

ARRTIS

Arizona Renewable Resource and Transmission Identification Subcommittee

**Workshop on Transmission to Support
Renewable Energy Development**

April 20, 2009

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ARRTIS Background

- Established by SWAT RTTF in January 2009 in response to ACC Order 70635
- An open stakeholder process tasked with:
 - Identifying potential areas for Arizona renewable resource development
 - Assisting the RTTF group by providing information to assess transmission options
 - Informing and assisting the utilities in their response to the BTA Order



ARRTIS Participants

- State
 - ACC Staff
 - AZ State Land Dept.
 - AZ Game and Fish Dept.
 - AZ Dept. of Water Resources
 - Universities – NAU & UofA
- Federal
 - Department of Energy
 - Department of Defense
 - National Renewable Energy Laboratory
 - Bureau of Land Management
 - U.S. Forest Service
 - U.S. Fish and Wildlife Service



ARRTIS Participants

- Utilities
 - APS
 - TEP
 - SW Transmission Coop
 - SRP
 - SCE
 - Grand Canyon State Electric Coop
- Tribal
 - Inter Tribal Council of Arizona
 - Dine Power Authority
 - Council of Resource Tribes



ARRTIS Participants

- Development/Technology Companies
 - BrightSource
 - BP Alternative Energy
 - OMNI
 - Shell Wind Energy
 - Sky Power
 - RES
- Environmental
 - Sonoran Institute
 - Sierra Club
- Other – consultants, law firms, etc.



ARRTIS Process

1. Assemble group of key stakeholders
2. Gather AZ renewable resource potential
3. Identify constraint criteria
4. Identify likely developable areas for renewables
5. Provide information to RTTF for identification of transmission options
6. Provide information to utilities to assist in their responses to the BTA Order

