

Western Renewable Energy Generation and Transmission

And the Western Renewable Energy Zone Initiative



**National Association
of Regulatory Utility
Commissions**

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**WESTERN RESOURCE
ADVOCATES**

Outline

1. About Western Resource Advocates
2. Regional renewable energy overview

3. Western Renewable Energy Zone (WREZ) Initiative



Western Resource Advocates

- sustainable energy policy
- lands and wildlife protection
- water conservation

- seven state

focus:

Montana, Wyoming,
Colorado, New Mexico,
Arizona, Utah and Nevada



Renewable Energy Transmission Solutions:

Smart Lines



The Role of Comprehensive Transmission Planning

Smart lines:

- (1) utilize efficiency/distributed generation *first*;
- (2) maximize current grid assets and existing rights-of-way
- (3) connect renewable energy sources; and
- (4) ensure lands/wildlife protection.

The smartest power line is the one that we don't need to build.

The West's Old Energy Economy



Interior West

2005 Power Generation by Fuel Choice

Coal	66%
Natural Gas	19%
Nuclear	8%
Hydro	6%
Renewables	1%

The West's New Energy Economy

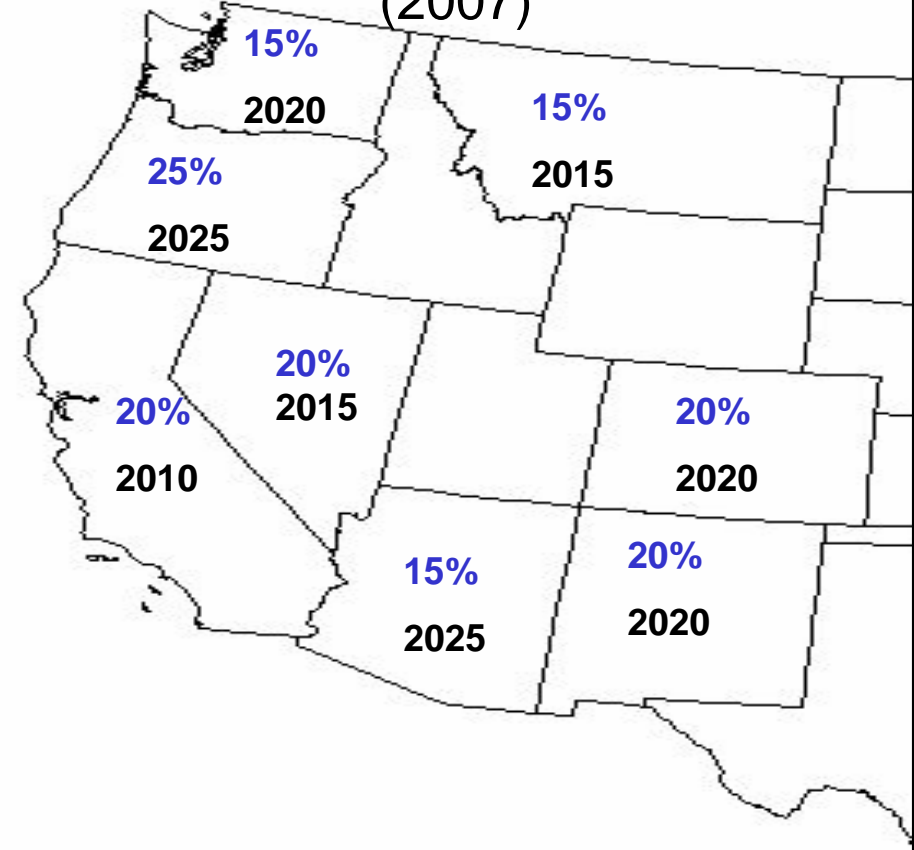
West-wide in 2007:

- 190,000 MW electricity capacity



- 6,785 MW wind
- 500 MW solar
- 3,100 MW geothermal

State Renewable Portfolio Standards (2007)

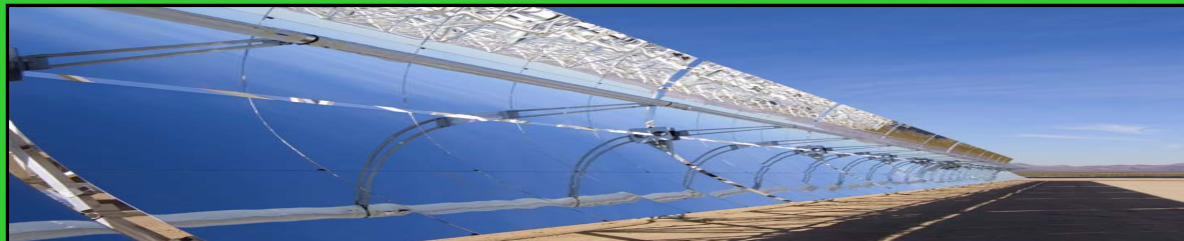


Future Renewable Energy Additions:

