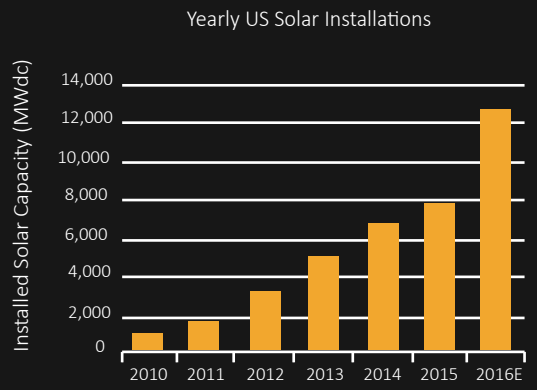
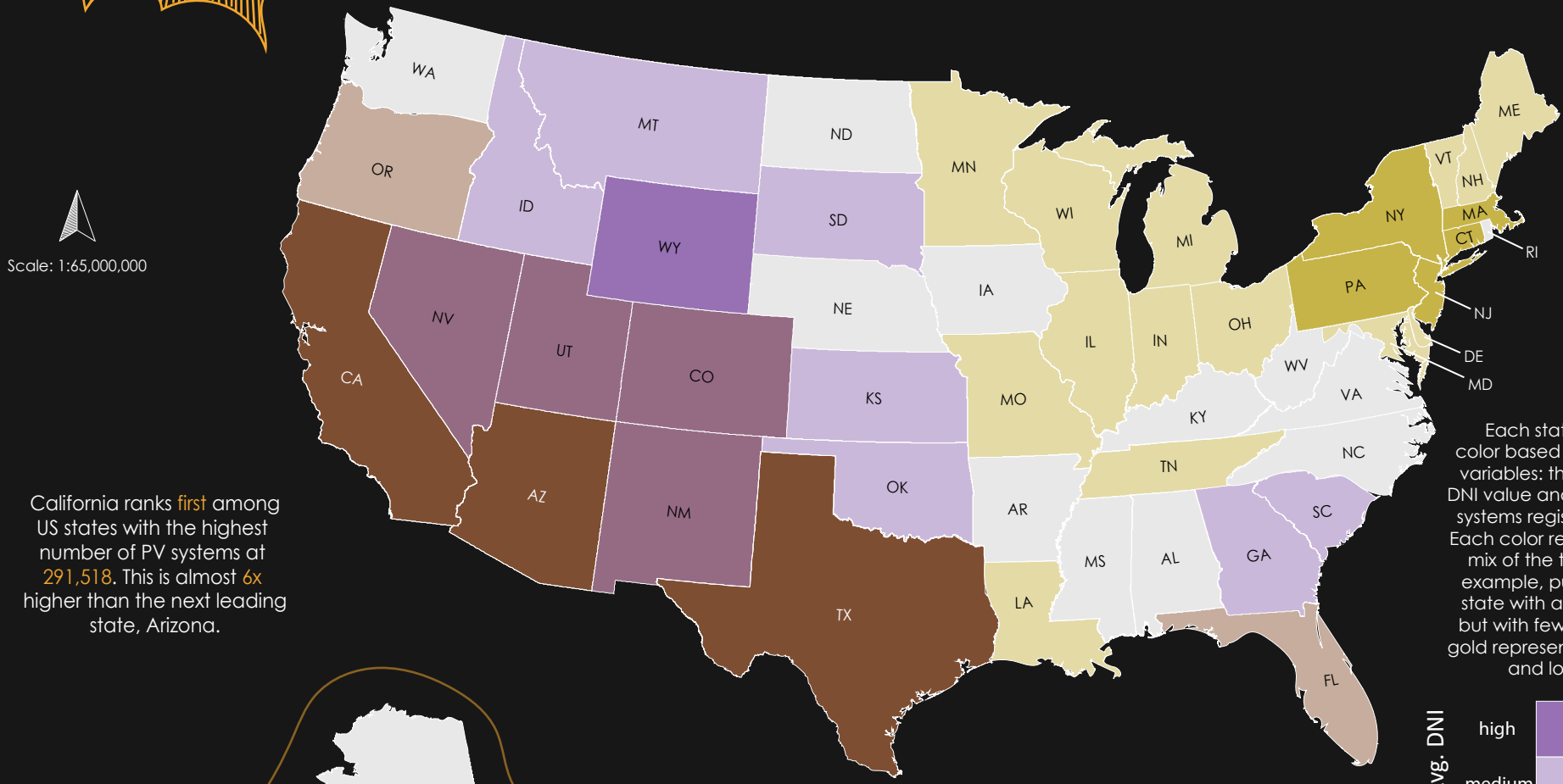
U.S. Solar Energy: Are we meeting our potential?

As solar power equipment becomes cheaper to manufacture and install, many states have taken to encouraging the use of photovoltaic (PV) systems as an ever-growing source of renewable energy. PV devices convert sunlight into electrical energy. The efficiency and amount of power generated by these PV devices is directly related to the state's DNI, which the amount of daily solar radiation received. The higher a state's DNI, the more potential for PV devices to harness maximum energy. Are our state's meeting their potential for harnessing the sunlight they receive?





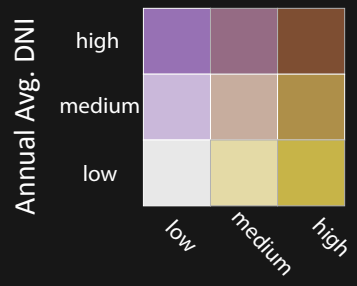
Scale: 1:65,000,000

California ranks first among US states with the highest number of PV systems at 291,518. This is almost 6x higher than the next leading state, Arizona.

Scale: 1:35,000,000

Scale: 1:20,000,000

Each state is assigned a color based upon two different variables: the annual average DNI value and the amount of PV systems registered in the state. Each color represents a different mix of the two variables. For example, purple represents a state with a high average DNI but with few PV systems, while gold represents many PV systems and low DNI values.



Projection: North America Albers Equal Area Conic Author: Emily Rose
Standard Parallel 1: 20.0 Standard Parallel 2: 60.0 Central Meridian: -96.0
Sources: www.nrel.gov/solar/ www.seia.org/research-resources
Data from naturalearthdata.com, Bivariate Scheme by Aileen Buckley