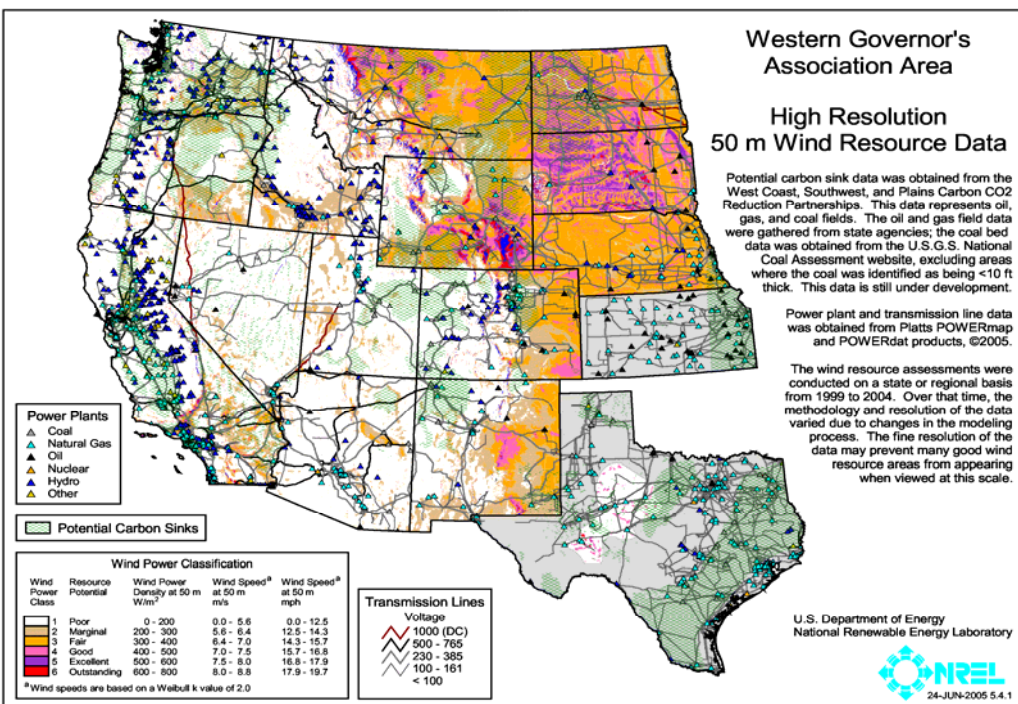


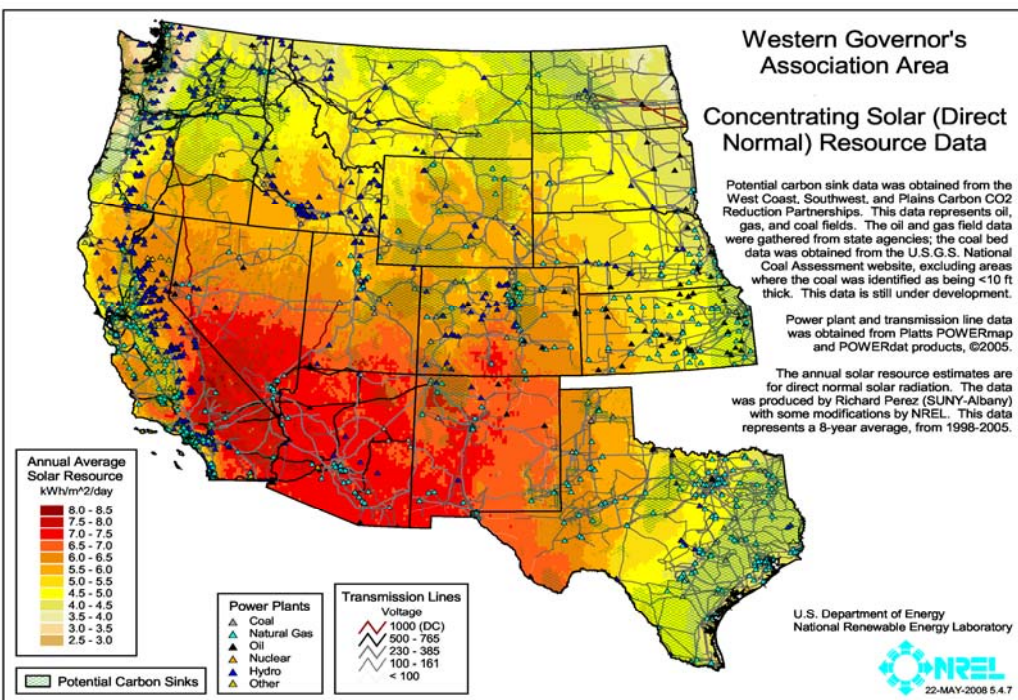


Western Governors' Association Western Renewable Energy Zones Project – Kickoff Meeting May 28, 2008



