Gold Standard
for the Global Goals

TEMPLATE

DEVIATION REQUEST FORM

PUBLICATION DATE **11.04.2021**

Version **5.0**

A. To be completed by Gold Standard

1| Decision

1.1 | Date – 19/06/2023

1.2 | Decision

The deviation request is approved considering the change in number of wind turbines does not equate to change in technology measure.

The project developer shall document the deviation request, its implications, and GS' decision in the appropriate section of the PDD.

The validating/verifying VVB shall, through appropriate means at its disposal, evaluate the project's compliance with the above-mentioned conditions and provides its opinion in the Validation report.

SustainCert shall review both the project developer'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

2| Background information

Deviation Reference Number	DEV_406	
Date of decision	19/06/2023	
Precedent (YES/NO)	No	
Precedent details	NA	
Date of submission	13/02/2023	
Project/PoA/VPA	Project	ID – GS3041
	☐ PoA	ID – GSXXXX
	☐ VPA	ID – GSXXXX
Project/PoA/VPA title	Soke Wind Power Plant Project	
Date of listing		
GS Standard version applicable	2.2	
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)	2.12.2015	
Location of project/PoA/VPA	Turkey	
Scale of the project/PoA/VPA	☐ Microscale ☐ Small scale ☒ Large scale	
Gold Standard Impact Registry link of the project/PoA/VPA	https://registry.goldstandard.org/projects/details/525	
Status of the project/PoA/VPA	☐ New ☐ Listed ☒ Certified design ☐ Certified project	
Title/subject of deviation	Exemption from a Gold Standard Rule	
Specify applicable rule/requirements/methodology, with exact paragraph reference and version number	ACM0002: Consolidated baseline methodology for grid-connected electricity generation from renewable sources - Version 16.0.0	

Specify the monitoring period for which the request is valid (if applicable)	Start date 21/03/2015[1] End date 31/07/2021
Submitted by	Contact person name:Zeynep Artaç Email ID:zeynep.artac@ekobil.com
	Organisation:Ekobil Environmental Services and Consultancy Ltd.
	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: KBS Certification Services Pvt. Ltd.(Verification) VVB Staff name(s): Shikha Sharma
Any previous deviations approved for the same project activity/PoA/VPA(s)?	Yes ☒ No ☐

3| Deviation detail

3.1 | Description of the deviation:

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

The deviation request is about the request for ***exemption*** of the following rule:

> "The prior consideration rule is also applicable to a Project that undergoes a design change. A project with a Certified Design requesting to include a new technology/measures shall submit the request for approval of design change to Gold Standard within one year of the start date of the proposed technology/measures (design change component). If the developer fails to submit the request for approval within one year, the design change component shall not be eligible for Gold Standard Certification. "

[1] The duration of the monitoring period cannot be more than three years from the date of remote/physical site visit by a VVB therefore credits are claimed form this date onwards. The start date of the project activity is 21/03/2014.Since the start date of the Gold Standard crediting period may be postponed for one year without justification,the crediting period is from 21/03/2015 to 20/03/2022.

This deviation form will explain the ***reasons*** why the project owner failed to submit the approval of design change of the project within one year of the proposed technology.

The design change involves the change in number of turbines from **19** to **15,** however, the total generation capacity of the project remains unchanged i.e. 45.0 MWe(which can be crosschecked from the project license[2]) and hence the annual estimated generation of 141,100 MWh/year as per the registered PDD is still valid.

In the first validated PDD it is stated that Soke Rüzgar Enerjisinden Elektrik Üretim Santrali A.Ş which was established in 2006 planned to install Soke Wind Power Plant Project Turkey (hereafter referred to as Soke WPP project) with 19 turbines each has an output of 3.3 MWm that have a 62.7 MWm/***45.0 MWe*** installed capacity in Soke district of province of Aydin. In the validated PDD under the section A.4, parties and project participants are given as follows:

Table 1:Names of the parties in validated PD

Party involved (host) indicates host Party	Private and/or public entity(ies) project participants (as applicable)
Turkey (host)	Soke Rüzgar Enerjisinden Elektrik Üretim Santrali A.Ş[3]
Turkey (host)	Gaia Finansal Danışmanlık Hiz. Tic. Ltd. Şti.

