AES GEO ENERGY OOD
SAINT NIKOLA WIND FARM
PERIODICAL MONITORING REPORT

Project title	Saint Nikola Wind Farm
Project ID	1258
Monitoring period	01-December-2020 to 31-October-2022
Original date of issue	01-October-2024
Most recent date of issue	30-April-2025
Version	4
***VCS Standard* Version**	4.7
Prepared by	Numerco Limited 3 London Bridge Street, London SE1 9SG, United Kingdom +44 20 8004 3302

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PROJECT DETAILS

1.1 Summary Description of the Implementation Status of the Project

The Saint Nikola Wind Farm project is a 156 MW, grid-connected, renewable energy wind farm in the Municipality of Kavarna, Bulgaria initiated and operated by “AES Geo Energy OOD.”

The Wind Farm consists of 52 wind turbines, type V90-3.0 MW manufactured by Vestas, each with nominal capacity of 3MW; an underground collection system and; a step-up substation 33/110 kV as well as an overhead high voltage line of 110 kV, connecting the substation with the grid. The wind generated electricity is transmitted through an underground energy collection system of 33 kV to a switchgear of 33 kV located in the step-up substation where it is transmitted to the grid through transformers of 33/110 kV and a switchyard of 110 kV.

The wind farm was expected to generate over 300,000 MWh/y depending on wind conditions and average wind turbines technical availability.

The design life time of the turbines according to the DNV Type Certificate of the V90-3.0 MW turbine is 20 years and therefore they are expected to operate at least until 2030.

The construction of the wind farm started in 2008 and the project was implemented in full according to the technical design without any deviations.

The owner of the project AES Geo Energy OOD. was granted a "Permit of Use" for the wind farm by the Ministry of Regional Development and Public Works - Directorate for National Construction Supervision in two stages.

On December 22nd 2009, a Permit of Use was granted for Saint Nikola sub-site C, and on March 15th 2010 for Saint Nikola sub-site A & B. Together, sub-sites A, B, and C constitute the full operational wind farm and include the 52 wind turbines, the energy collection system, the substation, and the overhead line connecting the wind farm to the grid.

Since March 15th 2010 the wind park is in continuous operation.

The registration of the project under VCS took place on October 27th 2014 when the registration documents had been uploaded at VCS web-site.

The start date of the project has been validated by the Validation Report CCL220/VAL/AESGE/CWPP/20130910, issued by the Designated Operational Entity (DOE) Carbon Check (Pty) Ltd. on 01-November-2012 .

The total emission reductions generated in this monitoring period is 527,199 tCO2e .

1.2 Audit History

Audit type	Period	Program	Validation/verification body name	Number of years
Validation/ verification	01-November-2012 to 31-October-2022	VCS	Carbon Check (Pty) Ltd, RSA	10 y.
Verification	01-November-2012 to 31-December-2014	VCS	RINA Services S.p.A (RINA)	2.167 y.
Verification	01-January-2015 to 30-April-2016	VCS	RINA Services S.p.A (RINA)	1.33y.
Verification	01-May-2016 to 30-November-2020	VCS	RINA Services S.p.A (RINA)	4.58 y
Verification	01-December-2020 to 31-October-2022	VCS	4K Earth Science Private Limited	1.92. y
Total	01-December-2012 to 31-October-2022	VCS		Validation: 10 y. Verification :10 y

1.3 Sectoral Scope and Project Type

Sectoral scope[1]	Sectoral Scope -01, Energy Industries (renewable/non-renewable)
Project activity type	The project is not a grouped project.

1.4 Project Proponent

[1] *Projects, activities, or methodologies may be developed under any of the 16 VCS sectoral scopes: https://verra.org/programs/verified-carbon-standard/vcs-program-details/#sectoral-scopes*

Organization name	AES Geo Energy OOD.
Contact person	Bisera Stoeva
Title	Commercial and Regulatory Officer
Address	Aries Office Building, 32 A "Cherni vrah" Blvd, 1407 Sofia, Bulgaria
Telephone	+359887773855
Email	bisera.stoeva@aes.com

1.5 Other Entities Involved in the Project

Organization name	Numerco Limited
Contact person	Gareth Turner
Title	Director
Address	18 King William Street, EC4N 7BP, London, UK
Telephone	+44 20 8004 3302
Email	gareth.turner@numerco.com

1.6 Project Start Date

Project start date	01-November-2012
Justification	01-November-2012 is first investment decision date

1.7 Project Crediting Period

Crediting period	☐ Seven years, twice renewable ☒ Ten years, fixed ☐ Other (state the selected crediting period and justify how it conforms with the VCS Program requirements)
Start and end date of first or fixed crediting period	01-November-2012 to 31-Ocotober-2022

1.8 Project Location

The geographic coordinates of the plant are:

Site Latitude: 43.448008° or in degrees 43°56'22.83 N

Site Longitude: 28.454943° or in degrees 28°27'17.80 E

The Saint Nikola Wind Farm (SNWF) project is located in the Municipality of Kavarna, Bulgaria. The area of the project site is approximately 6,000 hectares (60 km^2). The site of the Project is situated on the community land of the villages of Bulgarevo, Sveti Nikola, Hadji Dimitar, Rakovski and Porouchik Chounchevo.

