

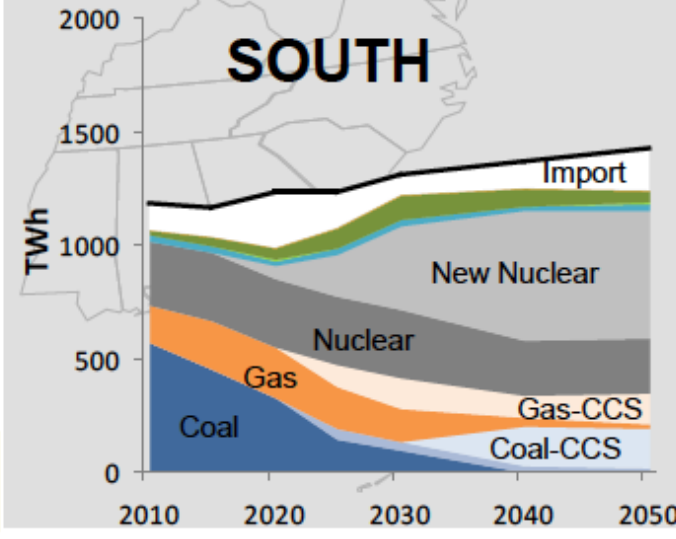
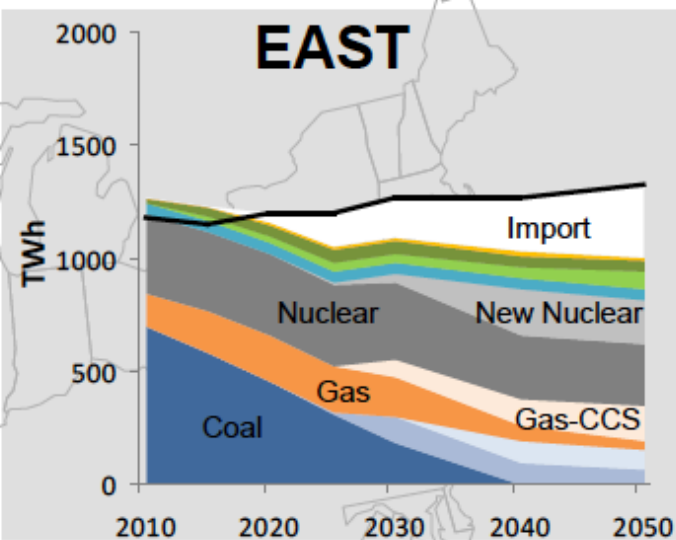
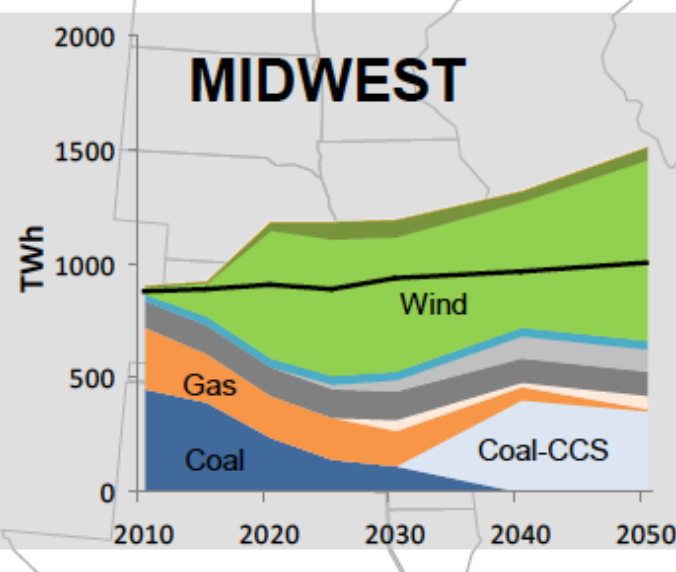
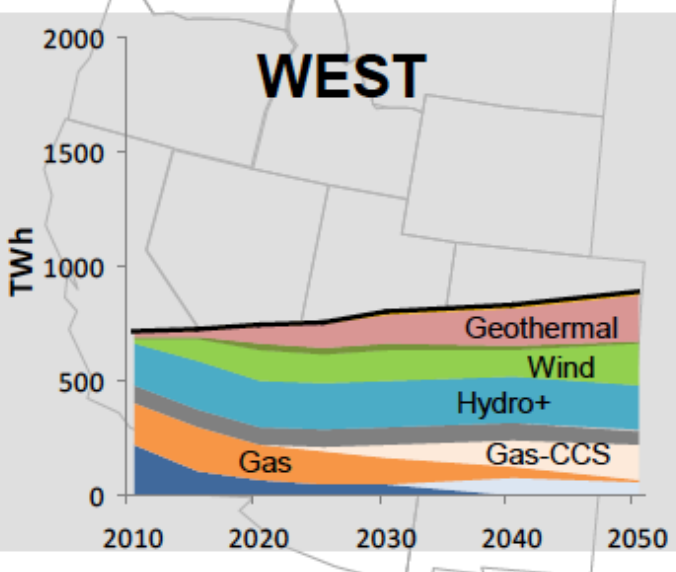
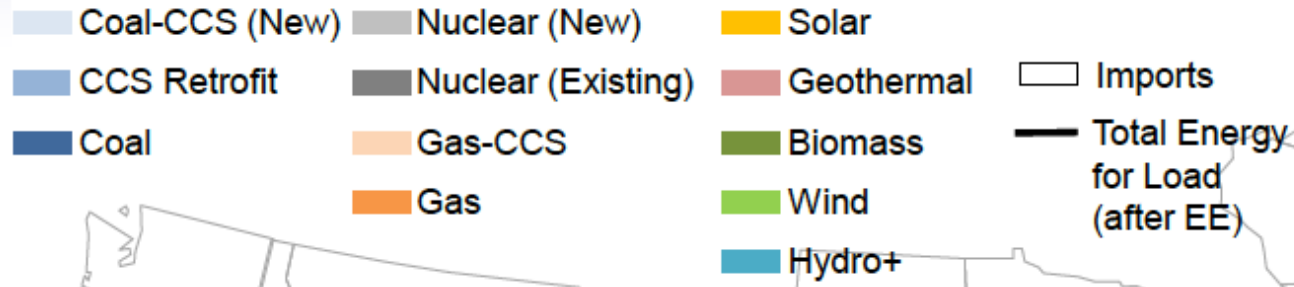
The Future of Energy: Regional, Distributed, Requires Storage, and Water Interdependent

