic of South Africa) has not been provided to DOE for Validation.</del>	CAR-1	OK
A.1.2. Are there any indications concerning the revision number and the date of the revision?	/02/, /03/, /14/	CPA-DD has indicated the version of the document i.e. version number 01, and date of the document as 21/11/2011 under section A.1.	OK	OK
A.1.3. Is this consistent with the time line of the programme's history?	/02/, /03/, /14/	Yes.	OK	OK
<b>A.2. Description of the CPA:</b>				
A.2.1. Is the description delivering a transparent overview of the CPA?	/02/, /03/, /14/	Yes, section A.2 provides an overview of the CPA with information on purpose of the CPA and how it reduces GHG emissions. However, it does not provide necessary information with regard to the implementation schedule and the contribution of CPA to sustainable development is not as per the host country requirements. Hence CAR is raised.  <del>CAR-2: Description of CPA under section A.2 of the CPA-DD does not provide information on:  <ul style="list-style-type: none"> <li>Implementation schedule for the CPA</li> <li>The view of the project participants on the contribution of the CPA to sustainable development is not in line with the Criteria laid down by DNA of the Republic of South Africa.</li> </ul> </del>	CAR-2	OK
A.2.2. Is the project implementation schedule available; are there any risks for delays?	/02/, /03/, /14/	<del>Depends on the closure of CAR-2 in section A.2.1 above.</del>	Refer CAR-2	OK
A.2.3. Is CPA specific data clearly indicated as	/02/, /14/	Yes, the CPA specific data is clearly indicated as per CPA template.	OK	OK

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<b>per CPA template?</b>				
A.2.4. <b>What proofs are available demonstrating that the programme description is in compliance with the actual situation or planning?</b>	02/, /03/, /14/	<del>Depends on the closure of CAR 2 in section A.2.1 above.</del>	Refer CAR-2	OK
A.2.5. <b>Is the information provided by these proofs consistent with the information provided by the CPA-DD and the PoA-DD?</b>	02/, /03/, /14/	<del>Depends on the closure of CAR 2 in section A.2.1 above.</del>	Refer CAR-2	OK
A.2.6. <b>Is all information presented consistent with details provided by further chapters of the CPA-DD and the PoA-DD?</b>	02/, /03/, /14/	<del>Depends on the closure of CAR 2 in section A.2.1 above.</del>	Refer CAR-2	OK
<b>A.3. Entity/individual responsible for the CPA:</b>				
A.3.1. <b>Does it become evident which entity/individual is responsible for the CPA (the CPA implementer)?</b>	/02/, /03/, /14/	It is evident from the CPA-DD that ENER-G Systems Natural Power (Pty) Ltd is the entity responsible for implementing the CPA.	OK	OK
A.3.2. <b>Is there any document substantiating that the stated entity/individual is responsible for the implementation of the CPA?</b>	/02/	<del>As informed by the CME that, the Host Country approval (LoA) is yet to be received, neither any other documents to substantiate the same are submitted by the PP.</del>  <del>Depends on the closure of CAR 1 in section A.1.1 above.</del>	Refer CAR-1	OK
A.3.3. <b>Is all information on the CPA implementer provided in consistency with details provided by further chapters of the CPA-DD (in particular annex 1)?</b>	/02/	The name of the entity responsible for this particular CPA implementation is consistent with Annex 1 of this CPA-DD.	OK	OK
<b>A.4. Technical description of the CPA:</b>				
<b>A.4.1. Identification of the CPA:</b>				
A.4.1.1. <b>Is the Host Party stated and consistent with the information provided in the PoA-DD?</b>	/01/, /02/, /03/	Yes, Republic of South Africa is indicated as the host country and inline with the CDM-PoA-DD.	OK	OK
A.4.1.2. <b>Does the information provided on the location of the programme activity allow for a unique identification of the location and the boundary of the CPA in terms of the geographical area?</b>	/02/, /03/, /14/	Yes, the information provided on the location of the programme activity allows for a unique identification of the location and the boundary of the CPA in terms of the geographical area.	OK	OK

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<b>A.4.1.3. Are the geographic reference and the means of identification transparent and clear? Is GPS data provided?</b>	/02/, /03/	Yes, the geographic reference and the means of clear and transparent identification of the CPA are provided.	OK	OK
<b>A.4.1.4. How it is ensured and/or demonstrated, that the project proponents can implement the project (ownership, licenses, contracts etc.)?</b>	02/, /03/	<del>Please refer section A.1.1 and A.3.2 above.</del> <del>Depends on the closure of CAR 1 in section A.1.1 above.</del>	<del>Refer CAR 1</del>	OK
<b>A.4.2. Duration of the CPA: Description of a typical CDM programme activity (CPA)</b>				
<b>A.4.2.1. Is the starting date of the CPA provided?</b>	/02/, /03/	Yes, the starting date of the CPA provided in the CPA-DD is 01/05/2012.  FAR 1: Starting date of CPA has been revised to 30/09/2013, expected date of start of CPA, set upon signing of the flare & extraction unit purchase. The starting date of CPA needs to be confirmed at the time of verification.	OK	FAR 1
<b>A.4.2.2. Is the starting date consistent with the PoA timeline and the requirements of the PoA procedures?</b>	/02/, /03/	As the PoA validation has started on 24/11/2011 and the indicated starting date of CPA is 01/05/2012, hence, it is considered to be consistent with the PoA timeline and the requirements of the PoA procedures.	OK	OK
<b>A.4.2.3. Is the operational lifetime of the CPA clearly defined and plausible?</b>	/02/	Yes, the operational lifetime of the CPA is clearly mentioned as 21 years. But the basis for the same needs to be provided. Hence a CL is raised.  CL 1: <del>PP needs to provide documentary evidence to support the technical lifetime is to be submitted to the DOE.</del>	<del>CL 1</del>	OK
<b>A.4.3. Choice of the crediting period and related information:</b>				
<b>A.4.3.1. Is the starting date of the crediting period stated and plausible (in accordance with the PoA procedures)?</b>	/02/, /03/	Yes, the starting date of the crediting period of the CPA is clearly stated as 01/10/2012 and plausible in accordance with the PoA procedures.	OK	OK
<b>A.4.3.2. Is it evident that fixed crediting period is chosen, what is the length of the crediting period?</b>	/02/, /03/	Renewable crediting period of 7 years has been chosen and found to be correct.	OK	OK
<b>A.4.4. Estimated amount of emission reductions over the crediting period:</b>				
<b>A.4.4.1. Estimated amount of emission reductions stated?</b>	/02/, /03/	The estimated amount of emission reduction stated in the CPA-DD is: • Total: 33,600 tCO <sub>2</sub> e	OK	OK