Table: Coordinates of Wind Turbines

Turbine	Parcel No	Lat Deg	Lat min	Lat sec	Lon deg	Lon min	Lon sec	X	Y	Height
T08	22069	43	24	55.0	28	25	8.3	4709830.07	9680856.51	91.24
T09	34041	43	24	57.9	28	25	25.7	4709928.59	9681245.44	92.72
T10	24103	43	25	27.9	28	26	45.2	4710902.22	9683009.96	79.74
T11	24145	43	25	35.5	28	27	11.6	4711152.22	9683596.85	69.88
T12	25082	43	26	10.3	28	27	58.6	4712254.89	9684623.80	78.83
T13	12083	43	26	22.2	28	28	52.4	4712654.34	9685825.14	65.79
T14	23056	43	25	40.0	28	25	35.0	4711235.31	9681419.92	102.91
T15	23108	43	25	48.6	28	25	51.2	4711509.07	9681777.88	94.31
T16	24085	43	25	56.9	28	26	30.0	4711788.41	9682644.41	77.67
T17	20097	43	26	13.4	28	26	35.8	4712300.68	9682760.33	86.68
T18	20085	43	26	21.1	28	27	3.2	4712555.21	9683369.67	82.00
T19	21013	43	26	29.8	28	27	21.8	4712833.36	9683781.66	87.05
T20	18099	43	25	46.5	28	24	47.5	4711407.55	9680347.07	103.02
T21	19180	43	26	20.1	28	25	45.1	4712477.00	9681615.02	94.41
T22	19218	43	26	27.5	28	25	59.6	4712713.81	9681935.02	88.37
T23	20086	43	26	34.5	28	26	33.8	4712951.03	9682698.83	92.18
T24	14124	43	26	13.2	28	24	36.6	4712224.16	9680081.93	108.41
T25	19201	43	26	25.5	28	25	10.9	4712622.59	9680842.53	108.10
T26	15166	43	26	45.9	28	25	40.2	4713270.91	9681484.67	93.26
T27	15168	43	27	3.1	28	25	18.3	4713787.28	9680978.69	97.96
T28	15101	43	27	9.1	28	25	37.1	4713983.51	9681396.31	104.59
T29	12041	43	27	16.8	28	24	50.6	4714194.25	9680344.58	110.40
T31	21067	43	26	51.8	28	27	35.8	4713522.65	9684077.70	84.05
T32	11063	43	27	11.7	28	28	44.9	4714178.61	9685614.20	74.10
T33	11091	43	26	54.6	28	29	11.1	4713666.83	9686217.39	70.13
T34	18080	43	26	53.5	28	29	32.0	4713643.62	9686687.35	72.55
T35	18083	43	26	58.1	28	29	51.9	4713797.14	9687130.50	73.74
T36	35099	43	25	13.4	28	25	58.7	4710428.52	9681974.49	95.36
T37	26054	43	25	59.9	28	27	37.3	4711921.58	9684155.12	80.15
T38	22062	43	25	24.4	28	25	1.7	4710733.21	9680685.08	98.98
T39	19100	43	26	7.3	28	25	10.4	4712061.40	9680844.62	104.86
T40	19224	43	26	23.4	28	25	28.7	4712570.46	9681243.66	102.82
T41	14149	43	26	33.3	28	24	30.3	4712840.95	9679923.74	112.42
T42	15183	43	26	58.5	28	24	44.7	4713626.36	9680226.10	112.96

T43	11080	43	26	60.0	28	24	17.8	4713655.39	9679620.20	112.54
T44	14139	43	26	33.9	28	23	46.7	4712832.69	9678942.55	110.01
T45	18007	43	27	22.5	28	25	43.0	4714401.60	9681516.55	105.98
T46	18024	43	27	27.3	28	26	59.6	4714595.98	9683235.00	90.81
T47	23103	43	27	13.7	28	27	12.5	4714182.87	9683536.61	85.73
T48	22058	43	27	26.0	28	27	39.5	4714577.36	9684131.69	84.97
T49	21112	43	27	37.9	28	27	25.4	4714938.32	9683805.33	87.80
T50	23132	43	27	1.7	28	27	52.6	4713838.20	9684447.64	78.34
T51	20044	43	28	10.4	28	28	23.3	4715976.50	9685080.02	82.66
T52	19036	43	28	31.0	28	28	38.3	4716619.01	9685400.43	75.56
T53	19018	43	28	41.8	28	28	27.3	4716945.33	9685143.49	71.27
T54	22027	43	28	47.0	28	28	48.5	4717119.55	9685615.77	72.03
T55	18036	43	28	53.1	28	29	18.8	4717326.37	9686290.49	74.27
T56	18022	43	28	37.7	28	29	43.5	4716865.10	9686858.20	66.83
T57	21062	43	28	9.3	28	29	59.7	4716000.29	9687246.05	65.36
T58	21052	43	27	57.4	28	29	41.6	4715621.49	9686850.78	73.07
T59	20038	43	28	14.1	28	29	0.0	4716112.80	9685902.29	72.91
T60	12085	43	26	42.7	28	28	44.5	4713282.99	9685629.26	73.09

