

TEMPLATE

DEVIATION REQUEST FORM

PUBLICATION DATE **11.04.2021**

Version **5.0**

A. To be completed by Gold Standard

1 | Decision

1.1 | Date – 14/07/2022

1.2 | Decision

The deviation request is **not approved** considering the GS4GG requirement under para 6.1.1 of Annex B under [GHG Emissions Reduction & Sequestration Product Requirements](#) states that:

“Transition project & CPA seeking issuance of GSVERs or conversion of issued GSCERs to GSVERs shall issue GSVERs for a maximum crediting period allowed as per relevant GS4GG activity requirements or crediting period with the other standard, whichever ends first. Under no circumstance, can the crediting period registered with other standards be extended”.

However, considering the discontinuation risk that projects face, two of the three projects may be considered for transition and claim GSVERs for the remaining crediting period (out of the 15 years permitted under GS4GG) as summarised below:

1. **0008:** [Brazil NovaGerar Landfill Gas to Energy Project](#) is not approved since it's 15-year crediting cycle ended in 2019.

2. **1165:** [PROBIOGAS-JP – João Pessoa Landfill Gas Project](#) allowed for a duration from 01/01/2021 to 26/11/2023
3. **3958:** [CTR Candeias Landfill Gas Project](#) allowed for a duration from 01/01/2021 to 28/09/2026

The eligibility of crediting period will be subject to the applicable timeline based on the submission date for preliminary review and compliance with the following requirements. The project developer shall :

1. Demonstrate compliance with applicable requirements as per the GS4GG Principles and Requirements and transition requirements along with the applicable activity requirement.
2. Demonstrate:
 - a. that the project faces a serious risk of discontinuation without carbon revenue.
 - b. additionality demonstration as per the design change rules. Where available, project additionality shall apply the actual financial data to justify how carbon revenue will alleviate the risk of discontinuation.
3. Ensure that continuity in the Project's monitoring activities is maintained and that PD is able to justify that no monitoring gaps exist (especially for SDG parameters) within the Monitoring Period(s). However, if gap(s) exist, the project shall justify that conservative approach(es) have been applied in line with section 3 of the [Deviation Approval Requirements and Procedures \(version 1.1\)](#) and overarching GS principles (as applicable).
4. Document the deviation request, its implications, and GS' decision in the appropriate section of the GS PDD and Monitoring Report (for the relevant MP).

FAR for validating VVB:

The validating VVB, through appropriate means at its disposal, validate the Project's compliance with the above-mentioned conditions and provides its opinion in the Validation Report.

SustainCert shall review both the PD's response and the VVB's assessment/opinion of the same and take appropriate steps

1.3 | Is this decision applicable to other project activities under similar circumstances?

No

B. To be completed by the Project Developer/Coordinating and Managing Entity and/or VVB requesting deviation (Submit deviation request form in Microsoft Word format)

2 | Background information

Deviation Reference Number	DEV_277	
Date of decision	14/07/2022	
Precedent (YES/NO)	NO	
Precedent details	N/A	
Date of submission	25/05/2022	
Project/PoA/VPA	Project	ID – CDM 0008 ID – CDM 1165 ID – CDM 3958
	☐ PoA	ID – CDM
	☐ VPA	ID – GSXXXX
Project/PoA/VPA title	CDM Project Activities: - Brazil NovaGerar Landfill Gas to Energy Project (https://cdm.unfccc.int/Projects/DB/DNV-CUK1095236970.6/view?cp=1) - PROBIOGAS-JP – João Pessoa Landfill Gas Project (https://cdm.unfccc.int/Projects/DB/SGS-UKL1181685608.94/view?cp=1) - CTR Candeias Landfill Gas Project (https://cdm.unfccc.int/Projects/DB/ERM-CVS1283351787.62/view?cp=1)	
Date of listing	25/05/2022	
GS Standard version applicable	1.2	
Date of transition to GS4GG (if applicable)	N/A	
Date of transition to Gold Standard from another standard (e.g. CDM) (if applicable)	N/A	
Date of design certification/inclusion (if applicable)	N/A	
Location of project/PoA/VPA	Brazil	
Scale of the project/PoA/VPA	☐ Microscale ☐ Small scale ☒ Large scale	
Gold Standard Impact Registry link of the project/PoA/VPA	N/A	
Status of the project/PoA/VPA	☒ New ☐ Listed ☐ Certified design ☐ Certified project	