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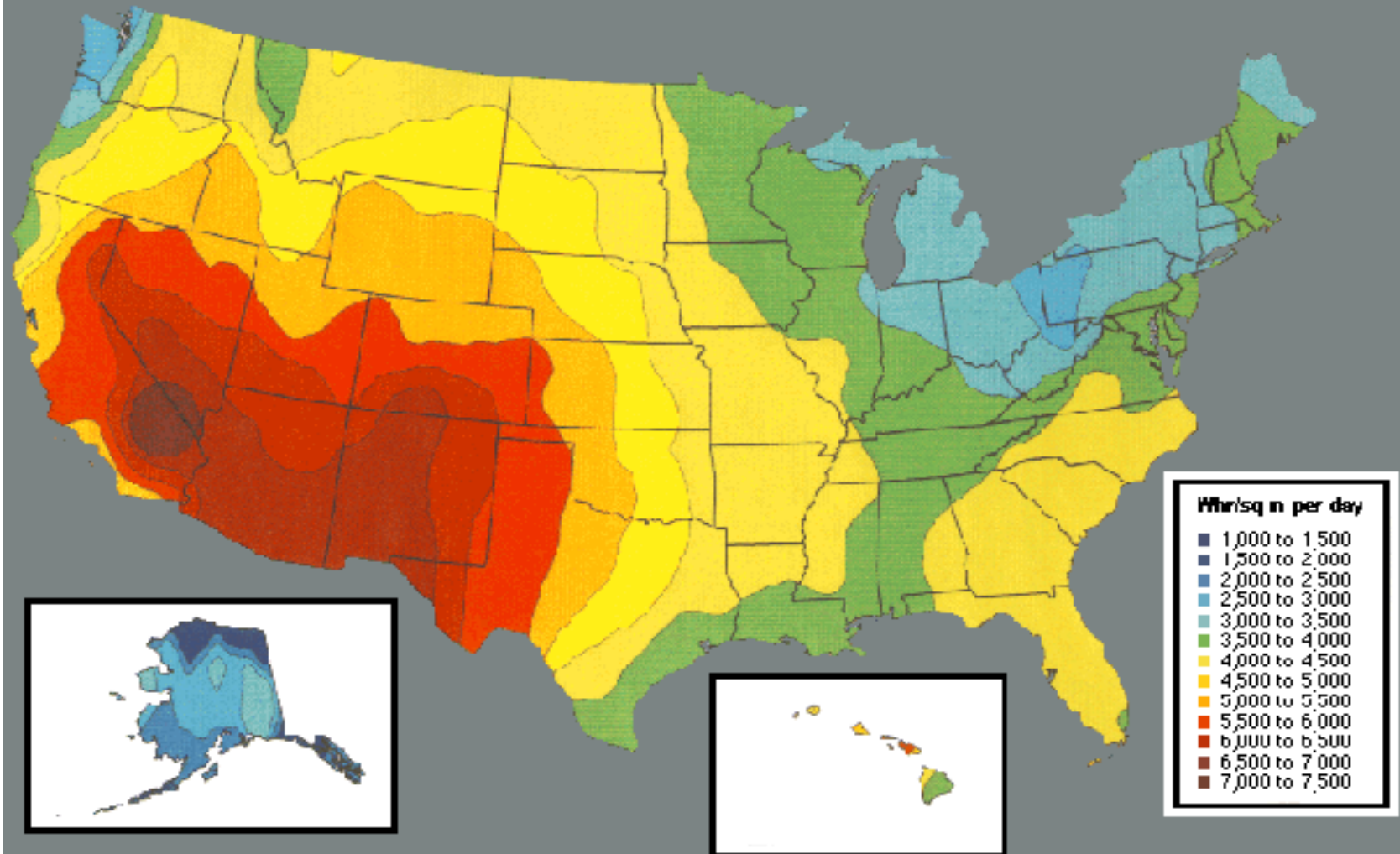
The Future of Energy is Regional



