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温室气体核查声明书

授予

江苏振江新能源装备股份有限公司

无锡航工机械制造有限公司

江阴振江能源科技有限公司

核查地址：江阴市镇澄路 2608 号

江阴市贵宾路 60 号

江阴市临港街道江市路 28 号

组织边界：江苏振江新能源装备股份有限公司/无锡航工机械制造有限公司/江阴振江能源科技有限公司拥有运营控制的活动和设施

报告边界：江苏振江新能源装备股份有限公司/无锡航工机械制造有限公司/江阴振江能源科技有限公司的风电设备、光伏设备零部件的制造及风电设施装配的相关管理活动过程中产生的直接温室气体排放及其重要的间接温室气体排放

限制性叙述：排除非重要间接温室气体排放

保证等级：合理保证等级

必维认证（北京）有限公司

证明上述单位依据下列国际标准执行组织温室气体盘查工作，查证数据为合理测量和计算，其它详细声明如附件所述。

ISO 14064-1:2018

经核查 2022 年 1 月 1 日到 2022 年 12 月 31 日期间：

类别 1：直接温室气体排放：3,310.56 吨二氧化碳当量

类别 2：能源间接温室气体排放：26,459.22 吨二氧化碳当量

类别 3：运输的间接温室气体排放：11,046.66 吨二氧化碳当量

类别 4：组织使用产品的间接温室气体排放：185,972.44 吨二氧化碳当量

类别 5：与使用组织产品有关的间接温室气体排放：非重要间接排放，未量化

类别 6：其它来源的间接温室气体排放：非重要间接排放，未量化

经量化的总排放量：226,788.88 吨二氧化碳当量

签发日期：2023 年 8 月 24 日

声明书编号：EMI19673994

版本号：NO.1

必维认证（北京）有限公司授权代表

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温室气体核查声明书（附页）

江苏振江新能源装备股份有限公司/无锡航工机械制造有限公司/江阴振江能源科技有限公司委托必维认证（北京）有限公司对其的报告边界范围内的温室气体排放进行第三方核查。查证的关键信息如下：

GHG 清单类别	GHG 排放源	温室气体	排放因子		数据来源
			数值	单位	
直接温室气体排放	发电机柴油	CO ₂	74100	kg CO ₂ /TJ	IPCC 2006
		CH ₄	3	kg CH ₄ /TJ	
		N ₂ O	0.6	kg N ₂ O/TJ	
	食堂、车间液化石油气	CO ₂	63100	kg CO ₂ /TJ	
		CH ₄	1	kg CH ₄ /TJ	
		N ₂ O	0.1	kg N ₂ O/TJ	
	食堂、RTO 天然气	CO ₂	56100	kg CO ₂ /TJ	
		CH ₄	1	kg CH ₄ /TJ	
		N ₂ O	0.1	kg N ₂ O/TJ	
	切割机丙烷	CO ₂	3	kg CO ₂ e/kg	质量平衡方法
	公务车汽油	CO ₂	69300	kg CO ₂ /TJ	IPCC 2006
		CH ₄	3.8	kg CH ₄ /TJ	
		N ₂ O	5.7	kg N ₂ O/TJ	
	货车柴油	CO ₂	74100	kg CO ₂ /TJ	
		CH ₄	3.9	kg CH ₄ /TJ	
		N ₂ O	3.9	kg N ₂ O/TJ	
	叉车柴油	CO ₂	74100	kg CO ₂ /TJ	
		CH ₄	4.15	kg CH ₄ /TJ	
		N ₂ O	28.6	kg N ₂ O/TJ	
	制冷设备/空调制冷剂	R407C	1908	kg CO ₂ e/kg	IPCC AR6
		R410a	2255.5	kg CO ₂ e/kg	
		R22	1960	kg CO ₂ e/kg	
		R32	771	kg CO ₂ e/kg	
	灭火器 CO ₂	CO ₂	1	kg CO ₂ e/kg	质量平衡方法
	保护焊 CO ₂	CO ₂	1	kg CO ₂ e/kg	
输入能源间接温室气体排放	外购电力	CO ₂	0.5703	kg CO ₂ e/KWh	关于做好 2023-2025 年发电行业企业温室气体排放报告管理有关工作的通知
运输的间接温室气体排放	道路货运（中型货车）	CO ₂	0.042	kg CO ₂ e/(t·km)	中国分省道路交通二氧化碳排放因子
	道路货运（重型货车）	CO ₂	0.049	kg CO ₂ e/(t·km)	
	海上货运	CO ₂	0.0161	kg CO ₂ e/(t·km)	UK Government GHG Conversion Factors for Company Reporting-2022
	航空货运（With RF）	CO ₂	1.0189	kg CO ₂ e/(t·km)	
	铁路货运	CO ₂	0.0109	kg CO ₂ e/(t·km)	CLCD
	航空客运	CO ₂	0.0925	kg CO ₂ e/Pkm	Emission_Factors_from_Cross_Sector_Tools_March_2017
	小轿车客运	CO ₂	0.0410	kg CO ₂ e/Pkm	中国分省道路交通二氧化碳排放因子
	铁路客运	CO ₂	0.0202	kg CO ₂ e/Pkm	中国高速铁路运营减碳及经济环境互馈影响研究
	自驾油车	CO ₂	0.1847	kg CO ₂ e/km	UK Government GHG Conversion Factors for
	自驾电车	CO ₂	0.2311	kWh (Net)/km	