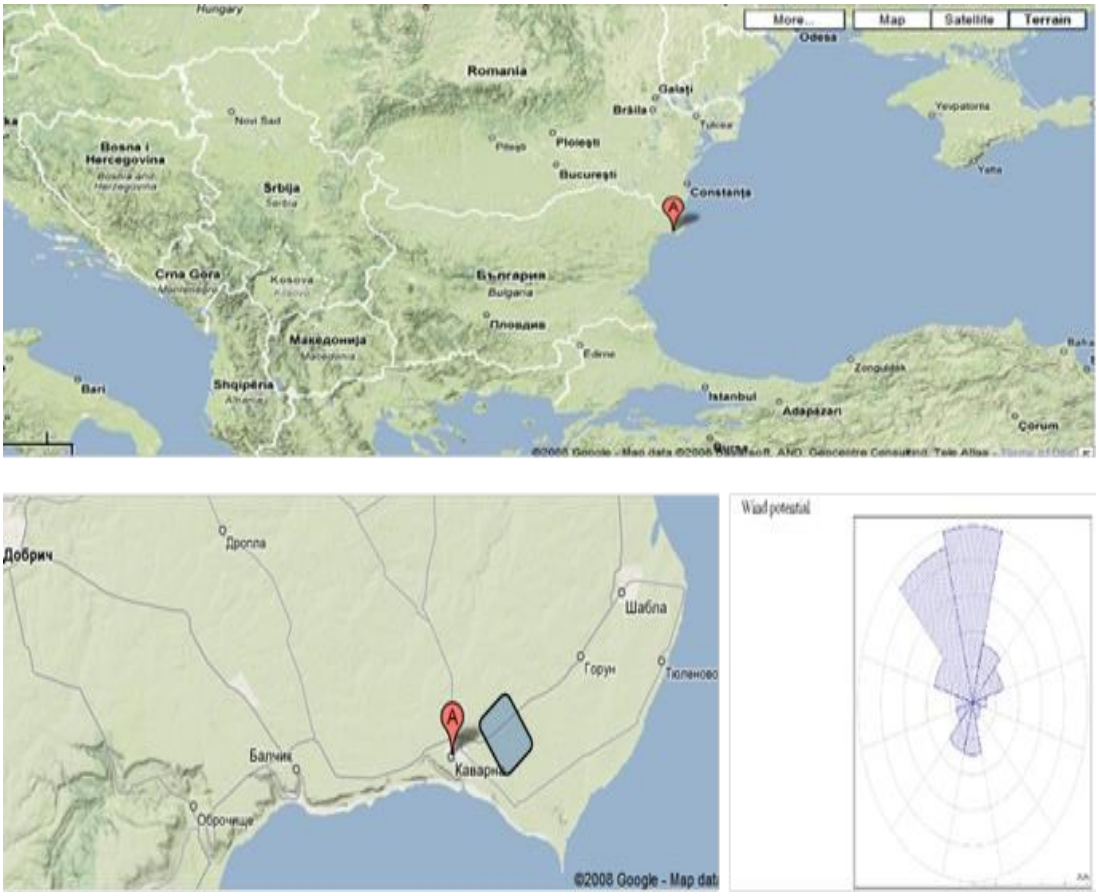

Fig.1: Project location

Fig.2: General view of the project location

1.9 Title and Reference of Methodology

Type (methodology, tool or module).	Reference ID, if applicable	Title	Version
Methodology	ACM0002	Large-scale Consolidated Methodology: Grid-connected electricity generation from renewable sources	14.0
Tool 01	Tool01	Tool for the demonstration and assessment of additionality	07.0.0

Guideline		Guidelines on common practice	2.0
Tool	Tool02	Combined tool to identify the baseline scenario and demonstrate additionality	5.0.0

1.10 Double Counting and Participation under Other GHG Programs

1.10.1 No Double Issuance

Is the project receiving or seeking credit for reductions and removals from a project activity under another GHG program?

☐ Yes ☒ No

If yes, provide required evidence of no double issuance as outlined by the VCS Standard.

1.10.2 Registration in Other GHG Programs

Was the project registered or seeking registration under any other GHG programs?

☐ Yes ☒ No

If yes, provide the registration number and all relevant details including the date of project inactivity in the other GHG program.[2]

1.11 Double Claiming, Other Forms of Credit, and Scope 3 Emissions

1.11.1 No Double Claiming with Emissions Trading Programs or Binding Emission Limits

Are project reductions and removals or project activities also included in an emissions trading program or binding emission limit? See the *VCS Program Definitions* for definitions of emissions trading program and binding emission limit.

☐ Yes ☒ No

If yes, provide all required evidence of no double claiming as outlined by the VCS Standard.

1.11.2 No Double Claiming with Other Forms of Environmental Credit

Has the project activity sought, received, or is planning to receive credit from another GHG-related environmental credit system? See the *VCS Program Definitions* for definition of GHG-related environmental credit system.

☐ Yes ☒ No

[2] The requirement to provide the date of project inactivity only applies to projects which request registration or crediting period renewal under the VCS Program on or after 1 January 2025.

If yes, provide all required evidence of no double claiming as outlined by the VCS Standard.

1.11.3 Supply Chain (Scope 3) Emissions

Do the project activities affect the emissions footprint of any product(s) (goods or services) that are part of a supply chain?

☐ Yes ☒ No

If yes:

Is the project proponent(s) or authorized representative a buyer or seller of the product(s) (goods or services) that are part of a supply chain?

☐ Yes ☒ No

If yes:

Has the project proponent(s) or authorized representative posted a public statement on their website saying, "Carbon credits may be issued through the Verified Carbon Standard project [project ID] for the greenhouse gas emission reductions or removals associated with [project proponent or authorized representative organization name(s)] [name of product(s) whose emissions footprint is changed by the project activities]."

☐ Yes ☒ No

If yes to all:
Provide evidence of the public statement. Evidence must be provided in this section or in an appendix.

1.12 Sustainable Development Contributions

The project generates sustainable electric energy using the wind potential of the region thus contributing to the overall goals set by the Republic of Bulgaria[3] and specifically to UN SDG 13 (Climate action), 7 (Affordable and Clean Energy), and 8 (Decent Work and Economic Growth).The project produces electricity from renewable energy sources using wind power as the power source and contributes to Bulgaria's growing electricity demand through a sustainable and low carbon technology. (SDG7, Affordable and Clean Energy),

During construction and operational period, the project has created approx. 4 number of employment opportunities for the local community. The project contributes to the economic development of the region by providing sustainable energy resources. (SDG 8 ,Decent Work and Economic Growth).

Bulgaria has set a target to reach 18% renewable share of the total energy generation by 2020 and this project, with its 156 MW installed capacity plays a major role in that effort.

[3] https://sdgs.un.org/basic-page/bulgaria-24741

The energy generated by the WPP is monitored on monthly and yearly basis and reported regularly to the Sustainable Energy Development Agency which issues a special Certificate for Renewable Energy for the reported amount.[4] The project is related to the Target 13.1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries. By generating of GHG emission reductions it strengthens resilience and adaptive capacity of the world to climate-related hazards; The project helps Integrate climate change measures into national policies, strategies and planning;

The project improves education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning;

The project helps 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;

Being implemented in Bulgaria, which was an active member of the Kyoto Protocol from the very beginning, as well as participating in all subsequent climate change agreements, the project helps promote mechanisms for raising capacity for effective climate change-related planning and management in least developed countries and small island developing States, including focusing on women, youth and local and marginalized communities.

No additional activities have been implemented during the monitoring period.