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		<ul style="list-style-type: none"> <li>Annual Average: 4,800 tCO<sub>2</sub>e/yr</li> </ul>		
<b>A.4.4.2. Is the estimated amount consistent with section B 5 of the CPA-DD?</b>	/01/, /02/, /03/	Yes, the estimated amount of CERs under section A.4.4 is consistent with section B.5.	OK	OK
<b>A.4.5. Public funding of the programme activity</b>				
<b>A.4.5.1. Is the information provided on public funding provided in compliance with the actual situation or planning?</b>	/02/, /03/	<p>Information provided on public funding in section A.4.5 of CPA-DD is not sufficient. Hence CL is raised.</p> <p><del>CL-2: In the section A.4.5 of PP states, "CPA01 does not obtain public funding."</del></p> <p><del>Project participants needs to substantiate with evidences that such funding does not result in a diversion of official development assistance, is separate from, and is not counted towards the financial obligations of those parties.</del></p>	<del>CL-2</del>	OK
<b>A.4.5.2. Is all information provided consistent with the details given in remaining chapters of the CPA-DD (in particular annex 2)?</b>	/02/, /03/	Depends on the closure of CL 2 in section A.4.5.1 above.	Refer CL 2	OK
<b>A.4.6. Confirmation that the CPA is neither registered as an individual CDM project activity or is part of another registered PoA</b>				
<b>A.4.6.1. Confirmation provided by coordinating/managing entity or CPA implementer?</b>	/02/, /03/	<p>CPA-DD under section A.4.6 states that based on the Inclusion Agreement between the CME and Energy Systems Natural Power that the CPA01 is registered neither as an individual CDM project nor as a CPA of another PoA and the CME has confirmed the same from the UNFCCC CDM database and with the South African Designated National Authority (DNA).</p> <p>However the same is required to be substantiated with evidence. Hence CL is raised.</p> <p>Moreover the name of CPA implementer provided is not the same as one provided in the other section of CPA-DD. Hence CAR is raised.</p> <p><del>CAR 3:</del></p> <p><del>The name of the CPA implementer provided in the section A.4.6 is not consistent with the information provided in Annex I of CPA-DD.</del></p>	<del>CAR 3 &amp; CL 3</del>	OK

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		CL-3: The CME and CPA implementer needs to provide documentary evidences to DoE to substantiate that CPA01 is not registered as an individual CDM project activity or as a part of another PoA.		
<b>A.4.6.2. Is the CPA implementer undertaking another similar project activity in the same region? If yes, are the project activities uniquely identified and not overlapping with this CPA?</b>	/02/, /03/	Depends on the closure of CL 3 in section A.4.6.1 above.	Refer CL-3	OK
<b>B. ELIGIBILITY OF THE CPA AND ESTIMATION OF EMISSION REDUCTIONS:</b>				
<b>B.1. Title and reference of the registered PoA to which CPA is added:</b>				
<b>B.1.1. Are the title and reference correctly provided?</b>	/01/, /02/, /03/	Title of the CPA provided in consistency with the CDM-PoA-DD.	OK	OK
<b>B.2. Justification of CPA is eligible to be included in the registered PoA:</b>				
<b>B.2.1. Is the CPA meet all the eligibility criterion as stipulated under section A.4.2.2 of the CDM-PoA-DD?</b>	/01/, /02/, /03/, /15/	Since the PoA-DD itself does not provide eligibility criteria for the inclusion for CPA inclusion into the PoA in accordance with the latest requirements stipulated as per §14 Annex 3 of EB 65 and also the CPA-DD followed the same. Hence CAR is raised.  CAR 4: In the section B.2 of the CPA DD, the PP has not explained the inclusion of CPA under the PoA by justifying the applicability under each eligibility criteria for inclusion of a CPA in the PoA in line with "Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities (version 01.0)" EB 65 Annex 3.	CAR 4	OK
<b>B.2.2. Is the geographical boundary of the CPA including any time-induced boundary consistent with the geographical boundary set in the PoA?</b>	/01/, /02/, /03/, /15/	Depends on the closure of CAR 4 in section B.2.1 above.	Refer CAR 4	OK
<b>B.2.3. Is unique identifications of CAP project location (e.g. wind site etc.); are clearly ant transparently provided to avoid double counting of emission reductions?</b>	/01/, /02/, /03/, /15/	Depends on the closure of CAR 4 in section B.2.1 above.	Refer CAR 4	OK
<b>B.2.4. Is specification of technology/measure including the level and type of service,</b>	/01/, /02/, /03/, /15/	Depends on the closure of CAR 4 in section B.2.1 above.	Refer CAR	OK

