**Wind Lulls in 2021 compared with 2020**

The National Grid’s Future Energy Scenarios, FES 2021 was published in July 2021 and gives an increase in installed wind capacity of over 25% in 2021 compared with 2020.

Taking a wind lull as when wind is supplying less than 5% of demand, one would expect a decrease in wind lulls as installed capacity increases. The table below compares 2021 to date with the same period in 2020.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Month | Total Hours <5% | No of Lulls | No of Lulls >5 hours | No of Lulls >10 hours | Maximum Lull (hours) |
| **2021** |  |  |  |  |  |
| January | 15 | 5 | 1 | 0 | 5 |
| February | 34 | 1 | 1 | 1 | 34 |
| March | 110 | 9 | 7 | 4 | 43.5 |
| April | 156 | 13 | 7 | 4 | 53.5 |
| May  | 177 | 17 | 8 | 4 | 67 |
| June | 89 | 9 | 6 | 3 | 30.5 |
| July | 314.5 | 9 | 6 | 5 | 120 |
| August | 128.5 | 17 | 4 | 3 | 54.5 |
| September | 108 | 14 | 8 | 5 | 18 |
| October | 9 | 3 | 1 | 0 | 5 |
| November | 28 | 3 | 2 | 1 | 14 |
| December | 84 | 3 | 3 | 3 | 39.5 |
| **TOTAL to date** | **1253** | **103** | **54** | **33** |  |
| **2020** |  |  |  |  |  |
| January | 32.5 | 5 | 3 | 1 | 12.5 |
| February | 12 | 1 | 1 | 1 | 12 |
| March | 39 | 5 | 3 | 1 | 21 |
| April | 70 | 6 | 5 | 4 | 22 |
| May  | 124 | 12 | 7 | 4 | 32.5 |
| June | 137.5 | 5 | 3 | 3 | 88.5 |
| July | 58.5 | 8 | 4 | 3 | 20 |
| August | 78 | 13 | 5 | 2 | 21.5 |
| September | 62.5 | 14 | 8 | 5 | 18 |
| October | 36.5 | 8 | 3 | 2 | 13.5 |
| November | 81 | 9 | 3 | 2 | 45.5 |
| December | 48.5 | 4 | 3 | 2 | 25.5 |
| **TOTAL** | **780** | **90** | **46** | **26** |  |

Despite a significant increase in installed wind turbine capacity in the UK between 2020 and 2021, it can be seen that in every aspect of the analysis wind lulls have increased in 2021 compared with 2020.

Of most concern is the 60% increase in the total time when wind contributed less than 5% of demand, including 13 days in total in July when wind contributed very little to the Grid. There was also a wind lull of 5 days continuously in July 2021. December was also disastrous, with the three wind lulls of over 10 hours each following on from each other between 17th and 21st. The overall figures would have been much worse but for October and November being very windy months and include Storm Arwen.

The table confirms that low wind speeds are not unusual, in fact they are frequent and often extended. Assuming weather patterns remain the same in future years, it can also be assumed that wind lulls will not significantly decrease as the capacity of operational wind turbines is increased.

It is clear that the FES 2021 strategy of increasing wind capacity, 6x that in 2020 by 2050, whilst reducing nuclear capacity and eliminating gas is not a sound strategy and it is suggested that the National Grid should look to other, more reliable, sources of renewable energy.