WHY SWITCH TO WIND TURBINES ?

A POTENTIAL TO AMPLIFY YOUR INVESTMENT

OUR COMPANY

WE ARE AN IMPACT-DRIVEN, RESULTS-ORIENTED CONSULTANCY.

A team of consultants with over 25 years in energy investments. Analyzing data sources and proposing solutions to strategic planning problems. Aim to provide data-driven decision support.

OUR TEAM

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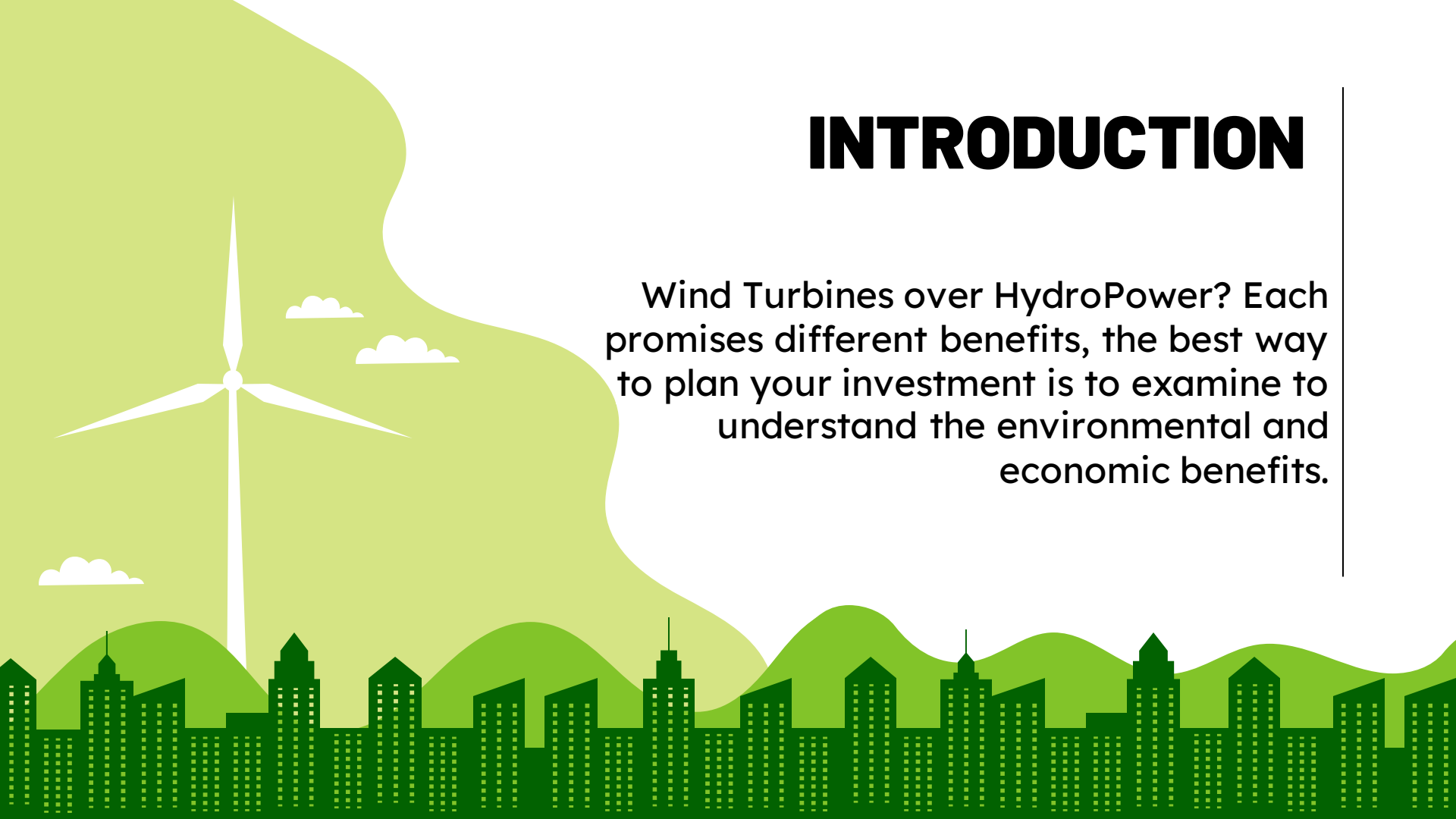
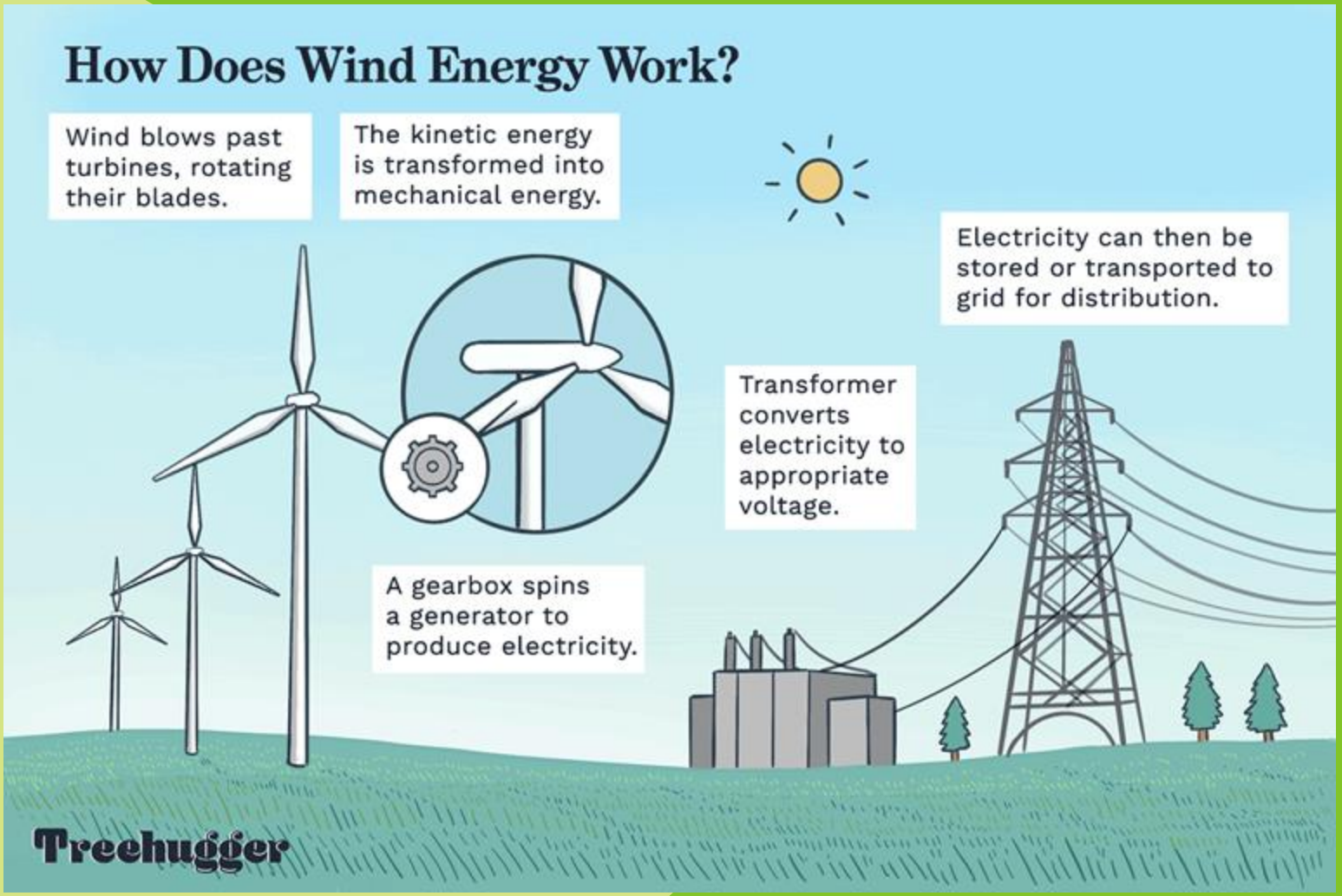
INTRODUCTION

Wind Turbines over HydroPower? Each promises different benefits, the best way to plan your investment is to examine to understand the environmental and economic benefits.