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	<b>performance specifications including compliance with testing/certifications are in line with the CDM-POA-DD?</b>			4	
B.2.5.	<b>Is the start date of the CPA is clearly evidenced?</b>	/01/, /02/, /03/, /15/	<del>Depends on the closure of CAR 4 in section B.2.1 above.</del>	Refer CAR 4	OK
B.2.6.	<b>Is it ensured that the CPA complies with applicability and other requirements of single or multiple methodologies?</b>	/01/, /02/, /03/, /15/	<del>Depends on the closure of CAR 4 in section B.2.1 above.</del> FAR 2: It is stated in sec. B.2 of CPA-DD that CPA will connect to the grid in phase 2. It needs to be confirmed during verification, if the CPA is connected to the grid.	Refer CAR 4	FAR 2
B.2.7.	<b>Is it ensured that CPAs meet the requirements pertaining to the demonstration of additionality as specified in PoA-DD?</b>	/01/, /02/, /03/, /15/	<del>Depends on the closure of CAR 4 in section B.2.1 above.</del>	Refer CAR 4	OK
B.2.8.	<b>The PoA-specific requirements stipulated by the CME including any conditions related to undertaking local stakeholder consultations and environmental impact analysis;</b>	/01/, /02/, /03/, /15/	<del>Depends on the closure of CAR 4 in section B.2.1 above.</del>	Refer CAR 4	OK
B.2.9.	<b>Does CPA provides an affirmation that funding from Annex I parties, if any, does not result in a diversion of official development assistance?</b>	/01/, /02/, /03/, /15/	<del>Depends on the closure of CAR 4 in section B.2.1 above.</del>	Refer CAR 4	OK
B.2.10.	<b>Are the target group (e.g. domestic/commercial/industrial, rural/urban, grid- connected/off-grid) and distribution mechanisms (e.g. direct installation) is well defined and documented in the CPA?</b>	/01/, /02/, /03/, /15/	<del>Depends on the closure of CAR 4 in section B.2.1 above.</del>	Refer CAR 4	OK
B.2.11.	<b>Where applicable, the conditions related to sampling requirements for a PoA in accordance with the approved guidelines/standard from the Board pertaining to sampling and surveys are applied?</b>	/01/, /02/, /03/, /15/	<del>Depends on the closure of CAR 4 in section B.2.1 above.</del>	Refer CAR 4	OK
B.2.12.	<b>the conditions that ensure that every CPA</b>	/01/, /02/,	<del>Depends on the closure of CAR 4 in section B.2.1 above.</del>	Refer	OK

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	in aggregate meets the small-scale or micro-scale threshold criteria and remains within those thresholds throughout the crediting period of the CPA;	/03/, /15/		CAR 4	
B.2.13.	Where applicable, the requirements for the de-bundling check, in case CPAs belong to small-scale (SSC) or micro-scale project categories are fulfilled?	/01/, /02/, /03/, /15/	Depends on the closure of CAR 4 in section B.2.1 above.	Refer CAR 4	OK
<b>B.3. Assessment and demonstration of additionality of the CPA, as per eligibility criteria listed in the registered PoA:</b>					
B.3.1.	Are the key criteria and data for assessing additionality of a CPA that are included appropriately?	/01/, /02/, /03/, /15/	The CPA-DD in section B.3 provides information on criteria and data used for assessing additionality of the CPA.	OK	OK
<b>B.4. Description of the sources and gases included in the project boundary and proof that the CPA is located within the geographical boundary of the registered PoA</b>					
B.4.1.	Does the CPA boundary include the physical and geographical location where the programme activities take place?	/01/, /02/, /03/	Yes, CPA boundary includes the project physical and geographical location where the PoA takes place.	OK	OK
B.4.2.	Is there any proof that the CPA is located within the geographical boundary of the registered PoA?	/01/, /02/, /03/, /SV/, /I/, /google earth/	DOE has performed an onsite visit, conducted an interview with PP and local stakeholders. Validation team has done the web search to verify the physical location where the project will be implemented.	OK	OK
B.4.3.	Are all sources and gases within the boundary considered in a clear manner?	/01/, /02/, /03/, /07/	Yes, the sources and gases within the boundary have been considered in a clear manner and in accordance with the applied methodology i.e.. ACM0001.	OK	OK
B.4.4.	Does the spatial and technological boundaries as verified on-site comply with the discussion provided by / indication included to the PoA-DD or CPA-DD?	/01/, /02/, /03/, /07/, /SV/	Yes, the spatial and technological boundaries as verified on-site comply with the discussion provided in the PoA-DD or CPA-DD.	OK	OK
<b>B.5. Emission reductions:</b>					
<b>B.5.1. Data and parameters that are available at validation (B.5.1.):</b>					
B.5.1.1.	Are the equations, including fixed parametric values, to be used for	/01/, /02/, /03/, /07/	CPA-DD does not appropriately provide a complete list of ex-ante parameters fixed at validation. Hence CAR is raised.	CAR-5	OK

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calculation of emission reductions of a CDM-CPA, completely presented?		CAR 5: In the section B.5.1 of the CPA-DD, the list of data and parameters available at the time of validation is not complete and not in accordance with the requirements of the applied methodology i.e. ACM0001.		
<b>B.5.1.2. Is the list of parameters presented in chapter B.5.1 considered to be complete with regard to the requirements of the applied methodology?</b>	/02/, /07/	Depends on the closure of CAR 5 in section B.5.1.1 above.	Refer CAR 5	OK
<b>B.5.2. Ex-ante calculation of emission reductions (B.5.2.):</b>				
<b>B.5.2.1. Are the GHG calculations documented in a complete and transparent manner?</b>	/01/, /02/, /03/, /07/	Yes, GHG calculations are documented in a complete and transparent manner in B.5.2 of CPA-DD. CAR 9 (new CAR): <del>As per the PoA DD, data considered for the GEF is 2009, 2010 and 2011. However review of GEF spread sheet reveals the data till 2012.</del>	CAR 9	OK
<b>B.5.2.2. Is the data provided in this section consistent with data as presented in other chapters of the PoA-DD or CPA-DD?</b>	/01/, /02/, /03/, /07/	Yes, the data provided in this section is consistent with data as presented in other chapters of the PoA-DD or CPA-DD.	OK	OK
<b>B.5.3. Summary of the ex-ante estimation of emission reductions (B 5.3)</b>				
<b>B.5.3.1. Will the programme activity result in lesser GHG emissions than the baseline scenario?</b>	/02/, /07/	Yes, the PoA would result in lesser GHG emissions than the baseline scenario as it involves capturing, flaring or using the captured landfill gas to generate energy, which in absence of the project were allowed to escape into the atmosphere.	OK	OK
<b>B.5.3.2. Is the form/table required for the indication of projected emission reductions correctly applied?</b>	/02/, /03/, /14/	Yes, the template is correctly applied for the projected emission reduction.	OK	OK
<b>B.5.3.3. Do these values comply with small-scale criteria for every year?</b>	NA	NA	NA	NA
<b>B.5.3.4. Is the projection in line with the envisioned time schedule for the programme's implementation and the indicated crediting period?</b>	/02/, /03/, /14/	Yes, the projection in line with the envisioned time schedule for the programme's implementation and the indicated crediting period.	OK	OK
<b>B.5.3.5. Is the data provided in this section in consistency with data as presented in</b>	/01/, /02/, /03/, /07/	Yes, the data provided in this section is consistent with data as presented in other chapters of the PoA-DD or CPA-DD.	OK	OK

