

Positive Winds of Change

Increases in Renewable Energy

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The Power of Perspective

Artist's view of a U.S. Landsat satellite. Credits: NASA

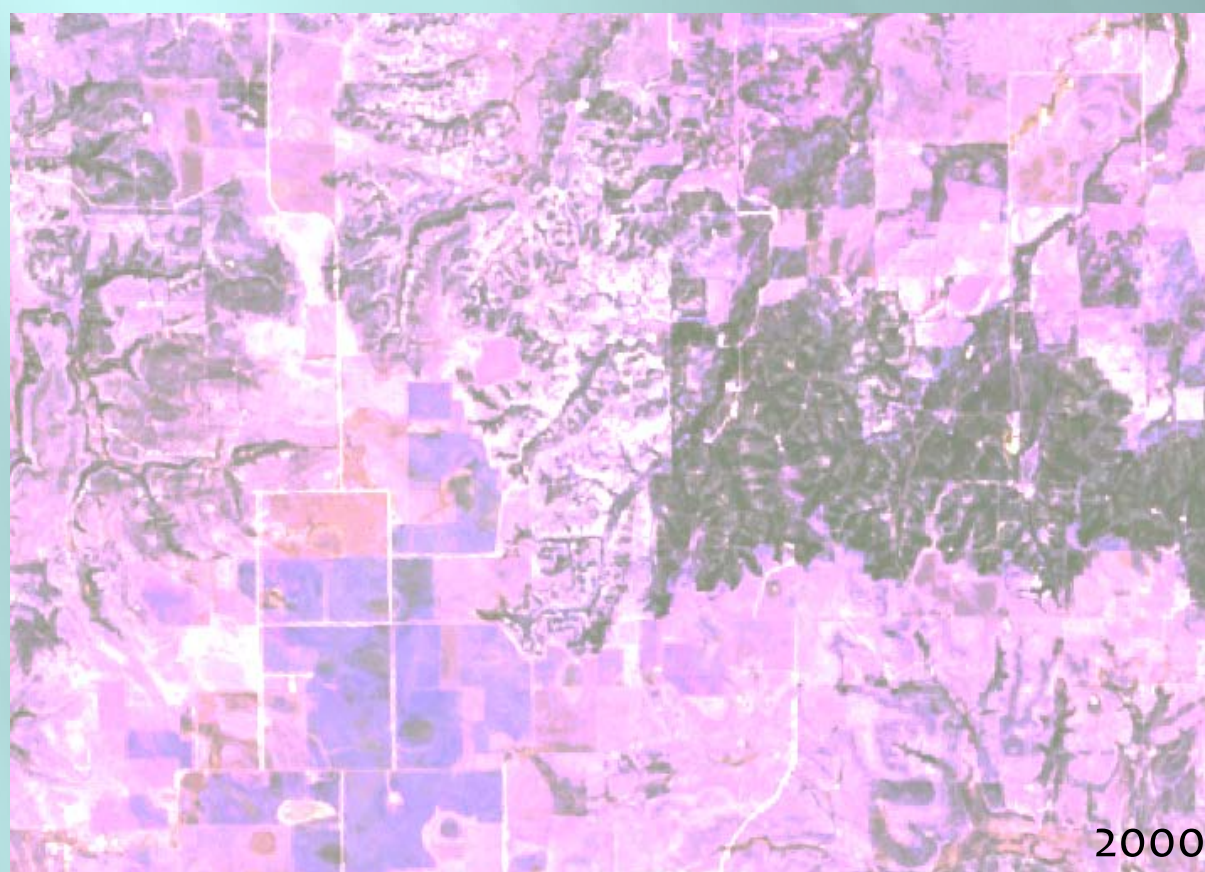
Wind energy is a renewable resource the United States continues to explore and expand. Wind energy not only provides clean, carbon free power but it also has less impact on water and habitat than many other energy sources. Wind farms around the country continue to grow.

Now more than ever, it is important that we continue to invest in renewable energy. Just one 1.5 megawatt wind turbine displaces 2,700 metric tons of CO₂ a year, the equivalent of planting 4 km² of forest. Increased use of renewable energy is necessary for a sustainable future.

In satellite imagery, wind farms look like light dotted lines. Examine the pairs of images below to see the growth of wind farms. Landsat imagery accessed courtesy of the Google Earth Engine Trusted Tester Program.