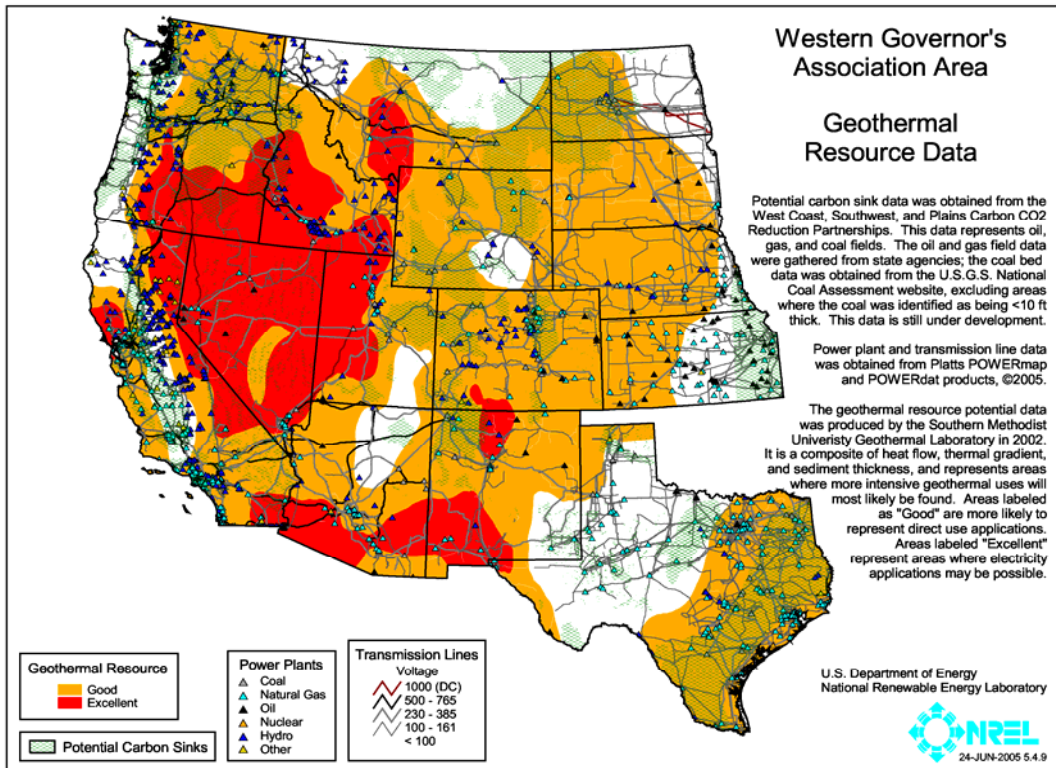
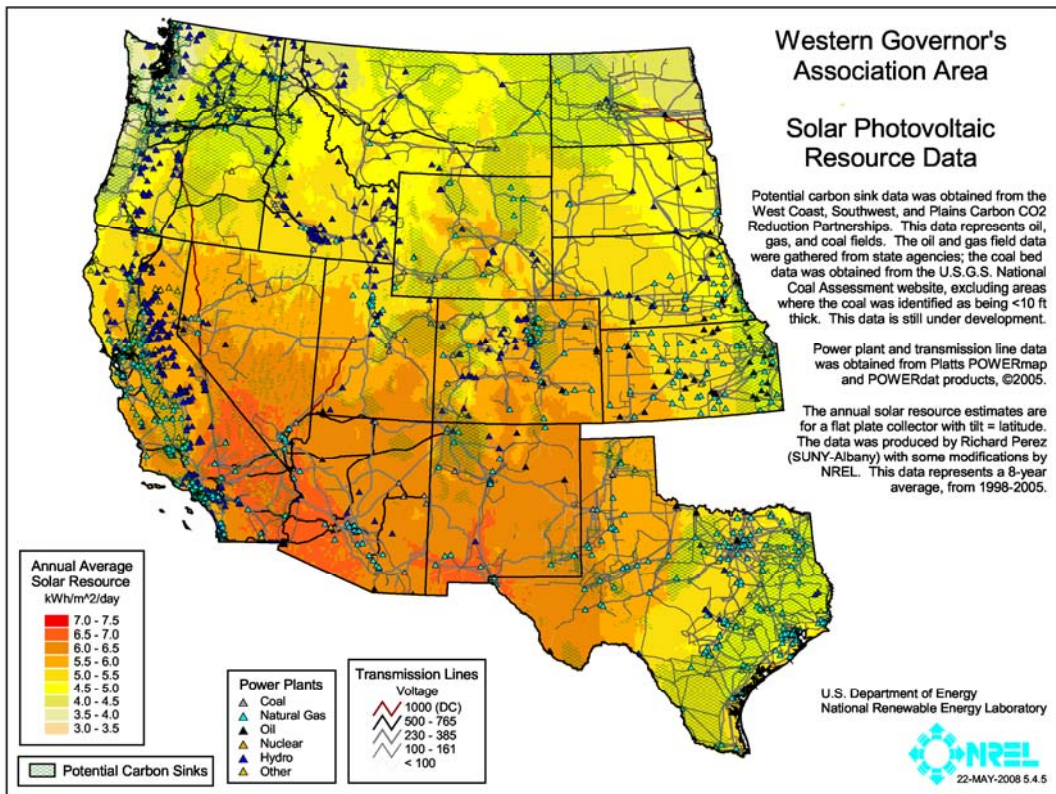
NREL's GIS team analyzes renewable energy resources to determine which energy technologies are viable solutions in the United States and inputs the data into a Geographic Information System (GIS).