Title/subject of deviation	Deviation on the "Requirements for transition of CDM Projects to Gold Standard for Global Goals"
Specify applicable rule/requirements/methodology, with exact paragraph reference and version number	"Requirements for projects to transition from other schemes to gold standard for global goals" Item: 1.1.2
Specify the monitoring period for which the request is valid (if applicable)	Start date N/A End date N/A
Submitted by	Contact person name:
	Email ID: nuno@unicarbo.com.br
	Organisation: Orizon Valorização de Resíduos S.A. UniCarbo energia e Biogás Ltda.
	Project participant: Yes ☒ No ☐
Validation and Verification body (VVB opinion shall be included, where required by the applicable rules/requirements or request is submitted by the VVB).	Yes ☐ No ☒ If yes; VVB name: VVB Staff name(s):
Any previous deviations approved for the same project activity/PoA/VPA(s)?	Yes ☐ No ☒

3 | Deviation detail

3.1 | Description of the deviation:

**Guidance* Use the space below to describe the deviation and substantiate the reason for requesting deviation from applicable rules/requirements. Please include all relevant information in support of the request. You are requested to follow the principles for requesting deviations, given in the [Deviation Approval Procedure/ Design Change Requirements](#).*

3.1.1 | Deviation detail (to be completed by Project developer):

Summary

The present document aims to demonstrate that revenues from carbon credits sales have developed a crucial role in 3 GHG emission reduction projects registered under CDM before 2016.

Evidences are presented that the carbon credit past and future sales have allowed the projects to be in operation, or to resume operation, and created the conditions for Orizon to invest more than **50 MM USD** in 3 LFG electricity generation plants.

These plants currently have **47,64 MW** installed and should expand for **59 MW** in the near future.

The document also aims to demonstrate that electricity generation without carbon credit revenues is not a difficult investment for waste companies due to instability in electricity sale prices, Brazilian currency exchange rate to Euro/Dolar (creating a big uncertainty in project OPEX), and high CAPEX.

The three cases presented are:

- Joao Pessoa project activity consisting in LFG flaring only was completely stopped from 2012 to 2019¹ and only resumed operation due to a CER sales contract that contributed to implement an LFG electricity generation plant; The João Pessoa Project was part of the Climate Cent Foundation program "Small and medium-sized landfill gas projects, Latin America" ² where trough an agreement with First Climate several stranded LFG projects in Latin America resumed operation due to entering into a CER sales agreement at a price that allowed to support operational and investment costs;
- Nova Gerar project activity consisting only as an LFG flaring project from 2004 to 2019 and was only operational due to CER sales contracts;
- Candeias project activity operated only as an LFG flaring project from 2012 to 2019 and was only operational due to CER sales contracts;
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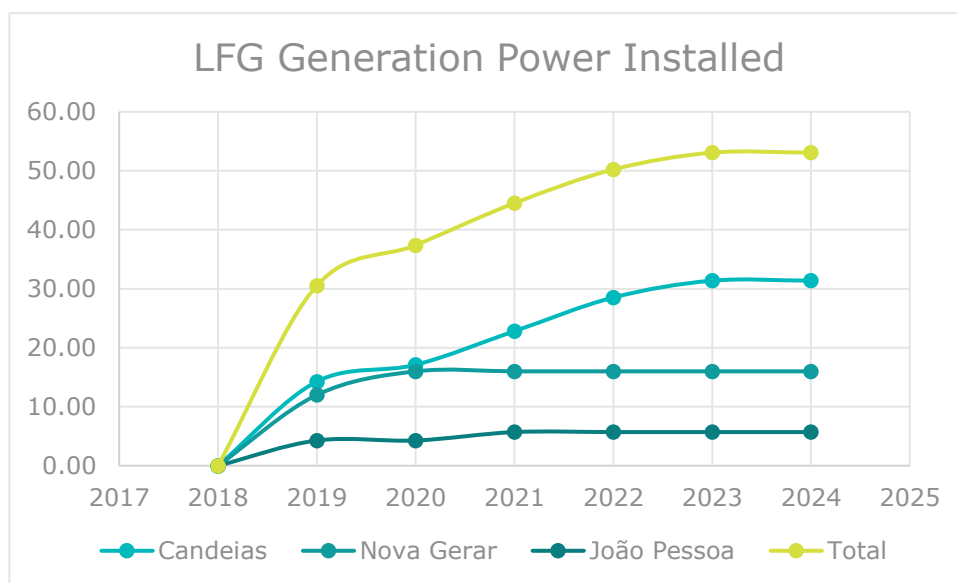
The project owner Orizon implemented LFG electricity generation projects in all the 3 project activities with the decision of implementation occurring in 2018. In fact, at the

¹ As demonstrated in the Monitoring Reports that cover the period from 13th May 2011 to 31st December 2019 available at <https://cdm.unfccc.int/Projects/DB/SGS-UKL1181685608.94/view?cp=1> and <https://cdm.unfccc.int/Projects/DB/SGS-UKL1181685608.94/view?cp=2>

² More details of the initiative available at: https://www.klimarappen.ch/resources/Deponiegas_FC_EN-21.pdf

time of the investment decision, there were signs that either the regulated market either through CDM or the Market Mechanisms of the Paris Agreement would continue to provide the income of Emission Reductions sales, that would allow the electricity generation projects to be financially viable.