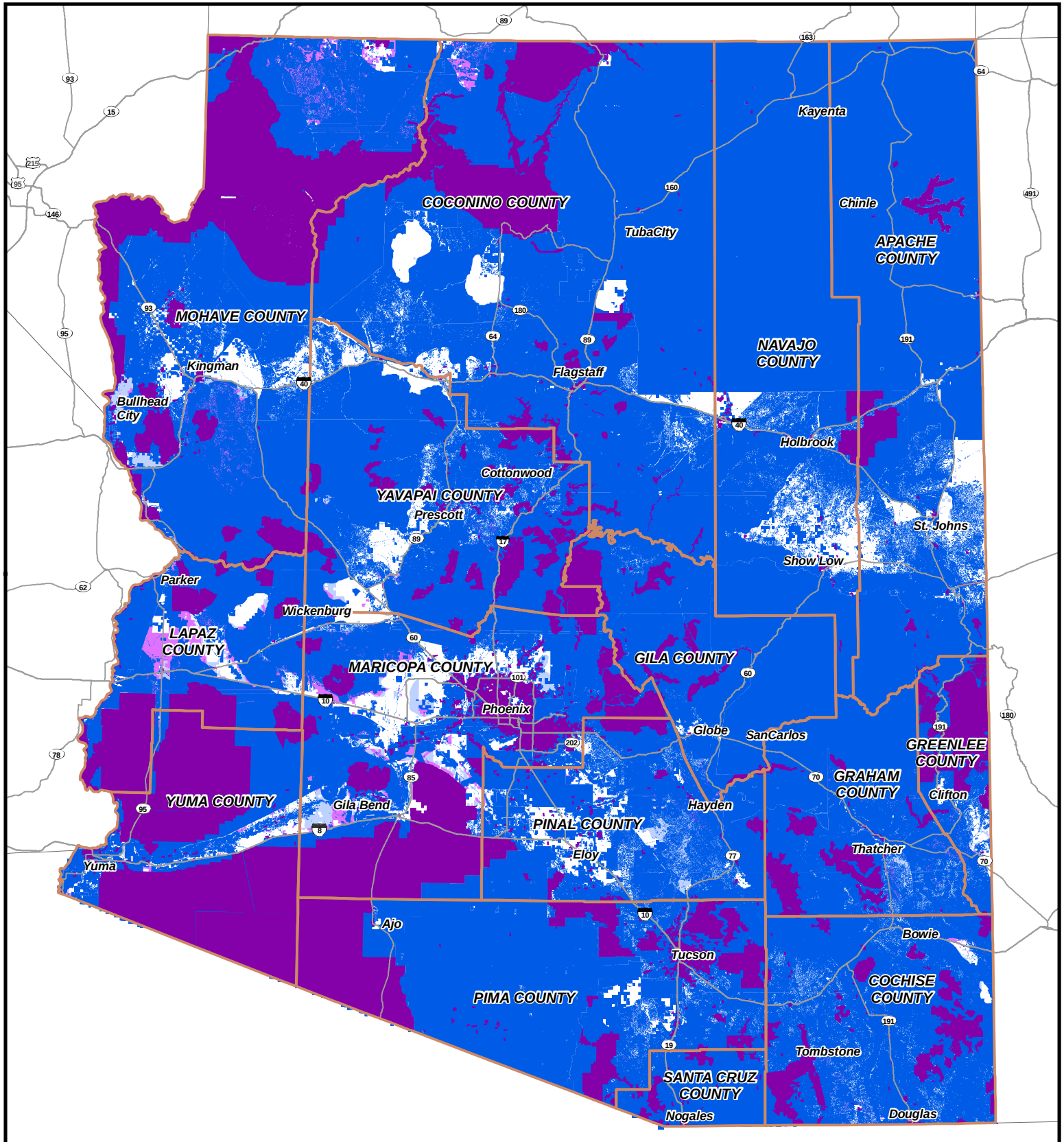
Overview of ARRTIS Efforts

- Six meetings conducted to-date
- GIS resource data provided by multiple entities
- NREL resource data used for location of renewable resources
- Resource sensitivity definitions
 - Exclusion
 - High
 - Moderate
 - Low

Current Status and Next Steps

- All resource information offered to process has been acquired
- Developing coverage of existing and 10-year plan transmission
- Initial renewable resource areas in development
- Cross-reference available interconnection queue information
- Refine renewable resource areas and provide to RTTF for conceptual transmission overlay