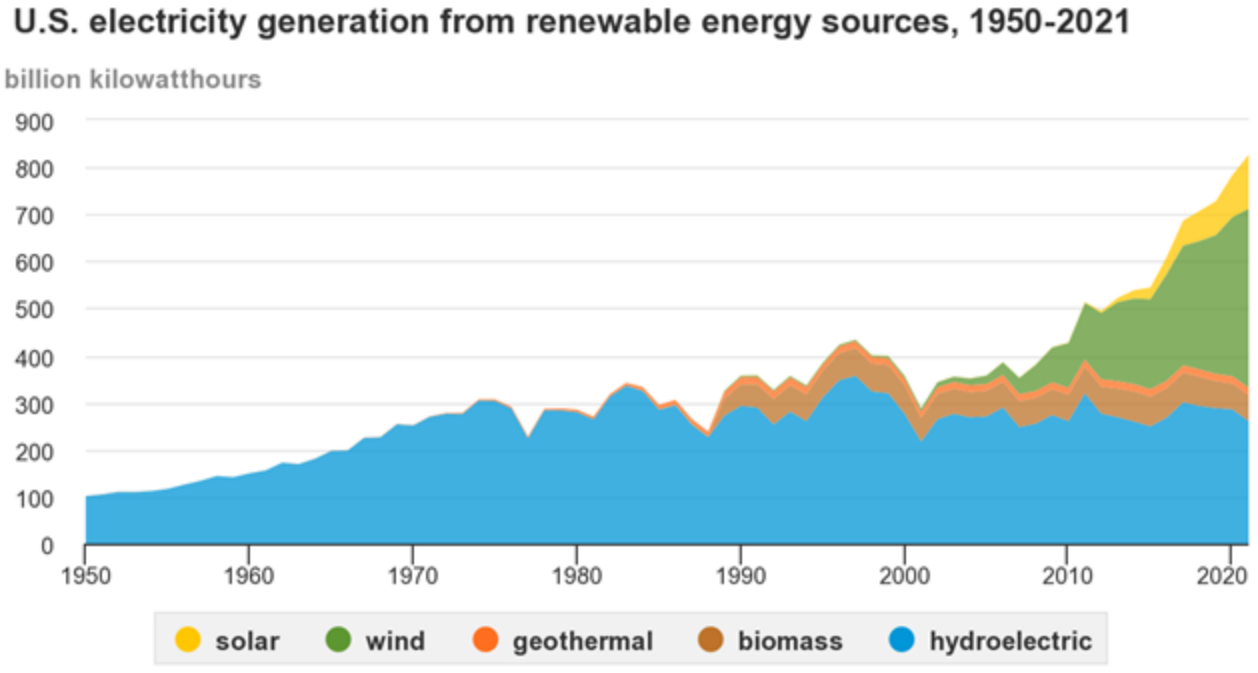
How Does Wind Energy Work?



WIND MARKET We Are Focused On?

USA

Rank of Wind Power & HydroPower



The percentage shares of total U.S. utility-scale electricity generating capacity by primary energy source in 2021 were:

43%
natural gas

18%
coal

27%
renewables (total)

