

坚持共享共建，实现海外新能源高质量发展

Adhering Contribution and Shared Benefits
Realizing the High-quality Development of Overseas New Energy Markets

2021.10



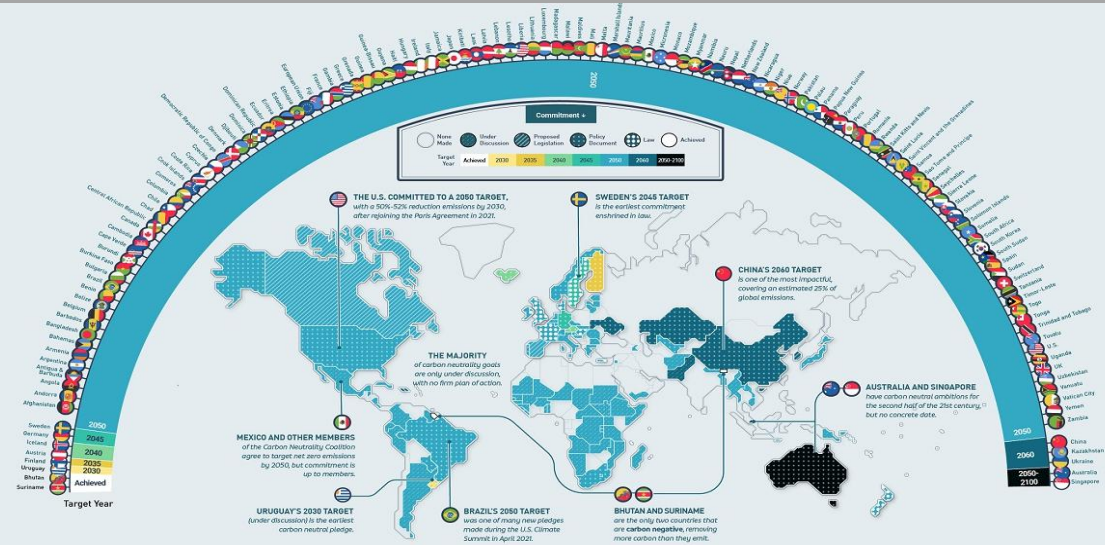
全球可再生能源发展主要趋势

- 从现在到2050年，全球能源系统经历加速**转型**，各国相继提出**碳中和**、**净零排放**等去碳化政策及目标。
- **世界能源结构将发生变化**，如到2050年全球要实现净零排放，**近90%**的发电将来自可再生能源。
- 风电行业作为可再生能源的重要组成部分，也是可再生能源领域中最**成熟**、**最具规模开发条件**和商业化发展前景的发电方式之一，可利用的风能在全球范围内分布广泛、储量巨大。

全球电力需求与发电结构预测

	Electricity Generation (TWh)					Shares (%)			CAAGR (%)	
	2019	2020	2030	2040	2050	2020	2030	2050	2020-2030	2020-2050
Total generation	26 922	26 778	37 316	56 553	71 164	100	100	100	3.4	3.3
Renewables	7 153	7 660	22 817	47 521	62 333	29	61	88	12	7.2
Solar PV	665	821	6 970	17 031	23 469	3	19	33	24	12
Wind	1 423	1 592	8 008	18 787	24 785	6	21	35	18	9.6
Hydro	4 294	4 418	5 870	7 445	8 461	17	16	12	2.9	2.2
Bioenergy	665	718	1 407	2 676	3 279	3	4	5	7.0	5.2
of which BECCS	-	-	129	673	842	-	0	1	n.a.	n.a.
CSP	14	14	204	880	1 386	0	1	2	31	17
Geothermal	92	94	330	625	821	0	1	1	13	7.5
Marine	1	2	27	77	132	0	0	0	28	14
Nuclear	2 792	2 698	3 777	4 855	5 497	10	10	8	3.4	2.4
Hydrogen-based	-	-	875	1 857	1 713	-	2	2	n.a.	n.a.
Fossil fuels with CCUS	1	4	459	1 659	1 332	0	1	2	61	21
Coal with CCUS	1	4	289	966	663	0	1	1	54	19
Natural gas with CCUS	-	-	170	694	669	-	0	1	n.a.	n.a.
Unabated fossil fuels	16 941	16 382	9 358	632	259	61	25	0	-5.4	-13
Coal	9 832	9 426	2 947	0	0	35	8	0	-11	-40
Natural gas	6 314	6 200	6 222	626	253	23	17	0	0.0	-10
Oil	795	756	189	6	6	3	1	0	-13	-15

