

CGT 270 Data Visualization
Makeover Monday #2 (2019 Dataset)

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Lab section: Thursday Lab 009

Show your work!!!

Acquire

Week: 8

Date: Feb 18

Year: **2019**

Data: Which States Produce the Most
Wind Energy?

Source Article/Visualization:

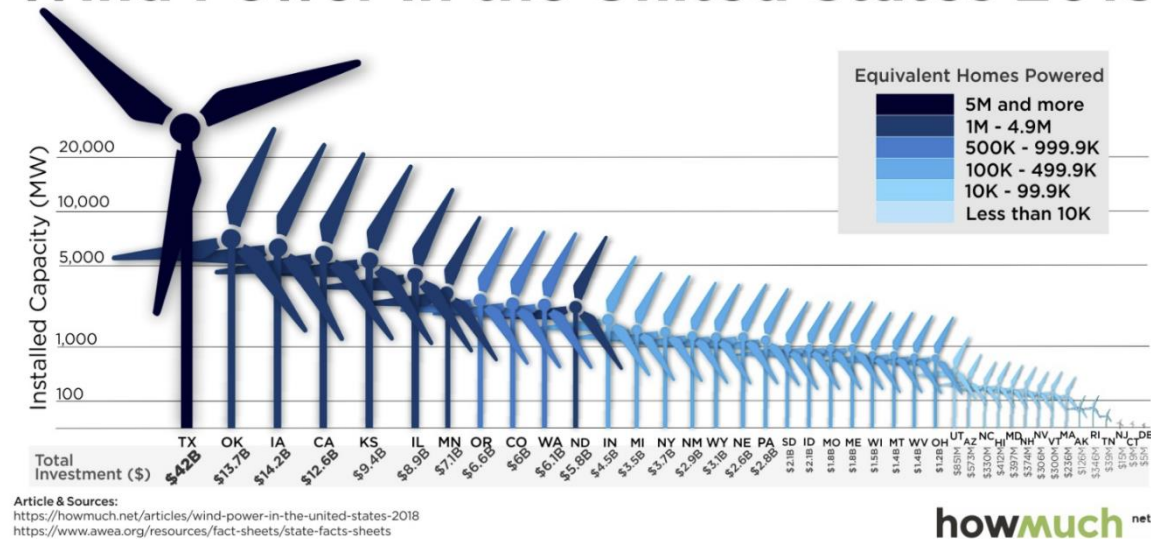
Which States Produce the Most Wind Energy, Data Source: American Wind Energy Association via Choose Energy.

<https://www.makeovermonday.co.uk/data/data-sets-2018/>

Represent

Original Visualization

Wind Power in the United States 2018



Critique

I like the way that the person had a color scheme to show the difference in wind power usage, but what I don't like about it is that the top colors are a little bit hard to distinguish and how there's a random break in the trend of the colors in the middle of the graph. Also, I don't think that it's necessary to use windmills as symbols instead of normal bars since the lower numbers further right look really mashed together and a little bit hard to tell what's going on. The idea behind using a symbol is unique and interesting though; it grabs the viewers attention pretty well. Finally, I'm pretty sure that not all 50 states are represented here and since that's the fault of the dataset maybe a better dataset could've been acquired.

NEW: Based on your knowledge of the Periodic Table of Visualization Methods (discussed in class this week), discuss which one of the 6 categories does the visualization you provided in the Represent stage falls in. Identify the method most closely related to the visualization in the Represent Stage and discuss the characteristics: overview, detail, detail AND overview, divergent thinking, convergent thinking. Refer to Week 10 Readings to assist with categorizing the visualization.

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This visualization would most likely just fall under the bar graph section which is the yellow “Data Visualization” family, if the windmills were to be turned into bars the bar chart would be clear and easily categorizable. According to the periodic table of visualization methods bar charts fall under convergent thinking and overview. The convergent thinking is following the rules of a bar chart by looking at the highest bar and determining that it has the highest value and vice versa for the lowest bar. The overview vs. the detail makes sense here since bar charts are often just general ideas of comparisons between different data values on the x axis and there isn’t much gritty detail that is displayed in this graph. The macro trends are apparent. The bar chart element suits this chart well.

Mine

For this I’m going to stick with the question that the data visualization answered: Which States Produce the Most Wind Energy, excluding the Southeast?

