

ARRTIS and RTTF Overview

Sixth Biennial Transmission Assessment

Greg Bernosky and John Lucas

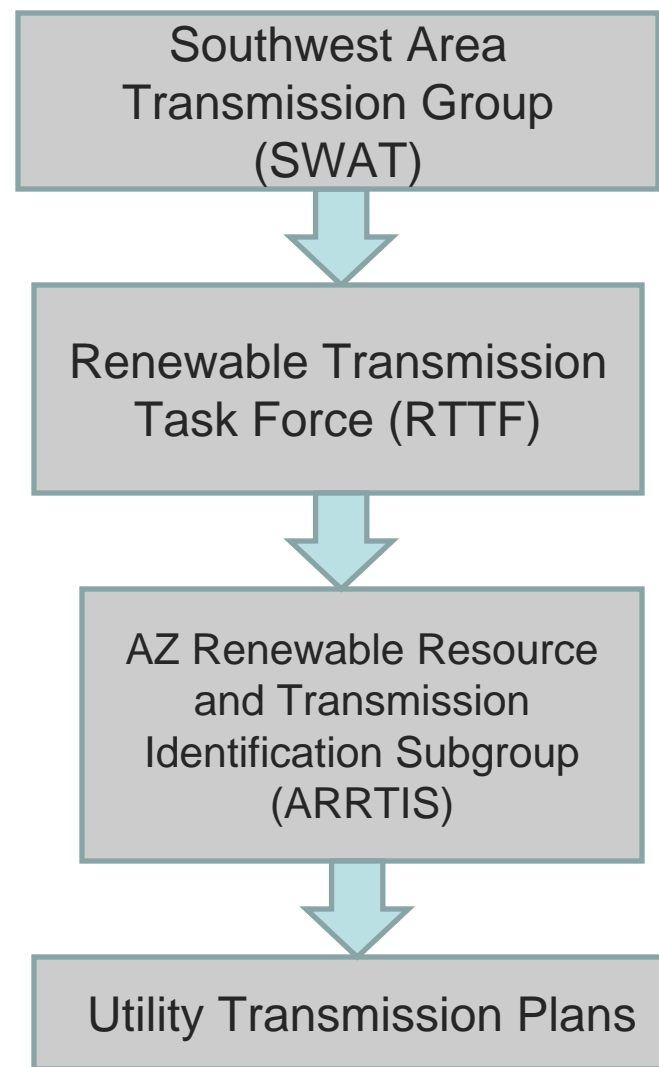
Arizona Public Service

June 3, 2010



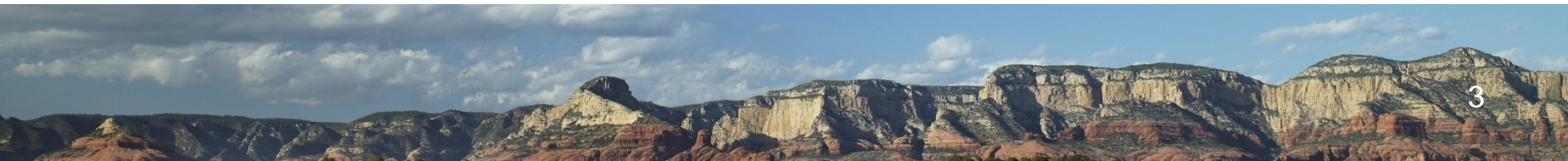
Arizona Statewide Planning

In December of 2008, the ACC approved the Fifth BTA (Decision No. 70635). *The Order* directed Commission-regulated utilities to “take the results of the Arizona Renewable Transmission Task Force and.....**identify the top three potential renewable transmission projects in its service territories**” and “**propose funding mechanisms to construct the top three renewable transmission projects.**”