The next graphic shows the power installed per year, as well as the total, in the 3 project activities.



However recent decisions on the future of the carbon markets, taken in COP#26 have brought a delay on the continuance of Carbon markets.

CDM project initiatives can't issue CERs generated on and onwards January 2021, and there are no assurances of when, or if, these project activities will be able to migrate to the Paris Agreement 6.4 mechanism.

This situation created a gap in carbon revenues of these projects, thus resulting in a difficult economic scenario as the decisions to implement electricity generation were dependent on those revenues.

Current status of the 3 project activities requesting deviation

#	CDM Project Activity	Status of implementation	LFG Flaring	LFG Electricity Generation	Investment
1	0008: Brazil NovaGerar Landfill Gas to Energy Project	Project under operation since 2004, having issued more than 3.0 MM CERs up to date	2004 - 2018	2019 – 12 Gensets: 16,93 MW 2020 onwards – 16 Gensets: 21,93 MW	20 MM USD
2	1165 : PROBIOGAS-JP – João Pessoa Landfill Gas Project	Project started operation in 2008 and operated until April 2012 being shutdown due to low CER prices. Project resumed operation in April 2019. Project issued 226338 CERs until today.	2008-2012 2012 – 2019 Project stopped	2019-2020: 3 Gensets: 4,28 MW 2020 onwards: 4 gensets: 5,70 MW	5,4 MM USD
3	3958: CTR Candeias Landfill Gas Project	Project started operation in 2012 as LFG flaring project. In 2019 started to generate electricity	2012-2019	2019 – 2021: gradual implementation of 8 to 11 gensets with a final installed power of 22,82 MW 2022: 20 gensets installed with total power of 28,52 MW	25 MM USD

Carbon credits revenue have shown to be crucial for the continuous not only for the operation of the above 3 project activities, but also for the implementation of the future stages of the above project activities.

0008 Brazil NovaGerar Landfill Gas to Energy Project

During the period from year 1986 to year 2003, the more than 700,000 ton of Municipal Solid Waste (MSW) generated in the metropolitan area of Nova Iguaçu (state of Rio de Janeiro, close to Rio de Janeiro city) were disposed at the Marambaia and Adrianópolis dumpsite under an unmanaged and uncontrolled manner.



Location of Marambaia and Adrianopolis



Marambaia open dump (1986 – 2003)

In February 2003 Marambaia was closed and an LFG extraction system was installed. Adrianópolis open dump was completely recovered and changed into a modern sanitary landfill, now known as the Nova Iguaçu landfill.



Current view of Adrianopolis Landfill, 2021

Part of the finance required to close the Marambaia open dump as well as transforming the Adrianopolis open dump into the state-of-the-art landfill site, was obtained by carbon credits.

The CDM project activity 0008 Brazil NovaGerar Landfill Gas to Energy Project was the first ever registered CDM project in the world.

Currently the Nova Iguaçu, also known as Adrianopolis landfill, has an MSW disposal of capacity of 5,000 ton per day and it is currently owned and operated by the company Orizon Valorização de Resíduos S.A. The landfill hosts since year 2004 the registered CDM project activity titled "Brazil NovaGerar Landfill Gas to Energy Project" (UNFCCC reg. no. 0008).



Location of the project activity

The CDM project activity was design to include, as part of its design conceptualization, landfill gas (LFG) being initially collected and destroyed under efficient and controlled conditions by flaring (in appropriate high temperature enclosed flares).

As part of the previously considered gradual/phase project implementation schedule for the project activity, LFG is utilized as gaseous fuel for electricity generation



CTR Nova Iguacu 5000 Nm³/h open flare in 2018 and view of landfill site



LFG Electricity Generation Plant in CTR Nova Iguacu landfill in 2021

Due to economical, regulatory and commercial constrains/challenges of the Brazilian Electricity Market, the construction of the project's electricity generation infrastructure only took place in 2018 and initially encompassed the installation and operation of 12 engine-generator sets of individual nameplate installed capacity of 1.4 MW. Currently (year 2022), the project's electricity generation infrastructure encompasses the installation and continuous operation of a total of 16 engine-generator sets which represents total combined installed capacity for the infrastructure of 22 MW.

Since its starting of operations, the CDM project activity has generated more than 2.0 Million CERs.

Year	CERs (tCO ₂ eq)
2.007	64.515
2.008	79.966
2.009	79.979
2.010	101.157
2.011	133.997
2.012	102.467
2.013	112.004
2.014	139.186
2.015	99.240
2.016	166.193
2.017	194.776
2.018	256.917
2.019	432.307
2.020	569.824
Total	2.072.915

The CDM registered project activity "Brazil NovaGerar Landfill Gas to Energy Project" has operated during the whole period from year 2007 to year 2019 with CER revenues representing the only income/revenue source for the project activity. Such revenues were instrumental to have generated LFG qualitatively and quantitatively evaluated along the period from year 2012 to year 2019. Confirmation of LFG pattern in the site was a requisite for the later occurred decision-making process of investing in infrastructure promoting utilization of LFG as gaseous fuel for electricity generation using state-of-the-art electricity generation technology fully fueled by LFG.