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other chapters of the PoA- or CPA-DD?					
<b>B.6. Application of the monitoring methodology and description of the monitoring plan</b>					
<b>B.6.1. Description of the monitoring plan for the CDM-CPA</b>					
<b>B.6.1.1. Is the operational and management structure clearly described and in compliance with the envisioned situation?</b>	/01/, /02/, /03/, /07/,	No, the operational and management structure has not been clearly described in the section B.6.1 of CPA-DD. Hence CAR is raised.  CAR 6: <del>In section B.6.1 of the CPA-DD, the operation and management structure along with procedure for data collection, recording, checking, data transfer and archiving system for CPA has not been described.</del>	CAR 6	OK	
<b>B.6.1.2. Are responsibilities and institutional arrangements for data collection and archiving clearly provided?</b>	/01/, /02/, /03/, /07/,	<del>Depends on the closure of CAR 6 in section B.6.1.1 above.</del>	Refer CAR 6	OK	
<b>B.6.1.3. Does the monitoring plan provide current good monitoring practice?</b>	/01/, /02/, /03/, /07/,	<del>Depends on the closure of CAR 6 in section B.6.1.1 above.</del>	Refer CAR 6	OK	
<b>B.6.1.4. If applicable: Does annex 4 provide useful information enabling a better understanding of the envisioned monitoring provisions?</b>	/02/ /03/	NA	OK	OK	
<b>B.6.1.5. Is the list of parameters presented in chapter B.6.1 considered to be complete with regard to the requirements of the applied methodology?</b>	/01/, /02/, /07/,	CPA-DD does not appropriately provide a complete list of parameters to be monitored in section B.6.1. Hence CAR is raised.  CAR 7: <del>In the section B.6.1 of the CPA-DD, the list of data and parameters to be monitored is not complete and not in accordance with the requirements of the applied methodology i.e. ACM0001.</del>	CAR 7	OK	
<b>C. ENVIRONMENTAL ANALYSIS</b>					
<b>C.1. Indication of the level at which environmental analysis as per requirements of the CDM modalities and procedures is undertaken. Justification of choice of level at which the environmental analysis is undertaken:</b>					
<b>C.1.1. Is it defined whether the environmental analysis takes place at PoA or CPA level?</b>	/02/, /03/	Yes, it is defined that environmental analysis takes place at CPA level.	OK	OK	
<b>C.1.2. Is the choice whether the environmental analysis takes place at PoA or CPA level justified?</b>	/02/, /03/	Yes, the choice is justified.	OK	OK	

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C.2. Documentation on the analysis of the environmental impacts, including trans-boundary impacts					
C.2.1.	Is it defined whether the environmental analysis takes place at PoA or CPA level?	/02/, /03/	Yes, it is defined that environmental analysis takes place at CPA level.	OK	OK
C.2.2.	Is the choice whether the environmental analysis takes place at PoA or CPA level justified?	/02/, /03/	Yes, the choice is justified.	OK	OK
C.3. Please state whether in accordance with the host party laws/regulations, an environmental impact assessment is required for a typical CPA level, included in the PoA.					
C.3.1.	Is it defined whether the environmental analysis takes place at PoA or CPA level?	/02/, /03/	Yes, it is defined that environmental analysis takes place at CPA level.	OK	OK
C.3.2.	Is the choice whether the environmental analysis takes place at PoA or CPA level justified?	/02/, /03/	Yes, it is defined that environmental analysis takes place at CPA level.	OK	OK
D. STAKEHOLDERS' COMMENTS					
D.1. Please indicate the level at which local stakeholder comments are invited. Justify the choice:					
D.1.1.	Is there a clear statement whether the stakeholder comments were invited at PoA or CPA level?	/02/	<p>Yes it is mentioned in the CPA-DD that the stakeholder comments are invited at CPA level. But the stakeholder consultation was carried out as a part of EIA / SIA process. It's not clearly mentioned in the section D of CPA-DD whether stakeholders were briefed about CDM and the project activity trying to accrue financial benefits under the mechanism. Moreover the process for identifying and inviting the stakeholders as well as comment received is not detailed in a transparent manner in the CPA-DD. Hence CAR is raised.</p> <p>CAR 8: Section D of CPA-DD is not complete with regards to the following points:</p> <ul style="list-style-type: none"> <li>• <del>Whether the local stakeholders were briefed about the CDM aspects of the project activity including CDM revenues?</del></li> <li>• <del>Process of identification of relevant stakeholders?</del></li> <li>• <del>Date of advertisement for CDM local stakeholder consultation invitation as well as meeting with the supporting evidences.</del></li> <li>• <del>Substantiate with evidences that a reasonable time for</del></li> </ul>	CAR 8	OK