These maps show resource assessments for wind, concentrating solar, solar PV, and geothermal in the WGA area.



Western Renewable Resource Landscape

Dr. Dan E. Arvizu
Director, National Renewable Energy Laboratory

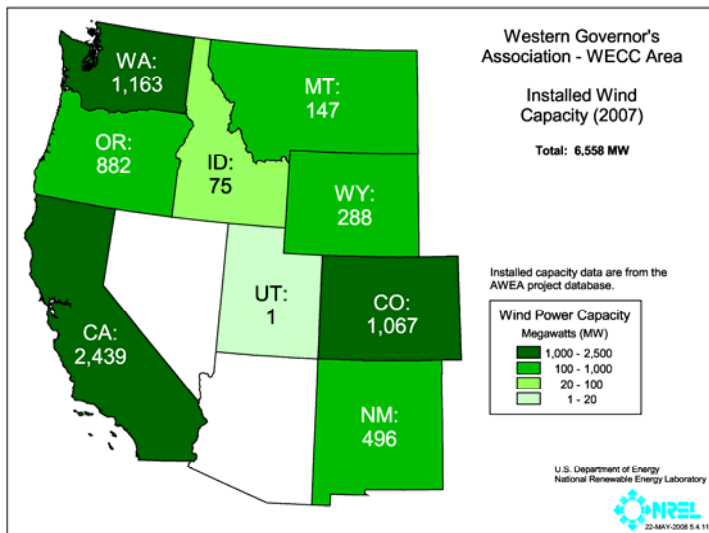
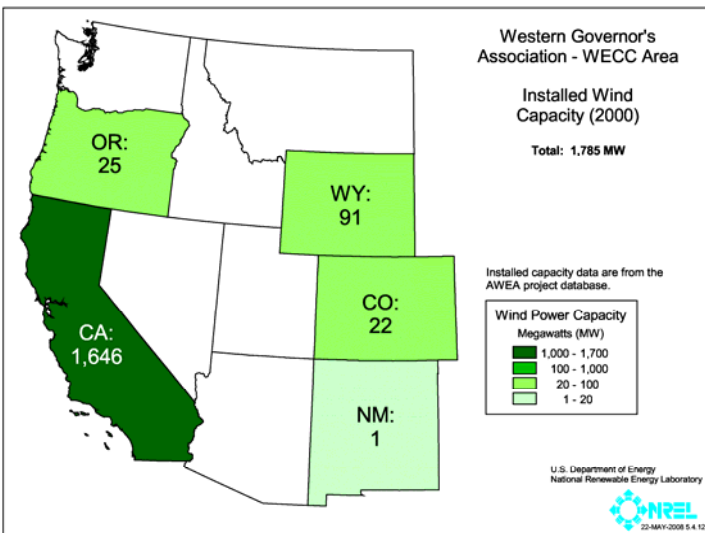