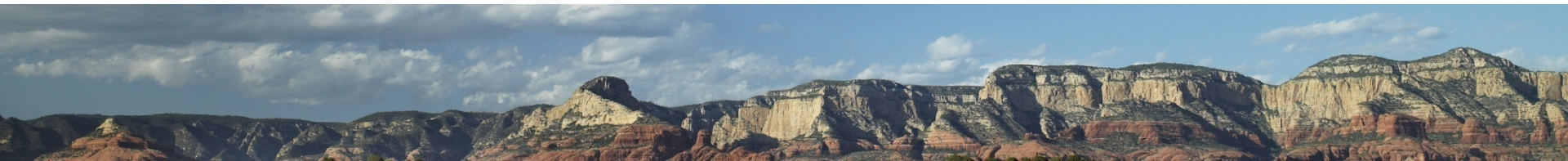
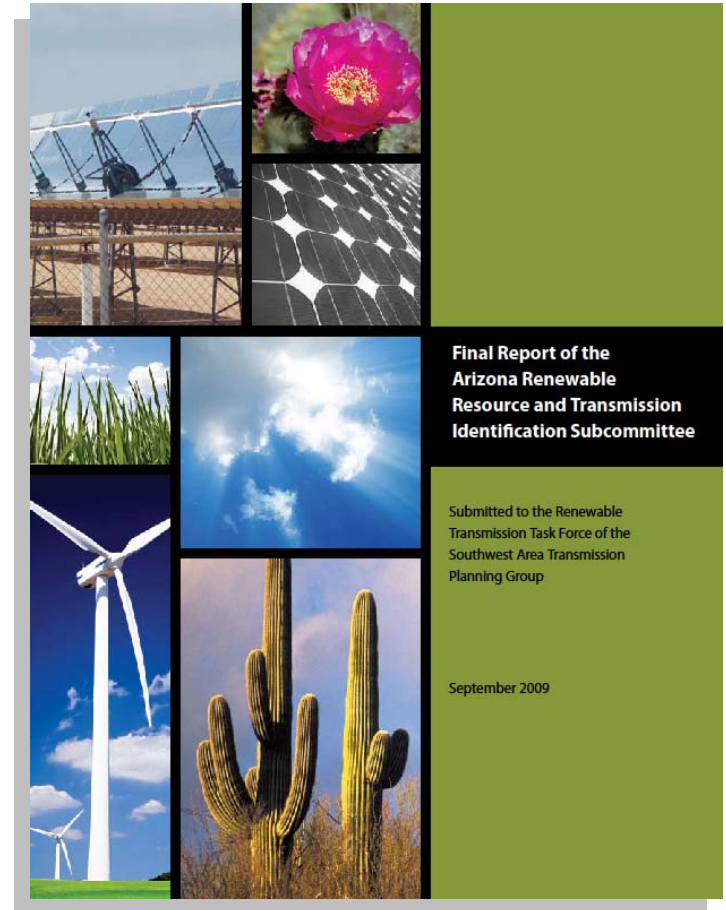
ARRTIS Background

- Established by SWAT RTTF in January 2009
- 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 5th BTA Order



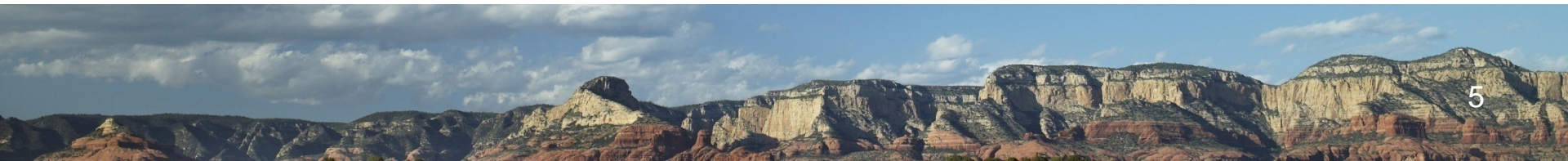
ARRTIS Participants

- Federal Agencies
- State Agencies
- Indian Reservations
- Electric Utilities
- Development/Tech Companies
- Environmental Interests
- Universities
- Legal