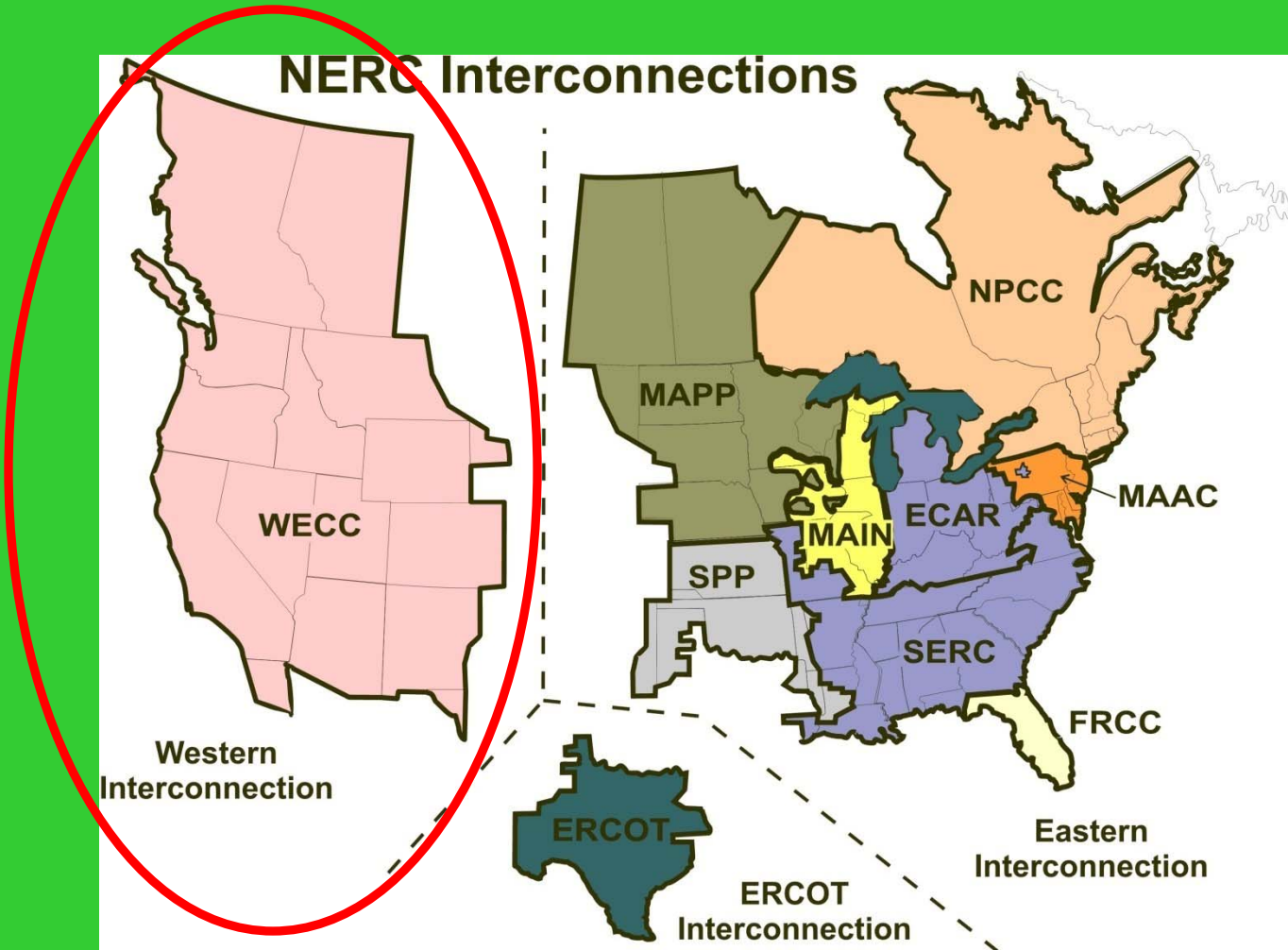
- 2017 RPS minimum: 15,000 MW
- 2025 RPS/other incentives: 30-40,000 MW
- 2025: 70-80,000 MW possible (WGA 2006)

Western Renewable Energy Zone Initiative

“Western Governors have been working together regionally to encourage increased investment in cleaner and more diverse energy sources in the West, but a critical barrier to continued expansion of renewable energy in the region has been the lack of transmission lines to areas with the greatest potential.”



