



Collaborative Approach for a Resilient Maricopa County: Sustainability Benchmark Recommendations

SOS 498:
Urban Sustainability Best Practices Application
Fall 2018

Energizing the Future of Maricopa County



Climate Change

What we know:

Drought and rising temps in the SW

Renewable energy sources increase resilience



Opportunity and Challenges

Fourth National Climate Assessment

- Many renewable energy sources offer increased electricity reliability, lower water intensity of energy generation, reduced greenhouse gas emissions, and new economic opportunities. .
- High number of sunny days in SW coupled with large amount of existing rooftops and parking lots create high potential for distributed solar generation.

Community Renewable Energy Study: Salt Lake City

- Transition to 100% renewable would result in \$7 - \$8 monthly increase for customers.
- Economic benefits due to construction activities are projected to add almost \$1.2 billion to Utah's economy



Energy Benchmarks

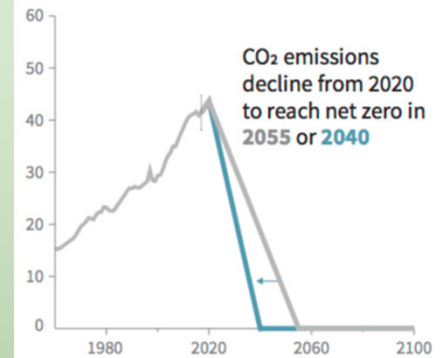
By 2025 All new residential housing installments within Maricopa County should be built with rooftop solar installments.

By 2035 all newly constructed commercial and municipal buildings within Maricopa County should follow green building standards such as International Green Construction Codes.

By 2040 All pre existing commercial, industrial, and municipal structures should be retrofitted to meet green building standards such as International Green Construction Codes.

By 2040 Maricopa County's electricity energy portfolio will be carbon neutral.

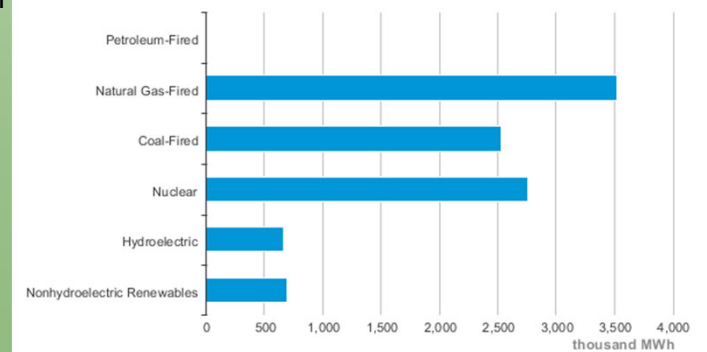
b) Stylized net global CO₂ emission pathways
Billion tonnes CO₂ per year (GtCO₂/yr)



Faster immediate CO₂ emission reductions limit cumulative CO₂ emissions shown in panel (c).

Source: IPCC Special Report on Global Warming of 1.5°C

Arizona Net Electricity Generation by Source, Jun. 2018



Source: Energy Information Administration, Electric Power Monthly