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(54) Title: SOLAR POWERED WIND TURBINE APPARATUS

(57) Abstract: A method and an apparatus are provided for initiating rotation of blades of a wind turbine when wind speed is less than a cut-in speed. A solar powered wind turbine apparatus includes a solar dome with photovoltaic cells, operably connected to a rotor assembly, and an electric motor. The photovoltaic cells convert solar energy from incident sunlight into electrical energy. The electric motor electrically connected to the photovoltaic cells rotates the blades of the rotor assembly using the electrical energy from the photovoltaic cells. The electric motor powered by the photovoltaic cells initiates the rotation of the blades of the rotor assembly when wind speed is less than the cut-in speed, and therefore reduces or eliminates the cut-in speed required to rotate the blades. The blades of the rotor assembly thereafter continue to rotate in response to a force of wind on the blades and/or the powered electric motor.



**INTERNATIONAL SEARCH REPORT**

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<p>A. CLASSIFICATION OF SUBJECT MATTER</p> <p style="text-align: center;"><b>F03D 7/00 (2006.01)</b>  <b>F03D 9/00 (2006.01)</b>  <b>H02S 10/12 (2014.01)</b></p> <p>According to International Patent Classification (IPC) or to both national classification and IPC</p>														
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<p>C. DOCUMENTS CONSIDERED TO BE RELEVANT</p> <table border="1"> <thead> <tr> <th>Category*</th> <th>Citation of document, with indication, where appropriate, of the relevant passages</th> <th>Relevant to claim No.</th> </tr> </thead> <tbody> <tr> <td>Y</td> <td>CN 101900085 B (QINGSHAN YANG) 17.04.2013, abstract, par. [0018], fig. 1</td> <td>1-20</td> </tr> <tr> <td>Y</td> <td>US 2011/0215587 A1 (LEE WILLIAM EDWARD et a.) 08.09.2011, abstract, fig. 3, par. [0009]-[0017], [0020]-[0022], [0042], [0045], [0046]-[0047], [0052]-[0057], [0059]-[0061]</td> <td>1-20</td> </tr> <tr> <td>Y</td> <td>US 2011/0215583 A1 (LEE WILLIAM EDWARD et al.) 08.09.2011, abstract, fig. 1, 2</td> <td>18</td> </tr> </tbody> </table>			Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.	Y	CN 101900085 B (QINGSHAN YANG) 17.04.2013, abstract, par. [0018], fig. 1	1-20	Y	US 2011/0215587 A1 (LEE WILLIAM EDWARD et a.) 08.09.2011, abstract, fig. 3, par. [0009]-[0017], [0020]-[0022], [0042], [0045], [0046]-[0047], [0052]-[0057], [0059]-[0061]	1-20	Y	US 2011/0215583 A1 (LEE WILLIAM EDWARD et al.) 08.09.2011, abstract, fig. 1, 2	18
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<p>Name and mailing address of the ISA/RU:                  Federal Institute of Industrial Property,                  Berezhkovskaya nab., 30-1, Moscow, G-59,                  GSP-3, Russia, 125993                  Facsimile No: (8-495) 531-63-18, (8-499) 243-33-37</p>		<p>Authorized officer</p> <p style="text-align: center;">A. Golovina</p> <p>Telephone No. 499-240-25-91</p>												