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			<ul style="list-style-type: none"> <li>• <del>submission of comments was provided.</del></li> <li>• <del>How the comments were invited, compiled for LSC in an open and transparent manner.</del></li> <li>• <del>Provide a summary of comments received.</del></li> <li>• <del>How due account was taken of any comments received.</del></li> </ul>		
D.1.2.	<b>Is the choice justified in a clear and reasonable manner?</b>	/02/	<del>Depends on the closure of CAR 8 in section D.1.1 above.</del>	Refer CAR 8	OK
<b>E. ANNEXES 1 – 4</b>					
<b>E.1. Annex 1: Contact Information</b>					
E.1.1.	<b>Is the information provided consistent with the one given under section A.3?</b>	/02/	Yes, the information provided is consistent with the one provided under section A.3.	OK	OK
E.1.2.	<b>Is the information on all private participants and directly involved Parties presented?</b>	/02/	Yes, the information on all private participants and directly involved Parties is clearly presented in the CPA-DD.	OK	OK
<b>E.2. Annex 2: Information regarding public funding</b>					
E.2.1.	<b>Is the information provided on the inclusion of public funding (if any) in consistency with the actual situation presented by the project participants?</b>	/02/	<del>Depends on the closure of CL 2 in section A.4.5.1 above</del>	Refer CL 2	OK
E.2.2.	<b>If necessary: Is an affirmation available that any such funding from Annex-I-countries does not result in a diversion of ODA?</b>	/02/	<del>Depends on the closure of CL 2 in section A.4.5.1 above</del>	Refer CL 2	OK
<b>E.3. Annex 3: Baseline information</b>					
E.3.1.	<b>If additional background information on baseline data is provided: Is this information consistent with data presented by other sections of the PoA- or CPA-DD?</b>	/02/	No, additional information is provided in the Annex 3 with respect to baseline information.	NA	NA
E.3.2.	<b>Is the data provided verifiable? Has sufficient evidence been provided to the validation team?</b>	/02/	Please refer section E.3.1 above.	NA	NA
E.3.3.	<b>Does the additional information substantiate / support statements given in other sections of the PoA- or</b>	/02/	Please refer section E.3.1 above.	NA	NA



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CPA-DD?					
<b>E.4. Annex 4: Monitoring information</b>					
E.4.1.	<b>If additional background information on monitoring is provided: Is this information consistent with data presented in other sections of the PoA- or CPA-DD?</b>	/02/	No additional background information on monitoring is provided.	OK	OK
E.4.2.	<b>Is the information provided verifiable? Has sufficient evidence been provided to the validation team?</b>	/02/	Please refer section E.4.1 above.	NA	NA
E.4.3.	<b>Do the additional information and / or documented procedures substantiate / support statements given in other sections of the PoA- or CPA-DD?</b>	/02/	Please refer section E.4.1 above.	NA	NA

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**Table 2: Resolution of Corrective Action and Clarification Requests (CPA-DD)**

Clarifications and corrective action requests by validation team	Ref. to table 1	Summary of programme activity implementer's response	Validation team Conclusion												
<b>CORRECTIVE ACTION REQUESTS</b>															
CAR 1: Letter of Approval (LoA) from the host country has not been provided to DOE for Validation.	A.1.1. / A.3.2. / A.4.1.4.	To be provided / request has been submitted  <hr/> Additional response (26/06/2012): The LoA dated June 26 2012 from the DNA of the Netherlands (see VD3_07 2012ANL647 Landfill Gas Utilisation Programme of South Africa.pdf in dropbox)	The Programme of Activities (PoA) has received Letter of Approval (LoA), dated 29/05/2012 from the DNA of South Africa i.e., Department of Energy, republic of South Africa.  Hence CAR is closed.												
CAR 2: Description of CPA under section A.2 of the CPA-DD does not provide information on: <ul style="list-style-type: none"> <li>Implementation schedule for the CPA</li> <li>The view of the project participants on the contribution of the CPA to sustainable development is not in line with the Criteria laid down by DNA of the Republic of South Africa.</li> </ul>	A.2.1. / A.2.2. / A.2.4. / A.2.5. / A.2.6.	The following table has been added to the CPA-DD: The schedule for the anticipated development and implementation of CPA01 is as follows: <table border="1" data-bbox="878 901 1507 1209"> <thead> <tr> <th>Date</th> <th>Activity</th> </tr> </thead> <tbody> <tr> <td>March 2008</td> <td>Publication of REFIT, South Africa Renewable Energy Feed-in Tariff<sup>1</sup></td> </tr> <tr> <td>09/06/2009</td> <td>Agreement Enviroserve and ENER-G</td> </tr> <tr> <td>20/09/2010</td> <td>Issuance of final environmental impact assessment (EIA) report for the project<sup>2</sup></td> </tr> <tr> <td>15/04/2010</td> <td>Local Stakeholder Consultation<sup>3</sup></td> </tr> <tr> <td>14/02/2011</td> <td>Issuance of waste license in terms of</td> </tr> </tbody> </table>	Date	Activity	March 2008	Publication of REFIT, South Africa Renewable Energy Feed-in Tariff <sup>1</sup>	09/06/2009	Agreement Enviroserve and ENER-G	20/09/2010	Issuance of final environmental impact assessment (EIA) report for the project <sup>2</sup>	15/04/2010	Local Stakeholder Consultation <sup>3</sup>	14/02/2011	Issuance of waste license in terms of	In section A.2 of the revised CPA-DD: <ul style="list-style-type: none"> <li>An implementation schedule has been provided, which details the timeline for development and operation of CPA01. The same is in line with the timeline for implementation of PoA.</li> <li>The contribution of the CPA to sustainable development of host country i.e., Republic of South Africa has been provided. Moreover, the Programme of Activities (PoA) has received Letter of Approval (LoA), dated 29/05/2012 from the DNA of South Africa i.e., Department of Energy, Republic of South Africa.</li> </ul>
Date	Activity														
March 2008	Publication of REFIT, South Africa Renewable Energy Feed-in Tariff <sup>1</sup>														
09/06/2009	Agreement Enviroserve and ENER-G														
20/09/2010	Issuance of final environmental impact assessment (EIA) report for the project <sup>2</sup>														
15/04/2010	Local Stakeholder Consultation <sup>3</sup>														
14/02/2011	Issuance of waste license in terms of														

<sup>1</sup>Publication only. Up till now (November 2011) no tenders have been completed under the REFIT

<sup>2</sup>Environmental Impact Assessment Report is made available to the DOE during validation. The report was submitted when applying for the waste management license.

