

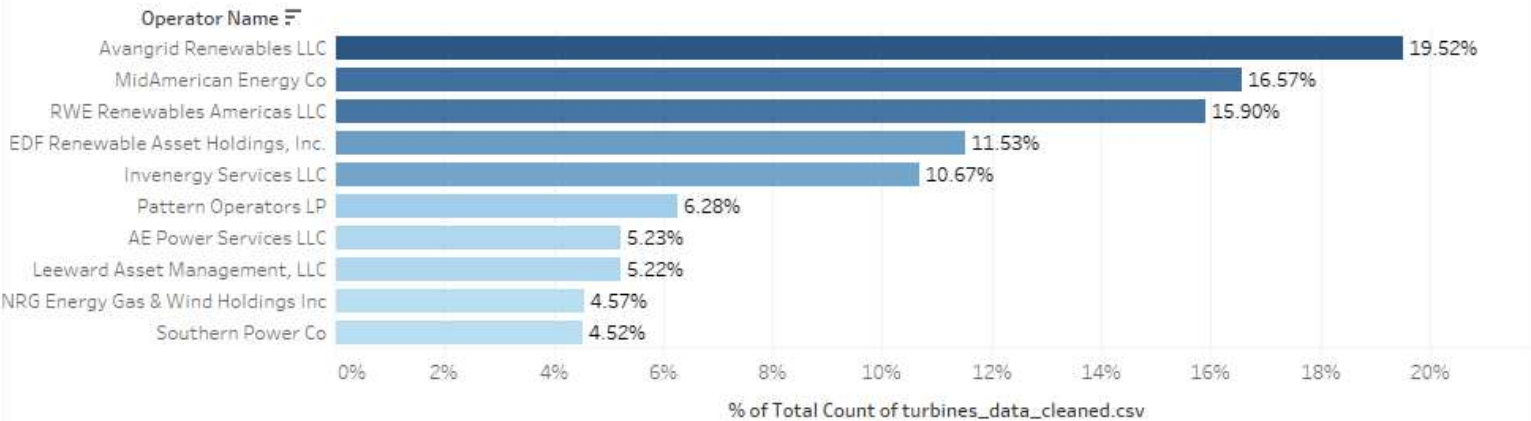
Wind Turbine Operators

- plant owners and national presence

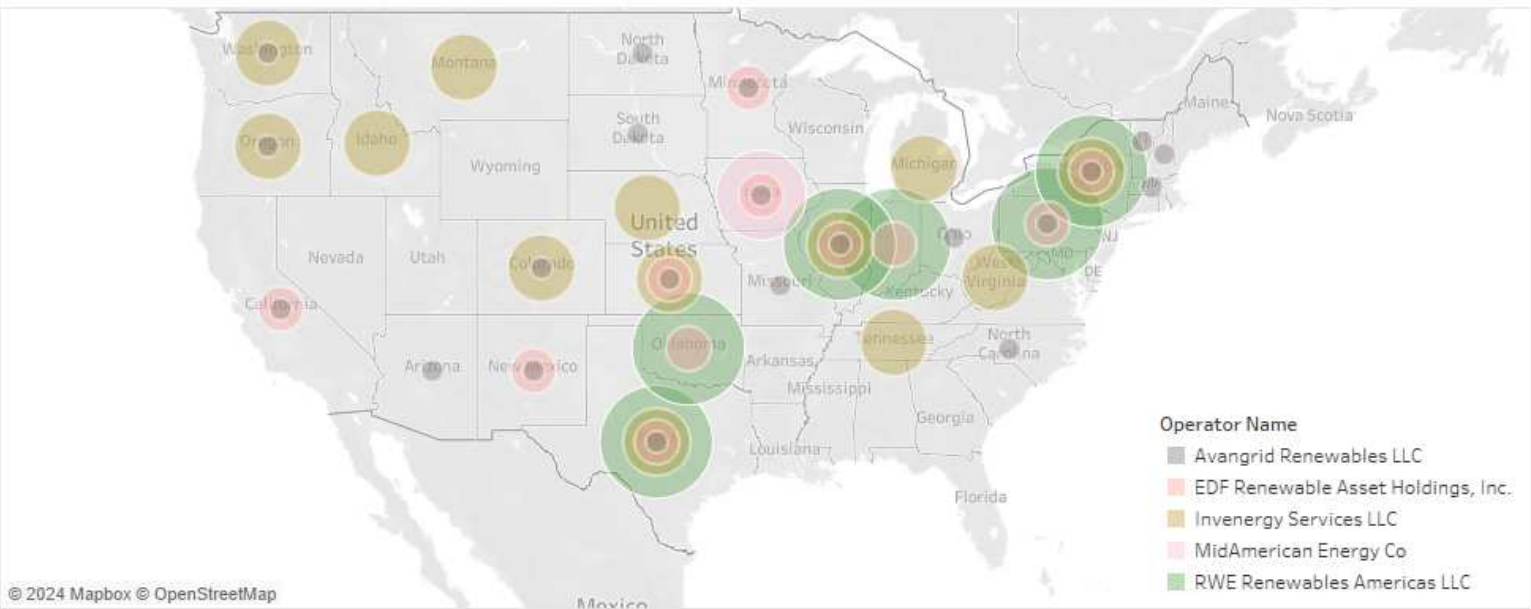


Top 10 Operators in the US

by number of turbines



Operator presence by state

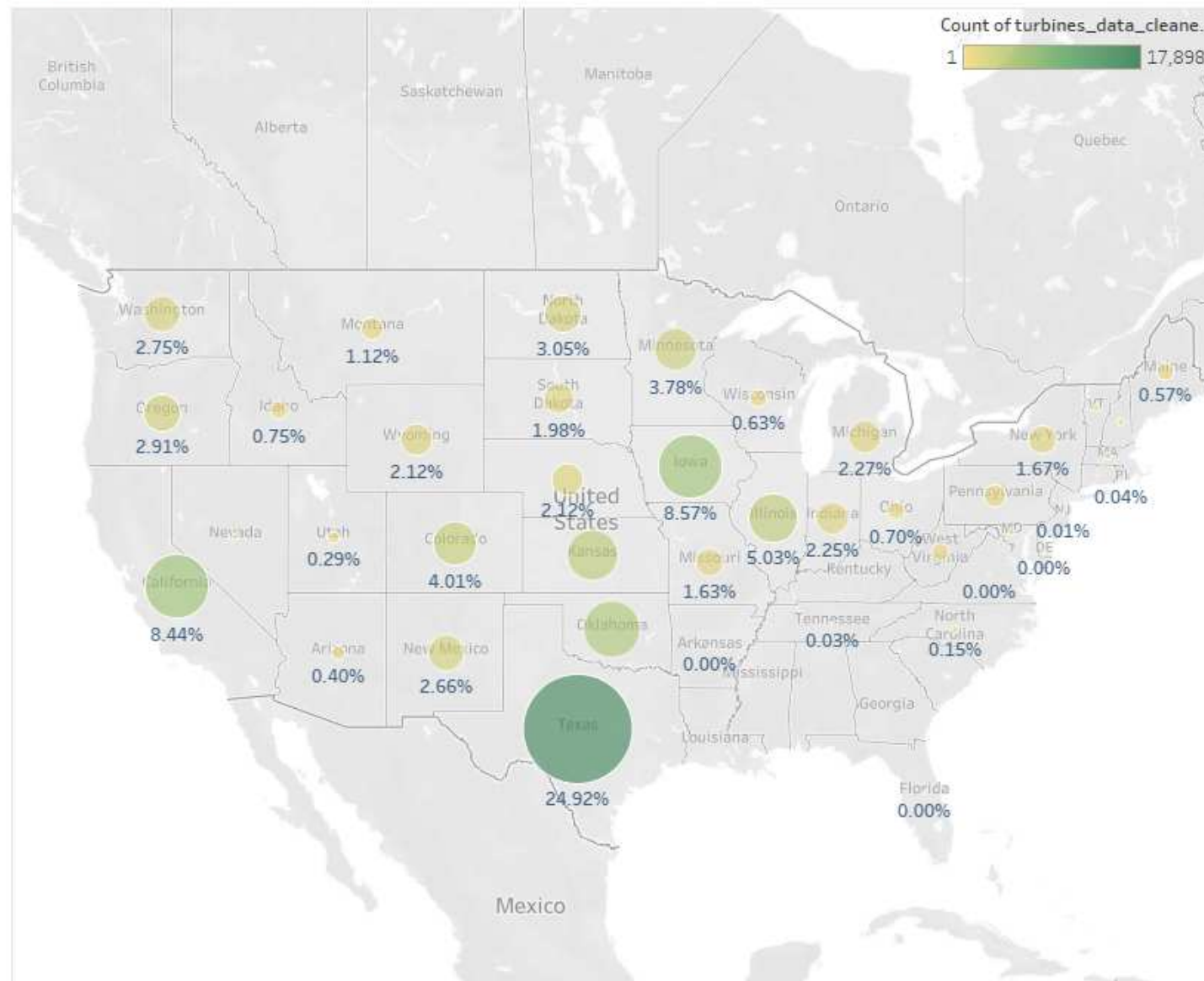


- **Avangrid Renewables** had the widest presence across the states, and managed the highest total share of turbines.
