

Research on the Development for Intelligent Equipment Manufacturing Industry concerning New Energy

Resources Power Generation

——in Nantong China, Have the Whole World in View

Zhongnian LI^{1,a}, Tianying LI^{2,b}, Yan QIN^{3,c},

Lijuan ZHANG^{4d} Qing WANG^{5,e}

Department of New Energy Resource Engineering, Nantong Institute of Technology

^alnlnzn2011@qq.com, ^b741783752@qq.com, ^c24531061@qq.com,

^d472462773@qq.com, ^e366919868@qq.com

Keywords: new energy resources power generation, intelligent equipment manufacturing industry, strategic emerging industries, in Nantong China/have the whole world in view

Abstract: In this paper authors carefully research the strategic emerging industries of "manufacturing industry of intelligent equipment of using new energy power generation" through the outlook of Nantong (that is, taking the manufacturing industry development of intelligent equipment of using the new energy power generation in Nantong as a case) and looking at the world (that is, taking the development of intelligent equipment manufacturing industry of using the new energy power generation in the global world as background). In this paper, the present situation and trend of this strategic emerging industry development, the favorable and main problems, countermeasures and measures are studied and discussed. The author's viewpoints and suggestions are put forward.

Introduction

With the energy demand was increased and the traditional energy resources was quickly depleted on worldwide, new energy resources industry to develop rapidly. In the rapid development of new energy resources industry meanwhile, new energy resources power generation intelligent equipment manufacturing industry has been becoming a smart strategic emerging industries. This strategic emerging industry knowledge and technology-intensive, great growth potential, good comprehensive benefits, and on the overall situation and long-term economic and social development have a significant leading and driving role.

Current Situation and Trend on Intelligent Equipment Manufacturing Industry for New Energy Resources Power Generation

Current Status. Nantong City from the last century, a new energy resources power generation of intelligent energy equipment manufacturing industry boom to rise and remain above 40% annual growth rate, has become a pillar industry of Nantong industrial economy. In 2011, Nantong wind

power capacity of more than 1,000 megawatts. In addition, Rudong 30 MW straw burning generating units, Rugao Municipal Solid Waste Incineration 24 MW generating units have been put into production^[1].

Trends.Nantong new energy power generation smart equipment manufacturing industry is very good, in 2008 the larger enterprises to achieve sales income of about 44600000000 yuan, an increase of about 44%, the main performance of the industrial development of the following two characteristics:

I.Leading Enterprise Effect Highlights:emerged Hanwha SolarOne (Qidong) Co., Ltd., a number of leading enterprises, wind power, solar power and other new energy equipment more complete, Jiangsu Province to encourage the extension of photo-voltaic industry chain and in Nantong build solar cell production and the application of industrial cluster.

II.Part of the Product in the Industry Leader: many new energy and energy equipment manufacturing enterprises in Nantong, technology, equipment and products in the industry in the whole of China in the leading level and the existing 5 provincial or more brands.

Favorable Conditions for the Development on Intelligent Equipment Manufacturing Industry concerning New energy Resources Power Generation

The world competing for the development of new energy sources, new energy power generation and its intelligent equipment manufacturing has entered a new stage of rapid development, the opportunities outweigh the challenges, the causes and reasons mainly the following three aspects:

Abundant New Energy Resources. Nantong city is one of the key planning areas of wind power development in China, the annual average wind speed of 70 meters is 8.6

M / s, with the construction of the "at sea Sanxia" natural endowments. Nantong more abundant sunshine resources, coastal tidal energy and biomass energy development and utilization value is also great, rich resources for the development of new energy power generation intelligent equipment manufacturing industry has created favorable conditions.

