

**Date and Time:** Tuesday, April 19, 2022 9:36:00 PM EDT

**Job Number:** 169320364

**Documents (100)**

1. [*Sinoma Wind Power Blade Submits Patent Application for Wind Power Blade*](https://advance.lexis.com/api/document?id=urn:contentItem:6580-47S1-JBHT-D3H1-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| **Content Type** | **Narrowed by** |
| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

2. [*Shanghai Electric Wind Power Group Applies for Patent on Laying Method of Wind Power Blade Bearing Structure*](https://advance.lexis.com/api/document?id=urn:contentItem:656G-9YG1-DY0W-43JY-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

3. [*Automatic Generation Control for Wind Power*](https://advance.lexis.com/api/document?id=urn:contentItem:6545-BJS1-F00C-64N8-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

4. [*Attend the Best Wind Power Online Workshop*](https://advance.lexis.com/api/document?id=urn:contentItem:652D-18J1-DY6B-21G7-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

5. [*Britain generating more wind power than ever*](https://advance.lexis.com/api/document?id=urn:contentItem:6573-JJF1-JDJN-642S-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| **Content Type** | **Narrowed by** |
| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

6. [*INTERNATIONAL PATENT: TANIIKE SHIGERU FILES APPLICATION FOR "WIND POWER MOTOR AND WIND POWER GENERATION DEVICE"*](https://advance.lexis.com/api/document?id=urn:contentItem:652K-HP11-F12F-F1YB-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

7. [*Horizonte Onshore Wind Power Project*](https://advance.lexis.com/api/document?id=urn:contentItem:651K-T3S1-JDJN-62HW-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| **Content Type** | **Narrowed by** |
| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

8. [*Zhong Neng Offshore Wind Power Project*](https://advance.lexis.com/api/document?id=urn:contentItem:6574-KTC1-JDJN-64N6-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

9. [*Wind Power Trifecta*](https://advance.lexis.com/api/document?id=urn:contentItem:655X-78M1-F03R-N02V-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

10. [*INTERNATIONAL PATENT: BEIJING GOLDWIND SCIENCE & CREATION WINDPOWER EQUIPMENT CO., LTD. FILES APPLICATION FOR "WIND POWER GENERATING SET SAFETY CHAIN SYSTEM, MONITORING METHOD, VARIABLE PITCH CONTROLLER AND WIND POWER GENERATING SET"*](https://advance.lexis.com/api/document?id=urn:contentItem:656N-MK71-JDKC-R00B-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

11. [*Surging offshore wind power boosts China's green development*](https://advance.lexis.com/api/document?id=urn:contentItem:654M-YHK1-JC5R-2170-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

12. [*Attend the Best Wind Power Online Workshop*](https://advance.lexis.com/api/document?id=urn:contentItem:652C-W6H1-JCSC-33T6-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

13. [*Attend the Best Wind Power Online Workshop*](https://advance.lexis.com/api/document?id=urn:contentItem:652N-NBP1-JDKC-R143-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

14. [*Favourable breezes boost Spain 's wind power sector*](https://advance.lexis.com/api/document?id=urn:contentItem:6567-BV51-JBV1-X343-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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15. [*Outokumpu Oyj Increases Wind Power*](https://advance.lexis.com/api/document?id=urn:contentItem:64SS-RBV1-F11P-X021-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

16. [*Marcos sees PH as producer of wind power*](https://advance.lexis.com/api/document?id=urn:contentItem:655T-9S31-JCSF-S2MC-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

17. [*Ministries reach agreement on wind power expansion in Germany*](https://advance.lexis.com/api/document?id=urn:contentItem:654B-TH71-JB0G-F1YP-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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18. [*Marcos highlights PH's wind power potential*](https://advance.lexis.com/api/document?id=urn:contentItem:655N-3CM1-JDJN-620V-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

19. [*State Intellectual Property Office of China Releases Sany Heavy Ind's Patent Application for Damping Structure for Wind Power Tower and Wind Power Tower*](https://advance.lexis.com/api/document?id=urn:contentItem:656P-9SG1-JBHT-D0X3-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

20. [*USAID helping Uzbekistan with profitable wind power projects*](https://advance.lexis.com/api/document?id=urn:contentItem:6580-N6Y1-DY3K-T03R-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

21. [*USAID helping Uzbekistan with profitable wind power projects*](https://advance.lexis.com/api/document?id=urn:contentItem:6580-XJ21-JBMJ-31T8-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| **Content Type** | **Narrowed by** |
| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

22. [*Boris Johnson plays down onshore wind power*](https://advance.lexis.com/api/document?id=urn:contentItem:6540-6D11-JBNF-W31D-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| **Content Type** | **Narrowed by** |
| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

23. [*USAID helping Uzbekistan with profitable wind power projects*](https://advance.lexis.com/api/document?id=urn:contentItem:6580-XJ21-JBMJ-31KK-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| **Content Type** | **Narrowed by** |
| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

24. [*USAID helping Uzbekistan with profitable wind power projects*](https://advance.lexis.com/api/document?id=urn:contentItem:6580-N6Y1-DY3K-T0HP-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| **Content Type** | **Narrowed by** |
| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

25. [*Sany Heavy Ind Submits Chinese Patent Application for Wind Power Variable-Pitch Overspeed Protection Method and Device and Wind Power Variable-Pitch System*](https://advance.lexis.com/api/document?id=urn:contentItem:6556-H1S1-JBHT-D4XR-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| **Content Type** | **Narrowed by** |
| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

26. [*China Focus: Surging offshore wind power boosts China's green development*](https://advance.lexis.com/api/document?id=urn:contentItem:654J-FNW1-JBTY-T1H5-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| **Content Type** | **Narrowed by** |
| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

27. [*China Focus: Surging offshore wind power boosts China's green development*](https://advance.lexis.com/api/document?id=urn:contentItem:654J-20Y1-DY91-H24S-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

28. [*INTERNATIONAL PATENT: FUDO GIKEN INDUSTRY CO.,LTD. FILES APPLICATION FOR "ABNORMALITY DETERMINATION METHOD FOR WIND POWER GENERATION DEVICE. ABNORMALITY DETERMINATION SYSTEM FOR WIND POWER GENERATION DEVICE AND ABNORMALITY DETERMINATION PROGRAM FOR WIND POWER GENERATION DEVICE"*](https://advance.lexis.com/api/document?id=urn:contentItem:652M-BMK1-F12F-F13K-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| **Content Type** | **Narrowed by** |
| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

29. [*Solar vs wind power: The ultimate showdown*](https://advance.lexis.com/api/document?id=urn:contentItem:652D-WDX1-F0YC-N38M-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

30. [*Australian Daily Wind Power Generation Data - Monday 18 April 2022*](https://advance.lexis.com/api/document?id=urn:contentItem:6586-GN61-JCMN-Y54X-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| **Content Type** | **Narrowed by** |
| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

31. [*Australian Daily Wind Power Generation Data - Thursday 14 April 2022*](https://advance.lexis.com/api/document?id=urn:contentItem:657B-KT31-JCMN-Y0WP-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| **Content Type** | **Narrowed by** |
| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

32. [*Marcos highlights PH's wind power potential.(National)*](https://advance.lexis.com/api/document?id=urn:contentItem:6562-VPH1-DYTM-94S1-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| **Content Type** | **Narrowed by** |
| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

33. [*State Intellectual Property Office of China Publishes Jiangsu Gaochuang Wind Power Equipment's Patent Application for Wind Power Generation Cooling Equipment*](https://advance.lexis.com/api/document?id=urn:contentItem:6580-47S1-JBHT-D40B-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| **Content Type** | **Narrowed by** |
| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

34. [*Huadian Fujian Wind Power Submits Patent Application for Distributed Wind Power Generation Cluster Control Method*](https://advance.lexis.com/api/document?id=urn:contentItem:64WR-PDB1-JBHT-D3CY-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

35. [*Australian Daily Wind Power Generation Data - Saturday 16 April 2022*](https://advance.lexis.com/api/document?id=urn:contentItem:657T-X6S1-F03R-N2SM-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| **Content Type** | **Narrowed by** |
| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

36. [*Explained - The UK's new wind power strategy*](https://advance.lexis.com/api/document?id=urn:contentItem:655X-78V1-F03R-N0B4-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| **Content Type** | **Narrowed by** |
| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

37. [*Australian Daily Wind Power Generation Data - Tuesday 12 April 2022*](https://advance.lexis.com/api/document?id=urn:contentItem:656X-NYP1-JCMN-Y0XC-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| **Content Type** | **Narrowed by** |
| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

38. [*Berlin resolves biodiversity issue to allow expansion of wind power*](https://advance.lexis.com/api/document?id=urn:contentItem:6551-RPY1-JB0G-F1F2-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| **Content Type** | **Narrowed by** |
| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

39. [*Wind Power Now Accounts For 8% Of Global Generation*](https://advance.lexis.com/api/document?id=urn:contentItem:6586-JPJ1-DXMP-K0XK-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| **Content Type** | **Narrowed by** |
| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

40. [*Georgia to begin industrial production of wind power plants*](https://advance.lexis.com/api/document?id=urn:contentItem:652M-V3S1-JCK3-M0J1-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

41. [*Australian Daily Wind Power Generation Data - Wednesday 13 April 2022*](https://advance.lexis.com/api/document?id=urn:contentItem:6574-MFW1-F03R-N3WX-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| **Content Type** | **Narrowed by** |
| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

42. [*Berlin resolves biodiversity issue to allow expansion of wind power*](https://advance.lexis.com/api/document?id=urn:contentItem:6552-MSW1-J9XT-N2WS-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| **Content Type** | **Narrowed by** |
| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

43. [*Zhuzhou Times New Mat Tech Submits Patent Application for Wind Power Blade Lightning Protection System and Lightning Protection Wind Power Blade*](https://advance.lexis.com/api/document?id=urn:contentItem:6503-C6F1-JBHT-D0KM-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| **Content Type** | **Narrowed by** |
| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

44. [*XCMG's XGC15000A Sets New Wind Power Hoisting Record*](https://advance.lexis.com/api/document?id=urn:contentItem:6521-8XP1-JB5M-W3F2-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

45. [*Favourable breezes boost Spain 's wind power sector*](https://advance.lexis.com/api/document?id=urn:contentItem:6568-VXR1-JCMN-Y12K-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

46. [*Ministries reach agreement on wind power expansion in Germany*](https://advance.lexis.com/api/document?id=urn:contentItem:654D-R771-J9XT-N1CS-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| **Content Type** | **Narrowed by** |
| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

47. [*Australian Daily Wind Power Generation Data - Saturday 9 April 2022*](https://advance.lexis.com/api/document?id=urn:contentItem:6568-VXN1-JCMN-Y43K-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

48. [*Global and China Wind Power Industry Report 2021*](https://advance.lexis.com/api/document?id=urn:contentItem:64PD-XH61-DY6B-246J-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

49. [*Wind Power Passes Coal And Nuclear As Power Generation Source In US*](https://advance.lexis.com/api/document?id=urn:contentItem:6587-CRP1-F11P-X45S-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

50. [*Australian Daily Wind Power Generation Data - Monday 11 April 2022*](https://advance.lexis.com/api/document?id=urn:contentItem:656P-R111-F03R-N2CH-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

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| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

51. [*Global and China Wind Power Industry Report 2021*](https://advance.lexis.com/api/document?id=urn:contentItem:64PN-1CD1-F11P-X0VH-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

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| **Content Type** | **Narrowed by** |
| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

52. [*Uzbekistan plans to put into operation new wind power plant*](https://advance.lexis.com/api/document?id=urn:contentItem:655V-74N1-DY3K-T1J5-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

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| **Content Type** | **Narrowed by** |
| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

53. [*Australian Daily Wind Power Generation Data - Friday 8 April 2022*](https://advance.lexis.com/api/document?id=urn:contentItem:6564-4MP1-JCMN-Y3HN-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

54. [*Australian Daily Wind Power Generation Data - Wednesday 6 April 2022*](https://advance.lexis.com/api/document?id=urn:contentItem:655P-9NB1-JCMN-Y3HW-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

55. [*Uzbekistan plans to put into operation new wind power plant*](https://advance.lexis.com/api/document?id=urn:contentItem:655W-KVT1-JCH9-G2V6-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

56. [*Uzbekistan plans to put into operation new wind power plant*](https://advance.lexis.com/api/document?id=urn:contentItem:656G-9YV1-DY0W-41SV-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

57. [*Uzbekistan plans to put into operation new wind power plant*](https://advance.lexis.com/api/document?id=urn:contentItem:655V-74N1-DY3K-T1RD-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

58. [*Uzbekistan plans to put into operation new wind power plant*](https://advance.lexis.com/api/document?id=urn:contentItem:655T-YV21-JBMJ-31VP-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

59. [*European Patent Office awards patent to WOBBEN PROPERTIES GMBH for " METHOD FOR DESIGNING AND OPERATING A WIND POWER PLANT, WIND POWER PLANT, AND WIND FARM "*](https://advance.lexis.com/api/document?id=urn:contentItem:6544-FPB1-JDG9-Y2FP-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| **Content Type** | **Narrowed by** |
| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

60. [*Australian Daily Wind Power Generation Data - Thursday 7 April 2022*](https://advance.lexis.com/api/document?id=urn:contentItem:655X-78V1-F03R-N0BN-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| **Content Type** | **Narrowed by** |
| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

61. [*Georgia , Turkey discuss wind power plant construction*](https://advance.lexis.com/api/document?id=urn:contentItem:64WS-GD81-JBMJ-33PJ-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| **Content Type** | **Narrowed by** |
| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

62. [*Wobben Properties Submits Patent Application for Rotor Blade for a Wind Power Installation, Rotor for a Wind Power Installation, Structure and Wind Power Installation*](https://advance.lexis.com/api/document?id=urn:contentItem:64NJ-J071-JBHT-D28B-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| **Content Type** | **Narrowed by** |
| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

63. [*Uzbekistan plans to put into operation new wind power plant*](https://advance.lexis.com/api/document?id=urn:contentItem:655T-YV21-JBMJ-31FN-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| **Content Type** | **Narrowed by** |
| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

64. [*Uzbekistan plans to put into operation new wind power plant*](https://advance.lexis.com/api/document?id=urn:contentItem:655X-5H51-DY6B-2065-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| **Content Type** | **Narrowed by** |
| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

65. [*Global and China Wind Power Industry Report 2021*](https://advance.lexis.com/api/document?id=urn:contentItem:64PD-R681-JDPV-B00J-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| **Content Type** | **Narrowed by** |
| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

66. [*Georgia , Turkey discuss wind power plant construction*](https://advance.lexis.com/api/document?id=urn:contentItem:64WS-GCG1-JBMJ-30KJ-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| **Content Type** | **Narrowed by** |
| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

67. [*Berlin resolves biodiversity issue to allow expansion of wind power*](https://advance.lexis.com/api/document?id=urn:contentItem:6552-MSW1-J9XT-N2VT-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| **Content Type** | **Narrowed by** |
| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

68. [*Norway : Major initiative to promote offshore wind power*](https://advance.lexis.com/api/document?id=urn:contentItem:64TK-9761-F11P-X06Y-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

69. [*Berlin resolves biodiversity issue to allow expansion of wind power*](https://advance.lexis.com/api/document?id=urn:contentItem:6551-NF01-DXFJ-542S-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

**Narrowed by:**

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| **Content Type** | **Narrowed by** |
| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

70. [*Favourable Breezes Boost Spain 's Wind Power Sector*](https://advance.lexis.com/api/document?id=urn:contentItem:6568-VXR1-JCMN-Y14D-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

**Narrowed by:**

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| **Content Type** | **Narrowed by** |
| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

71. [*Berlin resolves biodiversity issue to allow expansion of wind power*](https://advance.lexis.com/api/document?id=urn:contentItem:6552-MSW1-J9XT-N2W0-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

**Narrowed by:**

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| **Content Type** | **Narrowed by** |
| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

72. [*Australian Daily Wind Power Generation Data - Monday 4 April 2022*](https://advance.lexis.com/api/document?id=urn:contentItem:6556-XJ61-F03R-N159-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

**Narrowed by:**

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| **Content Type** | **Narrowed by** |
| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

73. [*Australian Daily Wind Power Generation Data - Sunday 17 April 2022 - Plus Weekly Update*](https://advance.lexis.com/api/document?id=urn:contentItem:6580-H1Y1-F03R-N121-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| **Content Type** | **Narrowed by** |
| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

74. [*Australian Daily Wind Power Generation Data - Saturday 2 April 2022*](https://advance.lexis.com/api/document?id=urn:contentItem:654T-2GC1-F03R-N02H-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

**Narrowed by:**

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| **Content Type** | **Narrowed by** |
| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

75. [*Australian Daily Wind Power Generation Data - Monday 21 March 2022*](https://advance.lexis.com/api/document?id=urn:contentItem:6527-9P51-JCMN-Y4NX-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| **Content Type** | **Narrowed by** |
| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

76. [*Wobben Properties Files United States Patent Application for Rotor Blade for a Wind Power Installation, Wind Power Installation and Method for Designing a Rotor Blade*](https://advance.lexis.com/api/document?id=urn:contentItem:6580-47W1-JBHT-D3GG-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| **Content Type** | **Narrowed by** |
| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

77. [*Uzbekistan plans to put into operation new wind power plant*](https://advance.lexis.com/api/document?id=urn:contentItem:6544-BYF1-JBMJ-34BN-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| **Content Type** | **Narrowed by** |
| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

78. [*Australian Daily Wind Power Generation Data - Wednesday 30 March 2022*](https://advance.lexis.com/api/document?id=urn:contentItem:6545-2551-F03R-N3YT-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| **Content Type** | **Narrowed by** |
| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

79. [*Australian Daily Wind Power Generation Data - Monday 28 March 2022*](https://advance.lexis.com/api/document?id=urn:contentItem:653S-GBD1-F03R-N0P3-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| **Content Type** | **Narrowed by** |
| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

80. [*Australian Daily Wind Power Generation Data - Friday 1 April 2022*](https://advance.lexis.com/api/document?id=urn:contentItem:654K-02P1-JCMN-Y06W-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| **Content Type** | **Narrowed by** |
| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

81. [*Australian Daily Wind Power Generation Data - Thursday 31 March 2022*](https://advance.lexis.com/api/document?id=urn:contentItem:654C-1GV1-F03R-N2FN-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| **Content Type** | **Narrowed by** |
| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

82. [*Japan : Toshiba to Win Turbine Supply Contract for Onshore Wind Power in Abukuma, Fukushima*](https://advance.lexis.com/api/document?id=urn:contentItem:657S-N351-F11P-X369-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| **Content Type** | **Narrowed by** |
| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

83. [*Uzbekistan plans to put into operation new wind power plant*](https://advance.lexis.com/api/document?id=urn:contentItem:6544-FR21-DY3K-T3RR-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

84. [*China's Goldwind Gains on USD2.9 Billion Plan for Wind Power Industrial Hub*](https://advance.lexis.com/api/document?id=urn:contentItem:657B-VJ01-JDJN-64K7-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

85. [*CECEP Wind-Power (601016: CNY4.36) in 4th consecutive rise*](https://advance.lexis.com/api/document?id=urn:contentItem:6586-3H31-DXKH-N4Y2-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

86. [*Uzbekistan plans to put into operation new wind power plant*](https://advance.lexis.com/api/document?id=urn:contentItem:6544-FR21-DY3K-T3HK-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| **Content Type** | **Narrowed by** |
| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

87. [*INTERNATIONAL PATENT: LUO, LAIHUAN FILES APPLICATION FOR "WIND POWER GENERATION DEVICE"*](https://advance.lexis.com/api/document?id=urn:contentItem:64Y6-B0G1-JDKC-R3XW-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| **Content Type** | **Narrowed by** |
| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

88. [*Australian Daily Wind Power Generation Data - Saturday 26 March 2022*](https://advance.lexis.com/api/document?id=urn:contentItem:653B-GF71-F03R-N0P6-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

89. [*New Joint Venture for floating wind power development in Greece*](https://advance.lexis.com/api/document?id=urn:contentItem:656R-KBV1-JDJN-604Y-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| **Content Type** | **Narrowed by** |
| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

90. [*Australian Daily Wind Power Generation Data - Friday 25 March 2022*](https://advance.lexis.com/api/document?id=urn:contentItem:6534-HK71-JCMN-Y406-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

91. [*Economic news: New use for vacant wind power plant near port*](https://advance.lexis.com/api/document?id=urn:contentItem:6581-VTR1-JCMN-Y4MC-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| **Content Type** | **Narrowed by** |
| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

92. [*Asia-Pacific Wind Power Market Assessment & Opportunity Forecast 2022-2031*](https://advance.lexis.com/api/document?id=urn:contentItem:6510-1CV1-DY6B-219Y-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| **Content Type** | **Narrowed by** |
| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

93. [*Meng Nani Applies for Patent on Fan Blade Rotating Device for Wind Power Generation*](https://advance.lexis.com/api/document?id=urn:contentItem:6580-47S1-JBHT-D44R-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| **Content Type** | **Narrowed by** |
| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

94. [*Australian Daily Wind Power Generation Data - Wednesday 23 March 2022*](https://advance.lexis.com/api/document?id=urn:contentItem:652N-7M21-JCMN-Y4M6-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

95. [*Japan : Toshiba to Win Turbine Supply Contract for Onshore Wind Power in Abukuma, Fukushima*](https://advance.lexis.com/api/document?id=urn:contentItem:657S-N591-JDJN-63DS-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| **Content Type** | **Narrowed by** |
| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

96. [*Cost of offshore wind power continues to fall*](https://advance.lexis.com/api/document?id=urn:contentItem:64T1-8FR1-JCF4-642V-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| **Content Type** | **Narrowed by** |
| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

97. [*Poland to ease rules for onshore wind power development*](https://advance.lexis.com/api/document?id=urn:contentItem:656X-36S1-F15C-G4T6-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| **Content Type** | **Narrowed by** |
| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

98. [*Australian Daily Wind Power Generation Data - Thursday 24 March 2022*](https://advance.lexis.com/api/document?id=urn:contentItem:652W-78D1-F03R-N2CG-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| **Content Type** | **Narrowed by** |
| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

99. [*Global Wind Power Industry Report 2021 with Focus on China - The Largest Region in the World in Cumulative Installed Wind Power Capacity'*](https://advance.lexis.com/api/document?id=urn:contentItem:64NT-4F61-DY6B-24F0-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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| **Content Type** | **Narrowed by** |
| News | Timeline: Jan 01, 2010 to Dec 31, 2022 |

100. [*INTERNATIONAL PATENT: SHANGHAI ELECTRIC WIND POWER GROUP CO., LTD. FILES APPLICATION FOR "WIND POWER GENERATION SYSTEM AND CONTROL METHOD AND DEVICE THEREFOR"*](https://advance.lexis.com/api/document?id=urn:contentItem:6510-PVC1-F12F-F2C6-00000-00&idtype=PID&context=1516831)

**Client/Matter:** -None-

**Search Terms:** wind power

**Search Type:** Natural Language

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[***Sinoma Wind Power Blade Submits Patent Application for Wind Power Blade***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:6580-47S1-JBHT-D3H1-00000-00&context=1516831)

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April 16, 2022 Saturday

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**FULL TEXT**

Publication Name: Energy Patent NewsPatent Application Number: CN202110322278 20210325Patent Publication Number: CN112796935 (A)International Patent Classification Codes: F03D1/06, F03D80/00, F03D80/30Cooperative Patent Classification Codes: F03D1/0675 (CN), F03D80/00 (CN), F03D80/30 (CN), Y02E10/72 (EP)Patent Status: Application

Beijing, April 16 -- Sinoma ***Wind Power*** Blade has submitted a patent application for ***wind power*** blade. Li Chengliang, Fang Zhiyang, Li Guoyong and Zhou Nina developed the invention.

The patent application number is CN202110322278 20210325. The patent publication number is CN112796935 (A). International Patent Classification codes are F03D1/06, F03D80/00 and F03D80/30. Cooperative Patent Classification codes are F03D1/0675 (CN), F03D80/00 (CN), F03D80/30 (CN) and Y02E10/72 (EP).

State Intellectual Property Office of China has released the abstract. According to the abstract, "The invention discloses a ***wind power*** blade which comprises a blade body, a first main beam, a lightning protection layer, a paint layer, a blade tip lightning arrester and a second main beam, and the blade body is provided with a blade tip, a blade body and a blade root arranged in sequence. Carbon fiber main beams are arranged in the blade body and the blade root, the second main beam is at least arranged on the blade body, is made of non-conductive fiber materials and does not participate in reception of electricity of lightning stroke, and when the ***wind power*** blade rotates, the ***wind power*** blade can bear larger torque, and the blade tip area cannot be broken off; the carbon fiber main beam is not arranged in the blade tip area, the lightning protection layer is not arranged in the blade tip area, and the paint layer is not arranged on the outer wall surface of the blade tip area, when lightning stroke happens, the blade tip lightning arrester receives the electricity of the lightning stroke and transmits the electricity to the lightning protection layer, and then the lightning protection layer transmits the electricity to the outside ground to form a lightning protection circuit. In the whole lightning protection process, the phenomenon that the conventional paint layer falls on the outer wall surface of the blade tip is avoided, the blade tip area is protected, the service lifetime of the ***wind power*** blade is prolonged, the maintenance period is prolonged, and the maintenance cost is reduced."

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**Load-Date:** April 18, 2022

**End of Document**



[***Shanghai Electric Wind Power Group Applies for Patent on Laying Method of Wind Power Blade Bearing Structure***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:656G-9YG1-DY0W-43JY-00000-00&context=1516831)

Global IP News. Energy Patent News

April 9, 2022 Saturday

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**Length:** 353 words

**Dateline:** New Delhi

**Body**

**FULL TEXT**

Publication Name: Energy Patent NewsPatent Application Number: CN202110163834 20210205Patent Publication Number: CN112776369 (A)International Patent Classification Codes: B29C70/30, B29L31/08Cooperative Patent Classification Codes: B29C70/30 (CN), B29L2031/085 (CN)Patent Status: Application

Beijing, April 9 -- Shanghai Electric ***Wind Power*** Group has applied for Chinese patent for laying method of ***wind power*** blade bearing structure. Zhang Zhenguo and Xu Yiqing developed it.

The patent application number is CN202110163834 20210205. The patent publication number is CN112776369 (A). International Patent Classification codes are B29C70/30 and B29L31/08. Cooperative Patent Classification codes are B29C70/30 (CN) and B29L2031/085 (CN).

The abstract of the patent published by the State Intellectual Property Office of China states: "The embodiment of the invention provides a laying method of a ***wind power*** blade bearing structure. The laying method comprises the following steps that a bearing structure stacking platform is provided; pultrusion plates are stacked on the bearing structure stacking platform to form the ***wind power*** blade bearing structure; a plurality of first tools are installed on the ***wind power*** blade bearing structure in the length direction of a blade; a hoisting tool for integrally hoisting the ***wind power*** blade bearing structure is provided; the heights of a plurality of lifting ropes on the hoisting tool are adjusted according to the laying posture of the ***wind power*** blade bearing structure in a blade shell mold, so that the ***wind power*** blade bearing structure keeps the laying posture; a plurality of second mounting structures on the hoisting tool are correspondingly connected with the first mounting structures on the plurality of first tools; and a lifting tool is used for lifting the hoisting tool so that the ***wind power*** blade bearing structure fixedly provided with the first tools can be integrally hoisted into the blade shell mold. And therefore, the ***wind power*** blade bearing structure and the blade shell mold have good laying performance."

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**Load-Date:** April 11, 2022

**End of Document**



[***Automatic Generation Control for Wind Power***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:6545-BJS1-F00C-64N8-00000-00&context=1516831)

Energy Update

March 31, 2022 Thursday

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**Section:** Vol. 5; No. 178

**Length:** 926 words

**Body**

Scientists from Pakistan and Saudi Arabia have proposed real-time dispatch strategies for automatic generation control for the optimization of ***wind power*** and energy storage in electric vehicles. In the study, the performance of the strategies has been assessed and discussed in detail. The research has been published online in the journal

Renewable energy has evolved at a breakneck rate over the past few decades. ***Wind power*** especially has seen massive growth in both technological sophistication and installation worldwide over the course of the past decade. The global share of ***wind power*** in the energy mix is growing yearly. A significant number of ***wind*** turbines are directly connected to energy grids.

However, despite ***wind*** being an abundant and limitless energy resource, there are some challenges with ***wind power***. ***Power*** generation relies primarily on ***wind*** speed, which cannot be accurately predicted. The possibility of energy gaps due to uncertain ***wind*** speeds is an ever-present problem with ***wind power***. Deviations between ***power*** generation and ***power*** exchanges from expected values can occur.

To overcome these issues, various scheduling approaches are employed by system operators which balance ***power*** generation and load demand on a daily basis. Due to the inherent imbalances in ***wind power*** generation, operational reserves are often employed to provide ***power*** during time periods when energy generation is low. These reserves usually come from conventional ***power*** stations which exploit non-renewable fossil fuels.

Using carbon dioxide-emitting conventional ***power*** plants to fill the energy gap in renewables obviously presents a conundrum: if fossil fuels are still being used to provide crucial ***power*** needs, however small their use may be, how can we achieve true net-zero carbon emissions? Clearly, strategies must be developed which optimize renewable ***power*** generation and energy storage to fully exploit the potential of the sector.

Providing active-balancing ***power*** generation operations for ***wind power*** that work like conventional ***power*** plants is a crucial element of improving ***wind power*** and reducing reliance on fossil fuels. Enhanced coordinating control strategies are needed to optimize ***wind*** energy capacity for regulatory purposes. Implementing these strategies can reduce both carbon emissions and operational costs, improving the reliability and secure operation of ***wind power***.

Studies over the past decade have focused on different strategies to achieve this, both in academia and industry. Ancillary services for ***wind power*** plants have been widely investigated and proposed. Studies have demonstrated the economic advantages of ***wind power*** for the worldwide energy mix, despite its minimum performance score. This score can be improved if sufficient ***wind power*** is available and systems are developed which help ***wind*** turbines accurately and rapidly track the ***power*** command signal from the automatic generation control.

Furthermore, the effectiveness of ***wind power*** resources can be maximized by improving the flexibility of loads, to help them actively participate in load generation on a need-by-need basis. Technologies such as electric vehicles, cold storage units, and heat pumps can act as flexible loads, contributing actively to ancillary services in ***power*** grids.

The study in Energies has investigated the optimization of ***wind power*** generation and the use of electric vehicles as flexible load systems for energy storage to support future energy grids with massive ***wind power*** integration.

The study has provided a comprehensive review of current literature in the area. Whilst there has been significant progress in the area of integrating ***wind power*** generation and electric vehicles to optimize performance and flexible load generation and energy storage, the authors have noted several bottlenecks in current technologies and research.

The research aims to create a simple, robust automatic generation control system, with integrated ***wind power*** generation and electric vehicle storage. In the proposed technological solution, a thermal generation system is used to enhance active ***power*** regulation. The research's proposed dispatch strategy in the automatic generation control system overcomes major challenges with developing an integrated ***wind power*** plant/electric vehicle ***power*** generation system.

The challenges overcome include ***power*** curtailment issues, dead bands, delays, economical operation of services, and environmental stresses. However, the study has not addressed issues such as voltage and reactive ***power*** control strategies, as it only emphasizes active ***power*** control strategies.

Three case studies have been analyzed and developed by the authors: Integrating the capacities of the thermal system into the automatic generation control system, studying integrated ***wind power*** plants and thermal systems, and finally, integrating electric vehicle storage with thermal systems in the automatic generation control system. Results of the study's analyses demonstrated that integrating ***wind power*** plants, electric vehicle battery storage, and thermal systems reduced both the ***power*** imbalance and costs of the proposed systems.

Future research directions identified by the authors include the integration of building loads along with electric vehicles which could further reduce conventional ***power*** needs, developing an AI-based automatic generation control system, and using the proposed system at a micro-grid level, which is more effective for systems with decreased inertia sue to large-scale renewable energy resource integration.

**Load-Date:** March 31, 2022

**End of Document**



[***Attend the Best Wind Power Online Workshop***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:652D-18J1-DY6B-21G7-00000-00&context=1516831)

MENAFN - Press Releases (English)

March 22, 2022 Tuesday

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**Length:** 573 words

**Body**

[*Link to Image*](https://menafn.com/updates/pr/2022-03/22/AN_8dcbeimage_story.jpg)

[*Link to Story*](https://menafn.com/1103895102/Attend-the-Best-Wind-Power-Online-Workshop)

Singapore, Mar 23, 2022 - (ACN Newswire) - Infocus International Group, a global business intelligence provider of strategic information and professional services, has announced the new dates for Mastering ***Wind Power*** training and it will be commencing live on the 7th of June 2022. A comprehensive, up-to-date and business-focused roadmap to success in delivering ***wind power*** growth, today and tomorrow.

Attendees will gain an excellent understanding of all the key factors facing ***wind power*** developers and investors, from resource assessment and energy production complexities, through technology trends, project development and planning challenges, to financial returns and risks.

The course will include the illustration of key concepts using online tools, ***wind*** resource datasets, energy yield, financial and other simple calculations, along with discussion of key planning and market environment considerations.

In keeping with the business-focused theme of the course, any illustrative materials are designed to provide time-efficient clarification of the key course takeaways, aimed at commercially-focused business developers and investors. They are therefore accessible to non-experts, not designed to replicate the complex or in-depth detailed planning undertaken - over much longer periods! - by experienced engineers and technical teams.

Past participant from Statkraft Development AS shared, 'This was one of my best spent weeks on training all year! A good and efficient way of getting an overview of the renewable energy sector. I found him very knowledgeable and enthusiastic in presenting the material, also enabling knowledge exchange between participants in the group. I really enjoyed his interesting lessons and the group work he provided for additional learning outcomes. Thanks.'

Course Sessions

1. From ***wind*** flow to electricity: ***wind*** turbines and ***wind*** farms

2. Understanding and measuring ***wind*** resources

3. Successful delivery of ***wind power*** projects

4. Taking ***wind power*** offshore

5. Making money from ***wind power*** projects

Among the key points to be addressed

- Learn from global experiences in ***wind power*** project development

- Understand unique properties of ***wind*** resource, and how these feed into financial risk analysis

- Gain a business-focused, up-to-date perspective on current and emerging ***wind*** technology innovations and project delivery best practices

- Analyse and discuss practical and project delivery risks facing ***wind power*** projects, including key stakeholder engagements

- Get hands-on with a financial model to better understand financial risks and returns for ***wind power*** projects

- Compare and contrast the unique extra costs and complexities of offshore ***wind*** projects with those onshore

Want to learn more?

Simply email to or call +65 6325 0210 to obtain your FREE COPY of event brochure. For more information, please visit .

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MENAFN22032022002725003249ID1103895102

**Load-Date:** March 22, 2022

**End of Document**



[***Britain generating more wind power than ever***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:6573-JJF1-JDJN-642S-00000-00&context=1516831)

China Daily

April 14, 2022 Thursday

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**Length:** 476 words

**Byline:** China Daily Global

**Body**

China Daily Global | Updated: 2022-04-14 09:42

***Wind-powered*** turbines produced more electricity for the United Kingdom during the first three months of 2022 than in any previous quarter, according to research from market specialist EnAppSys.

The company, which provides energy information to traders, analysts, and other stakeholders, said the increased use of ***wind power*** was part of an overall growth of renewable energy seen in the UK, as the nation strives to reduce carbon emissions from fossil fuels.

EnAppSys said the UK is now generating almost as much electricity from ***wind power*** as it is from gas-fired ***power*** stations. And the renewable sector overall-which includes ***power*** generated from ***wind***, wave, biomass, and the sun-now produces more energy than gas-***powered*** and coal-***powered*** sources combined.

"More ***wind*** generation was seen this quarter than in any other quarter on record," Paul Verrill, director of EnAppSys, told The Telegraph newspaper. "Renewables exceeded aggregate fossil-fuel generation for a calendar quarter. This has only ever happened once before, in the first quarter of 2020."

However, while the shift toward renewable energy was doubtless good news for the planet in its fight against global warming, EnAppSys noted that the UK has been trying to reduce dependence on Russian fossil fuels as much as it has been trying to reduce carbon emissions, with the situation in Ukraine pushing up the already high cost of fossil fuels.

London unveiled its new plan for energy production last week, in which it said it wants to increase off shore ***wind-power*** capacity to 50 GW by 2030, and also increase its land-based ***wind power*** production.

In addition, the UK said it will use more ***power*** generated from the sun, hydrogen, and nuclear sources, as it edges toward its target of net-zero carbon emissions, which it has promised to achieve by 2050.

EnAppSys said ***wind power*** has, in recent years, been accounting for around 20 percent of the UK's total ***power*** needs. Gas-***powered*** electricity has been accounting for around 35 percent, and nuclear ***power*** has produced around 16 percent.

But the company said the 20 percent ***wind*** had been contributing was pushed up to 31 percent during the past three months, with huge new projects coming online.

And it said the UK has now got 25 gigawatts, or GW, of ***wind-power*** capacity installed on land and above its seas, where it only had around 5 GW in 2008.

Trade association Renewable UK estimated an additional 86 GW of ***wind power*** is already in the pipeline, in the form of projects that are at various stages of development.

CityAM newspaper said ***wind power***'s strong performance in the first quarter of 2022 followed a disappointing third quarter of 2021, during which ***wind***-speeds were at 40-year lows, and ***power*** production was correspondingly poor, highlighting one potential frailty of the burgeoning ***power*** source.

**Load-Date:** April 14, 2022

**End of Document**



[***INTERNATIONAL PATENT: TANIIKE SHIGERU FILES APPLICATION FOR "WIND POWER MOTOR AND WIND POWER GENERATION DEVICE"***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:652K-HP11-F12F-F1YB-00000-00&context=1516831)

US Fed News

March 23, 2022 Wednesday 3:25 AM EST

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**Length:** 326 words

**Dateline:** GENEVA

**Body**

GENEVA, March 23 -- TANIIKE Shigeru (764-3, Kishimiya, Kishigawa-cho, Kinokawa-shi, Wakayama6400405) filed a patent application (PCT/JP2020/034667) for "***WIND POWER*** MOTOR AND ***WIND POWER*** GENERATION DEVICE" on Sep 14, 2020. With publication no. WO/2022/054268, the details related to the patent application was published on Mar 17, 2022.

Notably, the patent application was submitted under the International Patent Classification (IPC) system, which is managed by the World Intellectual Property Organization (WIPO). Inventor(s): TANIIKE Shigeru (764-3, Kishimiya, Kishigawa-cho, Kinokawa-shi, Wakayama6400405) Abstract: The purpose of the present invention is to provide: a vertical shaft rotation-type ***wind power*** motor 2 that produces a comprehensively large rotary force per motor; and a ***wind power*** generation device 1 which uses the ***wind power*** motor 2 to generate a large amount of ***power***. The ***wind power*** motor 2 of the ***wind power*** generation device 1 is characterized by comprising a plurality of windmill units, each windmill unit comprising: a rotation shaft 5, 6 that rotates around a substantially vertical axis; and rotary blades 10 attached to the rotation shaft 5, 6. The ***wind power*** motor is also characterized in that: one of the windmill units is set as a central windmill unit M, and the remaining windmill units are set as auxiliary windmill units S1-S4 and arranged around the central windmill unit M; the rotation shaft 5 of the central windmill unit M is connected to the rotation shafts 6 of the auxiliary windmill units S1-S4 via a rotary ***power*** transmission mechanism 26; and the rotary blades 10 of the central windmill unit M are disposed at a higher position than the rotary blades 10 of the auxiliary windmill units S1-S4. For more information:[*https://patentscope.wipo.int/search/en/detail.jsf?docId=WO2022054268*](https://patentscope.wipo.int/search/en/detail.jsf?docId=WO2022054268) For any query with respect to this article or any other content requirement, please contact Editor at [*contentservices@htlive.com*](mailto:contentservices@htlive.com)

**Load-Date:** March 23, 2022

**End of Document**



[***Horizonte Onshore Wind Power Project***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:651K-T3S1-JDJN-62HW-00000-00&context=1516831)

Energy Monitor Worldwide

March 19, 2022 Saturday

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**Length:** 625 words

**Body**

The 778MW Horizonte ***wind power*** project, located in the Antofagasta region of Chile, is claimed to be the biggest onshore ***wind*** farm under construction in Latin America.

Chilean electric utility, Colbun, is developing the project with an estimated investment of 621m ($850m).

Construction works started in December 2021 and the ***wind*** farm is expected to commence operations in 2024. At full capacity, the Horizonte ***wind power*** project is estimated to generate about 2,400 gigawatt hours (GWh) of electricity a year, which will be sufficient to ***power*** more than 700,000 Chilean households.

The ***wind*** farm is expected to reduce up to 1.2 million tonnes (Mt) of carbon dioxide (CO2) emissions a year.

PROJECT GALLERY

Location and site details The Horizonte onshore ***wind power*** project is located 130km north-east of the Taltal municipality and 80km east of the Paposo town in the Antofagasta region of Chile.

The project is being developed on a 454ha-site that forms part of 8,000ha of government-owned land earmarked for renewable energy projects in Taltal.

Horizonte onshore ***wind power*** project background

The Ministry of National Assets (MBN) of Chile awarded Colbun a 30-year concession to develop, construct and operate the Horizonte onshore ***wind power*** facility in December 2017.

It contemplated the project development to take four years to complete environmental and feasibility studies and permits, and an additional three years for the ***wind*** farm construction.

The feasibility study to assess the ***wind*** resource, as well as the basic engineering and environmental studies for the project, were conducted in 2019.

The environmental impact assessment (EIA) for the Horizonte onshore ***wind power*** project was approved in August 2021.

Upon commissioning, the project is expected to increase the ***wind power*** generation capacity of the Antofagasta region by 70%.

Horizonte ***wind*** farm make-up

The 778MW onshore ***wind*** farm will be installed with 140 Enercon E-160 EP5 ***wind*** turbines, each of which will have a rated ***power*** output of 5.56MW.

Each gearless, variable speed ***wind*** turbine will feature a modular steel tower (MST) with hub height ranging from 90m to 110m, and a 160m-diameter rotor.

The ***power*** generated by the ***wind*** turbines will be gathered and transmitted through 48 medium-voltage inter-array cable circuits connecting two 220kV onsite substations.

The project also includes the construction of about 100km of internal roads and an operations building.

***Power*** evacuation

The electricity generated by the Horizonte onshore ***wind*** farm will be evacuated into the Chilean ***power*** grid through two 220kV transmission lines including a 9.7km and a 15.8km line.

***Power*** offtake

In October 2019, mining company BHP contracted Colbun to supply 3,000GWh of renewable electricity a year for its Escondida and Spence copper operations in Chile for a period of ten years starting from January 2022.

Contractors involved

Enercon, a ***wind*** turbine manufacturer based in Germany, was selected to supply its advanced EP5 platform ***wind*** turbines for the Horizonte onshore ***wind power*** project in December 2019.

Sigdo Koppers Engineering and Construction (SKIC) was contracted by Colbun for the balance of plant (BOP) construction works for the project in September 2021.

The contractual scope includes the engineering, procurement and construction (EPC) of the transmission infrastructure for the ***wind*** farm, including two new substations, expansion of an existing substation, two 220kV transmission lines, as well as the buried medium-voltage cable network to connect the ***wind*** turbines with the substations.

Madeco by Nexans was subcontracted by SKIC to supply 840km of electrical cables for the Horizonte ***wind power*** project in March 2022. The cables will be manufactured at the Nexans plants in Chile and Peru.

**Load-Date:** March 19, 2022

**End of Document**



[***Zhong Neng Offshore Wind Power Project***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:6574-KTC1-JDJN-64N6-00000-00&context=1516831)

Energy Monitor Worldwide

April 14, 2022 Thursday

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**Length:** 824 words

**Body**

The Zhong Neng offshore ***wind power*** project is currently under development in Taiwan, with an electricity generation capacity of 298MW.

China Steel ***Power***, a joint venture between China Steel Corporation (CSC) and Copenhagen Infrastructure IV (CI IV), a fund managed by the Copenhagen Infrastructure Partners (CIP), is developing the ***wind*** farm.

Taiwan-based CSC owns a 51% stake in the joint venture, while the remaining 49% stake is held by the CIP fund.

The final investment decision (FID) on the Zhong Neng ***wind power*** project was reached in December 2021. The Taiwanese government approved the local content plan for the project in November 2019.

PROJECT GALLERY

Construction on the offshore ***wind*** project is expected to commence in 2023 and the project will be built with an estimated total investment of approximately 1.32-1.45bn ($1.75-1.92bn).

The Zhong Neng offshore ***wind*** farm is anticipated to start commercial operations in 2025 and will be able to produce generate around 1.1 billion kilowatt-hours (kWh) of electricity, which will be sufficient to ***power*** approximately 300,000 Taiwanese households.

Location and site details

The Zhong Neng offshore ***wind power*** project will be located approximately 10-17km off the west coast of Changhua County, central Taiwan.

The project will be spread over 36.54km2 of area, adjacent to CIPs Changfang and Xidao offshore ***wind*** farm, and the water depth in the area ranges between 27m and 40m.

Zhong Neng offshore ***wind power*** project make-up

The Zhong Neng offshore ***wind*** farm development will feature 31 turbines supplied by Danish company Vestas, with a rated ***power*** of 9.5MW each.

With 85m-long blades, each turbine will have a 174m-rotor diameter and swept area of 23,779m2. The nacelle will be 21m-long, 9m-wide and 9m-high, weighing approximately 390 tonnes.

The other components of the project will include a submarine cable system and an onshore substation.

The submarine cable system will consist of 29 inner array grid cables and four 66kV landfall export cables, with a total length of approximately 196km.

Project financing

The Zhong Neng project developers entered into an agreement with a banking consortium to raise approximately 1.2bn ($1.6bn) financing in November 2021.

The consortium consisted of 20 banks including the Bank of Taiwan, Mega International Commercial Bank, CTBC Bank, Taiwan Cooperative Bank, First Commercial Bank and Land Bank of Taiwan.

The project will also be financed through an equity contribution from CI IV and CSC.

***Power*** purchase agreement

The Zhong Neng offshore ***wind power*** project developers signed a 20-year ***power*** purchase agreement (PPA) with the state-owned Taiwan ***Power*** Company (Taipower) in February 2019.

Contractors involved

CSBC-DEME ***Wind*** Engineering (CDWE), a joint venture between CSBC and DEME Offshore in Taiwan, was contracted for the transportation and installation of foundations for the Zhong Neng ***wind power*** project in November 2019.

CDWE had also entered into a Preferred Bidder Agreement (PBA) for the transportation and installation of ***wind*** turbines. The joint ventures heavy lift and installation vessel Green Jade, with a 4000-tonne capacity crane and DP3 capability, will be mobilised to execute the contract.

Vestas was awarded a contract to supply 31 V174-9.5MW ***wind*** turbines for the Zhong Neng project in March 2022. The contract also includes the provision of turbine services for a period of 15 years.

As part of the localisation policy, Vestas is also expected to procure 19 components from Taiwan-based companies. The turbine blades will be manufactured by Tien Li Offshore ***Wind*** Technologys facility in Taichung Harbour, Taiwan, while Walsin Lihwa and Boltun will supply cables and fasteners, respectively.

Seaway 7 was contracted by China Steel ***Power*** for the transportation of and installation of the submarine cable system of the Zhong Neng offshore ***wind power*** project in December 2021. The contract, worth up to 113.16m ($150m) and first announced in July 2020, also comprises submarine cable route surveys, post-lay trenching, termination, jointing and testing services.

CTCI Machinery (CTCI MAC), a subsidiary of CTCI, was selected by China Steel ***Power*** to supply approximately 100 pin piles for the ***wind*** turbines in July 2020. The pin piles will be manufactured at CTCI MACs Ta-Lin Shop in Nansing Free Trade Zone in Kaohsiung, southern Taiwan.

Sing Da Marine Structure (SDMS), a subsidiary of CSC, was contracted to supply 31 jacket substructures for the project.

Taiwan-based TECO was awarded the engineering, procurement and construction (EPC) contract for the onshore substation of the Zhong Neng offshore ***wind power*** project.

Ramboll was contracted by China Steel ***Power*** to deliver the full jacket foundation design for the offshore ***wind*** project in October 2020. The contract covers the conceptual, front-end engineering design (FEED), and detailed designs for the primary and secondary structure of the jacket foundations, piles, and transition pieces.

**Load-Date:** April 14, 2022

**End of Document**



[***Wind Power Trifecta***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:655X-78M1-F03R-N02V-00000-00&context=1516831)

Newstex Blogs

Moonbattery

April 8, 2022 Friday 3:35 PM EST

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**Length:** 898 words

**Byline:** Dave Blount

**Body**

Apr 08, 2022( Moonbattery: [*http://www.moonbattery.com*](http://www.moonbattery.com)/ Delivered by Newstex)

According to our moonbat rulers, we don't need the fossil fuels that keep the lights on and make everything go. Like a stoned hippy driving a VW bus with the window rolled down and the breeze flowing through his hair, they believe that all we need is the ***wind***. Back in the real world, it isn't that easy.

For example[1],

Raw material and logistics inflation coupled with downward price pressures from auctions have led to an unsustainable situation where ***wind*** [original equipment manufacturers] are selling at a loss, with the sector unable to deliver Europe's planned tripling of ***wind*** capacity by 2030, industry leaders have warned.

Inflation is out of control largely due to the war on fossil fuels, which has driven up the price of everything. Here, inflation bites the leftists who created it on the behind:

Steel for offshore ***wind*** towers is currently being purchased at over $2,000 per tonne, Hickok gave as example, adding that the prices of copper, carbon and logistics had also soared.