- **Invenergy Services** had the second widest presence but was only 5th in terms of total share of turbines across the US.
- There were a number of Operators that had a **smaller overall distribution across the map**

-- but their **presence was more concentrated in specific states**

- Eg **RWE Renewables America**, which was more concentrated in Texas. Texas has a high share of total turbines. Hence RWE has a large market share despite being concentrated across a smaller area.
- **MidAmerican Energy Co** was similarly concentrated in Iowa, another high density state for turbines.

Turbines by state - % share

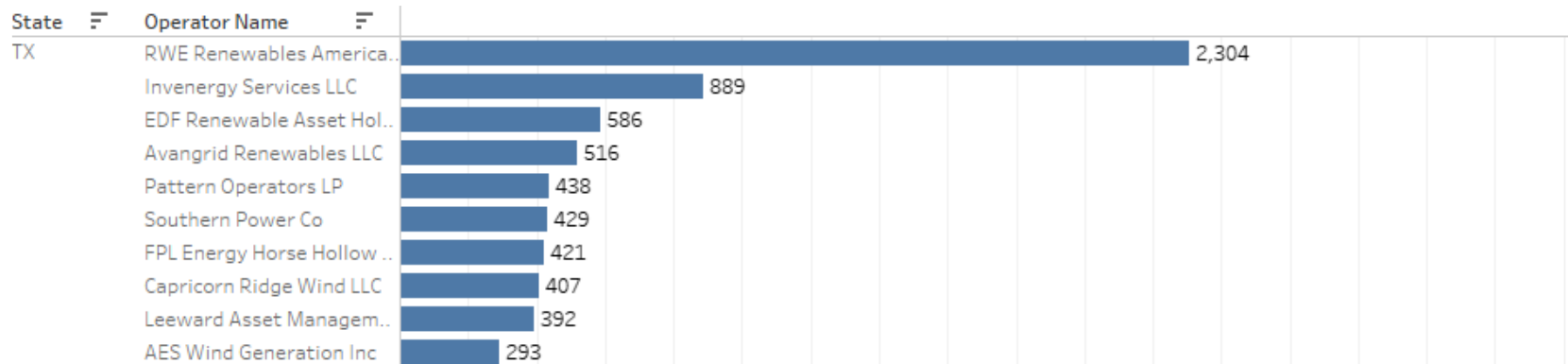


- If we look at the **share of turbines by state**:
- we can see that **Texas, Iowa** and **California** generated the highest amount of wind power.
- It makes sense **dominant Operators in these states** will be strongly represented in the top Operators nationwide.