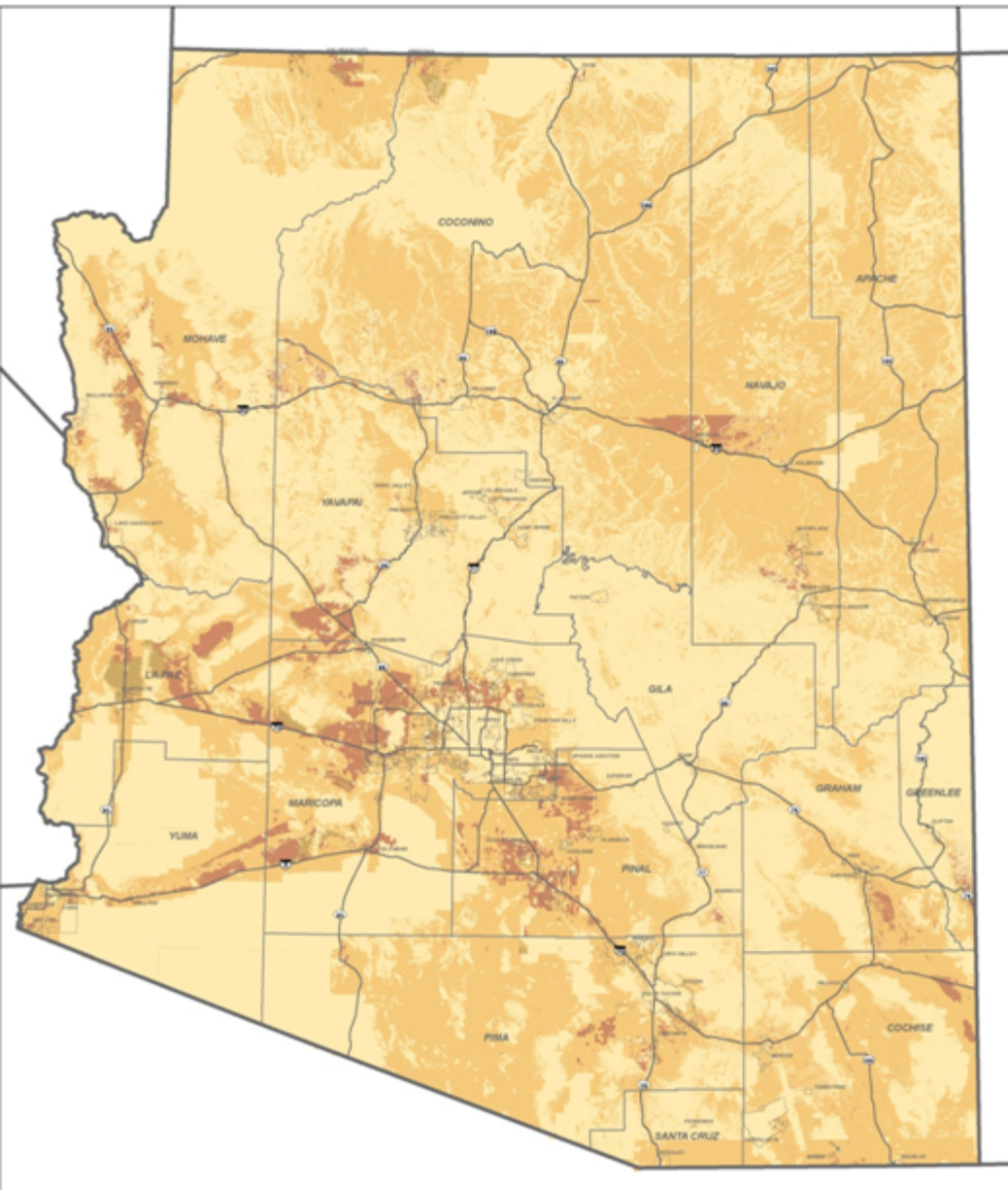


ARRTIS Process

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, and ultimately utilities, for identification of transmission options