全球提出碳中和、净零排放国家一览



数据来源：IEA、Wood Mackenzie



全球可再生能源发展主要趋势

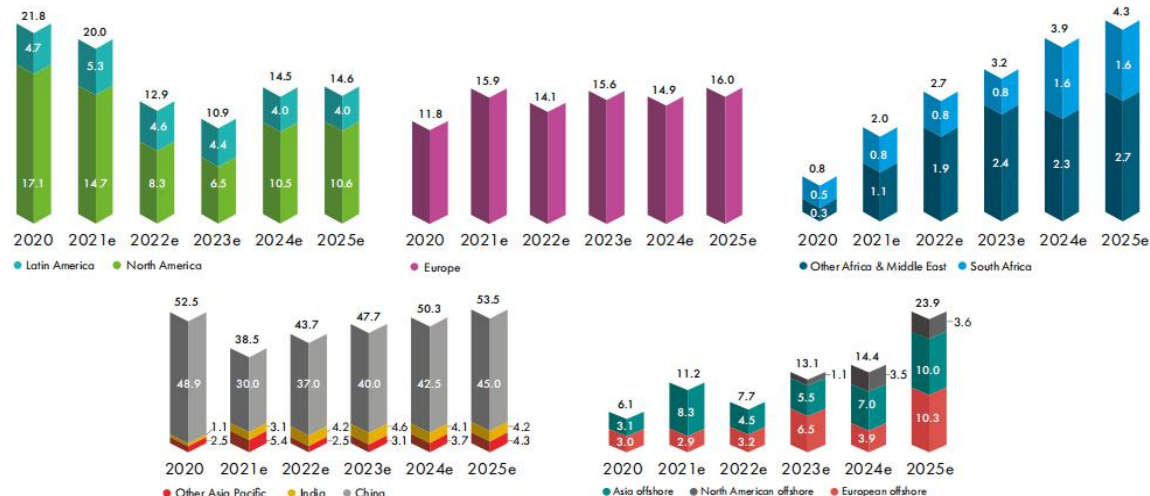
国际风电市场发展迅速，预测中中国装机量将占主导优势，**新兴市场**迅猛增长。

- 到2050年，全球要实现净零排放，近**九成**的发电将来自**可再生能源**，风能和光伏合计占比近七成
- 中、欧、北美主体市场格局不变，**亚洲主导**全球风电发展。新兴市场规模增长迅速，预计到2030年每年平均增长量达到62.5%，越南、沙特、乌兹别克市场开发量最大。

2020-2050 全球风电市场发展展望

Regional onshore wind and offshore wind outlook

New installations (GW)



金风的国际市场总览



1 ST

中国新增装机量第一
全球新增装机量位列第二

4291.88MW

金风科技海外装机

48.18+ GW

全球在运维服务量

50%

中国风机出口量占比

8大区域

国际业务区域中心

6大洲32个国家

全球业务分布

北美
1116.2MW

南美
487.1MW

欧洲
479.15MW

非洲
206.5MW

亚洲 (不含中国)
526.45MW

大洋洲
1476.48MW

国际项目案例

金风科技以优质的解决方案及出色的产品适应性，为不同海拔、温度、地理环境的国家和业主提供完善的综合能源解决方案。



打造多维度的国际化， 坚持国际项目属地化发展

五大国际化能力，全面深度根植全球市场



资本国际化



市场国际化



技术国际化



管理国际化



人才国际化

严格遵循市场原则和国际通行原则， 发挥企业主体作用



Xinjiang Goldwind Science & Technology Co., Ltd.



ENVIRONMENTAL PRODUCT DECLARATION

Product Name:	Goldwind GW155-4.5 wind turbine
Program Operator:	EPDItaly
Publisher:	EPDItaly
Declaration Number:	1
Registration Number:	EPDITALY0134

Issue Date:	2020 / 12 / 10
Valid to:	2025 / 12 / 10



www.epdItaly.it

intertek The Quality Assured

Intertek Testing Services (Beijing) Building No. 35, 3rd Floor, West Tower, Gulou East Road, Beijing 100024, China

Test Verification of Conformity

On the basis of the information and test reports, samples of the below product have been found to comply with the requirements standards and directives listed on this certificate of test. Other standards and directives may be relevant to the product.

Once a product receives the CE mark affixation and verification compliance, the manufacturer may indicate compliance by signing a declaration of conformity. However, we advise the manufacturer to product-specific to the full range of the product complies with all relevant CE mark directives requirements.