Responses to CO₂ policy differ greatly by region

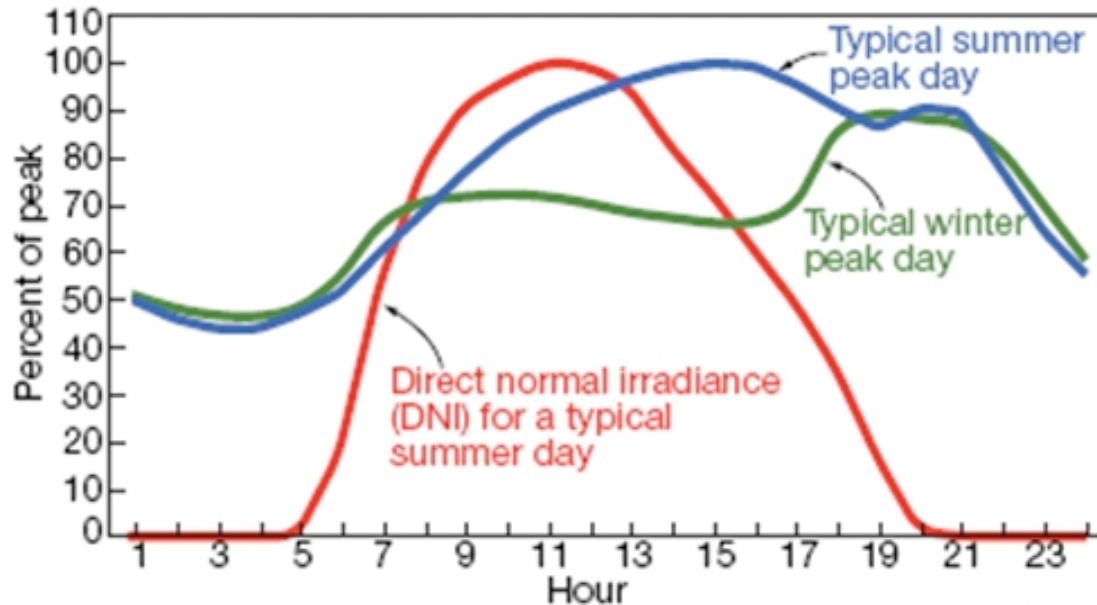
Regional and Distributed

Average daily solar radiation, 1961-1990



Energy from the sun on a surface directly facing the sun.

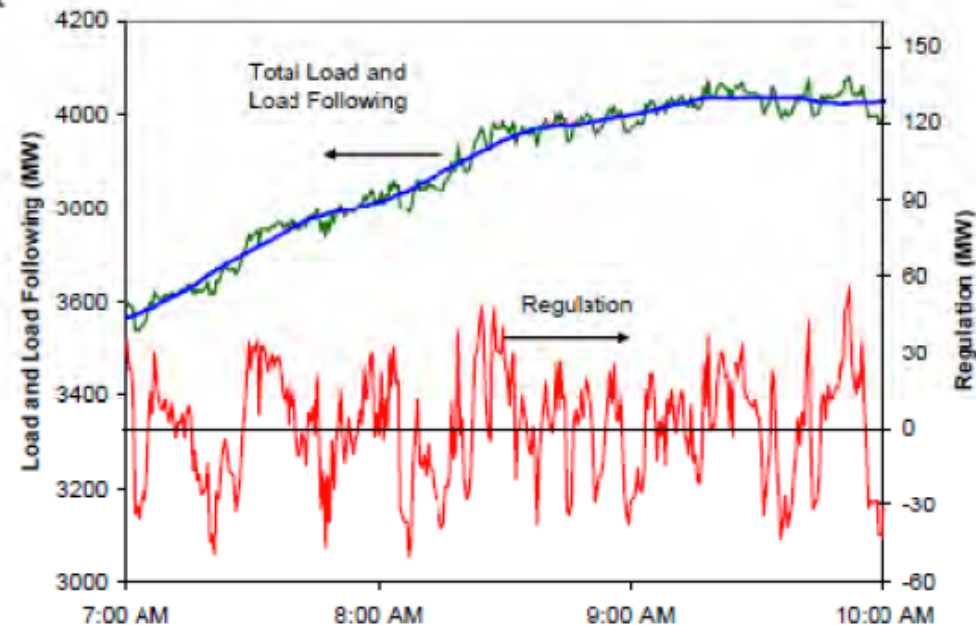
Requires Storage



Time of day generation vs. demand

24. Solar power produced at maximum DNI is stored in a battery and released later in the day when demand is highest

Generation transients vs. demand transients



The Future of Energy is Distributed



Next generation solid oxide fuel cell (SOFC) technology

Provides natural gas base load generation at cost and efficiency (>50%) of multi-MW combined cycle turbine but in distributed 10 kW to 250kW modular configuration

Can be configured for high efficiency (>85%) combined heat and power (CHP)



The Energy-Water Nexus

