SANY
RENEWABLE ENERGY

WIND TURBINE

SANY Renewable Energy Co., Ltd.

SANY Renewable Energy adopts differentiated design for its wind turbine products, making them adaptable to various geographical and climatic conditions, including different wind speeds, altitudes and temperatures. An extensive portfolio of customized products are available on the following platforms.

8.X-11.XMW
Platform WTGs

8.X-11.XMW platform offers both onshore and offshore wind turbines with larger rotors from 214m to 230m in diameter and larger rated power output, which are engineered to operate in medium and high wind speed areas, different topographical and grid conditions. Boasting of mature technologies, reliable supply chain, strict test requirement in factory and project sites, 8.X-11.XMW platform is definitely a preferred choice for clients across the globe.

Advanced

By inheriting previous design concept and introducing advanced new technologies, power generation capability of 8.X-11.XMW platform wind turbines is brought to a new high. The mature supply chain, manufacturing and test capabilities all enable 8.X-11.XMW platform to meet the prevailing industry standards. Featuring excellent robustness and cost effectiveness, 8.X-11.XMW platform could help customers to get higher ROI.

Cost Effective

The transformer-in-nacelle solution saves cabling cost compared to conventional design, and as construction of container foundation is no longer needed, the overall construction time is shortened significantly. Separate transportation & installation of nacelle cover and drive train greatly saves hoisting and crane leasing costs.

Reliable

Digital twin technology and comprehensive validation at both component level and turbine level help to avoid various failures and greatly improve reliability. Compact drive train design by integrating main shaft and gearbox guarantees better robustness performance, as proven by strict workbench and site tests.

Intelligent

The application of self-developed wind farm intelligent technologies greatly enhances power production efficiency, generating more revenue for customers while reducing operation and maintenance cost.

This platform offers wind turbines with rated power output of 4.X-6.XMW, and rotor diameter of 156m-200m, ensuring better performance in energy capture and power generation. Jointly developed by SANY Renewable Energy and SANY European Research Institute, the platform is adaptable to a full spectrum of wind regimes, and suitable for different topographical and climatic conditions.

4.X-6.XMW Platform WTGs

Reliable

Digital twin technology and comprehensive validation at both component level and turbine level help to avoid various failures and greatly improve reliability. Enhanced utilization rate and better power generation performance ensure higher ROI for customers.

Intelligent

The application of self-developed wind farm intelligent technologies greatly enhances power production efficiency, generating more revenue for customers while reducing operation and maintenance cost.

Grid-friendly

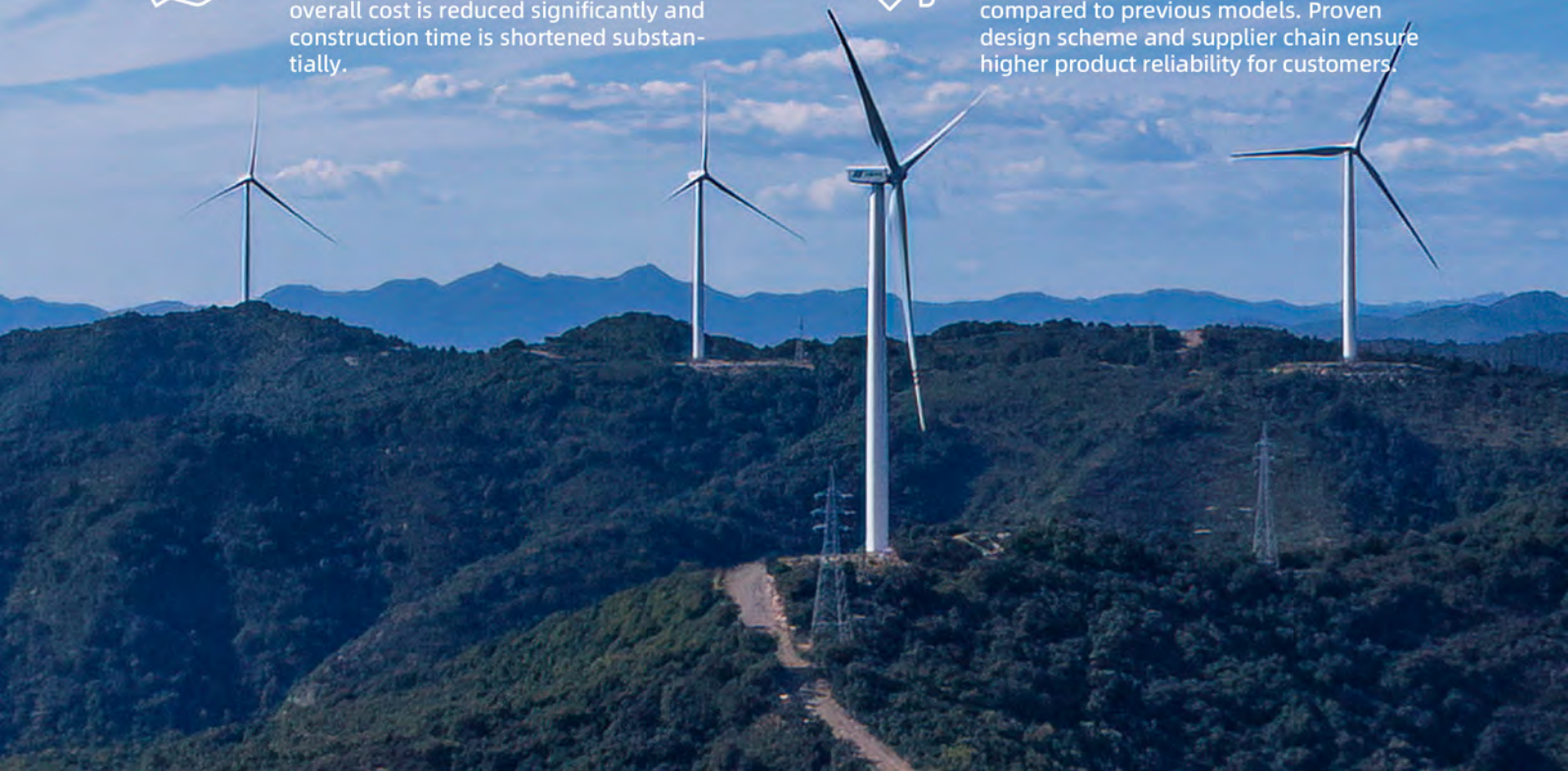
Wind turbines on the platform are equipped with doubly fed generators, which are made in-house by SANY with its patented technologies and even the strictest grid connection requirement can be met.

