Which States are Paying the Highest Carbon Cost for Non-Renewable Electricity Generation?
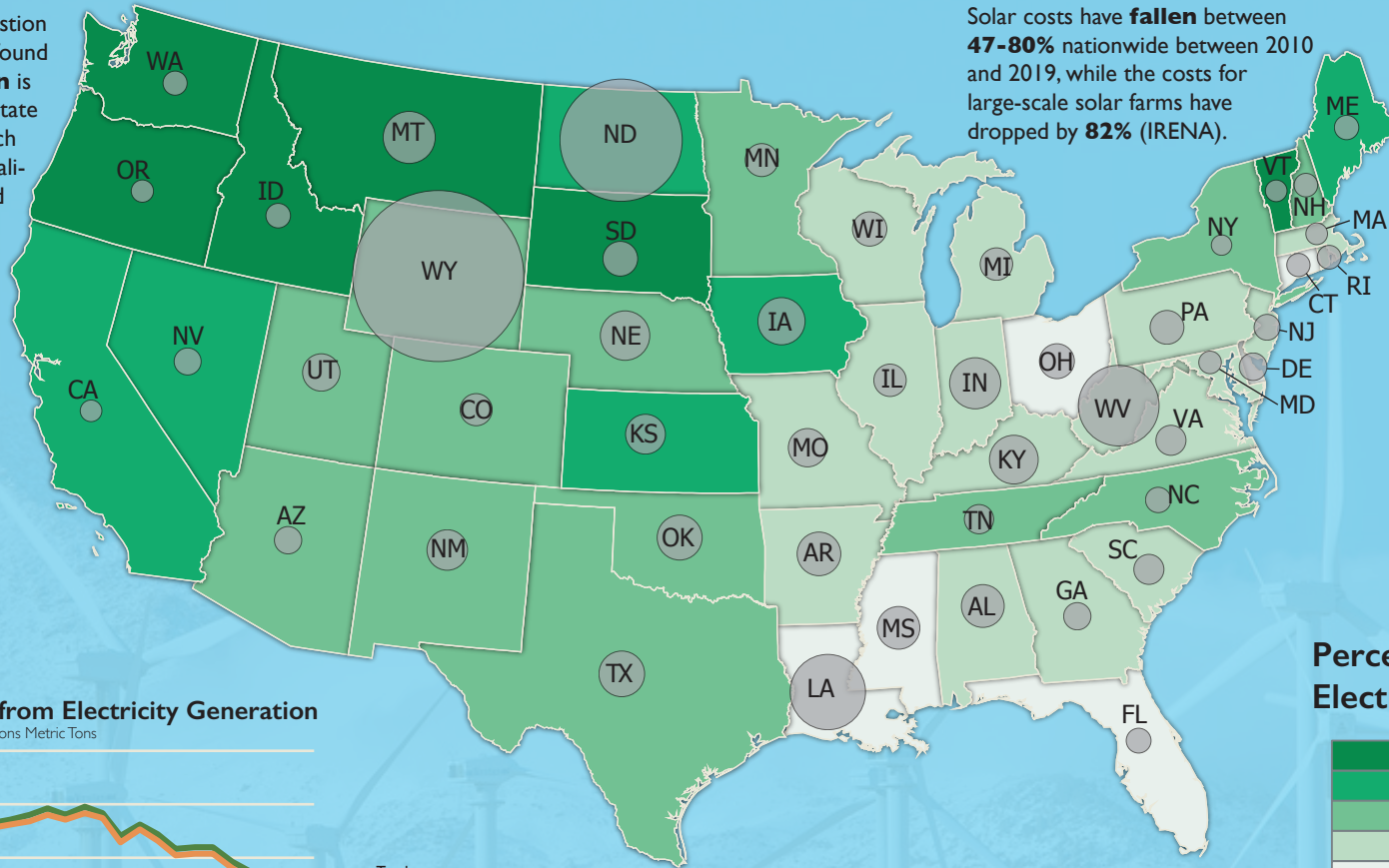
States using more clean energy are layered above those with less