[4] https://portal.seea.government.bg/bg/Guarantees/IssuedGuaranteeRegister

Table 1: Sustainable Development Contributions

Row number	SDG target	SDG indicator	Net impact on SDG indicator	Current project contributions	Contributions over project lifetime
Sequential row number	*SDG Target number*	*Number and text of SDG indicator or, if no official SDG indicator is applicable, user-defined indicator*	*Indicate the project's contribution to the SDG Indicator (implemented activities to increase or decrease)*	*Brief description of the quantifiable impact of the project's activities related to the SDG indicator, during the monitoring period.*	*Brief description of the cumulative quantifiable impact of the project's activities related to the SDG indicator, over the project lifetime.*
1)	*13.2*	13.2.2 Total greenhouse gas emissions per yea r	Building of a wind power plant with a capacity of 156 MW_e	The Saint Nikola Wind Farm project has prevented the release of 527,199 tonnes of CO_{2e} into the atmosphere during the monitoring period	The project generates renewable electric energy using wind turbine-generators. By replacing of high emission factor electric energy in the Bulgarian grid the project prevented the release of 2,612,655 tonnes of CO_{2e} into the atmosphere for a period of 10 years.

2)	7.2	7.2.1 Renewable energy share in the total final energy consumption	Implemented activities to increase	The project produces electricity from renewable energy sources using wind power as the power source and contributes to Bulgaria's growing electricity demand through a sustainable and low carbon technology. Prevented 666498.122 MWh net electricity generation from fossil fuels for the monitoring period 01 December 2020 to 31 October 2022. The project improved the fossil fuel dominated fuel mix of the electricity generation in the power grid by providing clean and renewable energy source and helped to energy supply security	Prevented 3302977 MWh net electricity generation from fossil fuels for period 01 November 2012 to 31 October 2022 (First Crediting Period)

3)	8.3	8.3.1 Proportion of Informal employment in non-agriculture employment, by sex	Implemented activities to increase	During construction and operational period, the project has created approx. 4 number of employment opportunities for the local community. The project contributes to the economic development of the region by providing sustainable energy resources. As contributing to SDG 8 Decent Work and Economic Growth, jobs have been created.	As contributing to SDG8 Decent Work and Economic Growth, the project will create the 4 employment opportunities for the local community during the entire project crediting period.

1.13 Commercially Sensitive Information

No commercially sensitive information has been excluded from the public version of the project description.

2 SAFEGUARDS AND STAKEHOLDER ENGAGEMENT

2.1 Stakeholder Engagement and Consultation

2.1.1 Stakeholder Identification

The stakeholder structure has not changed since validation. Details of the stakeholder structure are given in section 2.1.2.

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Stakeholder Identification	Both the EIA and the planning process involved a stakeholder dialogue. As a result, the Environmental Management and Monitoring Plan include specific provisions for community liaison and cultural heritage. Following the publication of the EIA, there was a period of two months where any comment or suggestion could have been raised directly to AES Geo Energy or through the municipality. An open public meeting was also held where stakeholders could learn about the project and raise any issues they may have. In May 2008 a Public Disclosure and Consultation Plan was published. The plan provides the framework for consultation during three distinguish stages: pre construction, during construction, and during operation. To support the dialogue with stakeholders during the planning and construction phase, a special website was established that includes information on the project (http://www.geopowerbg.com/en/projects/view/1/St.-Nikola/), which was later transferred to the current website http://www.aesgeoenergy.com/. The local stakeholders are identified as the people living in the villages in vicinity of the project. Other Stakeholders:

	MOEW, RIOEW Varna, Institute of Botany, Institute of Zoology Central Laboratory on common ecology to BAS, Department Civil Protection – Dobrich District, Kavarna Municipality, National Institute for Cultural Monuments, NEK EAD - high voltage grid company, Ministry of Energy and Energy Resources, MEW, "Preventive activities" Dept., "Protection of air purity" Dept. and "Waste Management" Dept. ,Bulgarian Society for the Protection of Birds, NMP-BAS Bats Research and protection group, RIPCPH – Dobrich, Investigation and production of oils and gas, JSC Ministry of Health, Executive Environment Agency, Ministry of regional development and public works ,Regional administration Dobrich, Water supply and sewer company – Dobrich, Regional directorate Agriculture and Forestry – Dobrich, The municipality of the village of Bulgarevo ,The municipality of the village of Sveti Nikola, The municipality of the village of Hadji Dimitar ,The municipality of the village of Rakovski ,The municipality of the village of Porouchik Chounchevo, Faculty of Biology, Sofia University St. Kliment Ohridski, Republican Infrastructure Fund, Bulgarian Investment Agency, University of Forestry Global, Carbon Irrigation systems – Dobrich, Union of Hunters and Fishermen in Bulgaria, The punitive and fishing battalion Kavarna, The punitive and fishing battalion Bulgarevo SEWRC, Economic Development Agency, Traffic Police ,Power supply ,BNP Paribas, Ministry of Transport and Communications, Agency of Regional Development, Animal farms
Legal or customary tenure/access rights	There is no uncertainty or change in land tenure arrangements, resource access rights, community-based property rights and customary rights, access rights or land ownership
Stakeholder diversity and changes over time	Stakeholder diversity: The staff of the project, the local residents around the project site, and the local government are affected by the project activity directly. Part of employees are mainly from the project area, and they have different levels of education and skills, and income levels may vary. The farmers around the project live in different villages, and they may have different social

	networks and ways of interacting. Workers in government departments may come from different backgrounds and have different expertise and experience. Government authorities are responsible for regulating and approving the operation of the project, and different government authorities may have different policies and regulations. Over time, the members of each group will adjust, but their groups doesnot change much in terms of society, economy, culture, etc.
Expected changes in well-being	The implementation of the project is expected to have a positive impact on the well-being and other characteristics of stakeholders. Relative to the baseline scenario of electricity delivered to Grid by the project that would otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources into the grid, the project bring about the following changes
Location of stakeholders	The Saint Nikola Wind Farm project is located in the Municipality of Kavarna, Bulgaria. The area of the project site is approximately 6,000 hectares (60 km2). The site of the Project is situated on the community land of the villages of Bulgarevo, Sveti Nikola, Hadji Dimitar, Rakovski and Porouchik Chounchevo The geographic coordinates of the plant are: Site Latitude: 43.448008° or in degrees 43°56'22.83 N Site Longitude: 28.454943° or in degrees 28°27'17.80 E*N/A*
Location of resources	The Saint Nikola Wind Farm project is located in the Municipality of Kavarna, Bulgaria. The area of the project site is approximately 6,000 hectares (60 km2). The site of the Project is situated on

	the community land of the villages of Bulgarevo, Sveti Nikola, Hadji Dimitar, Rakovski and Porouchik Chounchevo The geographic coordinates of the plant are: Site Latitude: 43.448008° or in degrees 43°56'22.83 N Site Longitude: 28.454943° or in degrees 28°27'17.80 E*N/A*