Filter

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1	Ranking	State	Installed Capacity (MW)	Equivalent Homes Powered	Total Investment (\$ Million)	Wind Projects Only	# of Wind Turbines
2	1	TEXAS	23,262	6,235,000	42,000	136	12,750
3	2	OKLAHOMA	7,495	2,268,000	13,700	45	3,717
4	3	IOWA	7,312	1,935,000	14,200	107	4,145
5	4	CALIFORNIA	5,686	1,298,000	12,600	104	6,972
6	5	KANSAS	5,110	1,719,000	9,400	35	2,795
7	6	ILLINOIS	4,464	1,050,000	8,900	49	2,632
8	7	MINNESOTA	3,699	1,012,000	7,100	98	2,428
9	8	OREGON	3,213	604,600	6,600	31	1,868
10	9	COLORADO	3,106	889,100	6,000	25	1,949
11	10	WASHINGTON	3,075	695,300	6,100	20	1,725
12	11	NORTH DAKOTA	2,996	1,021,000	5,800	28	1,611
13	12	INDIANA	2,117	440,700	4,500	16	1,203
14	13	MICHIGAN	1,904	471,700	3,500	26	1,051
15	14	NEW YORK	1,829	366,500	3,700	27	1,052
16	15	NEW MEXICO	1,682	422,100	2,900	17	1,005
17	16	WYOMING	1,489	408,700	3,100	22	1,005
18	17	NEBRASKA	1,445	486,700	2,600	22	789
19	18	PENNSYLVANIA	1,369	314,000	2,800	24	726
20	19	SOUTH DAKOTA	977	293,100	2,100	14	583
21	20	IDAHO	973	228,000	2,100	15	541
22	21	MISSOURI	959	181,100	1,800	8	499
23	22	MAINE	923	206,500	1,800	18	386
24	23	WISCONSIN	746	142,100	1,500	18	466
25	24	MONTANA	720	199,800	1,400	16	493
26	25	WEST VIRGINIA	686	149,300	1,400	6	376
27	26	OHIO	617	145,300	1,200	37	336
28	27	UTAH	391	86,900	851	5	205
29	28	ARIZONA	268	54,600	573	5	144
30	29	NORTH CAROLINA	208	43,800	330	1	105
31	30	HAWAII	206	59,800	412	7	119
32	31	MARYLAND	191	47,500	397	6	80
33	32	NEW HAMPSHIRE	185	38,500	374	5	75
34	33	NEVADA	152	33,600	306	1	66
35	34	VERMONT	149	25,900	300	9	71
36	35	MASSACHUSETTS	113	20,500	236	44	86
37	36	ALASKA	62	15,200	126	19	104
38	37	RHODE ISLAND	54	14,200	346	15	25
39	38	TENNESSEE	29	2,800	39	2	18
40	39	NEW JERSEY	9	1,900	15	2	6
41	40	CONNECTICUT	5	1,300	9	2	3
42	41	DELAWARE	2	NA	5	1	1
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Stakeholders

My audience (minus the students and teachers) could be government officials that are interested in how each state generates power, or even environmentalists that could be advocating for states that use naturally generated power and using this visualization to prove their points. Some assumptions that I made were that the Southeast states use wind power, but just weren't provided in the dataset. Another assumption would be

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that this data was taken at the same time, as in on the same day to one another. This would make it so that the rankings are accurate. Another assumption that I made is that the amount of energy used to power the wind turbine is factored out of the total for each state since some states like Texas have way more turbines that require more energy to run. I used Tableau to make the visualization.

What to submit: This document in PDF format only (if you do not know how to do this, ask).

Choose the best layout for your makeover visualization: Portrait or Landscape, Remove the page of the layout that you DO NOT choose. No blank pages!

Refine (Makeover – Landscape view)

Use an additional page if necessary. Remember, the purpose of visualization is “insight.” Take and include a screenshot of your visualization and include it below. Use Data Visualization Best Practices (see data visualization checklist).

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Wind Power in the United States 2018 (by state)