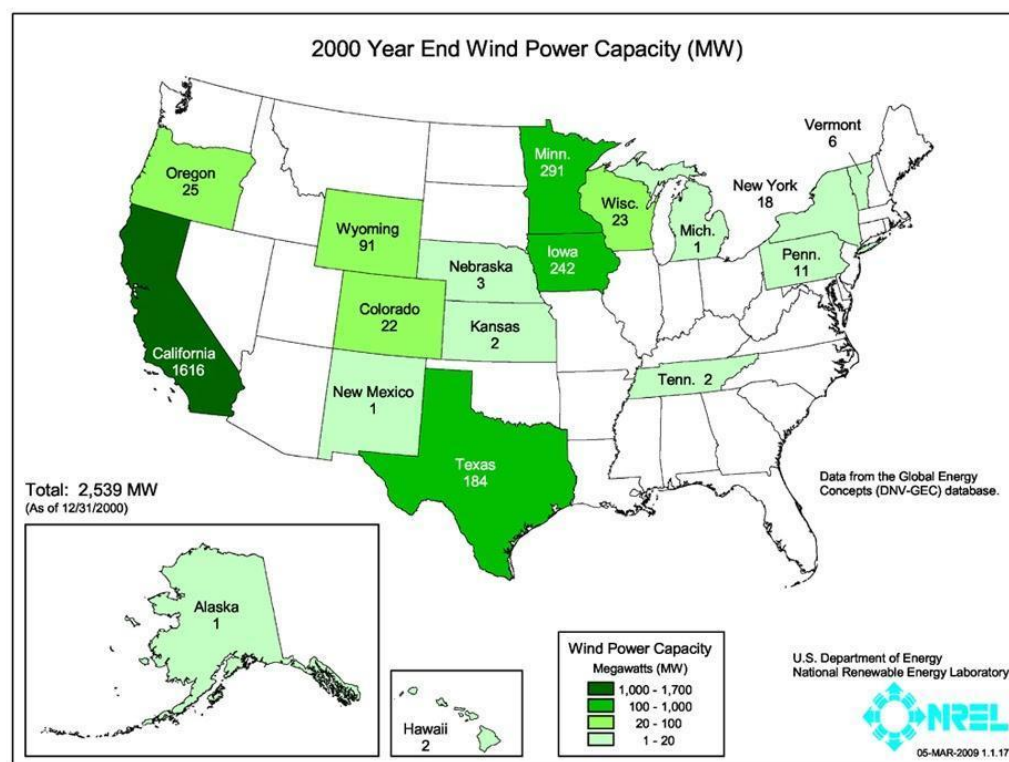
Alta Wind Energy Center, California 2000 vs. 2012

AWEC, or Mojave Wind Farm, is the second largest wind farm in the world. AWEC estimates that their project will reduce carbon emissions by 52 million metric tons (equivalent to taking over 400,000 cars off the road). When complete, AWEC will consist of 600 turbines.

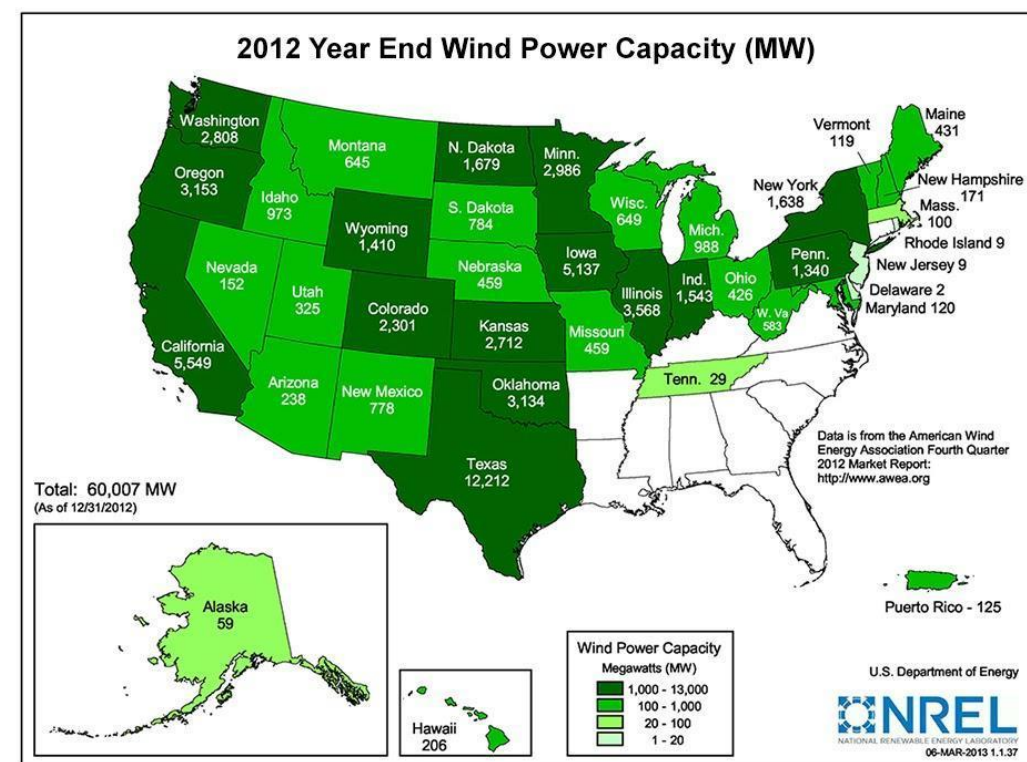


Roscoe Wind Farm, Texas 2000 vs. 2012

This section of Roscoe Wind Farm is located west of the town of Roscoe, Texas. Roscoe Wind Farm is the largest in the world, creating almost 800 megawatts of energy. 600 turbines are in operation on this 100,000 acre farm. The area can also be used for cotton and wheat farming. Again, Landsat images in false color show new turbine growth in horizontal white "dotted" lines.



In 2012 the Department of Energy reported that we now have more than 45,000 wind turbines that can provide power to 14.7 million homes, 60 gigawatts of cumulative wind capacity. **For the first time ever, wind power provides the largest share of new electric capacity.**



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