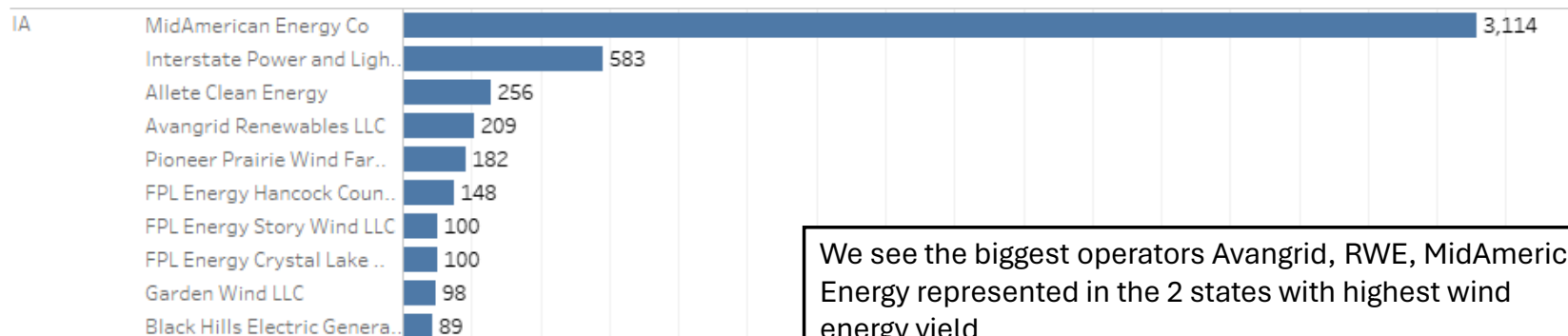
Looking at top 10 dominant operators in the top 5 states by number of turbines:

Turbines by company by state:

#1 Texas:

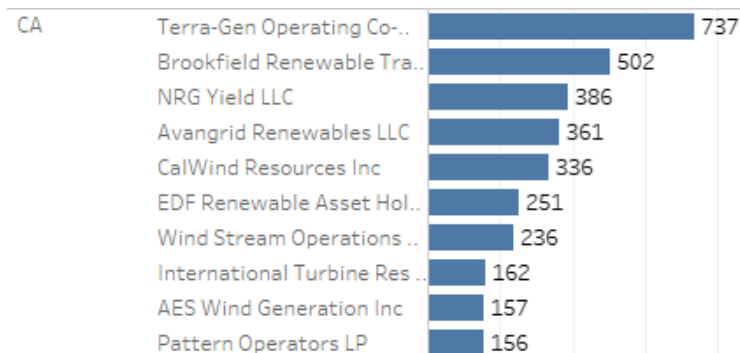


#2 Iowa:



We see the biggest operators Avangrid, RWE, MidAmerican Energy represented in the 2 states with highest wind energy yield

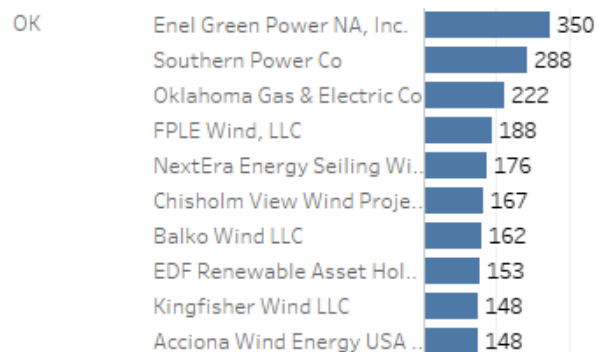
#3 California:



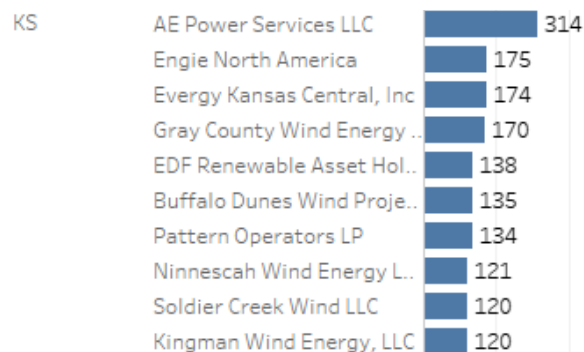
In the next 3 states by turbines:

Avangrid is represented, but many of the smaller operators/ locally based companies have a larger share.