CER revenues were also instrumental within the decision-making process for investing in power generation infrastructure fully fueled by LFG. While most of CAPEX is made in hard currency (USD/EUR), the revenues from commercialization of electricity are in local currency (BRL). It is crucial to note that the BRL currency has suffered from severe depreciation against USD/EUR within the latest years (more than 40% since year 2019).

Due to the current stranded situation of the CDM (and new flexible mechanisms) and due to all uncertainty regarding the expected migration of the project activity as a GHG mitigation project-based initiative under Article 6.4 of Paris Agreement, the migration of the project activity into Gold Standard is perceived as instrumental to ensure sustainable carbon revenues.

The investment occurred between 2018 and 2021 of more than **20 Million USD**.

Even considering the CERs revenues from 2004 onwards, the project activity remains financially unattractive and has been kept under operation as a result of carbon revenues generation.

Thus, future carbon revenues is perceived as being crucial to the keep the operation of the project activity and its future expansion.

With occurred accumulated CAPEX expenditures predicted over USD 20 MM (2018-2021) and OPEX within the range of USD 500 k per year until 2018, the project activity has suffered from negative cash flows.

1165: PROBIOGAS-JP – João Pessoa Landfill Gas Project

The JP Landfill was one of the first landfills in the Northeast region of Brazil, starting operating in 2003, and it is located in the Metropolitan Region of João Pessoa, the most populated city of Paraíba State. The landfill receives waste from five cities around João Pessoa, achieving a total of around 2,000 tons of waste per day, and is projected to receive around 13,000,000 tons of waste until 2028.

An LFG flaring registered project activity was implemented at the landfill in 2008. The project activity operated until April 2012 having generated 33 707 CERs, issued in September 2013.

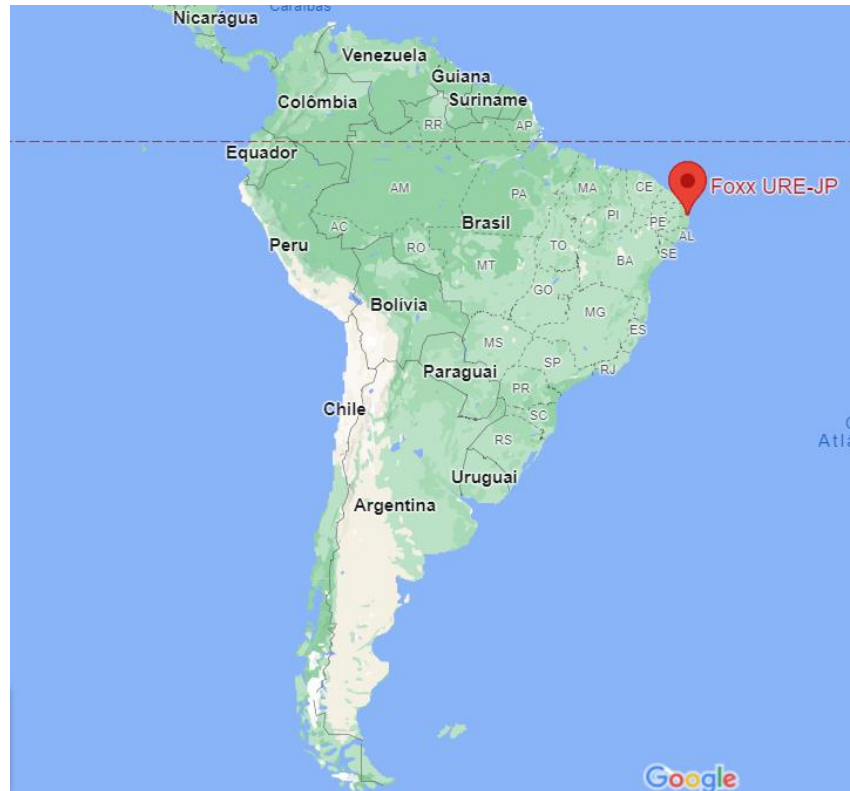
In April 2012 the LFG flaring station was shut down due to low CER market prices, and remained stopped until 2019, with all the LFG being released to the atmosphere.

In 2017 the project activity obtained a CER selling contract with the Swiss company First Climate under an initiative designed in conjunction with the Swiss Government to allow the restart of operation of LFG projects in LATAM.

The CER selling contract with First Climate allowed Orizon to resume project operation and to consider investing in an LFG electricity generation plant.