Unique Location Advantage. Global like Nantong city so at coastal economic zone has its unique geographical advantages, wind / PV is rich in resources, with construction of new energy power generation intelligent equipment manufacturing industry base of the unique advantages of the city are too numerous to mention.^[2]

Main Problems on Intelligent Equipment Manufacturing Industry about New Energy Resources Power Generation

Despite the new energy power generation intelligent equipment manufacturing industry, the development momentum is very good, but there are still some problems and bottlenecks:First,the new energy power generation intelligent equipment manufacturing industry is currently a higher cost.Second, the new energy power generation intelligent equipment manufacturing industry is weak.Third, the new energy power generation intelligent equipment manufacturing industry is not strong, the production scale of its facilities is still small, the industry chain is not perfect.

Countermeasure & Measures on the Development for Intelligent Equipment Manufacturing Industry about New Energy Resources Power Generation

Countermeasures. Suggestions of Nantong city around "to maintain growth, adjusting structure, promoting transformation of important national policy guidelines, seize the national, provincial and City revitalization of Nantong new energy power generation intelligent equipment manufacturing opportunities, insist on improving the capability of independent innovation and the digestive absorption of the combination of the advanced technology at home and abroad; adhere to the development and expansion of the scale enterprises and formation characteristics of the industrial chain / product group combination, focusing on the development of Nantong new energy power generation intelligent equipment manufacturing industry, the full realization of industrial transformation and upgrading. In addition, the focus of Nantong city to build the following three bases is the most important.^[3]

I.Elaborate Build a National class Demonstration Base on the New Energy Resources Power Generation.Accelerate the construction of solar photovoltaic power generation demonstration projects, and strive to build a national demonstration of new energy resources base.

II.Elaborate Build the Energy Base in the "Chang-San- Jiao". Comprehensive efforts to build a new energy resources base in the "Chang-San- Jiao".

III.Elaborate Construction on New Energy Equipment Manufacturing Industry Base With International Advanced Level.Nantong to form a group with strong international competitiveness of new energy equipment specialized production enterprise, manufacturing technology and supporting capacity has reached the international advanced level and completed as soon as possible with international advanced level of a new generation of intelligent equipment manufacturing industry base. In the building of these three bases, as soon as possible in the "Chang-San- Jiao"to build the "at sea Sanxia".

Measures.I."Power Station Construction".Carefully planning new energy power generation intelligent equipment manufacturing development strategy, fully and rationally utilize the resources of the coastal beach, accelerate the construction of the tidal zone and offshore wind farm, and give full play to the advantages of offshore wind power.

II.Construction on Intelligent Equipment Manufacturing Industry for New Energy Resources Power Generation in Nantong.In terms of wind power equipment, Rudong, Qidong large-scale wind farm construction, focusing on the development of MW class capacity of double fed and direct drive wind turbine and its control facilities, etc.

Conclusions

In this paper,taking the manufacturing industry development of intelligent equipment of using new energy power generation in Nantong city of China as "a small background",the development of strategic emerging industry of "intelligent equipment manufacturing industry of using new energy power to generate electricity" has been carried on the careful study and this paper put forward what the author has seen (namely three ideas: firstly, manufacturing industry of intelligent equipment of the new energy power generation is the strategic emerging industries,which thus should be settled in

the leading position to research and develop; secondly, establishing “three gorges on the sea” and establishing “the three gorges project on the land” are equally important, therefore, we should focus on the construction of “the three gorges on the sea”; thirdly, in order to establish demonstration base of new energy equipment manufacturing industry with international advanced level, so we should put special emphasis on advancements of this base), which also provides practical results for readers to do deeply research and investigation.

References

- [1] Zhongnian LI, Lei ZHOU. Research & Development on the MPPT Intelligent Control Device for WPVC Power Generation System. *Advances in Engineering Research*, [J]. pp3-6, May. (2015).
- [2] Zhongnian LI, Lei ZHOU. Research on the fault diagnosis system for ICM. *Advances in Manufacturing science and engineering*, [J]. pp96-99 June, (2013).
- [3] Zhongnian LI. Research on Fault Diagnosis Method for ECS-CNCL Based on Rough Set. *Proc. of IEEE ICNC-FSKD '12*, [M] pp103-107, May, (2012).