认证机构地址：中国北京市东城区东长安街1号东方广场西一办公楼9层902室，邮编：100738
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GHG 清单类别	GHG 排放源	温室气体	排放因子		数据来源
			数值	单位	
					Company Reporting-2022
组织使用产品的 间接温室气体排放	热轧钢板	CO ₂	2.40	kg CO ₂ e/kg	GBT 51366-2019 建筑碳排放计算标准
	碳钢	CO ₂	2.05	kg CO ₂ e/kg	
	油漆	CO ₂	0.86	kg CO ₂ e/kg	Ecoinvent Version 3.9.1 (2022) Database
	废弃物处理	CO ₂	21.2802	kgCO ₂ e/t	UK Government GHG Conversion Factors for Company Reporting-2022
	机械设备	CO ₂	4.2530	kg CO ₂ e/USD	GHG Protocol Scope 3 Evaluator tool
	WTT-电力	CO ₂	0.1639	kg CO ₂ e/kWh	UK Government GHG Conversion Factors for Company Reporting-2021
	外购电传输损失	CO ₂	0.0091	kg CO ₂ e/kWh	
	WTT-天然气	CO ₂	0.3459	kg CO ₂ e/m ³	
	WTT-丙烷	CO ₂	350.4556	kg CO ₂ e/t	
	WTT-液化石油气	CO ₂	347.0093	kg CO ₂ e/t	
	WTT-柴油	CO ₂	0.6099	kg CO ₂ e/L	
	WTT-汽油	CO ₂	0.6133	kg CO ₂ e/L	

上述经查证均适宜，但排除由于经济和技术特点难以核查的排放源。

核查组长：常德健

核查日期：2023 年 8 月 18 日



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Greenhouse Gases Verification Statement

is awarded to

JIANGSU ZHENJIANG NEW ENERGY EQUIPMENT CO., LTD

AVI MANUFACTURING CO.,LTD

JIANGYIN ZHENJIANG ENERGY TECHNOLOGY CO. LTD

Verified address: Zhencheng Road No. 2608, Jiangyin City

Guibin Road No. 60, Jiangyin City

Jiangshi Road No. 28, Lingang Street, Jiangyin City

Organizational boundaries: Activities and facilities of Jiangsu Zhenjiang New Energy Equipment Co., LTD/ AVI Manufacturing Co.,LTD/ Jiangyin Zhenjiang Energy Technology Co. LTD. under operational control