Cost Effective

The transformer-in-nacelle solution saves cabling cost compared to conventional design, and as construction of container foundation is no longer needed, the overall cost is reduced significantly and construction time is shortened substantially.

Mature

By adopting mature and modular design, the overall performance of 909 platform wind turbines is improved and greater energy production can be achieved, as compared to previous models. Proven design scheme and supplier chain ensure higher product reliability for customers.



		SI-16050	SI-172625
Rated Power	MW	5	6.25
Design Class	IEC	IEC S	IEC S
Cut-In Wind Speed	m/s	3	3
Cut-Out Wind Speed	m/s	22	25
Rated Wind Speed	m/s	10.2 m/s (static)	11.1 m/s (static)
Service Life	Years	20	20
Operating Ambient Temperature	℃	-30°-40°	-30°-40°
Living Environment Temperature	℃	-40°-50°	-40°-50°
Rotor Diameter	m	160	172
Sweep Area	m^2	20106	23235
Generator Type	/	Doubly-fed asynchronous Generator	Doubly-fed asynchronous Generator
Rated Voltage	V	690	690/950（60hz）
Power Control		Variable speed & pitch	Variable speed & pitch
Gearbox		Two-stage planetary & one-stage parallel	Two-stage planetary & one-stage parallel
Converter Type	/	Water-Cooled Double-fed Converter	Water-Cooled Double-fed Converter
Rated Power Factor	/	-0.95~0.95	-0.95~0.95
Grid Frequency	Hz	50	50/60
Cooling System		Water-cooling	Water-cooling
Aerodynamic Braking System	/	Electric pitch	Electric pitch
Mechanical Braking System	/	High-speed shaft brake (second level)	High-speed shaft brake (second level)
Yaw Type	/	Motor-gear drive	Motor-gear drive
Yaw Brake	/	Hydraulic brake	Hydraulic brake
Lightning Protection Design Standard	/	IEC 61400-24	IEC 61400-24
Tower Type	/	steel/hybrid	steel/hybrid

SI-19350	SI-16840	SI-16850
5	4	5
IEC S	IEC S	IEC S
3	3	3
22	22	22
9.2 m/s (static)	9.4m/s (static)	10.2m/s (static)
20	20	20
-30°-40°	-30°-40°	-30°-40°
-40°-50°	-40°-50°	-40°-50°
193	168	168
29255	22167	22167
Doubly-fed asynchronous Generator	Doubly-fed asynchronous Generator	Doubly-fed asynchronous Generator
690	1140	690
Variable speed & pitch	Variable speed & pitch	Variable speed & pitch
Two-stage planetary & one-stage parallel	Two-stage planetary & one-stage parallel	Two-stage planetary & one-stage parallel
Water-Cooled Double-fed Converter	Water-Cooled Double-fed Converter	Water-Cooled Double-fed Converter
-0.95~0.95	-0.95~0.95	-0.95~0.95
50	50	50
Water-cooling	forced air-cooling	Water-cooling
Electric pitch	Electric pitch	Electric pitch
High-speed shaft brake (second level)	High-speed shaft brake (second level)	High-speed shaft brake (second level)
Motor-gear drive	Motor-gear drive	Motor-gear drive
Hydraulic brake	Hydraulic brake	Hydraulic brake
IEC 61400-24	IEC61400-24	IEC61400-24
steel/hybrid	steel/hybrid	steel/hybrid

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