Even if ***wind power*** were economically feasible, there would be problems[2]:

Offshore ***wind*** developer Orsted is asking [relevant] authorities to establish 'no-sail zone' at some of its offshore ***wind*** farms after a catastrophic failure of an offshore ***wind*** turbine at a Danish offshore ***wind*** farm.

Orsted report Wednesday that a rotor and three blades separated from the nacelle of one of the offshore ***wind*** turbines at its 400 megawatt (MW) Anholt Offshore ***Wind*** Farm and fell into the sea. No injuries were reported from the accident. But as a precautionary measure, Orsted is requesting [authorities] establish temporary 'no-sail zones' at other ***wind*** farms using the same turbines as the one that failed.

See[3] what they want the sea to look like — in the name of the environment.

Speaking of the environment[4],

A subsidiary of one of the largest U.S. providers of renewable energy pleaded guilty to criminal charges and was ordered to pay over $8 million in fines and restitution after at least 150 eagles were killed at its ***wind*** farms in eight states, federal prosecutors said Wednesday.

NextEra Energy subsidiary ESI Energy was also sentenced to five years probation after being charged with three counts of violating the Migratory Bird Treaty Act

Almost all of the eagles killed at the NextEra subsidiary's facilities were struck by the blades of ***wind*** turbines, prosecutors said. Some turbines killed multiple eagles and because the carcasses are not always found, officials said the number killed was likely higher than the 150 birds cited in court documents.

That should read, 'likely many times higher.' It's not like the people running the turbines have a motive to report all the eagles they kill so that they can be punished.

The criminal case comes amid a push by President Joe Biden for more renewable energy from ***wind***, solar and other sources to help reduce climate changing emissions.

Isn't it just like Big Government to push you to do something stupid in the name of a deranged ideology, then haul you into court to pay for the consequences?

Authoritarians have been using climate change dogma as a pretext to erode our freedoms and destroy our way of life. The symbolism of their green energy mandates killing off our national symbol could not be more poignant.

Fossil fuels work. Nuclear energy works. ***Wind power*** does not work. That's why the government has to subsidize it and impose it to keep the industry even half alive.

On tips from Steve T and Chris Neilson.

The post ***Wind Power*** Trifecta[5] appeared first on Moonbattery[6].

[ 1]: [*https://www.rechargenews.com/****wind****/were-all-in-trouble-****wind****-turbine-makers-selling-at-a-loss-and-in-a-self-destructive-loop-bosses-admit/2-1-1197217*](https://www.rechargenews.com/wind/were-all-in-trouble-wind-turbine-makers-selling-at-a-loss-and-in-a-self-destructive-loop-bosses-admit/2-1-1197217) [ 2]: [*https://gcaptain.com/offshore-****wind****-accident-orsted-asks-for-no-sail-zones-after-turbine-breaks-into-sea*](https://gcaptain.com/offshore-wind-accident-orsted-asks-for-no-sail-zones-after-turbine-breaks-into-sea)/ [ 3]: [*https://gcaptain.com/wp-content/uploads/2022/04/Anholt\_Full\_Farm\_view.jpg*](https://gcaptain.com/wp-content/uploads/2022/04/Anholt_Full_Farm_view.jpg) [ 4]: [*https://abcnews.go.com/Technology/wireStory/****wind****-energy-company-kills-150-eagles-us-pleads-83916292*](https://abcnews.go.com/Technology/wireStory/wind-energy-company-kills-150-eagles-us-pleads-83916292) [ 5]: [*https://moonbattery.com/****wind-power****-trifecta*](https://moonbattery.com/wind-power-trifecta)/ [ 6]: [*https://moonbattery.com*](https://moonbattery.com)

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**Load-Date:** April 8, 2022

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[***INTERNATIONAL PATENT: BEIJING GOLDWIND SCIENCE & CREATION WINDPOWER EQUIPMENT CO., LTD. FILES APPLICATION FOR "WIND POWER GENERATING SET SAFETY CHAIN SYSTEM, MONITORING METHOD, VARIABLE PITCH CONTROLLER AND WIND POWER GENERATING SET"***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:656N-MK71-JDKC-R00B-00000-00&context=1516831)

US Fed News

April 12, 2022 Tuesday 3:19 AM EST

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**Length:** 421 words

**Dateline:** GENEVA

**Body**

GENEVA, April 12 -- BEIJING GOLDWIND SCIENCE & CREATION ***WINDPOWER*** EQUIPMENT CO., LTD. (No. 19, Kangding Road, Beijing Economic & Technological Development Zone, Daxing DistrictBeijing 100176) filed a patent application (PCT/CN2021/099132) for "***WIND POWER*** GENERATING SET SAFETY CHAIN SYSTEM, MONITORING METHOD, VARIABLE PITCH CONTROLLER AND ***WIND POWER*** GENERATING SET" on Jun 09, 2021. With publication no. WO/2022/068255, the details related to the patent application was published on Apr 07, 2022.

Notably, the patent application was submitted under the International Patent Classification (IPC) system, which is managed by the World Intellectual Property Organization (WIPO). Inventor(s): MA, Lei (No. 8, Boxing 1st Road, Beijing Economic & Technological Development Zone, Daxing DistrictBeijing 100176), WANG, Dawei (No. 8, Boxing 1st Road, Beijing Economic & Technological Development Zone, Daxing DistrictBeijing 100176), YAO, Xiaoli (No. 8, Boxing 1st Road, Beijing Economic & Technological Development Zone, Daxing DistrictBeijing 100176), ZHOU, Jie (No. 8, Boxing 1st Road, Beijing Economic & Technological Development Zone, Daxing DistrictBeijing 100176) Abstract: A ***wind power*** generating set safety chain system, a monitoring method, a variable pitch controller and a ***wind power*** generating set. The ***wind power*** generating set safety chain system comprises variable pitch cabinets (41) and a first safety chain (50). Each variable pitch cabinet (41) is internally provided with a variable pitch controller (42); the first safety chain (50) comprises first relays (51) corresponding to the variable pitch cabinets (41), each first relay (51) comprising a first coil (511) and a first contact (512), the first contact (512) being connected to the variable pitch controller (42); the variable pitch controller (42) obtains a first voltage signal of a ***power*** supply line of the first coil (511) by means of a first monitoring input port; and under the condition that the first voltage signal is a high-level signal, the ***wind power*** generating set continues operating for at least a period of time, thereby improving the accuracy of safety monitoring of a safety chain of the ***wind power*** generating set, and avoiding ***power*** generation loss caused by the shutdown of the ***wind power*** generating set due to misjudgment. For more information:[*https://patentscope.wipo.int/search/en/detail.jsf?docId=WO2022068255*](https://patentscope.wipo.int/search/en/detail.jsf?docId=WO2022068255) For any query with respect to this article or any other content requirement, please contact Editor at [*contentservices@htlive.com*](mailto:contentservices@htlive.com)

**Load-Date:** April 12, 2022

**End of Document**



[***Surging offshore wind power boosts China's green development***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:654M-YHK1-JC5R-2170-00000-00&context=1516831)

People's Daily Online - English

April 2, 2022 Saturday

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Copyright 2022 People's Daily

**Length:** 519 words

**Body**

GUANGZHOU, April 2 (Xinhua) -- After operating steadily for three months, an offshore ***wind*** farm in Shantou City, south China's Guangdong Province, generated over 100 million kilowatt-hours (kWh) of electricity by March 29, according to the developer Datang Shantou New Energy Co., Ltd.

The Shantou Datang Lemen I offshore ***wind power*** project, with 35 ***wind*** turbines, is located near the Lemen Islands in Nan'ao County. It is the first offshore ***wind power*** project in eastern Guangdong that has been put into operation.

The total installed capacity of the project is 245,000 kilowatts, which is expected to generate 751 million kWh of electricity annually. In lieu of the common coal-fired ***power*** plant, it can save 240,000 tonnes of standard coal and reduce 450,000 tonnes of carbon dioxide emissions every year.

China has announced its ambitious targets of peaking CO2 emissions before 2030 and achieving carbon neutrality before 2060. To reach the goal, relentless efforts are made to expand the clean energy industry and adopt renewable energy as a substitute, which creates a broad market for ***wind power***.

China's newly installed capacity of grid-connected ***wind power*** reached 47.57 million kilowatts in 2021, with offshore ***wind power*** accounting for over one-third. The installed ***wind power*** capacity of China has exceeded 300 million kilowatts, and its installed offshore ***wind power*** capacity now ranks first in the world, according to the National Energy Administration of China.

Chinese authorities have released a plan for developing a modern energy system during the 14th Five-Year Plan period (2021-2025), which stresses promoting ***wind power*** orderly in places with rich ***wind*** resources and good development conditions.

As an economic powerhouse, Guangdong Province plans to start the construction of offshore ***wind*** plants with a total installed capacity of 12 million kilowatts during this period, and put half of them into operation by the end of 2025.

Shantou City has established the Shantou Offshore ***Wind Power*** Industry Alliance, which groups 42 enterprises, including equipment suppliers and marine engineering enterprises.

Offshore ***wind power*** has witnessed a great leap in terms of both market and technology development, according to Lou Shujun, vice general manager of Datang Shantou New Energy Co., Ltd.

"There are rich ***wind*** resources in eastern Guangdong and Guangdong has a strong consumption ability for ***wind power***," said Lou. "We will keep upgrading technologies to improve utilization efficiency."

China's offshore ***wind power*** industry is now growing rapidly. A whole industry chain covering ***wind*** turbines, accessory equipment, offshore construction and operation has been formed.

Shanghai Electric ***Windpower*** Guangdong Co., Ltd. has invested over 1.5 billion yuan (about 236 million U.S. dollars) in its intelligent manufacturing base in Shantou for the production ***wind*** turbines.

"We will build a ***wind power*** equipment wharf and a home port for ***wind power*** in Shantou, to boost the transformation of China's industrial structure and energy structure," said Wang Quanjing, general manager of the company.

**Load-Date:** April 2, 2022

**End of Document**



[***Attend the Best Wind Power Online Workshop***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:652C-W6H1-JCSC-33T6-00000-00&context=1516831)

ACN Newswire

March 23, 2022 Wednesday

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**Length:** 591 words

**Dateline:** Singapore

**Body**

Singapore, Mar 23, 2022 - (ACN Newswire) - Infocus International Group, a global business intelligence provider of strategic information and professional services, has announced the new dates for Mastering ***Wind Power*** training and it will be commencing live on the 7th of June 2022. A comprehensive, up-to-date and business-focused roadmap to success in delivering ***wind power*** growth, today and tomorrow.

Attendees will gain an excellent understanding of all the key factors facing ***wind power*** developers and investors, from resource assessment and energy production complexities, through technology trends, project development and planning challenges, to financial returns and risks.

The course will include the illustration of key concepts using online tools, ***wind*** resource datasets, energy yield, financial and other simple calculations, along with discussion of key planning and market environment considerations.

In keeping with the business-focused theme of the course, any illustrative materials are designed to provide time-efficient clarification of the key course takeaways, aimed at commercially-focused business developers and investors. They are therefore accessible to non-experts, not designed to replicate the complex or in-depth detailed planning undertaken - over much longer periods! - by experienced engineers and technical teams.

Past participant from Statkraft Development AS shared, "This was one of my best spent weeks on training all year! A good and efficient way of getting an overview of the renewable energy sector. I found him very knowledgeable and enthusiastic in presenting the material, also enabling knowledge exchange between participants in the group. I really enjoyed his interesting lessons and the group work he provided for additional learning outcomes. Thanks."

Course Sessions

1. From ***wind*** flow to electricity: ***wind*** turbines and ***wind*** farms

2. Understanding and measuring ***wind*** resources

3. Successful delivery of ***wind power*** projects

4. Taking ***wind power*** offshore

5. Making money from ***wind power*** projects

Among the key points to be addressed

- Learn from global experiences in ***wind power*** project development

- Understand unique properties of ***wind*** resource, and how these feed into financial risk analysis

- Gain a business-focused, up-to-date perspective on current and emerging ***wind*** technology innovations and project delivery best practices

- Analyse and discuss practical and project delivery risks facing ***wind power*** projects, including key stakeholder engagements

- Get hands-on with a financial model to better understand financial risks and returns for ***wind power*** projects

- Compare and contrast the unique extra costs and complexities of offshore ***wind*** projects with those onshore

Want to learn more?

Simply email to [*emilia@infocusinternational.com*](mailto:emilia@infocusinternational.com) or call +65 6325 0210 to obtain your FREE COPY of event brochure. For more information, please visit [*https://www.infocusinternational.com/****wind****-online*](https://www.infocusinternational.com/wind-online).

About Infocus International Group

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Website: [*www.infocusinternational.com*](http://www.infocusinternational.com)

Source: Infocus International Group

**Load-Date:** March 22, 2022

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[***Attend the Best Wind Power Online Workshop***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:652N-NBP1-JDKC-R143-00000-00&context=1516831)

Web newswire

March 24, 2022 Thursday

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**Length:** 619 words

**Dateline:** India

**Body**

India, March 24 -- Infocus International Group, a global business intelligence provider of strategic information and professional services, has announced the new dates for Mastering ***Wind Power*** training and it will be commencing live on the 7th of June 2022. A comprehensive, up-to-date and business-focused roadmap to success in delivering ***wind power*** growth, today and tomorrow.Attendees will gain an excellent understanding of all the key factors facing ***wind power*** developers and investors, from resource assessment and energy production complexities, through technology trends, project development and planning challenges, to financial returns and risks.The course will include the illustration of key concepts using online tools, ***wind*** resource datasets, energy yield, financial and other simple calculations, along with discussion of key planning and market environment considerations.In keeping with the business-focused theme of the course, any illustrative materials are designed to provide time-efficient clarification of the key course takeaways, aimed at commercially-focused business developers and investors. They are therefore accessible to non-experts, not designed to replicate the complex or in-depth detailed planning undertaken - over much longer periods! - by experienced engineers and technical teams.Past participant from Statkraft Development AS shared, "This was one of my best spent weeks on training all year!

A good and efficient way of getting an overview of the renewable energy sector. I found him very knowledgeable and enthusiastic in presenting the material, also enabling knowledge exchange between participants in the group. I really enjoyed his interesting lessons and the group work he provided for additional learning outcomes. Thanks."Course Sessions1. From ***wind*** flow to electricity: ***wind*** turbines and ***wind*** farms2. Understanding and measuring ***wind*** resources3. Successful delivery of ***wind power*** projects4. Taking ***wind power*** offshore5. Making money from ***wind power*** projectsAmong the key points to be addressed- Learn from global experiences in ***wind power*** project development- Understand unique properties of ***wind*** resource, and how these feed into financial risk analysis- Gain a business-focused, up-to-date perspective on current and emerging ***wind*** technology innovations and project delivery best practices- Analyse and discuss practical and project delivery risks facing ***wind power*** projects, including key stakeholder engagements- Get hands-on with a financial model to better understand financial risks and returns for ***wind power*** projects- Compare and contrast the unique extra costs and complexities of offshore ***wind*** projects with those onshoreWant to learn more?Simply email to [*emilia@infocusinternational.com*](mailto:emilia@infocusinternational.com) or call +65 6325 0210 to obtain your FREE COPY of event brochure. For more information, please visit [*https://www.infocusinternational.com/****wind****-online.About*](https://www.infocusinternational.com/wind-online.About) Infocus International GroupInfocus International is a global business intelligence provider of strategic information and professional services for diverse business communities.Infocus International recognises clients' needs and responds with innovative and result oriented programmes. All products are founded on high value content in diverse subject areas, and the highest level of quality is ensured through intensive and in-depth market research from local and international insights.Emilia MokTel: +65 6325 0210Email: [*emilia@infocusevent.comWebsite*](mailto:emilia@infocusevent.comWebsite): [*www.infocusinternational.com*](http://www.infocusinternational.com)

Topic:Press release summary

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**Load-Date:** March 24, 2022

**End of Document**



[***Favourable breezes boost Spain's wind power sector***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:6567-BV51-JBV1-X343-00000-00&context=1516831)

Agence France Presse -- English

April 10, 2022 Sunday 2:58 AM GMT

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**Length:** 662 words

**Dateline:** Villar de los Navarros, Spain, April 10 2022

**Body**

Buoyed by a surge in investment and new projects, ***wind power*** has become Spain's main source of electricity generation just as Europe seeks to curb its energy imports from Russia.

"We are on suitable ground here," said Joaquin Garcia Latorre, project director at Enel Green ***Power*** Espana, pointing to gigantic masts erected on the heights of the tiny northeastern village of Villar de los Navarros.

The Spanish-Italian firm picked this spot, which is well exposed to the ***wind***, to set up a 180-megawatt ***wind*** farm, one of the country's biggest.

Dubbed Tico ***Wind***, its 43 ***wind*** turbines started producing ***power*** in November, said Latorre while workers around him tended to the turbines, which are over 100 metres (328 feet) high.

"There are between 2,500 and 3,000 hours of ***wind*** here per year," he added.

The ***wind*** farm will be able to produce 471 gigawatt hours per year -- enough to meet the demands of 148,000 households -- after it becomes fully operational in a month.

These types of projects have popped up across Spain in recent years, making it Europe's second-biggest ***wind power*** producer after Germany for installed capacity and the world's fifth biggest.

***Wind power*** became the main source of electricity production in Spain last year, accounting for 23 percent, ahead of nuclear (21 percent) and gas (17 percent), according to national grid operator REE.

The sector "benefits from a favourable situation" although "brakes" remain on its development, such as a dependency on government auctions, said Francisco Valverde Sanchez, renewables specialist at electricity consultants Menta Energia.

- Investor interest -

Following a boom in the 2000s thanks to generous public financial aid, the sector suffered a sudden halt when subsidies were slashed in 2013 during Spain's economic crisis.

It has since charged ahead. Spain, which has a total of 1,265 ***wind*** farms, had an installed ***wind power*** capacity of 28.1 gigawatts in 2021, up from 23.4 gigawatts in 2018, according to industry group AEE.

With large swathes of sparsely populated land, a favourable legal framework and cutting edge ***wind*** turbine makers, Spain is one of the most "interesting" markets for ***wind power*** investors, said AEE director general Juan Virgilio Marquez.

Spain is home to several sector heavyweights such as Iberdrola and Naturgay, making it a top exporter of ***wind power*** equipment. "This explains the dynamism of the sector," said Marquez.

Investor interest has even come from outside of the energy sector.

In November Spain's Amancio Ortega, the founder of fast fashion giant Zara and one of the world's richest men, injected 245 million euros ($268 million) in a ***wind*** farm in the northeastern region of Aragon.

- Energy 'breadbasket' -

Spain in 2020 pledged to generate 74 percent of its electricity from renewable sources by 2030, up from 47 percent.

To meet this target, Spain is counting on the development of offshore ***wind power***, a sector that is in its infancy.

But since Spain has thousands of kilometres of coastline, offshore ***wind*** has lots of room to grow.

"This is an ambitious goal," said Valverde Sanchez, arguing that government bureaucracy around ***wind*** farm projects must be reduced for it to be met.

Nearly 600 ***wind power*** projects are currently under study by the government, according to AEE.

As part of its plan to respond to the economic fallout from Russia's invasion of Ukraine, Spain has pledged to speed up the approval of ***wind power*** projects of less than 75 megawatts.

"Our country had enough natural resources to become Europe's leading producer and exporter of renewable energy," Prime Minister Pedro Sanchez said Wednesday, adding this could be key to help the European Union meet its goal of "energy independence".

Since Russia invaded Ukraine on February 24, Brussels has declared a mission to cut the EU's Russian gas imports by two thirds this year and to end the use of Russian gas by 2027.

Spain "could become the energy 'breadbasket' of Europe," said Virgilio Marquez.

IBERDROLA

INDITEX - ZARA

ENEL

**Load-Date:** April 9, 2022

**End of Document**



[***Outokumpu Oyj Increases Wind Power***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:64SS-RBV1-F11P-X021-00000-00&context=1516831)

Energy Monitor Worldwide

February 15, 2022 Tuesday

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**Length:** 216 words

**Body**

Outokumpu has signed a 10-year ***power*** supply agreement for renewable ***wind power*** with Swiss electricity producer Alpiq. The amount of contracted ***wind power*** energy corresponds to over 60% of Outokumpus electricity consumption at its production sites in Germany. According to the agreement, deliveries will begin in January 2023.

Increasing the share of low-carbon electricity is one of the most important methods for Outokumpu to achieve its ambitious climate targets. In total, the share of low-carbon electricity in Outokumpus European operations is already over 80 percent.

With another new ***wind power*** agreement, we can strengthen the role of renewable energy in the sustainable development of our operations even further. With our direction towards low-carbon energy sources, Outokumpu is supporting in the transition to more sustainable energy sources such as ***wind power***, says Mika Orpana, Head of Energy and Utilities, General Procurement at Outokumpu.

Earlier, Outokumpu has announced two other 10-year ***wind power*** agreements. Together these agreements support Outokumpus ambitious science-based climate targets which are aligned with keeping global warming below 1.5C. The updated targets were announced in December 2021 and support Outokumpus aim of being the industry leader in sustainability.

**Load-Date:** February 15, 2022

**End of Document**



[***Marcos sees PH as producer of wind power***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:655T-9S31-JCSF-S2MC-00000-00&context=1516831)

The Manila Times

April 7, 2022 Thursday

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**Length:** 410 words

**Byline:** Catherine S. Valente

**Body**

PRESIDENTIAL frontrunner Ferdinand "Bongbong" Marcos Jr. believes that the Philippines can be a major offshore ***wind power*** producer globally under his administration.

If elected president, Marcos said he will push for regulatory and policy reforms to strengthen the country's potential as a major offshore ***wind power*** producer.

He said ***wind power***, along with other renewable energy resources, can help the country lower its electricity rate and become a competitive destination for foreign investments in a post-pandemic environment.

"We have the potential to be a major ***wind power*** producer in the world. Our unique topography is very suitable for building offshore ***wind*** farms and we should take advantage of it to produce cheap electricity," Marcos said in a statement.

"We need to be competitive in a post-pandemic global economy and having low electricity rates is crucial in drawing in more foreign direct investments as we pursue aggressive growth targets," he added.

According to 2019 data, the Philippines ranked third among Asian countries with the most expensive ***power*** rates at P10 per kWh, after Japan and Singapore.

The former senator said he is hoping that the offshore ***wind power*** roadmap, which is being developed by the Department of Energy (DoE) and the World Bank Group (WBG), will be completed soon.

The offshore ***wind power*** roadmap, he said, will ensure that adequate rules and regulations are in place to guide the government in working with all industry stakeholders.

"It would be good to have the roadmap completed at the soonest possible time since it will provide us with the policy framework to fast-track the deployment of ***wind*** farms in the country," Marcos added.

The WBG believes that the Philippines has approximately 170 gigawatts (GW) of untapped offshore ***wind*** potential.

To date, Marcos said the DoE has awarded five ***wind*** energy service contracts with a combined capacity of 1.85 GW for offshore ***wind*** projects: Guimaras Strait (100 megawatts), Aparri Bay (100MW), Guimaras Strait 2 (600MW), Frontera Bay (450MW), and San Miguel Bay (600MW), which are all expected to be completed in 2031.

The DoE has also received nine additional letters of intent for offshore projects with a total capacity of 12GW, he added.

"Low electricity rates and a steady supply of it are important considerations for would-be investors. As such, we are pushing for the wider use of renewable energy sources as we veer away from our reliance on imported oil," Marcos said.

**Load-Date:** April 7, 2022

**End of Document**



[***Ministries reach agreement on wind power expansion in Germany***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:654B-TH71-JB0G-F1YP-00000-00&context=1516831)

dpa international (Englischer Dienst)

April 1, 2022 Friday 12:05 PM GMT

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**Length:** 286 words

**Dateline:** Berlin (dpa) -

**Body**

After years of debate in Germany over how best to balance the expansion of ***wind power*** and environmental protection, the country's Environment and Economics Ministries have reached an agreement, the Environment Ministry announced on Friday.

The ministries have drawn up an agreed approach for developing an environmentally sound expansion of onshore ***wind*** energy, the Environment Ministry said, ahead of a press conference planned for Monday.

The goal of the agreement was to be able to grant planning permission for new ***wind*** turbines rapidly and in a legally secure manner while maintaining the high environmental protection standards required by European law, it said, though it gave no further details.

Environment Minister Steffi Lemke and Climate Protection Minister Robert Habeck, both members of the Greens, will present the key points of the agreement next week.

The need to accelerate Germany's expansion of renewable energies while maintaining high environmental protection standards has been a contentious issue for the two ministries for years.

However, the faster expansion of onshore ***wind power*** plays a key role in achieving the German government's climate protection targets and, crucially in light of the war in Ukraine, in reducing its dependence on Russian fossil fuel imports.

Germany lacks land designated for the construction of ***wind*** turbines, and attempts to change this have often been prevented by species protection concerns.

This was demonstrated in a report produced by a state and federal committee on the status of ***wind power*** expansion last October, which also found that the resistance to the expansion of ***wind power*** on the environmental grounds has been particularly entrenched at the state level.

Editorial contactsEditing by: Tom Masters, <[*international@dpa.com*](mailto:international@dpa.com);

**Load-Date:** April 1, 2022

**End of Document**



[***Marcos highlights PH's wind power potential***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:655N-3CM1-JDJN-620V-00000-00&context=1516831)

Energy Monitor Worldwide

April 7, 2022 Thursday

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**Length:** 362 words

**Body**

Presidential candidate Bongbong Marcos has underscored anew the Philippines potential to become a major player in the ***wind power*** sector.

We have the potential to be a major ***wind power*** producer in the world. Our unique topography is very suitable for building offshore ***wind*** farms and we should take advantage of it to produce cheap electricity, Marcos said in a statement Wednesday, April 6.

The UniTeam member and survey frontrunner made these remarks as the Philippines continues to grapple with exorbitant fuel prices as a result of the global economic bounce-back from the Covid-19 pandemic and the ongoing Russia-Ukraine conflict.

We need to be competitive in a post-pandemic global economy and having low electricity rates is crucial in drawing in more foreign direct investments (FDIs) as we pursue aggressive growth targets, added the Ilocano bet.

According to 2019 data, the Philippines ranks third among Asia countries with the most expensive ***power*** rates at P10 per kilowatt hour (kWh), after Japan and Singapore.

The Ilocano Palace aspirant is also hoping for the completion of the offshore ***wind power*** roadmap being developed by the Department of Energy (DOE) and the World Bank Group, which is expected to be ready within the month.

The offshore ***wind power*** roadmap will ensure that adequate rules and regulations are in place to guide the government in working with all industry stakeholders.

It would be good to have the roadmap completed at the soonest possible time since it will provide us with the policy framework to fast-track the deployment of ***wind*** farms in the country, added Marcos.

According to the World Bank Group, the Philippines has approximately 170 gigawatts (GW) of untapped offshore ***wind*** potential.

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The DOE has also received nine additional letters of intent for offshore projects with a total capacity of 12 GW.

**Load-Date:** April 7, 2022

**End of Document**



[***State Intellectual Property Office of China Releases Sany Heavy Ind's Patent Application for Damping Structure for Wind Power Tower and Wind Power Tower***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:656P-9SG1-JBHT-D0X3-00000-00&context=1516831)

Global IP News. Energy Patent News

April 11, 2022 Monday

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**Length:** 378 words

**Dateline:** New Delhi

**Body**

**FULL TEXT**

Publication Name: Energy Patent NewsPatent Application Number: CN202110199011 20210222Patent Publication Number: CN112780499 (A)International Patent Classification Codes: F03D13/20, F03D80/00Cooperative Patent Classification Codes: F03D13/20 (CN), F03D80/00 (CN), Y02E10/72 (EP), Y02E10/728 (EP)Patent Status: Application

Beijing, April 11 -- State Intellectual Property Office of China has released Sany Heavy Ind's patent application for damping structure for ***wind power*** tower and ***wind power*** tower. This invention was developed by Tian Runli, Zhang Rongxin and Liu Yun.

The patent application number is CN202110199011 20210222. The patent publication number is CN112780499 (A). International Patent Classification codes are F03D13/20 and F03D80/00. Cooperative Patent Classification codes are F03D13/20 (CN), F03D80/00 (CN), Y02E10/72 (EP) and Y02E10/728 (EP).

According to the abstract released by the State Intellectual Property Office of China: "The embodiments of the invention provides a damping structure for a ***wind power*** tower and the ***wind power*** tower. The damping structure for the ***wind power*** tower comprises a fan inherent accessory and a suspension device. One end of the suspension device is connected with a rear chassis of a machine cabin, the other end of the suspension device is connected with the fan inherent accessory, and the suspension device can adjust the height of the gravity center position of the fan inherent accessory, so that the fan inherent accessory can play a damping role on the ***wind power*** tower. Compared with the prior art, the fan inherent accessory originally installed on the ***wind power*** tower is hung on a rear support of the machine cabin through the suspension device, and the frequency of the fan inherent accessory can be adjusted by changing the height of the gravity center position of the fan inherent accessory. When the frequency of the fan inherent accessory is the same as or similar to the first-order frequency of the ***wind power*** tower, the fan inherent accessory hung on the ***wind power*** tower can play a damping role. Therefore, a TMD damper can be prevented from being additionally installed, and then the operation equipment cost of the ***wind power*** tower is greatly reduced."

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**Load-Date:** April 12, 2022

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[***USAID helping Uzbekistan with profitable wind power projects***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:6580-N6Y1-DY3K-T03R-00000-00&context=1516831)

Trend Daily Economic News

April 18, 2022 Monday 4:20 PM GMT +4

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**Section:** UZBEKISTAN

**Length:** 281 words

**Body**

BAKU, Azerbaijan, April 18. The USAID introduced two devices using laser-based, cutting-edge technology for ***wind*** measurement to Uzbekistan, Communications Specialist at USAID Mission to Uzbekistan Sanobar Khudaybergenova told [*Trend*](http://en.trend.az/).

"These tools can measure ***wind*** speed and direction up to 200 meters above ground level, which will provide the capability to develop highly accurate ***wind*** resource maps that can then be used for profitable ***wind power*** projects," Khudaybergenova said.

Besides that, Khudaybergenova noted that USAID conducted grid integration studies for renewable energy (RE) development in Uzbekistan.

"Detailed ***power*** system modeling and analysis was performed in collaboration with local experts from the National Dispatch Center (NDC) and Coordination Dispatch Center (CDC) to understand the impact of RE development on the physical grid, its operation and reserve requirements," she said.

According to Khudaybergenova, this resulted in recommendations for upgrades to allow higher penetration of clean ***wind*** and solar energy.

Earlier in April, Uzbek Ministry of Energy said it plans to put into operation a new ***wind power*** plant by 2024. Once launched, the ***power*** plant will generate 350 million kilowatt-hours of electricity per year, which will provide electricity to more than 120,000 households.

After the plant is be commissioned, it will save 106 million cubic meters of natural gas per year and prevent the emission of 160,000 tons of greenhouse gases into the atmosphere. During the construction of the new ***wind power*** plant, 400 people will be involved, and when the plant is put into operation, 30 new jobs will be created.

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[***USAID helping Uzbekistan with profitable wind power projects***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:6580-XJ21-JBMJ-31T8-00000-00&context=1516831)

Trend News Agency - Uzbekistan (English)

April 18, 2022 Monday 6:00 PM GMT +4

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**End of Document**



[***Boris Johnson plays down onshore wind power***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:6540-6D11-JBNF-W31D-00000-00&context=1516831)

Cityam.com

March 30, 2022 Wednesday 5:50 PM GMT

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**Length:** 287 words

**Byline:** Nicholas Earl

**Highlight:** Boris Johnson has played down the prospect of ramping up onshore ***wind power*** in the government's upcoming energy strategy.The post Boris Johnson plays down onshore ***wind power*** appeared first on CityAM.

**Body**

Boris Johnson has played down the prospect of ramping up onshore ***wind power*** in the government's upcoming energy strategy.

The Prime Minister instead singled out ramping up offshore ***wind power*** and nuclear ***power*** when facing questions about his energy plans from the House of Commons' Liaison Committee.

He said: "Renewables are fantastic and offshore ***wind*** - and I stress offshore ***wind*** - I think has massive potential. But so does nuclear. In the UK we have failed for a generation to put in enough long-term supply and it's been one of those colossal mistakes."

Following the UK's decision to phase out Russian oil imports this year, Johnson is looking to outline plans to cut down its reliance on overseas energy imports.

He wants to significantly expand domestic renewables, nuclear ***power*** and North Sea oil and gas exploration.

However, his promised energy strategy has been delayed amid cabinet splits - despite first being announced earlier this month.

Business Secretary Kwasi Kwarteng has pushed for planning laws to be relaxed so that onshore ***wind*** farms do not have to be approved and included in local community plans.

According to The Financial Times, he wants to double capacity from 15GW to 30GW by the end of the decade.

Kwarteng has support from Levelling Up Minister Michael Gove but has faced opposition from Work and Pensions Secretary Therese Coffey.

Meanwhile, Chancellor Rishi Sunak is reportedly concerned about plans to ramp up nuclear ***power*** - and is wary of the heavy spending commitments required beyond Hinkley Point C and Sizewell C.

Read more

[*Energy analysts welcome renewable plans but warn support for households still needed*](https://www.cityam.com/energy-analysts-welcome-renewable-plans-but-warn-support-for-households-still-needed/)

The post [*Boris Johnson plays down onshore* ***wind power***](https://www.cityam.com/boris-johnson-plays-down-onshore-wind-power/) appeared first on [*CityAM*](https://www.cityam.com).

**Load-Date:** March 30, 2022

**End of Document**



[***USAID helping Uzbekistan with profitable wind power projects***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:6580-XJ21-JBMJ-31KK-00000-00&context=1516831)

Trend News Agency - Central Asia (English)

April 18, 2022 Monday 6:00 PM GMT +4

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**Section:** UZBEKISTAN

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[***USAID helping Uzbekistan with profitable wind power projects***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:6580-N6Y1-DY3K-T0HP-00000-00&context=1516831)

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[***Sany Heavy Ind Submits Chinese Patent Application for Wind Power Variable-Pitch Overspeed Protection Method and Device and Wind Power Variable-Pitch System***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:6556-H1S1-JBHT-D4XR-00000-00&context=1516831)

Global IP News. Energy Patent News

April 4, 2022 Monday

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**Length:** 379 words

**Dateline:** New Delhi

**Body**

**FULL TEXT**

Publication Name: Energy Patent NewsPatent Application Number: CN20211095288 20210125Patent Publication Number: CN112761872 (A)International Patent Classification Codes: F03D17/00, F03D7/02, F03D80/00Cooperative Patent Classification Codes: F03D17/00 (CN), F03D7/0236 (CN), F03D7/0256 (CN), F03D80/00 (CN), Y02E10/72 (EP)Patent Status: Application

Beijing, April 4 -- Sany Heavy Ind has submitted a patent application for ***wind power*** variable-pitch overspeed protection method and device and ***wind power*** variable-pitch system. This invention was developed by Liu Xiaonan, Feng Hao and Gao Kun.

The patent application number is CN20211095288 20210125. The patent publication number is CN112761872 (A). International Patent Classification codes are F03D17/00, F03D7/02 and F03D80/00. Cooperative Patent Classification codes are F03D17/00 (CN), F03D7/0236 (CN), F03D7/0256 (CN), F03D80/00 (CN) and Y02E10/72 (EP).

An abstract released by the State Intellectual Property Office of China states: "The invention provides a ***wind power*** variable-pitch overspeed protection method and device and a ***wind power*** variable-pitch system, and relates to the technical field of ***wind power*** generation. The ***wind power*** variable-pitch overspeed protection method comprises the steps that firstly, the position of blades are determined according to the position relation between a hub and a gravity sensing device; the rotation angular velocity of the hub is calculated on the basis of the acceleration of the blade corresponding to the gravity sensing device and the positions of the blades; the blades are connected with the hub, and the hub is used for driving the blades to rotate; and when the rotation angular velocity of the hub exceeds a first threshold value, a variable-pitch driving chip drives the blades corresponding to the gravity sensing device to retract. With the ***wind power*** variable-pitch overspeed protection method, the blades can be controlled to retract in time according to the rotating speed of the hub, the problem that the safety performance of an existing ***wind power*** generation technology is low is solved to some extent, and the beneficial effect of improving the safety performance of the ***wind power*** variable-pitch system is achieved."

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**Load-Date:** April 5, 2022

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[***China Focus: Surging offshore wind power boosts China's green development***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:654J-FNW1-JBTY-T1H5-00000-00&context=1516831)

Xinhua Economic News Service

April 2, 2022 Saturday 3:59 PM GMT

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**Section:** CHINA NEWS

**Length:** 518 words

**Byline:** 马晓澄

**Body**

GUANGZHOU, April 2 (Xinhua) -- After operating steadily for three months, an offshore ***wind*** farm in Shantou City, south China's Guangdong Province, generated over 100 million kilowatt-hours (kWh) of electricity by March 29, according to the developer Datang Shantou New Energy Co., Ltd.

The Shantou Datang Lemen I offshore ***wind power*** project, with 35 ***wind*** turbines, is located near the Lemen Islands in Nan'ao County. It is the first offshore ***wind power*** project in eastern Guangdong that has been put into operation.

The total installed capacity of the project is 245,000 kilowatts, which is expected to generate 751 million kWh of electricity annually. In lieu of the common coal-fired ***power*** plant, it can save 240,000 tonnes of standard coal and reduce 450,000 tonnes of carbon dioxide emissions every year.

China has announced its ambitious targets of peaking CO2 emissions before 2030 and achieving carbon neutrality before 2060. To reach the goal, relentless efforts are made to expand the clean energy industry and adopt renewable energy as a substitute, which creates a broad market for ***wind power***.

China's newly installed capacity of grid-connected ***wind power*** reached 47.57 million kilowatts in 2021, with offshore ***wind power*** accounting for over one-third. The installed ***wind power*** capacity of China has exceeded 300 million kilowatts, and its installed offshore ***wind power*** capacity now ranks first in the world, according to the National Energy Administration of China.

Chinese authorities have released a plan for developing a modern energy system during the 14th Five-Year Plan period (2021-2025), which stresses promoting ***wind power*** orderly in places with rich ***wind*** resources and good development conditions.

As an economic powerhouse, Guangdong Province plans to start the construction of offshore ***wind*** plants with a total installed capacity of 12 million kilowatts during this period, and put half of them into operation by the end of 2025.

Shantou City has established the Shantou Offshore ***Wind Power*** Industry Alliance, which groups 42 enterprises, including equipment suppliers and marine engineering enterprises.

Offshore ***wind power*** has witnessed a great leap in terms of both market and technology development, according to Lou Shujun, vice general manager of Datang Shantou New Energy Co., Ltd.

"There are rich ***wind*** resources in eastern Guangdong and Guangdong has a strong consumption ability for ***wind power***," said Lou. "We will keep upgrading technologies to improve utilization efficiency."

China's offshore ***wind power*** industry is now growing rapidly. A whole industry chain covering ***wind*** turbines, accessory equipment, offshore construction and operation has been formed.

Shanghai Electric ***Windpower*** Guangdong Co., Ltd. has invested over 1.5 billion yuan (about 236 million U.S. dollars) in its intelligent manufacturing base in Shantou for the production ***wind*** turbines.

"We will build a ***wind power*** equipment wharf and a home port for ***wind power*** in Shantou, to boost the transformation of China's industrial structure and energy structure," said Wang Quanjing, general manager of the company. Enditem

**Load-Date:** April 2, 2022

**End of Document**



[***China Focus: Surging offshore wind power boosts China's green development***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:654J-20Y1-DY91-H24S-00000-00&context=1516831)

Xinhua General News Service

April 2, 2022 Saturday 1:28 PM GMT

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**Section:** CHINA NEWS

**Length:** 520 words

**Byline:** 马晓澄

**Body**

GUANGZHOU, April 2 (Xinhua) -- After operating steadily for three months, an offshore ***wind*** farm in Shantou City, south China's Guangdong Province, generated over 100 million kilowatt-hours (kWh) of electricity by March 29, according to the developer Datang Shantou New Energy Co., Ltd. The Shantou Datang Lemen I offshore ***wind power*** project, with 35 ***wind*** turbines, is located near the Lemen Islands in Nan'ao County. It is the first offshore ***wind power*** project in eastern Guangdong that has been put into operation.

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**Load-Date:** April 2, 2022

**End of Document**



[***INTERNATIONAL PATENT: FUDO GIKEN INDUSTRY CO.,LTD. FILES APPLICATION FOR "ABNORMALITY DETERMINATION METHOD FOR WIND POWER GENERATION DEVICE. ABNORMALITY DETERMINATION SYSTEM FOR WIND POWER GENERATION DEVICE AND ABNORMALITY DETERMINATION PROGRAM FOR WIND POWER GENERATION DEVICE"***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:652M-BMK1-F12F-F13K-00000-00&context=1516831)

US Fed News

March 24, 2022 Thursday 2:10 AM EST

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**Length:** 370 words

**Dateline:** GENEVA

**Body**

GENEVA, March 24 -- FUDO GIKEN INDUSTRY CO.,LTD. (5-3, Akunoura-machi, Nagasaki-shi, Nagasaki8500063) filed a patent application (PCT/JP2021/029471) for "ABNORMALITY DETERMINATION METHOD FOR ***WIND POWER*** GENERATION DEVICE. ABNORMALITY DETERMINATION SYSTEM FOR ***WIND POWER*** GENERATION DEVICE, AND ABNORMALITY DETERMINATION PROGRAM FOR ***WIND POWER*** GENERATION DEVICE" on Aug 10, 2021. With publication no. WO/2022/054483, the details related to the patent application was published on Mar 17, 2022.

Notably, the patent application was submitted under the International Patent Classification (IPC) system, which is managed by the World Intellectual Property Organization (WIPO). Inventor(s): HONDA Iwao (c/o Nagasaki Institute of Applied Science, 536, Aba-machi, Nagasaki-shi, Nagasaki8510123), NAKAMURA Hirofumi (c/o Fudo Giken Industry Co.,Ltd., 5-3, Akunoura-machi,Nagasaki-shi, Nagasaki8500063), MATSUURA Masami (c/o Nagasaki Marine Industry Cluster Promotion Association, 1-43, Dejima-machi, Nagasaki-shi, Nagasaki8500862) Abstract: This abnormality determination method for a ***wind power*** generation device comprises: a measurement step (Step S1) for measuring sound emitted from a ***wind power*** generation device and recording acoustic data; an analysis step (Step S2) for performing spectrogram analysis on the acoustic data recorded in the measurement step in terms of a frequency-time axis domain in which frequency characteristics are indicated with a time change using short-time Fourier transformation or wavelet transformation; a detection step (Step S3) for detecting, on the basis of an analysis result in the analysis step, a signal component emitted from an abnormal site in the ***wind power*** generation device in a time corresponding to the rotation of the ***wind power*** generation device; and a determination step (Step S5) for determining that the ***wind power*** generation device is in an abnormal state when the signal component detected in the detection step is equal to or more than a given threshold. For more information:[*https://patentscope.wipo.int/search/en/detail.jsf?docId=WO2022054483*](https://patentscope.wipo.int/search/en/detail.jsf?docId=WO2022054483) For any query with respect to this article or any other content requirement, please contact Editor at [*contentservices@htlive.com*](mailto:contentservices@htlive.com)

**Load-Date:** March 24, 2022

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[***Solar vs wind power: The ultimate showdown***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:652D-WDX1-F0YC-N38M-00000-00&context=1516831)

Impact News Service

March 22, 2022 Tuesday

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**Length:** 1583 words

**Body**

Cologny: World Economic Forum has issued the following press release:

Two of the most popular renewable energy sources in the US, at this moment, are solar and ***wind***. But which will take the lead in 2022? An expert weighs up the pros and cons.

History shows that advances in renewable energy often follow crises: In the 1970s, oil embargos caused the cost of oil to quadruple, spurring efforts to reduce American dependence on fossil fuels and find alternative sources of ***power***, including solar energy or ***wind power***. The 2008-09 global financial crisis led to several governments linking part of their economic stimulus to investment in clean energy. The COVID-19 pandemic led to an unprecedented energy shock, and following in 2021, investment in renewable energy reached the highest levels since the Great Recession.

Following crises in Europe, Western economies are once again reminded of the importance of energy independence, and demand for renewable energy sources has gone through the roof. Two of the most popular renewable energy sources in the U.S , at this moment, are solar and ***wind***. Will either take charge as a leader in 2022?

Thanks to the decreasing cost of solar, the technology has never been more worth it for homeowners. Its ease for residential use allows customers to reduce their carbon footprint along with their energy expenses. But humans have been using ***wind*** for thousands of years, well before the modern ***wind*** turbine ever arrived. In fact, ***wind power*** accounted for 5% more energy generation than solar did last year.

So, as we enter the era of renewable energy, will either source of ***power*** come out on top? And if you ’ re considering making the switch to a renewable source of energy, which is better for your needs? Let ’ s explore.History of solar vs ***wind power***

We ’ ll start with a little background for color. The earliest recorded evidence of ***wind*** energy being used dates to around 6000 to 5000 B.C , when the sail was invented to catch the ***wind*** and propel boats. Over the years, developments in ***wind power*** allowed humans to grind grain, pump water, and eventually, around the late 1800s, generate electricity from kinetic energy.

One could argue that solar energy has been used since 700 B.C , when mirrors were used to concentrate solar energy to make fire. But solar cells were not used to generate energy until 1839, when Edmond Becquerel, a young physicist working in France, first observed and noted the photovoltaic effect. It took more than a century to produce a practical solar panel after Becquerel ’ s discovery. Solar energy remained in the research-and-development phase for several decades.

Fast forward to 1973 — oil shocks caused gasoline and oil prices to spike, spreading anxiety about the United States ’ energy future. U.S leaders grew increasingly curious about alternative, domestic sources of energy that would reduce dependence on foreign oil.

Coupled with mounting pressure from environmentalists, the ‘70s saw tangible federal support for renewable energy. To encourage its development, Congress passed the 1978 Energy Tax Act to provide tax credits for homes with solar panels and fund the development of large ***wind*** turbines. Solar was not cost-effective enough to take off quite yet, but ***wind*** turbines caught some modest gains in progressive states.

Over the next few decades, the share of U.S electricity generation from ***wind*** grew from less than 1% in 1990 to about 8.4% in 2020. Solar energy ’ s share of total U.S utility-scale electricity generation grew from 0.1% in 1990 to around 2.5% in 2020.Graph showing solar vs ***wind power*** generation in the US.***Wind*** is currently outperforming solar in terms of energy generation in the United States.Image: Energy Information Administration (EIA)Home solar panels

In 2022, modern solar panels are either installed on a roof or ground-mounted to convert sunlight into energy. Solar panels are made up of photovoltaic cells (or solar cells) that use the semi-conductive material silicon to create an electric current. The electricity that the panels produce is direct current (DC), and it is converted by an inverter into AC electricity, which is what we use to ***power*** our homes.

The best solar panels these days average between a ***power*** capacity of 250 to 400 watts, and the most efficient solar panels reach efficiency levels around 20%, meaning 20% of the energy that strikes the panel is converted into electricity. A typical solar array ranges anywhere from 10 to 30 solar panels (or more), with the average being around 20 to ***power*** an American household.

The average cost of a solar installation is between $20,000 to $40,000, varying with the complexity of an installation, location, and the size and energy needs of a home. This is a steep barrier to entry, and it remains one of the largest challenges to solar ’ s growth. However, for those able to afford the upfront cost or take out a solar financing loan, solar provides decades of energy savings and can top even $50,000 of lifetime savings in the right location.

Most homes with solar will remain grid-tied, meaning you won ’ t lose your connection with your local utility. However, off-grid solar can be used in small-scale applications.

Not only does residential solar help homeowners offset their electricity usage, but installations help homeowners lower their dependence on fossil fuels and public utilities, yielding a number of personal and community benefits.Home ***wind*** turbines

***Wind*** turbines can also be used to generate electricity. Rather than using the photovoltaic effect, the blades of ***wind*** turbines spin to turn an inner rotor. The rotor sends kinetic energy to a generator that converts it into AC electricity, similar to an inverter in a solar array. Also like solar, ***wind power*** can be grid-tied or the resulting energy can be stored in a battery.

Unlike solar panels, in the ***wind*** turbine world, bigger is better, as ***winds*** generally increase as altitudes increase.

According to the Office of Energy Efficiency and Renewable Energy, the hub height for utility-scale, land-based ***wind*** turbines has increased 59% since 1998, measuring about 295 feet in 2020 (about the same height as the Statue of Liberty). And the hub height for offshore turbines in the U.S is projected to be even taller. Because turbines are so large, local zoning ordinances usually present challenges to residential ***wind*** installations.

This dependence on size contributes most to what differentiates ***wind*** from solar ***power***. ***Wind power*** takes up far more space to be most effective, and as a result, most ***wind*** turbines are used on a commercial or industrial scale rather than residential. However, ***wind*** turbines harness about 50% of the energy that passes through them, compared with the 20% efficiency of the top residential solar panels. And unlike solar panels, ***wind*** turbines can produce energy at any time of day, making them very effective when implemented properly.

In closing, location is key for ***wind*** as a source of energy. ***Wind*** turbines work best in large expanses of land without trees, buildings or other obstructions. States like Texas, Oklahoma, Iowa, Kansas and Illinois are leading the nation in ***wind*** energy, and coastal states such as Virginia, Massachusetts and New Jersey have invested heavily in offshore ***wind power***, a promising avenue for growth.Benefits of solar panels and ***wind*** turbines for the home

Though the road has been bumpy with squeezed supply chains and inflation, the cost of renewable energy technologies is near the lowest it has ever been, eclipsing that of traditional sources like coal and natural gas. Solar and ***wind*** installations continue to grow exponentially, and technological advances and low costs have made residential clean energy sources extremely in-demand.