With over 5,4 MM USD investment, Orizon built an LFG electricity generation facility that operated with 3 gensets (4,28 MW) from May 2019 to March 2021.

An extra genset was installed in April 2021, and the plant currently operates with an installed power of 5,70 MW.



Location of the project activity



Current Aerial View of the João Pessoa Landfill



Aerial view of the LFG plant, March 2021

During the period of April 2019 to December 2020 the project issued **226 338 CERs**.

The signing of the CER selling contract with First Climate, was instrumental to allow the restart of LFG flaring operations of the João Pessoa LFG plant, and provide the additional revenue to allow Orizon decision invest in the LFG electricity generation plant.

3958: CTR Candeias Landfill Gas Project

During the period from year 1985 to year 2007, the more than 2,000 ton of Municipal Solid Waste (MSW) generated in the metropolitan area of Recife (capital of the State of Pernambuco in Northeast Brazil) were disposed at the Muribeca dumpsite under an unmanaged and uncontrolled manner. This particular open garbage dumpsite has been operating for more than 20 years and has hosted more than 3,000 people acting as waste scavengers.

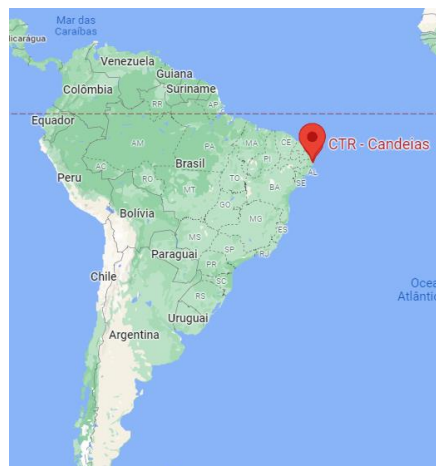
The CTR Candeias landfill was designed by using state-of-the-art engineering solutions and technics for the construction and operation of landfill sites and has entered into operation in year 2007. CTR Candeias landfill displaced uncontrolled and unmanaged waste disposal at the Muribeca dumpsite.

The CTR Candeias landfill is located within the geographical limits of the municipality of Jaboatão de Guararapes, not far from Muribeca.

The CTR Candeias landfill has MSW disposal of capacity of 5,000 ton per day and it is currently owned and operated by the company Orizon Valorização de Resíduos S.A. The landfill hosts since year 2011 the registered CDM project activity titled "CTR Candeias Landfill Gas Project" (UNFCCC reg. no. 3958).



Muribeca open dump (1985 – 2007)



Location of the project activity

The CDM project activity CTR Candeias Landfill Gas Project was design to include, as part of its design conceptualization, landfill gas (LFG) being initially collected and destroyed under efficient and controlled conditions by flaring (in appropriate high temperature enclosed flares).

As part of the previously considered gradual/phase project implementation schedule for the project activity, LFG is utilized as gaseous fuel for electricity generation (initially forecasted to occur by year 2012).



CTR Candeias landfill in 2015



Landfill Gas flaring plant installed at CTR Candeias in 2015



LFG Electricity Generation Plant in CTR Candeias landfill in 2021

Due to economical, regulatory and commercial constrains/challenges of the Brazilian Electricity Market, the construction of the project's electricity generation infrastructure only took place in 2019 and initially encompassed the installation and operation of 8 engine-generator sets of individual nameplate installed capacity of 1.4 MW. Currently (year 2022), the project's electricity generation infrastructure encompasses the installation and continuous operation of a total of 18 identical engine-generator sets which represents total combined installed capacity for the infrastructure of 25 MW.

Since its starting of operations, the CDM project activity has generated more than 1.3 Million CERs.

The project activity has managed to increase its activity level along its historical operation (with incremental CER generation), except in years 2018 and 2019 when, due to the fact that there was no CER contract in place, the level of operation of the plant was severely reduced in order to lower the operational costs.