#4 Oklahoma:



#5 Kansas:



Wind power plants by operator

Including count of turbines/ plant:

RWE Renewables

| | | | | |
|-----------------------------|------------------------------|----|--------|--|
| RWE Renewables Americas LLC | Anacacho Wind Farm, LLC | TX | 3,025 | |
| | Big Sky Wind LLC | IL | 12,996 | |
| | Blue Cloud Wind Energy L.. | TX | 1,849 | |
| | Boiling Springs Wind Farm | OK | 3,600 | |
| | Bruennings Breeze Wind .. | TX | 5,776 | |
| | Canadian Breaks, LLC | TX | 7,308 | |
| | Champion Wind Farm LLC | TX | 3,025 | |
| | Colbeck's Corner, LLC | TX | 12,544 | |
| | Forest Creek Wind Farm L.. | TX | 2,916 | |
| | Grandview Wind Farm, LLC | TX | 13,924 | |
| | Inadale Wind Farm LLC Hy.. | TX | 77,618 | |
| | Magic Valley Wind Farm I .. | TX | 12,544 | |
| | Munnsville Wind Farm LLC | NY | 529 | |
| | Panther Creek Wind Farm I | TX | 7,639 | |
| | Panther Creek Wind Farm II | TX | 7,315 | |
| | Panther Creek Wind Farm .. | TX | 17,689 | |
| | Papalote Creek I LLC | TX | 11,881 | |
| | Papalote Creek II LLC | TX | 7,569 | |
| | Peyton Creek Wind Farm L.. | TX | 2,256 | |
| | Pioneer Trail Wind Farm, .. | IL | 8,836 | |
| | Pyron Wind Farm LLC Hyb.. | TX | 55,112 | |
| | Radfords Run Wind Farm | IL | 19,321 | |
| | Roscoe Wind Farm LLC | TX | 43,681 | |
| | Sand Bluff Wind Farm | TX | 2,025 | |
| | Settlers Trail Wind Farm L.. | IL | 8,836 | |
| | Stella Wind Farm | TX | 4,489 | |
| | Stony Creek Wind Farm LLC | PA | 1,225 | |
| | Wildcat Wind Farm I, LLC | IN | 15,625 | |

Avangrid

| | | | | |
|-------------------------|-----------------------------|----|--------|--|
| Avangrid Renewables LLC | Barton Windpower LLC | IA | 6,400 | |
| | Big Horn Wind II | WA | 600 | |
| | Big Horn Wind Project | WA | 17,689 | |
| | Blue Creek Wind Project | OH | 23,104 | |
| | Buffalo Ridge I LLC | SD | 576 | |
| | Buffalo Ridge II LLC | SD | 11,025 | |
| | Casselman Wind Power Pr.. | PA | 529 | |
| | Colorado Green Holdings .. | CO | 11,664 | |
| | Deerfield Wind LLC | VT | 225 | |
| | Desert Wind Farm, LLC | NC | 10,816 | |
| | Dillon Wind LLC | CA | 2,025 | |
| | Dry Lake Wind LLC | AZ | 900 | |
| | El Cabo Wind | NM | 20,164 | |
| | Elk River Wind | KS | 10,000 | |
| | Elm Creek Wind II LLC | MN | 3,844 | |
| | Elm Creek Wind LLC | MN | 4,356 | |
| | Farmers City Wind LLC | MO | 5,329 | |
| | Flying Cloud Power Partn.. | IA | 841 | |
| | Groton Wind LLC | NH | 576 | |
| | Hardscrabble Wind Power.. | NY | 1,369 | |
| | Hay Canyon Wind Power L.. | OR | 2,304 | |
| | Juniper Canyon I Wind Pro.. | WA | 4,032 | |
| | Karankawa Wind LLC | TX | 15,376 | |
| | Klondike Wind Power | HI | 8 | |
| | | AK | 16 | |
| | | OR | 240 | |
| | Klondike Windpower II | OR | 2,500 | |
| | Klondike Windpower III | OR | 18,028 | |
| | Leaning Juniper Wind Po.. | OR | 13,689 | |
| | Lempster Wind LLC | NH | 144 | |
| | Locust Ridge | PA | 663 | |
| | Locust Ridge II LLC | PA | 2,107 | |
| | Manzana Wind LLC | CA | 15,876 | |
| | MinnDakota Wind LLC | SD | 1,296 | |
| | | MN | 4,096 | |
| | Montague Wind Power Fa.. | OR | 3,136 | |