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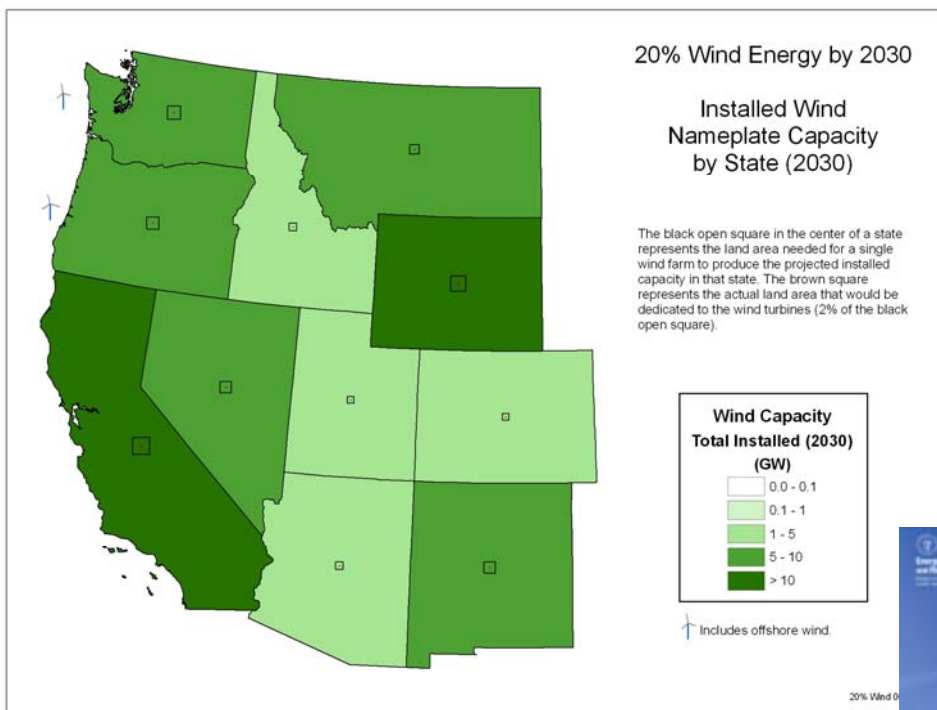
2000

2007

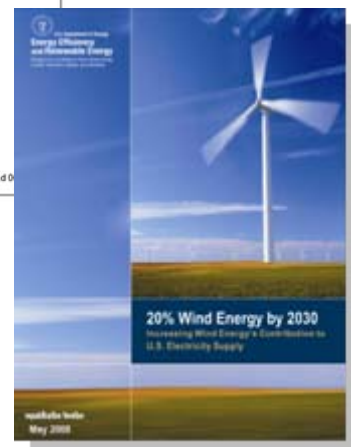


Comparison of installed wind capacity in WECC area – 2000 and 2007

2030 Scenario



From the U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy report, *“20% Wind Energy by 2030: Increasing Wind Energy’s Contribution to U.S. Electricity Supply”*



Western Renewable Resource Landscape

Dr. Dan E. Arvizu
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Connecting Renewable Resources to the Markets: NREL's Role

- **Colorado Renewable Resource Generation Areas**
 - Mapping task force created by the Colorado Legislature
 - NREL contributions:
 - Helped frame the distinction between utility-scale renewables and small-scale renewables
 - GIS analysis and data to identify wind and CSP zones
 - Economic analysis to develop supply curves
- **Western Wind and Solar Integration Study**
 - Partnership between WestConnect and NREL's National Wind Technology Center (NWTC)
 - Incorporating up-to-date wind, solar data
 - Will model the system impacts of large-scale wind penetration in WestConnect, and of large-scale CSP penetration in southern half of WestConnect area
- **Eastern Wind Integration and Transmission Study**
 - Partnership between NWTC and a collaboration of eastern RTOs and TVA
 - RTOs will conduct long-range transmission planning study, with 20% wind penetration scenarios developed by NWTC