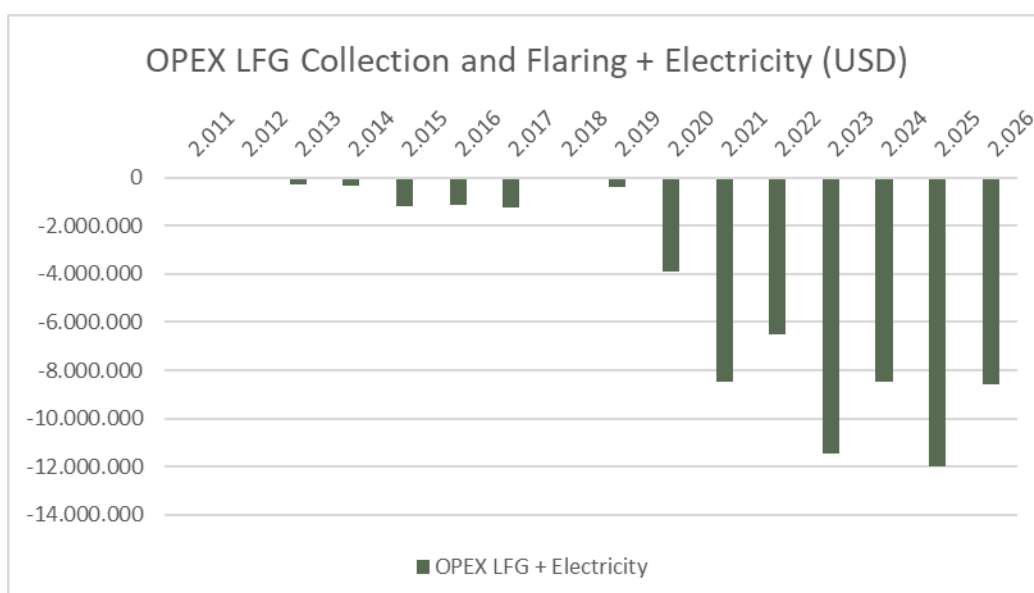
Year	CERs
2.011	-
2.012	1.181
2.013	103.451
2.014	138.170
2.015	145.393
2.016	221.830
2.017	219.000
2.018	14.684
2.019	117.317
2.020	413.567
Total	1.374.593

The CDM registered project activity “CTR Candeias Landfill Gas Project” has operated during the whole period from year 2012 to year 2019 with CER revenues representing the only income/revenue source for the project activity. Such revenues were instrumental to have generated LFG qualitatively and quantitatively evaluated along the period from year 2012 to year 2019. Confirmation of LFG pattern in the site was a requisite for the later occurred decision-making process of investing in infrastructure promoting utilization of LFG as gaseous fuel for electricity generation using state-of-the-art electricity generation technology fully fueled by LFG.

CER revenues was also instrumental within the decision-making process for investing in power generation infrastructure fully fueled by LFG. While most of CAPEX is made in hard currency (USD/EUR), the revenues from commercialization of electricity are in local currency (BRL). It is crucial to note that the BRL currency has suffered from severe depreciation against USD/EUR within the latest years (more than 40% since year 2019).

Due to the current stranded situation of the CDM (and new flexible mechanisms) and due to all uncertainty regarding the expected migration of the project activity as a GHG mitigation project-based initiative under Article 6.4 of Paris Agreement, the migration of the project activity into Gold Standard is perceived as instrumental to ensure sustainable carbon revenues.

With occurred accumulated CAPEX expenditures predicted over USD 32 MM (2012-2026) and OPEX within the range of USD 1 MM per year until 2019, the project activity has suffered from negative cash as seen below. From 2019 onwards the OPEX includes the electricity generation operational costs.



Even considering the CERs revenues from 2013 onwards, the project activity remains financially unattractive and has been kept under operation as a result of carbon revenues generation.

Thus, future carbon revenues is perceived as being crucial to the keep the operation of the project activity and its future expansion.

Orizon plans add 10% to the capacity of the electricity generation plant with the expected Gold Standard carbon revenues.

Deviations Proposed

The current rule for transition of projects registered under other SCHEMES TO GOLD STANDARD FOR GLOBAL GOALS, state that

"2.1.1 | The project or CPA is eligible for transition to GS4GG, if the project or CPA;

a. is a GS4GG eligible project type; AND

b. has a valid registration status with the other standard at the time of first submission (preliminary review) to Gold Standard; AND

c. has a crediting period start date with the other standard on or after 01 January 2016; OR

d. has a crediting period start date with other standard before 01 January 2016, but can demonstrate, at the time of preliminary review;

- i. that project faces a serious risk of discontinuation without carbon revenue, and*
- ii. how the project has been operational in the absence of carbon revenue, if carbon credits have not been issued to the project in recent years."*

As per the evidences presented in this request for deviation, Orizon requests that the three presented project activities are allowed to transaction to Gold Standard, based in the fact that it was shown that:

- GS4GG eligible project type
- Has a valid registration status with the other standard at the time of first submission (preliminary review) to Gold Standard
- Has a crediting period start date with other standard before 01 January 2016, but demonstrates that:
- Carbon revenues were and are crucial for project built, and operation as well as for the evolution of the projects from flaring to electricity generation.
- The absence of carbon revenues will seriously affect investment on the projects and reduce its performance, and in the long run face a risk of discontinuation.
- The absence of carbon revenues will delay future expansions of the projects.
- Are only active due to income of electricity sales.