Generally speaking, however, ***wind*** installations are in almost every case used on a commercial or industrial scale, while solar has proved its value in the residential market. Let ’ s go over the biggest benefits and drawbacks of each.Pros and cons of solar ***power***

As mentioned, solar panel installations offer tremendous opportunities as a residential-scale energy source. Here are the main reasons why:Pros and cons of solar ***power***.The pros and cons of solar ***power***.Image: EcowatchPros and cons of ***wind power***

***Wind power***, rather, is much more practical at the utility scale.Pros and cons of ***wind power***.The pros and cons of ***wind power***.Image: EcowatchSo which is better, solar or ***wind power***?

***Wind power*** currently outpaces that of solar when it comes to overall share of electricity generated. For homeowners, solar energy is a far more practical option.

What it really comes down to, however, is location. In the world of energy, there is no one-size-fits-all solution. Intelligence is a species ’ ability to live harmoniously in its environment, using the energy sources most logical for that region. We would never expect solar ***power*** to outpace a source of energy like hydropower in regions like the Pacific Northwest. Just like we wouldn ’ t expect ***wind power*** to take off in dense urban areas like New York City.

The future of energy is a decentralized one — one where energy is generated and consumed locally. For homeowners looking to make tangible changes in their lives to work toward a more sustainable future, solar ***power*** offers a wonderful opportunity to make a difference. ***Wind power*** may not present the same opportunities for homes, but it will surely be a huge part of the collaboration of renewable energy sources in the efforts to reach a net-zero-carbon future.

**Load-Date:** March 23, 2022

**End of Document**



[***Australian Daily Wind Power Generation Data - Monday 18 April 2022***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:6586-GN61-JCMN-Y54X-00000-00&context=1516831)

Newstex Blogs

PA Pundits

April 19, 2022 Tuesday 8:12 AM EST

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**Length:** 1132 words

**Byline:** TonyfromOz

**Body**

Apr 19, 2022( PA Pundits: [*http://papundits.wordpress.com*](http://papundits.wordpress.com)/ Delivered by Newstex)

By Anton Lang ~

This Post details the daily ***wind power*** generation data for the AEMO coverage area in Australia. For the background information, refer to the Introductory Post at this link[1].

Each image is shown here at a smaller size to fit on the page alongside the data for that day. If you click on each image, it will open on a new page and at a larger size so you can better see the detail.

Note also that on some days, there will be a scale change for the main ***wind power*** image, and that even though images may look similar in shape for the ***power*** generation black line on the graph when compared to other days, that scale (the total ***power*** shown on the left hand vertical axis) has been changed to show the graph at a larger size to better fit the image for that graph.

Monday 18 April 2022

Total ***Wind Power*** Generation

[*https://papundits.files.wordpress.com/2022/04/041801wind.jpgThis*](https://papundits.files.wordpress.com/2022/04/041801wind.jpgThis) image shows the total ***power*** generated across the whole day by every ***wind*** plant in this vast AEMO coverage area for Australia.

The total Nameplate for all these ***wind*** plants changes as each new ***wind*** plant comes on line delivering ***power*** to the grid. That current Nameplate is 8587MW, and this is from the current total of 69 ***wind*** plants.

Note that the shape of this ***wind power*** load curve does not follow the shape of the main load curve for total ***power*** generation, and that is seen in the image below, the solid black line across the top of the image for that graph. ***Wind power*** generates its ***power*** only when the ***wind*** is blowing, hence it does not follow the actual ***power*** generation Load Curve, which is also the the exact same shaped curve as for actual ***power*** consumption.

For this data, I have added the times for the daily minimum, and the daily maximum, to show how they do not correlate with the actual times of minimum ***power*** consumption (around 4AM each day) and maximum ***power*** consumption, the evening Peak. (at around 6.40PM in Winter and earlier during the Summer Months.)

Daily Minimum - 698MW (12.15PM)

Daily Maximum - 2101MW (12.50AM)

Average ***Wind*** Generation - 1283MW

Total Generated ***Power*** - 30.79GWH

Percentage Supplied By ***Wind Power*** At The Low Point For The Day - 3.1%

Percentage Supplied By ***Wind Power*** At Peak ***Power*** For The Day - 1081MW of 23990MW - 6.00PM - 4.51% (Mid afternoon Peak with rooftop solar added was 23020MW at 11.50AM)

Average Percentage Of Overall Total ***Power*** Generation - %

Daily Operational Capacity Factor - 14.94%

***Wind Power*** Generation Versus Total ***Power*** Generation

[*https://papundits.files.wordpress.com/2022/04/041802windtotal.jpgThis*](https://papundits.files.wordpress.com/2022/04/041802windtotal.jpgThis) image shows the total ***power*** generated from all the ***wind*** plants in this AEMO coverage area, and compares it to the overall total generated ***power*** from every source of ***power*** generation, which is the black line at the top of the graph. ***Wind power*** is the green coloured area, along the bottom of this graph.

While the green colour in this image looks to be a different shape to the graph above, keep in mind here that the scale is completely different, and that green coloured ***Wind*** total is the same as for the image shown above, only with the scale changed so it can fit onto the graph.

Notes

Finding ***Wind Power*** Average - On the graph, there are 25 hourly time points, starting with midnight and finishing with midnight. I have added the total at each of those hourly time points together, and divided the resultant total by 25 to give an average in MegaWatts. (MW) For total ***power*** in GWH, multiply the average daily ***power*** by 24, and then divide by 1000. For the Capacity Factor, that is calculated by dividing the average ***wind*** generation by the current Nameplate and then multiplying that by 100 to give a percentage.

Comments For This Day

***Wind*** generation fell away markedly on this day, and in fact was less than half the total generated ***power*** it was for the day before. The average for this day of 1283MW gave ***wind*** generation a daily operational Capacity Factor of 14.94%, and that was sixteen percent lower than the year round average. ***Wind*** was around its low for the day at the usual time of the evening Peak of maximum ***power*** consumption, and at that time, ***wind*** was delivering just 4.5% of all the generated ***power*** from every source. Even on a day when overall ***power*** generation was low, there was still that substantial difference between the high for the day and the low, and for this day that gap was 1403MW. You can see on the second (lower) graph, that the Load Curve of actual ***power*** consumption, that upper black line is now starting to look more like the typical profile for the cooler Months of the year with the two distinct peaks and the mid afternoon dip in overall ***power*** consumption.

\*\*\*\*\*

Anton Lang[2] uses the screen name of TonyfromOz, and he writes at this site, PA Pundits International[3] on topics related to electrical ***power*** generation, from all sources, concentrating mainly on Renewable ***Power***, and how the two most favoured methods of renewable ***power*** generation, ***Wind Power*** and all versions of Solar ***Power***, fail comprehensively to deliver levels of ***power*** required to replace traditional ***power*** generation. His Bio is at this link[4].

OzWindPowerGenerationTFO

[ 1]: [*https://papundits.wordpress.com/2019/10/01/australian-daily-****wind-power****-generation-data-introduction-with-permanent-link-to-daily-posts/*](https://papundits.wordpress.com/2019/10/01/australian-daily-wind-power-generation-data-introduction-with-permanent-link-to-daily-posts/) [ 2]: [*https://papundits.wordpress.com/author/tonyoz/*](https://papundits.wordpress.com/author/tonyoz/) [ 3]: [*https://papundits.wordpress.com*](https://papundits.wordpress.com)/ [ 4]: [*https://papundits.wordpress.com/views-expressed-by-writers-are-their-own-and-do-not/tonyfromoz/*](https://papundits.wordpress.com/views-expressed-by-writers-are-their-own-and-do-not/tonyfromoz/)

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**Load-Date:** April 19, 2022

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[***Australian Daily Wind Power Generation Data - Thursday 14 April 2022***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:657B-KT31-JCMN-Y0WP-00000-00&context=1516831)

Newstex Blogs

PA Pundits

April 15, 2022 Friday 7:08 AM EST

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**Length:** 1109 words

**Byline:** TonyfromOz

**Body**

Apr 15, 2022( PA Pundits: [*http://papundits.wordpress.com*](http://papundits.wordpress.com)/ Delivered by Newstex)

By Anton Lang ~

This Post details the daily ***wind power*** generation data for the AEMO coverage area in Australia. For the background information, refer to the Introductory Post at this link[1].

Each image is shown here at a smaller size to fit on the page alongside the data for that day. If you click on each image, it will open on a new page and at a larger size so you can better see the detail.

Note also that on some days, there will be a scale change for the main ***wind power*** image, and that even though images may look similar in shape for the ***power*** generation black line on the graph when compared to other days, that scale (the total ***power*** shown on the left hand vertical axis) has been changed to show the graph at a larger size to better fit the image for that graph.

Thursday 14 April 2022

Total ***Wind Power*** Generation

[*https://papundits.files.wordpress.com/2022/04/041401wind.jpgThis*](https://papundits.files.wordpress.com/2022/04/041401wind.jpgThis) image shows the total ***power*** generated across the whole day by every ***wind*** plant in this vast AEMO coverage area for Australia.

The total Nameplate for all these ***wind*** plants changes as each new ***wind*** plant comes on line delivering ***power*** to the grid. That current Nameplate is 8587MW, and this is from the current total of 69 ***wind*** plants.

Note that the shape of this ***wind power*** load curve does not follow the shape of the main load curve for total ***power*** generation, and that is seen in the image below, the solid black line across the top of the image for that graph. ***Wind power*** generates its ***power*** only when the ***wind*** is blowing, hence it does not follow the actual ***power*** generation Load Curve, which is also the the exact same shaped curve as for actual ***power*** consumption.

For this data, I have added the times for the daily minimum, and the daily maximum, to show how they do not correlate with the actual times of minimum ***power*** consumption (around 4AM each day) and maximum ***power*** consumption, the evening Peak. (at around 6.40PM in Winter and earlier during the Summer Months.)

Daily Minimum - 446MW (4.25PM)

Daily Maximum - 3286MW (4.20AM)

Average ***Wind*** Generation - 1971MW

Total Generated ***Power*** - 47.30GWH

Percentage Supplied By ***Wind Power*** At The Low Point For The Day - 1.9%

Percentage Supplied By ***Wind Power*** At Peak ***Power*** For The Day - 833MW of 25040MW - 6.05PM - 3.33% (Mid afternoon Peak with rooftop solar added was 25810MW at 11.10AM)

Average Percentage Of Overall Total ***Power*** Generation - %

Daily Operational Capacity Factor - 22.95%

***Wind Power*** Generation Versus Total ***Power*** Generation

[*https://papundits.files.wordpress.com/2022/04/041402windtotal.jpgThis*](https://papundits.files.wordpress.com/2022/04/041402windtotal.jpgThis) image shows the total ***power*** generated from all the ***wind*** plants in this AEMO coverage area, and compares it to the overall total generated ***power*** from every source of ***power*** generation, which is the black line at the top of the graph. ***Wind power*** is the green coloured area, along the bottom of this graph.

While the green colour in this image looks to be a different shape to the graph above, keep in mind here that the scale is completely different, and that green coloured ***Wind*** total is the same as for the image shown above, only with the scale changed so it can fit onto the graph.

Notes

Finding ***Wind Power*** Average - On the graph, there are 25 hourly time points, starting with midnight and finishing with midnight. I have added the total at each of those hourly time points together, and divided the resultant total by 25 to give an average in MegaWatts. (MW) For total ***power*** in GWH, multiply the average daily ***power*** by 24, and then divide by 1000. For the Capacity Factor, that is calculated by dividing the average ***wind*** generation by the current Nameplate and then multiplying that by 100 to give a percentage.

Comments For This Day

***Wind*** generation was lower on this day than it was on the day before, and the average for this day of 1971MW gave ***wind*** generation a daily operational Capacity Factor of 22.9%, and that was eight percent lower than the year round average. ***Wind*** was not far off its low point for the day when the usual time of the evening Peak of maximum ***power*** consumption came around, and at that time, ***wind*** was delivering just 3.3% of all the generated ***power*** from every source. On a day when ***wind power*** reached such a deep low (just 446MW, at an operational CF at that time of just a tick over 5%) that meant that the difference between the high for the day and the low was going to be quite large, as was the case, and that gap for this day was 2840MW, and that meant there was a swing across the whole day for ***wind*** generation of 86%.

\*\*\*\*\*

Anton Lang[2] uses the screen name of TonyfromOz, and he writes at this site, PA Pundits International[3] on topics related to electrical ***power*** generation, from all sources, concentrating mainly on Renewable ***Power***, and how the two most favoured methods of renewable ***power*** generation, ***Wind Power*** and all versions of Solar ***Power***, fail comprehensively to deliver levels of ***power*** required to replace traditional ***power*** generation. His Bio is at this link[4].

OzWindPowerGenerationTFO

[ 1]: [*https://papundits.wordpress.com/2019/10/01/australian-daily-****wind-power****-generation-data-introduction-with-permanent-link-to-daily-posts/*](https://papundits.wordpress.com/2019/10/01/australian-daily-wind-power-generation-data-introduction-with-permanent-link-to-daily-posts/) [ 2]: [*https://papundits.wordpress.com/author/tonyoz/*](https://papundits.wordpress.com/author/tonyoz/) [ 3]: [*https://papundits.wordpress.com*](https://papundits.wordpress.com)/ [ 4]: [*https://papundits.wordpress.com/views-expressed-by-writers-are-their-own-and-do-not/tonyfromoz/*](https://papundits.wordpress.com/views-expressed-by-writers-are-their-own-and-do-not/tonyfromoz/)

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**Load-Date:** April 15, 2022

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[***Marcos highlights PH's wind power potential.(National)***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:6562-VPH1-DYTM-94S1-00000-00&context=1516831)

Manila Bulletin

April 7, 2022

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ASAP

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**Length:** 377 words

**Body**

Presidential candidate Bongbong Marcos has underscored anew the Philippines' potential to become a major player in the ***wind power*** sector.

"We have the potential to be a major ***wind power*** producer in the world. Our unique topography is very suitable for building offshore ***wind*** farms and we should take advantage of it to produce cheap electricity," Marcos said in a statement Wednesday, April 6. The UniTeam member and survey frontrunner made these remarks as the Philippines continues to grapple with exorbitant fuel prices as a result of the global economic bounce-back from the Covid-19 pandemic and the ongoing Russia-Ukraine conflict. "We need to be competitive in a post-pandemic global economy and having low electricity rates is crucial in drawing in more foreign direct investments (FDIs) as we pursue aggressive growth targets," added the Ilocano bet.

According to 2019 data, the Philippines ranks third among Asia countries with the most expensive ***power*** rates at P10 per kilowatt hour (kWh), after Japan and Singapore. The Ilocano Palace aspirant is also hoping for the completion of the offshore ***wind power*** roadmap being developed by the Department of Energy (DOE) and the World Bank Group, which is expected to be ready within the month. The offshore ***wind power*** roadmap will ensure that adequate rules and regulations are in place to guide the government in working with all industry stakeholders. "It would be good to have the roadmap completed at the soonest possible time since it will provide us with the policy framework to fast-track the deployment of ***wind*** farms in the country," added Marcos. According to the World Bank Group, the Philippines has approximately 170 gigawatts (GW) of untapped offshore ***wind*** potential. To date, the DOE has awarded five ***wind*** energy service contracts with a combined capacity of 1.85 GW for offshore ***wind*** projects. These are the contracts for Guimaras Strait (100 megawatts [MW]), Aparri Bay (100 MW), Guimaras Strait II (600 MW), Frontera Bay (450 MW), and San Miguel Bay (600 MW), which are all expected to be completed in 2031. The DOE has also received nine additional letters of intent for offshore projects with a total capacity of 12 GW.

CAPTION(S):

Bangui windmills in Ilocos Norte (Photo from Wikimedia Commons)

**Load-Date:** April 9, 2022

**End of Document**



[***State Intellectual Property Office of China Publishes Jiangsu Gaochuang Wind Power Equipment's Patent Application for Wind Power Generation Cooling Equipment***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:6580-47S1-JBHT-D40B-00000-00&context=1516831)

Global IP News. Energy Patent News

April 16, 2022 Saturday

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**Length:** 354 words

**Dateline:** New Delhi

**Body**

**FULL TEXT**

Publication Name: Energy Patent NewsPatent Application Number: CN202011561210 20201225Patent Publication Number: CN112796961 (A)International Patent Classification Codes: F03D80/60, F03D9/25Cooperative Patent Classification Codes: F03D80/60 (CN), F03D9/25 (CN), Y02E10/72 (EP)Patent Status: Application

Beijing, April 16 -- State Intellectual Property Office of China has published Jiangsu Gaochuang ***Wind Power*** Equipment's patent application for ***wind power*** generation cooling equipment. The invention was developed by Zhao Shumin, Wu Zejun and Wei Tong.

The patent application number is CN202011561210 20201225. The patent publication number is CN112796961 (A). International Patent Classification codes are F03D80/60 and F03D9/25. Cooperative Patent Classification codes are F03D80/60 (CN), F03D9/25 (CN) and Y02E10/72 (EP).

The abstract issued by State Intellectual Property Office of China explains, "The invention discloses ***wind power*** generation cooling equipment. The equipment comprises a mounting device, two air guide devices and a sealing device. The mounting device comprises a shell, an air inlet plate, a transmission shaft, a stand column, a ***power*** generator and a positioning device. Through holes are formed in the front side wall and the rear side wall of the shell correspondingly, and two positioning blocks are welded to the bottom of an inner cavity of the shell. The air inlet plate is fixed to the right side wall of the shell through bolts, and air inlet holes are formed in the air inlet plate. The two air guide devices are installed in the shell, connecting rods and first hydraulic cylinders in the two air guide devices are used in cooperation so that opening and closing of air guide plates can be controlled, the opening angle of the air guide plates can also be adjusted, and then air is guided into a ***wind*** scooper through the air guide plates. The ***wind*** scooper is communicated with each heating device through a manifold, so that heat is taken away by utilizing airflow, energy waste can be greatly reduced, and the service life of the device is prolonged."

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**Load-Date:** April 18, 2022

**End of Document**



[***Huadian Fujian Wind Power Submits Patent Application for Distributed Wind Power Generation Cluster Control Method***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:64WR-PDB1-JBHT-D3CY-00000-00&context=1516831)

Global IP News. Energy Patent News

February 28, 2022 Monday

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**Length:** 438 words

**Dateline:** New Delhi

**Body**

**FULL TEXT**

Publication Name: Energy Patent NewsPatent Application Number: CN202011542366 20201221Patent Publication Number: CN112653187 (A)International Patent Classification Codes: H02J13/00, H02J3/38, H02J3/46Cooperative Patent Classification Codes: H02J13/00002 (CN), H02J13/00032 (CN), H02J3/381 (CN), H02J3/46 (CN), H02J2300/28 (CN), Y02E10/76 (EP), Y02E40/70 (EP), Y04S10/123 (EP)Patent Status: Application

Beijing, Feb. 28 -- Huadian Fujian ***Wind Power*** has submitted a patent application for distributed ***wind power*** generation cluster control method. Xu Xiaofeng, Wang Shaozhe, Liu Jingyao, Jiang Dingyong, Lin Shenghui, Zhang Qi, Wang Jia, Guo Jianhong, Cao Zhigang, Zhu Jin and Ding Zhiyang developed the invention.

The patent application number is CN202011542366 20201221. The patent publication number is CN112653187 (A). International Patent Classification codes are H02J13/00, H02J3/38 and H02J3/46. Cooperative Patent Classification codes are H02J13/00002 (CN), H02J13/00032 (CN), H02J3/381 (CN), H02J3/46 (CN), H02J2300/28 (CN), Y02E10/76 (EP), Y02E40/70 (EP) and Y04S10/123 (EP).

State Intellectual Property Office of China has released the abstract. According to the abstract, "The invention discloses a distributed ***wind power*** generation cluster control method, and belongs to the technical field of energy, wherein the method can be applied to distributed ***wind power*** operation control, optimal scheduling and other scenes. The cluster control process is roughly divided into four steps: 1) carrying out cluster division according to the principles of consistent multi-machine output characteristics, approximate electrical distance, similar control operation modes and benefit for centralized management and control; 2) performing integrated integration and centralized coordination control for the cluster, establishing a hybrid hierarchical control architecture, and realizing multi-machine unified scheduling of the distributed ***power*** supply; 3) deploying a cluster control strategy, realizing coordination control of multiple distributed ***power*** supplies in the cluster, managing active ***power*** control, reactive ***power*** control and voltage safety and stability control of the distributed ***power*** supplies, and realizing a unified control target of the cluster; and 4) realizing cluster control for a specific application scene. According to the invention, the ***power*** generation cost of the distributed ***power*** supply is reduced, the ***power*** grid safety is improved, and the flexible control and regulation capability of the distributed ***power*** supply in a future intelligent ***power*** grid is improved."

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**Load-Date:** March 1, 2022

**End of Document**



[***Australian Daily Wind Power Generation Data - Saturday 16 April 2022***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:657T-X6S1-F03R-N2SM-00000-00&context=1516831)

Newstex Blogs

PA Pundits

April 17, 2022 Sunday 1:06 PM EST

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**Length:** 1134 words

**Byline:** TonyfromOz

**Body**

Apr 17, 2022( PA Pundits: [*http://papundits.wordpress.com*](http://papundits.wordpress.com)/ Delivered by Newstex)

By Anton Lang ~

This Post details the daily ***wind power*** generation data for the AEMO coverage area in Australia. For the background information, refer to the Introductory Post at this link[1].

Each image is shown here at a smaller size to fit on the page alongside the data for that day. If you click on each image, it will open on a new page and at a larger size so you can better see the detail.

Note also that on some days, there will be a scale change for the main ***wind power*** image, and that even though images may look similar in shape for the ***power*** generation black line on the graph when compared to other days, that scale (the total ***power*** shown on the left hand vertical axis) has been changed to show the graph at a larger size to better fit the image for that graph.

Saturday 16 April 2022

Total ***Wind Power*** Generation

[*https://papundits.files.wordpress.com/2022/04/041601wind.jpgThis*](https://papundits.files.wordpress.com/2022/04/041601wind.jpgThis) image shows the total ***power*** generated across the whole day by every ***wind*** plant in this vast AEMO coverage area for Australia.

The total Nameplate for all these ***wind*** plants changes as each new ***wind*** plant comes on line delivering ***power*** to the grid. That current Nameplate is 8587MW, and this is from the current total of 69 ***wind*** plants.

Note that the shape of this ***wind power*** load curve does not follow the shape of the main load curve for total ***power*** generation, and that is seen in the image below, the solid black line across the top of the image for that graph. ***Wind power*** generates its ***power*** only when the ***wind*** is blowing, hence it does not follow the actual ***power*** generation Load Curve, which is also the the exact same shaped curve as for actual ***power*** consumption.

For this data, I have added the times for the daily minimum, and the daily maximum, to show how they do not correlate with the actual times of minimum ***power*** consumption (around 4AM each day) and maximum ***power*** consumption, the evening Peak. (at around 6.40PM in Winter and earlier during the Summer Months.)

Daily Minimum - 600MW (10.40AM)

Daily Maximum - 4163MW (11.59PM)

Average ***Wind*** Generation - 1437MW

Total Generated ***Power*** - 34.48GWH

Percentage Supplied By ***Wind Power*** At The Low Point For The Day - 2.7%

Percentage Supplied By ***Wind Power*** At Peak ***Power*** For The Day - 931MW of 22940MW - 6.10PM - 4.06% (Mid afternoon Peak with rooftop solar added was 23440MW at 11.40AM)

Average Percentage Of Overall Total ***Power*** Generation - %

Daily Operational Capacity Factor - 16.73%

***Wind Power*** Generation Versus Total ***Power*** Generation

[*https://papundits.files.wordpress.com/2022/04/041602windtotal.jpgThis*](https://papundits.files.wordpress.com/2022/04/041602windtotal.jpgThis) image shows the total ***power*** generated from all the ***wind*** plants in this AEMO coverage area, and compares it to the overall total generated ***power*** from every source of ***power*** generation, which is the black line at the top of the graph. ***Wind power*** is the green coloured area, along the bottom of this graph.

While the green colour in this image looks to be a different shape to the graph above, keep in mind here that the scale is completely different, and that green coloured ***Wind*** total is the same as for the image shown above, only with the scale changed so it can fit onto the graph.

Notes

Finding ***Wind Power*** Average - On the graph, there are 25 hourly time points, starting with midnight and finishing with midnight. I have added the total at each of those hourly time points together, and divided the resultant total by 25 to give an average in MegaWatts. (MW) For total ***power*** in GWH, multiply the average daily ***power*** by 24, and then divide by 1000. For the Capacity Factor, that is calculated by dividing the average ***wind*** generation by the current Nameplate and then multiplying that by 100 to give a percentage.

Comments For This Day

***Wind*** generation was lower on this day than it was on the day before, and the average for this day of 1437MW gave ***wind*** generation a daily operational Capacity Factor of 16.7%, and that was fourteen percent lower than the year round average. You can see from that graph for ***wind*** generation that it was low for most of the day and just after the evening Peak passed, it started to rise quite steeply, ironically really, as while ***wind*** was rising, overall ***power*** consumption for the day had already peaked, and was on the way down. It had just started to rise at that usual time of the evening Peak of maximum ***power*** consumption, and at that time, ***wind*** was delivering just 2.7% of all the generated ***power*** from every source. With such a steep rise after that deep low for the day, again that meant that the difference between the low for the day and the high was quite large, and here, on this day that gap was 3563MW, and that's a swing across the day from low to high of 86%.

\*\*\*\*\*

Anton Lang[2] uses the screen name of TonyfromOz, and he writes at this site, PA Pundits International[3] on topics related to electrical ***power*** generation, from all sources, concentrating mainly on Renewable ***Power***, and how the two most favoured methods of renewable ***power*** generation, ***Wind Power*** and all versions of Solar ***Power***, fail comprehensively to deliver levels of ***power*** required to replace traditional ***power*** generation. His Bio is at this link[4].

OzWindPowerGenerationTFO

[ 1]: [*https://papundits.wordpress.com/2019/10/01/australian-daily-****wind-power****-generation-data-introduction-with-permanent-link-to-daily-posts/*](https://papundits.wordpress.com/2019/10/01/australian-daily-wind-power-generation-data-introduction-with-permanent-link-to-daily-posts/) [ 2]: [*https://papundits.wordpress.com/author/tonyoz/*](https://papundits.wordpress.com/author/tonyoz/) [ 3]: [*https://papundits.wordpress.com*](https://papundits.wordpress.com)/ [ 4]: [*https://papundits.wordpress.com/views-expressed-by-writers-are-their-own-and-do-not/tonyfromoz/*](https://papundits.wordpress.com/views-expressed-by-writers-are-their-own-and-do-not/tonyfromoz/)

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**Load-Date:** April 17, 2022

**End of Document**



[***Explained - The UK's new wind power strategy***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:655X-78V1-F03R-N0B4-00000-00&context=1516831)

Newstex Blogs

Politics.co.uk

April 8, 2022 Friday 5:25 PM EST

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**Length:** 281 words

**Byline:** Chris Lomas

**Body**

Apr 08, 2022( Politics.co.uk: [*https://www.politics.co.uk*](https://www.politics.co.uk)/ Delivered by Newstex)

After the government revealed its long-awaited energy strategy this week, there is a notable push for new offshore ***wind*** capacity.

Ministers hope the new plans will generate up to 50 gigawatts of offshore ***wind power*** by 2030.

But why is the government still reluctant to commit to onshore ***wind power***? Chris Lomas breaks down the government's new ***wind power*** strategy.

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**Load-Date:** April 8, 2022

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[***Australian Daily Wind Power Generation Data - Tuesday 12 April 2022***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:656X-NYP1-JCMN-Y0XC-00000-00&context=1516831)

Newstex Blogs

PA Pundits

April 13, 2022 Wednesday 7:05 AM EST

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**Length:** 1074 words

**Byline:** TonyfromOz

**Body**

Apr 13, 2022( PA Pundits: [*http://papundits.wordpress.com*](http://papundits.wordpress.com)/ Delivered by Newstex)

By Anton Lang ~

This Post details the daily ***wind power*** generation data for the AEMO coverage area in Australia. For the background information, refer to the Introductory Post at this link[1].

Each image is shown here at a smaller size to fit on the page alongside the data for that day. If you click on each image, it will open on a new page and at a larger size so you can better see the detail.

Note also that on some days, there will be a scale change for the main ***wind power*** image, and that even though images may look similar in shape for the ***power*** generation black line on the graph when compared to other days, that scale (the total ***power*** shown on the left hand vertical axis) has been changed to show the graph at a larger size to better fit the image for that graph.

Tuesday 12 April 2022

Total ***Wind Power*** Generation

[*https://papundits.files.wordpress.com/2022/04/041201wind.jpgThis*](https://papundits.files.wordpress.com/2022/04/041201wind.jpgThis) image shows the total ***power*** generated across the whole day by every ***wind*** plant in this vast AEMO coverage area for Australia.

The total Nameplate for all these ***wind*** plants changes as each new ***wind*** plant comes on line delivering ***power*** to the grid. That current Nameplate is 8587MW, and this is from the current total of 69 ***wind*** plants.

Note that the shape of this ***wind power*** load curve does not follow the shape of the main load curve for total ***power*** generation, and that is seen in the image below, the solid black line across the top of the image for that graph. ***Wind power*** generates its ***power*** only when the ***wind*** is blowing, hence it does not follow the actual ***power*** generation Load Curve, which is also the the exact same shaped curve as for actual ***power*** consumption.

For this data, I have added the times for the daily minimum, and the daily maximum, to show how they do not correlate with the actual times of minimum ***power*** consumption (around 4AM each day) and maximum ***power*** consumption, the evening Peak. (at around 6.40PM in Winter and earlier during the Summer Months.)

Daily Minimum - 925MW (11.55AM)

Daily Maximum - 2932MW (11.20PM)

Average ***Wind*** Generation - 1932MW

Total Generated ***Power*** - 46.36GWH

Percentage Supplied By ***Wind Power*** At The Low Point For The Day - 3.8%

Percentage Supplied By ***Wind Power*** At Peak ***Power*** For The Day - 1708MW of 26050MW - 6.05PM - 6.56% (Mid afternoon Peak with rooftop solar added was 26280MW at 1.35PM)

Average Percentage Of Overall Total ***Power*** Generation - %

Daily Operational Capacity Factor - 22.50%

***Wind Power*** Generation Versus Total ***Power*** Generation

[*https://papundits.files.wordpress.com/2022/04/041202windtotal.jpgThis*](https://papundits.files.wordpress.com/2022/04/041202windtotal.jpgThis) image shows the total ***power*** generated from all the ***wind*** plants in this AEMO coverage area, and compares it to the overall total generated ***power*** from every source of ***power*** generation, which is the black line at the top of the graph. ***Wind power*** is the green coloured area, along the bottom of this graph.

While the green colour in this image looks to be a different shape to the graph above, keep in mind here that the scale is completely different, and that green coloured ***Wind*** total is the same as for the image shown above, only with the scale changed so it can fit onto the graph.

Notes

Finding ***Wind Power*** Average - On the graph, there are 25 hourly time points, starting with midnight and finishing with midnight. I have added the total at each of those hourly time points together, and divided the resultant total by 25 to give an average in MegaWatts. (MW) For total ***power*** in GWH, multiply the average daily ***power*** by 24, and then divide by 1000. For the Capacity Factor, that is calculated by dividing the average ***wind*** generation by the current Nameplate and then multiplying that by 100 to give a percentage.

Comments For This Day

***Wind*** generation was marginally higher on this day than it was on the day before, and the average for this day of 1932MW gave ***wind*** generation a daily operational Capacity Factor of 22.5%, and that was eight percent lower than the year round average. ***Wind*** was rising, albeit slowly, at the usual time of the evening Peak of maximum ***power*** consumption, and at that time, ***wind*** was delivering 6.5% of all the generated ***power*** from every source. Again, on a day when ***wind power*** had a low under 1000MW, there was a substantial difference between the low for the day and the high, and on this day, that gap was 2007MW.

\*\*\*\*\*

Anton Lang[2] uses the screen name of TonyfromOz, and he writes at this site, PA Pundits International[3] on topics related to electrical ***power*** generation, from all sources, concentrating mainly on Renewable ***Power***, and how the two most favoured methods of renewable ***power*** generation, ***Wind Power*** and all versions of Solar ***Power***, fail comprehensively to deliver levels of ***power*** required to replace traditional ***power*** generation. His Bio is at this link[4].

OzWindPowerGenerationTFO

[ 1]: [*https://papundits.wordpress.com/2019/10/01/australian-daily-****wind-power****-generation-data-introduction-with-permanent-link-to-daily-posts/*](https://papundits.wordpress.com/2019/10/01/australian-daily-wind-power-generation-data-introduction-with-permanent-link-to-daily-posts/) [ 2]: [*https://papundits.wordpress.com/author/tonyoz/*](https://papundits.wordpress.com/author/tonyoz/) [ 3]: [*https://papundits.wordpress.com*](https://papundits.wordpress.com)/ [ 4]: [*https://papundits.wordpress.com/views-expressed-by-writers-are-their-own-and-do-not/tonyfromoz/*](https://papundits.wordpress.com/views-expressed-by-writers-are-their-own-and-do-not/tonyfromoz/)

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**Load-Date:** April 13, 2022

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[***Berlin resolves biodiversity issue to allow expansion of wind power***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:6551-RPY1-JB0G-F1F2-00000-00&context=1516831)

dpa international (Englischer Dienst)

April 4, 2022 Monday 7:11 PM GMT

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**Length:** 394 words

**Byline:** Andreas Hoenig in Berlin

**Dateline:** Berlin (dpa) -

**Body**

The German government has resolved a conflict over biodiversity that will allow for the construction of more ***wind*** turbines.

Lawmakers greeted the step on Monday after years of conflict over the issue, saying it would enable the country to meet its climate goals and also reduce its dependency on Russian gas, amid the ongoing Ukraine conflict.

The Environment and Economics Ministries have reached an agreement to enable the faster expansion of onshore ***wind power*** in a way that is compatible with protecting the environment.

The ministries have set uniform, legal standards for testing and evaluating the extent to which a ***wind*** turbine significantly increases the "collision risk" for endangered bird species.

Species protection and ***wind power*** will be "allies" rather than opponents in the future, said Economy and Environment Minister Robert Habeck. "Species protection and ***wind power*** get along if you do it well."

A list is to be created of breeding bird species that could be at risk of colliding with the ***wind*** turbines, including the white-tailed eagle, the golden eagle and the red kite, for example. Efforts are to be made to ensure the turbines are not built near the breeding sites, which would be off-limits for generating ***wind power***.

The step aims to lead to easier and faster approval procedures that are also to enable older turbines to be replaced with newer models that are higher and more powerful.

The compromise also foresees ***wind*** turbine operators participating in programmes to support particular species.

The agreement comes as Germany seeks more land to expand onshore ***wind power***. The federal states are to be obliged to make 2% of their land available for this source of energy but so far, this aim has not been met. ***Wind power*** plants have often not been approved due to concerns about protecting particular bird species.

Faster expansion of onshore ***wind power*** plays a key role for the federal government in achieving climate protection goals and becoming less dependent on fossil fuel imports from Russia, an issue now urgent given the war in Ukraine and ever louder calls for Germany to halt imports of Russian energy, on which the country is heavily dependent.

However, the German Association of Energy and Water Industries (BDEW) expressed doubts as to whether the agreement would really reduce the obstacles to sufficiently expand onshore ***wind*** energy.

Editorial contactsEditing by: Allison Williams, <[*international@dpa.com*](mailto:international@dpa.com);

**Load-Date:** April 4, 2022

**End of Document**



[***Wind Power Now Accounts For 8% Of Global Generation***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:6586-JPJ1-DXMP-K0XK-00000-00&context=1516831)

Saur Energy International

April 19, 2022 Tuesday 6:30 AM EST

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**Length:** 577 words

**Byline:** Saur News Bureau

**Body**

A surge in Chinese offshore installations has pushed global ***wind*** capacity additions to nearly 100 GW for 2021, according to new research fromRethink Energy. Hitting 92.5 GW for the year, the figure surpassed expectations of 86.4 GW, despite additions falling by 25% compared to 2020.

The findings are set out in a new report calledGlobal ***Wind Power*** Forecast - entering boom phase by 2025, published today.

Overall, China accounted for a leading 51% share of global ***wind*** additions, followed by the USA (15%), Brazil (4%), Sweden (2%), and Turkey (2%). European nations accounted for just 18% in their entirety, with strict planning requirements plaguing the onshore sector, with the EU-27 installing less than half of what should have been installed to stay on track with its Fit-for-55 decarbonization plan. All but two European nations actually saw a decrease in annual installations.

With more dependence on government-related planning restrictions, as well as prices for commodities such as steel, the ***wind*** industry has not grown as consistently as solar. While additions have risen at a CAGR of 8.5% over the past 10 years, there have been five cases where there has been a decline in global activity in successive years.

For 2021, representing the second largest year for annual additions, the 25% dip in installations is largely a result of a flurry of activity in China at the end of 2020; project developers in the country rushed to get projects online ahead of subsidy deadlines at the end of January 2021.

"Despite a 34% drop in overall Chinese additions, it was this same dynamic, replicated in the offshore ***wind*** sector, that has once again pushed China to market domination in 2021", says Harry Morgan,Rethink Energy's ***wind power*** analyst and lead author ofGlobal ***Wind Power*** Forecast - entering boom phase by 2025.

"Accounting for 36% of the country's new capacity, in one year, China managed to install more offshore ***wind*** capacity than the rest of the world has in the past five years combined. Bringing China to 27 GW of offshore ***wind*** capacity in total, it has now blown the UK's market lead out of the water - with the UK sitting on just 11 GW", he says.

In total, while onshore ***wind*** additions fell by 36% globally, offshore ***wind*** additions more than doubled - reaching 19.3 GW for the year. The technology accounted for 21% of total ***wind*** additions, up from 6% last year. While this figure may not be sustained as Chinese additions dip in 2022, the overall share that offshore ***wind*** holds in the market will continue to rise as new countries - including the USA and Japan - rush into the market.

Activity across both onshore and offshore segments sees the global ***wind power*** capacity rise to 836 GW, with 39% of this sitting in China's territory -2.5-times more than its nearest competitor, the USA.

This means than ***wind power*** now accounts for 11% of global ***power*** generation capacity (in GW), with total generation (in GWh) growing 5-fold to now account for 8% of overall supply.

In a year of soaring commodity prices and logistical costs, turbine OEMs and developers have battled tight margins to surpass their expected production capacity growth. Of the OEMs, Vestas regained its crown as the leading supplier - accounting for 16.4% of the market - ahead of China's Goldwind (13.0%), Siemens Gamesa (9.3%), Envision (9.1%), and General Electric (9.0%). GE fell from the top spot in 2020, with its installations in its home US market falling by 22% year-on-year.

**Load-Date:** April 19, 2022

**End of Document**



[***Georgia to begin industrial production of wind power plants***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:652M-V3S1-JCK3-M0J1-00000-00&context=1516831)

Intellinews - Georgia Today

March 24, 2022 Thursday

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**Length:** 256 words

**Body**

Industrial production of ***wind power*** plants in Georgia is expected to begin following the signing of a memorandum between Georgia's Ministry of Economy, the State Military Scientific Centre Delta and the Georgian ***Wind*** Energy Association on 23 March. Production of ***wind*** energy ***power*** plants, creation of new jobs, integration of ***wind power*** into the energy infrastructure and generation of electricity is included in the agreement, the economy ministry said.

The state body, Delta and the association will also make efforts to find potential investors interested in financing and developing production of components of ***wind power*** plants on the territory of Georgia, with the manufacturing of ***wind*** generators and their components set to be located on an industrial area owned by Delta. Negotiations with the leading companies producing ***wind power*** generation equipment, as well as with parties interested in purchasing such equipment and its components, is also included in the memorandum.

A declaration was signed between the Georgian Economy Ministry and the German Development Bank (KfW) on the development of clean and renewable energy in Georgia in November 2021. The deal intended to assess the potential and benefits of green hydrogen, solar energy, water and ***wind*** in the country. It also involved undertaking a pilot project providing benefits to the country's economy, and assisting the development of clean and renewable energy.

A 50 MW ***wind power*** plant near the village of Nigoza in eastern Georgia is planned to begin operations in 2022.

**Load-Date:** March 24, 2022

**End of Document**



[***Australian Daily Wind Power Generation Data - Wednesday 13 April 2022***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:6574-MFW1-F03R-N3WX-00000-00&context=1516831)

Newstex Blogs

PA Pundits

April 14, 2022 Thursday 7:05 AM EST

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**Length:** 1080 words

**Byline:** TonyfromOz

**Body**

Apr 14, 2022( PA Pundits: [*http://papundits.wordpress.com*](http://papundits.wordpress.com)/ Delivered by Newstex)

By Anton Lang ~

This Post details the daily ***wind power*** generation data for the AEMO coverage area in Australia. For the background information, refer to the Introductory Post at this link[1].

Each image is shown here at a smaller size to fit on the page alongside the data for that day. If you click on each image, it will open on a new page and at a larger size so you can better see the detail.

Note also that on some days, there will be a scale change for the main ***wind power*** image, and that even though images may look similar in shape for the ***power*** generation black line on the graph when compared to other days, that scale (the total ***power*** shown on the left hand vertical axis) has been changed to show the graph at a larger size to better fit the image for that graph.

Wednesday 13 April 2022

Total ***Wind Power*** Generation

[*https://papundits.files.wordpress.com/2022/04/041301wind.jpgThis*](https://papundits.files.wordpress.com/2022/04/041301wind.jpgThis) image shows the total ***power*** generated across the whole day by every ***wind*** plant in this vast AEMO coverage area for Australia.

The total Nameplate for all these ***wind*** plants changes as each new ***wind*** plant comes on line delivering ***power*** to the grid. That current Nameplate is 8587MW, and this is from the current total of 69 ***wind*** plants.

Note that the shape of this ***wind power*** load curve does not follow the shape of the main load curve for total ***power*** generation, and that is seen in the image below, the solid black line across the top of the image for that graph. ***Wind power*** generates its ***power*** only when the ***wind*** is blowing, hence it does not follow the actual ***power*** generation Load Curve, which is also the the exact same shaped curve as for actual ***power*** consumption.

For this data, I have added the times for the daily minimum, and the daily maximum, to show how they do not correlate with the actual times of minimum ***power*** consumption (around 4AM each day) and maximum ***power*** consumption, the evening Peak. (at around 6.40PM in Winter and earlier during the Summer Months.)

Daily Minimum - 588MW (1.45PM)

Daily Maximum - 2992MW (12.45AM)

Average ***Wind*** Generation - 2119MW

Total Generated ***Power*** - 50.85GWH

Percentage Supplied By ***Wind Power*** At The Low Point For The Day - 2.3%

Percentage Supplied By ***Wind Power*** At Peak ***Power*** For The Day - 1940MW of 25330MW - 6.05PM - 7.66% (Mid afternoon Peak with rooftop solar added was 25670MW at 11.00AM)

Average Percentage Of Overall Total ***Power*** Generation - %

Daily Operational Capacity Factor - 24.68%

***Wind Power*** Generation Versus Total ***Power*** Generation

[*https://papundits.files.wordpress.com/2022/04/041302windtotal.jpgThis*](https://papundits.files.wordpress.com/2022/04/041302windtotal.jpgThis) image shows the total ***power*** generated from all the ***wind*** plants in this AEMO coverage area, and compares it to the overall total generated ***power*** from every source of ***power*** generation, which is the black line at the top of the graph. ***Wind power*** is the green coloured area, along the bottom of this graph.

While the green colour in this image looks to be a different shape to the graph above, keep in mind here that the scale is completely different, and that green coloured ***Wind*** total is the same as for the image shown above, only with the scale changed so it can fit onto the graph.

Notes

Finding ***Wind Power*** Average - On the graph, there are 25 hourly time points, starting with midnight and finishing with midnight. I have added the total at each of those hourly time points together, and divided the resultant total by 25 to give an average in MegaWatts. (MW) For total ***power*** in GWH, multiply the average daily ***power*** by 24, and then divide by 1000. For the Capacity Factor, that is calculated by dividing the average ***wind*** generation by the current Nameplate and then multiplying that by 100 to give a percentage.

Comments For This Day

***Wind*** generation was again marginally higher than it was on the day before, and the average for this day of 2119MW gave ***wind*** generation a daily operational Capacity Factor of 24.7%, and that was six percent lower than the year round average. After that very low dip in the afternoon, ***wind*** was rising again at the usual time of the evening Peak of maximum ***power*** consumption, and at that time, ***wind*** was delivering 7.7% pf all the generated ***power*** from every source. With that deep low dip point for the day, that meant that again there was a substantial difference between the high for the day and the low, and for this day, that gap was 2404MW.

\*\*\*\*\*

Anton Lang[2] uses the screen name of TonyfromOz, and he writes at this site, PA Pundits International[3] on topics related to electrical ***power*** generation, from all sources, concentrating mainly on Renewable ***Power***, and how the two most favoured methods of renewable ***power*** generation, ***Wind Power*** and all versions of Solar ***Power***, fail comprehensively to deliver levels of ***power*** required to replace traditional ***power*** generation. His Bio is at this link[4].

OzWindPowerGenerationTFO

[ 1]: [*https://papundits.wordpress.com/2019/10/01/australian-daily-****wind-power****-generation-data-introduction-with-permanent-link-to-daily-posts/*](https://papundits.wordpress.com/2019/10/01/australian-daily-wind-power-generation-data-introduction-with-permanent-link-to-daily-posts/) [ 2]: [*https://papundits.wordpress.com/author/tonyoz/*](https://papundits.wordpress.com/author/tonyoz/) [ 3]: [*https://papundits.wordpress.com*](https://papundits.wordpress.com)/ [ 4]: [*https://papundits.wordpress.com/views-expressed-by-writers-are-their-own-and-do-not/tonyfromoz/*](https://papundits.wordpress.com/views-expressed-by-writers-are-their-own-and-do-not/tonyfromoz/)

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**Load-Date:** April 14, 2022

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[***Berlin resolves biodiversity issue to allow expansion of wind power***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:6552-MSW1-J9XT-N2WS-00000-00&context=1516831)

dpa-AFX International ProFeed

April 4, 2022 Monday 7:12 PM GMT

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**Length:** 411 words

**Body**

By Andreas Hoenig, dpa BERLIN (dpa-AFX) - The German government has resolved a conflict over biodiversity that will allow for the construction of more ***wind*** turbines. Lawmakers greeted the step on Monday after years of conflict over the issue, saying it would enable the country to meet its climate goals and also reduce its dependency on Russian gas, amid the ongoing Ukraine conflict. The Environment and Economics Ministries have reached an agreement to enable the faster expansion of onshore ***wind power*** in a way that is compatible with protecting the environment. The ministries have set uniform, legal standards for testing and evaluating the extent to which a ***wind*** turbine significantly increases the "collision risk" for endangered bird species. Species protection and ***wind power*** will be "allies" rather than opponents in the future, said Economy and Environment Minister Robert Habeck. "Species protection and ***wind power*** get along if you do it well." A list is to be created of breeding bird species that could be at risk of colliding with the ***wind*** turbines, including the white-tailed eagle, the golden eagle and the red kite, for example. Efforts are to be made to ensure the turbines are not built near the breeding sites, which would be off-limits for generating ***wind power***. The step aims to lead to easier and faster approval procedures that are also to enable older turbines to be replaced with newer models that are higher and more powerful. The compromise also foresees ***wind*** turbine operators participating in programmes to support particular species. The agreement comes as Germany seeks more land to expand onshore ***wind power***. The federal states are to be obliged to make 2% of their land available for this source of energy but so far, this aim has not been met. ***Wind power*** plants have often not been approved due to concerns about protecting particular bird species. Faster expansion of onshore ***wind power*** plays a key role for the federal government in achieving climate protection goals and becoming less dependent on fossil fuel imports from Russia, an issue now urgent given the war in Ukraine and ever louder calls for Germany to halt imports of Russian energy, on which the country is heavily dependent. However, the German Association of Energy and Water Industries (BDEW) expressed doubts as to whether the agreement would really reduce the obstacles to sufficiently expand onshore ***wind*** energy. Copyright dpa

**Load-Date:** April 4, 2022

**End of Document**



[***Zhuzhou Times New Mat Tech Submits Patent Application for Wind Power Blade Lightning Protection System and Lightning Protection Wind Power Blade***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:6503-C6F1-JBHT-D0KM-00000-00&context=1516831)

Global IP News. Energy Patent News

March 10, 2022 Thursday

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**Length:** 352 words

**Dateline:** New Delhi

**Body**

**FULL TEXT**

Publication Name: Energy Patent NewsPatent Application Number: CN20211003462 20210104Patent Publication Number: CN112682275 (A)International Patent Classification Codes: F03D1/06, F03D80/30Cooperative Patent Classification Codes: Y02E10/72 (EP)Patent Status: Application

Beijing, March 10 -- Zhuzhou Times New Mat Tech has submitted a patent application for ***wind power*** blade lightning protection system and lightning protection ***wind power*** blade. Hu Jiehua, Xiao Qiong, Yi Liyi, Liang Pengcheng, Yang Jun, Peng Chaoyi, Feng Xuebin, Peng Bo, Tan Long and Fan Sheng developed the invention.

The patent application number is CN20211003462 20210104. The patent publication number is CN112682275 (A). International Patent Classification codes are F03D1/06 and F03D80/30. Cooperative Patent Classification code is Y02E10/72 (EP).