Context – Western Interconnection



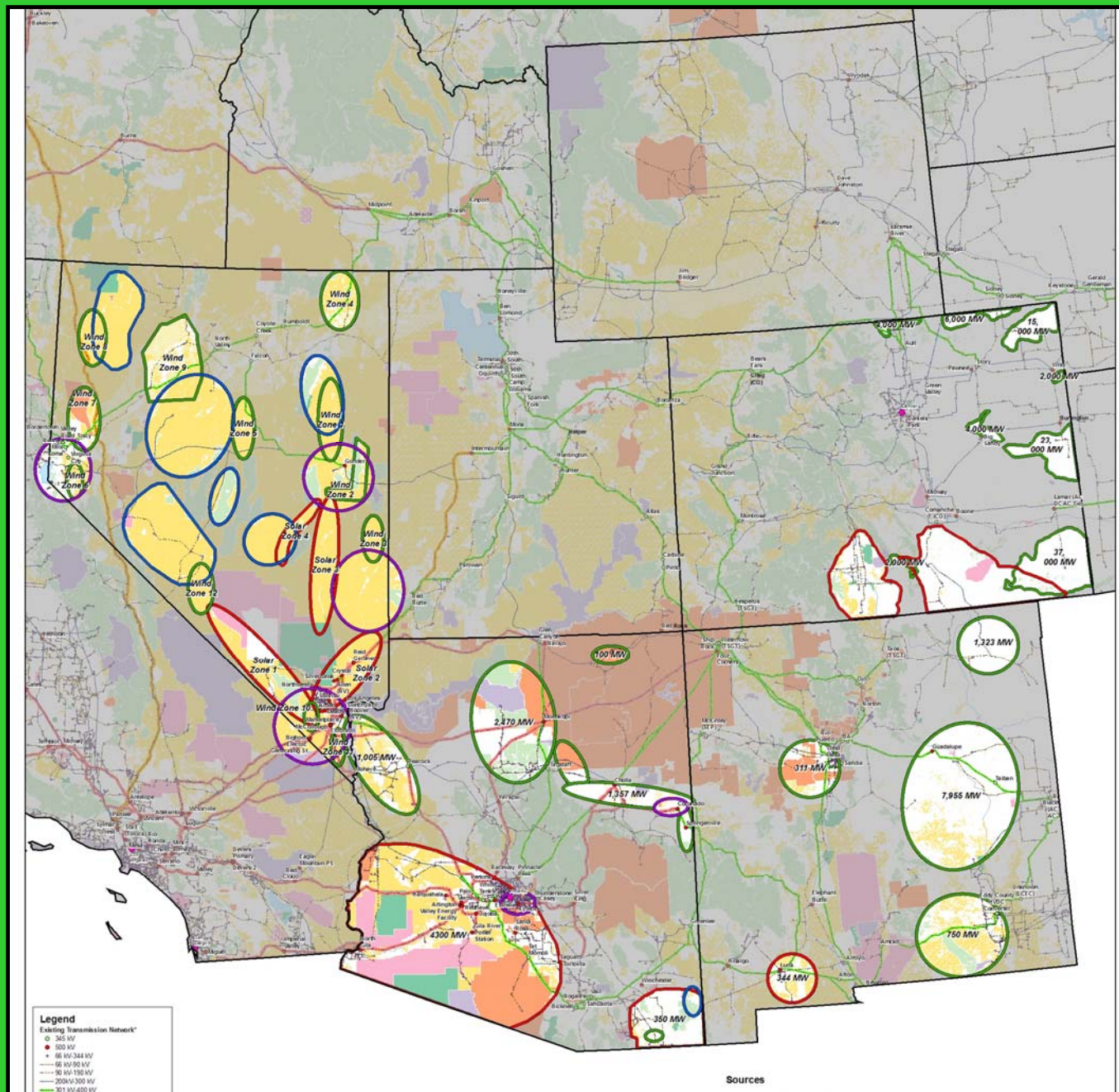
The WREZ effort will help realize the WGA Clean and Diversified Energy Initiative goal of adding 30,000 MW of these resources by 2015.