<sup>3</sup>Documents of the local stakeholder consultation are made available to the DOE during validation.

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			National Environmental Management: Waste Act, 2008 (Act 59 of 2008) for Shongweni Landfill based on the EIA Report <sup>4</sup>	Hence it is deemed fulfilled. Hence CAR is closed.
		March 2011	Technical and Economical Due Diligence	
		September 2011	Amendment letter to the agreement between Enviroserve and ENER-G <sup>5</sup>	
		24/11/2011 -23/12/2011	Global Stakeholder Consultation	
		02/09/2013 - 04/10/2013	Design and development phase (scheduled)	
		02/09/2013 - 04/03/2014	Procurement phase (scheduled)	
		30/09/2013	<b>Order main equipment ('Project start date'; scheduled)</b>	
		11/11/2013 - 15/04/2014	Construction phase (scheduled)	
		16/04/2014 - 01/05/2014	Commissioning phase (scheduled)	
		01/05/2014	Start of commercial operation of the project (scheduled)	
<p><b>Table 1: Timeline for the development and implementation of CPA01</b>                  2. The response in A.2. has been aligned with the criteria laid down by South African DNA.</p>				

<sup>4</sup>A copy of the issued license is made available to the DOE during validation.

<sup>5</sup>The letter was made available to the DOE during validation.

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<p>CAR 3:</p> <p>The name of the CPA implementer provided in the section A.4.6 is not consistent with the information provided in Annex I of CPA-DD.</p>	<p>A.4.6.1.</p>	<p>Resolved: now reads: Ener-G Systems Natural Power</p>	<p>Secion A.3 of the revised CPA-DD states “The Shongweni Landfill is owned and operated by EnviroServ Waste Management (Pty) Ltd. The company ENER-G Systems Natural Power (Pty.) Ltd. (hereinafter referred to as “ENER-G Systems Natural Power”) has obtained a gas rights agreement for the utilization of the landfill gas produced at Shongweni from EnviroServ Waste Management (Pty) Ltd. ENER-G Systems Natural Power is responsible for the implementation of CPA01 under the PoA and is the owner of CPA01.”</p> <p>The same was verified through a contract signed on 09/06/2009 between EnviroServ Waste Management (Pty) Ltd. &amp; ENER-G Systems (Pty.) Ltd.</p> <p>Hence CAR is closed.</p>
<p>CAR 4:</p> <p>In the section B.2 of the CPA-DD, the PP has not explained the inclusion of CPA under the PoA by justifying the applicability under each eligibility criteria for inclusion of a CPA in the PoA in line with “Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities (version 01.0)” EB 65 Annex 3.</p>	<p>B.2.1. / B.2.2. / B.2.3. / B.2.4. / B.2.5. / B.2.6. / B.2.7. / B.2.8. / B.2.9. / B.2.10. / B.2.11. / B.2.12. / B.2.13.</p>	<p>PP added additional explanation per Criteria to match the eligibility criteria for inclusion as specified in § 13 Annex 3 of EB 63.</p> <p>Please see VD2_07 120402_List of eligibility criteria.doc. The memo also shows the numbering of the criteria as used in version 1 of the PoA-DD and version 1 of the CPA-DD.</p> <hr/> <p>New response (26/06/2012): The criteria have been updated. See VD3_01 120621 updated List of eligibility criteria.docx. This resulted in an updated Inclusion check list signed by CME and CPA owner: VD3_09 Eligibility check sheet Shongweni_signed.pdf based on updated Eligibility check procedure (WI-CME-GEN-18 Rev 02 Eligibility Check</p>	<p>The eligibility criteria in PoA-DD have been updated. The explanation for inclusion of CPA under the PoA are provided by justifying the applicability under each eligibility criteria for inclusion of a CPA in the PoA in line with “Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities (version 01.0)” EB 65 Annex 3.</p> <p>Hence CAR is closed.</p>

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		Procedure) and related template (WI-CME-GEN-19 Rev 02 Eligibility Check Sheet) in the CME manual.	
CAR 5: In the section B.5.1 of the CPA-DD, the list of data and parameters available at the time of validation is not complete and not in accordance with the requirements of the applied methodology i.e. ACM0001.	B.5.1.1. / B.5.1.2.	Section B.5.1 of the CPA-DD has been adjusted in accordance with the requirements of the applied methodology (ACM0001). The following parameters have been added: ID4 (BE <sub>CH4, SWDS,y</sub> ), ID5 (MD <sub>Hist</sub> ), ID6 (MG <sub>Hist</sub> ). Also, section E.6.3 of the PoA-DD has been adjusted accordingly.	Section B.5.1 of the CPA-DD has been updated in accordance with the requirements of applied methodology ACM0001. The section is complete with respect to data and parameters available at the time of validation.  Hence CAR is closed.
CAR 6: In section B.6.1 of the CPA-DD, the operation and management structure along with procedure for data collection, recording, checking, data transfer and archiving system for CPA has not been described.	B.6.1.1. / B.6.1.2. / B.6.1.3.	Relevant procedures including inter alia procedures on data collection and storage, record keeping, calibration of instruments, responsibilities and organisation of the monitoring as well as training of staff are described in the Operational Manual of the programme that is included in the supporting documents (see VD2_08 CME manual).	Section B.6.1 of the revised CPA-DD includes information on operation and management structure along with procedure for data collection, recording, checking, data transfer and archiving system for CPA.  Specific Work Instructions (WI) have been developed as a part of CME manual to address the requirements.  The following WI's deal with the issues identified: <ul style="list-style-type: none"> <li>• WI-CME-GEN-04: Document control;</li> <li>• WI-CME-GEN-05: Record keeping system;</li> <li>• WI-CME-GEN-06: Roles &amp; responsibilities;</li> <li>• WI-CME-GEN-54: Continuous Improvement of PoA Management System;</li> <li>• WI-CME-GEN-45: Training.</li> </ul> Moreover, In section B.6.1 of revised CPA-DD provides the following: <ul style="list-style-type: none"> <li>• Monitoring plan to be implemented by CME along with a diagram clearly indicating the flow of information,</li> </ul>