Responsibilities of GAIA Carbon Finance regarding the carbon credits process was the preparation of the validation documents such as PDD, Passport, Calculations etc. and assisting Soke Rüzgar Enerjisinden Elektrik Üretim Santrali A.Ş during the validation, registration, after that verification, and issuance process as the carbon finance team

[2] Annex 1 can be checked from the document list
[3]Soke Rüzgar Enerjisinden Elektrik Üretim Santrali A.Ş was a company that under the management of Bereket Energy. Later,the title of the company changed from Bereket Enerji Üretim San. ve Tic. A. Ş. to Aydem Yenilenebilir Enerji A.Ş.

of The Turkish Mid-Size Sustainable Energy Financing Facility (MidSEFF). The Turkish Mid-Size Sustainable Energy Financing Facility (MidSEFF) is launched by the EBRD with support from the European İnvestment Bank (EIB) and European Commission (source of the Technical Cooperation funds) provided loans through 7 Turkish banks for on-lending to private sector borrowers.

After that between the years 2016 to 2018, the project owner was in an economic hardship that they were unable to continue the project with the background of a country where the coup d'état in 2016 changed the USD to TL values drastically and rendered the planned budgets impossible. This hardship led a management change that was also asked by the financial institutions that supported several other renewable energy projects that the project owner was trying to invest at the same time period. When the new management came in 2018, they decided to amend the project license and continue with 15 turbines. Therefore one must also note that the design change does not involve installation of "NEW" components but installation of less wind turbines due to financial hardship reasons.

The initial project participant and PDD developer GAİA Finansal Danışmanlık Hiz. Tic. Ltd. Şti. Was able to bring the project upto the design certified level but they did not carry on with the verification or follow up of the projects, as a result later the company contracted with Ekobil Environmental Services and Consultancy for the verification of the project on 09 December,2019.Because of the covid there was no progress in the project in 2020. Later, the process started again.

Table 2:Name of the parties in current situation

Party involved (host) indicates host Party	Private and/or public entity(ies) project participants (as applicable)
Turkey (host)	Aydem Yenilenebilir Enerji A.Ş.
Turkey (host)	Ekobil Environmental Services and Consultancy

The detailed timeline can be seen from the graph below:

Table 3:Timeline

Date	***Event***	**Proof**
20.11.2014	Project license obtained for 19 turbines(62,7MWM/45 Mwe)	Annex 1,pg.5

2.12.2015	Registration to Gold Standard(with another consultancy firm)	Annex 2
14.12.2015	The commissioning for 15 turbines	Annex 3
20.01.2017	The expected date for installing the rest four turbines	Annex 1,pg.7
2.03.2017	The expected date for installing the rest four turbines was delayed to 20/01/2018	Annex 1,pg.7
2016-2018	The project owner was in an economic hardship that they were unable to continue the project with the background of a country where the coup d'état in 2016 changed the USD to TL values drastically and rendered the planned budgets impossible. When the new management came in 2018, they decided to amend the project license and continue with 15 turbines.	
24.05.2018	Project license amended with 15 turbines(49,5 MWm/45 Mwe)	Annex 1,pg 8
9.12.2019	The project owner contracted with Ekobil Environmental Services&Consultancy	Annex 4
24.12.2019	The name of the project owner changed from BEREKET ENERJİ ÜRETİM AŞ to AYDEM YENİLENEBİLİR ENERJİ A.S	Annex 5
2020	Due to Covid there was no progress in project	
19.05.2021	Verification contract with KBS	Annex 6
27.08.2021	Site visit with KBS	Annex 6
25.10.2021	Design change memo and supportive documents sent to the GS	Annex 7
27.10.2021	A mail from Gold Standard was received suggesting we to start the design change review with VVB design change validation report	Annex 8
4.07.2022	We submitted a design change combined with verification(design change validation+report)	
13.10.2022	First Round review comments were received	
20.12.2022	We uploaded the revised documents	
12.01.2023	Second Round review comments were received	

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

During the design certification of the project, a total number of 19 wind turbines having a rated output of 3.3 MWm and nominal power of 3000 kW were proposed, summing up the total capacity of the project to 62.7 MWm/45.0 Mwe. However, during the remote assessment by KBS validation team, it was confirmed that the actual number of turbines installed were 15, i.e 4 turbines were not installed as proposed. The same was confirmed through review of project approval letter , commissioning certificate, supply and installation agreement. KBS assessment team, during the remote assessment confirmed the conditions which led to the design change (reduced no. of turbines during actual implementation) and verified the above mentioned situation described by the PP. Document review carried out by the assessment team confirmed that initially project proponent purchased 15 turbines which is evident through the project approval for operation of 15 turbines. PP planned to purchase more in future as required by the project license (See screenshot below)