WREZ Goals

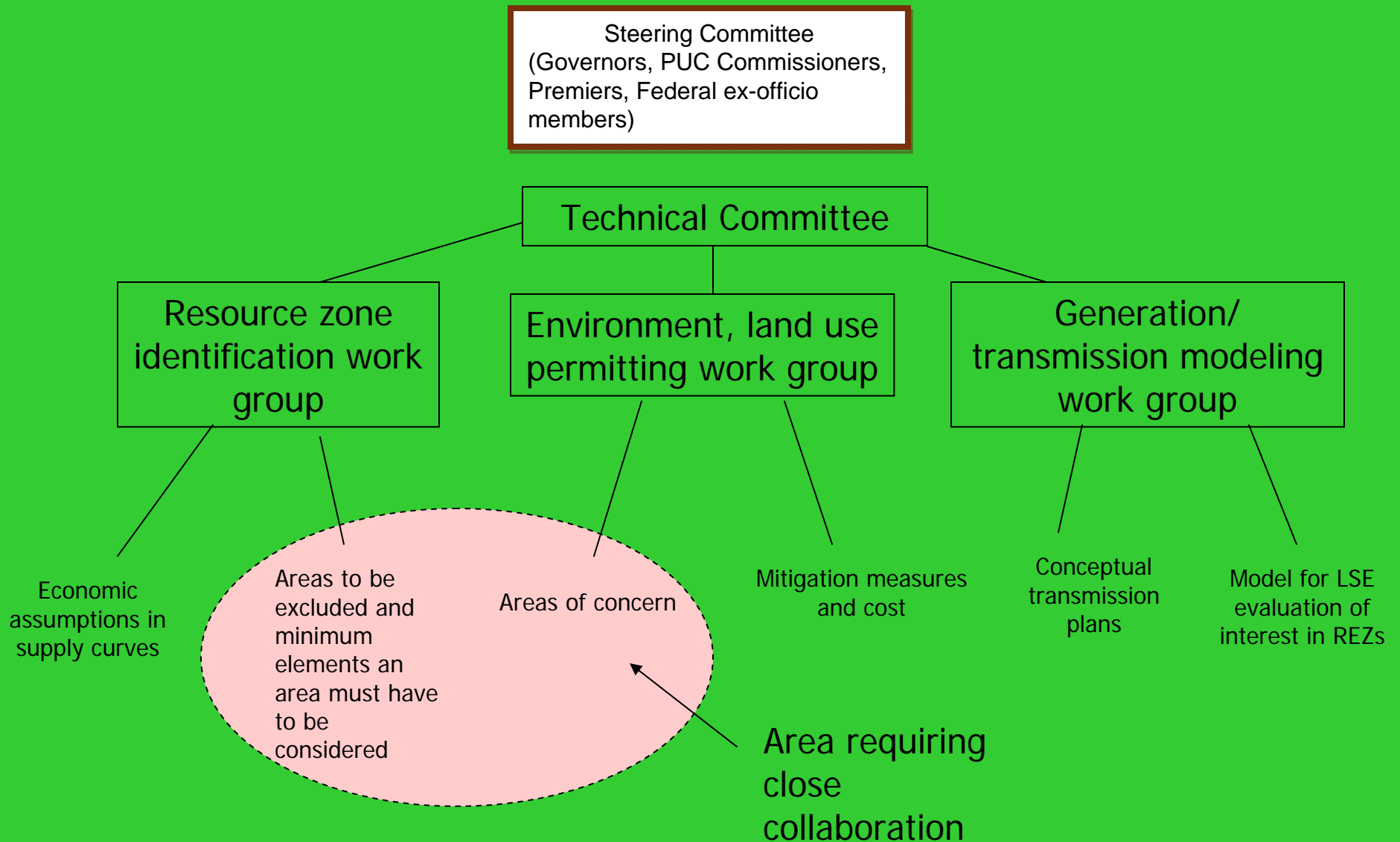
The WREZ Initiative will generate:

- (1) reliable information for use by decision-makers that supports the cost-effective and environmentally sensitive development of renewable energy in specified zones, and
- (2) conceptual transmission plans for delivering that energy to load centers within the Western Interconnection.

Potential RE Zones in Arizona, Colorado, New Mexico and Nevada



WREZ Structure and Work Group Coordination



WREZ Phases

1. Identification of WREZs

- Technical analysis
- Stakeholder “ground truthing”

2. Conceptual transmission from WREZs

3. Coordinated procurement for renewables

4. Institutional options to facilitate interstate transmission for renewables