One MIT Study that tracked combustion emissions between 2005 and 2018 found that **electric power generation** is the greatest contributor to out-of-state **pollution-related deaths**, which make up more than half of all air-quality-related early deaths in the United States, (Steven Barrett, MIT).
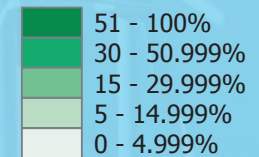
According to one Stanford study, wind energy produces around **11 grams** of CO_2 per kilowatt-hour of electricity generated, compared with about **980 g CO_2/kWh** for coal and roughly **465 g CO_2/kWh** for natural gas, (NREL).

Solar costs have **fallen** between **47-80%** nationwide between 2010 and 2019, while the costs for large-scale solar farms have dropped by **82%** (IRENA).

"In 2018, CO_2 emissions from fossil fuel combustion for energy were equal to about 75% of total U.S. anthropogenic GHG emissions (based on 100-year global warming potential) and about 93% of total U.S. anthropogenic CO_2 emissions," (EIA).
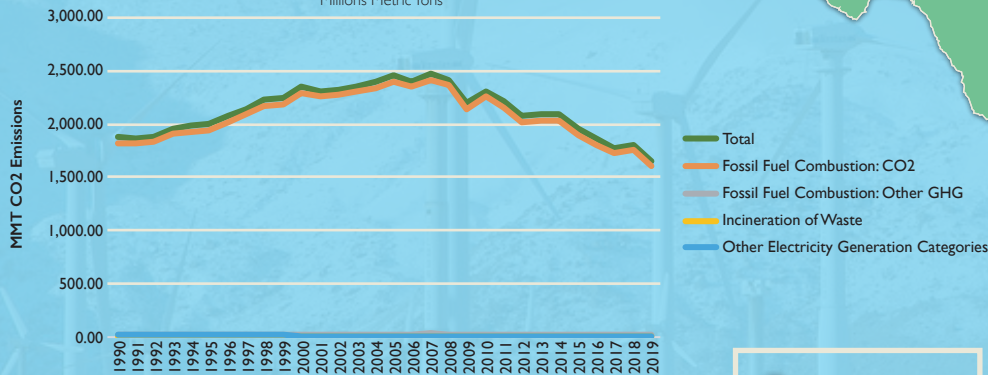
Map state labels: WA, MT, ND, MN, ME, OR, ID, WY, SD, WI, VT, NH, MA, NY, NV, NE, IA, MI, RI, CT, UT, CO, IL, IN, OH, PA, NJ, DE, MD, CA, KS, MO, KY, WV, VA, AZ, NM, OK, AR, TN, NC, SC, TX, MS, AL, GA, LA, FL, AK, HI

U.S. CO_2 Emissions from Electricity Generation
Millions Metric Tons

MMT CO_2 Emissions

3,000.00
2,500.00
2,000.00
1,500.00
1,000.00
500.00
0.00

1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019

— Total
— Fossil Fuel Combustion: CO_2
— Fossil Fuel Combustion: Other GHG
— Incineration of Waste
— Other Electricity Generation Categories

Percentage of Renewable Electric Energy Generation

- 51 - 100%
- 30 - 50.999%
- 15 - 29.999%
- 5 - 14.999%
- 0 - 4.999%

CO_2 Emissions from Electric Energy Production
Million Metric Tons per 100,000 people

- 10
- 7.5
- 5
- 2.5
- 1

Not to Scale

Not to Scale
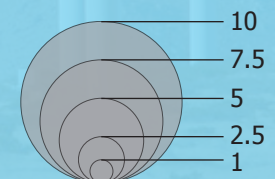
This map uses data collected from March 18, 2021 by the EIA and EPA. Renewable sources include geothermal, hydroelectric, solar, and wind. Non-Renewable sources include coal, petroleum, and natural gas.

Lambert Conformal Conic Projection
Standard Parallels: 33°N, 45°N
Central Median: 96°W

Cartographer: Kaden Bosquez