State Intellectual Property Office of China has released the abstract. According to the abstract, "The invention discloses a ***wind power*** blade lightning protection system and a lightning protection ***wind power*** blade. The ***wind power*** blade lightning protection system comprises a metal net laid on the surface of the ***wind power*** blade, the metal net is connected with a down lead, the down lead is connected with a whole machine lightning protection system of a ***wind power*** generator, multiple layers of additional metal nets are overlapped on the metal net, metal belts are clamped between the metal net and the additional metal nets and between the adjacent layers of additional metal nets, and the multiple metal belts extend into a cavity of the ***wind power*** blade to be twisted into a strand and then connected with the down lead. According to the ***wind*** turbine blade lightning protection system and the lightning protection ***wind*** turbine blade, the sudden change degree of resistance from the metal nets to the metal belts can be reduced, and thus damage of lightning current to the metal nets in the area near the connecting position of the metal belts is reduced in the process that the lightning current is conducted to the down lead from the metal nets."

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**Load-Date:** March 12, 2022

**End of Document**



[***XCMG's XGC15000A Sets New Wind Power Hoisting Record***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:6521-8XP1-JB5M-W3F2-00000-00&context=1516831)

Constrofacilitator.com

March 19, 2022 Saturday 6:30 AM EST

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**Length:** 384 words

**Byline:** Constro Facilitator

**Body**

XCMG's 1,000-ton crawler crane, XGC15000A, has set a new world record after completing its first single-arm ***wind power*** hoisting operation at a height of 172+12 meters for the Jinjiaozhou ***wind power*** farm in Qingdao, China .

Weighing in at 118 tons the 4.5MW ***wind power*** turbine hoisted to a height of 170 meters with the diameter of the impeller reaching 156 meters. It adopts the world-leading prestressed fatigue resistant framed steel pipe ***wind power*** tower that greatly increases the height of the ***wind*** turbine when compared with the common 120-140 meters flexible tower in the industry, which better utilizes ***wind*** resources and increases ***power*** generation efficiency.

However, the higher installation height posed greater challenges for the crawler crane.

The flat and open project site usually experiences strong ***wind*** greater than level 5, and the fully prepared construction team quickly completed the operation during a short "***wind***-free" time window, thanks to the powerful and stable performance of the XGC15000A.

"The tower height at this ***wind*** farm will reach 180 meters or even above 200 meters, and facing these challenges, we found that XCMG had already taken everything into consideration. We believe XCMG can fully meet our needs in the future," noted Di Caijin, who was responsible for the on-site hoisting operation.

The successful installation makes the XGC15000A the world's first ***wind power*** crawler crane to achieve a hoisting height of 170 meters. China has pledged to reach carbon peak by 2030 and carbon neutrality by 2060, and according to the latest analysis from Wood Mackenzie, the country is expected to reach 700GW of cumulative connected ***wind*** capacity by 2030 and annual ***wind*** and photovoltaic installed capacity needs will reach 100- to 200 million kilowatts, which calls for more ***wind power*** projects to be developed at lower costs.

In February, XCMG delivered China's largest tonnage ***wind power*** reach stacker, XCS70S, which was co-developed and customized by XCMG and CRRC Zhuzhou Institute ***Wind Power*** Business Unit. With a rated load of 70 tons, the product has a much broader range of applications and was designed for the hoisting operations of large-scale ***wind*** turbines and equipment. It is equipped with exclusive spreaders that increase hoisting and handling efficiency three-fold.

**Load-Date:** March 21, 2022

**End of Document**



[***Favourable breezes boost Spain's wind power sector***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:6568-VXR1-JCMN-Y12K-00000-00&context=1516831)

Newstex Blogs

Digital Journal

April 10, 2022 Sunday 3:00 AM EST

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**Length:** 1118 words

**Byline:** AFP

**Body**

Apr 10, 2022( Digital Journal: [*http://www.digitaljournal.com*](http://www.digitaljournal.com) Delivered by Newstex)

Buoyed by a surge in investment and new projects, ***wind power*** has become Spain's main source of electricity generation just as Europe seeks to curb its energy imports from Russia.

'We are on suitable ground here,' said Joaquin Garcia Latorre, project director at Enel Green ***Power*** Espana, pointing to gigantic masts erected on the heights of the tiny northeastern village of Villar de los Navarros.

The Spanish-Italian firm picked this spot, which is well exposed to the ***wind***, to set up a 180-megawatt ***wind*** farm, one of the country's biggest.

Dubbed Tico ***Wind***, its 43 ***wind*** turbines started producing ***power*** in November, said Latorre while workers around him tended to the turbines, which are over 100 metres (328 feet) high.

'There are between 2,500 and 3,000 hours of ***wind*** here per year,' he added.

The ***wind*** farm will be able to produce 471 gigawatt hours per year — enough to meet the demands of 148,000 households — after it becomes fully operational in a month.

These types of projects have popped up across Spain in recent years, making it Europe's second-biggest ***wind power*** producer after Germany for installed capacity and the world's fifth biggest.

***Wind power*** became the main source of electricity production in Spain last year, accounting for 23 percent, ahead of nuclear (21 percent) and gas (17 percent), according to national grid operator REE.

The sector 'benefits from a favourable situation' although 'brakes' remain on its development, such as a dependency on government auctions, said Francisco Valverde Sanchez, renewables specialist at electricity consultants Menta Energia.

- Investor interest -

Following a boom in the 2000s thanks to generous public financial aid, the sector suffered a sudden halt when subsidies were slashed in 2013 during Spain's economic crisis.

It has since charged ahead. Spain, which has a total of 1,265 ***wind*** farms, had an installed ***wind power*** capacity of 28.1 gigawatts in 2021, up from 23.4 gigawatts in 2018, according to industry group AEE.

With large swathes of sparsely populated land, a favourable legal framework and cutting edge ***wind*** turbine makers, Spain is one of the most 'interesting' markets for ***wind power*** investors, said AEE director general Juan Virgilio Marquez.

Spain is home to several sector heavyweights such as Iberdrola and Naturgay, making it a top exporter of ***wind power*** equipment. 'This explains the dynamism of the sector,' said Marquez.

Investor interest has even come from outside of the energy sector.

In November Spain's Amancio Ortega, the founder of fast fashion giant Zara and one of the world's richest men, injected 245 million euros ($268 million) in a ***wind*** farm in the northeastern region of Aragon.

- Energy 'breadbasket' -

Spain in 2020 pledged to generate 74 percent of its electricity from renewable sources by 2030, up from 47 percent.

To meet this target, Spain is counting on the development of offshore ***wind power***, a sector that is in its infancy.

But since Spain has thousands of kilometres of coastline, offshore ***wind*** has lots of room to grow.

'This is an ambitious goal,' said Valverde Sanchez, arguing that government bureaucracy around ***wind*** farm projects must be reduced for it to be met.

Nearly 600 ***wind power*** projects are currently under study by the government, according to AEE.

As part of its plan to respond to the economic fallout from Russia's invasion of Ukraine, Spain has pledged to speed up the approval of ***wind power*** projects of less than 75 megawatts.

'Our country had enough natural resources to become Europe's leading producer and exporter of renewable energy,' Prime Minister Pedro Sanchez said Wednesday, adding this could be key to help the European Union meet its goal of 'energy independence'.

Since Russia invaded Ukraine on February 24, Brussels has declared a mission to cut the EU's Russian gas imports by two thirds this year and to end the use of Russian gas by 2027.

Spain 'could become the energy 'breadbasket' of Europe,' said Virgilio Marquez.

[*https://www.addtoany.com/add\_to/facebook?linkurl=https%3A%2F%2Fwww.digitaljournal.com%2Fbusiness%2Ffavourable-breezes-boost-spains-****wind-power****-sector%2Farticle&linkname=Favourable%20breezes%20boost%20Spain%E2%80%99s%20wind%20power%20sectorhttps://www.addtoany.com/add\_to/twitter?linkurl=https%3A%2F%2Fwww.digitaljournal.com%2Fbusiness%2Ffavourable-breezes-boost-spains-****wind-power****-sector%2Farticle&linkname=Favourable%20breezes%20boost%20Spain%E2%80%99s%20wind%20power%20sectorhttps://www.addtoany.com/add\_to/linkedin?linkurl=https%3A%2F%2Fwww.digitaljournal.com%2Fbusiness%2Ffavourable-breezes-boost-spains-****wind-power****-sector%2Farticle&linkname=Favourable%20breezes%20boost%20Spain%E2%80%99s%20wind%20power%20sectorhttps://www.addtoany.com/add\_to/email?linkurl=https%3A%2F%2Fwww.digitaljournal.com%2Fbusiness%2Ffavourable-breezes-boost-spains-****wind-power****-sector%2Farticle&linkname=Favourable%20breezes%20boost%20Spain%E2%80%99s%20wind%20power%20sectorhttps://www.addtoany.com/share#url=https%3A%2F%2Fwww.digitaljournal.com%2Fbusiness%2Ffavourable-breezes-boost-spains-****wind-power****-sector%2Farticle&title=Favourable%20breezes%20boost%20Spain%E2%80%99s%20wind%20power%20sector*](https://www.addtoany.com/add_to/facebook?linkurl=https%3A%2F%2Fwww.digitaljournal.com%2Fbusiness%2Ffavourable-breezes-boost-spains-wind-power-sector%2Farticle&linkname=Favourable%20breezes%20boost%20Spain%E2%80%99s%20wind%20power%20sectorhttps://www.addtoany.com/add_to/twitter?linkurl=https%3A%2F%2Fwww.digitaljournal.com%2Fbusiness%2Ffavourable-breezes-boost-spains-wind-power-sector%2Farticle&linkname=Favourable%20breezes%20boost%20Spain%E2%80%99s%20wind%20power%20sectorhttps://www.addtoany.com/add_to/linkedin?linkurl=https%3A%2F%2Fwww.digitaljournal.com%2Fbusiness%2Ffavourable-breezes-boost-spains-wind-power-sector%2Farticle&linkname=Favourable%20breezes%20boost%20Spain%E2%80%99s%20wind%20power%20sectorhttps://www.addtoany.com/add_to/email?linkurl=https%3A%2F%2Fwww.digitaljournal.com%2Fbusiness%2Ffavourable-breezes-boost-spains-wind-power-sector%2Farticle&linkname=Favourable%20breezes%20boost%20Spain%E2%80%99s%20wind%20power%20sectorhttps://www.addtoany.com/share#url=https%3A%2F%2Fwww.digitaljournal.com%2Fbusiness%2Ffavourable-breezes-boost-spains-wind-power-sector%2Farticle&title=Favourable%20breezes%20boost%20Spain%E2%80%99s%20wind%20power%20sector)

The post Favourable breezes boost Spain's ***wind power*** sector[1] appeared first on Digital Journal[2].

[ 1]: [*https://www.digitaljournal.com/business/favourable-breezes-boost-spains-****wind-power****-sector/article*](https://www.digitaljournal.com/business/favourable-breezes-boost-spains-wind-power-sector/article) [ 2]: [*https://www.digitaljournal.com*](https://www.digitaljournal.com)

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**Load-Date:** April 10, 2022

**End of Document**



[***Ministries reach agreement on wind power expansion in Germany***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:654D-R771-J9XT-N1CS-00000-00&context=1516831)

dpa-AFX International ProFeed

April 1, 2022 Friday 12:07 PM GMT

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**Length:** 297 words

**Body**

BERLIN (dpa-AFX) - After years of debate in Germany over how best to balance the expansion of ***wind power*** and environmental protection, the country's Environment and Economics Ministries have reached an agreement, the Environment Ministry announced on Friday. The ministries have drawn up an agreed approach for developing an environmentally sound expansion of onshore ***wind*** energy, the Environment Ministry said, ahead of a press conference planned for Monday. The goal of the agreement was to be able to grant planning permission for new ***wind*** turbines rapidly and in a legally secure manner while maintaining the high environmental protection standards required by European law, it said, though it gave no further details. Environment Minister Steffi Lemke and Climate Protection Minister Robert Habeck, both members of the Greens, will present the key points of the agreement next week. The need to accelerate Germany's expansion of renewable energies while maintaining high environmental protection standards has been a contentious issue for the two ministries for years. However, the faster expansion of onshore ***wind power*** plays a key role in achieving the German government's climate protection targets and, crucially in light of the war in Ukraine, in reducing its dependence on Russian fossil fuel imports. Germany lacks land designated for the construction of ***wind*** turbines, and attempts to change this have often been prevented by species protection concerns. This was demonstrated in a report produced by a state and federal committee on the status of ***wind power*** expansion last October, which also found that the resistance to the expansion of ***wind power*** on the environmental grounds has been particularly entrenched at the state level. Copyright dpa

**Load-Date:** April 1, 2022

**End of Document**



[***Australian Daily Wind Power Generation Data - Saturday 9 April 2022***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:6568-VXN1-JCMN-Y43K-00000-00&context=1516831)

Newstex Blogs

PA Pundits

April 10, 2022 Sunday 7:06 AM EST

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**Length:** 1076 words

**Byline:** TonyfromOz

**Body**

Apr 10, 2022( PA Pundits: [*http://papundits.wordpress.com*](http://papundits.wordpress.com)/ Delivered by Newstex)

By Anton Lang ~

This Post details the daily ***wind power*** generation data for the AEMO coverage area in Australia. For the background information, refer to the Introductory Post at this link[1].

Each image is shown here at a smaller size to fit on the page alongside the data for that day. If you click on each image, it will open on a new page and at a larger size so you can better see the detail.

Note also that on some days, there will be a scale change for the main ***wind power*** image, and that even though images may look similar in shape for the ***power*** generation black line on the graph when compared to other days, that scale (the total ***power*** shown on the left hand vertical axis) has been changed to show the graph at a larger size to better fit the image for that graph.

Saturday 9 April 2022

Total ***Wind Power*** Generation

[*https://papundits.files.wordpress.com/2022/04/040901wind.jpgThis*](https://papundits.files.wordpress.com/2022/04/040901wind.jpgThis) image shows the total ***power*** generated across the whole day by every ***wind*** plant in this vast AEMO coverage area for Australia.

The total Nameplate for all these ***wind*** plants changes as each new ***wind*** plant comes on line delivering ***power*** to the grid. That current Nameplate is 8587MW, and this is from the current total of 69 ***wind*** plants.

Note that the shape of this ***wind power*** load curve does not follow the shape of the main load curve for total ***power*** generation, and that is seen in the image below, the solid black line across the top of the image for that graph. ***Wind power*** generates its ***power*** only when the ***wind*** is blowing, hence it does not follow the actual ***power*** generation Load Curve, which is also the the exact same shaped curve as for actual ***power*** consumption.

For this data, I have added the times for the daily minimum, and the daily maximum, to show how they do not correlate with the actual times of minimum ***power*** consumption (around 4AM each day) and maximum ***power*** consumption, the evening Peak. (at around 6.40PM in Winter and earlier during the Summer Months.)

Daily Minimum - 1575MW (2.55PM)

Daily Maximum - 3756MW (1.15AM)

Average ***Wind*** Generation - 2759MW

Total Generated ***Power*** - 66.21GWH

Percentage Supplied By ***Wind Power*** At The Low Point For The Day - 7.5%

Percentage Supplied By ***Wind Power*** At Peak ***Power*** For The Day - 2080MW of 23960MW - 6.15PM - 8.68% (Mid afternoon Peak with rooftop solar added was 24900MW at 10.45AM)

Average Percentage Of Overall Total ***Power*** Generation - %

Daily Operational Capacity Factor - 32.13%

***Wind Power*** Generation Versus Total ***Power*** Generation

[*https://papundits.files.wordpress.com/2022/04/040902windtotal.jpgThis*](https://papundits.files.wordpress.com/2022/04/040902windtotal.jpgThis) image shows the total ***power*** generated from all the ***wind*** plants in this AEMO coverage area, and compares it to the overall total generated ***power*** from every source of ***power*** generation, which is the black line at the top of the graph. ***Wind power*** is the green coloured area, along the bottom of this graph.

While the green colour in this image looks to be a different shape to the graph above, keep in mind here that the scale is completely different, and that green coloured ***Wind*** total is the same as for the image shown above, only with the scale changed so it can fit onto the graph.

Notes

Finding ***Wind Power*** Average - On the graph, there are 25 hourly time points, starting with midnight and finishing with midnight. I have added the total at each of those hourly time points together, and divided the resultant total by 25 to give an average in MegaWatts. (MW) For total ***power*** in GWH, multiply the average daily ***power*** by 24, and then divide by 1000. For the Capacity Factor, that is calculated by dividing the average ***wind*** generation by the current Nameplate and then multiplying that by 100 to give a percentage.

Comments For This Day

***Wind*** generation was marginally lower on this day than it was on the day before. The average for this day of 2759MW gave ***wind*** generation a daily operational capacity Factor of 32.1%, and that was two percent lower than the year round average. ***Wind*** generation fell across the early part of the day, and after a slight rise, was still rising at the usual time of the evening Peak of maximum ***power*** consumption, and at that time, ***wind*** was delivering 8.7% of all the generated ***power*** form every source. There was again a substantial difference between the high for the day and the low, and here, on this day, that gap was 2181MW.

\*\*\*\*\*

Anton Lang[2] uses the screen name of TonyfromOz, and he writes at this site, PA Pundits International[3] on topics related to electrical ***power*** generation, from all sources, concentrating mainly on Renewable ***Power***, and how the two most favoured methods of renewable ***power*** generation, ***Wind Power*** and all versions of Solar ***Power***, fail comprehensively to deliver levels of ***power*** required to replace traditional ***power*** generation. His Bio is at this link[4].

OzWindPowerGenerationTFO

[ 1]: [*https://papundits.wordpress.com/2019/10/01/australian-daily-****wind-power****-generation-data-introduction-with-permanent-link-to-daily-posts/*](https://papundits.wordpress.com/2019/10/01/australian-daily-wind-power-generation-data-introduction-with-permanent-link-to-daily-posts/) [ 2]: [*https://papundits.wordpress.com/author/tonyoz/*](https://papundits.wordpress.com/author/tonyoz/) [ 3]: [*https://papundits.wordpress.com*](https://papundits.wordpress.com)/ [ 4]: [*https://papundits.wordpress.com/views-expressed-by-writers-are-their-own-and-do-not/tonyfromoz/*](https://papundits.wordpress.com/views-expressed-by-writers-are-their-own-and-do-not/tonyfromoz/)

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**Load-Date:** April 10, 2022

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[***Global and China Wind Power Industry Report 2021***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:64PD-XH61-DY6B-246J-00000-00&context=1516831)

MENAFN - Press Releases (English)

February 4, 2022 Friday

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**Length:** 1143 words

**Body**

[*Link to Story*](https://menafn.com/1103641834/Global-and-China-Wind-Power-Industry-Report-2021)

Dublin, Feb. 04, 2022 (GLOBE NEWSWIRE) -- The 'Global and China's ***Wind Power*** Industry Research Report 2016-2030' report has been added to ResearchAndMarkets.com's offering.

The continued increase in newly installed ***wind power*** capacity in China has made China the largest region in the world in terms of cumulative installed ***wind power*** capacity, surpassing the EU. 2020 is a record year for the global ***wind power*** industry, with 93GW of new installations worldwide, up 53% YOY.

In 2020, China's newly added ***wind power*** capacity reached 52GW, double the amount of new ***wind power*** capacity installed in 2019. China has become one of the world's largest ***wind power*** markets, with record growth in installed ***wind power*** in 2020, and its onshore ***wind power*** was responsible for 56.3% of the total new installations worldwide.

In the emerging offshore ***wind*** sector in recent years, the total cumulative global offshore ***wind power*** installed in 2020 was 35 GW, with 6.1 GW of new installations, down slightly from 6.24 GW in 2019.

China achieved more than 3 GW of new grid-connected offshore ***wind power*** in 2020, becoming the world's largest offshore ***wind*** market for the third consecutive year. The European market maintained steady growth, with the Netherlands ranking second globally with nearly 1.5 GW of new installations and Belgium in third place (706 MW).

It is expected that with the existing ***wind power*** policy, 235 GW of new offshore ***wind power*** will be installed worldwide in the next decade, an increase equivalent to seven times the existing offshore ***wind power*** installation.

According to this analysis, China's ***wind power*** market is somewhat different from the global market. 20,401 new units were installed in China in 2020, with a capacity of 54.43 million kW, an increase of 105.1% YOY. Such a prosperous market, however, has barely developed relationships with overseas companies.

The world's highest-ranked company, Vestas, accounts for only 2.1% of installed capacity in China's ***wind*** turbine market, ranking 11th in terms of new installed capacity for China's ***wind*** turbine manufacturers in 2020.

Accordingly, overseas markets are not open to Chinese companies. In 2020, China exported a total of 1188 MW of ***wind*** turbine capacity, accounting for only 2-3% of the total global installed capacity outside of China. At the same time, China's ***wind power*** machine industry is highly concentrated.

The leading enterprises are more advanced in capital, technology accumulation, and industry chain integrity, with obvious advantages in the market competition, so they hold a stable leading position.

Xinjiang Goldwind Science & Technology Co., Ltd., Envision Energy and Ming Yang Smart Energy Group Limited, three ***wind*** turbine manufacturers, have been holding the top three positions in the industry since 2016. From 2016 to 2020, according to the size of the Chinese market, CR5 increased from 60% to 70%, CR10 from 84% to 90%.

In terms of cost, ***wind power*** costs are lower than PV costs. Globally, among offshore ***wind***, onshore ***wind***, and PV, onshore ***wind*** has the lowest LCOE of 0.25 RMB/KWh. According to the global LCOE data published by the International Renewable Energy Agency (IRENA), offshore ***wind***, onshore ***wind***, and PV had decreased by 48%, 56%, and 85% respectively, from 2010 to 2020. By 2020, the LCOE for offshore ***wind***, onshore ***wind***, and PV was about RMB 0.54/KWh, RMB 0.25/KWh, and RMB 0.37/KWh respectively.

Compared to the decline in PV, onshore ***wind power*** still has more room for improvement. China's average LCOE for onshore ***wind*** is among the highest in the world, at 0.24 RMB (about 3.7 cents)/KWh in 2020.

According to the plan of China's National Energy Administration, China's total installed ***wind*** PV capacity will reach more than 1.2 billion kW (about 1200 GW) by the end of 2030. It means that during 2022-2030, China will need to add at least about 300 million kW of ***wind power***, with an average annual installed capacity of at least 30 GW. For ***wind power***, with little policy change, the industry will continue to grow at least by 2030. And the global ***wind power*** industry is expected to continue to have strong growth momentum by 2050.

Key Topics Covered:

1 ***Wind Power*** Industry Overview

1.1 Definition and Classification

1.1.1 Definition

1.1.2 Classification

1.2 Global ***Wind Power*** Industry Overview

1.3 Impact of COVID-19 on ***Wind Power*** Industry

2 ***Wind Power*** Industry Development Environment 2016-2020

2.1 Economic Environment

2.1.1 Global Economy

2.1.2 China's Economy

2.2 Policy Environment

2.2.1 Policy Overview

2.2.2 Policy Trends

3 Current Situation of ***Wind Power*** Industry, 2016-2021

3.1 Supply

3.1.1 Global Production

3.1.2 China's Production

3.2 Demand

3.2.1 International Market

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8.4 Investment and Development Suggestions for China's ***Wind Power*** Industry, 2022-2030

For more information about this report visit

Attachment

* Global and China ***Wind Power*** Market

Global and China ***Wind Power*** Market Global and China ***Wind Power*** Market Tags Onshore ***Wind*** Onshore ***Wind Power*** ***Wind*** Energy ***Wind*** Market ***Wind Power Wind Power*** Equipment ***Wind Power*** Generation ***Wind*** TurbineMENAFN04022022004107003653ID1103641834

**Load-Date:** February 4, 2022

**End of Document**



[***Wind Power Passes Coal And Nuclear As Power Generation Source In US***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:6587-CRP1-F11P-X45S-00000-00&context=1516831)

Energy Monitor Worldwide

April 19, 2022 Tuesday

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**Length:** 397 words

**Body**

***Wind power*** became the second-largest source of electricity in the US last month.

Electricity created by ***wind*** surpassed that generated by both coal and nuclear on 29 March, meaning energy created by ***wind power*** was second only to natural gas energy on that day.

It marks the first time in recorded history that energy generated by ***wind*** surpassed all other energy sources bar gas for an entire day.

In 2021, ***wind*** beat out coal and nuclear, but just for a single hour.

29 Marchs data was collected by the Energy Information Administrations (EIA) Hourly Electric Grid Monitor.

The administrations data showed that ***wind*** turbines in 48 states produced 2,017 gigawatt hours of electricity on 29 March, totalling 19% of energy generated.

This means ***wind power*** generated 2% more electricity than coal and a sliver more percentage-wise than nuclear.

Natural gas generated 31% of electricity in the US on 29 March.

The EIA pins the new record on ***wind power*** growth across the United States, as per Vice. According to the outlet, ***wind*** accounted for a whopping 42% of new energy in the US last year after the quantity of ***wind*** turbines across the country sky-rocketed.

To put things into perspective, ***wind power*** generated approximately six billion kilowatt hours in 2000, but by 2021 that had jumped to 380 billion.

Announcing the news in a press release, the EIA explained that ***wind*** speeds pick up during spring and warmer temperatures mean a drop in energy demands, which leads to a reduction in the production of coal-fired and nuclear generators.

The report read: Daily ***wind-powered*** electricity had surpassed coal-fired and nuclear electricity generation separately on other days earlier this year but had not surpassed both sources on a single day.

However, the EIA heeded: We do not expect ***wind*** to surpass either coal-fired or nuclear generation for any month in 2022 or 2023, based on our most recent forecast.

***Wind power*** statistics are flourishing across the pond, too.

The Observer carried out a poll this month that revealed more than three-quarters of the public are in favour of windfarms being built across Britain.

Whats more, the papers research indicated that Tories are almost just as keen on the development of new windfarms as Labour and Lib Dem voters.

79% of Tory voters said they were strongly or somewhat in favour of windfarm installation compared to 83% of Labour voters and 88% of Lib Dems.

**Load-Date:** April 19, 2022

**End of Document**



[***Australian Daily Wind Power Generation Data - Monday 11 April 2022***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:656P-R111-F03R-N2CH-00000-00&context=1516831)

Newstex Blogs

PA Pundits

April 12, 2022 Tuesday 5:11 AM EST

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**Length:** 1187 words

**Byline:** TonyfromOz

**Body**

Apr 12, 2022( PA Pundits: [*http://papundits.wordpress.com*](http://papundits.wordpress.com)/ Delivered by Newstex)

By Anton Lang ~

This Post details the daily ***wind power*** generation data for the AEMO coverage area in Australia. For the background information, refer to the Introductory Post at this link[1].

Each image is shown here at a smaller size to fit on the page alongside the data for that day. If you click on each image, it will open on a new page and at a larger size so you can better see the detail.

Note also that on some days, there will be a scale change for the main ***wind power*** image, and that even though images may look similar in shape for the ***power*** generation black line on the graph when compared to other days, that scale (the total ***power*** shown on the left hand vertical axis) has been changed to show the graph at a larger size to better fit the image for that graph.

Monday 11 April 2022

Total ***Wind Power*** Generation

[*https://papundits.files.wordpress.com/2022/04/041101wind.jpgThis*](https://papundits.files.wordpress.com/2022/04/041101wind.jpgThis) image shows the total ***power*** generated across the whole day by every ***wind*** plant in this vast AEMO coverage area for Australia.

The total Nameplate for all these ***wind*** plants changes as each new ***wind*** plant comes on line delivering ***power*** to the grid. That current Nameplate is 8587MW, and this is from the current total of 69 ***wind*** plants.

Note that the shape of this ***wind power*** load curve does not follow the shape of the main load curve for total ***power*** generation, and that is seen in the image below, the solid black line across the top of the image for that graph. ***Wind power*** generates its ***power*** only when the ***wind*** is blowing, hence it does not follow the actual ***power*** generation Load Curve, which is also the the exact same shaped curve as for actual ***power*** consumption.

For this data, I have added the times for the daily minimum, and the daily maximum, to show how they do not correlate with the actual times of minimum ***power*** consumption (around 4AM each day) and maximum ***power*** consumption, the evening Peak. (at around 6.40PM in Winter and earlier during the Summer Months.)

Daily Minimum - 1175MW (1.15PM)

Daily Maximum - 2630MW (7.25PM)

Average ***Wind*** Generation - 1894MW

Total Generated ***Power*** - 45.45GWH

Percentage Supplied By ***Wind Power*** At The Low Point For The Day - 4.7%

Percentage Supplied By ***Wind Power*** At Peak ***Power*** For The Day - 2051MW of 26420MW - 6.05PM - 7.76% (Mid afternoon Peak with rooftop solar added was 26850MW at 12.00PM)

Average Percentage Of Overall Total ***Power*** Generation - %

Daily Operational Capacity Factor - 22.06%

***Wind Power*** Generation Versus Total ***Power*** Generation

[*https://papundits.files.wordpress.com/2022/04/041102windtotal.jpgThis*](https://papundits.files.wordpress.com/2022/04/041102windtotal.jpgThis) image shows the total ***power*** generated from all the ***wind*** plants in this AEMO coverage area, and compares it to the overall total generated ***power*** from every source of ***power*** generation, which is the black line at the top of the graph. ***Wind power*** is the green coloured area, along the bottom of this graph.

While the green colour in this image looks to be a different shape to the graph above, keep in mind here that the scale is completely different, and that green coloured ***Wind*** total is the same as for the image shown above, only with the scale changed so it can fit onto the graph.

Notes

Finding ***Wind Power*** Average - On the graph, there are 25 hourly time points, starting with midnight and finishing with midnight. I have added the total at each of those hourly time points together, and divided the resultant total by 25 to give an average in MegaWatts. (MW) For total ***power*** in GWH, multiply the average daily ***power*** by 24, and then divide by 1000. For the Capacity Factor, that is calculated by dividing the average ***wind*** generation by the current Nameplate and then multiplying that by 100 to give a percentage.

Comments For This Day

***Wind*** generation was lower on this day than it was on the day before, and the average for this day of 1894MW gave ***wind*** generation a daily operational Capacity Factor of 22%, and that was eight percent lower than the year round average. ***Wind*** was rising when the usual evening Peak of maximum ***power*** consumption came around, and at that time, ***wind*** was delivering 7.8% of all the generated ***power*** from every source. Of note here now is that those two daily peaks, the high in the middle of the day with rooftop solar ***power*** added in, and the normal large evening peak at that usual time between 6PM and 6.30PM, well, now both of them are almost the same, as now, rooftop solar ***power*** diminishes with the Sun not as high in the sky as it is during the Summer Months, and also common for this time of year as well, ***power*** consumption in the middle of the day falls away, and the usual evening peak remains virtually the same. What is happening now is what usually happens at this time of year, as the cooler Months profile for overall ***power*** consumption starts to take effect. With a relatively lower overall for ***wind*** generation for this day, that difference between the low for the day and the high was not as large as usual, but it was still quite substantial, and the gap for this day was 1455MW.

\*\*\*\*\*

Anton Lang[2] uses the screen name of TonyfromOz, and he writes at this site, PA Pundits International[3] on topics related to electrical ***power*** generation, from all sources, concentrating mainly on Renewable ***Power***, and how the two most favoured methods of renewable ***power*** generation, ***Wind Power*** and all versions of Solar ***Power***, fail comprehensively to deliver levels of ***power*** required to replace traditional ***power*** generation. His Bio is at this link[4].

OzWindPowerGenerationTFO

[ 1]: [*https://papundits.wordpress.com/2019/10/01/australian-daily-****wind-power****-generation-data-introduction-with-permanent-link-to-daily-posts/*](https://papundits.wordpress.com/2019/10/01/australian-daily-wind-power-generation-data-introduction-with-permanent-link-to-daily-posts/) [ 2]: [*https://papundits.wordpress.com/author/tonyoz/*](https://papundits.wordpress.com/author/tonyoz/) [ 3]: [*https://papundits.wordpress.com*](https://papundits.wordpress.com)/ [ 4]: [*https://papundits.wordpress.com/views-expressed-by-writers-are-their-own-and-do-not/tonyfromoz/*](https://papundits.wordpress.com/views-expressed-by-writers-are-their-own-and-do-not/tonyfromoz/)

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**Load-Date:** April 12, 2022

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[***Global and China Wind Power Industry Report 2021***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:64PN-1CD1-F11P-X0VH-00000-00&context=1516831)

Energy Monitor Worldwide

February 5, 2022 Saturday

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**Length:** 1105 words

**Body**

(GlobeNewswire) - The "Global and China's ***Wind Power*** Industry Research Report 2016-2030" report has been added to ResearchAndMarkets.com's offering.

The continued increase in newly installed ***wind power*** capacity in China has made China the largest region in the world in terms of cumulative installed ***wind power*** capacity, surpassing the EU. 2020 is a record year for the global ***wind power*** industry, with 93GW of new installations worldwide, up 53% YOY.

In 2020, China's newly added ***wind power*** capacity reached 52GW, double the amount of new ***wind power*** capacity installed in 2019. China has become one of the world's largest ***wind power*** markets, with record growth in installed ***wind power*** in 2020, and its onshore ***wind power*** was responsible for 56.3% of the total new installations worldwide.

In the emerging offshore ***wind*** sector in recent years, the total cumulative global offshore ***wind power*** installed in 2020 was 35 GW, with 6.1 GW of new installations, down slightly from 6.24 GW in 2019.

China achieved more than 3 GW of new grid-connected offshore ***wind power*** in 2020, becoming the world's largest offshore ***wind*** market for the third consecutive year. The European market maintained steady growth, with the Netherlands ranking second globally with nearly 1.5 GW of new installations and Belgium in third place (706 MW).

It is expected that with the existing ***wind power*** policy, 235 GW of new offshore ***wind power*** will be installed worldwide in the next decade, an increase equivalent to seven times the existing offshore ***wind power*** installation.

According to this analysis, China's ***wind power*** market is somewhat different from the global market. 20,401 new units were installed in China in 2020, with a capacity of 54.43 million kW, an increase of 105.1% YOY. Such a prosperous market, however, has barely developed relationships with overseas companies.

The world's highest-ranked company, Vestas, accounts for only 2.1% of installed capacity in China's ***wind*** turbine market, ranking 11th in terms of new installed capacity for China's ***wind*** turbine manufacturers in 2020.

Accordingly, overseas markets are not open to Chinese companies. In 2020, China exported a total of 1188 MW of ***wind*** turbine capacity, accounting for only 2-3% of the total global installed capacity outside of China. At the same time, China's ***wind power*** machine industry is highly concentrated.

The leading enterprises are more advanced in capital, technology accumulation, and industry chain integrity, with obvious advantages in the market competition, so they hold a stable leading position.

Xinjiang Goldwind Science & Technology Co., Ltd., Envision Energy and Ming Yang Smart Energy Group Limited, three ***wind*** turbine manufacturers, have been holding the top three positions in the industry since 2016. From 2016 to 2020, according to the size of the Chinese market, CR5 increased from 60% to 70%, CR10 from 84% to 90%.

In terms of cost, ***wind power*** costs are lower than PV costs. Globally, among offshore ***wind***, onshore ***wind***, and PV, onshore ***wind*** has the lowest LCOE of 0.25 RMB/KWh. According to the global LCOE data published by the International Renewable Energy Agency (IRENA), offshore ***wind***, onshore ***wind***, and PV had decreased by 48%, 56%, and 85% respectively, from 2010 to 2020. By 2020, the LCOE for offshore ***wind***, onshore ***wind***, and PV was about RMB 0.54/KWh, RMB 0.25/KWh, and RMB 0.37/KWh respectively.

Compared to the decline in PV, onshore ***wind power*** still has more room for improvement. China's average LCOE for onshore ***wind*** is among the highest in the world, at 0.24 RMB (about 3.7 cents)/KWh in 2020.

According to the plan of China's National Energy Administration, China's total installed ***wind*** PV capacity will reach more than 1.2 billion kW (about 1200 GW) by the end of 2030. It means that during 2022-2030, China will need to add at least about 300 million kW of ***wind power***, with an average annual installed capacity of at least 30 GW. For ***wind power***, with little policy change, the industry will continue to grow at least by 2030. And the global ***wind power*** industry is expected to continue to have strong growth momentum by 2050.

Key Topics Covered:

1 ***Wind Power*** Industry Overview

1.1 Definition and Classification

1.1.1 Definition

1.1.2 Classification

1.2 Global ***Wind Power*** Industry Overview

1.3 Impact of COVID-19 on ***Wind Power*** Industry

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4.1.2 Blade

4.1.3 Casting

4.1.4 Bearings

4.1.5 Gearboxes

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4.2.1 Raw Material Costs

4.2.2 ***Power*** Generation Costs

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5.1.3 Northeast China

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5.4 Other Regions

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6.1.1 Overview of ***wind power*** equipment exports

6.1.2 China's main export destinations of ***wind power*** equipment

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6.2.1 Overview of imports

6.2.2 Major Import Sources

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8 Outlook on Global and China's ***Wind Power*** Industry, 2022-2030

8.1 Influencing Factors of Global and China's ***Wind Power*** Industry Development, 2022-2030

8.2 Forecast on China's ***Wind Power*** Industry Supply, 2022-2030

8.3 Forecast on ***Wind Power*** Demand, 2022-2030

8.4 Investment and Development Suggestions for China's ***Wind Power*** Industry, 2022-2030

For more information about this report visit [*https://www.researchandmarkets.com/r/umekra*](https://www.researchandmarkets.com/r/umekra)

Attachment

Global and China ***Wind Power*** Market

**Load-Date:** February 5, 2022

**End of Document**



[***Uzbekistan plans to put into operation new wind power plant***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:655V-74N1-DY3K-T1J5-00000-00&context=1516831)

Trend News Agency - Central Asia (English)

April 8, 2022 Friday 12:00 PM GMT +4

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**Section:** UZBEKISTAN

**Length:** 275 words

**Body**

BAKU, Azerbaijan, April 8. Uzbekistan plans to put into operation new ***wind power*** plant in the Republic of Karakalpakstan in 2024, Trend reports via Uzbek Ministry of Energy.

Once launched, the ***power*** plant will generate 350 million kilowatt-hours of electricity per year, which will provide electricity to more than 120,000 households.

After the plant will be commissioned, it will save 106 million cubic meters of natural gas per year and prevent the emission of 160,000 tons of greenhouse gases into the atmosphere.

During the construction of the new ***wind power*** plant, 400 people will be involved, and when the plant is put into operation, 30 new jobs will be created.

On March 18, 2022, the decree of the president of the Republic of Uzbekistan "On measures to implement the project for construction and operation of a ***wind power*** plant with a capacity of 100 MW in the Karauzyak district of the Republic of Karakalpakstan based on the conditions of public-private partnership" was adopted.

As a result of an international tender held with the support of the European Bank for Reconstruction and Development, Saudi ACWA ***Power*** company was declared the winner with a tariff offer of 2.5695 cents per 1 kilowatt-hour of electricity.

Within the framework of the project, the investor will build and put into operation overhead ***power*** lines, a step-up substation and switching points for connecting the ***wind power*** plant to a single energy system, with their subsequent transfer to National Electric Grids of Uzbekistan JSC.

The project cost is $107.8 million and is 100 percent funded by the investor (ACWA ***Power***).

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Follow the author on Twitter: @NatavanRzayeva5

**Load-Date:** April 8, 2022

**End of Document**



[***Australian Daily Wind Power Generation Data - Friday 8 April 2022***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:6564-4MP1-JCMN-Y3HN-00000-00&context=1516831)

Newstex Blogs

PA Pundits

April 9, 2022 Saturday 1:06 PM EST

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**Length:** 1062 words

**Byline:** TonyfromOz

**Body**

Apr 09, 2022( PA Pundits: [*http://papundits.wordpress.com*](http://papundits.wordpress.com)/ Delivered by Newstex)

By Anton Lang ~

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Note also that on some days, there will be a scale change for the main ***wind power*** image, and that even though images may look similar in shape for the ***power*** generation black line on the graph when compared to other days, that scale (the total ***power*** shown on the left hand vertical axis) has been changed to show the graph at a larger size to better fit the image for that graph.

Friday 8 April 2022

Total ***Wind Power*** Generation

[*https://papundits.files.wordpress.com/2022/04/040801wind-1.jpgThis*](https://papundits.files.wordpress.com/2022/04/040801wind-1.jpgThis) image shows the total ***power*** generated across the whole day by every ***wind*** plant in this vast AEMO coverage area for Australia.

The total Nameplate for all these ***wind*** plants changes as each new ***wind*** plant comes on line delivering ***power*** to the grid. That current Nameplate is 8587MW, and this is from the current total of 69 ***wind*** plants.

Note that the shape of this ***wind power*** load curve does not follow the shape of the main load curve for total ***power*** generation, and that is seen in the image below, the solid black line across the top of the image for that graph. ***Wind power*** generates its ***power*** only when the ***wind*** is blowing, hence it does not follow the actual ***power*** generation Load Curve, which is also the the exact same shaped curve as for actual ***power*** consumption.

For this data, I have added the times for the daily minimum, and the daily maximum, to show how they do not correlate with the actual times of minimum ***power*** consumption (around 4AM each day) and maximum ***power*** consumption, the evening Peak. (at around 6.40PM in Winter and earlier during the Summer Months.)

Daily Minimum - 1761MW (1.15PM)

Daily Maximum - 3860MW (12.15AM)

Average ***Wind*** Generation - 2803MW

Total Generated ***Power*** - 67.27GWH

Percentage Supplied By ***Wind Power*** At The Low Point For The Day - 6.9%

Percentage Supplied By ***Wind Power*** At Peak ***Power*** For The Day - 2147MW of 25450MW - 6.00PM - 8.44% (Mid afternoon Peak with rooftop solar added was 26440MW at 11.35AM)

Average Percentage Of Overall Total ***Power*** Generation - %

Daily Operational Capacity Factor - 32.64%

***Wind Power*** Generation Versus Total ***Power*** Generation

[*https://papundits.files.wordpress.com/2022/04/040802windtotal.jpgThis*](https://papundits.files.wordpress.com/2022/04/040802windtotal.jpgThis) image shows the total ***power*** generated from all the ***wind*** plants in this AEMO coverage area, and compares it to the overall total generated ***power*** from every source of ***power*** generation, which is the black line at the top of the graph. ***Wind power*** is the green coloured area, along the bottom of this graph.

While the green colour in this image looks to be a different shape to the graph above, keep in mind here that the scale is completely different, and that green coloured ***Wind*** total is the same as for the image shown above, only with the scale changed so it can fit onto the graph.

Notes

Finding ***Wind Power*** Average - On the graph, there are 25 hourly time points, starting with midnight and finishing with midnight. I have added the total at each of those hourly time points together, and divided the resultant total by 25 to give an average in MegaWatts. (MW) For total ***power*** in GWH, multiply the average daily ***power*** by 24, and then divide by 1000. For the Capacity Factor, that is calculated by dividing the average ***wind*** generation by the current Nameplate and then multiplying that by 100 to give a percentage.

Comments For This Day

***Wind*** generation was lower on this day than it was on the day before, and the average for this day of 2803MW gave ***wind*** generation a daily operational Capacity Factor of 32.64%, and that was two percent higher than the year round average. While rising a little from the daily low, at the usual time of the evening Peak of maximum ***power*** consumption, ***wind*** was delivering 8.4% of all the generated ***power*** from every source. There was again a substantial difference between the high for the day and the low, and on this day, that gap was 2099MW.

\*\*\*\*\*

Anton Lang[2] uses the screen name of TonyfromOz, and he writes at this site, PA Pundits International[3] on topics related to electrical ***power*** generation, from all sources, concentrating mainly on Renewable ***Power***, and how the two most favoured methods of renewable ***power*** generation, ***Wind Power*** and all versions of Solar ***Power***, fail comprehensively to deliver levels of ***power*** required to replace traditional ***power*** generation. His Bio is at this link[4].

OzWindPowerGenerationTFO

[ 1]: [*https://papundits.wordpress.com/2019/10/01/australian-daily-****wind-power****-generation-data-introduction-with-permanent-link-to-daily-posts/*](https://papundits.wordpress.com/2019/10/01/australian-daily-wind-power-generation-data-introduction-with-permanent-link-to-daily-posts/) [ 2]: [*https://papundits.wordpress.com/author/tonyoz/*](https://papundits.wordpress.com/author/tonyoz/) [ 3]: [*https://papundits.wordpress.com*](https://papundits.wordpress.com)/ [ 4]: [*https://papundits.wordpress.com/views-expressed-by-writers-are-their-own-and-do-not/tonyfromoz/*](https://papundits.wordpress.com/views-expressed-by-writers-are-their-own-and-do-not/tonyfromoz/)

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**Load-Date:** April 9, 2022

**End of Document**



[***Australian Daily Wind Power Generation Data - Wednesday 6 April 2022***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:655P-9NB1-JCMN-Y3HW-00000-00&context=1516831)

Newstex Blogs

PA Pundits

April 7, 2022 Thursday 1:06 PM EST

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**Length:** 1064 words

**Byline:** TonyfromOz

**Body**

Apr 07, 2022( PA Pundits: [*http://papundits.wordpress.com*](http://papundits.wordpress.com)/ Delivered by Newstex)

By Anton Lang ~

This Post details the daily ***wind power*** generation data for the AEMO coverage area in Australia. For the background information, refer to the Introductory Post at this link[1].

Each image is shown here at a smaller size to fit on the page alongside the data for that day. If you click on each image, it will open on a new page and at a larger size so you can better see the detail.

Note also that on some days, there will be a scale change for the main ***wind power*** image, and that even though images may look similar in shape for the ***power*** generation black line on the graph when compared to other days, that scale (the total ***power*** shown on the left hand vertical axis) has been changed to show the graph at a larger size to better fit the image for that graph.

Wednesday 6 April 2022

Total ***Wind Power*** Generation

[*https://papundits.files.wordpress.com/2022/04/040601wind.jpgThis*](https://papundits.files.wordpress.com/2022/04/040601wind.jpgThis) image shows the total ***power*** generated across the whole day by every ***wind*** plant in this vast AEMO coverage area for Australia.

The total Nameplate for all these ***wind*** plants changes as each new ***wind*** plant comes on line delivering ***power*** to the grid. That current Nameplate is 8587MW, and this is from the current total of 69 ***wind*** plants.

Note that the shape of this ***wind power*** load curve does not follow the shape of the main load curve for total ***power*** generation, and that is seen in the image below, the solid black line across the top of the image for that graph. ***Wind power*** generates its ***power*** only when the ***wind*** is blowing, hence it does not follow the actual ***power*** generation Load Curve, which is also the the exact same shaped curve as for actual ***power*** consumption.

For this data, I have added the times for the daily minimum, and the daily maximum, to show how they do not correlate with the actual times of minimum ***power*** consumption (around 4AM each day) and maximum ***power*** consumption, the evening Peak. (at around 6.40PM in Winter and earlier during the Summer Months.)

Daily Minimum - 1371MW (12.00PM Midday)

Daily Maximum - 3973MW (9.40PM)

Average ***Wind*** Generation - 2478MW

Total Generated ***Power*** - 59.47GWH

Percentage Supplied By ***Wind Power*** At The Low Point For The Day - 5.3%

Percentage Supplied By ***Wind Power*** At Peak ***Power*** For The Day - 2950MW of 25420MW - 6.35PM - 11.61% (Mid afternoon Peak with rooftop solar added was 25920MW at 12.30PM)

Average Percentage Of Overall Total ***Power*** Generation - %

Daily Operational Capacity Factor - 28.86%

***Wind Power*** Generation Versus Total ***Power*** Generation

[*https://papundits.files.wordpress.com/2022/04/040602windtotal.jpgThis*](https://papundits.files.wordpress.com/2022/04/040602windtotal.jpgThis) image shows the total ***power*** generated from all the ***wind*** plants in this AEMO coverage area, and compares it to the overall total generated ***power*** from every source of ***power*** generation, which is the black line at the top of the graph. ***Wind power*** is the green coloured area, along the bottom of this graph.

While the green colour in this image looks to be a different shape to the graph above, keep in mind here that the scale is completely different, and that green coloured ***Wind*** total is the same as for the image shown above, only with the scale changed so it can fit onto the graph.

Notes

Finding ***Wind Power*** Average - On the graph, there are 25 hourly time points, starting with midnight and finishing with midnight. I have added the total at each of those hourly time points together, and divided the resultant total by 25 to give an average in MegaWatts. (MW) For total ***power*** in GWH, multiply the average daily ***power*** by 24, and then divide by 1000. For the Capacity Factor, that is calculated by dividing the average ***wind*** generation by the current Nameplate and then multiplying that by 100 to give a percentage.

Comments For This Day

***Wind*** generation was higher on this day than it was on the day before, and the average for this day of 2478MW gave ***wind*** generation a daily operational Capacity Factor of 28.9%, and that was two percent lower than the year round average. ***Wind*** was in a rising phase at the usual time of the evening Peak of maximum ***power*** consumption, and at that time, ***wind*** was delivering 11.6% od all the generated ***power*** from every source. Again there was a substantial difference between the low for the day and the high, and on this day that gap was 2605MW.

\*\*\*\*\*

Anton Lang[2] uses the screen name of TonyfromOz, and he writes at this site, PA Pundits International[3] on topics related to electrical ***power*** generation, from all sources, concentrating mainly on Renewable ***Power***, and how the two most favoured methods of renewable ***power*** generation, ***Wind Power*** and all versions of Solar ***Power***, fail comprehensively to deliver levels of ***power*** required to replace traditional ***power*** generation. His Bio is at this link[4].