16%
nonhydroelectric

9%
hydroelectric

8%
nuclear

Wind vs. Hydro Plants

1235

WIND OPERATING PLANTS

1457

HYDRO OPERATING PLANTS

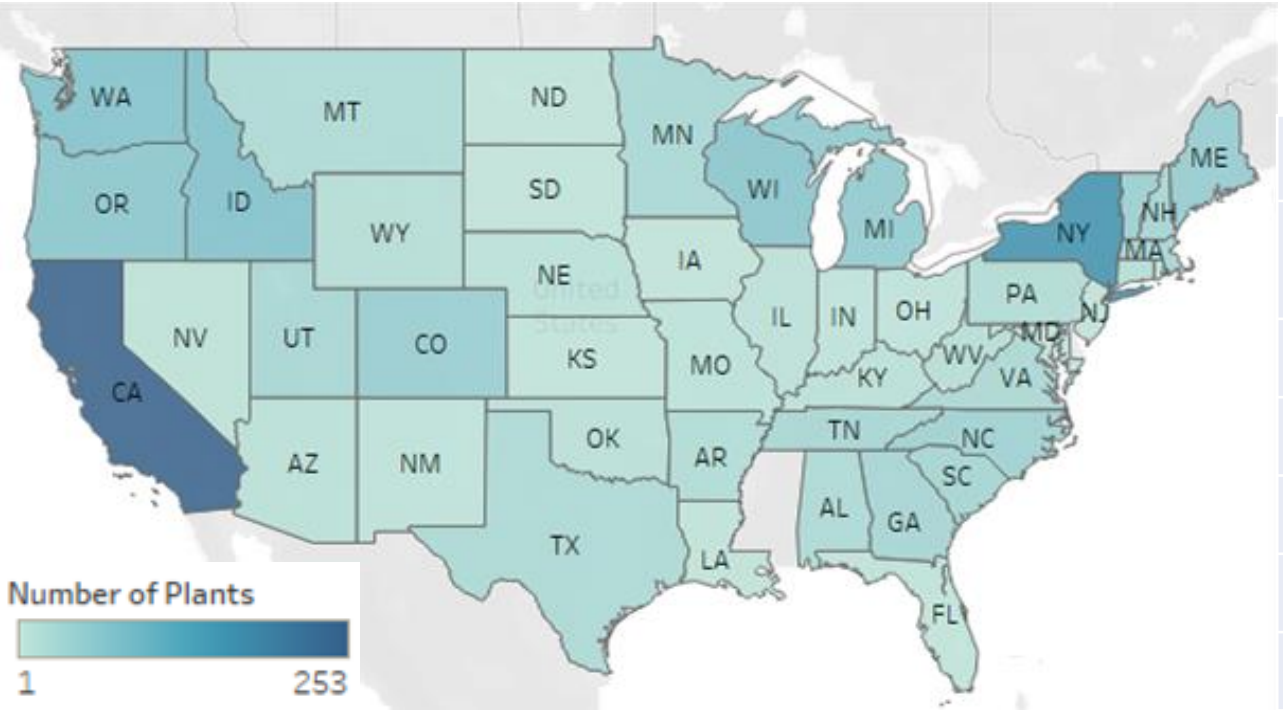
653

WIND OPERATORS

469

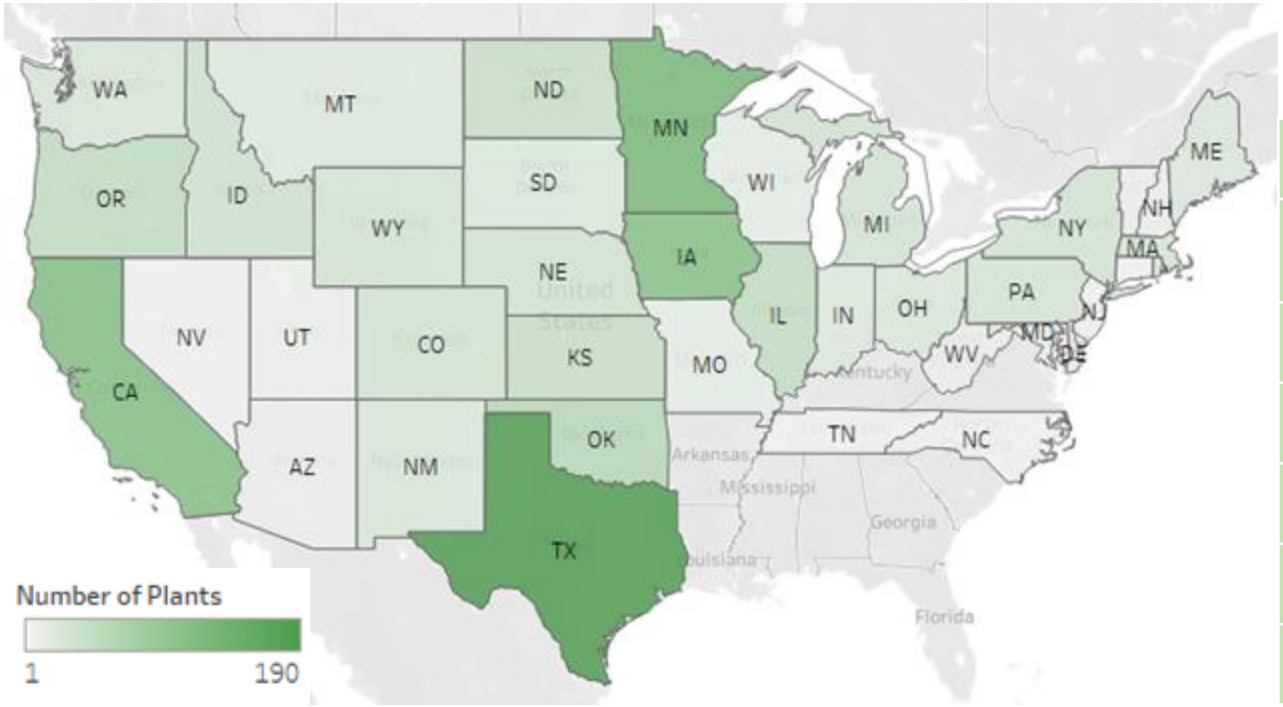
HYDRO OPERATORS

Hydro-Powered (Plants per State)



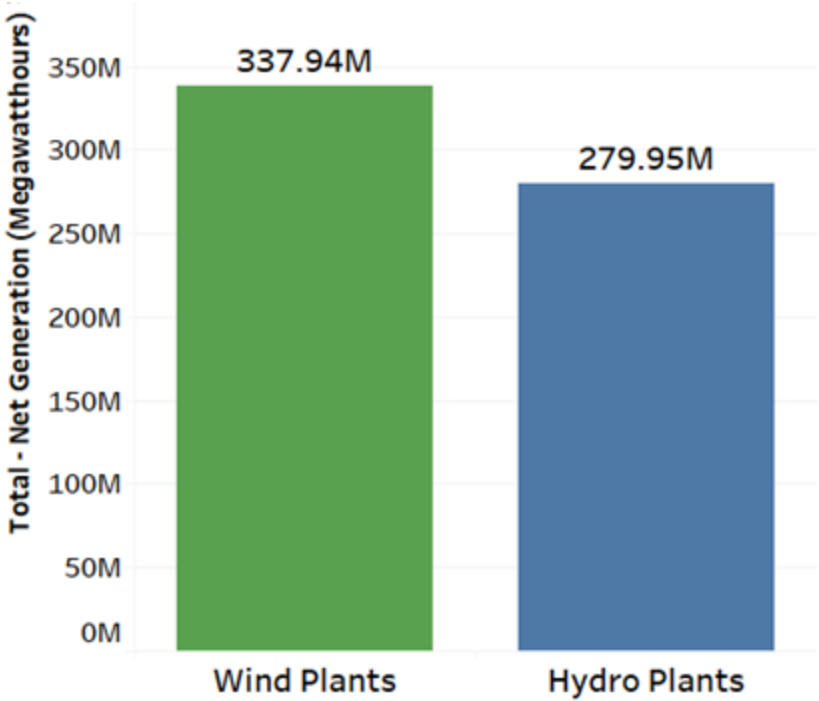
Hydro Operating Plants	
STATE	**NUMBER OF PLANTS**
California (CA)	**253**
New York (NY)	**165**
Washington (WA)	**74**
Indiana (ID)	**74**
Wisconsin (WI)	**66**

Wind-Powered (Plants per State)



Wind Operating Plants	
STATE	**NUMBER OF PLANTS**
Texas (TX)	**190**
Minnesota (MN)	**129**
California (CA)	**114**
Iowa (IA)	**112**
Oklahoma (OK)	**57**

Total Electric Output



In 2022, Wind-powered plants generated around **17%** more than Hydro-powered plants.