Applicant Name & Address:
Beijing Goldwind Science & Control Windpower Equipment Co., Ltd.
No. 10 Kangzhang Street, Beijing Economic Development Area, 101312 P. R. China

Manufacturer Name & Address:
Beijing Goldwind Science & Control Windpower Equipment Co., Ltd. (Goldwind Science & Technology Co., Ltd.)
No. 10 Kangzhang Street, Beijing Economic Development Area, 101312 P. R. China

Product(s) tested:
1. Wind turbine generator system

Settings and principal characteristics:
Rated voltage: 0.69 kV, 3-phase
Rated frequency: 50Hz
Rated power: 2000kW / 2100kW / 2200kW / 2300kW / 2400kW

Marked to:
EN 14300, EN 14301, EN 14302, EN 14303, EN 14304, EN 14305

Marked with:
GOLDWIND

Apparent Conformance(s) / Specification(s) / Drawing(s):
EN 60054-1: 2004 - A1: 2005
EN 60054: 2004
CENELEC of Directive 2006/42/EC
The Low Voltage Directive 2014/34/EU
The Machinery Directive 2006/42/EC

Verification-using entity Name & Address:
Intertek Testing Services (Beijing) Building No. 35, 3rd Floor, West Tower, Gulou East Road, Beijing 100024, China

Verification Number:
12000112329-01

Notes: This certificate is part of the full test report(s) and should be read in conjunction with it.

CE

Valid: Mar 31
Further Storage: 6000
Date: 08 Dec, 2020

4102017-01-01 Rev.001

intertek AUTHORIZATION TO MARK

This authorizes the affixation of the Certification Mark shown below to the product described in the Product Declaration under which trade it is marketed, and the conditions set forth in the Certification Agreement and Listing Report. This authorization may terminate without notice if compliance with the conditions set forth in the Listing Report is not maintained.

This document is the property of Intertek Testing Services and is not to be distributed. The certification rights may be withdrawn at the discretion of Intertek Testing Services at any time.

Applicant: Beijing Goldwind Science & Control Windpower Equipment Co., Ltd.
Address: No. 10 Kangzhang Street, Beijing Economic Development Area, 101312 P. R. China
Country: China
Product: Wind Turbine Generator
Phone: 86-10-51267170
Fax: 86-10-51267171
E-mail: info@goldwind.com

Manufacturer: Beijing Goldwind Science & Control Windpower Equipment Co., Ltd.
Address: No. 10 Kangzhang Street, Beijing Economic Development Area, 101312 P. R. China
Country: China
Product: Wind Turbine Generator
Phone: 86-10-51267170
Fax: 86-10-51267171
E-mail: info@goldwind.com

Product Issuing Office: Intertek Testing Services (Beijing) Building No. 35, 3rd Floor, West Tower, Gulou East Road, Beijing 100024, China

Control Number: 200000222 **Authorized by:** [Signature]

UK Conformity Assessed
UKCA
intertek

This document represents an authorized authorization to mark to the listed Report Number.

Product Declaration: Goldwind Science & Control Windpower Equipment Co., Ltd. No. 10 Kangzhang Street, Beijing Economic Development Area, 101312 P. R. China

Product: Wind Turbine Generator

Marked with: GOLDWIND

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DNV-GL

CONFORMITY STATEMENT

Issued to: Beijing Goldwind Science & Technology Co., Ltd.

Issued for: Design Evaluation, RNA of Offshore GW154/6700 Wind Turbine

Issued by: Xinjiang Goldwind Science & Technology Co., Ltd.

Issued on: IEC 61400-23:2010-05 Wind turbines - Part 23: Conformity testing and certification

Approved: DNVGL-SE-0074:2014-12 Type and component certification of wind turbines according to IEC 61400-23

Based on the following: EN 14300, EN 14301, EN 14302, EN 14303, EN 14304, EN 14305

Changes of the design shall be as approved by DNV GL.

Reference: DNVGL-SE-0074
No. of the certificate: 2020-0100
Date of issue: 2020-12-10

GOLDWIND

Global Alliance for Sustainable Energy
founding member

GOLDWIND

坚持高质量的专业服务， 以质量提升促进新竞争优势的形成

以质量卓越的先进产品、精准交付项目，提供标准高效的运维服务和解决方案，保证风电场的高效运行和客户收益



质量卓越



产品先进



精准交付



服务高效

金风在开展业务运营过程中，以可持续的方式管理和保护当地的自然资源和社会，并借助业务优势和资源改善周边社区居民生活，尽可能地使社区在公司业务运营过程中获益，助力当地社区发展。



南非

为当地学校捐赠学习设施、文娱活动用品，为孩子们创造更好的学习和生活环境。



阿根廷

向阿根廷当地机场、学校、警察局、旅游部、国家科学研究委员会等捐赠集装箱、木材和帆布，用于建设消防站和流动办公室，赞助学校木匠和温室活动。



泰国

金风泰国团队携手当地社区、项目业主和商业伙伴，赞助并参与食品银行在当地植树造林的项目。



Thanks

Innovating for a Brighter Tomorrow

2021.11