OzWindPowerGenerationTFO

[ 1]: [*https://papundits.wordpress.com/2019/10/01/australian-daily-****wind-power****-generation-data-introduction-with-permanent-link-to-daily-posts/*](https://papundits.wordpress.com/2019/10/01/australian-daily-wind-power-generation-data-introduction-with-permanent-link-to-daily-posts/) [ 2]: [*https://papundits.wordpress.com/author/tonyoz/*](https://papundits.wordpress.com/author/tonyoz/) [ 3]: [*https://papundits.wordpress.com*](https://papundits.wordpress.com)/ [ 4]: [*https://papundits.wordpress.com/views-expressed-by-writers-are-their-own-and-do-not/tonyfromoz/*](https://papundits.wordpress.com/views-expressed-by-writers-are-their-own-and-do-not/tonyfromoz/)

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**Load-Date:** April 7, 2022

**End of Document**



[***Uzbekistan plans to put into operation new wind power plant***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:655W-KVT1-JCH9-G2V6-00000-00&context=1516831)

Azer News

April 8, 2022 Friday

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**Length:** 265 words

**Body**

ByTrend Uzbekistan plans to put into operation new ***wind power*** plant in the Republic of Karakalpakstan in 2024,Trendreports via Uzbek Ministry of Energy. Once launched, the ***power*** plant will generate 350 million kilowatt-hours of electricity per year, which will provide electricity to more than 120,000 households.

After the plant will be commissioned, it will save 106 million cubic meters of natural gas per year and prevent the emission of 160,000 tons of greenhouse gases into the atmosphere. During the construction of the new ***wind power*** plant, 400 people will be involved, and when the plant is put into operation, 30 new jobs will be created.

On March 18, 2022, the decree of the president of the Republic of Uzbekistan "On measures to implement the project for construction and operation of a ***wind power*** plant with a capacity of 100 MW in the Karauzyak district of the Republic of Karakalpakstan based on the conditions of public-private partnership" was adopted. As a result of an international tender held with the support of the European Bank for Reconstruction and Development, Saudi ACWA ***Power*** company was declared the winner with a tariff offer of 2.

5695 cents per 1 kilowatt-hour of electricity. Within the framework of the project, the investor will build and put into operation overhead ***power*** lines, a step-up substation and switching points for connecting the ***wind power*** plant to a single energy system, with their subsequent transfer to National Electric Grids of Uzbekistan JSC.

The project cost is $107.8 million and is 100 percent funded by the investor (ACWA ***Power***).

**Load-Date:** April 8, 2022

**End of Document**



[***Uzbekistan plans to put into operation new wind power plant***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:656G-9YV1-DY0W-41SV-00000-00&context=1516831)

Trend News. English

April 8, 2022 Friday

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**Section:** UZBEKISTAN

**Length:** 276 words

**Dateline:** Baku

**Body**

**FULL TEXT**

BAKU, Azerbaijan, April 8. Uzbekistan plans to put into operation new ***wind power*** plant in the Republic of Karakalpakstan in 2024, Trend reports via Uzbek Ministry of Energy.

Once launched, the ***power*** plant will generate 350 million kilowatt-hours of electricity per year, which will provide electricity to more than 120,000 households.

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The project cost is $107.8 million and is 100 percent funded by the investor (ACWA ***Power***).

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Follow the author on Twitter: @NatavanRzayeva5

**Load-Date:** April 11, 2022

**End of Document**



[***Uzbekistan plans to put into operation new wind power plant***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:655V-74N1-DY3K-T1RD-00000-00&context=1516831)

Trend News Agency - Uzbekistan (English)

April 8, 2022 Friday 12:00 PM GMT +4

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**Section:** UZBEKISTAN

**Length:** 275 words

**Body**

BAKU, Azerbaijan, April 8. Uzbekistan plans to put into operation new ***wind power*** plant in the Republic of Karakalpakstan in 2024, Trend reports via Uzbek Ministry of Energy.

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**Load-Date:** April 8, 2022

**End of Document**



[***Uzbekistan plans to put into operation new wind power plant***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:655T-YV21-JBMJ-31VP-00000-00&context=1516831)

Trend Daily News (Azerbaijan)

April 8, 2022 Friday 10:20 AM GMT +4

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**Section:** UZBEKISTAN

**Length:** 275 words

**Body**

BAKU, Azerbaijan, April 8. Uzbekistan plans to put into operation new ***wind power*** plant in the Republic of Karakalpakstan in 2024, [*Trend*](http://en.trend.az) reports via Uzbek Ministry of Energy.

Once launched, the ***power*** plant will generate 350 million kilowatt-hours of electricity per year, which will provide electricity to more than 120,000 households.

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Follow the author on Twitter: [*@NatavanRzayeva5*](https://twitter.com/natavanrzayeva5)

**Load-Date:** April 8, 2022

**End of Document**



[***European Patent Office awards patent to WOBBEN PROPERTIES GMBH for " METHOD FOR DESIGNING AND OPERATING A WIND POWER PLANT, WIND POWER PLANT, AND WIND FARM "***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:6544-FPB1-JDG9-Y2FP-00000-00&context=1516831)

Impact Financial News

March 25, 2022 Friday

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**Length:** 257 words

**Body**

Munich: European Patent Office has awarded a patent no.EP3969742A1 on Mar 23, 2022, toWOBBEN PROPERTIES GMBH for 'METHOD FOR DESIGNING AND OPERATING A ***WIND POWER*** PLANT, ***WIND POWER*** PLANT, AND ***WIND*** FARM '

Inventor(s): MESSING RALF [DE]; KIMILLI MUSTAFA ONUR [DE]; BOTT STEFANIE [DE] MESSING, Ralf; KIMILLI, Mustafa Onur; BOTT, Stefanie

Applicant(s): WOBBEN PROPERTIES GMBH [DE] Wobben Properties GmbH

Classification:

IPC: F03D1/06; F03D13/30; F03D7/02;

CPC: F03D1/0633 (EP); F03D13/30 (EP); F03D7/0224 (EP); F05B2240/3062 (EP); F05B2270/327 (EP); F05B2270/335 (EP); Y02E10/72 (EP);

The patent was filed under Application No. EP20727208A·2020-05-15

According to the abstract published by the European Patent Office on its website: 'The present invention relates to a method for designing and operating a ***wind power*** plant (100) for generating electrical ***power*** from ***wind***, wherein the ***wind power*** plant (100) comprises an aerodynamic rotor (106) having rotor blades (108) which have adjustable blade setting angles, wherein the rotor blades (108) have a plurality of vortex generators (118) between the rotor blade root (114) and the rotor blade tip (116), characterized in that the vortex generators (118) are provided in the longitudinal direction of the respective rotor blades (108) up to a radius position (r/R), which is determined according to the air density (ρA, ρB) at a location of the ***wind power*** plant (100). The invention furthermore relates to a rotor blade (108) of a ***wind power*** plant (100), an associated ***wind power*** plant (100) and a ***wind*** farm.'

**Load-Date:** March 31, 2022

**End of Document**



[***Australian Daily Wind Power Generation Data - Thursday 7 April 2022***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:655X-78V1-F03R-N0BN-00000-00&context=1516831)

Newstex Blogs

PA Pundits

April 8, 2022 Friday 1:07 PM EST

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**Length:** 1074 words

**Byline:** TonyfromOz

**Body**

Apr 08, 2022( PA Pundits: [*http://papundits.wordpress.com*](http://papundits.wordpress.com)/ Delivered by Newstex)

By Anton Lang ~

This Post details the daily ***wind power*** generation data for the AEMO coverage area in Australia. For the background information, refer to the Introductory Post at this link[1].

Each image is shown here at a smaller size to fit on the page alongside the data for that day. If you click on each image, it will open on a new page and at a larger size so you can better see the detail.

Note also that on some days, there will be a scale change for the main ***wind power*** image, and that even though images may look similar in shape for the ***power*** generation black line on the graph when compared to other days, that scale (the total ***power*** shown on the left hand vertical axis) has been changed to show the graph at a larger size to better fit the image for that graph.

Thursday 7 April 2022

Total ***Wind Power*** Generation

[*https://papundits.files.wordpress.com/2022/04/040701wind.jpgThis*](https://papundits.files.wordpress.com/2022/04/040701wind.jpgThis) image shows the total ***power*** generated across the whole day by every ***wind*** plant in this vast AEMO coverage area for Australia.

The total Nameplate for all these ***wind*** plants changes as each new ***wind*** plant comes on line delivering ***power*** to the grid. That current Nameplate is 8587MW, and this is from the current total of 69 ***wind*** plants.

Note that the shape of this ***wind power*** load curve does not follow the shape of the main load curve for total ***power*** generation, and that is seen in the image below, the solid black line across the top of the image for that graph. ***Wind power*** generates its ***power*** only when the ***wind*** is blowing, hence it does not follow the actual ***power*** generation Load Curve, which is also the the exact same shaped curve as for actual ***power*** consumption.

For this data, I have added the times for the daily minimum, and the daily maximum, to show how they do not correlate with the actual times of minimum ***power*** consumption (around 4AM each day) and maximum ***power*** consumption, the evening Peak. (at around 6.40PM in Winter and earlier during the Summer Months.)

Daily Minimum - 2964MW (1.35PM)

Daily Maximum - 4442MW (7.40PM)

Average ***Wind*** Generation - 3496MW

Total Generated ***Power*** - 83.90GWH

Percentage Supplied By ***Wind Power*** At The Low Point For The Day - 11.3%

Percentage Supplied By ***Wind Power*** At Peak ***Power*** For The Day - 4039MW of 26140MW - 6.40PM - 15.45% (Mid afternoon Peak with rooftop solar added was 26480MW at 11.25AM)

Average Percentage Of Overall Total ***Power*** Generation - %

Daily Operational Capacity Factor - 40.71%

***Wind Power*** Generation Versus Total ***Power*** Generation

[*https://papundits.files.wordpress.com/2022/04/040702windtotal.jpgThis*](https://papundits.files.wordpress.com/2022/04/040702windtotal.jpgThis) image shows the total ***power*** generated from all the ***wind*** plants in this AEMO coverage area, and compares it to the overall total generated ***power*** from every source of ***power*** generation, which is the black line at the top of the graph. ***Wind power*** is the green coloured area, along the bottom of this graph.

While the green colour in this image looks to be a different shape to the graph above, keep in mind here that the scale is completely different, and that green coloured ***Wind*** total is the same as for the image shown above, only with the scale changed so it can fit onto the graph.

Notes

Finding ***Wind Power*** Average - On the graph, there are 25 hourly time points, starting with midnight and finishing with midnight. I have added the total at each of those hourly time points together, and divided the resultant total by 25 to give an average in MegaWatts. (MW) For total ***power*** in GWH, multiply the average daily ***power*** by 24, and then divide by 1000. For the Capacity Factor, that is calculated by dividing the average ***wind*** generation by the current Nameplate and then multiplying that by 100 to give a percentage.

Comments For This Day

***Wind*** generation was a lot higher on this day than it was on the day before, and the average for this day of 3496MW gave ***wind*** generation a daily operational Capacity Factor of 4.07%, and that was ten percent higher than the year round average. ***Wind*** was rising at the usual time of the evening Peak of maximum ***power*** consumption, and at that time, ***wind*** was delivering 15.5% of all the generated ***power*** from every source. Even on one of these rare good days for ***wind*** generation, there was still a fairly substantial difference between the low for the day and the high, and here, for this day that gap was 1478MW.

\*\*\*\*\*

Anton Lang[2] uses the screen name of TonyfromOz, and he writes at this site, PA Pundits International[3] on topics related to electrical ***power*** generation, from all sources, concentrating mainly on Renewable ***Power***, and how the two most favoured methods of renewable ***power*** generation, ***Wind Power*** and all versions of Solar ***Power***, fail comprehensively to deliver levels of ***power*** required to replace traditional ***power*** generation. His Bio is at this link[4].

OzWindPowerGenerationTFO

[ 1]: [*https://papundits.wordpress.com/2019/10/01/australian-daily-****wind-power****-generation-data-introduction-with-permanent-link-to-daily-posts/*](https://papundits.wordpress.com/2019/10/01/australian-daily-wind-power-generation-data-introduction-with-permanent-link-to-daily-posts/) [ 2]: [*https://papundits.wordpress.com/author/tonyoz/*](https://papundits.wordpress.com/author/tonyoz/) [ 3]: [*https://papundits.wordpress.com*](https://papundits.wordpress.com)/ [ 4]: [*https://papundits.wordpress.com/views-expressed-by-writers-are-their-own-and-do-not/tonyfromoz/*](https://papundits.wordpress.com/views-expressed-by-writers-are-their-own-and-do-not/tonyfromoz/)

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**Load-Date:** April 8, 2022

**End of Document**



[***Georgia, Turkey discuss wind power plant construction***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:64WS-GD81-JBMJ-33PJ-00000-00&context=1516831)

Georgia Economic Outlook (EN)

February 28, 2022 12:00 PM GMT +4

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**Length:** 224 words

**Body**

Georgia and Turkish Chalik Energy discussed the construction of the ***wind power*** plant project with, [*Trend*](http://en.trend.az) reports via the press service of the Ministry of Economy and Sustainable Development of Georgia.

The matter was talked about at the meeting between the Minister of Economy and Sustainable Development of Georgia Levan Davitashvili and the General Manager of Chalik Energy Onur Yucekal.

The cost of the 50-megawatt wing ***power*** plant is about $70 million, while an average annual output will be 195 million kWh.

The project will be implemented in Georgia's Shida Kartli region and will employ about 200 people at the construction stage. Up to 20 permanent jobs will be created once the station becomes operational.

Currently, the project is under consideration for a construction agreement, after which it will be sent for the government's approval.

To this end, the Ministry of Economy and Sustainable Development is cooperating with the private sector to implement solar and ***wind power*** projects, the minister said.

According to Davitashvili, Georgia in 2021 only has signed ***wind*** projects with a total capacity of 286 megawatts, and the average annual electricity production through this capacity is about 1.144 million kWh, and solar ***power*** plants - with a total capacity of 78 megawatts, while an average annual output will amount to 90 million kWh.

**Load-Date:** March 9, 2022

**End of Document**



[***Wobben Properties Submits Patent Application for Rotor Blade for a Wind Power Installation, Rotor for a Wind Power Installation, Structure and Wind Power Installation***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:64NJ-J071-JBHT-D28B-00000-00&context=1516831)

Global IP News. Energy Patent News

January 29, 2022 Saturday

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**Length:** 232 words

**Dateline:** New Delhi

**Body**

**FULL TEXT**

Publication Name: Energy Patent NewsPatent Application Number: 17/381077Patent Publication Number: 20220025847Patent Status: Application

Alexandria, Jan. 29 -- Wobben Properties has submitted a patent application for rotor blade for a ***wind power*** installation, rotor for a ***wind power*** installation, structure and ***wind power*** installation. Knobbe Eschen Henry and Stemberg Jochen developed the invention.

The patent application number is 17/381077.

U.S. Patent and Trademark Office has released the abstract. According to the abstract, "A rotor blade for a rotor, in particular of a ***wind power*** installation, having a rotor-blade length constituted between a root region and a rotor-blade tip, a rotor-blade depth constituted between a leading edge and a blunt trailing edge, a rotor-blade thickness constituted between a pressure side and a suction side, a suction-side trailing-edge region extending on the suction side and/or a pressure-side trailing-edge region extending on the pressure side, the suction-side trailing-edge region and/or the pressure-side trailing-edge region extending from the blunt trailing edge in the direction of the leading edge with an extent of less than 30%, in particular less than 20%, of the chord, and the suction-side trailing-edge region and/or the pressure-side trailing-edge region having at least one eddy generator."

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**Load-Date:** January 31, 2022

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[***Uzbekistan plans to put into operation new wind power plant***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:655T-YV21-JBMJ-31FN-00000-00&context=1516831)

Trend Daily Economic News

April 8, 2022 Friday 10:20 AM GMT +4

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**Section:** UZBEKISTAN

**Length:** 275 words

**Body**

BAKU, Azerbaijan, April 8. Uzbekistan plans to put into operation new ***wind power*** plant in the Republic of Karakalpakstan in 2024, [*Trend*](http://en.trend.az) reports via Uzbek Ministry of Energy.

Once launched, the ***power*** plant will generate 350 million kilowatt-hours of electricity per year, which will provide electricity to more than 120,000 households.

After the plant will be commissioned, it will save 106 million cubic meters of natural gas per year and prevent the emission of 160,000 tons of greenhouse gases into the atmosphere.

During the construction of the new ***wind power*** plant, 400 people will be involved, and when the plant is put into operation, 30 new jobs will be created.

On March 18, 2022, the decree of the president of the Republic of Uzbekistan "On measures to implement the project for construction and operation of a ***wind power*** plant with a capacity of 100 MW in the Karauzyak district of the Republic of Karakalpakstan based on the conditions of public-private partnership" was adopted.

As a result of an international tender held with the support of the European Bank for Reconstruction and Development, Saudi ACWA ***Power*** company was declared the winner with a tariff offer of 2.5695 cents per 1 kilowatt-hour of electricity.

Within the framework of the project, the investor will build and put into operation overhead ***power*** lines, a step-up substation and switching points for connecting the ***wind power*** plant to a single energy system, with their subsequent transfer to National Electric Grids of Uzbekistan JSC.

The project cost is $107.8 million and is 100 percent funded by the investor (ACWA ***Power***).

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[***Uzbekistan plans to put into operation new wind power plant***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:655X-5H51-DY6B-2065-00000-00&context=1516831)

MENAFN - Business & Finance News (English)

April 8, 2022 Friday

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**Length:** 280 words

**Body**

[*Link to Image*](https://menafn.com/updates/pr/2022-04/08/A_a0f4dimage_story.jpg)

[*Link to Story*](https://menafn.com/1103982749/Uzbekistan-plans-to-put-into-operation-new-wind-power-plant)

By Trend

Uzbekistan plans to put into operation new ***wind power*** plant in the Republic of Karakalpakstan in 2024, Trend reports via Uzbek Ministry of Energy.

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[***Global and China Wind Power Industry Report 2021***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:64PD-R681-JDPV-B00J-00000-00&context=1516831)

GlobeNewswire

February 4, 2022 Friday 3:58 AM PT

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**Section:** RESEARCH ANALYSIS AND REPORTS

**Length:** 1133 words

**Body**

Dublin, Feb. 04, 2022 (GLOBE NEWSWIRE) -- The "Global and China's ***Wind Power*** Industry Research Report 2016-2030" report has been added to ResearchAndMarkets.com's offering.

The continued increase in newly installed ***wind power*** capacity in China has made China the largest region in the world in terms of cumulative installed ***wind power*** capacity, surpassing the EU. 2020 is a record year for the global ***wind power*** industry, with 93GW of new installations worldwide, up 53% YOY.

In 2020, China's newly added ***wind power*** capacity reached 52GW, double the amount of new ***wind power*** capacity installed in 2019. China has become one of the world's largest ***wind power*** markets, with record growth in installed ***wind power*** in 2020, and its onshore ***wind power*** was responsible for 56.3% of the total new installations worldwide.

In the emerging offshore ***wind*** sector in recent years, the total cumulative global offshore ***wind power*** installed in 2020 was 35 GW, with 6.1 GW of new installations, down slightly from 6.24 GW in 2019.

China achieved more than 3 GW of new grid-connected offshore ***wind power*** in 2020, becoming the world's largest offshore ***wind*** market for the third consecutive year. The European market maintained steady growth, with the Netherlands ranking second globally with nearly 1.5 GW of new installations and Belgium in third place (706 MW).

It is expected that with the existing ***wind power*** policy, 235 GW of new offshore ***wind power*** will be installed worldwide in the next decade, an increase equivalent to seven times the existing offshore ***wind power*** installation.

According to this analysis, China's ***wind power*** market is somewhat different from the global market. 20,401 new units were installed in China in 2020, with a capacity of 54.43 million kW, an increase of 105.1% YOY. Such a prosperous market, however, has barely developed relationships with overseas companies.

The world's highest-ranked company, Vestas, accounts for only 2.1% of installed capacity in China's ***wind*** turbine market, ranking 11th in terms of new installed capacity for China's ***wind*** turbine manufacturers in 2020.

Accordingly, overseas markets are not open to Chinese companies. In 2020, China exported a total of 1188 MW of ***wind*** turbine capacity, accounting for only 2-3% of the total global installed capacity outside of China. At the same time, China's ***wind power*** machine industry is highly concentrated.

The leading enterprises are more advanced in capital, technology accumulation, and industry chain integrity, with obvious advantages in the market competition, so they hold a stable leading position.

Xinjiang Goldwind Science & Technology Co., Ltd., Envision Energy and Ming Yang Smart Energy Group Limited, three ***wind*** turbine manufacturers, have been holding the top three positions in the industry since 2016. From 2016 to 2020, according to the size of the Chinese market, CR5 increased from 60% to 70%, CR10 from 84% to 90%.

In terms of cost, ***wind power*** costs are lower than PV costs. Globally, among offshore ***wind***, onshore ***wind***, and PV, onshore ***wind*** has the lowest LCOE of 0.25 RMB/KWh. According to the global LCOE data published by the International Renewable Energy Agency (IRENA), offshore ***wind***, onshore ***wind***, and PV had decreased by 48%, 56%, and 85% respectively, from 2010 to 2020. By 2020, the LCOE for offshore ***wind***, onshore ***wind***, and PV was about RMB 0.54/KWh, RMB 0.25/KWh, and RMB 0.37/KWh respectively.

Compared to the decline in PV, onshore ***wind power*** still has more room for improvement. China's average LCOE for onshore ***wind*** is among the highest in the world, at 0.24 RMB (about 3.7 cents)/KWh in 2020.

According to the plan of China's National Energy Administration, China's total installed ***wind*** PV capacity will reach more than 1.2 billion kW (about 1200 GW) by the end of 2030. It means that during 2022-2030, China will need to add at least about 300 million kW of ***wind power***, with an average annual installed capacity of at least 30 GW. For ***wind power***, with little policy change, the industry will continue to grow at least by 2030. And the global ***wind power*** industry is expected to continue to have strong growth momentum by 2050.

Key Topics Covered: 1 ***Wind Power*** Industry Overview1.1 Definition and Classification 1.1.1 Definition 1.1.2 Classification 1.2 Global ***Wind Power*** Industry Overview 1.3 Impact of COVID-19 on ***Wind Power*** Industry2 ***Wind Power*** Industry Development Environment 2016-20202.1 Economic Environment 2.1.1 Global Economy 2.1.2 China's Economy 2.2 Policy Environment 2.2.1 Policy Overview 2.2.2 Policy Trends 3 Current Situation of ***Wind Power*** Industry, 2016-20213.1 Supply 3.1.1 Global Production3.1.2 China's Production 3.2 Demand 3.2.1 International Market 3.2.2 China's market3.3 Analysis of Offshore ***Wind Power*** Industry4 ***Wind Power*** Industry Chain, 2016-20224.1 Components of the ***Wind Power*** Industry Chain 4.1.1 Overview 4.1.2 Blade 4.1.3 Casting 4.1.4 Bearings4.1.5 Gearboxes 4.2 Cost Analysis of ***wind power*** industry chain 4.2.1 Raw Material Costs 4.2.2 ***Power*** Generation Costs5 Global and China's ***Wind Power*** Industry Key Regions, 2016-20215.1 China5.1.1 East China 5.1.2 North China 5.1.3 Northeast China 5.1.4 Central China5.1.5 Other regions5.2 United States5.3 Europe5.4 Other Regions6 Analysis of China's ***Wind Power*** Equipment Import and Export, 2018-20216.1 ***Wind Power*** Equipment Exports 6.1.1 Overview of ***wind power*** equipment exports 6.1.2 China's main export destinations of ***wind power*** equipment 6.2 ***Wind Power*** Equipment Imports6.2.1 Overview of imports 6.2.2 Major Import Sources 7 Major ***Wind Power*** Equipment Manufacturers, 2020-20227.1 ***Wind*** Turbine Manufacturers7.1.1 Xinjiang Goldwind Science & Technology Co., Ltd.7.1.2 Envision Energy7.1.3 Ming Yang Smart Energy Group Limited7.1.4 Electric ***Wind*** Power7.1.5 Zhejiang Windey Co7.1.6 CRRC ***Wind Power*** (Shandong) Co., Ltd.7.1.7 Dongfang Electric7.1.8 Sany Renewable Energy Co.,Ltd7.1.9 China State Shipbuilding Corporation7.1.10 Guodian United ***Power*** Technology Company Limited7.2 ***Wind Power*** Operators7.2.1 China Guodian Corporation7.2.2 China Datang Corporation7.2.3 China Huaneng Group7.2.4 China Best7.2.5 CNOOC7.2.6 Jingneng Group7.2.7 Luneng Group7.2.8 Concord New Energy7.2.9 Hong Kong Energy (Holdings) Limited7.2.10 Tianrun Group8 Outlook on Global and China's ***Wind Power*** Industry, 2022-20308.1 Influencing Factors of Global and China's ***Wind Power*** Industry Development, 2022-20308.2 Forecast on China's ***Wind Power*** Industry Supply, 2022-20308.3 Forecast on ***Wind Power*** Demand, 2022-20308.4 Investment and Development Suggestions for China's ***Wind Power*** Industry, 2022-2030

For more information about this report visit [*https://www.researchandmarkets.com/r/umekra*](https://www.researchandmarkets.com/r/umekra)

Attachment

* Global and China ***Wind Power*** Market

Global and China ***Wind Power*** Market

Global and China ***Wind Power*** Market

CONTACT: ResearchAndMarkets.com Laura Wood, Senior Press Manager [*press@researchandmarkets.com*](mailto:press@researchandmarkets.com) For E.S.T Office Hours Call 1-917-300-0470 For U.S./CAN Toll Free Call 1-800-526-8630 For GMT Office Hours Call +353-1-416-8900

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[***Georgia, Turkey discuss wind power plant construction***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:64WS-GCG1-JBMJ-30KJ-00000-00&context=1516831)

Caspian Oil & Gas Trends (English)

February 28, 2022 12:00 PM GMT +4

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**Length:** 224 words

**Body**

Georgia and Turkish Chalik Energy discussed the construction of the ***wind power*** plant project with, [*Trend*](http://en.trend.az) reports via the press service of the Ministry of Economy and Sustainable Development of Georgia.

The matter was talked about at the meeting between the Minister of Economy and Sustainable Development of Georgia Levan Davitashvili and the General Manager of Chalik Energy Onur Yucekal.

The cost of the 50-megawatt wing ***power*** plant is about $70 million, while an average annual output will be 195 million kWh.

The project will be implemented in Georgia's Shida Kartli region and will employ about 200 people at the construction stage. Up to 20 permanent jobs will be created once the station becomes operational.

Currently, the project is under consideration for a construction agreement, after which it will be sent for the government's approval.

To this end, the Ministry of Economy and Sustainable Development is cooperating with the private sector to implement solar and ***wind power*** projects, the minister said.

According to Davitashvili, Georgia in 2021 only has signed ***wind*** projects with a total capacity of 286 megawatts, and the average annual electricity production through this capacity is about 1.144 million kWh, and solar ***power*** plants - with a total capacity of 78 megawatts, while an average annual output will amount to 90 million kWh.

**Load-Date:** March 9, 2022

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[***Berlin resolves biodiversity issue to allow expansion of wind power***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:6552-MSW1-J9XT-N2VT-00000-00&context=1516831)

dpa-AFX International ProFeed

April 4, 2022 Monday 5:49 PM GMT

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**Length:** 264 words

**Body**

BERLIN (dpa-AFX) - The German government has resolved a conflict over biodiversity that will allow for the construction of more ***wind*** turbines. Lawmakers greeted the step on Monday after years of conflict over the issue, saying it would enable the country to meet its climate goals and also reduce its dependency on Russian gas, amid the ongoing Ukraine conflict. The Environment and Economics Ministries have reached an agreement to enable the faster expansion of onshore ***wind power*** in a way that is compatible with protecting the environment. The ministries have set uniform, legal standards for testing and evaluating the extent to which a ***wind*** turbine significantly increases the "collision risk" for endangered bird species. Species protection and ***wind power*** will be "allies" rather than opponents in the future, said Economy and Environment Minister Robert Habeck. "Species protection and ***wind power*** get along if you do it well." A list is to be created of breeding bird species that could be at risk of colliding with the ***wind*** turbines, including the white-tailed eagle, the golden eagle and the red kite, for example. Efforts are to be made to ensure the turbines are not built near the breeding sites, which would be off-limits for generating ***wind power***. The step aims to lead to easier and faster approval procedures that are also to enable older turbines to be replaced with newer models that are higher and more powerful. The compromise also foresees ***wind*** turbine operators participating in programmes to support particular species. Copyright dpa

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[***Norway : Major initiative to promote offshore wind power***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:64TK-9761-F11P-X06Y-00000-00&context=1516831)

TendersInfo

February 18, 2022 Friday

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**Length:** 791 words

**Body**

The Government has announced plans to implement phase one of ***wind power*** production in the area of Srlige Nordsj II. The electricity produced from these ***wind*** farms will be transmitted via subsea cable to the Norwegian mainland. The goal is to establish a model for allocating sea bed based on auctions.

This is a solution that will increase the energy supply to southern Norway. The Government is working to ensure that Norway has access to abundant, renewable and affordable electricity, which will benefit Norwegian industry in the future and enhance value creation and employment across the country as a whole, said Prime Minister Jonas Gahr Stre.

Phase one of Srlige Nordsj II has a capacity of 1 500 MW, and will produce roughly 7 TWh per year enough electricity to ***power*** 460 000 households.

The Government will encourage greater investment in offshore ***wind power***. ***Wind*** farms in the areas of Srlige Nordsj II and Utsira Nord will boost energy production in Norway. This will provide more electricity to meet the rising demand emerging from electrification of the Norwegian society. It will promote technological development, generate cost reductions and spur innovation in Norwegian industry, said Minister of Petroleum and Energy Marte Mjs Persen.

Phase two of Srlige Nordsj II has a capacity of another 1 500 MW. The Government will determine how to connect this additional electricity to the grid on the basis of a study on different grid alternatives for offshore ***wind power*** and their respective effects on the ***power*** system. The study will be carried out by the Norwegian Water Resources and Energy Directorate (NVE) in cooperation with Statnett.

The study will also look at the impacts on the ***power*** system of different grid solutions for offshore ***wind power*** connected to Norway and/or to other countries while not boosting export capacity from mainland Norway. The study was commissioned to NVE today and will be completed in the course of this autumn.

Our aim is to ensure low electricity prices for the people of Norway. The Government has taken effective steps to address the situation in the electricity market through measures such as support for electricity customers, reductions in the electrical ***power*** tax, increased housing assistance, increased social assistance, increased support for students and more support for household energy efficiency measures. So as we now work to expand offshore ***wind power***, we will not be looking to establish new interconnectors that increase electricity export capacity from mainland Norway, said Minister of Finance Trygve Slagsvold Vedum.

Auction to be the main model for allocating sea bed

The Government intends to develop the auction model as the primary means of allocating sea bed for renewable energy production. The Ministry of Petroleum and Energy will now start work on designing an auction model for realising phase one of Srlige Nordsj II

The Government will move forward with the plans for regulatory changes needed for the auction solution and sea bed allocation process that were circulated for review in summer 2021. The Government will submit a proposal to the Storting in the course of spring 2022 for amendments to the Offshore Energy Act and the appurtenant regulations.

Consultation on division of the area

Today the Ministry of Petroleum and Energy is starting a consultation process on the proposed division of the areas to be allocated in Utsira and Srlige Nordsj II. The proposal takes into account both environmental interests and coexistence with other interests. The Ministry is seeking input from the ***wind power*** industry, other users of the areas and other interested parties on any adjustments to the areas and on which areas will be most suitable for development.

Identifying new areas for offshore ***wind power***

In the long term, offshore ***wind power*** development will be dependent on access to sea bed. The Government is seeking to establish a predictable framework for the business sector by opening the door to more projects after Srlige Nordsj II and Utsira Nord. The Ministry of Petroleum and Energy has commissioned NVE to identify new areas for renewable offshore energy production based on input from an internal directorate-level committee and draw up a recommendation for an impact assessment programme. This work will take 912 months. Impact assessments will then need to be carried out before any new areas can be opened.

Norways workforce, engineers and supplier industry are among the best in the world. With our expertise and access to clean ***power***, we have the potential to become a green industrial giant. The industrial projects to be developed at Srlige Nordsj II and Utsira Nord can help make this happen, said Minister of Trade and Industry Jan Christian Vestre.

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[***Berlin resolves biodiversity issue to allow expansion of wind power***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:6551-NF01-DXFJ-542S-00000-00&context=1516831)

dpa international (Englischer Dienst)

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**Dateline:** Berlin (dpa) -

**Body**

The German government has resolved a conflict over biodiversity that will allow for the construction of more ***wind*** turbines.

Lawmakers greeted the step on Monday after years of conflict over the issue, saying it would enable the country to meet its climate goals and also reduce its dependency on Russian gas, amid the ongoing Ukraine conflict.

The Environment and Economics Ministries have reached an agreement to enable the faster expansion of onshore ***wind power*** in a way that is compatible with protecting the environment.

The ministries have set uniform, legal standards for testing and evaluating the extent to which a ***wind*** turbine significantly increases the "collision risk" for endangered bird species.

Species protection and ***wind power*** will be "allies" rather than opponents in the future, said Economy and Environment Minister Robert Habeck. "Species protection and ***wind power*** get along if you do it well."

A list is to be created of breeding bird species that could be at risk of colliding with the ***wind*** turbines, including the white-tailed eagle, the golden eagle and the red kite, for example. Efforts are to be made to ensure the turbines are not built near the breeding sites, which would be off-limits for generating ***wind power***.

The step aims to lead to easier and faster approval procedures that are also to enable older turbines to be replaced with newer models that are higher and more powerful.

The compromise also foresees ***wind*** turbine operators participating in programmes to support particular species.

Editorial contactsEditing by: Allison Williams, <[*international@dpa.com*](mailto:international@dpa.com);

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[***Favourable Breezes Boost Spain's Wind Power Sector***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:6568-VXR1-JCMN-Y14D-00000-00&context=1516831)

Newstex Blogs

International Business Times News

April 10, 2022 Sunday 3:50 AM EST

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**Body**

Apr 10, 2022( International Business Times News: [*http://www.ibtimes.com*](http://www.ibtimes.com) Delivered by Newstex)

Buoyed by a surge in investment and new projects, ***wind power*** has become Spain's main source of electricity generation just as Europe seeks to curb its energy imports from Russia.

"We are on suitable ground here," said Joaquin Garcia Latorre, project director at Enel Green ***Power*** Espana, pointing to gigantic masts erected on the heights of the tiny northeastern village of Villar de los Navarros.

The Spanish-Italian firm picked this spot, which is well exposed to the ***wind***, to set up a 180-megawatt ***wind*** farm, one of the country's biggest.

Dubbed Tico ***Wind***, its 43 ***wind*** turbines started producing ***power*** in November, said Latorre while workers around him tended to the turbines, which are over 100 metres (328 feet) high.

***Wind power*** became the main source of electricity production in Spain last year, accounting for 23 percent, ahead of nuclear (21 percent) and gas (17 percent) Photo: AFP / CESAR MANSO

"There are between 2,500 and 3,000 hours of ***wind*** here per year," he added.

The ***wind*** farm will be able to produce 471 gigawatt hours per year -- enough to meet the demands of 148,000 households -- after it becomes fully operational in a month.

These types of projects have popped up across Spain in recent years, making it Europe's second-biggest ***wind power*** producer after Germany for installed capacity and the world's fifth biggest.

***Wind power*** became the main source of electricity production in Spain last year, accounting for 23 percent, ahead of nuclear (21 percent) and gas (17 percent), according to national grid operator REE.

The sector "benefits from a favourable situation" although "brakes" remain on its development, such as a dependency on government auctions, said Francisco Valverde Sanchez, renewables specialist at electricity consultants Menta Energia.

A ***wind*** farm in Spain's Villar de los Navarros will produce 471 gigawatt hours per year -- enough to meet the demands of 148,000 households -- after it becomes fully operational in a month Photo: AFP / CESAR MANSO

Following a boom in the 2000s thanks to generous public financial aid, the sector suffered a sudden halt when subsidies were slashed in 2013 during Spain's economic crisis.

It has since charged ahead. Spain, which has a total of 1,265 ***wind*** farms, had an installed ***wind power*** capacity of 28.1 gigawatts in 2021, up from 23.4 gigawatts in 2018, according to industry group AEE.

With large swathes of sparsely populated land, a favourable legal framework and cutting edge ***wind*** turbine makers, Spain is one of the most "interesting" markets for ***wind power*** investors, said AEE director general Juan Virgilio Marquez.

As part of its plan to respond to the economic fallout from Russia's invasion of Ukraine, Spain has pledged to speed up the approval of ***wind power*** projects of less than 75 megawatts Photo: AFP / CESAR MANSO

Spain is home to several sector heavyweights such as Iberdrola and Naturgay, making it a top exporter of ***wind power*** equipment. "This explains the dynamism of the sector," said Marquez.

Investor interest has even come from outside of the energy sector.

In November Spain's Amancio Ortega, the founder of fast fashion giant Zara and one of the world's richest men, injected 245 million euros ($268 million) in a ***wind*** farm in the northeastern region of Aragon.

Spain in 2020 pledged to generate 74 percent of its electricity from renewable sources by 2030, up from 47 percent.

To meet this target, Spain is counting on the development of offshore ***wind power***, a sector that is in its infancy.

But since Spain has thousands of kilometres of coastline, offshore ***wind*** has lots of room to grow.

"This is an ambitious goal," said Valverde Sanchez, arguing that government bureaucracy around ***wind*** farm projects must be reduced for it to be met.

Nearly 600 ***wind power*** projects are currently under study by the government, according to AEE.

As part of its plan to respond to the economic fallout from Russia's invasion of Ukraine, Spain has pledged to speed up the approval of ***wind power*** projects of less than 75 megawatts.

"Our country had enough natural resources to become Europe's leading producer and exporter of renewable energy," Prime Minister Pedro Sanchez said Wednesday, adding this could be key to help the European Union meet its goal of "energy independence".

Since Russia invaded Ukraine on February 24, Brussels has declared a mission to cut the EU's Russian gas imports by two thirds this year and to end the use of Russian gas by 2027.

Spain "could become the energy 'breadbasket' of Europe," said Virgilio Marquez.

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[***Australian Daily Wind Power Generation Data - Monday 4 April 2022***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:6556-XJ61-F03R-N159-00000-00&context=1516831)

Newstex Blogs

PA Pundits

April 5, 2022 Tuesday 7:06 AM EST

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**Length:** 1088 words

**Byline:** TonyfromOz

**Body**

Apr 05, 2022( PA Pundits: [*http://papundits.wordpress.com*](http://papundits.wordpress.com)/ Delivered by Newstex)

By Anton Lang ~

This Post details the daily ***wind power*** generation data for the AEMO coverage area in Australia. For the background information, refer to the Introductory Post at this link[1].

Each image is shown here at a smaller size to fit on the page alongside the data for that day. If you click on each image, it will open on a new page and at a larger size so you can better see the detail.

Note also that on some days, there will be a scale change for the main ***wind power*** image, and that even though images may look similar in shape for the ***power*** generation black line on the graph when compared to other days, that scale (the total ***power*** shown on the left hand vertical axis) has been changed to show the graph at a larger size to better fit the image for that graph.

Monday 4 April 2022

Total ***Wind Power*** Generation

[*https://papundits.files.wordpress.com/2022/04/040401wind.jpgThis*](https://papundits.files.wordpress.com/2022/04/040401wind.jpgThis) image shows the total ***power*** generated across the whole day by every ***wind*** plant in this vast AEMO coverage area for Australia.

The total Nameplate for all these ***wind*** plants changes as each new ***wind*** plant comes on line delivering ***power*** to the grid. That current Nameplate is 8587MW, and this is from the current total of 69 ***wind*** plants.

Note that the shape of this ***wind power*** load curve does not follow the shape of the main load curve for total ***power*** generation, and that is seen in the image below, the solid black line across the top of the image for that graph. ***Wind power*** generates its ***power*** only when the ***wind*** is blowing, hence it does not follow the actual ***power*** generation Load Curve, which is also the the exact same shaped curve as for actual ***power*** consumption.

For this data, I have added the times for the daily minimum, and the daily maximum, to show how they do not correlate with the actual times of minimum ***power*** consumption (around 4AM each day) and maximum ***power*** consumption, the evening Peak. (at around 6.40PM in Winter and earlier during the Summer Months.)

Daily Minimum - 917MW (9.45AM)

Daily Maximum - 1455MW (8.55PM)

Average ***Wind*** Generation - 1168MW

Total Generated ***Power*** - 28.03GWH

Percentage Supplied By ***Wind Power*** At The Low Point For The Day - 3.7%

Percentage Supplied By ***Wind Power*** At Peak ***Power*** For The Day - 1065MW of 25750MW - 6.20PM - 4.14% (Mid afternoon Peak with rooftop solar added was 26840MW at 1.15PM)

Average Percentage Of Overall Total ***Power*** Generation - %

Daily Operational Capacity Factor - 13.60%

***Wind Power*** Generation Versus Total ***Power*** Generation

[*https://papundits.files.wordpress.com/2022/04/040402windtotal.jpgThis*](https://papundits.files.wordpress.com/2022/04/040402windtotal.jpgThis) image shows the total ***power*** generated from all the ***wind*** plants in this AEMO coverage area, and compares it to the overall total generated ***power*** from every source of ***power*** generation, which is the black line at the top of the graph. ***Wind power*** is the green coloured area, along the bottom of this graph.

While the green colour in this image looks to be a different shape to the graph above, keep in mind here that the scale is completely different, and that green coloured ***Wind*** total is the same as for the image shown above, only with the scale changed so it can fit onto the graph.

Notes

Finding ***Wind Power*** Average - On the graph, there are 25 hourly time points, starting with midnight and finishing with midnight. I have added the total at each of those hourly time points together, and divided the resultant total by 25 to give an average in MegaWatts. (MW) For total ***power*** in GWH, multiply the average daily ***power*** by 24, and then divide by 1000. For the Capacity Factor, that is calculated by dividing the average ***wind*** generation by the current Nameplate and then multiplying that by 100 to give a percentage.

Comments For This Day

This was another of those days (and they are not all that rare really) when ***wind*** generation was low across the whole of the day. The daily average of 1168MW gave ***wind*** generation a daily operational Capacity Factor of just 13.6%, and that was seventeen percent lower than the year round average. As it was low across the whole of the day, it was also low at the usual time of the evening Peak of maximum ***power*** consumption, and at that time, ***wind*** was delivering just 4.1% of all the generated ***power*** from every source. With generated ***power*** low across most of the day, then there was not mach room for a wide difference between the low for the day and the high, and for this day that gap was only 510MW

\*\*\*\*\*

Anton Lang[2] uses the screen name of TonyfromOz, and he writes at this site, PA Pundits International[3] on topics related to electrical ***power*** generation, from all sources, concentrating mainly on Renewable ***Power***, and how the two most favoured methods of renewable ***power*** generation, ***Wind Power*** and all versions of Solar ***Power***, fail comprehensively to deliver levels of ***power*** required to replace traditional ***power*** generation. His Bio is at this link[4].

OzWindPowerGenerationTFO

[ 1]: [*https://papundits.wordpress.com/2019/10/01/australian-daily-****wind-power****-generation-data-introduction-with-permanent-link-to-daily-posts/*](https://papundits.wordpress.com/2019/10/01/australian-daily-wind-power-generation-data-introduction-with-permanent-link-to-daily-posts/) [ 2]: [*https://papundits.wordpress.com/author/tonyoz/*](https://papundits.wordpress.com/author/tonyoz/) [ 3]: [*https://papundits.wordpress.com*](https://papundits.wordpress.com)/ [ 4]: [*https://papundits.wordpress.com/views-expressed-by-writers-are-their-own-and-do-not/tonyfromoz/*](https://papundits.wordpress.com/views-expressed-by-writers-are-their-own-and-do-not/tonyfromoz/)

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**Load-Date:** April 5, 2022

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[***Australian Daily Wind Power Generation Data - Sunday 17 April 2022 - Plus Weekly Update***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:6580-H1Y1-F03R-N121-00000-00&context=1516831)

Newstex Blogs

PA Pundits

April 18, 2022 Monday 7:06 AM EST

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**Length:** 1245 words

**Byline:** TonyfromOz

**Body**

Apr 18, 2022( PA Pundits: [*http://papundits.wordpress.com*](http://papundits.wordpress.com)/ Delivered by Newstex)

By Anton Lang ~

This Post details the daily ***wind power*** generation data for the AEMO coverage area in Australia. For the background information, refer to the Introductory Post at this link[1].

Each image is shown here at a smaller size to fit on the page alongside the data for that day. If you click on each image, it will open on a new page and at a larger size so you can better see the detail.

Note also that on some days, there will be a scale change for the main ***wind power*** image, and that even though images may look similar in shape for the ***power*** generation black line on the graph when compared to other days, that scale (the total ***power*** shown on the left hand vertical axis) has been changed to show the graph at a larger size to better fit the image for that graph.

Sunday 17 April 2022

Total ***Wind Power*** Generation

[*https://papundits.files.wordpress.com/2022/04/041701wind-1.jpgThis*](https://papundits.files.wordpress.com/2022/04/041701wind-1.jpgThis) image shows the total ***power*** generated across the whole day by every ***wind*** plant in this vast AEMO coverage area for Australia.

The total Nameplate for all these ***wind*** plants changes as each new ***wind*** plant comes on line delivering ***power*** to the grid. That current Nameplate is 8587MW, and this is from the current total of 69 ***wind*** plants.

Note that the shape of this ***wind power*** load curve does not follow the shape of the main load curve for total ***power*** generation, and that is seen in the image below, the solid black line across the top of the image for that graph. ***Wind power*** generates its ***power*** only when the ***wind*** is blowing, hence it does not follow the actual ***power*** generation Load Curve, which is also the the exact same shaped curve as for actual ***power*** consumption.

For this data, I have added the times for the daily minimum, and the daily maximum, to show how they do not correlate with the actual times of minimum ***power*** consumption (around 4AM each day) and maximum ***power*** consumption, the evening Peak. (at around 6.40PM in Winter and earlier during the Summer Months.)

Daily Minimum - 1746MW (9.40PM)

Daily Maximum - 4457MW (12.25AM)

Average ***Wind*** Generation - 2956MW

Total Generated ***Power*** - 70.94GWH

Percentage Supplied By ***Wind Power*** At The Low Point For The Day - 9.5%

Percentage Supplied By ***Wind Power*** At Peak ***Power*** For The Day - 2145MW of 22600MW - 6.25PM - 9.49% (Mid afternoon Peak with rooftop solar added was 22990MW at 12.00PM Midday)

Average Percentage Of Overall Total ***Power*** Generation - %

Daily Operational Capacity Factor - 34.42%

***Wind Power*** Generation Versus Total ***Power*** Generation

[*https://papundits.files.wordpress.com/2022/04/041702windtotal.jpgThis*](https://papundits.files.wordpress.com/2022/04/041702windtotal.jpgThis) image shows the total ***power*** generated from all the ***wind*** plants in this AEMO coverage area, and compares it to the overall total generated ***power*** from every source of ***power*** generation, which is the black line at the top of the graph. ***Wind power*** is the green coloured area, along the bottom of this graph.

While the green colour in this image looks to be a different shape to the graph above, keep in mind here that the scale is completely different, and that green coloured ***Wind*** total is the same as for the image shown above, only with the scale changed so it can fit onto the graph.

Notes

Finding ***Wind Power*** Average - On the graph, there are 25 hourly time points, starting with midnight and finishing with midnight. I have added the total at each of those hourly time points together, and divided the resultant total by 25 to give an average in MegaWatts. (MW) For total ***power*** in GWH, multiply the average daily ***power*** by 24, and then divide by 1000. For the Capacity Factor, that is calculated by dividing the average ***wind*** generation by the current Nameplate and then multiplying that by 100 to give a percentage.

Weekly UPDATE

Generated ***wind power*** total as a Percentage of overall total generated ***power*** from every source for this last week - 9.9%

Generated ***wind power*** total as a Percentage of overall total generated ***power*** from every source for the last year (52 weeks) - 11.4%

Capacity Factor for ***wind power*** generation for the last week (7 days) - 23.16%

Capacity Factor for ***wind power*** generation for the last year (52 weeks) - 30.07%

Capacity Factor for ***wind power*** generation for the longer term (185 weeks) - 29.99%

Nameplate change from beginning of data collection - (then) 5301MW - (now) 8587MW - (Change) +3286MW (an increase of 62%)

Comments For This Day

***Wind*** generation was well up on what it was on the day before, and the average for this day of 2956MW gave ***wind*** generation a daily operational Capacity Factor (CF) of 34.4%, and that was four percent higher than the year round average. ***Wind*** fell steadily across the day, and at the usual time of the evening Peak of maximum ***power*** consumption, ***wind*** was delivering 9.5% of all the generated ***power*** from every source. There was again a substantial difference between the high for the day and the low, and for this day, that gap was 2711MW.

When it came to the weekly Update, the one day of relatively good ***wind*** generation did not make up for the low days during the week, and the weekly operational CF only came in at 23.1% and that was seven percent lower than the year round average. That dragged both long term averages for CF lower, and the longest term, now almost three and a half years of daily data sees that CF fall below 30% again, and the yearly one is closing in on that 30% figure as well.

\*\*\*\*\*

Anton Lang[2] uses the screen name of TonyfromOz, and he writes at this site, PA Pundits International[3] on topics related to electrical ***power*** generation, from all sources, concentrating mainly on Renewable ***Power***, and how the two most favoured methods of renewable ***power*** generation, ***Wind Power*** and all versions of Solar ***Power***, fail comprehensively to deliver levels of ***power*** required to replace traditional ***power*** generation. His Bio is at this link[4].