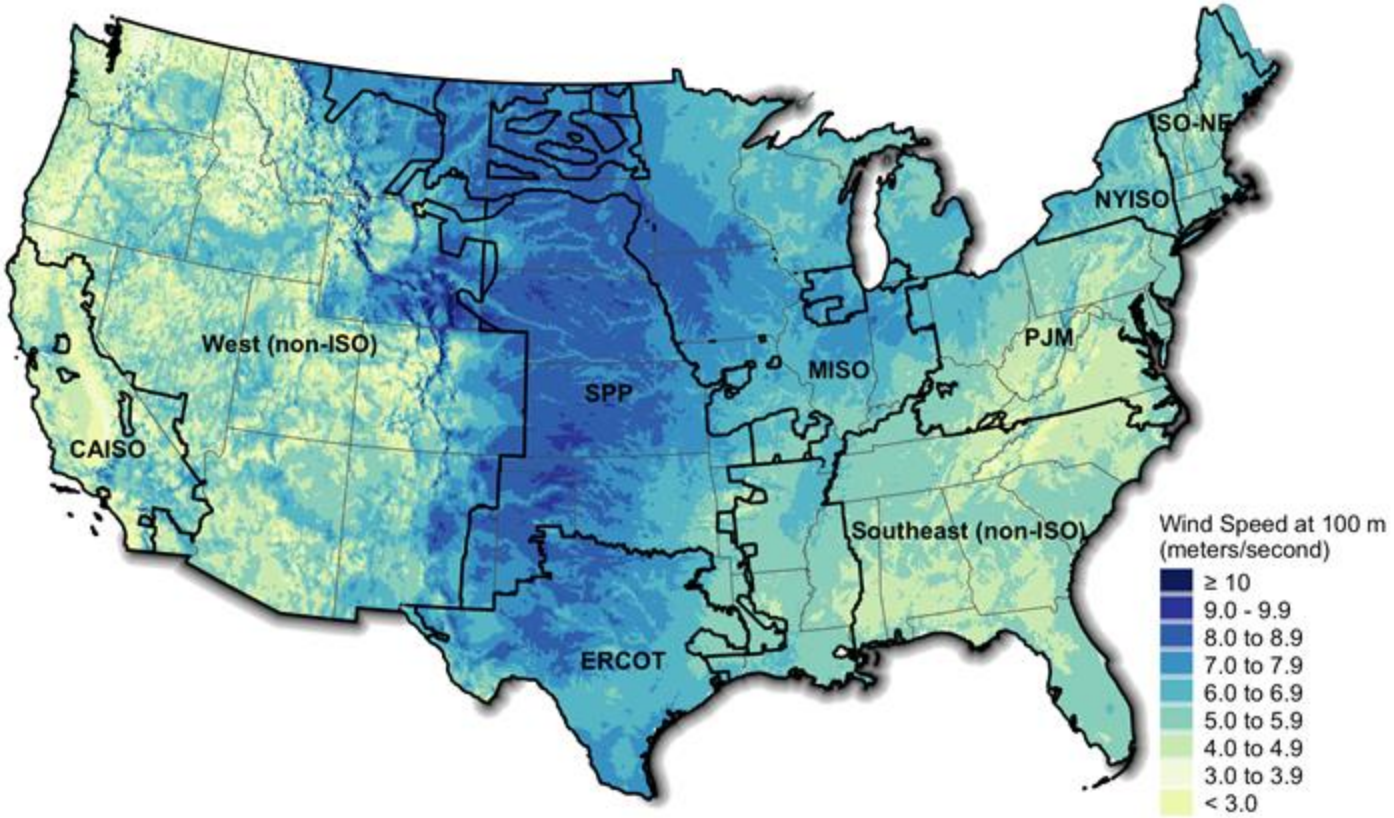
Top Wind-Powered Plants

- **By number of Plants per Operator:**
  - **Willmar** : Has two plants operating in Minnesota (MN)
  - **High Plane** : Has two plants operating in Texas (TX) and Wyoming (WY)

- **By Total Electric Output (in MegaWattHour):**
  - **Horse Hollow Wind Energy Center (TX):** 2,513,457
  - **Capricorn Ridge Wind LLC (TX):** 2,259,411
  - **Hale Community Wind Farm (TX):** 2,083,677

Wind Speed

The Average Annual Wind Speed At 100 meters



Offshore Vs Onshore

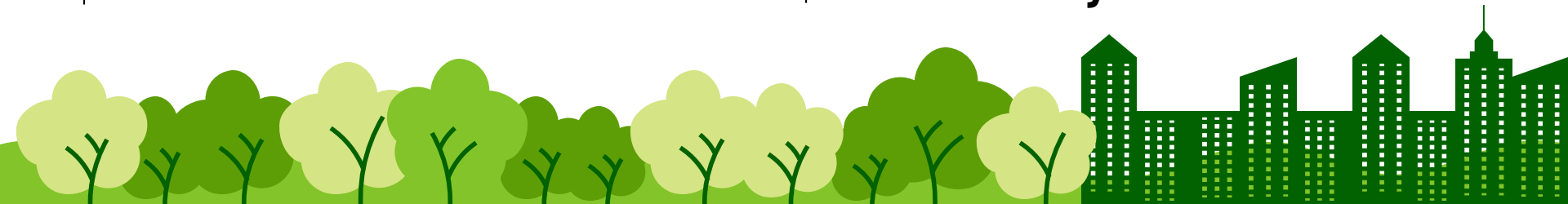
Offshore

Advantages

- Offshore wind turbines are more efficient
- Reduced environmental impact
- More space to construct in

Disadvantages

- Higher installation cost
- More challenging to maintain and repair
- It has an effect on the marine life and ecosystem



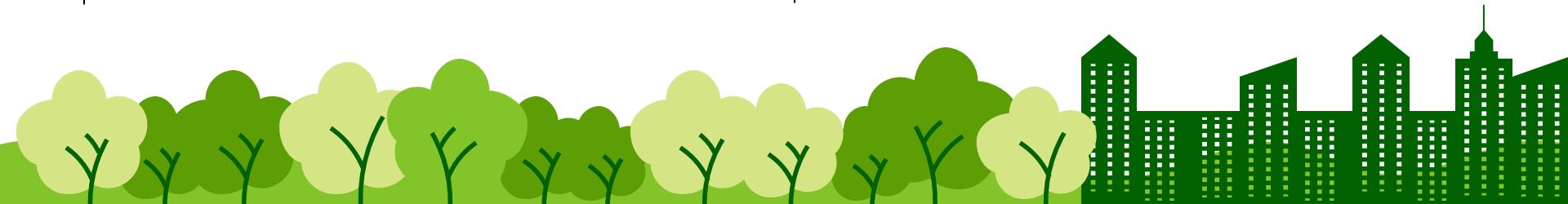
Onshore

Advantages

- Reduced environmental impact
- Cost effective
- Quicker installation and easier maintenance

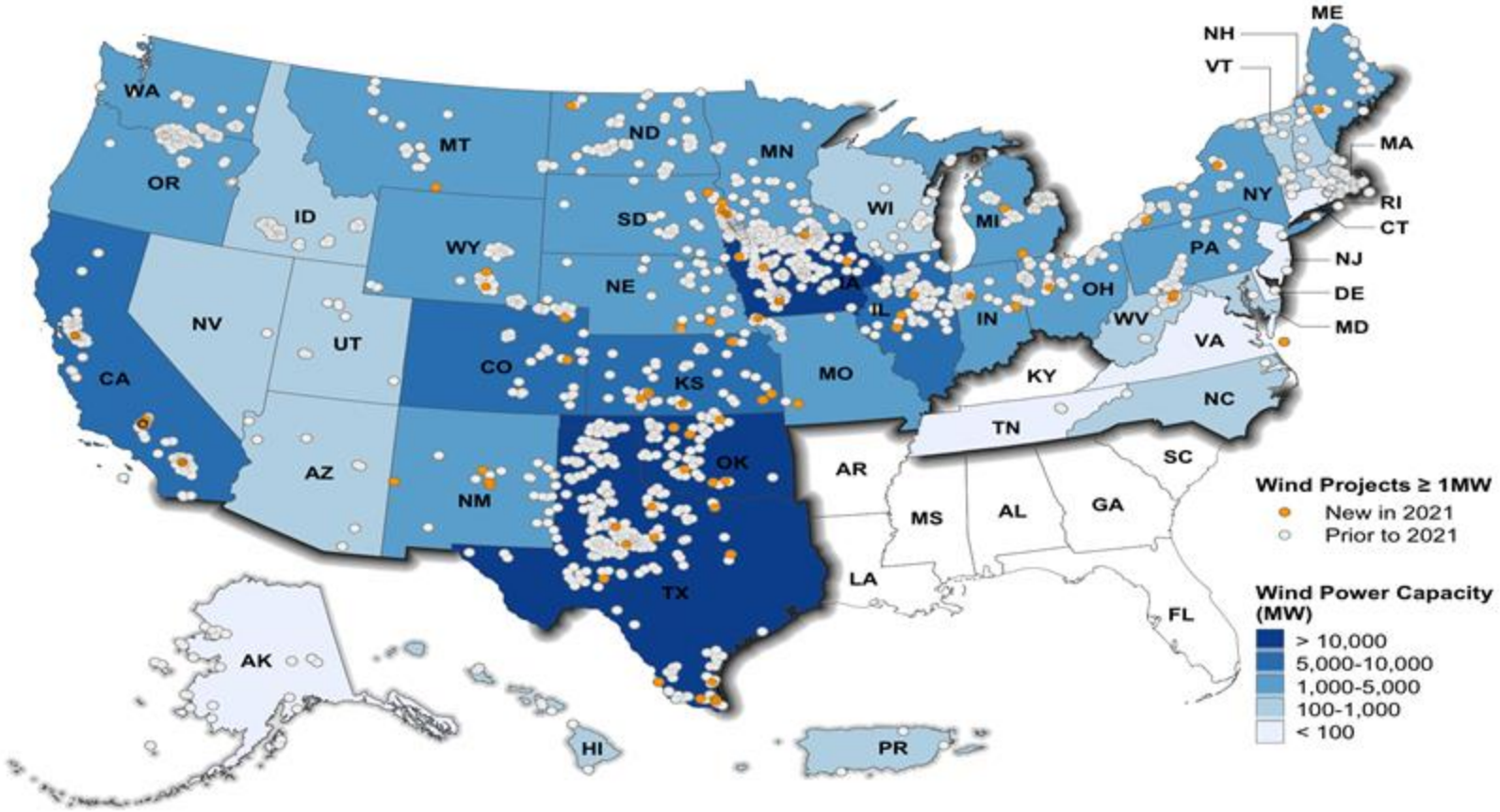
Disadvantages

- Less power generation than the offshore
- Some residents could complain about the noise