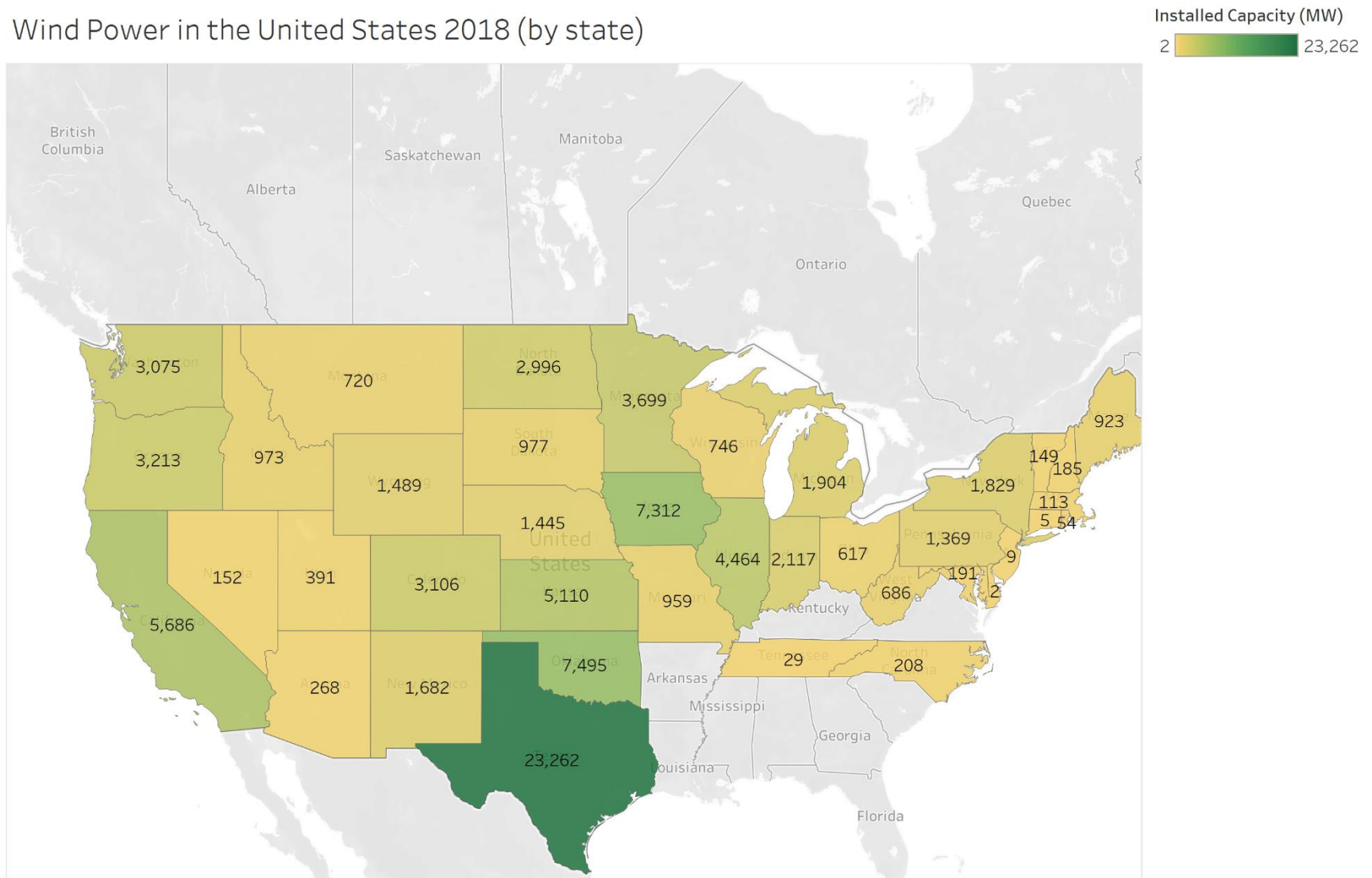


Figure Caption. The Wind Power Usage in the United States (2018) is displayed and color coded by state excluding the South East.

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Resources

Data Visualization Checklist:

http://stephanieevergreen.com/wp-content/uploads/2016/10/DataVizChecklist_May2016.pdf

How to give constructive criticism:

<https://personalexcellence.co/blog/constructive-criticism/>

Sample Makeovers

<https://www.makeovermonday.co.uk/gallery/>

Grading Rubric

Excellent (21-25 pts)	Good (10-20 pts)	Fair (5 – 9 pts)	Needs Improvement (0 – 4 pts)
Meets ALL or most of these: Makeover is esthetically pleasing (color, perception), best practices followed (insightful), Correct dataset downloaded; provided an interesting point of view of the data; critiqued previous makeover, critique is constructive (indicates one thing that is done	Meets MOST of these: Makeover is esthetically pleasing (color, perception), best practices followed (insightful), Correct dataset downloaded; provided an interesting point of view of the data; critiqued previous makeover, critique is constructive (indicates one thing that is done well, and one thing	Consistently meets SOME of these: Makeover is esthetically pleasing (color, perception), best practices followed (insightful), Correct dataset downloaded; provided an interesting point of view of the data; critiqued previous	Little to no evidence of the understanding of the data visualization process. Lackluster makeover or no makeover. Little effort.

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well, and one thing that could be done differently, what will be done to improve the visualization), assumptions (more than one) are listed.	that could be done differently, what will be done to improve the visualization), assumptions (more than one) are listed.	makeover, critique is constructive (indicates one thing that is done well, and one thing that could be done differently, what will be done to improve the visualization), assumptions (more than one) are listed.	
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