Crediting Periods

The crediting period of the project activities mentioned in the document are presented in the following table:

Project	Crediting Period Start	21 year Crediting Period End
Nova Gerar	01/07/2004	30/06/2025
João Pessoa	27/11/2008	26/11/2029
Candeias	29/09/2011	27/09/2032

The start date of electricity generation in each project activity is mentioned on the following table:

Project	Start of Electricity Generation
Nova Gerar	01/02/2019
João Pessoa	01/05/2019
Candeias	01/08/2019

Due to the very different nature of electricity generation with gensets using LFG as fuel, when compared to LFG flaring, Orizon request that a new project activity is considered at the landfill, where the project activity consists in the LFG valorization for the generation of renewable energy. Thus, the crediting period of the project activities would be initiate at the start date of the electricity generation component and have a length of 15 years onwards.

Presentation of the companies involved

Orizon Valorização de Resíduos was founded in 1999. Orizon is as major Waste Management player, that currently owns and operates **11 large scale landfill sites in Brazil**, providing state-of-the-art solid waste management services for more than **40 million people**.

Orizon is a pioneer in the carbon market, owning and operating the first ever registered CDM project in the world: the Brazil NovaGerar Landfill Gas to Energy Project, registered under the CDM in November/2004.

Orizon's project activities under the CDM currently generate over **1.98 MM CERs per year (6 registered CDM project activities)**, and all LFG collection and destruction/utilization project-based initiatives implemented and operated by Orizon are aligned with the SDGs 7, 8 and 13. Orizon recently implemented power generation using LFG as fuel in the 4 projects (Nova Gerar, Candeias, João Pessoa and Barra Mansa).

As part of its constant expansion Orizon recently acquired 7 new landfills (June 2022):

ESTRE Itapevi Landfill Gas Project (EILGP)

ESTRE's Paulínia Landfill Gas Project (EPLGP) – Closed Landfill

EcoParque Paulínia

Maceió Landfill

Sergipe Landfill

Itaboraí Landfill

Tremembé Landfill

Of these 7 landfills, 2 have registered CDM project activities of LFG flaring (ESTRE Itapevi Landfill Gas Project (EILGP), and ESTRE's Paulínia Landfill Gas Project (EPLGP) – Closed Landfill).

Orizon pretends to implement LFG valorization plants in all of those landfills in the near future, and carbon credits represent a very important role in providing financial revenue to allow such projects to be developed.

With this recent expansion, Orizon has become not only the **largest landfill operating company in Brazil**, but also the company with the highest number of registered LFG carbon projects in Brazil.

The next table presents all of the project activities of Orizon. When fully implemented those project activities are expected to generate over **3.55 MM** carbon credits per year.

#	CDM Project Activity/Landfill	Date of original registration in CDM	Current Crediting Period	Annual CER generation potential per current performance	Type	Status
1	0008: Brazil NovaGerar Landfill Gas to Energy Project	01 Nov 2004	3 rd 01 Jul 18 - 30 Jun 25	650 000	LFG Flaring + Power Generation	CDM
2	1165 : PROBIOGAS-JP - João Pessoa Landfill Gas Project	30 Jan 2008	2 nd 27 Nov 15 - 26 Nov 22	160 000	LFG Flaring + Power Generation	CDM
3	3958: CTR Candeias Landfill Gas Project	29 Sep 2011	2 nd 29 Sep 18 - 28 Sep 25	470 000	LFG Flaring + Power Generation	CDM
4	6573: Caixa Econômica Federal Solid Waste Management and Carbon Finance Project CPA CPA-2: CTR São Gonçalo	PoA:05 Oct 2012 CPA:31 Mar 2016	1 st 18 May 2016 - 17 May 23	300 000	LFG Flaring + Power Generation	Registered under CDM In transition to GS
5	0911 : ESTRE Itapevi Landfill Gas Project (EILGP)	17 Aug 2007	2 nd 17 Aug 14 - 16 Aug 21	50 000	LFG Flaring	Registered CDM
6	0165 : ESTRE's Paulínia Landfill Gas Project (EPLGP) - Old Landfill	03 Mar 2006	3 rd 14 Sep 20 - 13 Sep 27	350 000	LFG Flaring	Registered CDM
7	Ecoparque Paulínia Landfill Gas Project	Not registered/not operational	-	900 000	Future LFG Flaring + Biomethane + Power Generation	New project to be registered under GS or VCS
8	Ecoparque Barra Mansa Landfill Gas Project	Not registered/not operational	-	75 000	LFG Flaring + Power Generation	Project to be registered under GCC
9	Ecoparque Maceió Landfill Gas Project	Not registered/not operational	-	150 000	Future LFG Flaring + Biomethane + Power Generation	New project to be registered under GS or VCS
10	Ecoparque Sergipe Landfill Gas Project	Not registered/not operational	-	150 000	Future LFG Flaring + Biomethane + Power Generation	New project to be registered under GS or VCS
11	Ecoparque Itaboraí Landfill Gas Project	Not registered/not operational	-	150 000	Under evaluation	New project to be registered under GS or VCS
12	Ecoparque Tremembé Landfill Gas Project	Not registered/not operational	-	150 000	LFG Flaring + Power Generation	Project to be registered under GCC
			Total	3 555 000		

UniCarbo is a Brazilian consultancy/advisory services and project structuring company with more than 16 years of day-to-day expertise and experience in GHG mitigation/abatement projects. While having being directly involved with CDM project preparation and monitoring related activities in more than 70 LFG collection and destruction/utilization projects located in 7 countries,

UniCarbo's team has been instrumental for the successful issuance of more than 30,000,000 CERs/VCUs/VERs. UniCarbo is the carbon consultancy/advisory partner for all existing and new Orizon's LFG collection and destruction/utilization project activities.