2.1.2 Stakeholder Consultation and Ongoing Communication

:

Ongoing consultation	The public consultation regarding the Report for EIA of the project was carried out on 19.12.2006. This meeting was publicly announced in advance: Announcement in a local newspaper – Fakel, dd. 13-11-2006 and Announcement in a national daily – Dnevnik, dd. 13-11-2006 To support the dialogue with stakeholders during the planning and construction phase, a special website was established that includes information on the project (http://www.geopowerbg.com/en/projects/view/1/St.-Nikola/), which was later transferred to the current website **http://www.aesgeoenergy.com/**. For continuous communication with local stakeholders, the project owner public its office telephone to local people and put a grievance notebook in the site office of the company. Anyone who have comments on the project could write on the book or communicate through phone
Date(s) of stakeholder consultation	19-December-2006
Communication of monitored results	The process of Local Stakeholder Consultation is continuous. No grievance was received from the

	stakeholders in current monitoring period thus no mitigation measure is required. The construction of a wind farm on the territories of the villages Bulgarevo, Sveti Nikola, Hadji Dimitar, Rakovski and Porouchik Chounchevo, the municipality of Kavarna do not exert a negative effect on the environment and its health and hygienic aspects. Therefore, the stakeholders did not formulate any negative consideration regarding the planned project.
Consultation records	Project Owner maintains a grievance register in plant office for local stakeholders to give feedback/grievances. In case of grievances, the nature of probable resolution is discussed with the plant head office and implemented by the site in charge
Stakeholder input	Generally, the stakeholders were pleased with the project. Since they have informed regarding the project at the first stakeholder consultation process, they have no negative comments on the project.

2.1.3 Free, Prior, and Informed Consent

Consent	Relevant permits were obtained during the validation period.
Outcome of FPIC	The project activity did not damage land, did not relocate people without their consent, and did not forcibly physically or economically displace people.

2.1.4 Grievance Redress Procedure

Grievances received	Resolution and outcome
No negative inputs have been received during this monitoring period.	The grievance mechanism is in place. Project Owner maintains a grievance register in plant office for local stakeholders to give feedback/grievances. In case of grievances, the nature of probable resolution is discussed

	with the plant head office and implemented by the site in charge.
	...

2.1.5 Public Comments

Summary of comments received	Actions taken
There hasn't been any public consultation during this monitoring period	*N/A*
...	....

2.2 Risks to Stakeholders and the Environment

2.2.1 Management Experience

The PP's management team has the experience and expertise to effectively implement similar project activities. The team members have many years of working experience in the field of wind power plant with relevant skills and expertise in project planning, implementation and supervision to effectively manage and drive the implementation of the project.

In addition, the PP have developed a recruitment strategy to fill gaps in skills and experience that may exist in the team. They will be looking for people with relevant experience and expertise to join the team to ensure that the project is supported and guided. The project has male and female employees of different genders, and there are female employees in management positions. There is no significant gender difference between female employees and male employees in terms of salary, promotion opportunities and welfare benefits, and employees of different genders have equal opportunities to obtain training and development resources. In regular employee satisfaction surveys, all employees feel that the project is treated equally in terms of gender and pay. The project adopts a compliant recruitment and employment policy to ensure that the recruitment and employment policies comply with relevant ILO standards and do not involve any form of human trafficking, forced Labour and child Labour. PP conducted comprehensive background checks and comply with local labor laws and regulations to ensure that employees are not exploited and abused.

The project has put in place monitoring mechanisms to ensure that all employees and partners involved in the project are not involved in human trafficking, forced Labour and child Labour. PP conducts regular on-site inspections and audits to ensure that there are no violations of labor rights during the implementation of the project. The PPs work with partners who share the same commitment to labor rights to ensure that the entire supply chain is free from human trafficking, forced labor and child labor.

The project provides training to employees and partners on human trafficking, forced Labour and child Labour to increase their awareness of these issues and how to avoid and report possible violations.

2.2.2 Risk assessment

	Risk identified	Mitigation or preventative measure(s) taken
Natural and human-induced risks to stakeholders' wellbeing	No risk identified	Since this is a wind project, there are no natural or human risks involved. All identified risks and the corresponding measures outlined in the Environmental Impact Report have been consistently adhered to.
Risks to stakeholder participation	No risk identified	Stakeholders are involved in every stage of informing about the project activity. The complaint mechanism is fully functioning.
Working conditions	No risk identified	All necessary training regarding the health and safety of employees is provided. Child labor as defined in the ILO Minimum Age Convention is not permitted. The Project Developer ensures that there is no forced labor, and that all employment complies with national occupational and occupational health and safety laws, obligations under international law, and the principles and standards and essential conventions of the International Labor Organization (ILO).
Safety of women and girls	No risk identified	The project does not endanger the safety of girls and women.
Safety of minority and marginalized groups, including children	No risk identified	The project does not jeopardize the safety of minorities and isolated groups, including children.
Pollutants (air, noise, discharges to water, generation of waste, and release of	No risk identified	The project is a wind energy project. The Environmental Impact Assessment was carried out the summary of the findings of the

hazardous materials and chemical pesticides and fertilizers)		report are the following. No negative impact was assessed.