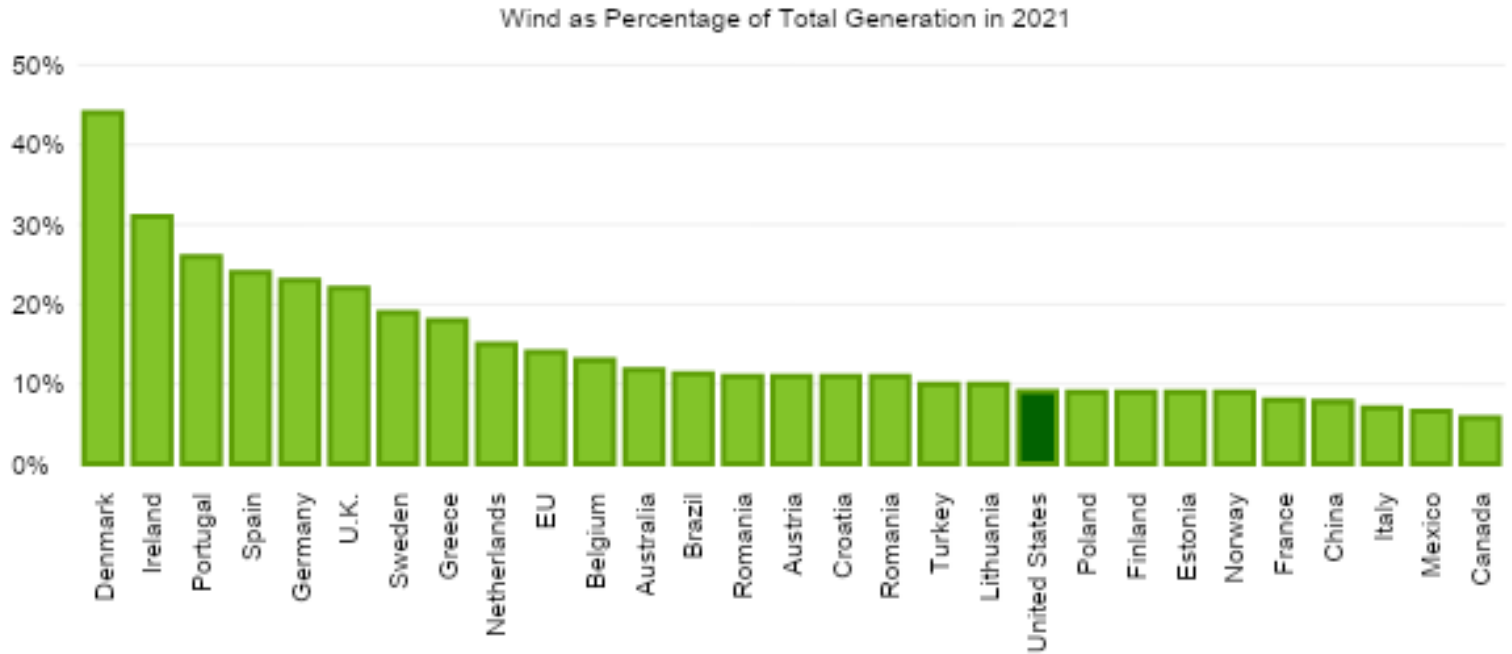


Wind Market

U.S. Wind Power Installations By State



Wind Energy Penetration In Subset Of Top Global Wind Markets

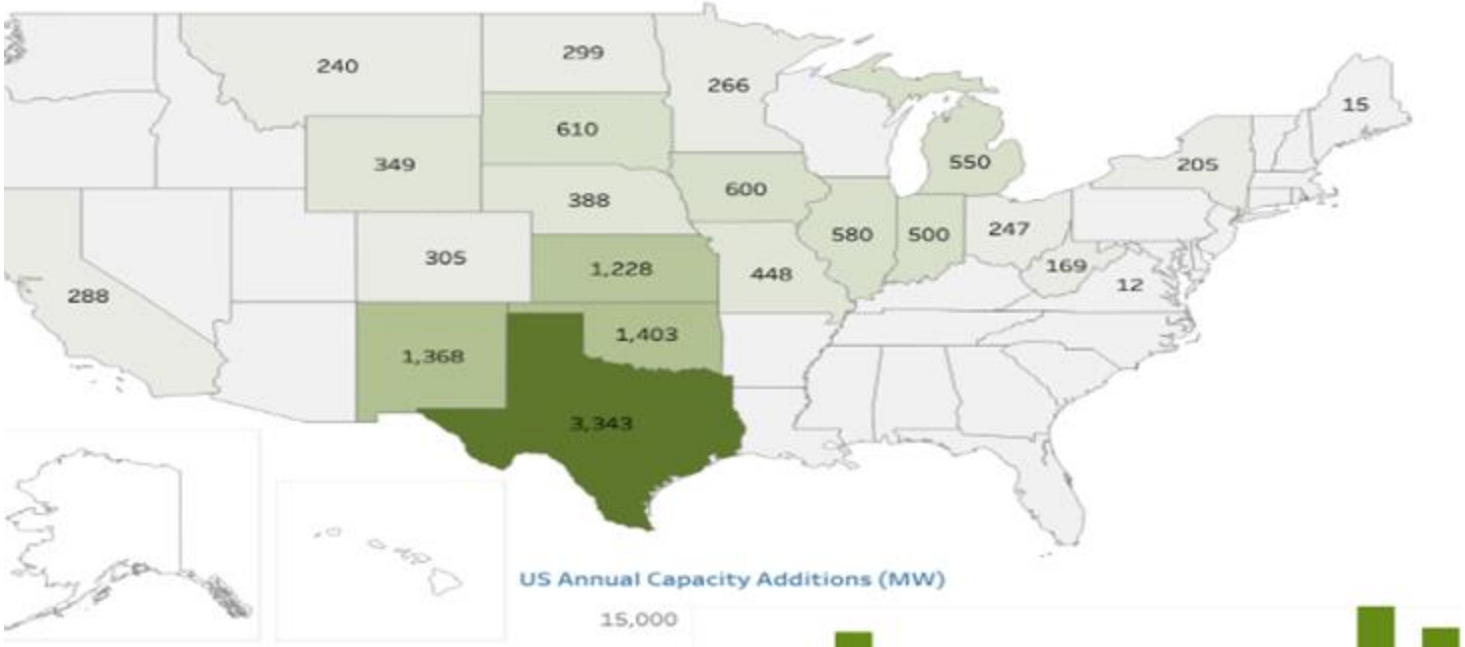


International Rankings Of Total Wind Power Capacity

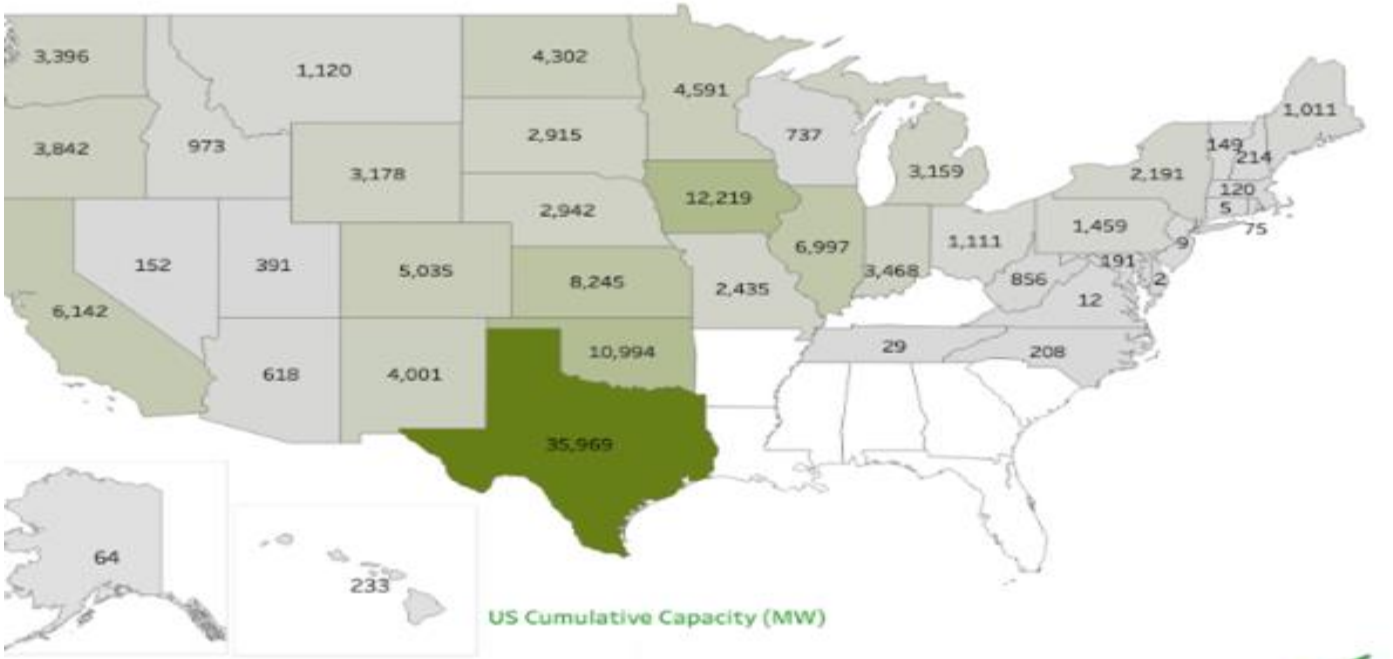
Annual Capacity (2021, GW)	
China	47.6
United States	13.4
Brazil	3.8