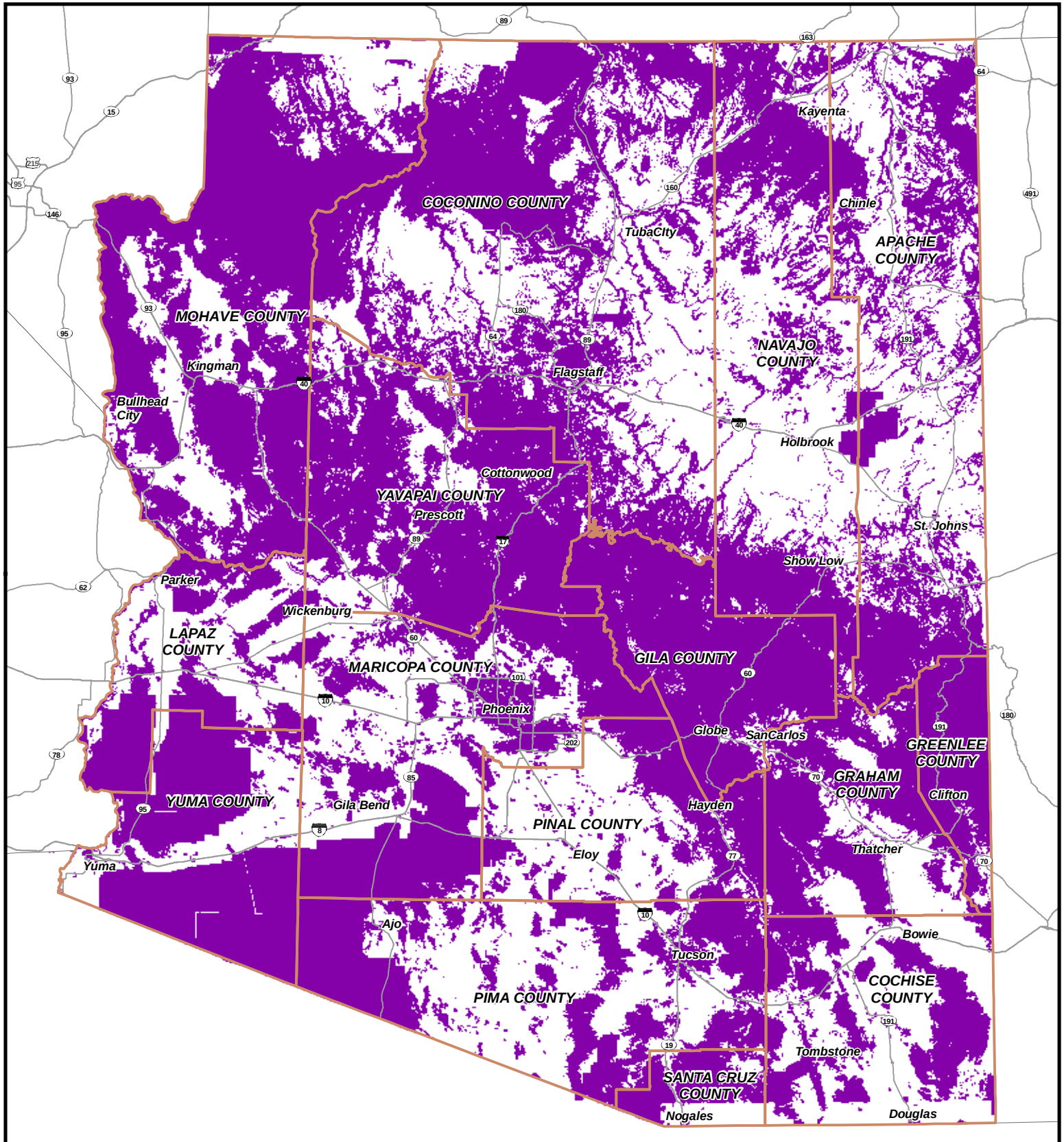
Legend

- Exclusion Areas
- High Sensitivity Areas
- Moderate Sensitivity Areas
- Low Sensitivity Areas