OzWindPowerGenerationTFO

[ 1]: [*https://papundits.wordpress.com/2019/10/01/australian-daily-****wind-power****-generation-data-introduction-with-permanent-link-to-daily-posts/*](https://papundits.wordpress.com/2019/10/01/australian-daily-wind-power-generation-data-introduction-with-permanent-link-to-daily-posts/) [ 2]: [*https://papundits.wordpress.com/author/tonyoz/*](https://papundits.wordpress.com/author/tonyoz/) [ 3]: [*https://papundits.wordpress.com*](https://papundits.wordpress.com)/ [ 4]: [*https://papundits.wordpress.com/views-expressed-by-writers-are-their-own-and-do-not/tonyfromoz/*](https://papundits.wordpress.com/views-expressed-by-writers-are-their-own-and-do-not/tonyfromoz/)

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**Load-Date:** April 18, 2022

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[***Australian Daily Wind Power Generation Data - Saturday 2 April 2022***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:654T-2GC1-F03R-N02H-00000-00&context=1516831)

Newstex Blogs

PA Pundits

April 3, 2022 Sunday 8:12 AM EST

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**Length:** 1061 words

**Byline:** TonyfromOz

**Body**

Apr 03, 2022( PA Pundits: [*http://papundits.wordpress.com*](http://papundits.wordpress.com)/ Delivered by Newstex)

By Anton Lang ~

This Post details the daily ***wind power*** generation data for the AEMO coverage area in Australia. For the background information, refer to the Introductory Post at this link[1].

Each image is shown here at a smaller size to fit on the page alongside the data for that day. If you click on each image, it will open on a new page and at a larger size so you can better see the detail.

Note also that on some days, there will be a scale change for the main ***wind power*** image, and that even though images may look similar in shape for the ***power*** generation black line on the graph when compared to other days, that scale (the total ***power*** shown on the left hand vertical axis) has been changed to show the graph at a larger size to better fit the image for that graph.

Saturday 2 April 2022

Total ***Wind Power*** Generation

[*https://papundits.files.wordpress.com/2022/04/040201wind.jpgThis*](https://papundits.files.wordpress.com/2022/04/040201wind.jpgThis) image shows the total ***power*** generated across the whole day by every ***wind*** plant in this vast AEMO coverage area for Australia.

The total Nameplate for all these ***wind*** plants changes as each new ***wind*** plant comes on line delivering ***power*** to the grid. That current Nameplate is 8587MW, and this is from the current total of 69 ***wind*** plants.

Note that the shape of this ***wind power*** load curve does not follow the shape of the main load curve for total ***power*** generation, and that is seen in the image below, the solid black line across the top of the image for that graph. ***Wind power*** generates its ***power*** only when the ***wind*** is blowing, hence it does not follow the actual ***power*** generation Load Curve, which is also the the exact same shaped curve as for actual ***power*** consumption.

For this data, I have added the times for the daily minimum, and the daily maximum, to show how they do not correlate with the actual times of minimum ***power*** consumption (around 4AM each day) and maximum ***power*** consumption, the evening Peak. (at around 6.40PM in Winter and earlier during the Summer Months.)

Daily Minimum - 1951MW (11.50PM)

Daily Maximum - 3931MW (12.05AM)

Average ***Wind*** Generation - 2773MW

Total Generated ***Power*** - 66.55GWH

Percentage Supplied By ***Wind Power*** At The Low Point For The Day - 10.00%

Percentage Supplied By ***Wind Power*** At Peak ***Power*** For The Day - 2333MW of 22640MW - 6.25PM - 10.30% (Mid afternoon Peak with rooftop solar added was MW at PM)

Average Percentage Of Overall Total ***Power*** Generation - %

Daily Operational Capacity Factor - 32.29%

***Wind Power*** Generation Versus Total ***Power*** Generation

[*https://papundits.files.wordpress.com/2022/04/040202windtotal.jpgThis*](https://papundits.files.wordpress.com/2022/04/040202windtotal.jpgThis) image shows the total ***power*** generated from all the ***wind*** plants in this AEMO coverage area, and compares it to the overall total generated ***power*** from every source of ***power*** generation, which is the black line at the top of the graph. ***Wind power*** is the green coloured area, along the bottom of this graph.

While the green colour in this image looks to be a different shape to the graph above, keep in mind here that the scale is completely different, and that green coloured ***Wind*** total is the same as for the image shown above, only with the scale changed so it can fit onto the graph.

Notes

Finding ***Wind Power*** Average - On the graph, there are 25 hourly time points, starting with midnight and finishing with midnight. I have added the total at each of those hourly time points together, and divided the resultant total by 25 to give an average in MegaWatts. (MW) For total ***power*** in GWH, multiply the average daily ***power*** by 24, and then divide by 1000. For the Capacity Factor, that is calculated by dividing the average ***wind*** generation by the current Nameplate and then multiplying that by 100 to give a percentage.

Comments For This Day

***Wind*** generation was lower on this day than it was on the day before. The daily average for this day was 2773MW gave ***wind*** generation a daily operational Capacity Factor of 32.3%, and that was two percent higher than the year round average. ***Wind*** was falling at the usual time of the evening Peak of maximum ***power*** consumption, and at that time, ***wind*** was delivering 10.3% of all the generated ***power*** from every source. Again, there was a substantial difference between the high for the day and the low, and on this day, that gap was 1980MW.

\*\*\*\*\*

Anton Lang[2] uses the screen name of TonyfromOz, and he writes at this site, PA Pundits International[3] on topics related to electrical ***power*** generation, from all sources, concentrating mainly on Renewable ***Power***, and how the two most favoured methods of renewable ***power*** generation, ***Wind Power*** and all versions of Solar ***Power***, fail comprehensively to deliver levels of ***power*** required to replace traditional ***power*** generation. His Bio is at this link[4].

OzWindPowerGenerationTFO

[ 1]: [*https://papundits.wordpress.com/2019/10/01/australian-daily-****wind-power****-generation-data-introduction-with-permanent-link-to-daily-posts/*](https://papundits.wordpress.com/2019/10/01/australian-daily-wind-power-generation-data-introduction-with-permanent-link-to-daily-posts/) [ 2]: [*https://papundits.wordpress.com/author/tonyoz/*](https://papundits.wordpress.com/author/tonyoz/) [ 3]: [*https://papundits.wordpress.com*](https://papundits.wordpress.com)/ [ 4]: [*https://papundits.wordpress.com/views-expressed-by-writers-are-their-own-and-do-not/tonyfromoz/*](https://papundits.wordpress.com/views-expressed-by-writers-are-their-own-and-do-not/tonyfromoz/)

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**Load-Date:** April 3, 2022

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[***Australian Daily Wind Power Generation Data - Monday 21 March 2022***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:6527-9P51-JCMN-Y4NX-00000-00&context=1516831)

Newstex Blogs

PA Pundits

March 22, 2022 Tuesday 6:06 AM EST

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**Length:** 1415 words

**Byline:** TonyfromOz

**Body**

Mar 22, 2022( PA Pundits: [*http://papundits.wordpress.com*](http://papundits.wordpress.com)/ Delivered by Newstex)

By Anton Lang ~

This Post details the daily ***wind power*** generation data for the AEMO coverage area in Australia. For the background information, refer to the Introductory Post at this link[1].

Each image is shown here at a smaller size to fit on the page alongside the data for that day. If you click on each image, it will open on a new page and at a larger size so you can better see the detail.

Note also that on some days, there will be a scale change for the main ***wind power*** image, and that even though images may look similar in shape for the ***power*** generation black line on the graph when compared to other days, that scale (the total ***power*** shown on the left hand vertical axis) has been changed to show the graph at a larger size to better fit the image for that graph.

Monday 21 March 2022

Total ***Wind Power*** Generation

[*https://papundits.files.wordpress.com/2022/03/032101wind.jpgThis*](https://papundits.files.wordpress.com/2022/03/032101wind.jpgThis) image shows the total ***power*** generated across the whole day by every ***wind*** plant in this vast AEMO coverage area for Australia.

The total Nameplate for all these ***wind*** plants changes as each new ***wind*** plant comes on line delivering ***power*** to the grid. That current Nameplate is 8587MW, and this is from the current total of 69 ***wind*** plants.

Note that the shape of this ***wind power*** load curve does not follow the shape of the main load curve for total ***power*** generation, and that is seen in the image below, the solid black line across the top of the image for that graph. ***Wind power*** generates its ***power*** only when the ***wind*** is blowing, hence it does not follow the actual ***power*** generation Load Curve, which is also the the exact same shaped curve as for actual ***power*** consumption.

For this data, I have added the times for the daily minimum, and the daily maximum, to show how they do not correlate with the actual times of minimum ***power*** consumption (around 4AM each day) and maximum ***power*** consumption, the evening Peak. (at around 6.40PM in Winter and earlier during the Summer Months.)

Daily Minimum - 457MW (10.20AM)

Daily Maximum - 1462MW (12.10AM)

Average ***Wind*** Generation - 896MW

Total Generated ***Power*** - 21.50GWH

Percentage Supplied By ***Wind Power*** At The Low Point For The Day - 1.8%

Percentage Supplied By ***Wind Power*** At Peak ***Power*** For The Day - 1166MW of 26570MW - 6.30PM - 4.39% (Mid afternoon Peak with rooftop solar added was 28620MW at 4.15PM)

Average Percentage Of Overall Total ***Power*** Generation - %

Daily Operational Capacity Factor - 10.43%

***Wind Power*** Generation Versus Total ***Power*** Generation

[*https://papundits.files.wordpress.com/2022/03/032102windtotal.jpgThis*](https://papundits.files.wordpress.com/2022/03/032102windtotal.jpgThis) image shows the total ***power*** generated from all the ***wind*** plants in this AEMO coverage area, and compares it to the overall total generated ***power*** from every source of ***power*** generation, which is the black line at the top of the graph. ***Wind power*** is the green coloured area, along the bottom of this graph.

While the green colour in this image looks to be a different shape to the graph above, keep in mind here that the scale is completely different, and that green coloured ***Wind*** total is the same as for the image shown above, only with the scale changed so it can fit onto the graph.

Notes

Finding ***Wind Power*** Average - On the graph, there are 25 hourly time points, starting with midnight and finishing with midnight. I have added the total at each of those hourly time points together, and divided the resultant total by 25 to give an average in MegaWatts. (MW) For total ***power*** in GWH, multiply the average daily ***power*** by 24, and then divide by 1000. For the Capacity Factor, that is calculated by dividing the average ***wind*** generation by the current Nameplate and then multiplying that by 100 to give a percentage.

Comments For This Day

The ***wind*** generation graph for this day marks one of those (extreme) times I highlighted in red text right at the top of this Post where I wrote that the change in scale makes the daily graphs look somewhat similar, and the specific change that makes this the most visible is the change in total ***power*** generation shown on the left side vertical axis, so, as I said, the graphs are best sized to fit the page. That was the ONLY reason I included that second graph under the main graph, where it shows the total ***wind*** generation in a green colour, and you can compare that to the overall actual ***power*** consumption, the black line at the top of this lower graph. And here, for this day, you can see just how low ***wind*** generation was for this day. I have now been detailing the daily ***wind*** generation for 181 weeks now, a little under 1300 individual days, three and a half years. In all that time, ***wind*** generation has only been lower than the total for this day on three occasions, and that was for three consecutive days last April, almost 12 Months ago, and it was just a little lower than this on those three consecutive days, and at that time, the total Nameplate for ALL these ***wind*** plants was lower than it is now, so that's what makes this total so low. That average for this day of 896MW (from a total Nameplate of 8587MW) gave ***wind*** generation a daily operational Capacity Factor of just 10.4%, only ONE THIRD of the year round average, a full twenty percent lower than that average. You can see the low point there, and again, on that lower graph, the green coloured total is barely discernible above zero, where it hovers for most of the day. At that low point, as ***power*** consumption was close to its highest for the day, ***wind*** was delivering just 1.8% of all the generated ***power*** from every source. At the usual evening Peak of maximum ***power*** consumption even then with ***wind*** slightly higher, it was still only delivering 4.4% of all the generated ***power*** from every source. And even on a day of extremely low ***power*** generation, there was still a gap between the low for the day and the high of 1005MW.

Okay, one day like this in years. I really am not all that fussed that it IS that ONE DAY. What are we going to do, if ***wind*** generation is to become one of the major suppliers of ***power***, and then we have days like this. You can't just shut the Country down while you wait for the ***wind*** to pick up. And it sort of shows the truth regarding that hackneyed old meme that if you build more of them, then there's always ***wind*** blowing somewhere or other. Here we have a case where the ***wind*** has abjectly failed across the whole network of ***wind*** plants .. FOR A WHOLE DAY.

\*\*\*\*\*

Anton Lang[2] uses the screen name of TonyfromOz, and he writes at this site, PA Pundits International[3] on topics related to electrical ***power*** generation, from all sources, concentrating mainly on Renewable ***Power***, and how the two most favoured methods of renewable ***power*** generation, ***Wind Power*** and all versions of Solar ***Power***, fail comprehensively to deliver levels of ***power*** required to replace traditional ***power*** generation. His Bio is at this link[4].

OzWindPowerGenerationTFO

[ 1]: [*https://papundits.wordpress.com/2019/10/01/australian-daily-****wind-power****-generation-data-introduction-with-permanent-link-to-daily-posts/*](https://papundits.wordpress.com/2019/10/01/australian-daily-wind-power-generation-data-introduction-with-permanent-link-to-daily-posts/) [ 2]: [*https://papundits.wordpress.com/author/tonyoz/*](https://papundits.wordpress.com/author/tonyoz/) [ 3]: [*https://papundits.wordpress.com*](https://papundits.wordpress.com)/ [ 4]: [*https://papundits.wordpress.com/views-expressed-by-writers-are-their-own-and-do-not/tonyfromoz/*](https://papundits.wordpress.com/views-expressed-by-writers-are-their-own-and-do-not/tonyfromoz/)

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**Load-Date:** March 22, 2022

**End of Document**



[***Wobben Properties Files United States Patent Application for Rotor Blade for a Wind Power Installation, Wind Power Installation and Method for Designing a Rotor Blade***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:6580-47W1-JBHT-D3GG-00000-00&context=1516831)

Global IP News. Energy Patent News

April 15, 2022 Friday

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**Length:** 274 words

**Dateline:** New Delhi

**Body**

**FULL TEXT**

Publication Name: Energy Patent NewsPatent Application Number: 17/497220Patent Publication Number: 20220112874International Patent Classification Codes: F03D 1/06 20060101 F03D001/06Patent Status: Application

Alexandria, April 15 -- Wobben Properties has filed a patent application for rotor blade for a ***wind power*** installation, ***wind power*** installation and method for designing a rotor blade. This invention was developed by Stemberg Jochen, Maass Hauke and Eschen Henry Knobbe.

The patent application number is 17/497220. International Patent Classification code is F03D 1/06 20060101 F03D001/06. Cooperative Patent Classification codes are F03D 1/0633 20130101, F05B 2230/50 20130101, F05B 2250/711 20130101 and F05B 2240/304 20200801.

According to the abstract released by the U.S. Patent and Trademark Office: "A rotor blade for a ***wind power*** installation, which extends in a longitudinal direction with a profile course from a blade connector to a blade tip, wherein the profile course contains at least one profile, comprising: a suction side and a pressure side, a relative profile thickness of greater than 25%, a profile chord, which extends between a leading edge and a trailing edge of the profile and has a length which defines the profile depth, a mean line which extends at least partially below the profile chord, a convex region which extends on the suction side from the trailing edge, and a convex region which extends on the pressure side from the trailing edge, wherein the convex region on the pressure side defines a rounded transition region of the pressure side to the trailing edge."

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**Load-Date:** April 18, 2022

**End of Document**



[***Uzbekistan plans to put into operation new wind power plant***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:6544-BYF1-JBMJ-34BN-00000-00&context=1516831)

Trend Daily Economic News

March 31, 2022 Thursday 11:20 AM GMT +4

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**Section:** UZBEKISTAN

**Length:** 275 words

**Body**

BAKU, Azerbaijan, March 31. Uzbekistan plans to put into operation new ***wind power*** plant in the Republic of Karakalpakstan in 2024, [*Trend*](http://en.trend.az) reports via Uzbek Ministry of Energy.

Once launched, the ***power*** plant will generate 350 million kilowatt-hours of electricity per year, which will provide electricity to more than 120,000 households.

After the plant will be commissioned, it will save 106 million cubic meters of natural gas per year and prevent the emission of 160,000 tons of greenhouse gases into the atmosphere.

During the construction of the new ***wind power*** plant, 400 people will be involved, and when the plant is put into operation, 30 new jobs will be created.

On March 18, 2022, the decree of the president of the Republic of Uzbekistan "On measures to implement the project for construction and operation of a ***wind power*** plant with a capacity of 100 MW in the Karauzyak district of the Republic of Karakalpakstan based on the conditions of public-private partnership" was adopted.

As a result of an international tender held with the support of the European Bank for Reconstruction and Development, Saudi ACWA ***Power*** company was declared the winner with a tariff offer of 2.5695 cents per 1 kilowatt-hour of electricity.

Within the framework of the project, the investor will build and put into operation overhead ***power*** lines, a step-up substation and switching points for connecting the ***wind power*** plant to a single energy system, with their subsequent transfer to National Electric Grids of Uzbekistan JSC.

The project cost is $107.8 million and is 100 percent funded by the investor (ACWA ***Power***).

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Follow the author on Twitter: [*@NatavanRzayeva5*](https://twitter.com/natavanrzayeva5)

**Load-Date:** March 31, 2022

**End of Document**



[***Australian Daily Wind Power Generation Data - Wednesday 30 March 2022***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:6545-2551-F03R-N3YT-00000-00&context=1516831)

Newstex Blogs

PA Pundits

March 31, 2022 Thursday 5:12 AM EST

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**Length:** 1100 words

**Byline:** TonyfromOz

**Body**

Mar 31, 2022( PA Pundits: [*http://papundits.wordpress.com*](http://papundits.wordpress.com)/ Delivered by Newstex)

By Anton Lang ~

This Post details the daily ***wind power*** generation data for the AEMO coverage area in Australia. For the background information, refer to the Introductory Post at this link[1].

Each image is shown here at a smaller size to fit on the page alongside the data for that day. If you click on each image, it will open on a new page and at a larger size so you can better see the detail.

Note also that on some days, there will be a scale change for the main ***wind power*** image, and that even though images may look similar in shape for the ***power*** generation black line on the graph when compared to other days, that scale (the total ***power*** shown on the left hand vertical axis) has been changed to show the graph at a larger size to better fit the image for that graph.

Wednesday 30 March 2022

Total ***Wind Power*** Generation

[*https://papundits.files.wordpress.com/2022/03/033001wind.jpgThis*](https://papundits.files.wordpress.com/2022/03/033001wind.jpgThis) image shows the total ***power*** generated across the whole day by every ***wind*** plant in this vast AEMO coverage area for Australia.

The total Nameplate for all these ***wind*** plants changes as each new ***wind*** plant comes on line delivering ***power*** to the grid. That current Nameplate is 8587MW, and this is from the current total of 69 ***wind*** plants.

Note that the shape of this ***wind power*** load curve does not follow the shape of the main load curve for total ***power*** generation, and that is seen in the image below, the solid black line across the top of the image for that graph. ***Wind power*** generates its ***power*** only when the ***wind*** is blowing, hence it does not follow the actual ***power*** generation Load Curve, which is also the the exact same shaped curve as for actual ***power*** consumption.

For this data, I have added the times for the daily minimum, and the daily maximum, to show how they do not correlate with the actual times of minimum ***power*** consumption (around 4AM each day) and maximum ***power*** consumption, the evening Peak. (at around 6.40PM in Winter and earlier during the Summer Months.)

Daily Minimum - 2221MW (1.30AM)

Daily Maximum - 4878MW (6.35PM)

Average ***Wind*** Generation - 3454MW

Total Generated ***Power*** - 82.89GWH

Percentage Supplied By ***Wind Power*** At The Low Point For The Day - 12.4%

Percentage Supplied By ***Wind Power*** At Peak ***Power*** For The Day - 4781MW of 25090MW - 6.25PM - 19.06% (Mid afternoon Peak with rooftop solar added was 26510MW at 1.25PM)

Average Percentage Of Overall Total ***Power*** Generation - %

Daily Operational Capacity Factor - 40.22%

***Wind Power*** Generation Versus Total ***Power*** Generation

[*https://papundits.files.wordpress.com/2022/03/033002windtotal.jpgThis*](https://papundits.files.wordpress.com/2022/03/033002windtotal.jpgThis) image shows the total ***power*** generated from all the ***wind*** plants in this AEMO coverage area, and compares it to the overall total generated ***power*** from every source of ***power*** generation, which is the black line at the top of the graph. ***Wind power*** is the green coloured area, along the bottom of this graph.

While the green colour in this image looks to be a different shape to the graph above, keep in mind here that the scale is completely different, and that green coloured ***Wind*** total is the same as for the image shown above, only with the scale changed so it can fit onto the graph.

Notes

Finding ***Wind Power*** Average - On the graph, there are 25 hourly time points, starting with midnight and finishing with midnight. I have added the total at each of those hourly time points together, and divided the resultant total by 25 to give an average in MegaWatts. (MW) For total ***power*** in GWH, multiply the average daily ***power*** by 24, and then divide by 1000. For the Capacity Factor, that is calculated by dividing the average ***wind*** generation by the current Nameplate and then multiplying that by 100 to give a percentage.

Comments For This Day

With strong ***winds*** in that area in the South of the Country where the greatest majority of ***wind*** plants are located, then ***wind*** generation was higher on this day than it was on the day before. the average for this day of3454MW gave ***wind*** generation a daily operational Capacity Factor of 40.2%, and that was ten percent higher than the year round average. ***Wind*** was just approaching its high for the day at the usual time of the evening Peak of maximum ***power*** consumption, and at that time, ***wind*** was delivering 19% of all the generated ***power*** from every source. On a day when ***wind*** did not go as low and reached a fairly rerasonable high, well, even then that difference between the low for the day and the high was substantial, and for this day, that gap was 2567MW.

\*\*\*\*\*

Anton Lang[2] uses the screen name of TonyfromOz, and he writes at this site, PA Pundits International[3] on topics related to electrical ***power*** generation, from all sources, concentrating mainly on Renewable ***Power***, and how the two most favoured methods of renewable ***power*** generation, ***Wind Power*** and all versions of Solar ***Power***, fail comprehensively to deliver levels of ***power*** required to replace traditional ***power*** generation. His Bio is at this link[4].

OzWindPowerGenerationTFO

[ 1]: [*https://papundits.wordpress.com/2019/10/01/australian-daily-****wind-power****-generation-data-introduction-with-permanent-link-to-daily-posts/*](https://papundits.wordpress.com/2019/10/01/australian-daily-wind-power-generation-data-introduction-with-permanent-link-to-daily-posts/) [ 2]: [*https://papundits.wordpress.com/author/tonyoz/*](https://papundits.wordpress.com/author/tonyoz/) [ 3]: [*https://papundits.wordpress.com*](https://papundits.wordpress.com)/ [ 4]: [*https://papundits.wordpress.com/views-expressed-by-writers-are-their-own-and-do-not/tonyfromoz/*](https://papundits.wordpress.com/views-expressed-by-writers-are-their-own-and-do-not/tonyfromoz/)

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**Load-Date:** March 31, 2022

**End of Document**



[***Australian Daily Wind Power Generation Data - Monday 28 March 2022***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:653S-GBD1-F03R-N0P3-00000-00&context=1516831)

Newstex Blogs

PA Pundits

March 29, 2022 Tuesday 12:06 PM EST

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**Length:** 1137 words

**Byline:** TonyfromOz

**Body**

Mar 29, 2022( PA Pundits: [*http://papundits.wordpress.com*](http://papundits.wordpress.com)/ Delivered by Newstex)

By Anton Lang ~

This Post details the daily ***wind power*** generation data for the AEMO coverage area in Australia. For the background information, refer to the Introductory Post at this link[1].

Each image is shown here at a smaller size to fit on the page alongside the data for that day. If you click on each image, it will open on a new page and at a larger size so you can better see the detail.

Note also that on some days, there will be a scale change for the main ***wind power*** image, and that even though images may look similar in shape for the ***power*** generation black line on the graph when compared to other days, that scale (the total ***power*** shown on the left hand vertical axis) has been changed to show the graph at a larger size to better fit the image for that graph.

Monday 28 March 2022

Total ***Wind Power*** Generation

[*https://papundits.files.wordpress.com/2022/03/032801wind.jpgThis*](https://papundits.files.wordpress.com/2022/03/032801wind.jpgThis) image shows the total ***power*** generated across the whole day by every ***wind*** plant in this vast AEMO coverage area for Australia.

The total Nameplate for all these ***wind*** plants changes as each new ***wind*** plant comes on line delivering ***power*** to the grid. That current Nameplate is 8587MW, and this is from the current total of 69 ***wind*** plants.

Note that the shape of this ***wind power*** load curve does not follow the shape of the main load curve for total ***power*** generation, and that is seen in the image below, the solid black line across the top of the image for that graph. ***Wind power*** generates its ***power*** only when the ***wind*** is blowing, hence it does not follow the actual ***power*** generation Load Curve, which is also the the exact same shaped curve as for actual ***power*** consumption.

For this data, I have added the times for the daily minimum, and the daily maximum, to show how they do not correlate with the actual times of minimum ***power*** consumption (around 4AM each day) and maximum ***power*** consumption, the evening Peak. (at around 6.40PM in Winter and earlier during the Summer Months.)

Daily Minimum - 284MW (9.05AM)

Daily Maximum - 2442MW (12.45AM)

Average ***Wind*** Generation - 1372MW

Total Generated ***Power*** - 32.92GWH

Percentage Supplied By ***Wind Power*** At The Low Point For The Day - 1.0%

Percentage Supplied By ***Wind Power*** At Peak ***Power*** For The Day - 1696MW of 25510MW - 6.25PM - 6.65% (Mid afternoon Peak with rooftop solar added was 26680MW at 1.25PM)

Average Percentage Of Overall Total ***Power*** Generation - %

Daily Operational Capacity Factor - 15.98%

***Wind Power*** Generation Versus Total ***Power*** Generation

[*https://papundits.files.wordpress.com/2022/03/032802windtotal.jpgThis*](https://papundits.files.wordpress.com/2022/03/032802windtotal.jpgThis) image shows the total ***power*** generated from all the ***wind*** plants in this AEMO coverage area, and compares it to the overall total generated ***power*** from every source of ***power*** generation, which is the black line at the top of the graph. ***Wind power*** is the green coloured area, along the bottom of this graph.

While the green colour in this image looks to be a different shape to the graph above, keep in mind here that the scale is completely different, and that green coloured ***Wind*** total is the same as for the image shown above, only with the scale changed so it can fit onto the graph.

Notes

Finding ***Wind Power*** Average - On the graph, there are 25 hourly time points, starting with midnight and finishing with midnight. I have added the total at each of those hourly time points together, and divided the resultant total by 25 to give an average in MegaWatts. (MW) For total ***power*** in GWH, multiply the average daily ***power*** by 24, and then divide by 1000. For the Capacity Factor, that is calculated by dividing the average ***wind*** generation by the current Nameplate and then multiplying that by 100 to give a percentage.

Comments For This Day

***Wind*** generation was lower on this day than it was on the day before. The daily average for this day of 1372MW gave ***wind*** generation a daily operational Capacity Factor of 16%, and that was fourteen percent lower than the year round average. While ***wind*** had risen some from that low point early in the day, at the usual time of the evening Peak of maximum ***power*** consumption, ***wind*** was delivering just 6.2% of all the generated ***power*** from every source. Note that low point for the day at around 9AM when ***wind*** was only delivering a minute one percent of all generated ***power***, that low point was just nine hours after the high for the day, so ***wind*** generation lost the whole of that difference between the high and the low in around eight and a half hours, and that gap between the two was 2158MW, and with ***wind*** so low for the day, that was a swing across the day from high to low of 88% of all the generated ***wind power*** across the day. And a low of just 284MW, that's a CF at that time, of only 3.3%.

\*\*\*\*\*

Anton Lang[2] uses the screen name of TonyfromOz, and he writes at this site, PA Pundits International[3] on topics related to electrical ***power*** generation, from all sources, concentrating mainly on Renewable ***Power***, and how the two most favoured methods of renewable ***power*** generation, ***Wind Power*** and all versions of Solar ***Power***, fail comprehensively to deliver levels of ***power*** required to replace traditional ***power*** generation. His Bio is at this link[4].

OzWindPowerGenerationTFO

[ 1]: [*https://papundits.wordpress.com/2019/10/01/australian-daily-****wind-power****-generation-data-introduction-with-permanent-link-to-daily-posts/*](https://papundits.wordpress.com/2019/10/01/australian-daily-wind-power-generation-data-introduction-with-permanent-link-to-daily-posts/) [ 2]: [*https://papundits.wordpress.com/author/tonyoz/*](https://papundits.wordpress.com/author/tonyoz/) [ 3]: [*https://papundits.wordpress.com*](https://papundits.wordpress.com)/ [ 4]: [*https://papundits.wordpress.com/views-expressed-by-writers-are-their-own-and-do-not/tonyfromoz/*](https://papundits.wordpress.com/views-expressed-by-writers-are-their-own-and-do-not/tonyfromoz/)

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[***Australian Daily Wind Power Generation Data - Friday 1 April 2022***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:654K-02P1-JCMN-Y06W-00000-00&context=1516831)

Newstex Blogs

PA Pundits

April 2, 2022 Saturday 8:12 AM EST

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**Length:** 1144 words

**Byline:** TonyfromOz

**Body**

Apr 02, 2022( PA Pundits: [*http://papundits.wordpress.com*](http://papundits.wordpress.com)/ Delivered by Newstex)

By Anton Lang ~

This Post details the daily ***wind power*** generation data for the AEMO coverage area in Australia. For the background information, refer to the Introductory Post at this link[1].

Each image is shown here at a smaller size to fit on the page alongside the data for that day. If you click on each image, it will open on a new page and at a larger size so you can better see the detail.

Note also that on some days, there will be a scale change for the main ***wind power*** image, and that even though images may look similar in shape for the ***power*** generation black line on the graph when compared to other days, that scale (the total ***power*** shown on the left hand vertical axis) has been changed to show the graph at a larger size to better fit the image for that graph.

Friday 1 April 2022

Total ***Wind Power*** Generation

[*https://papundits.files.wordpress.com/2022/04/040101wind.jpgThis*](https://papundits.files.wordpress.com/2022/04/040101wind.jpgThis) image shows the total ***power*** generated across the whole day by every ***wind*** plant in this vast AEMO coverage area for Australia.

The total Nameplate for all these ***wind*** plants changes as each new ***wind*** plant comes on line delivering ***power*** to the grid. That current Nameplate is 8587MW, and this is from the current total of 69 ***wind*** plants.

Note that the shape of this ***wind power*** load curve does not follow the shape of the main load curve for total ***power*** generation, and that is seen in the image below, the solid black line across the top of the image for that graph. ***Wind power*** generates its ***power*** only when the ***wind*** is blowing, hence it does not follow the actual ***power*** generation Load Curve, which is also the the exact same shaped curve as for actual ***power*** consumption.

For this data, I have added the times for the daily minimum, and the daily maximum, to show how they do not correlate with the actual times of minimum ***power*** consumption (around 4AM each day) and maximum ***power*** consumption, the evening Peak. (at around 6.40PM in Winter and earlier during the Summer Months.)

Daily Minimum - 3260MW (12.35PM)

Daily Maximum - 4798MW (6.00PM)

Average ***Wind*** Generation - 4137MW

Total Generated ***Power*** - 99.28GWH

Percentage Supplied By ***Wind Power*** At The Low Point For The Day - 12.8%

Percentage Supplied By ***Wind Power*** At Peak ***Power*** For The Day - 4625MW of 24400MW - 6.20PM - 18.95% (Mid afternoon Peak with rooftop solar added was 26590MW at 11.45AM)

Average Percentage Of Overall Total ***Power*** Generation - %

Daily Operational Capacity Factor - 48.18%

***Wind Power*** Generation Versus Total ***Power*** Generation

[*https://papundits.files.wordpress.com/2022/04/040102windtotal.jpgThis*](https://papundits.files.wordpress.com/2022/04/040102windtotal.jpgThis) image shows the total ***power*** generated from all the ***wind*** plants in this AEMO coverage area, and compares it to the overall total generated ***power*** from every source of ***power*** generation, which is the black line at the top of the graph. ***Wind power*** is the green coloured area, along the bottom of this graph.

While the green colour in this image looks to be a different shape to the graph above, keep in mind here that the scale is completely different, and that green coloured ***Wind*** total is the same as for the image shown above, only with the scale changed so it can fit onto the graph.

Notes

Finding ***Wind Power*** Average - On the graph, there are 25 hourly time points, starting with midnight and finishing with midnight. I have added the total at each of those hourly time points together, and divided the resultant total by 25 to give an average in MegaWatts. (MW) For total ***power*** in GWH, multiply the average daily ***power*** by 24, and then divide by 1000. For the Capacity Factor, that is calculated by dividing the average ***wind*** generation by the current Nameplate and then multiplying that by 100 to give a percentage.

Comments For This Day

This was another day of high ***wind*** generation, and again, keep in mind that even on a good day like this, ***wind*** is still only operating at less than 50% of its Capacity. The daily average of 4137MW gave ***wind*** generation a daily operational Capacity Factor of 48.2%, and that was eighteen percent higher than the year round average. ***Wind*** had just come off its high for the day at the usual time of the evening Peak of maximum ***power*** consumption, and at that time, ***wind*** was delivering 19% of all the generated ***power*** from every source, and again, note here that at the high point of a really good day for ***wind*** generation, it still is less than one fifth of all generated ***power***. Having spent many Billions of dollars, it still struggles to generate enough ***power*** to be viable as a regular supplier of reliable electrical ***power***. Even while relatively stable on a day of higher ***power*** generation than is the usual, there was still a substantial difference between the low for the day and the high, and here, on this day, that gap was 1538MW.

\*\*\*\*\*

Anton Lang[2] uses the screen name of TonyfromOz, and he writes at this site, PA Pundits International[3] on topics related to electrical ***power*** generation, from all sources, concentrating mainly on Renewable ***Power***, and how the two most favoured methods of renewable ***power*** generation, ***Wind Power*** and all versions of Solar ***Power***, fail comprehensively to deliver levels of ***power*** required to replace traditional ***power*** generation. His Bio is at this link[4].

OzWindPowerGenerationTFO

[ 1]: [*https://papundits.wordpress.com/2019/10/01/australian-daily-****wind-power****-generation-data-introduction-with-permanent-link-to-daily-posts/*](https://papundits.wordpress.com/2019/10/01/australian-daily-wind-power-generation-data-introduction-with-permanent-link-to-daily-posts/) [ 2]: [*https://papundits.wordpress.com/author/tonyoz/*](https://papundits.wordpress.com/author/tonyoz/) [ 3]: [*https://papundits.wordpress.com*](https://papundits.wordpress.com)/ [ 4]: [*https://papundits.wordpress.com/views-expressed-by-writers-are-their-own-and-do-not/tonyfromoz/*](https://papundits.wordpress.com/views-expressed-by-writers-are-their-own-and-do-not/tonyfromoz/)

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**Load-Date:** April 2, 2022

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[***Australian Daily Wind Power Generation Data - Thursday 31 March 2022***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:654C-1GV1-F03R-N2FN-00000-00&context=1516831)

Newstex Blogs

PA Pundits

April 1, 2022 Friday 8:11 AM EST

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**Length:** 1140 words

**Byline:** TonyfromOz

**Body**

Apr 01, 2022( PA Pundits: [*http://papundits.wordpress.com*](http://papundits.wordpress.com)/ Delivered by Newstex)

By Anton Lang ~

This Post details the daily ***wind power*** generation data for the AEMO coverage area in Australia. For the background information, refer to the Introductory Post at this link[1].

Each image is shown here at a smaller size to fit on the page alongside the data for that day. If you click on each image, it will open on a new page and at a larger size so you can better see the detail.

Note also that on some days, there will be a scale change for the main ***wind power*** image, and that even though images may look similar in shape for the ***power*** generation black line on the graph when compared to other days, that scale (the total ***power*** shown on the left hand vertical axis) has been changed to show the graph at a larger size to better fit the image for that graph.

Thursday 31 March 2022

Total ***Wind Power*** Generation

[*https://papundits.files.wordpress.com/2022/04/033101wind.jpgThis*](https://papundits.files.wordpress.com/2022/04/033101wind.jpgThis) image shows the total ***power*** generated across the whole day by every ***wind*** plant in this vast AEMO coverage area for Australia.

The total Nameplate for all these ***wind*** plants changes as each new ***wind*** plant comes on line delivering ***power*** to the grid. That current Nameplate is 8587MW, and this is from the current total of 69 ***wind*** plants.

Note that the shape of this ***wind power*** load curve does not follow the shape of the main load curve for total ***power*** generation, and that is seen in the image below, the solid black line across the top of the image for that graph. ***Wind power*** generates its ***power*** only when the ***wind*** is blowing, hence it does not follow the actual ***power*** generation Load Curve, which is also the the exact same shaped curve as for actual ***power*** consumption.

For this data, I have added the times for the daily minimum, and the daily maximum, to show how they do not correlate with the actual times of minimum ***power*** consumption (around 4AM each day) and maximum ***power*** consumption, the evening Peak. (at around 6.40PM in Winter and earlier during the Summer Months.)

Daily Minimum - 3939MW (12.15PM)

Daily Maximum - 5046MW (5.55PM)

Average ***Wind*** Generation - 4509MW

Total Generated ***Power*** - 108.21GWH

Percentage Supplied By ***Wind Power*** At The Low Point For The Day - 15.1%

Percentage Supplied By ***Wind Power*** At Peak ***Power*** For The Day - 4779MW of 25330MW - 6.35PM - 18.87% (Mid afternoon Peak with rooftop solar added was 27060MW at 12.05PMPM)

Average Percentage Of Overall Total ***Power*** Generation - %

Daily Operational Capacity Factor - 52.51%

***Wind Power*** Generation Versus Total ***Power*** Generation

[*https://papundits.files.wordpress.com/2022/04/033102windtotal.jpgThis*](https://papundits.files.wordpress.com/2022/04/033102windtotal.jpgThis) image shows the total ***power*** generated from all the ***wind*** plants in this AEMO coverage area, and compares it to the overall total generated ***power*** from every source of ***power*** generation, which is the black line at the top of the graph. ***Wind power*** is the green coloured area, along the bottom of this graph.

While the green colour in this image looks to be a different shape to the graph above, keep in mind here that the scale is completely different, and that green coloured ***Wind*** total is the same as for the image shown above, only with the scale changed so it can fit onto the graph.

Notes

Finding ***Wind Power*** Average - On the graph, there are 25 hourly time points, starting with midnight and finishing with midnight. I have added the total at each of those hourly time points together, and divided the resultant total by 25 to give an average in MegaWatts. (MW) For total ***power*** in GWH, multiply the average daily ***power*** by 24, and then divide by 1000. For the Capacity Factor, that is calculated by dividing the average ***wind*** generation by the current Nameplate and then multiplying that by 100 to give a percentage.

Comments For This Day

On a rare day when ***winds*** were high across that area in the South where the largest number of ***wind*** plants are located, ***wind*** generation was high and also relatively stable across most of the day, and these days are so rare to see. The average for the day was 4509MW, and that gave ***wind*** generation a daily operational Capacity Factor of 52.5%, and that was twenty two percent higher than the year round average, and yet again, note the irony here that on one of those very rare days when ***wind*** generation is so high, it was still only averaging just a little more than just HALF of its total Capacity. With ***wind*** high across most of the day, it was still relatively high at the usual time of the evening Peak of maximum ***power*** consumption, and at that time, ***wind*** was delivering just under 19% of all the generated ***power*** from every source. On this day with ***wind*** relatively stable, that difference between the low and the high was not as wide as it usually is, and that gap for this day came in at 1107MW.

\*\*\*\*\*

Anton Lang[2] uses the screen name of TonyfromOz, and he writes at this site, PA Pundits International[3] on topics related to electrical ***power*** generation, from all sources, concentrating mainly on Renewable ***Power***, and how the two most favoured methods of renewable ***power*** generation, ***Wind Power*** and all versions of Solar ***Power***, fail comprehensively to deliver levels of ***power*** required to replace traditional ***power*** generation. His Bio is at this link[4].

OzWindPowerGenerationTFO

[ 1]: [*https://papundits.wordpress.com/2019/10/01/australian-daily-****wind-power****-generation-data-introduction-with-permanent-link-to-daily-posts/*](https://papundits.wordpress.com/2019/10/01/australian-daily-wind-power-generation-data-introduction-with-permanent-link-to-daily-posts/) [ 2]: [*https://papundits.wordpress.com/author/tonyoz/*](https://papundits.wordpress.com/author/tonyoz/) [ 3]: [*https://papundits.wordpress.com*](https://papundits.wordpress.com)/ [ 4]: [*https://papundits.wordpress.com/views-expressed-by-writers-are-their-own-and-do-not/tonyfromoz/*](https://papundits.wordpress.com/views-expressed-by-writers-are-their-own-and-do-not/tonyfromoz/)

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[***Japan : Toshiba to Win Turbine Supply Contract for Onshore Wind Power in Abukuma, Fukushima***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:657S-N351-F11P-X369-00000-00&context=1516831)

Mena Report

April 16, 2022 Saturday

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**Length:** 500 words

**Body**

?Output to Reach Capacity of Approx. 147,000 kW; One of the Largest in Japan?

Toshiba Energy Systems & Solutions Corporation (hereinafter Toshiba ESS) announced that the company has won a major order from a joint venture, Fukushima Reconstruction ***Wind Power*** GK, to supply 46 ***wind*** turbines (totaling approx. 147,000 kW) as part of an operation and maintenance contract, including windmills and BOP1, for the four onshore ***wind power*** plants2 in the area of Abukuma, Fukushima Prefecture. With Fukushima Reconstruction ***Wind Power*** GK having recently started construction of the four ***wind power*** plants, Toshiba ESS will deliver GEs 3.2 MW (3.2-103) ***wind*** turbines to these plants.

In recent years, governments around the world have been accelerating the adoption of renewable energy generation as a way to address climate change. Last year, the Japanese government announced the 6th Strategic Energy Plan, which includes the national electricity mix plan to increase the share attributable to renewable energy to 36 to 38% by 2030. Expectations are rising for renewable energy as a main ***power*** source to approach the goal of achieving carbon neutrality by 2050. Fukushima Prefecture, promoting itself as a pioneer in introducing renewable energy, has set the renewable ***power*** generation target of exceeding the requirement to meet demand from the entire prefecture by around 2040.

Fukushima Reconstruction ***Wind Power*** GK was selected by Fukushima Prefecture in 2017 to receive a grant to promote the Project. The specific plan is to install 46 ***wind*** turbines with a height of 148 meters in a ***wind*** farm built along a ridge stretching over Tamura City, Okuma Town, Namie Town, and Katsurao Village in the Abukuma area. This will be one of the largest onshore ***wind power*** generation projects in Japan when completed in the spring of 2025 as scheduled. The Project is designed to have a total output capacity of approx.147,000 kW, which can meet the ***power*** demand of 120,000 households on an estimated annual basis.

Toshiba ESS has strengths in the installation and operation of renewable energy ***power*** generation facilities, such as ***wind*** and solar ***power***, in Japan, as well as in connecting to substation networks, and superior engineering capabilities. GEs 3.2 MW ***wind*** turbines are highly efficient and reliable, and have a proven track record in Japan. Thus, this large-scale order was received in recognition of our technological capabilities and GEs ***wind*** turbine performance.

Shigehiro Kawahara, Vice President of the Energy Aggregation Div. at Toshiba ESS, said, Toshiba ESS is proud to have received this major order, and will take this opportunity to continue to accelerate business development for onshore ***wind power*** in Japan and contribute to the spread of ***wind power*** generation and the realization of carbon neutrality.

1: BOP(Balance of Plant): Facilities and equipment in the ***power*** plant excluding ***wind*** turbine generators

2: Abukuma ***Wind Power*** Plant Nos. 1, 2, 3, and 4Write the annotation text in a small font size

**Load-Date:** April 17, 2022

**End of Document**



[***Uzbekistan plans to put into operation new wind power plant***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:6544-FR21-DY3K-T3RR-00000-00&context=1516831)

Trend News Agency - Uzbekistan (English)

March 31, 2022 Thursday 12:00 PM GMT +4

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**Section:** UZBEKISTAN

**Length:** 275 words

**Body**

BAKU, Azerbaijan, March 31. Uzbekistan plans to put into operation new ***wind power*** plant in the Republic of Karakalpakstan in 2024, Trend reports via Uzbek Ministry of Energy.

Once launched, the ***power*** plant will generate 350 million kilowatt-hours of electricity per year, which will provide electricity to more than 120,000 households.

After the plant will be commissioned, it will save 106 million cubic meters of natural gas per year and prevent the emission of 160,000 tons of greenhouse gases into the atmosphere.

During the construction of the new ***wind power*** plant, 400 people will be involved, and when the plant is put into operation, 30 new jobs will be created.

On March 18, 2022, the decree of the president of the Republic of Uzbekistan "On measures to implement the project for construction and operation of a ***wind power*** plant with a capacity of 100 MW in the Karauzyak district of the Republic of Karakalpakstan based on the conditions of public-private partnership" was adopted.

As a result of an international tender held with the support of the European Bank for Reconstruction and Development, Saudi ACWA ***Power*** company was declared the winner with a tariff offer of 2.5695 cents per 1 kilowatt-hour of electricity.

Within the framework of the project, the investor will build and put into operation overhead ***power*** lines, a step-up substation and switching points for connecting the ***wind power*** plant to a single energy system, with their subsequent transfer to National Electric Grids of Uzbekistan JSC.

The project cost is $107.8 million and is 100 percent funded by the investor (ACWA ***Power***).

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Follow the author on Twitter: @NatavanRzayeva5

**Load-Date:** March 31, 2022

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[***China's Goldwind Gains on USD2.9 Billion Plan for Wind Power Industrial Hub***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:657B-VJ01-JDJN-64K7-00000-00&context=1516831)

Energy Monitor Worldwide

April 15, 2022 Friday

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**Length:** 384 words

**Body**

Goldwind Science & Technologys shares gained after the Chinese ***wind*** turbine maker said it is preparing to build an offshore ***wind power*** industrial cluster as well as a marine engineering equipment manufacturing and service center at a cost of about CNY18.8 billion (USD2.9 billion).

After jumping as much as 5.6 percent in Hong Kong today, Goldwind [HKG: 2208] ended 4.8 percent higher at HKD12.26 (USD1.56). In Shenzhen, the companys stock [SHE: 002202] rose 1.7 percent to CNY12.64 (USD1.98), giving up some of an earlier 3.8 percent gain.

Both projects will be located in Wenzhou in Chinas southeastern Zhejiang province and involve fixed-asset investment of CNY16.2 billion (USD2.5 billion) and CNY2.6 billion, respectively, Wulumuqi-based Goldwind said yesterday, citing the cooperation agreement with the Wenzhou government.

The first phase of the offshore ***wind*** energy industrial hub, costing CNY5.2 billion, will consist of a research and development center for deep-water floating ***wind power*** technologies as well as an offshore ***wind*** turbine manufacturing base, a plant to produce ancillary equipment and a demonstration area for zero emissions applications.

Floating offshore technologies are key to developing ***wind power*** generation on the high seas, it said. Wenzhou is rich in offshore ***wind power*** resources, and it also has a deepwater port, with outstanding industrial infrastructure and abundant skilled talent.

Planned investment in the second phase is expected to be as high as CNY11 billion, with CNY3 billion coming from third-party investors. The goal will be to build an operating and maintenance center for the areas offshore ***wind*** farms, along with a centralized transmission infrastructure to transfer ***power*** to the grid.

The outside investors will be attracted to the industry park to build plants that will produce parts for ***wind power*** equipment, Goldwind said.

The marine engineering equipment industrial cluster project will have a deepwater offshore ***wind power*** energy management platform and various ancillary equipment manufacturing projects, the firm said.

Construction is expected to begin in three months once land use rights are acquired, and is expected to be completed in about a year. Once in operation, Wenzhou will become Goldwinds southern China regional headquarters, it added.

**Load-Date:** April 15, 2022

**End of Document**



[***CECEP Wind-Power (601016: CNY4.36) in 4th consecutive rise***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:6586-3H31-DXKH-N4Y2-00000-00&context=1516831)

News Bites - Asia: China

April 19, 2022 Tuesday

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**Section:** STOCK

**Length:** 4424 words

**Body**

CHINESE END-OF-DAY STOCK REPORT

CECEP ***Wind-Power*** Corp Co Ltd (SS:601016), extended its gains on Tuesday, rising an additional 5.0 fen (1.2%) to close at CNY4.36.

This brought its 4-day rise to 3.8%, compared with the SSE Composite Index which rose 7.2 points (0.2%) in the four days for a relative price increase of 3.6%.

The cumulative volume in the 4 days was at about its average 4-day volume of 57.1 million shares. There were 57,110,000 shares worth CNY249 million ($39 million) traded today.