ARRTIS Final Sensitivity Map



ENVIRONMENTAL EXCLUSION AND SENSITIVITY AREAS

- Exclusion - Includes areas greater than 5% Slope
- High Sensitivity
- Moderate Sensitivity
- Low Sensitivity

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GENERAL REFERENCE

- Interstate/Highway
- Major Road
- City Boundary
- County Boundary
- State Boundary

SOURCES

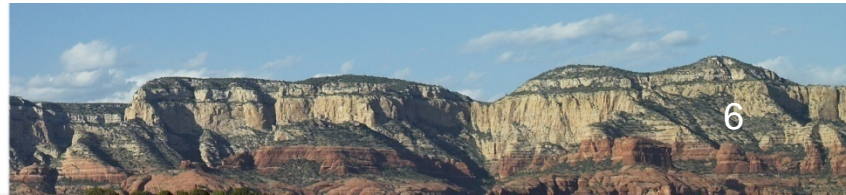
ASLD, AGFD, BLM, NREL, USFS, USFWS, USGS, WREZ, 2009

This map is a draft product only and has not been reviewed or approved by the Southwest Area Transmission Oversight Committee or its Renewable Transmission Task Force and represents secondary data provided by the sources listed above as of May 2009.

ENVIRONMENTAL RESOURCE EXCLUSION AND SENSITIVITY AREAS

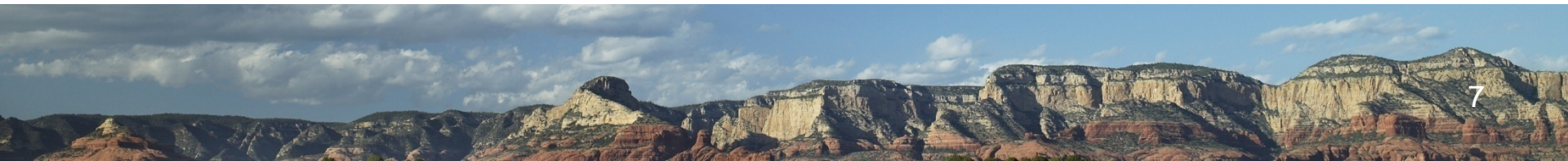
ARRTIS - ARIZONA RENEWABLE RESOURCE AND TRANSMISSION IDENTIFICATION SUBCOMMITTEE