11	24/05/2018 tarihli ve 7853-17 sayılı Kurul Kararı	**Tadil öncesi durum:** Before the amendment 19 turbines Ünite sayısı : 19 adet Tesis toplam kurulu gücü : 62,7 MWm/45 MWe Ünite Koordinatları:

	E	N
T1	527618,7256	4171637,195
T2	527977,4224	4171760,656
T3	528312,6351	4171970,945
T4	528646,944	4172158,129
T5	529316,4175	4172209,721
T11	530505,7864	4174369,466
T12	530791,2531	4174561,438
T13	531086,4679	4174785,733
T14	531392,8903	4174982,896
T15	531718,5754	4175223,673

EÜ/8909-11/04346 7 / 8

	E	N
T7	529457,7736	4173154,069
T8	529487,1045	4173512,904
T9	529719,4835	4173837,693
T10	529996,0668	4174037,148
T17	532367,9882	4175392,689
T18	532543,9636	4175736,182
T19	532789,5031	4175995,339

Tadil sonrası durum: after amendment 15 turbines

Ünite sayısı : 15 adet
Tesis toplam kurulu gücü : 49,5 MWm/45 MWe
Ünite Koordinatları:

	E	N
T1	527618,7256	4171637,195
T2	527977,4224	4171760,656
T3	528312,6351	4171970,945
T4	528646,944	4172158,129
T5	529316,4175	4172209,721
T6	529241,2705	4172846,975
T7	529457,7736	4173154,069
T8	529487,1045	4173512,904
T9	529719,4835	4173837,693
T10	529996,0668	4174037,148
T11	530505,7864	4174369,466
T12	530791,2531	4174561,438
T13	531086,4679	4174785,733
T14	531392,8903	4174982,896
T15	531718,5754	4175223,673

however, the investment amount of these 15 turbines was higher than the amount calculated with 19 turbines in registered PDD. Therefore, due to financial difficulties, it was decided not to purchase the leftover 4 turbines as proposed in registered PDD and went for amendment of the project license (Screenshot above highlighting the amendment).

3.2 | Assessment of the deviation:

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

The design change involves the change in number of turbines from **19** to **15,** however, the total generation capacity of the project remains unchanged i.e. 45.0 MWe(which can be crosschecked from the project license) and hence the annual estimated generation of 141,100 MWh/year as per the registered PDD is still valid. One may suggest that this change may rather be interpreted as a change in implementation rather than a severe design change.

The number of turbines has been revised to 15 instead of 19. As per ACM0002 (version 16.0), the spatial extent of the proposed project boundary includes the project power plant and all power plants connected physically to the electricity system[4] that the proposed project is connected to. Within the boundary which was also stated in the validated PDD the project is considered with all of the turbines regardless of the number of turbines as it was stated in the figure 3 of the validated PDD. The greenhouse gases and emission sources included in or excluded from the project boundary did not get affected from the change in the number of the turbines.

In this context, it was examined whether additionality was affected by this situation. Within the scope of the project, as stated in PD, Vestas branded wind turbines were installed. Only the amount of money spent on turbines has changed. The money planned to be spent for the turbines in the PD is stated as 27,000,000 EUR. At the same time, the expected annual budget allocated to O&M at PDD is 850,000 dollars. Despite the decrease in the number of turbines, due to the fact that the O&M costs were slightly higher than expected, the expected expenditure and the actual expenditure matched each other despite the change in the number of turbines. In fact, when we look at the annual payment budgets and convert the expenditures into dollars with the exchange

[4] Turkey has a single grid system where all the power generation units are connected via distribution and transmission lines , which is operated by a state owned company TEIAS / Turkish Electricity Transmission Co (www.teias.gov.tr)

rate of that year, it equals to an average of 880,000 dollars per year. Therefore, the calculation in PDD is conservative and the reduction in turbine number did not affect the financial analysis. Despite the decrease in the number of turbines, the actual investment amount on turbines were higher than expected. As can be seen from the document link below, the investment amount for 15 turbines is 38,610,000 EUR. That is, the amount of investment for turbines increased by 43% compared to what was estimated.