Vietnam	3.5
United Kingdom	2.6
Sweden	2.1
Germany	1.9
Australia	1.7
India	1.5
Turkey	1.4
Rest of World	14.7
TOTAL	94.3

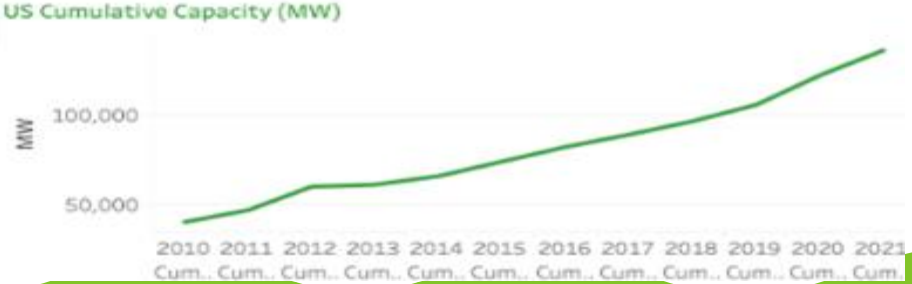
Cumulative Capacity (end of 2021, GW)	
China	338.3
United States	135.9
Germany	64.5
India	40.1
Spain	28.3
United Kingdom	26.6
Brazil	21.6
France	19.1
Canada	14.3
Sweden	12.1
Rest of World	138.1
TOTAL	838.9