2.3 Respect for Human Rights and Equity

2.3.1 Labor and Work

	Risks identified[5]	Mitigation or preventative measure(s) taken
Discrimination	The project does not involve and is not complicit in any form of discrimination based on gender, race, religion, sexual orientation or any other basis.	All requirements, mentioned in the Environment Impact Report have been followed on regular basis.
Sexual harassment	The project does not involve and is not complicit in any form of discrimination based on gender, race, religion, sexual orientation or any other basis.	All requirements, mentioned in the Environment Impact Report have been followed on regular basis.
Gender equity in labor and work	The project does not reduce access to or control of resources for women. The project does not involve in any form discrimination in any kind of form.The project respects the employees' freedom of association and their right to collective bargaining and is not complicit in restrictions of these freedoms and rights.	All requirements, mentioned in the Environment Impact Report have been followed on regular basis.
Forced labor	The Project Developer ensures that there is no forced labour, and that all employment is in compliance with national labour and occupational health and safety laws, with obligations	All requirements, mentioned in the Environment Impact Report have been followed on regular basis.

[5] The identified risks and commensurate mitigation or preventative measure(s) for forced labor, child labor, and human trafficking, must be inclusive of staff and contracted workers employed by third parties.

	under international law, and consistency with the principles and standards embodied in the International Labour Organization (ILO) fundamental conventions.	
Child labor	Child labour, as defined by the ILO Minimum Age Convention, is not allowed	All requirements, mentioned in the Environment Impact Report have been followed on regular basis.
Human trafficking	No Human Trafficking involved with the project activity.	All requirements, mentioned in the Environment Impact Report have been followed on regular basis.

2.3.2 Human Rights

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Risks identified	Mitigation or preventative measure(s) taken
The project owner respects internationally proclaimed human rights including dignity, cultural property and uniqueness of indigenous people. The project is not complicit in Human Rights abuses.	All requirements, mentioned in the Environment Impact Report have been followed on regular basis.

2.3.3 Indigenous Peoples and Cultural Heritage

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Risks identified	Mitigation(s) or preventative measure taken
There is no resettlement issue associated with the Project. There was no house in the project area, thus the project did not cause any resettlement	N/A

2.3.4 Property Rights

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Risks identified	Mitigation or preventative measure(s) taken

No risk identified	AES Geo Energy was granted a "Permit of Use" for the wind farm by the Ministry of Regional Development and Public Works - Directorate for National Construction Supervision in two stages. On December 22nd 2009, a Permit of Use was granted for Saint Nikola sub-site C, and on March 15th 2010 for Saint Nikola sub-site A & B. Together, sub-site A, B, and C constitute the full operational wind farm and includes the 52 wind turbines, the energy collection system, the substation, and the overhead line connecting the wind farm to the grid.

2.3.5 Benefit Sharing

There is no benefit sharing in the project activity.

Summary of the benefit sharing plan	N/A
Benefit sharing during the monitoring period	*N/A*

2.4 Ecosystem Health

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	Risk identified	Mitigation or preventative measure(s) taken during the monitoring period
Impacts on biodiversity and ecosystems	No risk identified	The project is a wind energy project. The few recorded species are common and only found in small numbers on the site. None of the species found on or near the site is rare or endangered. Nevertheless, care

		should be taken to keep any impact as low as reasonably possible, both on the site itself and on any surrounding area affected by the project (e.g. site access roads), as a precautionary measure.
Soil degradation and soil erosion	No risk identified	The project is a wind energy project.
Water consumption and stress	No risk identified	The project is a wind energy project. Sanitary wastes and waste from maintenance and food production will occur only in small quantities. Site management practices introduced during construction is continued (e.g. storage and disposal of wastes; training and supervision of staff and contractors).

2.4.1 Rare, Threatened, and Endangered species

Species or habitat	There are not any endangered species identified as potentially present within the Project boundary (including those that may route through the area). The Project does not potentially impact other areas where endangered species may be present through transboundary affects.
Areas needed for habitat connectivity	*N/A*
...	...

	Risks identified	Mitigation or preventative measure(s) taken

Habitats for rare, threatened, and endangered species	N/A	N/A
Areas for habitat connectivity	N/A	N/A

2.4.2 Introduction of species

Species introduced	Classification	Justification for use	Adverse effects and mitigation
N/A	N/A	N/A	N/A

Existing invasive species	Mitigation measures to prevent the spread or continued existence of invasive species
N/A	N/A

	Risks identified	Mitigation or preventative measure(s) taken
Invasive species	N/A	N/A

2.4.3 Ecosystem conversion

	Risks identified	Mitigation or preventative measure(s) taken
Ecosystem conversion	N/A	N/A

3 IMPLEMENTATION STATUS

3.1 Implementation Status of the Project Activity

The final Permit of Use has been issued to the project sub-sites A & B on March 15th 2010 which constitutes the second and final stage of the project's implementation. Since then, the wind-park is in continuous operation as per the technical design. No events that may impact the GHG emission reductions and monitoring have been registered.

There is no leakage from the project and no changes to the project proponent have been registered

3.2 Deviations

3.2.1 Methodology Deviations

No deviations from the methodology for the estimation of the emission reductions have been applied during this monitoring period.

3.2.2 Project Description Deviations

No deviations from the project design have been applied during this monitoring period.

3.3 Grouped Projects

Not applicable.

The project is a single project situated on one site near the village of Poruchik Chunchevo, Kavarna area, Bulgaria

3.4 Baseline Reassessment

Did the project undergo baseline reassessment during the monitoring period?