Reporting boundaries: Direct GHG emissions generated in manufacturing of wind power equipment, photovoltaic equipment components, and wind power facility assembly of Jiangsu Zhenjiang New Energy Equipment Co., LTD/ AVI Manufacturing Co.,LTD/ Jiangyin Zhenjiang Energy Technology Co. LTD and related management activities within the organizational boundaries, as well as significant indirect greenhouse gases emissions

Limitations and exclusions: Exclude other non-significant indirect GHG emissions

Level of assurance: Reasonable

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certifies that the organization has conducted Greenhouse Gas inventory in accordance with the requirements of the standard detailed below, and verification data are reasonable measurement and calculation. Other details are described in the appendix.

ISO 14064-1:2018

Verified from 01/01/2022 to 31/12/2022:

Category 1: Direct GHG emissions: 3,310.56 tonnes of CO₂e

Category 2: Indirect GHG emissions from imported energy: 26,459.22 tonnes of CO₂e

Category 3: Indirect GHG emissions from transportation: 11,046.66 tonnes of CO₂e

Category 4: Indirect GHG emissions from products used by organization: 185,972.44 tonnes of CO₂e

Category 5: Indirect GHG emissions associated with the use of products from the organization: Non-significant indirect GHG emissions, Unquantified

Category 6: Indirect GHG emissions from other sources: Non-significant indirect GHG emissions, Unquantified

Total GHG emissions: 226,788.88 tonnes of CO₂e

Statement No.: EMI19673994

Issue date: 24/08/2023

Version No.: 1

Signed on behalf of BVC (Beijing) Co., Ltd.

Certification body address: Room 02, 9 / F, West Office Building 1, Oriental Economic and Trade City, Oriental Plaza, No.1 East Chang'an Street, Dongcheng District, Beijing, China. 100738

Further clarifications regarding the verification scope of this statement may be obtained by consulting the organization.
To check this statement validity please call: +86 021-23190306



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Greenhouse Gases Verification Statement (Appendix)

Jiangsu Zhenjiang New Energy Equipment Co., LTD/ AVI Manufacturing Co.,LTD/ Jiangyin Zhenjiang Energy Technology Co. LTD has commissioned Bureau Veritas (Beijing) Co., Ltd. to conduct a third-party verification on the GHG emissions within its reporting boundary. Key information is listed below.

GHG Inventory categories	GHG Source	GHG	Factor		Reference
			Quantity	Unit	
Direct GHG emissions	Diesel of Generat	CO ₂	74100	kg CO ₂ /TJ	IPCC 2006
		CH ₄	3	kg CH ₄ /TJ	
		N ₂ O	0.6	kg N ₂ O/TJ	
	LPG of canteen& workshops	CO ₂	63100	kg CO ₂ /TJ	
		CH ₄	1	kg CH ₄ /TJ	
		N ₂ O	0.1	kg N ₂ O/TJ	
	Natural gas of canteens& RTO	CO ₂	56100	kg CO ₂ /TJ	
		CH ₄	1	kg CH ₄ /TJ	
		N ₂ O	0.1	kg N ₂ O/TJ	
	Propane of cutting machine	CO ₂	3	kg CO ₂ e/kg	Mass balance method
	Gasoline of Car	CO ₂	69300	kg CO ₂ /TJ	IPCC 2006
		CH ₄	3.8	kg CH ₄ /TJ	
		N ₂ O	5.7	kg N ₂ O/TJ	
	Diesel of Truck	CO ₂	74100	kg CO ₂ /TJ	
		CH ₄	3.9	kg CH ₄ /TJ	
		N ₂ O	3.9	kg N ₂ O/TJ	
	Diesel of Fork cart	CO ₂	74100	kg CO ₂ /TJ	IPCC AR6
		CH ₄	4.15	kg CH ₄ /TJ	
		N ₂ O	28.6	kg N ₂ O/TJ	
	refrigerant	R407C	1908	kg CO ₂ e/kg	
		R410a	2255.5	kg CO ₂ e/kg	
		R22	1960	kg CO ₂ e/kg	
		R32	771	kg CO ₂ e/kg	
	CO ₂ Fire Extinguisher	CO ₂	1	kg CO ₂ e/kg	Mass balance method
	CO ₂ Protective welding	CO ₂	1	kg CO ₂ e/kg	
Indirect GHG emissions form imported energy	Power	CO ₂	0.5703	kg CO ₂ e/KWh	Notice on Doing a Good Job in the Management of Greenhouse Gas Emission Reports for Enterprises in the Power Generation Industry from 2023 to 2025
Indirect GHG emissions from transportation	Road freight (Medium truck)	CO ₂	0.042	kg CO ₂ e/(t • km)	Carbon dioxide emission factors of road traffic in different provinces of China
	Road freight (Heavy truck)	CO ₂	0.049	kg CO ₂ e/(t • km)	
	Sea freight	CO ₂	0.0161	kg CO ₂ e/(t • km)	UK Government GHG Conversion Factors for Company Reporting-2022
	Air freight (With RF)	CO ₂	1.0189	kg CO ₂ e/(t • km)	

