Wind Power in the United States 2018

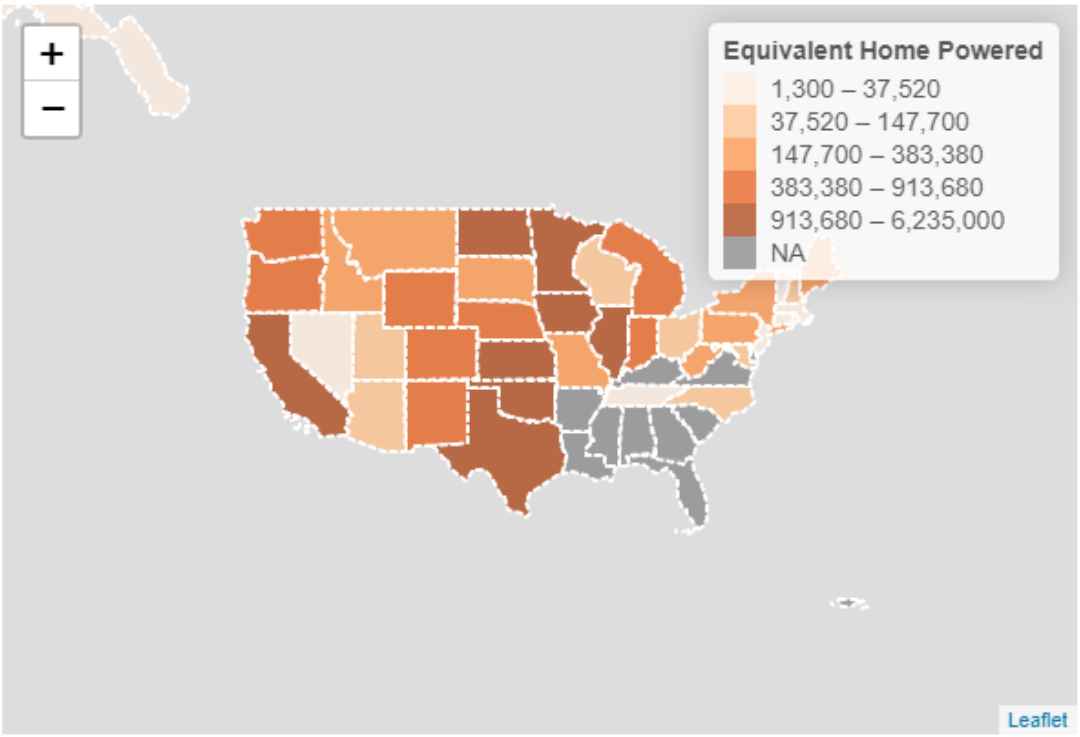
Data Visualization created using ShinyApps with R programming language

Live version of the app: https://cthemin.shinyapps.io/USWindProject/

Wind Power in United States 2018 | Interactive map | Ranking Bar Chart | Data Table & Reference

In the United States, it has been reported that the wind energy consumption is increased by 30% over the years. The government have recorded the data of the wind energy installated in each state with the total money invested. This report will analyse each state's Equivalent Home Powered (EHP), Installed Capacity in Megawatt (MW) and the Total amount of Money Invested. The data is collected from Choose Energy Inc.

The map below shows the size of each state, grouped by the number of EHP.



As can be seen, there are states that have more energy supplied than the others. Take the comparison between Texas and Oklahoma. The size of Oklahoma is 1/3 of Texas, the amount of money invested in Texas is $42 Billion with 23,262 MW Installed capacity and 6,235,000 home powered. While in Oklahoma, it is invested with $13,7 Billion, 7,495 MW Installed capacity and 2,268,000 home powered. The number is somehow reasonable.