ENVIRONMENTAL RESOURCE SENSITIVITY AREAS

ARRTIS ARIZONA RENEWABLE RESOURCE AND TRANSMISSION IDENTIFICATION SUBCOMMITTEE

DRAFT: April 17, 2009



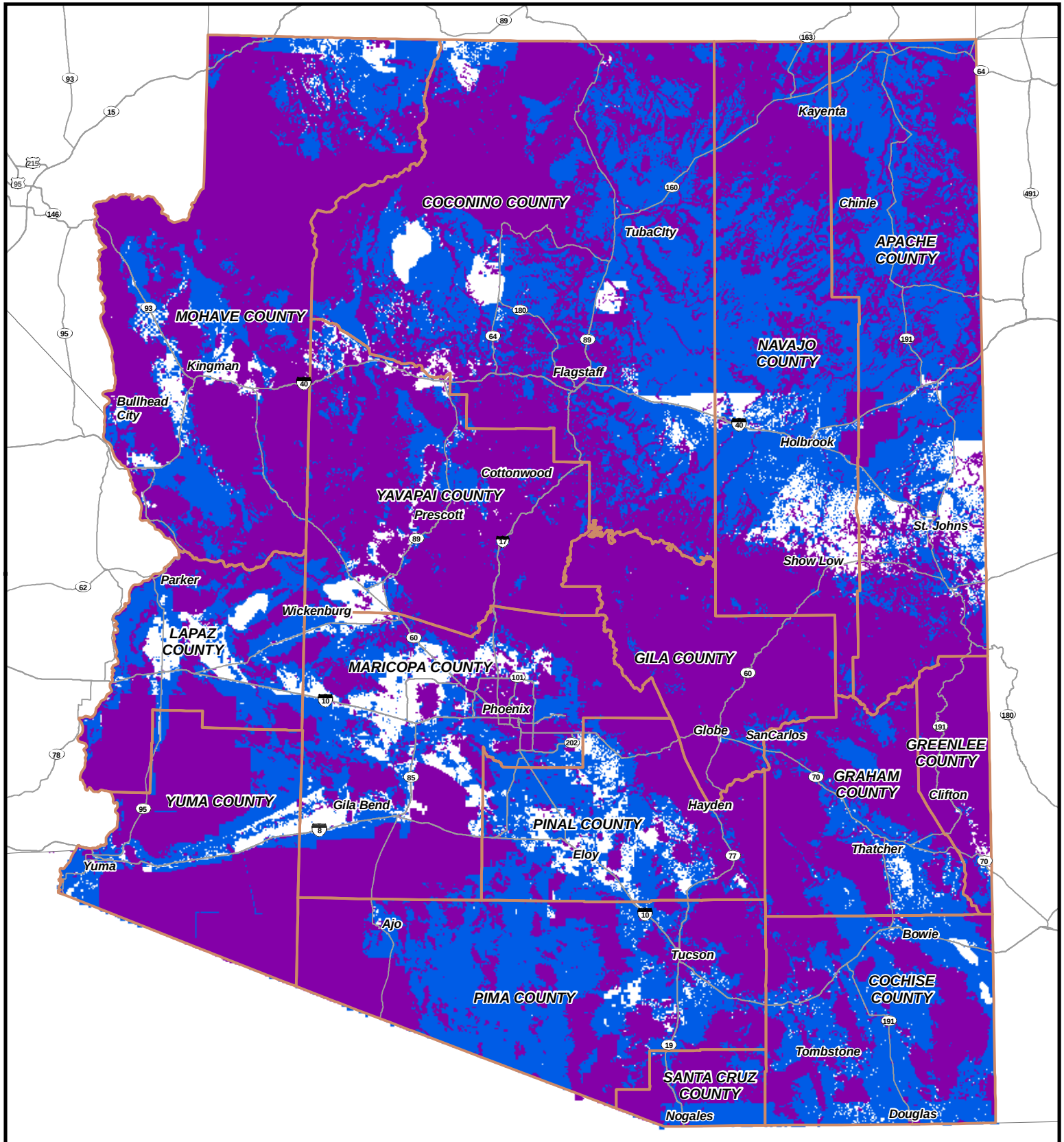
Legend

Exclusion Areas - Includes areas greater than 5% slope

**ENVIRONMENTAL RESOURCE
EXCLUSION AREAS**

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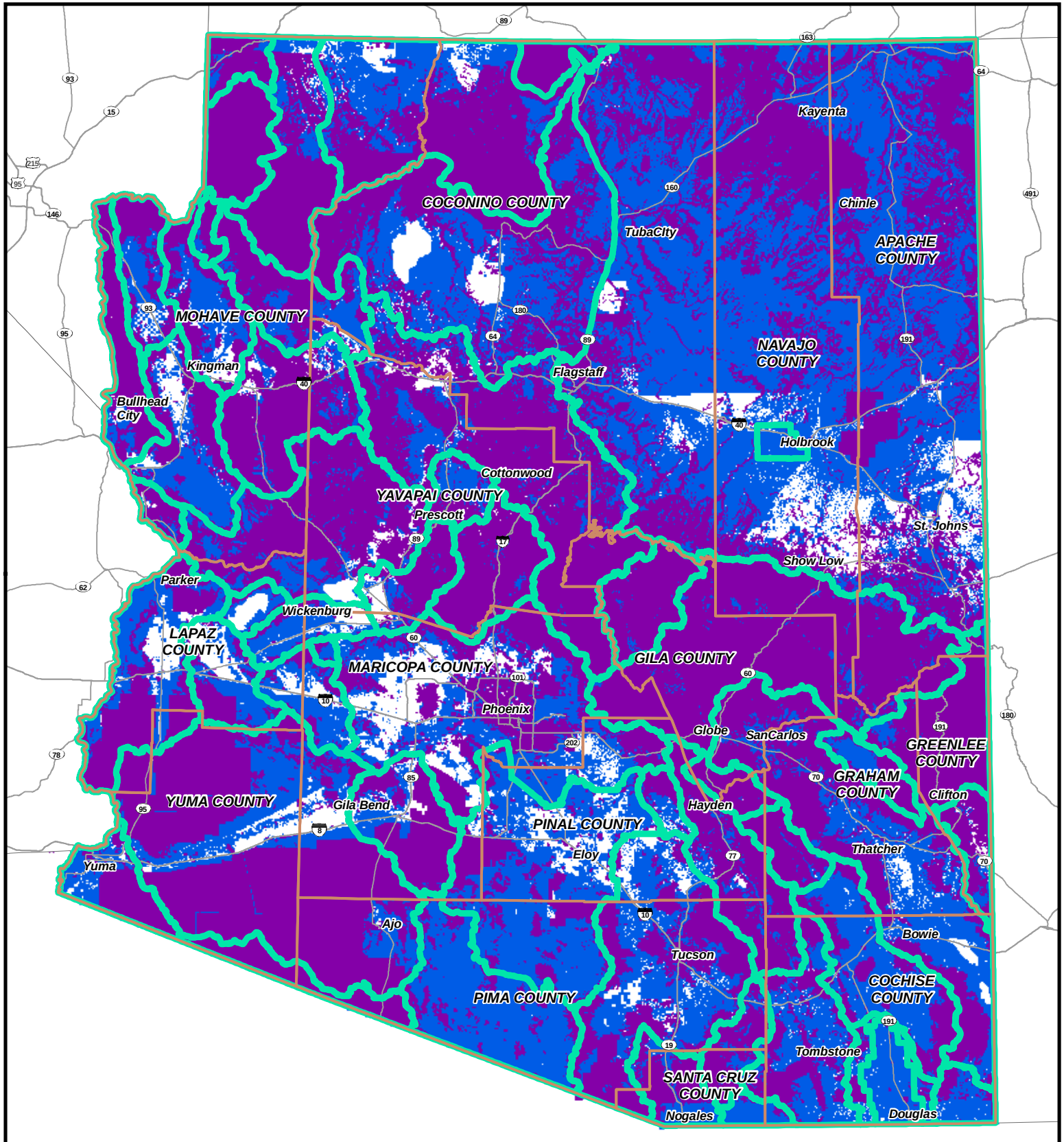
Legend

- Exclusion Areas - Includes areas greater than 5% slope
- High Sensitivity Areas

ENVIRONMENTAL RESOURCE EXCLUSION AND SENSITIVITY AREAS

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Legend

- Exclusion Areas - Includes areas greater than 5% slope
- High Sensitivity Areas
- ADWR Groundwater Basins

ENVIRONMENTAL RESOURCE EXCLUSION AND SENSITIVITY AREAS INCLUDING ADWR GROUNDWATER BASINS

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Arizona Renewable Generation Interconnection Requests