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			<p>recording and archiving of the same.</p> <ul style="list-style-type: none"> <li>WI-CME-GEN-55: is the workbook format that would be used to capture data in accordance with the applied methodology and generate monthly reports of emission reductions.</li> </ul> <p>Hence CAR is closed.</p>
<p>CAR 7:</p> <p>In the section B.6.1 of the CPA-DD, the list of data and parameters to be monitored is not complete and not in accordance with the requirements of the applied methodology i.e. ACM0001.</p>	B.6.1.5.	<p>Section B.6.1 of the CPA-DD has been adjusted in accordance with the requirements of the applied methodology (ACM0001). The following parameters have been added: ID21 (PE<sub>EC,y</sub>), ID22 (PE<sub>flare,y</sub>). Also, section E.7.1 of the PoA-DD has been adjusted accordingly.</p>	<p>Section B.5.1 of the CPA-DD has been updated in accordance with the requirements of applied methodology ACM0001. The section is complete with respect to data and parameters available at the time of validation.</p> <p>Hence CAR is closed.</p>
<p>CAR 8:</p> <p>Section D of CPA-DD is not complete with regards to the following points:</p> <ul style="list-style-type: none"> <li>Whether the local stakeholders were briefed about the CDM aspects of the project activity including CDM revenues?</li> <li>Process of identification of relevant stakeholders?</li> <li>Date of advertisement for CDM local stakeholder consultation invitation as well as meeting with the supporting evidences.</li> <li>Substantiate with evidences that a reasonable time for submission of comments was provided.</li> <li>How the comments were invited, compiled for LSC in an open and transparent manner.</li> <li>Provide a summary of comments received.</li> </ul>	D.1.1. / D.1.2.	<p>Bullet 1: The local stakeholder meeting on 15 April 2010 was also used to ask for comments on the project being registered as a CDM project that will sell carbon credits. This formed part of the presentation and part of the project documentation. VD_09 (Basic assessment report clause 8.11) and VD 10 Appendix 1 outlines the consultation with the interested and affected parties (I&amp;APS). The I&amp;APs also got an opportunity to comment on the reports in terms of VD2_12.</p> <p>Bullet 2: For the process of identification of relevant stakeholders please refer to § 3.3 of the Basic Assessment Report (VD_09)</p> <p>Bullet 3: Invitation letters were sent on 26 March 2010, newspaper advertisements were published on 1-3 April. The meeting was held on April 15 2010.</p> <p>Bullet 4: The I&amp;APS got the opportunity to comment on the report. They were notified by letter dated January 31 2011 (VD2_12) and had time to respond till March 25</p>	<p>Section D of revised CPA-DD states:</p> <ul style="list-style-type: none"> <li>The public stakeholder consultation was held at the Assegay Hotel on 15 April 2010 to introduce the landfill gas to electricity project and to discuss the basic assessment process as required for the waste management license application as well as outline the projects intentions to be registered as a CDM project under the Kyoto protocol.</li> <li>Synergistics Environmental Services undertook the public participation process with the assistance of Pravin Amar Development Planners who facilitate the Shongweni Landfill Monitoring Committee (SLMC). As SLMC is an established committee that has been running for many years the committee's database of IAPs (Interested and Affected Parties) was used as a starting point for the distribution of project information.</li> </ul>

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<ul style="list-style-type: none"> <li>How due account was taken of any comments received.</li> </ul>		<p>2011. After the project was approved all the I&amp;APs were given and additional opportunity to comment or object to the project for 30 days as detailed in VD2_13.</p> <p>Bullet 5: See bullet 1, bullet 4.</p> <p>Bullet 6: See table 21 Questions and comments raised during stakeholder consultation, which provides a summary of comments received.</p> <p>Bullet 7: After the assessment was complete according to the Scoping report, the Basic Assessment report was compiled and provided to all the I&amp;APs for comment or objection and this letter (VD2_13). Chapter 8.11. outlines that the project will receive revenue from the sale of CER under CDM. The I&amp;APs were then given additional opportunity to comment to the department or to object to the project as detailed in the letter and having sight of the BA report.</p>	<p>Additional measures to identify IAPs included the placement of site posters and newspaper advertisements. Networking and referral by informed IAPs has helped register additional IAPs.</p> <ul style="list-style-type: none"> <li>The advertisements were put out in various newspapers viz., The Mercury (01/04/2010), Highway mail (02/04/2010) and Ilanga (01 – 03/04/2010). Invitation letters (reference no.: DN/WML/0008/10; dated 26/03/2010) were sent out to all IAPs.</li> <li>The stakeholder consultation meeting was held on 15/04/2010 and hence a sufficient time was provided for submission of comments.</li> <li>The invitation letter (reference no.: DN/WML/0008/10; dated 26/03/2010) sent out to IAPs has the form attached to provide their feedback on the project activity.</li> <li>A brief summary of comments received and replies to the comments is provided.</li> </ul> <p>Hence CAR is closed.</p>
<p>CAR 9 (new CAR):</p> <p>As per the PoA DD, data considered for the GEF is 2009, 2010 and 2011. However review of GEF spread sheet reveals the data till 2012.</p>	<p>B.5.2.1</p>	<p>Indeed the table taken from Eskom website includes data from 2012. However the latest annual report – from which also data is taken – is only for the year 2011. Hence in PoA-DD data for 2009, 2010 and 2011 is used. Revised in ER sheet. A more conservative figure for OM and BM has been used to give a conservative figure for CM.</p>	<p>The data in the GEF spread sheet has been revised and does not include the data for 2012. Also the value for OM and BM has been updated to give a more conservative figure for CM.</p> <p>Hence CAR is closed.</p>
<b>CLARIFICATION REQUEST</b>			
<p>CL 1: PP needs to provide documentary evidence to support the technical lifetime to</p>	<p>A.4.2.3.</p>	<p>Please see Technical Due Diligence Report (VD_11 12914-10311-3_Tech_DD_23Mar11 final.pdf) by Golder Ass. Page 42 last two paragraphs which read:</p>	<p>Technical lifetime of the equipment has been considered as 15 years.</p>