The MWe is the upper limit the project's electricity production capacity. As such the project is not allowed to exceed this capacity. All the other turbines are acting to complete this MWe capacity by providing the best possible wind harvest. That is why the decrease in the numbers of turbines only changed the backup capacity but not the electricity production capacity of the project.

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

For the deviation described above in section 3.1.2, despite the change in number of turbines from 19 to 15, the total generation capacity of the project remains unchanged (as per the revised production license dated 24/10/2019 numbered EU/8909-11/04346), i.e. 45.0 MWe as mentioned in the registered PDD.

* Project approval granted for the operation of 15 turbine generator (dated 05/10/2015) instead of the 19 turbines as per the production license dated 04/01/2012 and numbered EU/3769-2/2202

LİSANS TARİHİ VE SAYISI	: 04.01.2012- EÜ/3619-2/2202
ÜNİTE KURULU GÜÇLERİ	: 19 x 3,3 MW
TESİS TOPLAM LİSANS KURULU GÜCÜ	: 62.7 MWm / 45 MWe
KISMİ GEÇİCİ KABULE ESAS KURULU GÜÇ	: 49,5 MWm / 45 MWe
KISMİ GEÇİCİ KABULE ESAS ÜNİTE GÜCÜ	: 15 x 3,3 MW
PROJE ONAY TARİH VE SAYISI	: 05.10.2015 / 38758

This is because the MWe is the upper limit of the project's electricity production capacity, and the grid operator does not allow the project owner to exceed this capacity. The technical specifications of the actual turbines purchased were checked and confirmed to have a rated power output of 3300 kw. Therefore, in the implemented scenario the project capacity became 49.5MWm/45 MWe with the decrease in number of turbines. Hence, it was confirmed that the manufactured capacity changed from 62.7 MWm to 49.5 MWm but the generation capacity of the project remained the same and has been verified through the revised production license dated 24/10/2019 numbered EU/8909-11/04346 acquired by the project.

3.3 | Impact of the deviation:

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

The deviation request complies with the requirements, accuracy, completeness and conservativeness and follows the GS4GG Principles and requirements. The above requested deviation did not cause any impact upon the development of the project.

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

As the design change only pertains to the number of installed wind turbines leading to revision in the manufactured capacity from 62.7 MWm to 45.0 MWm without the change in the registered generation capacity 45.0 MWe, the design change does not impact the applicability of baseline, additionality, methodology and monitoring plan. The same has been discussed in detail as follows:

Assessment of Impact on project boundary:

During the remote interview, it has been confirmed that the design change of reduction in number of wind turbines [decrease in 4 turbines from 19 (as proposed during the design certification) to 15(based on actual implementation)] has no impact on the boundary of the project, this is because the emission sources included in the project boundary is limited to CO2 emission from fossil fuel fired power plant that are displaced due to project activity and during the remote assessment it has been verified that the emission sources have not been impacted by the change in the number of turbines, as the generation capacity remains the same. There is no change in the project boundary as turbine locations have not been changed, only the additional specified locations for installation of wind turbines have been deleted for the 4 removed turbines.

Assessment of Impact on Baseline:

Previously electricity is generated by 19 WTGs and now with the design change the electricity will be generated by 15 WTGs and the total generation capacity will be remain unchanged at 45 MWe. Since there is no change in the total capacity, equipment and technical specification. Therefore, is no change in the Baseline.

Assessment of Impact on Additionality:

The benchmark (15%), sources and values of input parameters (as mentioned in table below) and equity IRR (9.10%) has been validated at the time of design certification.

As per the registered PDD, the following input parameters and values were verified

Input parameter	Value
1.Capacity	45 MWe
2.Length of analysis	20 years
3.Annual energy production (net)	141,100 MWh/year
4.Electricity sales price	5.556 EUcents/kWh)
5.O&M expenses	Total: 795,462 EUR/year (weighted average) Maintenance: First 2 years – 540,000 EUR/year; Rest – 850,000 EUR/year; Personnel cost – 200,250 EUR/year; Grid Connection – 55,212 EUR/year
6. Total investment : Including: • Equity • Loan	48,167,325 EURO 20,867,325 EURO 27,300,000 EURO
7.Loan/Equity ratio	43.3/56.7%
8.Exchange rate ($/€)	1.3137
9. Exchange rate (TL/USD)	2.3221
10. Loan interest	4.88%
11.Loan tenor	8 years
12. Grace period	1.5 years
13.Corporate tax rate	20%
14.Depreciation period (electromechanical equipment)	10 years
15.Transmission loss	3%