APS

Solar 7102MW
Wind 3348MW
Biomass 22MW

SRP

Solar 2762MW
Wind 1350MW

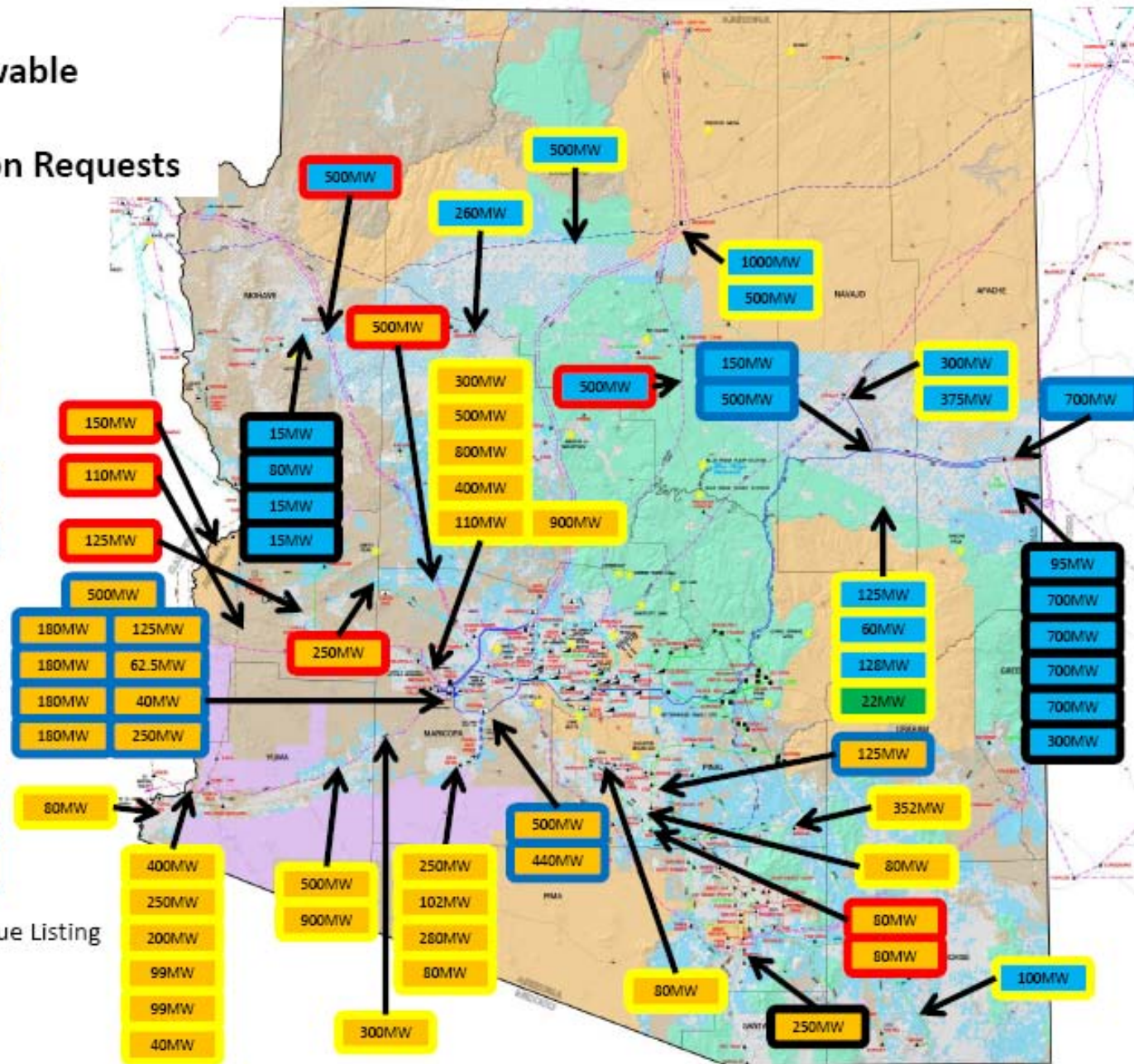
TEP

Solar 250MW
Wind 3320MW

WAPA

Solar 1295MW
Wind 1000MW

Interconnection Queue Listing
As of 3/2/09



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**More information available at
www.westconnect.com**