CECEP ***WIND-POWER*** Stock Dashboard [traded in Chinese Yuan, CNY]

|  |  |  |  |
| --- | --- | --- | --- |
| Exchange | CHINA | Ave Daily Volume | 57,056,440 shares |
| Currency | 1.000 USD = 6.379 Chinese Yuan (CNY) | 52-Week Range | 3.61 - 8.15 |
| Apr 19, 2022 | CNY4.36 | Sector | Shanghai Market |
| P/E (FY2021) | 28.3 | Market Cap | CNY22 billion [$3 billion] |
| Dividend Yield (TTM) | 1% | Shares Outstanding | 5,013,160,000 |
| DPS (past 12 months) | 4 fen | 601016 in Indices | SSE Composite, SSE TOTAL MARKET |

Financial News

Quarterly Report (Q4/2021):

Quarterly Report Analysis Q4 2021: CECEP ***Wind-Power*** sequential quarterly profits hit by 83% fall

CECEP ***Wind-Power*** (SS:601016), announced net profit of CNY26.2m ($4.1m) for the quarter-ended 31 December 2021 [Q4/2021], down 83% from the previous quarter [Q3/2021] and down 68% from the year-earlier period [Q4/2020].

Quarterly Report (Q4 2021)

|  |  |  |  |
| --- | --- | --- | --- |
| Quarter-ended | 31 Dec [Q4/2021] | 30 Sep [Q3/2021] | 30 Jun [Q2/2021] |
| Revenue, CNY million | 948 | 796 | 910 |
| Revenue, $ million | 149 | 125 | 143 |
| Sequential growth in Revenue % | 19.1 | -12.6 | 2.8 |
| Net Profit, CNY million | 26.2 | 155 | 288 |
| Net Profit, $ million | 4.1 | 24.3 | 45.2 |
| Sequential growth in Net Profit % | -83 | -46.3 | -3.7 |

Compared with the Previous Corresponding Period [PCP; Q4/2020], year-over-year [y.o.y.] Revenue was up 44.2% and Net Profit was down 68.1%.

|  |  |  |
| --- | --- | --- |
| Quarter-ended | 31 Dec [Q4/2021] | 31 Dec [Q4/2020] |
| Revenue, CNY million | 948 | 657 |
| Revenue, $ million | 149 | 103 |
| PCP growth in Revenue % | 44.2 | -5.1 |
| Net Profit, CNY million | 26.2 | 82.1 |
| Net Profit, $ million | 4.1 | 12.9 |
| PCP growth in Net Profit % | -68 | -48.6 |

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GLOSSARY

DATA & ARCHIVE DOWNLOAD CENTER

601016: EXCEL TABLES ARE AVAILABLE TO EXPORT DATA:

+ PRICE VOLUME - 5-YEAR HISTORY Click [*http://www.buysellsignals.com/bst/001051941001904221056*](http://www.buysellsignals.com/bst/001051941001904221056)

+ FINANCIALS - 6-YEAR HISTORY: Click [*http://www.buysellsignals.com/bst/002991941001904221056*](http://www.buysellsignals.com/bst/002991941001904221056)

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SECTION 1 THE PAST QUARTER: FINANCIALS

1.1 CECEP ***Wind-Power*** Financials Summary:

+ Sales were up 32.7% from $418.1 million in FY2020 to $554.8 million in FY2021.

+ Net profit was up 24.2% from $96.9 million in FY2020 to $120.3 million in FY2021.

|  |  |  |  |
| --- | --- | --- | --- |
| Year ended Dec | FY2021 | FY2020 | FY2019 |
| Sales ($ M) | 554.8 | 418.1 | 389.9 |
| Pretax ($ M) | 141.8 | 121 | 117.1 |
| Net ($ M) | 120.3 | 96.9 | 91.6 |

SECTION 2 TODAY'S BEARISH SIGNALS

2.1 Rank in the bottom 18% by Relative Valuation in the China market

|  |  |  |
| --- | --- | --- |
| Description | Value | Rank |
| Price to Sales | 6.2 | In Bottom 18% |

2.2 Rank in the bottom 23% by Price Performance in the China market

|  |  |  |
| --- | --- | --- |
| Description | Value | Rank |
| Price/MAP50 | 0.87 | In Bottom 23% |
| Rel Strength 6 mo | 6 | In Bottom 5% |

2.3 Downtrend

Price/Moving Average Price of 0.8 and negative MACD:

- The Price/MAP 200 for CECEP ***Wind-Power*** is 0.8. Being less than 1 is a bearish indicator. It is lower than the Price/MAP 200 for the SSE Composite Index of 0.91, a second bearish indicator. The stock is trading below both its MAPs and the 50-day MAP of CNY5.02 is lower than the 200-day MAP of CNY5.46, a third bearish indicator. The 200-day MAP has decreased to CNY5.46, a fourth bearish indicator.

- The Moving Average Convergence Divergence (MACD) indicator of 12-day Exponential Moving Average (EMA) of 4.39 minus the 26-day EMA of 4.65 is negative, suggesting a bearish signal. Both the 12-day EMA as well as the 26-day EMA are falling, another bearish signal.

- The price to 50-day EMAP ratio is 0.9, a bearish indicator. In the past 200 days this ratio has been under 0.9 18 times suggesting further downside. The 50-day EMAP has decreased to CNY4.90. A decrease is another bearish indicator.

Past Quarter:

The Worst 3 weeks in the past quarter

In the past quarter the steepest fall of 8.5% took place in the week beginning Monday March 14.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Mon-Fri | Change % | SSE Composite Index Change % | RPC % | Vol Ind [1 is avg] |
| Mar 14-18 | -8.5 | -1.8 | -6.8 | 0.6 |
| Jan 24-28 | -5.3 | -4.6 | -0.8 | 1.3 |
| Apr 04-08 | -4.7 | -0.9 | -3.8 | 1 |

Trailing Relative Strength (6 months) at 6 percentile:

- The stock has a 6-month relative strength of 6 in the China market of 1,835 stocks indicating it is trailing 94% of the market.

2.4 Overvaluation

Price/Earnings of 28.3 greater than sector avg of 13.3:

- The price-to-earnings ratio of 28.3 indicates overvaluation compared with market average of 13.3.

The Dividend Yield of 1% is worse than the Index average of 2.5%

- The relative yield of the stock, defined by its yield of 1%, divided by average yield of dividend yielding stocks in the SSE Composite Index of 2.5% is 40.7%. This suggests the stock is overvalued in dividend yield terms.

Price/Sales of 6.2 greater than sector avg of 1.1:

- The price-to-sales ratio of 6.2 indicates overvaluation compared with market average of 1.1.

2.5 Other Bearish Signals

- Return on Equity of 7.5% versus market average of 9.4%.

- Total Liabilities/EBITDA of 31.3 is more than 5, this compares unfavourably with the Joseph Piotroski benchmark of 5.

- As per the Du Pont analysis, Return on Equity is less than stellar at 7.5%. This is computed as net profit margin of 22.7% times asset turnover [sales/assets] of 0.09 times leverage factor [total assets/shareholders' equity] of 3.7.

SECTION 3 ONGOING BEARISH PARAMETERS

3.1 Rank in the bottom 6% by Gearing in the China market

|  |  |  |
| --- | --- | --- |
| Description | Value | Rank |
| Total Debt to Equity | 2.3 | In Bottom 6% |

3.2 Rank in the bottom 23% by Productivity in the China market

|  |  |  |
| --- | --- | --- |
| Description | Value | Rank |
| Return on Assets [ROA] % | 2 | In Bottom 23% |
| Return on Capital Employed [ROCE] % | 2.7 | In Bottom 14% |

3.3 Present Value of CNY1000 Invested in the Past 3 Months; The Worst Period with PVCNY1000 less than 801

|  |  |
| --- | --- |
| PVCNY1,000 | 3 mo ago |
| 601016.SS | CNY800 |
| Shanghai Market | CNY918 |
| SSE Composite Index | CNY898 |

3.4 Past quarter: price fall of 20%

3-Month price change of -20% for CECEP ***Wind-Power*** underperformed the change of -10.2% in the SSE Composite Index for a relative price change of -9.8%.

|  |  |
| --- | --- |
| Price Change % | Quarter |
| CECEP ***Wind-Power*** | -20 |
| Shanghai Market | -8.2 |
| SSE Composite Index | -10.2 |

3.5 Total Shares on Issue: 5-Year Increase of 20%

In the past 5 years total shares on issue have increased by 831.2 million (20%) from 4.2 billion to 5 billion. An increase in total shares on issue is an unfavourable indicator in Joseph Piotroski's 9 indicators.

|  |  |
| --- | --- |
| Year End (Dec 31) | Total Shares on Issue |
| 2021 | 4,986,780,040 |
| 2020 | 4,986,672,000 |
| 2019 | 4,155,560,000 |
| 2018 | 4,155,560,000 |
| 2017 | 4,155,560,000 |
| 2016 | 4,155,560,000 |

3.6 Annualised Period-based Total Shareholder Returns [TSR %]: The Worst Period with TSR less than 3.7%

|  |  |
| --- | --- |
| TSR % | 5 yrs |
| 601016.SS | 3.6 |

3.7 High Debt to Equity (%) and Increasing

The debt to equity ratio of 226.5% is above a safe benchmark figure of 70%. Moreover, it has deteriorated in the past four years.

|  |  |
| --- | --- |
| Years | Debt to Equity (%) |
| Dec 2021 | 226.52 |
| Dec 2020 | 194.26 |
| Dec 2019 | 184.01 |
| Dec 2018 | 179.34 |
| Dec 2017 | 164.84 |

SECTION 4 TODAY'S BULLISH SIGNALS

4.1 PAST WEEK: MODERATE MOMENTUM UP - 601016 increases 2.1% on volume 0.9 times average

CECEP ***Wind-Power*** (601016) outperformed the SSE Composite Index in 3 out of 5 days. The price ranged between a low of CNY4.20 on Wednesday Apr 13 and a high of CNY4.36 on Tuesday Apr 19.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Apr | CECEP ***Wind-Power*** | Close [CNY] | Change % | RPC % \* | Comment |
| Wed 13 | Falls in 4 out of last 5 days; 5-day fall of 8.5% | 4.2 | -1.6 | -0.8 | Week-low of 4.2; Steepest Fall |
| Thu 14 | Rises 2.2% from 14-day low | 4.23 | 0.7 | -0.9 | Oversold: close to 14-day low |
| Fri 15 | Inches higher, resistance at 12-day EMA | 4.27 | 0.9 | 1.0 | VI\*=1.2 |
| Mon 18 | In 3rd consecutive rise | 4.31 | 0.9 | 1.4 | Rises for a third consecutive day |
| Tue 19 | Rises in 4 out of last 5 days; 5-day rise of 2.1% | 4.36 | 1.2 | 1.2 | Week-high of 4.36; Top Rise |

\* RPC - Relative Price Change is % price change of stock less % change of the SSE Composite Index.

[Volume Index (VI); 1 is average]

4.2 Rank in the top 25% by Price Performance in the China market

|  |  |  |
| --- | --- | --- |
| Description | Value | Rank |
| 1-week Price Change % | 2.1 | In Top 25% |

4.3 Undervaluation

MCap/Total Assets:

- Tobin's Q Ratio, defined as MCap divided by Total Assets, is 0.6. Compared with the rest of the market the stock is undervalued and ranks in the top quartile of stocks by value of Q Ratio.

4.4 Other Bullish Signals

- Net profit margin has averaged 24.6% in the last 3 years. This is considered superior and suggests a high margin of safety.

4.5 Oversold/Bullish Signals:

- The Stochastic indicator of 18.9 has pierced the oversold line of 20; this indicates the price is close to its 14-day low and is likely to revert to an uptrend.

SECTION 5 ONGOING BULLISH PARAMETERS

5.1 Rule of 40

The stock scores a favorable score exceeding 40 when using the Rule of 40 (Revenue Growth plus EBITDA margin). Y.o.y revenue growth of 33%, EBITDA margin is 25.9% and the sum of the two 58.6% needs to exceed 40%.

5.2 Past two-years

- CECEP ***Wind-Power*** rose for a second consecutive year. In the previous year the shares rose CNY1.97 (91.5%).

5.3 Rank in the top 21% by Size in the China market

|  |  |  |
| --- | --- | --- |
| Description | Value | Rank |
| Ave daily Turnover | CNY249 million ($39 million) | In Top 6% |
| MCap | $3 billion | In Top 21% |

5.4 Rank in the top 20% by Performance in the China market

|  |  |  |
| --- | --- | --- |
| Description | Value | Rank |
| Net Profit Margin % | 22.7 | In Top 16% |
| EBITDA Margin % | 25.9 | In Top 20% |

5.5 Rank in the top 16% by Productivity in the China market

|  |  |  |
| --- | --- | --- |
| Description | Value | Rank |
| Revenue Per Employee | CNY3.5 million ($552,594) | In Top 16% |

5.6 Present Value of CNY1000 Invested in the Past [1 Yr, 3 Yrs]; The Best Periods with PVCNY1000 greater than 1,067

|  |  |  |
| --- | --- | --- |
| PVCNY1,000 | 1 yr ago | 3 yrs ago |
| 601016.SS | CNY1,068 | CNY1,506 |
| Shanghai Market | CNY939 | CNY1,101 |
| SSE Composite Index | CNY918 | CNY977 |

5.7 The Best Periods [1 Yr, 3 Yrs] with Price Change % greater than 5.6

3-Year price change of 43% for CECEP ***Wind-Power*** outperformed the change of -1.7% in the SSE Composite Index for a relative price change of 44.7%.

|  |  |  |
| --- | --- | --- |
| Price Change % | Year | 3 Years |
| CECEP ***Wind-Power*** | 5.7 | 43 |
| Shanghai Market | -4.5 | 10.8 |
| SSE Composite Index | -6.8 | -1.7 |

5.8 Moving Annual Return of 6.7% in the past year:

Moving Annual Return was 6.7% in the past year. Based on a dynamic start date of 5 years ago, the real rate of return has averaged 10.8%. The Moving Annual Return has been positive in 3 of the last 5 years.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 601016 | Close (CNY) | Dividends (CNY) | Capital Gain / (Loss) % | % Yield | Annual Return % |
| Apr 19 | 4.36 | 0.04 | 5.7 | 1.1 | 6.7 |
| 1 Yr ago | 4.13 | 0.05 | 91.5 | 2.4 | 93.8 |
| 2 Yrs ago | 2.16 | 0.05 | (29.3) | 1.5 | (27.8) |
| 3 Yrs ago | 3.05 | 0.04 | 6 | 1.5 | 7.5 |
| 4 Yrs ago | 2.88 | 0.02 | (26.8) | 0.5 | (26.3) |

Close 5 years ago CNY3.93

Prices are adjusted for a bonus share. On April 19, 2017 shareholders received 10 additional shares for every 10 shares held prior to that date.

5.9 MCap: 5-Year Increase of CNY4 billion [$668 million] (24%)

In the past 5 years Market Capitalization has increased by CNY4.3 billion (24%) from CNY17.6 billion to CNY21.9 billion. Based on a dynamic start date of 5 years ago, there have been declines in MCap in 3 out of 5 years.

|  |  |  |  |
| --- | --- | --- | --- |
|  | Price | MCap (CNY B) | MCap ($ M) |
| Last | CNY4.36 | 21.9 | 3,426.6 |
| 1 Year ago | CNY4.13 | 20.9 | 3,212.2 |
| 2 Years ago | CNY2.16 | 9.3 | 1,309.2 |
| 3 Years ago | CNY3.05 | 13.3 | 1,993.2 |
| 4 Years ago | CNY2.88 | 12.8 | 2,028.6 |
| 5 Years ago | CNY3.93 | 17.6 | 2,557.1 |

5.10 Created Market Value [CMV] past 5 yrs of CNY2.2 billion ($339.3 million)

- Market Capitalization has increased by CNY4.2 billion from CNY17.7 billion to CNY21.9 billion in the last 5 years. This increase comprises cumulative retained earnings (RETE) of CNY2 billion and Created Market Value of CNY2.2 billion. The Created Market Value multiple, defined by the change in MCap for every CNY1 of retained earnings is exemplary at CNY2.09.

5.11 Annualised Period-based Total Shareholder Returns [TSR %]: The Best Periods with TSR greater than 6.7%

|  |  |  |
| --- | --- | --- |
| TSR % | 1 yr | 3 yrs |
| 601016.SS | 6.8 | 14.5 |

5.12 Increased Volume, up 150% in 5 years

In the past five years, Average Daily Volume of Trading (ADVT) has increased 150.4% to 57.1 million shares.

Avg. Daily Volume Traded 12 months ended Apr 19, million shares

|  |  |
| --- | --- |
| Year | ADVT |
| 2022 | 57.1 |
| 2021 | 118.1 |
| 2020 | 17.1 |
| 2019 | 26.1 |
| 2018 | 22.8 |

5.13 Increased VWAP, up 65% in 5 years

In the past five years Volume Weighted Average Price (VWAP) has increased by 64.9% to CNY5.73. Based on a dynamic start date of five years ago, there have been declines in VWAP in 3 out of 5 years.

Past five years, 12 months ended Apr 19 (CNY)

|  |  |  |  |
| --- | --- | --- | --- |
| Year | High Price | VWAP | Low Price |
| 2022 | 8.15 | 5.73 | 3.61 |
| 2021 | 5.13 | 3.56 | 2.03 |
| 2020 | 3.1 | 2.37 | 1.96 |
| 2019 | 3.52 | 2.76 | 2.02 |
| 2018 | 3.98 | 3.47 | 2.73 |

5.14 Increased share turnover, up 1,190% in 5 years

In the past five years, average daily share turnover has increased 1189.9% to CNY988 million ($154.9 million). This suggests increased liquidity.

Past five years, 12 months ended Apr 19 (CNY million)

|  |  |
| --- | --- |
| Year | Average Daily Turnover |
| 2022 | 988.0 |
| 2021 | 408.6 |
| 2020 | 39.2 |
| 2019 | 70.4 |
| 2018 | 76.6 |

5.15 Growth greater than 19% for Revenue:

- Revenue growth has shown signs of recovery in recent quarters. [All figures in %]

|  |  |  |  |
| --- | --- | --- | --- |
| Qtr-ended | Revenue Growth | Net Profit Growth | Net Profit Margin |
| Dec 21 [Q4 vs Q3] | 19.1 | -83.1 | 1 |
| Sep 21 [Q3 vs Q2] | -12.6 | -46.3 | 20.4 |

5.16 Revenue and EBITDA:

- Revenue growth rate is positive and has seen consecutive rises in recent years. [compared with previous year, all figures in %]

|  |  |  |
| --- | --- | --- |
| FY | Revenue Growth | EBITDA Growth |
| 2021 | 33 | 18 |
| 2020 | 7 | 3 |
| 2019 | 5 | 5 |

5.17 Satisfies 5 out of 9 criteria of Joseph Piotroski [pass mark 5]:

- Positive net income.

- Positive operating cashflow.

- Good quality of earnings [operating cashflow exceeds net income].

- Improvement in gross margin [from 52.1% to 55.2%].

- Improvement in asset turnover [growth in revenue of 32.7% exceeded growth in assets of 19.1%].

But does not meet the following 4 criteria of Joseph Piotroski:

- Return on Assets improvement.

- Improvement in long-term debt to total assets.

- Improvement in current ratio.

- Total shares on issue unchanged (or reduction in total shares on issue).

SECTION 6 CORPORATE PROFILE

6.1 Activities

CECEP ***Wind-Power*** Corporation is principally engaged in development, construction and operation of ***wind power*** generation projects. The Company primarily involves in the development and operation of ***wind power*** stations. The Company holds three main ***wind power*** station projects, which situated at Hebei province, Xinjiang autonomous regions and Gansu province, China. Its ***wind power*** stations mainly contribute to North China ***power*** grid, Northwest China ***power*** grid and Xinjiang ***power*** grid respectively.

6.2 Contact Details

|  |  |
| --- | --- |
| Website | [*http://www.cecwpc.cn*](http://www.cecwpc.cn) |
| Physical Address | 12F, Tower A Jieneng Mansion, No.42 Xizhimen North Av Haidian District Beijing, Bej 100082 China |
| Phone | 86-10-62248707 |
| Fax | 86-10-62248700 |

SECTION 7 FINANCIALS Q4 2021, FY 2021

7.1 Quarterly Financials (Q4/2021)

CECEP ***Wind-Power*** sequential quarterly profits hit by 83% fall

CECEP ***Wind-Power*** (SS:601016), announced net profit of CNY26.2m ($4.1m) for the quarter-ended 31 December 2021 [Q4/2021], down 83% from the previous quarter [Q3/2021] and down 68% from the year-earlier period [Q4/2020].

Quarterly Report (Q4 2021)

|  |  |  |  |
| --- | --- | --- | --- |
| Quarter-ended | 31 Dec [Q4/2021] | 30 Sep [Q3/2021] | 30 Jun [Q2/2021] |
| Revenue, CNY million | 948 | 796 | 910 |
| Revenue, $ million | 149 | 125 | 143 |
| Sequential growth in Revenue % | 19.1 | -12.6 | 2.8 |
| Net Profit, CNY million | 26.2 | 155 | 288 |
| Net Profit, $ million | 4.1 | 24.3 | 45.2 |
| Sequential growth in Net Profit % | -83 | -46.3 | -3.7 |

Compared with the Previous Corresponding Period [PCP; Q4/2020], year-over-year [y.o.y.] Revenue was up 44.2% and Net Profit was down 68.1%.

|  |  |  |
| --- | --- | --- |
| Quarter-ended | 31 Dec [Q4/2021] | 31 Dec [Q4/2020] |
| Revenue, CNY million | 948 | 657 |
| Revenue, $ million | 149 | 103 |
| PCP growth in Revenue % | 44.2 | -5.1 |
| Net Profit, CNY million | 26.2 | 82.1 |
| Net Profit, $ million | 4.1 | 12.9 |
| PCP growth in Net Profit % | -68 | -48.6 |

Currency Conversion (December 31, 2021): $1 = CNY6.37

Currency Conversion (December 31, 2020): $1 = CNY6.53

7.2 Financials, FY 2021 [year-ended 31 December 2021 ]

CECEP ***Wind-Power*** Net Profit up 24%

CECEP ***Wind-Power*** (SS:601016) reported net profit for the year-ended 31 December 2021 [FY2021] of CNY768m ($120m), up 24% from CNY618m ($94.6m) in the previous year [FY2020].

7.3 Annual growth in Revenue and Net Profit

|  |  |  |
| --- | --- | --- |
| Year-ended | 31 December [FY/2021] | 31 December [FY/2020] |
| Revenue, CNY Billion | 3.5 | 2.7 |
| Revenue, $ Million | 555 | 419 |
| Growth in Revenue % | 32.7 | 7.2 |
| Net Profit, CNY Million | 768 | 618 |
| Net Profit, $ Million | 120 | 97.0 |
| Growth in Net Profit % | 24.2 | 5.8 |

Major changes compared with previous year (FY2021 vs FY2020):

Favourable Changes:

- Net profit up 24.2% from CNY617.9m ($94.6m) to CNY767.5m ($120.4m)

- Sales revenue up 32.7% from CNY2.7b ($408.4m) to CNY3.5b ($555.3m)

- Cost of Goods Sold to Sales down from 47.9% to 44.8%

- Current Debtors to Total Assets up from 10.4% to 12%

Unfavourable Changes:

- EBIT Margin down from 28.9% to 25.6%

- Profit before tax to Sales down from 28.9% to 25.6%

- Sales and marketing expenses to Sales up from 5.6% to 5.8%

- Debt to Equity up 17% from 1.9 to 2.3

- Current ratio down 15.6% from 1.4 to 1.2

- Working capital to total assets down from 5.4% to 2.9%

- Total Liabilities to EBITDA of 31.3 compares unfavourably with the Joseph Piotroski benchmark of less than 5. This ratio has deteriorated by 5% from the previous year's ratio of 29.8.

- Total Liabilities to Operating Cash Flow of 13.7 compares unfavourably with the Joseph Piotroski benchmark of less than 4. However, it has improved by 17.8% from the previous year's ratio of 16.6.

- Net tangible assets per share down 3.7% from CNY2.16 (US33.1c) to CNY2.08 (US32.7c)

Note:

- EBIT to total assets steady at 2.3%

- Tax expenses to Sales down from 4% to 2.8%

- Total liabilities to Total assets steady at 0.7

- Total non-current assets to Total Assets up from 81.3% to 81.5%

- Fixed Assets to Total Assets up from 76.3% to 76.4%

- Total current assets to Total Assets down from 18.7% to 18.5%

- Intangibles to Total Assets up from 0.6% to 0.7%

Year-on-year comparison of Performance Ratios [FY2021 vs FY2020]

|  |  |  |  |
| --- | --- | --- | --- |
| December 31 | FY2021 | FY2020 | Change (%) |
| Return on Equity (%) | 7.5 | 6.8 | Up 10.3 |
| Total debt to net tangible assets (%) | 232.8 | 198.6 | Up 17.2 |
| Debt/Equity | 2.3 | 1.9 | Up 17 |
| Common Size Ratios by Assets % |  |  |  |
| Current Debtors to Total Assets | 12.0 | 10.4 | Up 15.7 |
| Long-term investments to Total Assets | 0.2 | 0.2 | Down 14.9 |

Currency Conversion (December 31, 2021): $1 = CNY6.37

Currency Conversion (December 31, 2020): $1 = CNY6.53

Five-year record of growth and performance:

In the last 5 years Total Revenue averaged CNY2,588.2M ($406.1M), EBITDA averaged CNY744.3M ($116.8M) and Net Profit averaged CNY635.1M ($99.7M). Compound Annual Growth Rate (CAGR) averaged 20.1% for Total Revenue, 32.4% for Net Profit and 21.5% for EBITDA.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Description | Annual (CNY M) | Annual ($ M) | 5-year Avg (CNY M) | 5-year Avg ($ M) | 5-year CAGR % |
| Total Revenue | 3,538.9 | 555.3 | 2,588.2 | 406.1 | 20.1 |
| EBITDA | 917.7 | 144 | 744.3 | 116.8 | 21.5 |
| Operating Profit | 904.3 | 141.9 | 733.4 | 115.1 | 21.9 |
| Net Profit | 767.5 | 120.4 | 635.1 | 99.7 | 32.4 |

Five-year record of EBITDA, Operating Profit, Net Profit, ROE, ROA and ROCE

In 2021 Net Profit Margin of 22.7% was below its 5-year Avg of 24.7% (All Figures in %)

|  |  |  |
| --- | --- | --- |
| Description | 2021 | 5-year Avg |
| EBITDA Margin | 25.9 | 29 |
| Operating Profit Margin | 25.6 | 28.6 |
| Net Profit Margin | 22.7 | 24.7 |
| Return on Equity | 7.5 | 7.5 |
| Return on Assets | 2 | 2.4 |
| Return on Capital Employed | 2.7 | 3.2 |

SECTION 8 TAX & DIVIDEND

8.1 Average Income Tax Paid (Past 5 Years)

In the past 5 years, Income Tax as % of profit before tax decreased from 13.6% to 11.1% and Income Tax as % of operating cash flow decreased from 13.4% to 11.0%.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Description | 2021 | 2020 | 2019 | 2018 | 2017 | 5-yr avg |
| As % of profit before tax | 11.1 | 13.8 | 13.2 | 15.9 | 13.6 | 13.5 |
| As % of operating cash flow | 11 | 13.7 | 13 | 15.6 | 13.4 | 13.3 |

8.2 Dividend History

In the past 4 years, there has been no change in annual dividends of 4.4 fen per share.

|  |  |  |
| --- | --- | --- |
| Date Paid | Value ( fen) | Type |
| 26 May 2021 | 4.4 | Cash |
| Tr 12 Months | 4.4 |  |
| 2020 - 2021 | 5.1 |  |
| 2019 - 2020 | 4.64 |  |
| 2018 - 2019 | 4.4 |  |

SECTION 9 PEER COMPARISON & RANKING OF 601016

9.1 PEER COMPARISON: 601016 IN INDICES

CECEP ***Wind-Power*** is a constituent of the following indices.

Its market capitalisation is $3 billion and accounts for 0.7% of the combined MCap of the SSE Medium Composite Index.

|  |  |  |
| --- | --- | --- |
| Index Name | MCap of Index ($ b) | 601016 MCap as % of Index |
| SSE Medium Composite Index | 466 | 0.7 |
| SSE New Composite Index | 6,342 | 0.1 |
| SSE A share Index | 6,347 | 0.1 |
| SSE Composite Index | 6,869 | 0.05 |

9.2 BUYSELLSIGNALS FUNDAMENTALS VALUATION RANKING:

CECEP ***Wind-Power*** vs Shanghai Market

Out of 1,835 stocks in the China Market, CECEP ***Wind-Power*** is ranked 322nd(322) by EBITDA Margin%, 325th(325) by Discount to 52-Wk High, 415th(415) by Net Profit $ and 624th(624) by Price/Net Tangible Assets.

|  |  |  |  |
| --- | --- | --- | --- |
|  | Shanghai Avg | 601016 | 601016 Rank |
| EBITDA Margin% | 11.1 | 25.9 | 322 |
| Discount to 52-Wk High (%) | 13.3 | 46.5 | 325 |
| Net Profit $ | 318.6 M | 120.3 M | 415 |
| Price/Net Tangible Assets | 1.4x | 2.1x | 624 |
| P/Earnings | 13.3x | 28.3x | 762 |
| Yield (%) | 2.2 | 1.01 | 769 |
| Premium to 52-Wk Low (%) | 6.9 | 20.8 | 941 |
| ROE (%) | 9.4 | 7.5 | 1046 |
| ROA (%) | 1.3 | 2.04 | 1292 |
| Total Debt/Equity (the lower the better) | 1.2x | 2.3x | 1636 |

Negative values are shown in brackets.

9.3 GLOBAL RANK [out of 48,491 stocks] AND RANK OF CECEP ***WIND-POWER*** IN THE ASIA REGION [out of 24,531 stocks]

|  |  |  |  |
| --- | --- | --- | --- |
| Description | Value | Global Rank | In Asia Region |
| MCap ($) | 3.4B | 4,327 | 1,609 |
| Total Assets ($) | 6.2B | 4,107 | 1,601 |
| Revenue ($) | 555.5M | 9,310 | 4,699 |
| Net Profit ($) | 120.5M | 5,381 | 2,188 |
| Return on Equity % | 7.5 | 17,156 | 9,962 |
| Net Profit Margin % | 22.7 | 5,465 | 2,535 |
| Price to Book | 2.1 | 20,585 | 12,924 |
| Price/Earnings | 28.0 | 17,072 | 11,011 |
| Yield % | 1.0 | 17,637 | 9,696 |
| PV1000 (1Year) $\* | 1,080 | 15,750 | 8,820 |
| $\* Change (1Year) % | 9.0 | 14,953 | 8,494 |

\* 1 year ago $1 = CNY 6.51

Apr 19, 2022: $ 1 equals CNY 6.38

9.4 RANK OF CECEP ***WIND-POWER*** IN THE SSE COMPOSITE INDEX [out of 1512 stocks] AND IN THE SHANGHAI MARKET [out of 1829 stocks]

|  |  |  |  |
| --- | --- | --- | --- |
| Description | Value | In SSE Composite Index | In Shanghai Market |
| MCap (CNY) | 21.9B | 306 | 355 |
| Total Assets (CNY) | 39.4B | 259 | 272 |
| Revenue (CNY) | 3.5B | 735 | 780 |
| Net Profit (CNY) | 767.5M | 368 | 405 |
| Return on Equity % | 7.5 | 788 | 990 |
| Net Profit Margin % | 22.7 | 154 | 235 |
| Price to Book | 2.1 | 591 | 625 |
| Price/Earnings | 28.3 | 658 | 762 |
| Yield % | 1.0 | 680 | 769 |
| PV1000 (1Year) CNY | 1,068 | 693 | 750 |

9.5 LONG-TERM FUNDAMENTAL RANKING: 4 OUT OF 5 [5 is best]

CECEP ***Wind-Power*** is ranked number 361 out of 1946 listed companies in the China with a market capitalization of CNY21.9 billion ($3.4 billion).

In the shanghai market it has the 274th highest total assets and 739th highest revenues.

Within its sector it has a relatively moderate P/E of 28.3 and high Price/Sales of 6.2.

It has a moderate relative ROE of 7.5% and ROA of 2%.

Stocks are scored on a set of parameters reflecting fundamental analytical tools involving valuation, size and financial performance. They are ranked according to the average values of those parameters. The highest ranking is 5 and the lowest ranking is 1.

SECTION 10 CURRENCY SYNOPSIS: CHINESE YUAN (CNY)

10.1 % Change of CNY vs Currency Basket Period-Based

In the past year the Chinese Yuan rose 2.4% against the US Dollars; in the past three years the Chinese Yuan rose 5.3% against the US Dollars.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Last | Country | 1-day % | 1-week % | 1-Year % | 3-Yrs % |
| CNY1=0.157USD | United States Of America | - | -0.1 | 2.4 | 5.3 |
| CNY1=1.0CNY | China | 0.0 | - | - | - |
| CNY1=19.873JPY | Japan | 0.1 | 1.1 | 19.0 | 19.1 |
| CNY1=0.145EUR | European Union | 0.2 | 1.0 | 13.7 | 10.3 |
| CNY1=193.793KRW | South Korea | 0.6 | 0.1 | 13.4 | 14.5 |
| CNY1=0.214SGD | Singapore | 0.4 | -0.3 | 4.4 | 6.0 |
| CNY1=0.233NZD | New Zealand | 0.6 | 1.5 | 8.8 | 5.8 |
| CNY1=0.121GBP | United Kingdom | 0.5 | 0.1 | 8.2 | 6.1 |
| CNY1=0.213AUD | Australia | 0.5 | 0.9 | 7.6 | 2.6 |
| CNY1=1.231HKD | Hong Kong | - | - | 3.3 | 5.4 |
| CNY1=0.148CHF | Switzerland | 0.3 | 1.0 | 5.2 | -0.9 |
| CNY1=0.198CAD | Canada | 0.3 | 0.3 | 3.4 | -0.5 |
| CNY1=1.502SEK | Sweden | 0.3 | 1.3 | 16.3 | 8.7 |
| CNY1=1.385NOK | Norway | 0.4 | 0.9 | 7.9 | 9.4 |
| CNY1=3.139MXN | Mexico | 0.2 | -0.4 | 2.6 | 11.5 |

SECTION 11 STOCK IDENTIFIERS

ISIN: CNE100001T15

PermID: 5036865268

RIC: 601016.SS

GLOSSARY

ADVT: Average Daily Volume of shares Traded

Annual Return: Dividends Paid In a 12-Month Period/Price at the Beginning of the Period + Capital Gain or Loss over 1 Year/Price 1 Year Ago (%)

Current Ratio: Current Assets/Current Liabilities (times)

Debt/Equity: Net Debt/Net Assets %

Dividend Yield: Dividend Per Share/Share Price (%)

EBIT Margin : Earnings Before Interest and Tax/Revenue (%)

Income during the n years (3/2/1): Dividends received during the Period

Moving Average Price (n periods): Sum of Prices for each Period/Number of Periods

PV1000: Present value of 1000 invested 1 year/'n' years ago

Price Close/Moving Avg Price: Latest Price/Moving Average Price

Price/Earnings: Share Price/Earnings Per Share (times)

Price/NTA: Closing Share Price/Net Tangible Assets Per Share (times)

Price/Sales: Share Price/Sales Per Share (times)

Relative Price Change [RPC]: Relative price change is price change of stock with respect to Benchmark Index

Relative Strength (6 Months): Price close today/Price close 6 months ago, then ranked by percentile within the entire market.

Return on Assets: Net Profit/Total Assets (%)

Return on Equity (Shareholders' Funds): Net Profit/Net Assets (%)

TSR: Total Shareholder Returns is expressed as an annualized rate of return for shareholders after allowing for capital appreciation and dividend

TTM: Trailing 12 Months

Total Liabilities/Total Assets: Total Liabilities/Total Assets

Volume Index (VI): Number of shares traded in the period/Average number of shares traded for the period

Volume Weighted Average Price (VWAP): The Volume Weighted Average Price (VWAP) is the summation of turnover divided by total volume in the same period.

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**Load-Date:** April 19, 2022

**End of Document**



[***Uzbekistan plans to put into operation new wind power plant***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:6544-FR21-DY3K-T3HK-00000-00&context=1516831)

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**Section:** UZBEKISTAN

**Length:** 275 words

**Body**

BAKU, Azerbaijan, March 31. Uzbekistan plans to put into operation new ***wind power*** plant in the Republic of Karakalpakstan in 2024, Trend reports via Uzbek Ministry of Energy.

Once launched, the ***power*** plant will generate 350 million kilowatt-hours of electricity per year, which will provide electricity to more than 120,000 households.

After the plant will be commissioned, it will save 106 million cubic meters of natural gas per year and prevent the emission of 160,000 tons of greenhouse gases into the atmosphere.

During the construction of the new ***wind power*** plant, 400 people will be involved, and when the plant is put into operation, 30 new jobs will be created.

On March 18, 2022, the decree of the president of the Republic of Uzbekistan "On measures to implement the project for construction and operation of a ***wind power*** plant with a capacity of 100 MW in the Karauzyak district of the Republic of Karakalpakstan based on the conditions of public-private partnership" was adopted.

As a result of an international tender held with the support of the European Bank for Reconstruction and Development, Saudi ACWA ***Power*** company was declared the winner with a tariff offer of 2.5695 cents per 1 kilowatt-hour of electricity.

Within the framework of the project, the investor will build and put into operation overhead ***power*** lines, a step-up substation and switching points for connecting the ***wind power*** plant to a single energy system, with their subsequent transfer to National Electric Grids of Uzbekistan JSC.

The project cost is $107.8 million and is 100 percent funded by the investor (ACWA ***Power***).

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Follow the author on Twitter: @NatavanRzayeva5

**Load-Date:** March 31, 2022

**End of Document**



[***INTERNATIONAL PATENT: LUO, LAIHUAN FILES APPLICATION FOR "WIND POWER GENERATION DEVICE"***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:64Y6-B0G1-JDKC-R3XW-00000-00&context=1516831)

US Fed News

March 8, 2022 Tuesday 4:33 AM EST

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**Length:** 381 words

**Dateline:** GENEVA

**Body**

GENEVA, March 8 -- LUO, Laihuan (No. 71 Jiaoyuan Ziran Village, Dongjiang Village, Wujiang Town, Jishui CountyJi'an, Jiangxi 331619) filed a patent application (PCT/CN2021/109997) for "***WIND POWER*** GENERATION DEVICE" on Aug 02, 2021. With publication no. WO/2022/042213, the details related to the patent application was published on Mar 03, 2022.

Notably, the patent application was submitted under the International Patent Classification (IPC) system, which is managed by the World Intellectual Property Organization (WIPO). Inventor(s): LUO, Laihuan (No. 71 Jiaoyuan Ziran Village, Dongjiang Village, Wujiang Town, Jishui CountyJi'an, Jiangxi 331619) Abstract: A ***wind power*** generation device, comprising an upper plate (1), a lower plate (2), and impellers located between the upper plate (1) and the lower plate (2). The upper plate (1) and the lower plate (2) are provided in parallel relative to one another, the plurality of impellers are provided between the upper plate (1) and the lower plate (2), the impellers are arranged in two rows, each row of impellers is connected by means of a transmission mechanism so as to achieve synchronous rotation, an included angle is formed in the plane in which the two rows of impellers are located, a ***wind*** deflector (3) is provided at the included angle, the impellers among the two rows of impellers that are closest to the ***wind*** deflector (3) are a first ***power*** impeller (5) and a second ***power*** impeller (6) respectively, a linkage structure is provided between the first ***power*** impeller (5) and the second ***power*** impeller (6), and a generator is connected on the first ***power*** impeller (5). The ***wind power*** generation device converts ***wind power*** into kinetic energy by using the impellers, and transmits the kinetic energy to a generator (4) by means of a plurality of gears, so as to achieve ***wind power*** generation; in addition, the ***wind power*** generation device can be applied at sea or on land, such that same achieves the purpose of generating electricity in different environments by cooperating different fixing structures. For more information:[*https://patentscope.wipo.int/search/en/detail.jsf?docId=WO2022042213*](https://patentscope.wipo.int/search/en/detail.jsf?docId=WO2022042213) For any query with respect to this article or any other content requirement, please contact Editor at [*contentservices@htlive.com*](mailto:contentservices@htlive.com)

**Load-Date:** March 7, 2022

**End of Document**



[***Australian Daily Wind Power Generation Data - Saturday 26 March 2022***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:653B-GF71-F03R-N0P6-00000-00&context=1516831)

Newstex Blogs

PA Pundits

March 27, 2022 Sunday 12:06 PM EST

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**Length:** 1061 words

**Byline:** TonyfromOz

**Body**

Mar 27, 2022( PA Pundits: [*http://papundits.wordpress.com*](http://papundits.wordpress.com)/ Delivered by Newstex)

By Anton Lang ~

This Post details the daily ***wind power*** generation data for the AEMO coverage area in Australia. For the background information, refer to the Introductory Post at this link[1].

Each image is shown here at a smaller size to fit on the page alongside the data for that day. If you click on each image, it will open on a new page and at a larger size so you can better see the detail.

Note also that on some days, there will be a scale change for the main ***wind power*** image, and that even though images may look similar in shape for the ***power*** generation black line on the graph when compared to other days, that scale (the total ***power*** shown on the left hand vertical axis) has been changed to show the graph at a larger size to better fit the image for that graph.

Saturday 26 March 2022

Total ***Wind Power*** Generation

[*https://papundits.files.wordpress.com/2022/03/032601wind.jpgThis*](https://papundits.files.wordpress.com/2022/03/032601wind.jpgThis) image shows the total ***power*** generated across the whole day by every ***wind*** plant in this vast AEMO coverage area for Australia.

The total Nameplate for all these ***wind*** plants changes as each new ***wind*** plant comes on line delivering ***power*** to the grid. That current Nameplate is 8587MW, and this is from the current total of 69 ***wind*** plants.

Note that the shape of this ***wind power*** load curve does not follow the shape of the main load curve for total ***power*** generation, and that is seen in the image below, the solid black line across the top of the image for that graph. ***Wind power*** generates its ***power*** only when the ***wind*** is blowing, hence it does not follow the actual ***power*** generation Load Curve, which is also the the exact same shaped curve as for actual ***power*** consumption.

For this data, I have added the times for the daily minimum, and the daily maximum, to show how they do not correlate with the actual times of minimum ***power*** consumption (around 4AM each day) and maximum ***power*** consumption, the evening Peak. (at around 6.40PM in Winter and earlier during the Summer Months.)

Daily Minimum - 758MW (1.20PM)

Daily Maximum - 3015MW (2.20PM)

Average ***Wind*** Generation - 2113MW

Total Generated ***Power*** - 50.71GWH

Percentage Supplied By ***Wind Power*** At The Low Point For The Day - 3.2%

Percentage Supplied By ***Wind Power*** At Peak ***Power*** For The Day - 2304MW of 23250MW - 6.50PM - 9.91% (Mid afternoon Peak with rooftop solar added was 24640MW at 11.05AM)

Average Percentage Of Overall Total ***Power*** Generation - %

Daily Operational Capacity Factor - 24.61%

***Wind Power*** Generation Versus Total ***Power*** Generation

[*https://papundits.files.wordpress.com/2022/03/032602windtotal.jpgThis*](https://papundits.files.wordpress.com/2022/03/032602windtotal.jpgThis) image shows the total ***power*** generated from all the ***wind*** plants in this AEMO coverage area, and compares it to the overall total generated ***power*** from every source of ***power*** generation, which is the black line at the top of the graph. ***Wind power*** is the green coloured area, along the bottom of this graph.

While the green colour in this image looks to be a different shape to the graph above, keep in mind here that the scale is completely different, and that green coloured ***Wind*** total is the same as for the image shown above, only with the scale changed so it can fit onto the graph.

Notes

Finding ***Wind Power*** Average - On the graph, there are 25 hourly time points, starting with midnight and finishing with midnight. I have added the total at each of those hourly time points together, and divided the resultant total by 25 to give an average in MegaWatts. (MW) For total ***power*** in GWH, multiply the average daily ***power*** by 24, and then divide by 1000. For the Capacity Factor, that is calculated by dividing the average ***wind*** generation by the current Nameplate and then multiplying that by 100 to give a percentage.

Comments For This Day

***Wind*** generation was lower on this day that it was on the day before, and the average for this day of 2113MW gave ***wind*** generation a daily operational Capacity Factor of 24.6%, and that was six percent lower than the year round average. ***Wind*** was again rising at the usual time of the evening Peak of maximum ***power*** consumption, and at that time, ***wind*** was delivering 9.9% of all the ***power*** generated from every source. Again there was a substantial difference between the high for the day and the low, and on this day that gap was 2257MW.

\*\*\*\*\*

Anton Lang[2] uses the screen name of TonyfromOz, and he writes at this site, PA Pundits International[3] on topics related to electrical ***power*** generation, from all sources, concentrating mainly on Renewable ***Power***, and how the two most favoured methods of renewable ***power*** generation, ***Wind Power*** and all versions of Solar ***Power***, fail comprehensively to deliver levels of ***power*** required to replace traditional ***power*** generation. His Bio is at this link[4].

OzWindPowerGenerationTFO

[ 1]: [*https://papundits.wordpress.com/2019/10/01/australian-daily-****wind-power****-generation-data-introduction-with-permanent-link-to-daily-posts/*](https://papundits.wordpress.com/2019/10/01/australian-daily-wind-power-generation-data-introduction-with-permanent-link-to-daily-posts/) [ 2]: [*https://papundits.wordpress.com/author/tonyoz/*](https://papundits.wordpress.com/author/tonyoz/) [ 3]: [*https://papundits.wordpress.com*](https://papundits.wordpress.com)/ [ 4]: [*https://papundits.wordpress.com/views-expressed-by-writers-are-their-own-and-do-not/tonyfromoz/*](https://papundits.wordpress.com/views-expressed-by-writers-are-their-own-and-do-not/tonyfromoz/)

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**Load-Date:** March 27, 2022

**End of Document**



[***New Joint Venture for floating wind power development in Greece***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:656R-KBV1-JDJN-604Y-00000-00&context=1516831)

Energy Monitor Worldwide

April 12, 2022 Tuesday

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**Length:** 610 words

**Body**

Hexicon has created a Joint Venture (JV) called; Hexicon ***Power*** SA, in Greece with the local company; EAMAA. This is a first step to start the development of floating offshore ***wind*** projects off the coast of Greece. A new legal framework for offshore ***wind*** is expected this year and Hexicon is now set to establish a presence in the area. Greece has great potential for floating offshore ***wind power*** with some of the best ***winds*** in Europe, says Marcus Thor, CEO at Hexicon.

With a continuously expanding energy grid and rising energy demand, Greece has become an increasingly important market for global renewable energy development. In line with the countrys overall economic recovery strategy, Greece now seeks to promote renewables, including offshore ***wind*** parks, to reduce its traditional reliance on fossil fuels and increase its share of clean energy sources.?The government has made green energy one of its top priorities by implementing a new national plan and setting some of the most ambitious goals in the EU, such as generating 60% of its electricity mix from renewable sources by 2030.

This is an important strategic move for us. We see great opportunities in Greece as they embark on the journey from fossil-fuels to renewables, says Marcus Thor, CEO at Hexicon.

The JV is in line with Hexicons strategy as an early-stage developer in key markets globally, where the company teams up with talented partners and local companies. The joint venture is a starting point for working together on several projects that will complement each other. Hexicon is set to provide input from its unique experience from existing projects in this new and exciting market.

The Greek team has operational, legal and technical know-how as well as a local network that matches Hexicons expertise in floating ***wind power*** technology. The project will be led by Mikelis Chatzigakis, CEO of Hexicon ***Power***. Mr. Chatzigakis, has served as a special advisor to the current Vice President of the conservative party now in government and former Greek Minister of Energy. Also, prior to joining Hexicon, Mr. Chatzigakis was the COO of Cobblestone Energy, a leading British electricity trading firm, and a former management consultant at the Boston Consulting Group (BCG). The President of the Board will be Alexander Singer, a renowned investment advisor in Greece and abroad, with 30 years of experience in the field and with a strong experience in energy investments, specifically in renewables. The new Chief Executive said:

We hope that Hexicons advanced technology in floating ***wind power*** will be a strong driving force in supporting Greeces clean energy future. Our floating ***wind*** technology can produce high energy output with limited environmental impact. Greece has enormous opportunities in offshore ***wind*** and we are committed to assisting the country reaching its full potential.

The CEO, the Board and the executive team will work closely with Hexicon to make the most of Greeces robust offshore ***wind*** prospects. The team looks forward to supporting Greeces transition to offshore ***wind*** and the countrys lofty targets for clean energy and a healthy environment.

Hexicon is a Swedish cleantech company that develops ***wind power*** projects in deep waters internationally. The company has its own patented technology; TwinWind, which consists of a floating foundation with two turbines. The innovative twin turbine design enables more turbines per sea area, which increases the energy yield and reduces the environmental impact. Sustainability, innovation, and cooperation are at the core of Hexicons business and floating ***wind power*** is a key component as the world transitions to renewables.

**Load-Date:** April 12, 2022

**End of Document**



[***Australian Daily Wind Power Generation Data - Friday 25 March 2022***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:6534-HK71-JCMN-Y406-00000-00&context=1516831)

Newstex Blogs

PA Pundits

March 26, 2022 Saturday 12:07 PM EST

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**Length:** 1063 words

**Byline:** TonyfromOz

**Body**

Mar 26, 2022( PA Pundits: [*http://papundits.wordpress.com*](http://papundits.wordpress.com)/ Delivered by Newstex)

By Anton Lang ~

This Post details the daily ***wind power*** generation data for the AEMO coverage area in Australia. For the background information, refer to the Introductory Post at this link[1].

Each image is shown here at a smaller size to fit on the page alongside the data for that day. If you click on each image, it will open on a new page and at a larger size so you can better see the detail.