☐ Yes ☒ No

If yes, provide a summary of the baseline reassessment applied during the monitoring period. Include a summary on the following:

- *Details of the use and applicability of the latest approved version of the methodology or its replacement, where relevant.*
- *Sections in the project description that have been updated to reflect changes in the new baseline.*
- *Indicate whether the baseline scenario is still valid. If the previous baseline scenario is no longer valid, summarize the new baseline scenario as described in the updated project description.*
- *Describe the impact of new relevant national and/or sectoral policies and circumstances on the validity of the baseline scenario, where relevant.*

- *Include the percentage change between the revised baseline emissions provided in the updated project description and the previous baseline emissions.*

4 DATA AND PARAMETERS

4.1 Data and Parameters Available at Validation

Data / Parameter	$EF_{grid,CM,y}$
Data unit	tCO_{2e}/MWh
Description	Combined margin CO2 emission factor for grid connected power generation in year y calculated
Source of data	The value applied is based on the summary document: "Baseline Carbon Emission Factor of Bulgarian Electricity and Heat Power System" which was commissioned and published by the Bulgarian Ministry of Environment and Water (MoEW), Climate Change Policy Directorate, International Emission Trading Mechanisms Department. Available for download at the web-site of the Ministry of Environment and Water
Value applied	0.791 tCO2e/MWh
Justification of choice of data or description of measurement methods and procedures applied	Official report published by the Bulgarian Ministry of Environment and Water (MoEW), Climate Change Policy Directorate, International Emission Trading Mechanisms Department.
Purpose of data	Calculation of baseline emissions
Comments	The Project Proponent chose the ex-ante option for determining $EF_{grid,CM,y}$, and therefore this parameter will be fixed at registration

4.2 Data and Parameters Monitored

Data / Parameter	$EG_{facility,y}$
Data unit	MWh/y
Description	Quantity of net electricity generation supplied by the project plant/unit to the grid in year y
Source of data	Electricity meter(s)
Description of measurement methods	The following parameters shall be measured: (a) The quantity of electricity supplied by the project plant/unit

and procedures to be applied	to the grid; and (b) The quantity of electricity delivered to the project plant/unit from the grid The net energy delivered is calculated as the difference between (a) and (b).
Frequency of monitoring/recording	Continuous measurement and monthly recording
Value monitored	Net energy delivered to the grid (MWh): 2020 – 41,416 (01-December-2020 – 31-December-2020) 2021 –336,044 (01-January-2021 – 31-December-2021) 2022 – 289,037 (01-January-2022 – 31-October-2022)
Monitoring equipment	At present there are two electricity meters which are owned and calibrated by the grid operator. Both are commercial measuring Landis+Gyr, accuracy class 0.2 (See Annex 1). Serial number: No 60225248 Serial number: No 60225249.
QA/QC procedures to be applied	The measuring meters described above are owned by the (ESO or in Bulgarian ECO) and are used for the commercial measurement of the electricity. Commercial electrometer 1 is measuring the amount of the electricity exported through the HV step-up transformer 1, similarly commercial electrometer 2 is measuring the electricity exported through HV step-up transformer 2 into the grid. AES does not have access to the data from the commercial electrometers, except for visual reading. In addition there are two internal control meters, property of AES that are used to crosscheck the readings and will also serve as backup in case one of the main meters will malfunction. Both are Landis+Gyr static, accuracy class 0,2S. Serial number: No: 97600398 Serial number: No: 97600399
Purpose of the data	Baseline emission Calculation
Calculation method	Not relevant
Comments	All data will be archived and preserved for at least 2 years after the end of the crediting period

4.3 Monitoring Plan

The O&M Manager of the Wind Farm is responsible for implementing this monitoring plan. The organizational structure of the project management is presented below:

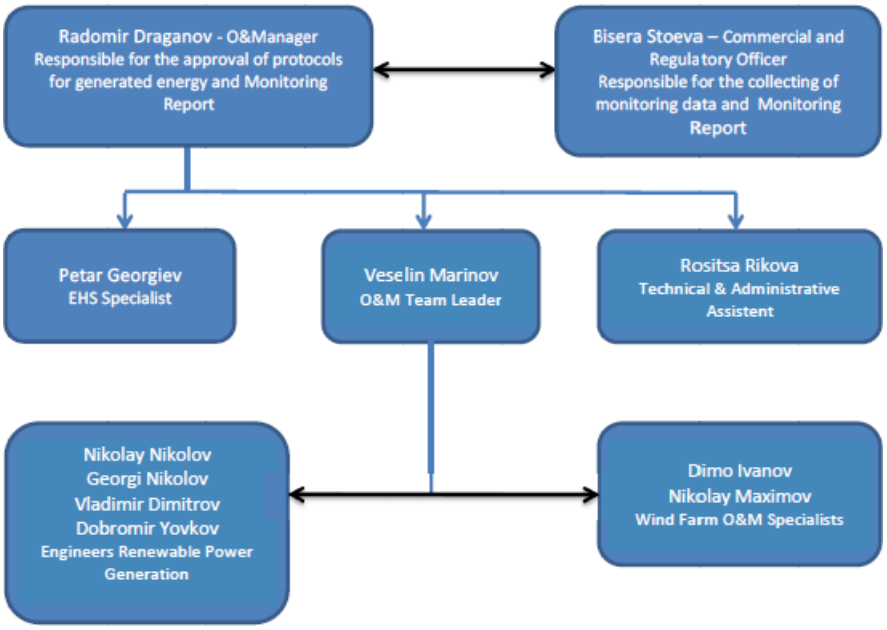

Fig 3: Management structure of the project activity

An up-dated and modern system for control of the wind park and the electric energy generated has been developed by the owner in order to optimize the management. All data and control functions are transferred in real time via specially rented optic MAN connection to the common control centre of AES in Galabovo where all decisions and correcting actions are taken by the duty shift engineers.

The data for the generated electricity measured by the commercial electrometers is sent via GSM modem connection to the ESO on a daily basis – around midnight. There are two GSM connections, using two different mobile operators, to ensure the reliability of the data transfer.

The control electrometers are owned by AES Geo Energy and are used to control the accuracy of the commercial electrometers. They are connected to the internal network and are sending and

recording their readings directly on the SNWF server. This process is automated and the data is regularly being uploaded. The data from the control electrometers can be accessed by using the manufacturers software.