DRAFT: June 8, 2009

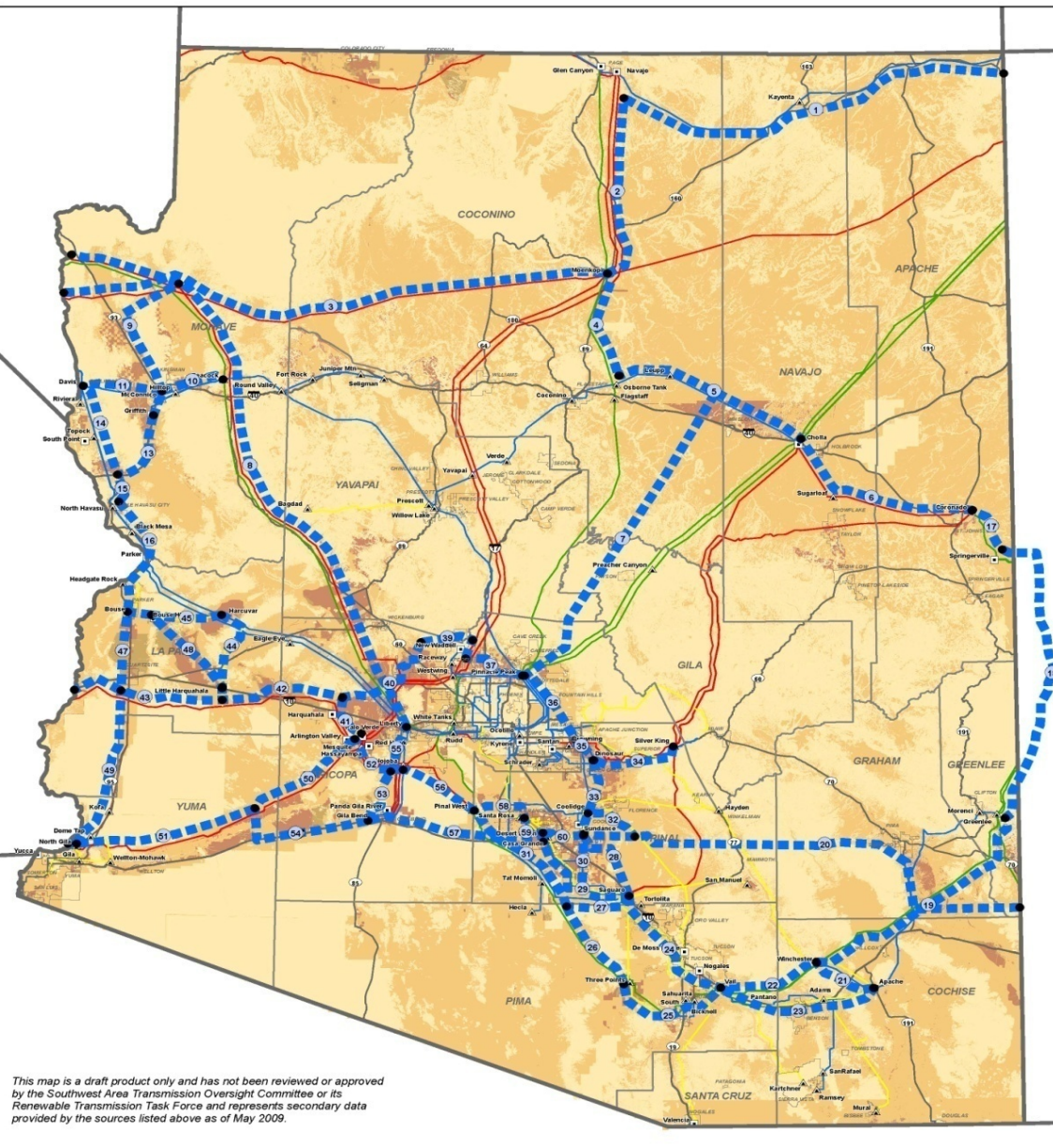


RTTF Analysis and Transmission Options

- Utilized ARRTIS base data to identify likely renewable resource development areas
- Developed conceptual renewable transmission options for:
 - in-state resource development
 - import/export
- 2,800 miles of options identified for consideration by utilities



RTTF Final Transmission Options Map



UTILITY FACILITIES

- RTTF Proposed New Transmission/Upgrades
- 500kV Transmission Line
- 345kV Transmission Line
- 230kV Transmission Line
- 161kV Transmission Line
- 138kV Transmission Line
- 115kV Transmission Line
- Power Plant
- Pumping Plant
- Substation

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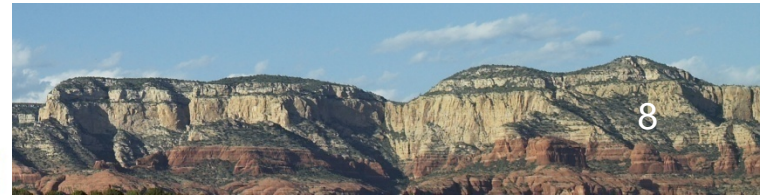
SOURCES

ASLD, AGFD, BLM, NREL, USFS, USFWS, USGS, WREZ, 2009

ENVIRONMENTAL RESOURCE EXCLUSION AND SENSITIVITY AREAS (SOLAR)

ARTIS - ARIZONA RENEWABLE RESOURCE AND TRANSMISSION IDENTIFICATION SUBCOMMITTEE

DRAFT: June 18, 2009



Additional Information

www.westconnect.com/planning_swat_rttf.php

- RTTF studies and meeting information
- ARRTIS presentations, maps, and final report
- Finance Subcommittee presentation and reports