The design change involves the change in number of turbines from 19 to 15, however, the total generation capacity of the project remains unchanged i.e. 45.0 Mwe and hence the annual estimated generation of 141,100 MWh/year as per the registered PDD is still valid. Therefore, the impact of design change has been identified on the investment amount, which has changed from 48,167,325 EURO to 59,777,325 EURO. This is due to the higher cost incurred (almost 43% higher) on the installation of 15 turbines (38,610,000 EUR) as compared to the expected cost (27,000,000 EUR) at the time of investment analysis. Although the generation capacity of the project remained the same, however during the monitoring period (14/12/2016 to 31/07/2021) actual average generation (153,000 MWh/year) was observed to be higher (almost 8%) than

the estimated generation (141,100 MWh/year). However, no impact of the increased generation on additionality was identified as the sensitivity analysis already considered a 10 % increase in the generation (elaborated in the table below), wherein IRR of the project increased from 9.69 to 11.96, which was found to be well below the benchmark (15%).

Further, the impact of design change was also assessed on the operation and maintenance cost, the O &M agreement and its amendment between the PP and the O & M contractor (Vestas Ruzgar Enerjesi Sistemleri Sanayi ve Tic. Ltd. Sti) were scrutinized. The O &M expenditure sheet (detailing the O&M expenses from 2016 onwards) and invoices were checked to confirm that the actual expenditure (880,000 USD on average) incurred was more (almost 1.04% higher) than the estimated average expenditure of 850,000 USD. However, it had no impact on the additionality as the estimated average expenditure of O&M is conservative and as per the sensitivity analysis a 10 percent variation in O&M cost would still not meet the benchmark. The cost of installation of wind turbines has been verified from the purchase document and found to be correctly reported. Therefore, a significant increase of 43% in the investment amount was identified, breaching the considered 10% increase of sensitivity analysis. Hence, Equity IRR was recalculated with revised investment cost and came out to be as follows:

	Without VER	**@ 3 Euro/ton VER**	**@ 4 Euro/ton VER**	**@ 5 Euro/ton VER**
Equity IRR (%)	9.69%	10.22%	10.40%	10.57%

Table: Summary of Project investment analysis without and with VER financing

Therefore, the Equity IRR without additional income to the project developer through sale of VERs was re calculated as 9.69 % instead of the validated 9.10%. Further, the validation team confirms that the parameters have been resubjected to the sensitivity in line with para 27 of the "Methodological tool: Investment Analysis, version 11.0". The sensitivity analysis covers a reasonable range of +10% and -10%, which is in conformity with para 28 of the "Methodological tool: Investment Analysis, version 11.0".

Percentage Variation	**-10%**	**0%**	**+10%**
Investment costs	10.29%	9.69%	9.14%
Electricity production	7.42%		11.96%
Operational costs	9.99%		9.39%
Electricity selling price	7.51%		11.81%
Percentage Variation	**-10**		**+50%**
Financing costs	9.75%		9.39%

Table- Sensitivity analysis; impact of variations in assumptions on the Equity IRR (Excluding VER revenue)

The sensitivity analysis confirms that the post-tax equity IRR without VER revenues is unlikely to meet the required benchmark of 15%. Based on market trend and document review, the validation team was able to establish that variation considered is appropriate on identified data/parameter to perform sensitivity analysis. The benchmark is treated as the reference at which the investment project is considered to be financially attractive. In all the cases, the IRR is lower than the benchmark. Therefore, it can be stated that the project activity is unlikely to be financially/economically attractive even after the design change (since the Equity IRR i.e. 9.69 % is lower than the benchmark i.e. 15%).

In conclusion of the overall additionality demonstration, the project activity is deemed additional even after the design change.

Assessment of Impact on Monitoring methodology and Monitoring plan:
The design change does not impact the compliance of project with the registered monitoring plan and the applied methodology and therefore, the original methodology is still applicable.

3.4 | Documents:

The list of documents can be found from the link below:

https://app.box.com/s/w9u216qqdj2ahylivmdq74qqq40nyd4p

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