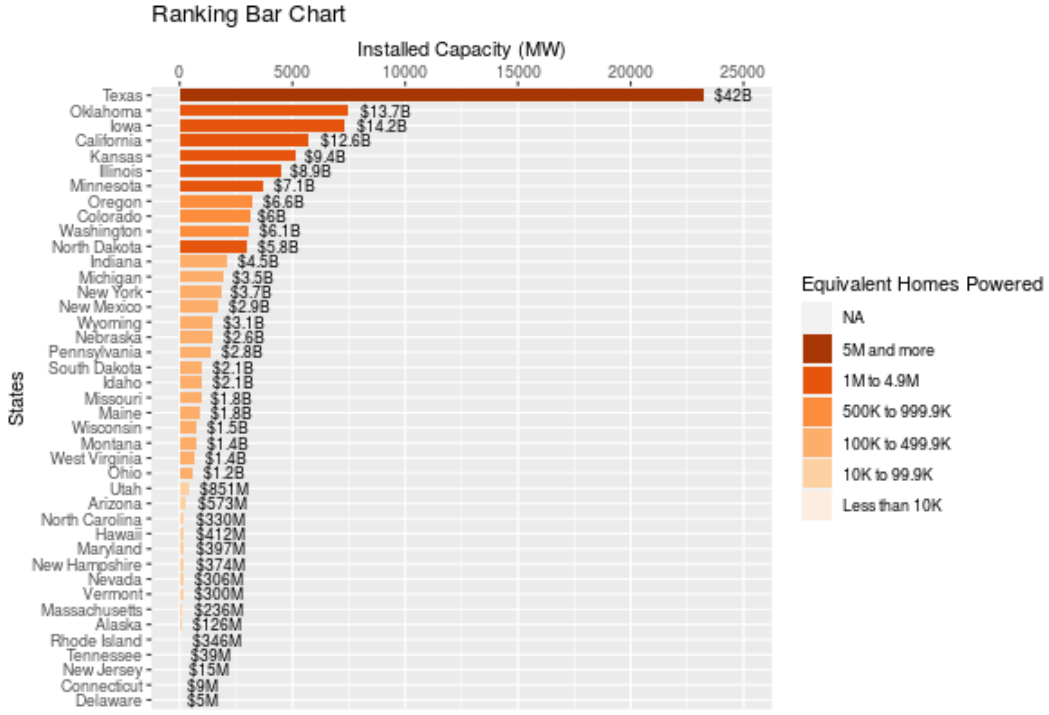
However, if comparing Oklahoma to New Mexico where the size of New Mexico is slightly bigger than Oklahoma, the amount of money invested in New Mexico is only $2,9 Billion with 1,682 MW installed capacity for 422,100 home powered. That is about 372% difference in money invested, power installed and home powered.

Next to the left of New Mexico is Arizona, which has similar size to New Mexico but it is invested with lower amount: $573 million, 268 MW installed, and 54,600 home powered.

Further analysis can be done using Bar Chart on the next tab to see more detail on the Installed Capacity, EHP and the Amount invested

The following Bar Chart compares the Installed Capacity (MW), Amount invested ($) and Equivalent Home Powered. As can be seen, Texas is the highest in terms of money invested, energy supplied and EHP compare to the other states. Interestingly, North Dakota with only $5,8 Billion money invested supplying 2,996 MW Installed Capacity for about 1 Million houses.

While Oregon, Colorado, and Washington received $6 Billion each, supply less than 1 Million houses



Conclusion

Both visualisations give a better insight for comparison between states in terms of money invested, power installed and equivalent home powered. This can help the government to make a better decision in the future for supplying energy for each state.

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Ranking	NAME	Total.Investment..Millions.	Installed.Capacity..MW.	Equivalent.Homes.Powered
1	Texas	42000	23262	6235000
2	Oklahoma	13700	7495	2268000
3	Iowa	14200	7312	1935000
4	California	12600	5686	1298000
5	Kansas	9400	5110	1719000
6	Illinois	8900	4464	1050000
7	Minnesota	7100	3699	1012000
8	Oregon	6600	3213	604600
9	Colorado	6000	3106	889100
10	Washington	6100	3075	695300
11	North Dakota	5800	2996	1021000
12	Indiana	4500	2117	440700
13	Michigan	3500	1904	471700
14	New York	3700	1829	366500
15	New Mexico	2900	1682	422100
16	Wyoming	3100	1489	408700
17	Nebraska	2600	1445	486700
18	Pennsylvania	2800	1369	314000
19	South Dakota	2100	977	293100
20	Idaho	2100	973	228000
21	Missouri	1800	959	181100
22	Maine	1800	923	206500
23	Wisconsin	1500	746	142100
24	Montana	1400	720	199800
25	West Virginia	1400	686	149300
Ranking	NAME	Total.Investment..Millions.	Installed.Capacity..MW.	Equivalent.Homes.Powered

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Data Reference:

Choose Energy, Inc. Best States for Wind in 2018.
https://www.chooseenergy.com/news/article/best-worst-ranked-states-wind-power/
United States Spatial Data 2017. https://www.usgs.gov/products/data-and-tools/gis-data