3.1.2 | VVB opinion (to be completed by VVB, if applicable):

**Guidance* If required by SustainCERT or Gold Standard for this particular deviation, please add here the VVB's opinion.*

.....

Not applicable

3.2 | Assessment of the deviation:

**Guidance* Use the space below to describe how the deviation complies with the requirements, and, where applicable, the accuracy, completeness and conservativeness is ensured. Please include all relevant information in support of the request.*

3.2.1 | Deviation assessment (to be completed by Project developer):

.....

In preparing this application, UniCarbo has interpreted The Gold Standard rules in accordance with the Standard's core principles of fairness, reliability, conservativeness and pragmatism. (Principles, Clause 1.2.6)

3.2.2 | VVB opinion (to be completed by VVB, if applicable):

**Guidance* If required by SustainCERT or Gold Standard for this particular deviation, please add here the VVB's opinion.*

.....

Not applicable

3.3 | Impact of the deviation:

****Guidance*** Use the space below to describe the impact of the deviation on project design, safeguarding principles assessment, SDG assessment, emissions reductions, monitoring frequency, data quality, potential risk or any other relevant aspect of the project. Please substantiate the impact assessment with relevant and verifiable data/information.*

3.3.1 | Impact assessment (to be completed by Project developer):

.....

Orizon 's projects contribute actively to SDG. Recently the company has issued its sustainability report, from which we emphasize the following commitments:

ORIZON | 2021 SUSTAINABILITY REPORT
☰
ABOUT US < 19 >

2021 COMMITMENTS

Orizon VR is committed to achieving progress on ESG. In our first report we set five sustainability goals for 2021.



1. Our five priority SDGs and how they align with our strategy	
	8.3 Promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage the formalization and growth of micro-, small- and medium-sized enterprises, including through access to financial services. 8.8 Protect labor rights and promote safe and secure working environments for all workers, including migrant workers, in particular women migrants, and those in precarious employment.
	9.4 By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities.
	10.1 By 2030, progressively achieve and sustain income growth of the bottom 40 per cent of the population at a rate higher than the national average. 10.2 By 2030, empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status.
	12.4 By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment. 12.5 By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse.
	13.a Implement the commitment undertaken by developed-country parties to the United Nations Framework Convention on Climate Change to a goal of mobilizing jointly \$100 billion annually by 2020 from all sources to address the needs of developing countries in the context of meaningful mitigation actions and transparency on implementation and fully operationalize the Green Climate Fund through its capitalization as soon as possible.

Regarding the presented project activities, they will contribute for SDG 13 in approximately 1 300 000 tCO₂eq of emission reductions per year.

The project activities will also contribute with 492 000 MWh/year of renewable energy. The projects also create local employment opportunities, with employee development and training, as Orizon always contracts local personnel. Working directly and exclusive for those three projects, Orizon maintain a full team of employees and outsourced employees that are benefited with better job conditions and opportunities thanks to the carbon project.

The landfills are located in low employment and economically disadvantaged areas, thus the creation of local work opportunities is of major importance.

Sustainable Development Goals Targeted	SDG Impact	Estimated Annual Average	Units or Products
13 Climate Action (mandatory)	Emissions Reductions	Nova Gerar: 600 000 tCO ₂ e Candeias: 500 000 tCO ₂ e Joao Pessoa: 200 000 tCO ₂ e	VERs
SDG 7 Affordable and Clean Energy	Quantity of net electricity supplied to the grid in year y	492 000	MWh/year
8 Decent work and Economic Growth	Number of employments	60	workers

3.3.2 | VVB opinion (to be completed by VVB, if applicable):

**Guidance* If required by SustainCERT or Gold Standard for this particular deviation, please add here the VVB's opinion.*

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Not applicable

3.4 | Documents:

**Guidance* List of documents provided (note that once a decision has been made by Gold Standard, this deviation form along with supporting documents will be made public on the Gold Standard website. If any of the supporting documents are confidential, please indicate here to ensure they are omitted.)*

Version number	Release date	Description
5	11.04.2022	Additional information added: - date of listing, design certification, transition - standard version - specific reference to a requirement deviated from - any previous deviations/design changes approved Guidance on VVB opinion
4	14.01.2021	
3	16.07.2020	
2	03.05.2018	
1	01.07.2017	Initial adoption