The commercial electrometers are recording the consumed and the generated electricity by SNWF. At the beginning of each month a representative of ESO is delivering the protocol for the generated electricity by the SNWF. Obligation of the Management is to compare the data from the protocol with the data collected from the control electrometers, before signing the protocol. If the difference between the measurements of the commercial and control electrometers fall into the acceptable boundaries of 1.0%, the protocol is signed by Mr. Radomir Draganov – O&M Manager. If the difference between the readings exceeds the limit of 1.0% the reason should be investigated. In such case the detailed data from the commercial and the control electrometers is to be compared.

Detailed instruction on the protocol checking procedure can be found in the internal Instruction O-01.23 for monthly reporting of the readings from the control electrometers and comparing with the ESO protocol.

Signed protocols are collected on an annual basis and presented to Mrs. Bisera Stoeva – Commercial and Regulatory Officer responsible for the VCS program and data management. The preparation of the Monitoring report is outsourced to an external company specialized in Kyoto mechanisms. After preparation of the Monitoring report the document is approved by AES Management presented by Mr. Radomir Draganov – O&M Manager and delivered for verification to a contracted VVB.

During the monitoring period calibration is not conducted as per the approved monitoring plan and delay has occurred for different periods for the main and check meters. As per the results mentioned in the latest calibration certificates the error was found within the maximum permissible limits (+/- 0.2%) during the calibration of energy meters. As per VVS PA v 03 para 366 (a) requirement: error factor of "-0.2%" should be applicable for export & +0.2% to the import i.e. the measured vales. Hence being conservative the error factor has been applied for the entire monitoring period.

After treating of all data the documents and files will be archived and stored for 5 years.

The following table shows the technical specifications of the commercial electric meters used for the monitoring:

Annex1:

Measuring equipment	Measured parameter variable	Equipment producer and type	Serial number	Installation date	Date of latest calibration	Measurement error data	Comments
Digital electric meter	$EG_{facility,y}$	Landis+Gyr	51369628	21July-2020	21July2020	Class 0.2S	Property of the electric transmission company (ESO)
		Landis+Gyr	50464143	27-July-2021	27-July-2021		
		Landis+Gyr	60225248	19-July2022	19-July-2022		
Digital electric meter	$EG_{facility,y}$	Landis+Gyr	51369629	21July-2020	21-July-2020	Class 0.2S	Property of the electric transmission company (ESO)
		Landis+Gyr	50464144	27-July-2021	27-July--2021		
		Landis+Gyr	60225249	19-July-2022	19_July2022		
Digital electric meter	$EG_{facility,y}$	Landis+Gyr	97600398	2012	11_August-2020	Class 0.2S	Property of AES. Back-up meter for cross-check
		Landis+Gyr	97600398	2012	22-August-2022		
Digital electric meter	$EG_{facility,y}$	Landis+Gyr	97600399	2012	11-August-2020	Class 0.2S	Property of AES. Back-up meter for cross-check
		Landis+Gyr	97600399	2012	22-August-2022		

5 QUANTIFICATION OF GHG EMISSION REDUCTIONS AND REMOVALS

5.1 Baseline Emissions

For the baseline emission factor the emission factors of the Bulgarian Ministry of Environment and Water were taken as a basis and verified by the Validation Report , ID CCL220/VAL/AESGE/CWPP/20130910, issued by the Designated Operational Entity (DOE) Carbon Check (Pty) Ltd. on 22-10-2014 .

The value of the emission factor approved ex-ante in the validated PDD is 0.791 tCO_{2e}/MWh.

The baseline emissions are calculated using the following equation:

$$BE_y = EG_{Pj,y} * EF_{grid,CM} \quad (1)$$

Where

BE_y = Baseline emissions in year y (tCO_{2e})

$EG_{Pj,y}$ = Net electricity supplied by the project activity to the grid in year y (MWh)

$EF_{grid,CM}$ = Grid emission factor (tCO_2/MWh)

Taking into consideration the values recorded in the monitored period subject to this report the baseline emission reductions are equal to:

BE2020 = 41,416.143 * 0.79 =32,760 tCO_{2e}

BE2021 = 336,044.293*0.791=265,811 tCO_{2e}

BE2022 = 289,037.684 *0.791=228,628 tCO_{2e}

The total quantity of baseline emissions for the period 01-December-2020 to 31-October- 2022 is **527,199 tCO_{2e}**

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5.2 Project Emissions

The project emissions from this activity are zero. $PE_y = 0$

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5.3 Leakage Emissions

There are no leakage emissions from this project activity.

5.4 GHG Emission Reductions and Carbon Dioxide Removals

The emission reductions generated by the project are calculated as follows:

$ER_y = (BE_y - PE_y - LE_y)$ (2)

Where:

BEy- - Baseline Emissions in year y (tCO2e/y)

PEy - Project Emissions in year y (tCO2e/y)

LEy - Leakage Emissions in year y (tCO2e/y)

Vintage period	Baseline emissions (tCO_2e)	Project emissions (tCO_2e)	Leakage emissions (tCO_2e)	Reduction VCUs (tCO_2e)	Removal VCUs (tCO_2e)	Total VCUs (tCO_2e)
2020 (01-December–2020 to 31-December-2020)	32,760	0	0	32,760	-	32,760
2021 (01-January-2021 to 31-December-2021)	265,811	0	0	265,811	-	265,811
2022 (01-January-2022 to 31-October-2022)	228,628	0	0	228,628	-	228,628
Total	527,199	*0*	*0*	527,199	-	527,199
Total						

Vintage period	Ex-ante estimated reductions/ removals	Achieved reductions/ removals	Percent difference	Explanation for the difference
2020 (01-December-2020 – 31-December-2020)	21342	32,760	34.85%	The difference is well within seasonal wind fluctuations.
2021 (01-January-2021 – 31-December-2021)	256108	265,811	3.65%	The difference is well within seasonal wind fluctuations.
2022 (01-January-2022 – 31-October-2022)	213420	228,628	6.65%	The difference is well within seasonal wind fluctuations.
Total	490870	527,199	7.00%	The difference is well within seasonal wind fluctuations.