Certification body address: Room 02, 9 / F, West Office Building 1, Oriental Economic and Trade City, Oriental Plaza, No.1 East Chang'an Street, Dongcheng District, Beijing, China. 100738

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	Railway freight	CO ₂	0.0109	kg CO ₂ e/ (t • km)	CLCD
	Air Transportation	CO ₂	0.0925	kg CO ₂ e/Pkm	Emission_Factors_fro m_Cross_Sector_Tool s_March_2017
	Car (passenger transport)	CO ₂	0.0410	kg CO ₂ e/Pkm	Carbon dioxide emission factors of road traffic in different provinces of China
	Railway (passenger transport)	CO ₂	0.0202	kg CO ₂ e/Pkm	Research on Carbon Reduction and Economic Environment Mutual Feedback in China's High Speed Railway Operation
	Medium car	CO ₂	0.1847	kg CO ₂ e/km	UK Government GHG Conversion Factors for Company Reporting-2022
	Medium car (EV)	CO ₂	0.2311	kWh (Net)/km	
Indirect GHG emissions from products used by organizati on	Hot-rolled steel plate	CO ₂	2.40	kg CO ₂ e/kg	GBT 51366-2019
	Carbon steel	CO ₂	2.05	kg CO ₂ e/kg	
	Paint	CO ₂	0.86	kg CO ₂ e/kg	Ecoinvent Version 3.9.1 (2022) Database
	Commercial and industrial waste electricity	CO ₂	21.2802	kgCO ₂ e/t	UK Government GHG Conversion Factors for Company Reporting-2022
	Machinery (not elsewhere classified)	CO ₂	4.2530	kg CO ₂ e/USD	GHG Protocol Scope 3 Evaluator tool
	Upstream emissions of purchased electricity	CO ₂	0.1639	kg CO ₂ e/kWh	UK Government GHG Conversion Factors for Company Reporting-2021
	Transmission and distribution (T&D) losses	CO ₂	0.0091	kg CO ₂ e/kWh	
	WTT-Natural gas	CO ₂	0.3459	kg CO ₂ e/m ³	
	WTT-Propane	CO ₂	350.4556	kg CO ₂ e/t	
	WTT-LPG	CO ₂	347.0093	kg CO ₂ e/t	
	WTT-Diesel	CO ₂	0.6099	kg CO ₂ e/L	
	WTT-Petrol	CO ₂	0.6133	kg CO ₂ e/L	

Above have been verified to be appropriate, except GHG emission sources that are not economically or technically feasible to verify.

Lead verifier: Vistar Chang

Verification date: 18/08/2023

Certification body address: Room 02, 9 / F, West Office Building 1, Oriental Economic and Trade City, Oriental Plaza, No.1 East Chang'an Street, Dongcheng District, Beijing, China. 100738

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