Note also that on some days, there will be a scale change for the main ***wind power*** image, and that even though images may look similar in shape for the ***power*** generation black line on the graph when compared to other days, that scale (the total ***power*** shown on the left hand vertical axis) has been changed to show the graph at a larger size to better fit the image for that graph.

Friday 25 March 2022

Total ***Wind Power*** Generation

[*https://papundits.files.wordpress.com/2022/03/032501wind.jpgThis*](https://papundits.files.wordpress.com/2022/03/032501wind.jpgThis) image shows the total ***power*** generated across the whole day by every ***wind*** plant in this vast AEMO coverage area for Australia.

The total Nameplate for all these ***wind*** plants changes as each new ***wind*** plant comes on line delivering ***power*** to the grid. That current Nameplate is 8587MW, and this is from the current total of 69 ***wind*** plants.

Note that the shape of this ***wind power*** load curve does not follow the shape of the main load curve for total ***power*** generation, and that is seen in the image below, the solid black line across the top of the image for that graph. ***Wind power*** generates its ***power*** only when the ***wind*** is blowing, hence it does not follow the actual ***power*** generation Load Curve, which is also the the exact same shaped curve as for actual ***power*** consumption.

For this data, I have added the times for the daily minimum, and the daily maximum, to show how they do not correlate with the actual times of minimum ***power*** consumption (around 4AM each day) and maximum ***power*** consumption, the evening Peak. (at around 6.40PM in Winter and earlier during the Summer Months.)

Daily Minimum - 1138MW (12.10PM)

Daily Maximum - 3519MW (10.30PM)

Average ***Wind*** Generation - 2304MW

Total Generated ***Power*** - 55.29GWH

Percentage Supplied By ***Wind Power*** At The Low Point For The Day - 4.5%

Percentage Supplied By ***Wind Power*** At Peak ***Power*** For The Day - 2944MW of 24400MW - 6.40PM - 12.07% (Mid afternoon Peak with rooftop solar added was 27170MW at 1.10PM)

Average Percentage Of Overall Total ***Power*** Generation - %

Daily Operational Capacity Factor - 26.83%

***Wind Power*** Generation Versus Total ***Power*** Generation

[*https://papundits.files.wordpress.com/2022/03/032502windtotal.jpgThis*](https://papundits.files.wordpress.com/2022/03/032502windtotal.jpgThis) image shows the total ***power*** generated from all the ***wind*** plants in this AEMO coverage area, and compares it to the overall total generated ***power*** from every source of ***power*** generation, which is the black line at the top of the graph. ***Wind power*** is the green coloured area, along the bottom of this graph.

While the green colour in this image looks to be a different shape to the graph above, keep in mind here that the scale is completely different, and that green coloured ***Wind*** total is the same as for the image shown above, only with the scale changed so it can fit onto the graph.

Notes

Finding ***Wind Power*** Average - On the graph, there are 25 hourly time points, starting with midnight and finishing with midnight. I have added the total at each of those hourly time points together, and divided the resultant total by 25 to give an average in MegaWatts. (MW) For total ***power*** in GWH, multiply the average daily ***power*** by 24, and then divide by 1000. For the Capacity Factor, that is calculated by dividing the average ***wind*** generation by the current Nameplate and then multiplying that by 100 to give a percentage.

Comments For This Day

***Wind*** generation was a little higher on this day than it was on the day before, and the average for this day of 2304MW gave ***wind*** generation a daily operational Capacity Factor of 26.8%, and that was four percent lower than the year round average. While ***wind*** rose in the afternoon, at the usual time of the evening Peak of maximum ***power*** consumption, ***wind*** was delivering 12% of the total ***power*** generation from every source. Again, there was a substantial difference between the low for the day and the high, and on this day, that gap was 2381MW.

\*\*\*\*\*

Anton Lang[2] uses the screen name of TonyfromOz, and he writes at this site, PA Pundits International[3] on topics related to electrical ***power*** generation, from all sources, concentrating mainly on Renewable ***Power***, and how the two most favoured methods of renewable ***power*** generation, ***Wind Power*** and all versions of Solar ***Power***, fail comprehensively to deliver levels of ***power*** required to replace traditional ***power*** generation. His Bio is at this link[4].

OzWindPowerGenerationTFO

[ 1]: [*https://papundits.wordpress.com/2019/10/01/australian-daily-****wind-power****-generation-data-introduction-with-permanent-link-to-daily-posts/*](https://papundits.wordpress.com/2019/10/01/australian-daily-wind-power-generation-data-introduction-with-permanent-link-to-daily-posts/) [ 2]: [*https://papundits.wordpress.com/author/tonyoz/*](https://papundits.wordpress.com/author/tonyoz/) [ 3]: [*https://papundits.wordpress.com*](https://papundits.wordpress.com)/ [ 4]: [*https://papundits.wordpress.com/views-expressed-by-writers-are-their-own-and-do-not/tonyfromoz/*](https://papundits.wordpress.com/views-expressed-by-writers-are-their-own-and-do-not/tonyfromoz/)

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**Load-Date:** March 26, 2022

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[***Economic news: New use for vacant wind power plant near port***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:6581-VTR1-JCMN-Y4MC-00000-00&context=1516831)

Newstex Blogs

Arkansas Times

April 18, 2022 Monday 5:11 PM EST

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**Length:** 420 words

**Byline:** Max Brantley

**Body**

Apr 18, 2022( Arkansas Times: [*http://www.arktimes.com*](http://www.arktimes.com) Delivered by Newstex)

WATCH THIS SPACE: Former site of LM turbine blade factory seems likely spot for industrial announcement Wednesday.

Governor Hutchinson has scheduled an economic development announcement Wednesday morning and it appears to be news about a new use for the vacant LM ***Wind Power*** facility near the Little Rock Port.

No further details are available at this time. The facility is privately owned and not a property of the city or Little Rock Port.

LM opened in 2008 and closed in April 2020. It made giant blades for ***wind power*** turbines but closed because of declining demand. The company had to repay millions in state corporate welfare incentives because it failed to meet employment targets. Hoping to employ 1,100, the facility had about 400 workers when it closed.

Speculation is that a steelmaker plans a project there.

LM sold its property in the port area to Frazier Pike Holdings LLC, which lists an address in Springdale, in late 2020 for $9.5 million.

The post Economic news: New use for vacant ***wind power*** plant near port[1] appeared first on Arkansas Times[2].

[ 1]: [*https://arktimes.com/arkansas-blog/2022/04/18/economic-news-new-use-for-vacant-****wind-power****-plant-near-port*](https://arktimes.com/arkansas-blog/2022/04/18/economic-news-new-use-for-vacant-wind-power-plant-near-port) [ 2]: [*https://arktimes.com*](https://arktimes.com)

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**Load-Date:** April 18, 2022

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[***Asia-Pacific Wind Power Market Assessment & Opportunity Forecast 2022-2031***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:6510-1CV1-DY6B-219Y-00000-00&context=1516831)

MENAFN - Press Releases (English)

March 16, 2022 Wednesday

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**Length:** 1309 words

**Body**

[*Link to Story*](https://menafn.com/1103862024/Asia-Pacific-Wind-Power-Market-Assessment-Opportunity-Forecast-2022-2031)

Shibuya-ku, Tokyo, Japan, Japan, Mar 16, 2022, 09:54 /Comserve / -- Asia-Pacific ***Wind Power*** Market With Top Countries Data, Industry Analysis , Size, Share, Revenue, Prominent Players, Developing Technologies, Tendencies and Forecast

The Asia-Pacific ***wind power*** market is expected to register a CAGR of less than 10.45% during the forecast period. Major factors attributing to the growth include the favorable government policies, the increasing investment in ***wind power*** projects, and the reduced cost of ***wind*** energy, which led to an increased adoption of ***wind*** energy, thereby positively contributing to the demand for ***wind*** energy. The increasing adoption of alternate energy sources, such as gas-based ***power*** and solar ***power***, is likely to hinder the market growth.

- The onshore segment is expected to be the largest market during the forecast period in Asia-Pacific, owing to increased onshore ***wind*** capacity additions, supported by reducing the cost of electricity generation from onshore ***wind*** projects.

- The technological advancements in efficiency and decrease in the production cost of offshore ***wind*** turbines are expected to create ample opportunity for the market players in Asia-Pacific.

- China dominates the ***wind power*** market and remains the largest onshore market with 21.2 GW new capacity additions. The government policy and incentives made China a favorable hotspot for investment, and therefore, the ***wind power*** market is expected to flourish in the coming years as well.

Get a PDF Sample for more detailed market insights:

Key Market Trends

Onshore Segment to Dominate the Market

- Onshore ***wind*** energy ***power*** generation technology evolved over the last five years to maximize electricity produced per megawatt capacity installed to cover more sites with lower ***wind*** speeds. Besides this, in recent years, ***wind*** turbines have become larger with taller hub heights, broader diameters, and larger ***wind*** turbine blades.

- The newly installed capacity of ***wind power*** in China in 2019 reached 25.74 GW. Of this, the new installation of onshore ***wind power*** was 23.76 GW, and the new installation of offshore was 1.98 GW. The cumulative installed capacity of ***wind power*** generation reached 210 GW in 2019.

- The onshore market in China installed capacity of 23.76 GW in 2019. Through the 206 GW total installations at the end of 2018, China became the first market to surpass 200 GW of the total installed capacity, reaching its target of 200 GW two years earlier than planned (based on the Five-year Plan 2016-2020). Adding to this, the total ***wind power*** generation reached 405.7 TWh in 2019, exceeding 400 TWh for the first time and accounting for 5% of the total ***power*** generation in the country.

- China's northern regions have abundant onshore ***wind*** potential. The provinces of Qinghai, Xinjiang, and Inner Mongolia, and the country's northeast have the highest ***power*** density (average values between 400 and 600 watts per square meter (W/ m²)), and most new onshore installations are expected to be deployed in these areas.

- Although the ***wind power*** market has a positive outlook across the world, the coronavirus (COVID-19) outbreak is expected to have a negative impact on the supply chain and installation operations in the Chinese ***wind*** energy industry, as well as the global ***wind*** energy. Moreover, as the majority of the global ***wind*** turbine and related manufacturers are located in China, the market is expected to witness a slight slowdown in the coming years.

- Japan, being an island nation, has many suitable locations for offshore ***wind power*** generation. The country analyzed that offshore ***wind*** turbines can generate five times more electricity than onshore ***wind*** turbines. Also, there are likely to be land constraints for the development of onshore ***wind*** farms in the future. Owing to this, the government aims to promote more offshore projects and, at the same time, introduce necessary laws to reduce operators' risks and encourage new entries for the companies.

- Similarly, other countries, such as South Korea, are good locations for offshore ***wind*** farms. Most ***wind*** farm developments in the country have been onshore turbines. Currently, onshore installed capacity is 1,229 MW. Numerous Korean conglomerates have already begun to invest significantly in the offshore ***wind*** farm business.

- From all these factors, it can be concluded that the offshore sector is expected to gain significant traction in the market in the coming years and is expected to be the fastest-growing segment in the market.

China to Dominate the Market

- In China, nearly 70% of the electricity produced is from thermal sources of energy. Owing to the increasing pollution from the thermal sources, the country has been making efforts to increase the share of cleaner and renewable sources in ***power*** generation, which is expected to drive the ***wind power*** market in the country.

- The newly installed capacity of ***wind power*** in 2019 reached 25.74 GW. Of this, a new installation of onshore ***wind power*** was 23.76 GW, and the new installation of offshore was 1.98 GW. The cumulative installed capacity of ***wind power*** generation reached 210 GW in 2019.

- Though the ***wind*** farms are in the ***wind***-rich northern and western provinces of the country, delays in grid connection and improper grid management continue to be the major issues.

- China, the world's largest ***wind*** market, remained partially isolated from the global market. The national manufacturers cover almost all the internal demand and have very few exports to other markets.

- In May 2019, China planned to invest approximately CNY 160 billion in an offshore ***wind*** project with an installed capacity of more than 10 GW. During the same period, Beijing announced its plans to invest USD 360 billion in renewable energy, by 2020, and cancel its plans for the construction of 85 new coal-***powered*** plants.

- Chinese manufacturers comprise nearly 95% of the overall ***wind power*** market. At the end of 2018, the top turbine manufacturer in China was Goldwind, followed by Envision and Mingyang. The small non-Chinese presence (4%) is held by three main foreign manufacturers, namely, Vestas (2%), Siemens-Gamesa (1%), and GE (1%).

- The government policy and incentives made China a favorable hotspot for investment. Moreover, with the increasing capacity, China outpaced Europe to become the largest onshore ***wind*** market in 2018, with nearly one-third of the global installed capacity.

Enquire before purchasing this report:

Competitive Landscape

Some of the key players include Acciona Energia SA, Orsted AS, EDF SA, General Electric Company, and Siemens Gamesa Renewable Energy.

1 INTRODUCTION

1.1 Scope of the Study

1.2 Market Definition

1.3 Study Assumptions

2 RESEARCH METHODOLOGY

3 EXECUTIVE SUMMARY

4 MARKET OVERVIEW

4.1 Introduction

4.2 Installed Capacity and Forecast in GW, until 2025

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4.7.5 Intensity of Competitive Rivalry

5 MARKET SEGMENTATION

Ask for it and browse full report- Asia-Pacific ***Wind Power*** Market

The dynamic nature of business environment in the current global economy is raising the need amongst business professionals to update themselves with current situations in the market. To cater such needs, Shibuya Data Count provides market research reports to various business professionals across different industry verticals, such as healthcare & pharmaceutical, IT & telecom, chemicals and advanced materials, consumer goods & food, energy & ***power***, manufacturing & construction, industrial automation & equipment and agriculture & allied activities amongst others.

MENAFN16032022004694010674ID1103862024

**Load-Date:** March 16, 2022

**End of Document**



[***Meng Nani Applies for Patent on Fan Blade Rotating Device for Wind Power Generation***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:6580-47S1-JBHT-D44R-00000-00&context=1516831)

Global IP News. Energy Patent News

April 16, 2022 Saturday

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**Length:** 387 words

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**Body**

**FULL TEXT**

Publication Name: Energy Patent NewsPatent Application Number: CN202011613525 20201230Patent Publication Number: CN112796933 (A)International Patent Classification Codes: F03D1/06, F03D17/00, F03D7/02, F03D80/70, F03D9/11Cooperative Patent Classification Codes: F03D1/0675 (CN), F03D17/00 (CN), F03D7/022 (CN), F03D80/70 (CN), F03D9/11 (CN), Y02E10/72 (EP), Y02E70/30 (EP)Patent Status: Application

Beijing, April 16 -- Meng Nani has applied for Chinese patent for fan blade rotating device for ***wind power*** generation. The patent application number is CN202011613525 20201230. The patent publication number is CN112796933 (A). International Patent Classification codes are F03D1/06, F03D17/00, F03D7/02, F03D80/70 and F03D9/11. Cooperative Patent Classification codes are F03D1/0675 (CN), F03D17/00 (CN), F03D7/022 (CN), F03D80/70 (CN), F03D9/11 (CN), Y02E10/72 (EP) and Y02E70/30 (EP).

The abstract of the patent published by the State Intellectual Property Office of China states: "The invention relates to the technical field of ***wind power*** generation equipment, in particular to a fan blade rotating device for ***wind power*** generation. The device comprises a main shell fixedly mounted on a ***wind power*** generation equipment support through bolts, a front shell is rotationally mounted at the front end of the main shell through a third bearing, and at least three butt joint sleeves are integrally formed on the front shell in a circumferential array manner. A connecting sleeve is fixedly mounted in each butt joint sleeve, and a connecting shaft is rotationally mounted in each connecting sleeve through a second bearing. The fan blade rotating device for ***wind power*** generation has the beneficial effects that the fan blade rotating device for ***wind power*** generation can effectively optimize the ***power*** generation efficiency by adjusting the dip angles of fan blades, and meanwhile, the fan blade rotating device can be matched with a middle shaft to integrally protect ***wind power*** generation equipment in strong ***wind*** weather, so that the overall service life of the equipment can be effectively prolonged; and meanwhile, the device is reasonable in stress distribution in the process of adjusting the angles of the fan blades, and the whole device is also easy to maintain and repair."

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**Load-Date:** April 18, 2022

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[***Australian Daily Wind Power Generation Data - Wednesday 23 March 2022***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:652N-7M21-JCMN-Y4M6-00000-00&context=1516831)

Newstex Blogs

PA Pundits

March 24, 2022 Thursday 7:11 AM EST

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**Length:** 1075 words

**Byline:** TonyfromOz

**Body**

Mar 24, 2022( PA Pundits: [*http://papundits.wordpress.com*](http://papundits.wordpress.com)/ Delivered by Newstex)

By Anton Lang ~

This Post details the daily ***wind power*** generation data for the AEMO coverage area in Australia. For the background information, refer to the Introductory Post at this link[1].

Each image is shown here at a smaller size to fit on the page alongside the data for that day. If you click on each image, it will open on a new page and at a larger size so you can better see the detail.

Note also that on some days, there will be a scale change for the main ***wind power*** image, and that even though images may look similar in shape for the ***power*** generation black line on the graph when compared to other days, that scale (the total ***power*** shown on the left hand vertical axis) has been changed to show the graph at a larger size to better fit the image for that graph.

Wednesday 23 March 2022

Total ***Wind Power*** Generation

[*https://papundits.files.wordpress.com/2022/03/032301wind.jpgThis*](https://papundits.files.wordpress.com/2022/03/032301wind.jpgThis) image shows the total ***power*** generated across the whole day by every ***wind*** plant in this vast AEMO coverage area for Australia.

The total Nameplate for all these ***wind*** plants changes as each new ***wind*** plant comes on line delivering ***power*** to the grid. That current Nameplate is 8587MW, and this is from the current total of 69 ***wind*** plants.

Note that the shape of this ***wind power*** load curve does not follow the shape of the main load curve for total ***power*** generation, and that is seen in the image below, the solid black line across the top of the image for that graph. ***Wind power*** generates its ***power*** only when the ***wind*** is blowing, hence it does not follow the actual ***power*** generation Load Curve, which is also the the exact same shaped curve as for actual ***power*** consumption.

For this data, I have added the times for the daily minimum, and the daily maximum, to show how they do not correlate with the actual times of minimum ***power*** consumption (around 4AM each day) and maximum ***power*** consumption, the evening Peak. (at around 6.40PM in Winter and earlier during the Summer Months.)

Daily Minimum - 1173MW (3.45PM)

Daily Maximum - 3478MW (3.55AM)

Average ***Wind*** Generation - 2539MW

Total Generated ***Power*** - 60.93GWH

Percentage Supplied By ***Wind Power*** At The Low Point For The Day - 4.5%

Percentage Supplied By ***Wind Power*** At Peak ***Power*** For The Day - 1679MW of 25830MW - 6.25PM - 6.50% (Mid afternoon Peak with rooftop solar added was 27300MW at 1.50PM)

Average Percentage Of Overall Total ***Power*** Generation - %

Daily Operational Capacity Factor - 29.57%

***Wind Power*** Generation Versus Total ***Power*** Generation

[*https://papundits.files.wordpress.com/2022/03/032302windtotal.jpgThis*](https://papundits.files.wordpress.com/2022/03/032302windtotal.jpgThis) image shows the total ***power*** generated from all the ***wind*** plants in this AEMO coverage area, and compares it to the overall total generated ***power*** from every source of ***power*** generation, which is the black line at the top of the graph. ***Wind power*** is the green coloured area, along the bottom of this graph.

While the green colour in this image looks to be a different shape to the graph above, keep in mind here that the scale is completely different, and that green coloured ***Wind*** total is the same as for the image shown above, only with the scale changed so it can fit onto the graph.

Notes

Finding ***Wind Power*** Average - On the graph, there are 25 hourly time points, starting with midnight and finishing with midnight. I have added the total at each of those hourly time points together, and divided the resultant total by 25 to give an average in MegaWatts. (MW) For total ***power*** in GWH, multiply the average daily ***power*** by 24, and then divide by 1000. For the Capacity Factor, that is calculated by dividing the average ***wind*** generation by the current Nameplate and then multiplying that by 100 to give a percentage.

Comments For This Day

***Wind*** generation was higher on this day than it was on the day before, and the average for this day of 2539MW gave ***wind*** generation a daily operational Capacity factor of 29.6%, and that was one percent lower than the year round average. While ***wind*** was a little up on its low for the day at the usual time of the evening Peak of maximum ***power*** consumption, ***wind*** was only delivering 4.5% of all the generated ***power*** from every source. You can see that ***wind*** fell away across the early part of the day and that difference between the high for the day and the low was again substantial, and on this day that gap was 2305MW.

\*\*\*\*\*

Anton Lang[2] uses the screen name of TonyfromOz, and he writes at this site, PA Pundits International[3] on topics related to electrical ***power*** generation, from all sources, concentrating mainly on Renewable ***Power***, and how the two most favoured methods of renewable ***power*** generation, ***Wind Power*** and all versions of Solar ***Power***, fail comprehensively to deliver levels of ***power*** required to replace traditional ***power*** generation. His Bio is at this link[4].

OzWindPowerGenerationTFO

[ 1]: [*https://papundits.wordpress.com/2019/10/01/australian-daily-****wind-power****-generation-data-introduction-with-permanent-link-to-daily-posts/*](https://papundits.wordpress.com/2019/10/01/australian-daily-wind-power-generation-data-introduction-with-permanent-link-to-daily-posts/) [ 2]: [*https://papundits.wordpress.com/author/tonyoz/*](https://papundits.wordpress.com/author/tonyoz/) [ 3]: [*https://papundits.wordpress.com*](https://papundits.wordpress.com)/ [ 4]: [*https://papundits.wordpress.com/views-expressed-by-writers-are-their-own-and-do-not/tonyfromoz/*](https://papundits.wordpress.com/views-expressed-by-writers-are-their-own-and-do-not/tonyfromoz/)

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**Load-Date:** March 24, 2022

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[***Japan : Toshiba to Win Turbine Supply Contract for Onshore Wind Power in Abukuma, Fukushima***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:657S-N591-JDJN-63DS-00000-00&context=1516831)

TendersInfo

April 16, 2022 Saturday

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**Length:** 500 words

**Body**

?Output to Reach Capacity of Approx. 147,000 kW; One of the Largest in Japan?

Toshiba Energy Systems & Solutions Corporation (hereinafter Toshiba ESS) announced that the company has won a major order from a joint venture, Fukushima Reconstruction ***Wind Power*** GK, to supply 46 ***wind*** turbines (totaling approx. 147,000 kW) as part of an operation and maintenance contract, including windmills and BOP1, for the four onshore ***wind power*** plants2 in the area of Abukuma, Fukushima Prefecture. With Fukushima Reconstruction ***Wind Power*** GK having recently started construction of the four ***wind power*** plants, Toshiba ESS will deliver GEs 3.2 MW (3.2-103) ***wind*** turbines to these plants.

In recent years, governments around the world have been accelerating the adoption of renewable energy generation as a way to address climate change. Last year, the Japanese government announced the 6th Strategic Energy Plan, which includes the national electricity mix plan to increase the share attributable to renewable energy to 36 to 38% by 2030. Expectations are rising for renewable energy as a main ***power*** source to approach the goal of achieving carbon neutrality by 2050. Fukushima Prefecture, promoting itself as a pioneer in introducing renewable energy, has set the renewable ***power*** generation target of exceeding the requirement to meet demand from the entire prefecture by around 2040.

Fukushima Reconstruction ***Wind Power*** GK was selected by Fukushima Prefecture in 2017 to receive a grant to promote the Project. The specific plan is to install 46 ***wind*** turbines with a height of 148 meters in a ***wind*** farm built along a ridge stretching over Tamura City, Okuma Town, Namie Town, and Katsurao Village in the Abukuma area. This will be one of the largest onshore ***wind power*** generation projects in Japan when completed in the spring of 2025 as scheduled. The Project is designed to have a total output capacity of approx.147,000 kW, which can meet the ***power*** demand of 120,000 households on an estimated annual basis.

Toshiba ESS has strengths in the installation and operation of renewable energy ***power*** generation facilities, such as ***wind*** and solar ***power***, in Japan, as well as in connecting to substation networks, and superior engineering capabilities. GEs 3.2 MW ***wind*** turbines are highly efficient and reliable, and have a proven track record in Japan. Thus, this large-scale order was received in recognition of our technological capabilities and GEs ***wind*** turbine performance.

Shigehiro Kawahara, Vice President of the Energy Aggregation Div. at Toshiba ESS, said, Toshiba ESS is proud to have received this major order, and will take this opportunity to continue to accelerate business development for onshore ***wind power*** in Japan and contribute to the spread of ***wind power*** generation and the realization of carbon neutrality.

1: BOP(Balance of Plant): Facilities and equipment in the ***power*** plant excluding ***wind*** turbine generators

2: Abukuma ***Wind Power*** Plant Nos. 1, 2, 3, and 4Write the annotation text in a small font size

**Load-Date:** April 17, 2022

**End of Document**



[***Cost of offshore wind power continues to fall***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:64T1-8FR1-JCF4-642V-00000-00&context=1516831)

The Japan News

February 17, 2022 Thursday

S Edition

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**Section:** BUSINESS; Pg. 3;; No. 25597

**Length:** 1118 words

**Byline:** Koichi Kuranuki and Katsutoshi Samata, Yomiuri Shimbun Staff Writers

**Body**

At the end of last year, the Economy, Trade and Industry Ministry and the Land, Infrastructure, Transport and Tourism Ministry selected a corporate consortium centered around Mitsubishi Corp. for three offshore ***wind power*** projects off the coasts of Akita and Chiba prefectures.

The overwhelmingly low cost was the decisive factor in the winning bid.

Attention is focused on whether expanding offshore ***wind power***, which some analysts see as key to expanding renewable energy, will help spur the decarbonization of society.

Many reactors' worth

The government's green growth strategy aims to achieve net-zero carbon dioxide emissions by 2050 and has offshore ***wind power*** as one of its pillars. By 2040, the goal is to introduce from 30 million to 45 million kilowatts of offshore ***wind power***, the equivalent of about 40 nuclear ***power*** reactors.

This was the first major bid in government-designated offshore ***wind*** development zones.

From two to five consortiums bid on one project off the coast of Choshi, Chiba Prefecture, and on two projects off the coast of Akita Prefecture.

An alliance of Mitsubishi and Chubu Electric ***Power*** Co. won the bids for all three, which are scheduled to be operational in 2028-30. The total output of the projects could be up to about 1.7 million kilowatts, similar to two medium-sized nuclear reactors.

Offshore ***wind power*** is subject to the central government's feed-in tariff system. The policy is designed to encourage growth by setting a high purchase price, though there is concern that the burden on the public will grow because these costs are eventually passed on to consumers through electricity rates.

Over the next 20 years, the Mitsubishi consortium proposed to sell electricity for 16.49 yen per kilowatt-hour from the Choshi project and for 11.99 yen to 13.26 yen per kilowatt-hour from the Akita projects. These prices are well below the upper limit the government originally set of 29, yen and up to about 14 yen lower than the other bids.

Offshore ***wind power*** has traditionally been seen as expensive, but it is now cheaper than onshore ***wind***, which costs about 15 yen-17, yen and comparable to commercial solar ***power***. This decline in cost is expected to reduce the burden on the public.

Concrete plans

Mitsubishi's low prices come from a painstaking analysis of the risks involved, from design to construction, operation and maintenance, and deep knowledge of how to achieve efficiency.

They scrutinized everything -- including designs that take into account the topography and geology of the seabed, the specifications of submarine transmission lines, and the content of maintenance and inspections -- to figure out where they could cut costs while still achieving sufficient performance.

Many trading companies that are engaged in energy projects do not send employees overseas, choosing to only invest. However, since the early 2010s, Mitsubishi has taken part in seven offshore ***wind*** projects in Europe, giving its employees valuable experience.

In 2020, Mitsubishi and Chubu Electric paid 500 billion yen to acquire Eneco, a Dutch company engaged in offshore ***wind power***. Being able to incorporate professionals who have real-world experience in offshore ***wind power*** projects in Europe was a big advantage.

A person involved in the bid review said, "Mitsubishi's proposals were not only superior in price, but also in the specificity of their plans."

Yoshihiro Iwasaki, president of Mitsubishi Corporation Energy Solutions Ltd., which will implement the projects, said, "We want to achieve both decarbonization and economic growth in Japan by supplying renewable energy at competitive prices."

Rethinking strategy

The results of the bidding were a shock to the other consortiums.

The stock price of renewable energy company Renova Inc., which bid for the Akita project, plunged from 4,600 yen to the 1,500 yen level after the results of the bid were announced.

Renova, which worked with local utility Tohoku Electric ***Power*** Co. and others, had already engaged in marine surveys and taken local action, and was seen as likely to win the bid.

"We have to fundamentally rethink our business plan for the next bid," a person involved said.

Tokyo Electric ***Power*** Company Holdings Inc., which was expected to win the Choshi project, suffered a major disappointment because it had positioned its offshore ***wind power*** business as a pillar of its management reconstruction.

TEPCO needs 450 billion yen per year in profits to cover compensation costs for the Fukushima No. 1 nuclear ***power*** plant disaster, of which it wanted to make 100 billion yen from renewable energy.

TEPCO tried to tap into the knowledge of overseas companies by partnering with the Danish offshore ***wind power*** company Orsted, but they were apparently not able to cut enough from the budget.

Helping domestic industries

A public-private council studying the spread of offshore ***wind power*** proposed that the percentage of parts procured from domestic companies should be raised to 60% by 2040, to strengthen industrial competitiveness.

A feed-in tariff system led to rapid expansion of solar ***power***, but cheap Chinese panels have swept the market, stymieing the growth of the domestic industry.

By learning from this mistake, the strategy is to involve numerous domestic companies in offshore ***wind power***, from construction to maintenance, in the hope this will spark economic growth.

However, specially appointed Prof. Kimio Yamaka of the Kyoto University graduate school said: "People said that the cost of offshore ***wind power*** in Japan would be nearly double that of our predecessors in Europe, due to the lack of any track record. I have doubts as to whether the sector will expand if domestic companies don't make enough profits off this latest bid."

Still, the Mitsubishi camp is bullish. Through efforts such as assembling windmills made by General Electric of the United States at Toshiba Corp. factories in Japan, Iwasaki said, "We want to nurture domestic industries and take Japan-based offshore ***wind power*** projects overseas."

Because the output of renewable energy varies depending on the weather and time of day, it has been seen as a poor choice for a core ***power*** source.

For offshore ***wind power*** in particular, it has been pointed out that there are few sea areas that are shallow enough and have strong enough ***winds*** in Japan.

Promising areas for offshore ***wind power*** have been designated off the coasts of Aomori and Nagasaki prefectures. Whether these and other places will be developed depends on the success or failure of the Mitsubishi consortium's projects.

It is important for businesses to improve efficiency on their own through healthy competition. The government also needs to pay close attention to the progress of the plan.

**Load-Date:** February 16, 2022

**End of Document**



[***Poland to ease rules for onshore wind power development***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:656X-36S1-F15C-G4T6-00000-00&context=1516831)

CEE Energy NewsWatch Today

April 13, 2022 Wednesday

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**Length:** 268 words

**Body**

Poland plans to ease its controversial rule restricting the development of onshore ***wind power*** parks, the climate ministry said on April 12.

Warsaw currently has a rule stating that no ***wind*** turbine can be located closer to any housing area than 10 times the height of the installation. That has practically eliminated all possible locations for onshore ***wind*** development, the ***wind power*** lobbies have long said.

But Russia's invasion of Ukraine has led Poland to re-think how its energy transformation should move forward. Poland gets 70% of its electricity from coal, such as lignite, and has planned to replace much of this capacity with gas-fired installations.

While Poland is planning to wean itself off Russian gas completely by the end of the year, replacing it with supplies from the US, Qatar, and Norway, it is also under pressure to reduce the overall share of fossil fuels in the energy mix.

More renewables would be instrumental in achieving that goal while also boosting Poland's energy security, a key topic in the context of the war.

"We expect that the bill [easing restrictions] will be approved by the cabinet and sent to the lower house in the second quarter," the ministry said in an answer to an MP's question.

Onshore ***wind***, as well as solar ***power*** projects, are expected to help reduce coal's share in ***power*** generation to an estimated 11%-28% by 2040, according to the government. That would come in addition to the development of at least six gigawatts of installed capacity of offshore ***wind*** by the late 2020s and the launch of the country's first nuclear ***power*** reactor in 2033.

**Load-Date:** April 13, 2022

**End of Document**



[***Australian Daily Wind Power Generation Data - Thursday 24 March 2022***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:652W-78D1-F03R-N2CG-00000-00&context=1516831)

Newstex Blogs

PA Pundits

March 25, 2022 Friday 9:05 AM EST

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**Length:** 1066 words

**Byline:** TonyfromOz

**Body**

Mar 25, 2022( PA Pundits: [*http://papundits.wordpress.com*](http://papundits.wordpress.com)/ Delivered by Newstex)

By Anton Lang ~

This Post details the daily ***wind power*** generation data for the AEMO coverage area in Australia. For the background information, refer to the Introductory Post at this link[1].

Each image is shown here at a smaller size to fit on the page alongside the data for that day. If you click on each image, it will open on a new page and at a larger size so you can better see the detail.

Note also that on some days, there will be a scale change for the main ***wind power*** image, and that even though images may look similar in shape for the ***power*** generation black line on the graph when compared to other days, that scale (the total ***power*** shown on the left hand vertical axis) has been changed to show the graph at a larger size to better fit the image for that graph.

Thursday 24 March 2022

Total ***Wind Power*** Generation

[*https://papundits.files.wordpress.com/2022/03/032401wind.jpgThis*](https://papundits.files.wordpress.com/2022/03/032401wind.jpgThis) image shows the total ***power*** generated across the whole day by every ***wind*** plant in this vast AEMO coverage area for Australia.

The total Nameplate for all these ***wind*** plants changes as each new ***wind*** plant comes on line delivering ***power*** to the grid. That current Nameplate is 8587MW, and this is from the current total of 69 ***wind*** plants.

Note that the shape of this ***wind power*** load curve does not follow the shape of the main load curve for total ***power*** generation, and that is seen in the image below, the solid black line across the top of the image for that graph. ***Wind power*** generates its ***power*** only when the ***wind*** is blowing, hence it does not follow the actual ***power*** generation Load Curve, which is also the the exact same shaped curve as for actual ***power*** consumption.

For this data, I have added the times for the daily minimum, and the daily maximum, to show how they do not correlate with the actual times of minimum ***power*** consumption (around 4AM each day) and maximum ***power*** consumption, the evening Peak. (at around 6.40PM in Winter and earlier during the Summer Months.)

Daily Minimum - 674MW (11.20AM)

Daily Maximum - 3076MW (10.50PM)

Average ***Wind*** Generation - 1983MW

Total Generated ***Power*** - 47.59GWH

Percentage Supplied By ***Wind Power*** At The Low Point For The Day - 2.6%

Percentage Supplied By ***Wind Power*** At Peak ***Power*** For The Day - 2252MW of 25470MW - 6.40PM - 8.84% (Mid afternoon Peak with rooftop solar added was 26990MW at 1.10PM)

Average Percentage Of Overall Total ***Power*** Generation - %

Daily Operational Capacity Factor - 23.09%

***Wind Power*** Generation Versus Total ***Power*** Generation

[*https://papundits.files.wordpress.com/2022/03/032402windtotal.jpgThis*](https://papundits.files.wordpress.com/2022/03/032402windtotal.jpgThis) image shows the total ***power*** generated from all the ***wind*** plants in this AEMO coverage area, and compares it to the overall total generated ***power*** from every source of ***power*** generation, which is the black line at the top of the graph. ***Wind power*** is the green coloured area, along the bottom of this graph.

While the green colour in this image looks to be a different shape to the graph above, keep in mind here that the scale is completely different, and that green coloured ***Wind*** total is the same as for the image shown above, only with the scale changed so it can fit onto the graph.

Notes

Finding ***Wind Power*** Average - On the graph, there are 25 hourly time points, starting with midnight and finishing with midnight. I have added the total at each of those hourly time points together, and divided the resultant total by 25 to give an average in MegaWatts. (MW) For total ***power*** in GWH, multiply the average daily ***power*** by 24, and then divide by 1000. For the Capacity Factor, that is calculated by dividing the average ***wind*** generation by the current Nameplate and then multiplying that by 100 to give a percentage.

Comments For This Day

***Wind*** generation was lower on this day than it was on the day before. The average of 1983MW gave ***wind*** generation a daily operational Capacity Factor of 23%, and that was seven percent lower than the year round average. ***Wind*** was a little higher at the usual time of the evening Peak of maximum ***power*** consumption, and at that time, ***wind*** was delivering 8.8% of all the generated ***power*** from every source. Again, with ***wind*** going as low as it did, there was again a substantial difference between the low for the day and the high, and on this day, that gap was 2402MW.

\*\*\*\*\*

Anton Lang[2] uses the screen name of TonyfromOz, and he writes at this site, PA Pundits International[3] on topics related to electrical ***power*** generation, from all sources, concentrating mainly on Renewable ***Power***, and how the two most favoured methods of renewable ***power*** generation, ***Wind Power*** and all versions of Solar ***Power***, fail comprehensively to deliver levels of ***power*** required to replace traditional ***power*** generation. His Bio is at this link[4].

OzWindPowerGenerationTFO

[ 1]: [*https://papundits.wordpress.com/2019/10/01/australian-daily-****wind-power****-generation-data-introduction-with-permanent-link-to-daily-posts/*](https://papundits.wordpress.com/2019/10/01/australian-daily-wind-power-generation-data-introduction-with-permanent-link-to-daily-posts/) [ 2]: [*https://papundits.wordpress.com/author/tonyoz/*](https://papundits.wordpress.com/author/tonyoz/) [ 3]: [*https://papundits.wordpress.com*](https://papundits.wordpress.com)/ [ 4]: [*https://papundits.wordpress.com/views-expressed-by-writers-are-their-own-and-do-not/tonyfromoz/*](https://papundits.wordpress.com/views-expressed-by-writers-are-their-own-and-do-not/tonyfromoz/)

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[***Global Wind Power Industry Report 2021 with Focus on China - The Largest Region in the World in Cumulative Installed Wind Power Capacity'***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:64NT-4F61-DY6B-24F0-00000-00&context=1516831)

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**Body**

[*Link to Story*](https://menafn.com/1103624895/Global-Wind-Power-Industry-Report-2021-with-Focus-on-China-The-Largest-Region-in-the-World-in-Cumulative-Installed-Wind-Power-Capacity)

DUBLIN, Feb. 1, 2022 /PRNewswire/ -- The 'Global and China's ***Wind Power*** Industry Research Report 2016-2030' report has been added to ResearchAndMarkets.com's offering.

The continued increase in newly installed ***wind power*** capacity in China has made China the largest region in the world in terms of cumulative installed ***wind power*** capacity, surpassing the EU. 2020 is a record year for the global ***wind power*** industry, with 93GW of new installations worldwide, up 53% YOY.

In 2020, China's newly added ***wind power*** capacity reached 52GW, double the amount of new ***wind power*** capacity installed in 2019. China has become one of the world's largest ***wind power*** markets, with record growth in installed ***wind power*** in 2020, and its onshore ***wind power*** was responsible for 56.3% of the total new installations worldwide.

In the emerging offshore ***wind*** sector in recent years, the total cumulative global offshore ***wind power*** installed in 2020 was 35 GW, with 6.1 GW of new installations, down slightly from 6.24 GW in 2019.

China achieved more than 3 GW of new grid-connected offshore ***wind power*** in 2020, becoming the world's largest offshore ***wind*** market for the third consecutive year. The European market maintained steady growth, with the Netherlands ranking second globally with nearly 1.5 GW of new installations and Belgium in third place (706 MW).

It is expected that with the existing ***wind power*** policy, 235 GW of new offshore ***wind power*** will be installed worldwide in the next decade, an increase equivalent to seven times the existing offshore ***wind power*** installation.

According to this analysis, China's ***wind power*** market is somewhat different from the global market. 20,401 new units were installed in China in 2020, with a capacity of 54.43 million kW, an increase of 105.1% YOY. Such a prosperous market, however, has barely developed relationships with overseas companies.

The world's highest-ranked company, Vestas, accounts for only 2.1% of installed capacity in China's ***wind*** turbine market, ranking 11th in terms of new installed capacity for China's ***wind*** turbine manufacturers in 2020.

Accordingly, overseas markets are not open to Chinese companies. In 2020, China exported a total of 1188 MW of ***wind*** turbine capacity, accounting for only 2-3% of the total global installed capacity outside of China. At the same time, China's ***wind power*** machine industry is highly concentrated.

The leading enterprises are more advanced in capital, technology accumulation, and industry chain integrity, with obvious advantages in the market competition, so they hold a stable leading position.

Xinjiang Goldwind Science & Technology Co., Ltd., Envision Energy and Ming Yang Smart Energy Group Limited, three ***wind*** turbine manufacturers, have been holding the top three positions in the industry since 2016. From 2016 to 2020, according to the size of the Chinese market, CR5 increased from 60% to 70%, CR10 from 84% to 90%.

In terms of cost, ***wind power*** costs are lower than PV costs. Globally, among offshore ***wind***, onshore ***wind***, and PV, onshore ***wind*** has the lowest LCOE of 0.25 RMB/KWh. According to the global LCOE data published by the International Renewable Energy Agency (IRENA), offshore ***wind***, onshore ***wind***, and PV had decreased by 48%, 56%, and 85% respectively, from 2010 to 2020. By 2020, the LCOE for offshore ***wind***, onshore ***wind***, and PV was about RMB 0.54/KWh, RMB 0.25/KWh, and RMB 0.37/KWh respectively.

Compared to the decline in PV, onshore ***wind power*** still has more room for improvement. China's average LCOE for onshore ***wind*** is among the highest in the world, at 0.24 RMB (about 3.7 cents)/KWh in 2020.

According to the plan of China's National Energy Administration, China's total installed ***wind*** PV capacity will reach more than 1.2 billion kW (about 1200 GW) by the end of 2030. It means that during 2022-2030, China will need to add at least about 300 million kW of ***wind power***, with an average annual installed capacity of at least 30 GW. For ***wind power***, with little policy change, the industry will continue to grow at least by 2030. And the global ***wind power*** industry is expected to continue to have strong growth momentum by 2050.

Topics covered:

* Overview of the ***wind power*** industry

1. Economic and policy environment of ***wind power***
2. What is the impact of COVID-19 on the ***wind power*** industry?
3. Global and China's ***Wind Power*** Market Size, 2016-2021
4. Forecast on Global and China's ***Wind Power*** Market, 2022-2030
5. Analysis of the development status of offshore ***wind power***
6. Analysis of major ***wind power*** companies
7. Key drivers and market opportunities in the ***wind power*** industry
8. What are the key drivers, challenges and opportunities for the ***wind power*** industry during the forecast period 2022-2030?
9. What is the expected revenue of the ***wind power*** market during the forecast period of 2022-2030?
10. What are the strategies adopted by the key players in the market to increase their market share in the industry?
11. Which segment of the ***wind power*** market is expected to dominate the market in 2030?
12. What are the major adverse factors facing the ***wind power*** industry?

Key Topics Covered: 1 ***Wind Power*** Industry Overview 1.1 Definition and Classification 1.1.1 Definition 1.1.2 Classification 1.2 Global ***Wind Power*** Industry Overview 1.3 Impact of COVID-19 on ***Wind Power*** Industry 2 ***Wind Power*** Industry Development Environment 2016-2020 2.1 Economic Environment 2.1.1 Global Economy 2.1.2 China's Economy 2.2 Policy Environment 2.2.1 Policy Overview 2.2.2 Policy Trends 3 Current Situation of ***Wind Power*** Industry, 2016-2021 3.1 Supply 3.1.1 Global Production3.1.2 China's Production 3.2 Demand 3.2.1 International Market 3.2.2 China's market3.3 Analysis of Offshore ***Wind Power*** Industry 4 ***Wind Power*** Industry Chain, 2016-2022 4.1 Components of the ***Wind Power*** Industry Chain 4.1.1 Overview 4.1.2 Blade 4.1.3 Casting 4.1.4 Bearings4.1.5 Gearboxes 4.2 Cost Analysis of ***wind power*** industry chain 4.2.1 Raw Material Costs 4.2.2 ***Power*** Generation Costs 5 Global and China's ***Wind Power*** Industry Key Regions, 2016-2021 5.1 China5.1.1 East China 5.1.2 North China 5.1.3 Northeast China 5.1.4 Central China5.1.5 Other regions5.2 United States5.3 Europe5.4 Other Regions 6 Analysis of China's ***Wind Power*** Equipment Import and Export, 2018-2021 6.1 ***Wind Power*** Equipment Exports 6.1.1 Overview of ***wind power*** equipment exports 6.1.2 China's main export destinations of ***wind power*** equipment 6.2 ***Wind Power*** Equipment Imports6.2.1 Overview of imports 6.2.2 Major Import Sources 7 Major ***Wind Power*** Equipment Manufacturers, 2020-2022 7.1 ***Wind*** Turbine Manufacturers7.1.1 Xinjiang Goldwind Science & Technology Co., Ltd.7.1.2 Envision Energy7.1.3 Ming Yang Smart Energy Group Limited7.1.4 Electric ***Wind*** Power7.1.5 Zhejiang Windey Co7.1.6 CRRC ***Wind Power*** (Shandong) Co., Ltd.7.1.7 Dongfang Electric7.1.8 Sany Renewable Energy Co.,Ltd7.1.9 China State Shipbuilding Corporation7.1.10 Guodian United ***Power*** Technology Company Limited7.2 ***Wind Power*** Operators7.2.1 China Guodian Corporation7.2.2 China Datang Corporation7.2.3 China Huaneng Group7.2.4 China Best7.2.5 CNOOC7.2.6 Jingneng Group7.2.7 Luneng Group7.2.8 Concord New Energy7.2.9 Hong Kong Energy (Holdings) Limited7.2.10 Tianrun Group 8 Outlook on Global and China's ***Wind Power*** Industry, 2022-2030 8.1 Influencing Factors of Global and China's ***Wind Power*** Industry Development, 2022-20308.2 Forecast on China's ***Wind Power*** Industry Supply, 2022-20308.3 Forecast on ***Wind Power*** Demand, 2022-20308.4 Investment and Development Suggestions for China's ***Wind Power*** Industry, 2022-2030

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[***INTERNATIONAL PATENT: SHANGHAI ELECTRIC WIND POWER GROUP CO., LTD. FILES APPLICATION FOR "WIND POWER GENERATION SYSTEM AND CONTROL METHOD AND DEVICE THEREFOR"***](https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:6510-PVC1-F12F-F2C6-00000-00&context=1516831)

US Fed News

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**Body**

GENEVA, March 16 -- SHANGHAI ELECTRIC ***WIND POWER*** GROUP CO., LTD. (8th Floor, 6th Building, No. 555 Dongchuan Road, Minhang DistrictShanghai 200241) filed a patent application (PCT/CN2021/093614) for "***WIND POWER*** GENERATION SYSTEM, AND CONTROL METHOD AND DEVICE THEREFOR" on May 13, 2021. With publication no. WO/2022/048185, the details related to the patent application was published on Mar 10, 2022.

Notably, the patent application was submitted under the International Patent Classification (IPC) system, which is managed by the World Intellectual Property Organization (WIPO). Inventor(s): ZHANG, Luhua (8th Floor, 6th Building, No. 555 Dongchuan Road, Minhang DistrictShanghai 200241), MA, Chengbin (8th Floor, 6th Building, No. 555 Dongchuan Road, Minhang DistrictShanghai 200241), LIU, Jiaming (8th Floor, 6th Building, No. 555 Dongchuan Road, Minhang DistrictShanghai 200241), CHEN, Kunming (8th Floor, 6th Building, No. 555 Dongchuan Road, Minhang DistrictShanghai 200241), YU, Qing (8th Floor, 6th Building, No. 555 Dongchuan Road, Minhang DistrictShanghai 200241), GE, Haoxiang (8th Floor, 6th Building, No. 555 Dongchuan Road, Minhang DistrictShanghai 200241), LV, Ting (8th Floor, 6th Building, No. 555 Dongchuan Road, Minhang DistrictShanghai 200241), WU, Yanjun (8th Floor, 6th Building, No. 555 Dongchuan Road, Minhang DistrictShanghai 200241) Abstract: A control method for a ***wind power*** generation system. The ***wind power*** generation system comprises a motor and N ***power*** conversion circuits; the motor comprises N coil windings which are respectively electrically connected to the N ***power*** conversion circuits, wherein N is a positive integer not less than 2. The control method comprises: obtaining operating ***power*** of the motor; controlling cut-in of a coil ***winding*** according to the current operating ***power*** of the motor; if the current operating ***power*** of the motor is lower than the rated ***power*** of one coil ***winding***, controlling one of the N coil windings to be cut in; and if the current operating ***power*** of the motor is higher than the rated ***power*** of one coil ***winding***, controlling at least two of the N coil windings to be cut in. By means of the technical solution, cut-in/cut-out of a coil ***winding*** is optimized, aging of components can be slowed down, the overall service life is prolonged, the overall conversion efficiency can be effectively improved, grid-connected current harmonics are reduced, and the electric energy quality is improved. In addition, also provided are a device for implementing the control method, and the ***wind power*** generation system. For more information:[*https://patentscope.wipo.int/search/en/detail.jsf?docId=WO2022048185*](https://patentscope.wipo.int/search/en/detail.jsf?docId=WO2022048185) For any query with respect to this article or any other content requirement, please contact Editor at [*contentservices@htlive.com*](mailto:contentservices@htlive.com)

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