Annual Wind Capacity Installations (MW) 2021

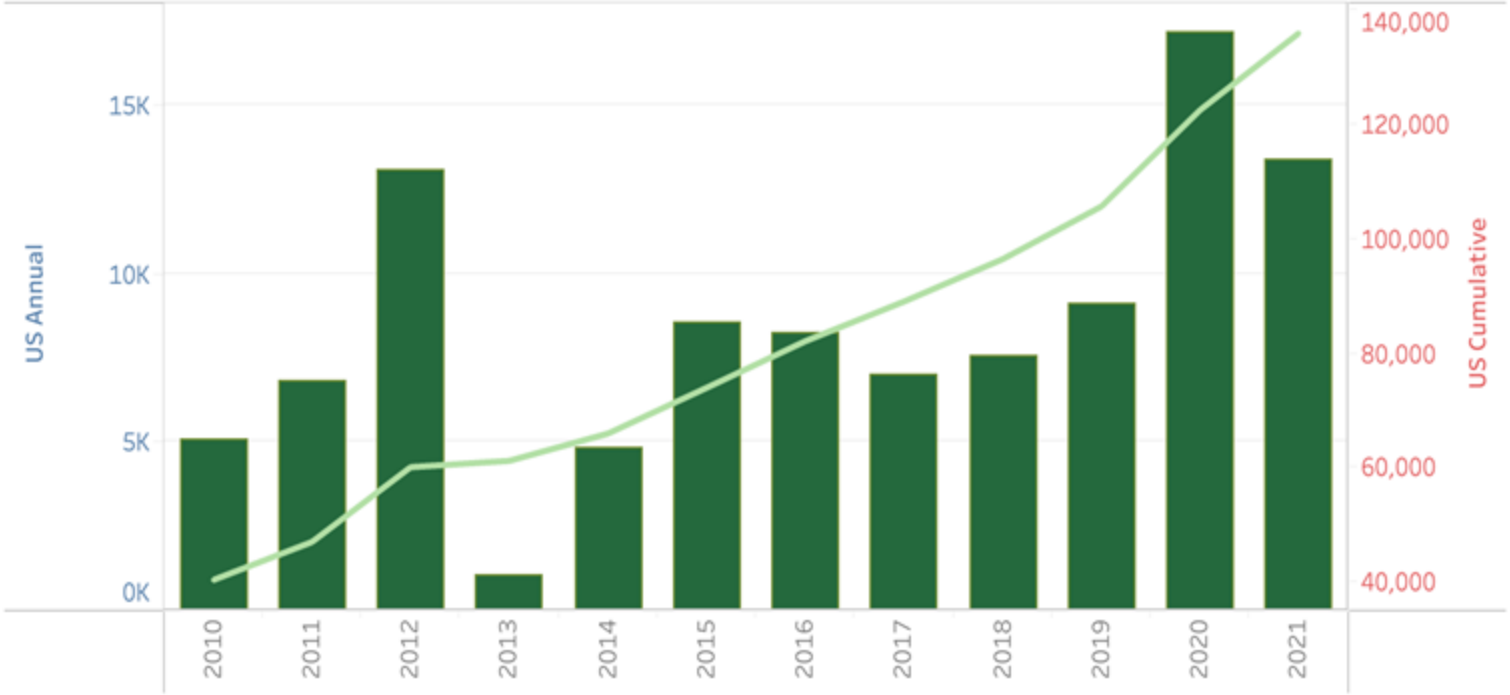


Cumulative Wind Capacity (MW) 2021

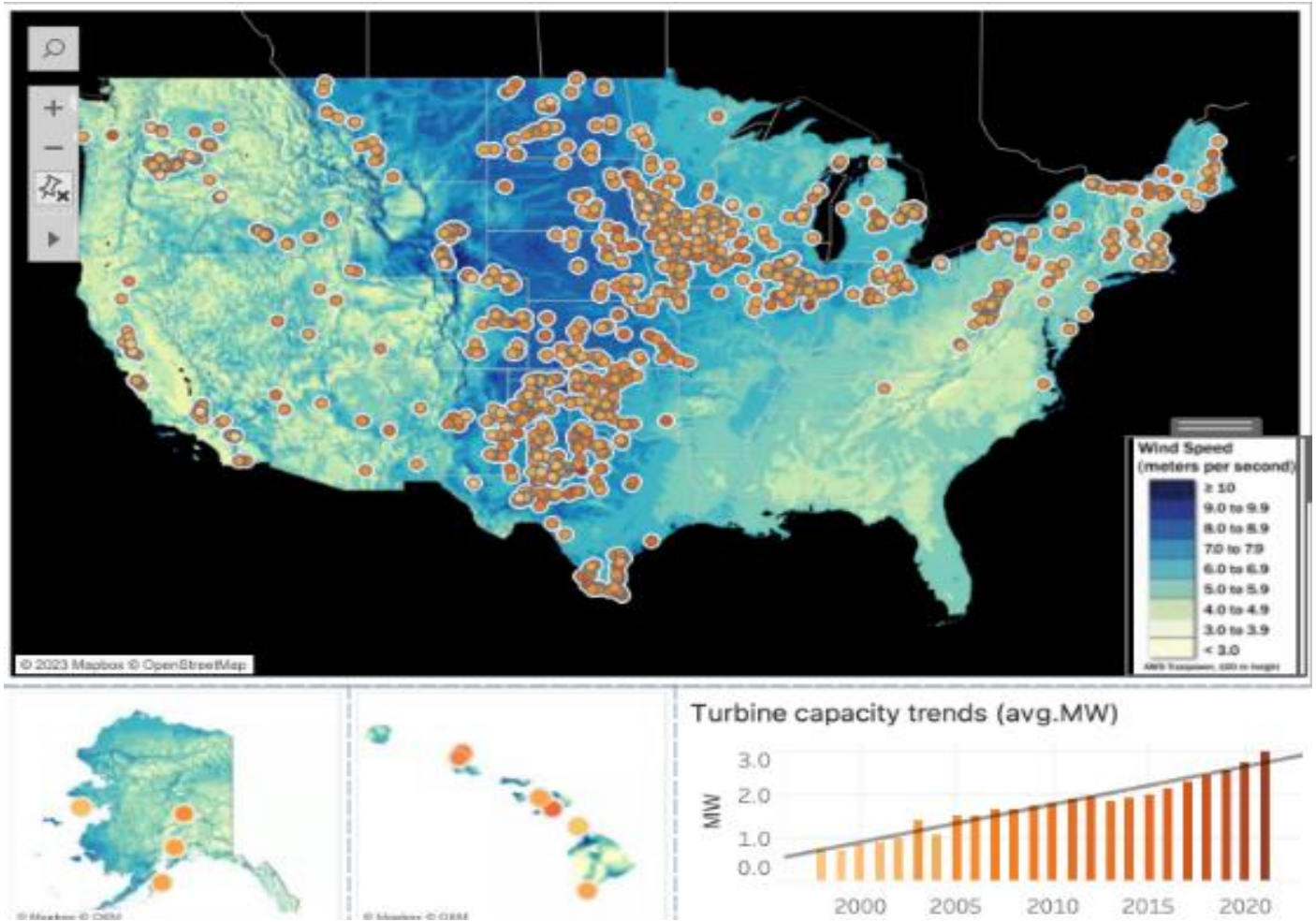




US Annual and Cumulative Capacity Additions (MW)



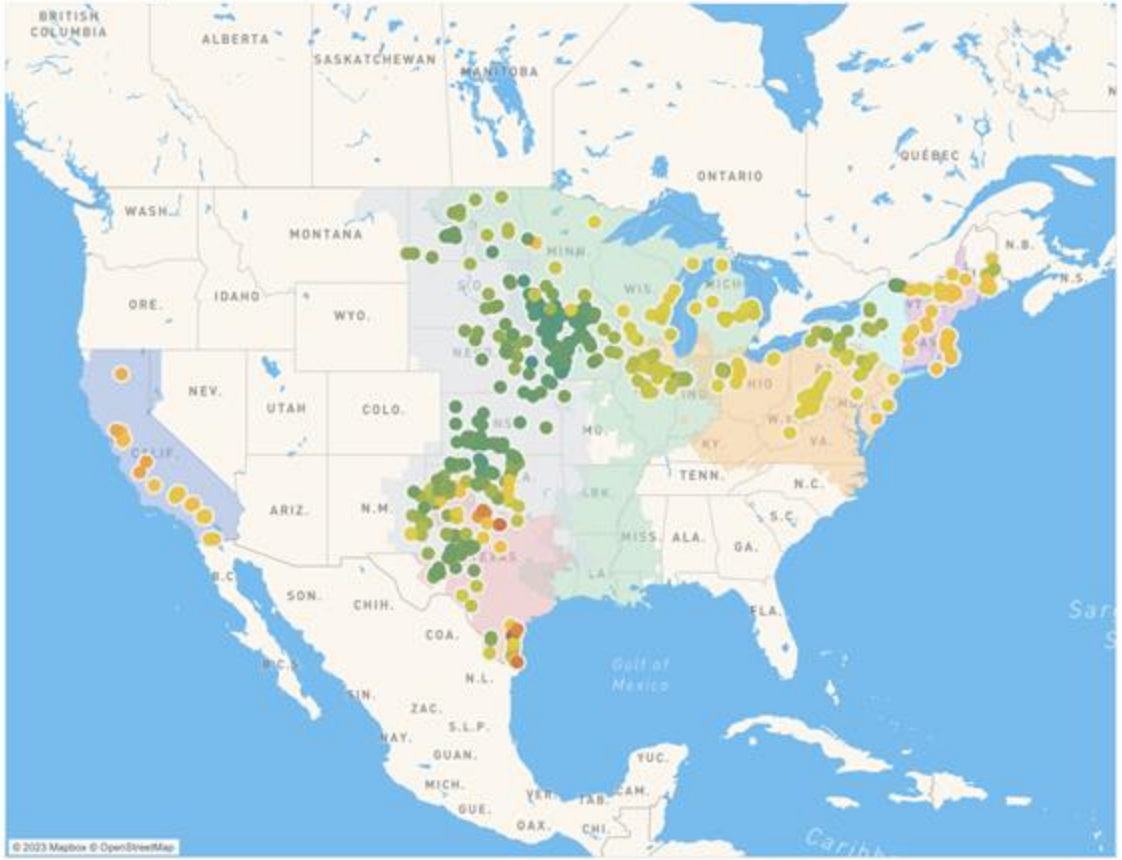
Turbine Capacity



Value & Cost

Wind Market Value for 2021

Energy + Capacity Value per year,by project and ISO capacity-weighted average (All values in 2018$/MWh)