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<p>the DOE.</p>		<p><i>“The financial model has assumed the Gensets to have a 15 year lifetime. This is based on a run time of 115 500 operational hours, assuming 7 700 hours per year. Golder considers this to be in accordance with industry norms. It is, however, reliant on adherence to the manufacturers recommended service regime and with enhanced servicing and/or gas clean up, where required, due to local gas quality and/or environmental conditions. A significant number of the engines in both SPVs are forecast to become non-operational before they achieve 15 years use.”</i></p>	<p>The same is based on a technical due diligence report titled “ENERG JOBURG and ENERG SYSTEMS PORTFOLIO (report no.: 12914-10311-3) by Golder Associates, which on page 42 states, “<i>The financial model has assumed the Gensets to have a 15 year lifetime. This is based on a run time of 115 500 operational hours, assuming 7 700 hours per year. Golder considers this to be in accordance with industry norms. It is, however, reliant on adherence to the manufacturers recommended service regime and with enhanced servicing and/or gas clean up, where required, due to local gas quality and/or environmental conditions. A significant number of the engines in both SPVs are forecast to become non-operational before they achieve 15 years use.</i>”</p> <p>Hence CL is closed.</p>
<p>CL 2: In the section A.4.5 of CPA-DD PP states, “CPA01 does not obtain public funding.”</p> <p>Project participants needs to substantiate with evidences that such funding does not result in a diversion of official development assistance, is separate from, and is not counted towards the financial obligations of those parties.</p>	<p>A.4.5.1. / A.4.5.2. / E.2.1. / E.2.2.</p>	<p>Added to the paragraph the sentence which now reads: <i>“The CPA01 has not received and will not be seeking public funding from Annex 1 countries, hence no official development assistance will be diverted from any funding from Annex 1 parties.”</i></p> <hr/> <p>New response (26/06/2012):</p>	<p>The section A.4.5 of the CPA-DD states <i>“The CPA01 has not received and will not be seeking public funding from Annex 1 countries, hence no official development assistance will be diverted from any funding from Annex 1 parties.”</i></p> <p>The same has been substantiated through documentary evidences by providing a declaration from CPA implementer affirming the same.</p> <p>Hence CL is closed.</p>



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		Please find the signed letter VD3_03 CPA01 declaration of non ODA (signed).pdf in the dropbox folder, as supporting evidence that no ODA has been diverted.	
CL 3: The CME and CPA implementer needs to provide documentary evidences to DoE to substantiate that CPA01 is not registered as an individual CDM project activity or as a part of another PoA.	A.4.6.1. / A.4.6.2.	<p>please find the following proof:</p> <ol style="list-style-type: none"> <li>1. No other landfill PoAs registered under CDM (<a href="http://cdm.unfccc.int/ProgrammeOfActivities/registered.html">http://cdm.unfccc.int/ProgrammeOfActivities/registered.html</a>) see also printed version of page: VD2_02 print of registered CDM- Programme of Activities.pdf. Status as per April 23 2012</li> <li>2. No Shongweni landfill project registered under CDM: in <a href="http://cdm.unfccc.int/Projects/projsearch.html">http://cdm.unfccc.int/Projects/projsearch.html</a> a search query was executed on April 23 2012 with the following search criteria: sectoral scope 13, "South Africa" as host country and "Registered" as status. This resulted in 5 findings, none of them Shongweni landfill. See also VD2_03 print of query registered CDM landfill SA.pdf print of the query and its results)</li> <li>3. A search was conducted on the UNFCCC site (see VD2_04 print result search on UNFCCC site on Shongweni.pdf and VD2_05 Screen Shot 2012-04-23 at 17.13.50 search shongweni.pdf). Search resulted in 4 matches: a. The CPA-DD of Shongweni itself, b. a PDD of New England landfill, c. a PDD of Ekurhuleni Landfill and d. the PDD of Alton landfill. Hence Shongweni is not registered as an individual CDM project activity or as a part of another PoA.</li> </ol>	<p>The PP has submitted the following evidences to substantiate that the proposed CPA01 under the PoA is not a registered project activity or a part of a part of an already registered PoA:</p> <ul style="list-style-type: none"> <li>• VD2_02: List of registered CDM PoA with CDM Executive Board<sup>6</sup></li> <li>• VD2_03: List of registered CDM landfill projects in South Africa.<sup>7</sup></li> <li>• VD2_04: Search result for Shongweni Landfill on UNFCCC website.<sup>8</sup></li> <li>• VD2_06: CDM Project inclusion and CER sale agreement between ENER-G Systems (Pty) Ltd., and ENER-G Systems Natural Power (Pty) Ltd., signed on 26/04/2012.</li> </ul> <p>Hence CL is closed.</p>

<sup>6</sup> <http://cdm.unfccc.int/ProgrammeOfActivities/registered.html>

<sup>7</sup> <http://cdm.unfccc.int/Projects/projsearch.html>

<sup>8</sup> <http://cdm.unfccc.int/search?q=Shongweni+Landfill>

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**Table3: Forward Action Requests**

Forward action request	Reference to Table 2	Response by project participants/ Validation Conclusion
FAR 1: Starting date of CPA has been revised to 30/09/2013, expected date of start of CPA, set upon signing of the flare & extraction unit purchase. The starting date of CPA needs to be confirmed at the time of verification.	A.4.2.1	-
FAR 2: It is stated in sec. B.2 of CPA-DD that CPA will connect to the grid in phase 2. It needs to be confirmed during verification, if the CPA is connected to the grid.	B.2.6	-

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## APPENDIX B

### CERTIFICATE OF COMPETENCE



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