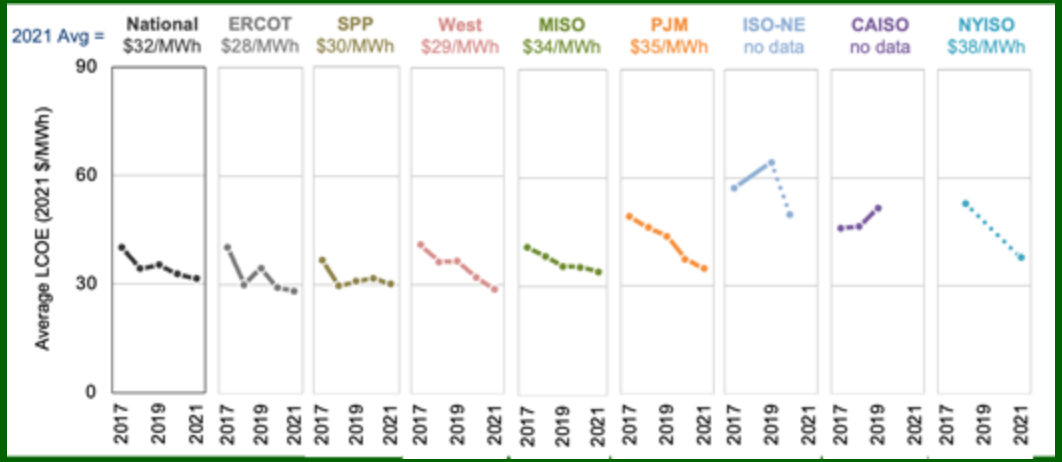
Choose Total Value Year

2021

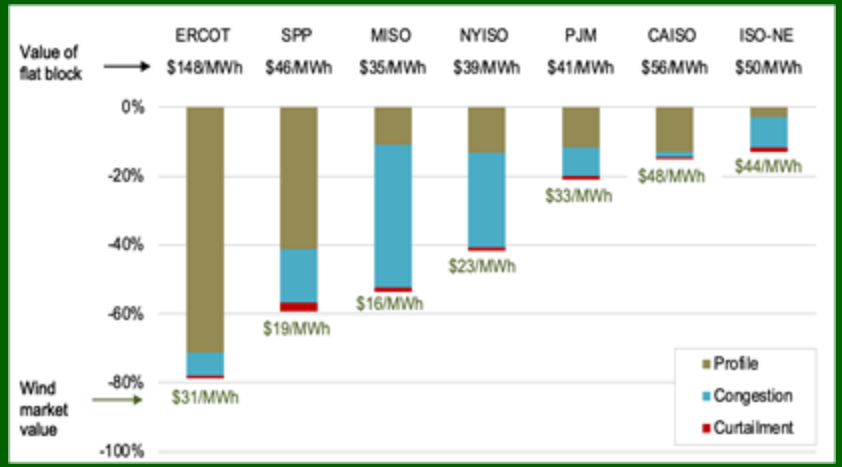
Total Value

$0 $72

Estimated levelized cost of wind energy by region, over last five years

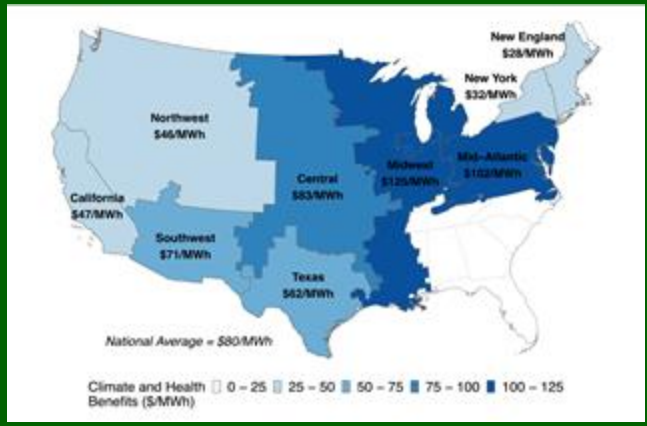


Value factor of wind energy

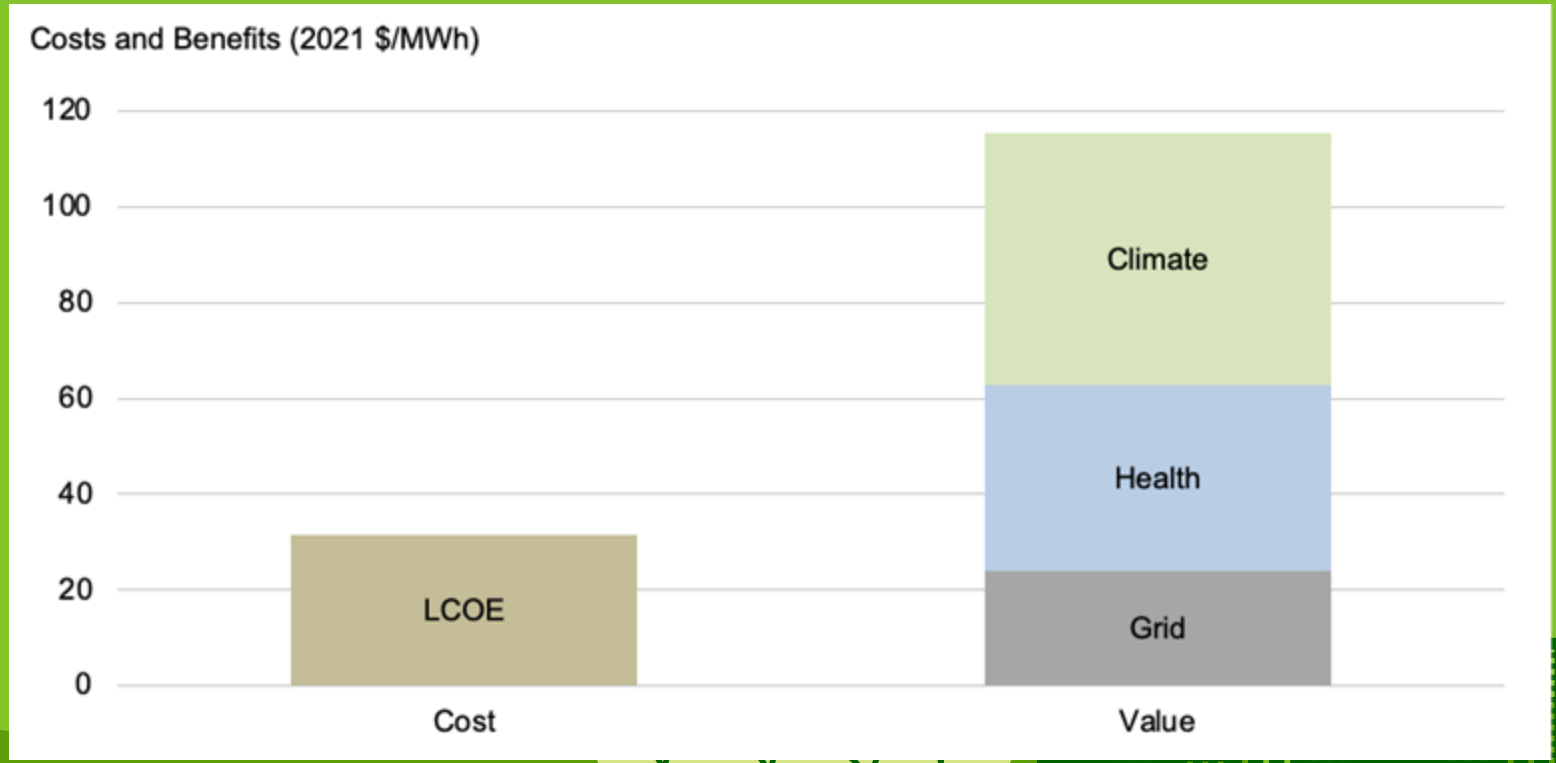


Estimated levelized cost of wind energy by commercial operation date

Marginal health and climate benefits from wind generation by region in 2021



Marginal Health, Climate, and Grid-Value Benefits From Wind Generation Versus LCOE in 2021



Recommendation

Wind Power

Wins over other energy investments

Environment Friendly

It has less damage than hydropower

Good Investment

It is a growing market and it is cost effective

Texas Onshore

High wind speed and a higher electricity output and has a levelized cost.

Thanks For listening!

STAY GREEN