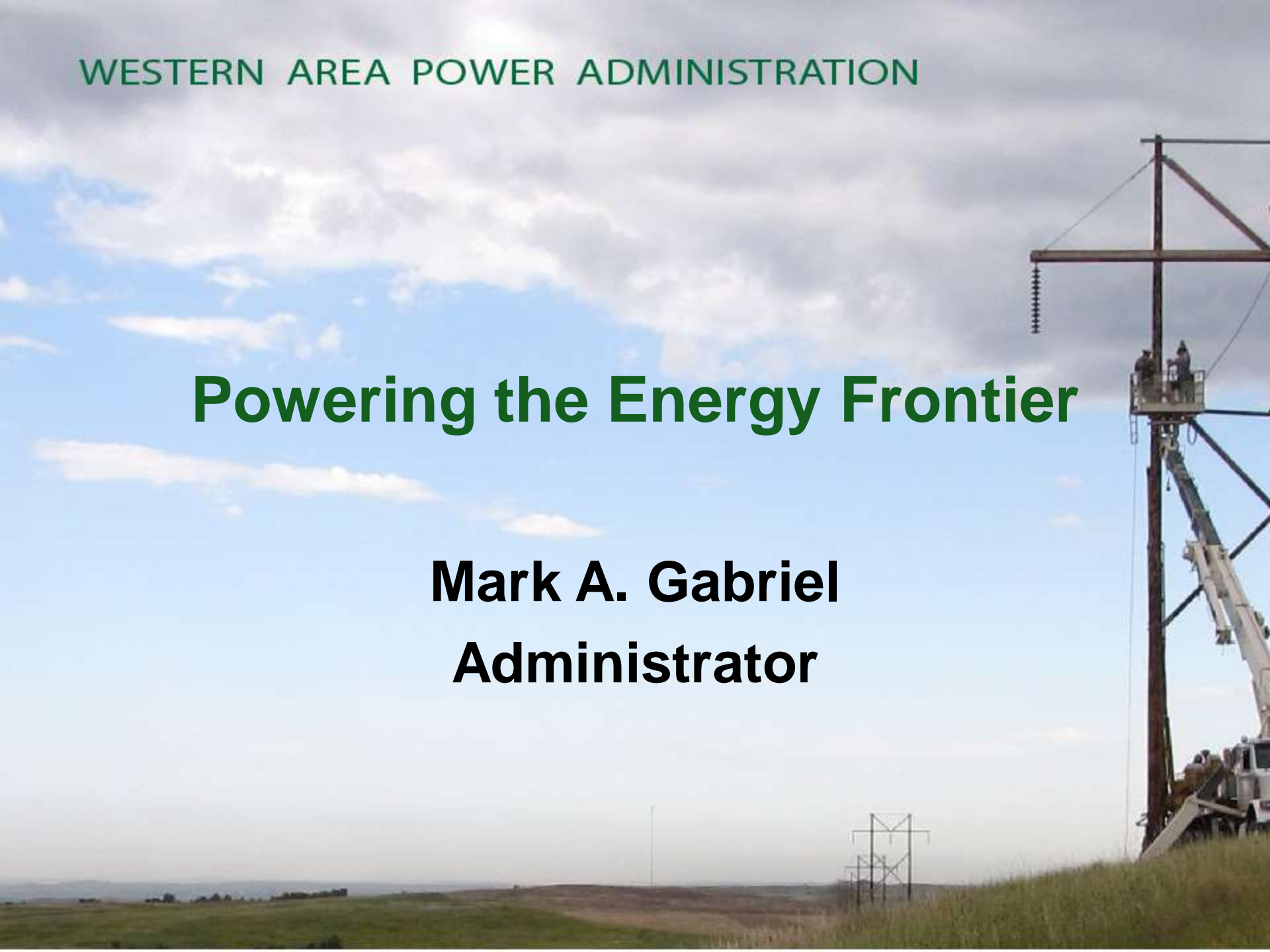


WESTERN AREA POWER ADMINISTRATION

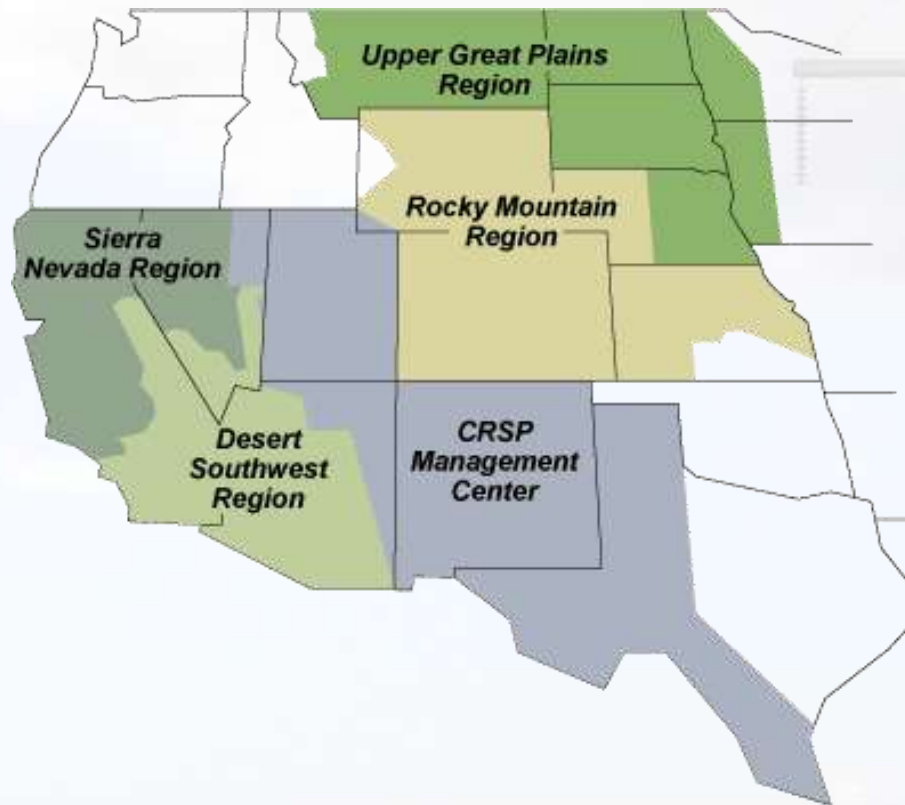
Powering the Energy Frontier

Mark A. Gabriel
Administrator



Western's service territory

- Serving 690 customers from 4 regional offices
- 56 hydropower plants
- 10,505 MW of installed capacity
- Market and transmit 40 billion kilowatt-hours of federal hydropower



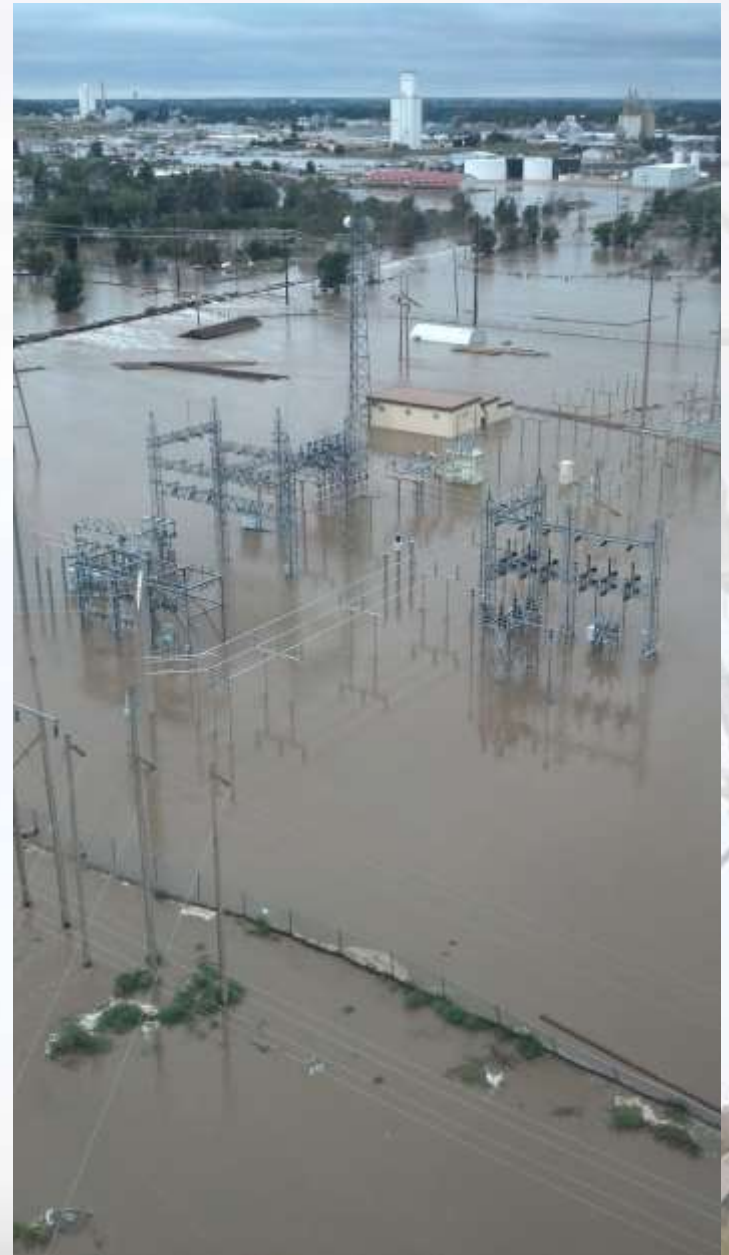
Bulk wholesale transmission

- 17,060 miles of high-voltage transmission lines in 15 states
- Bulk, wholesale transmission



Colorado Flooding

- Sterling Substation
 - Remains energized
 - Serves 26 MW radial load



Colorado Flooding

- Downed structure
 - Xcel
 - Near Ft. Collins, CO
 - Power re-routed



Challenge and Opportunity

- The new energy future
 - Increasing intermittent generation
 - Increasing distributed generation
 - Changing markets
- We must be prepared
 - Technologically
 - Economically
 - Operationally

New Energy Future

- Increasing intermittent generation
- Increasing behind-the-meter generation
- Changing markets
- Transmission system will be operated differently than it was envisioned or constructed.

New Energy Future

- Water/energy/fuel-source nexus
 - Dynamic energy system
 - Market moving to low-carbon economy
 - Mix of fuels for generation is changing and intermittent
- Customer expectations will be different

Five Focus Areas

- Water – Energy nexus
- Reliability
- Operations in a changing market environment
- Becoming a data-driven organization
- Human capital management

Water – Energy Nexus

- Unprecedented low water levels
 - LAP drought moderate to extreme
 - Missouri River
 - Glen Canyon Dam
 - Hoover Dam
 - CVP



Reliability

- Core responsibility
- Challenges include
 - More variable generation
 - Increased distributed generation
 - Stringent NERC compliance
 - Severe storms
- Optimize operation and maintenance of existing system
- Plan and develop new infrastructure



Changing Market Environment

- New market designs are coming to the West
- Changing markets will create opportunities
- Transmission system will be operated differently than
 - Envisioned
 - Constructed



Data-driven Organization

- Line of sight between strategy and reliable system operations
- Ensure assets deliver optimal value in line with goals
- Asset management
 - Comprehensive
 - Systematic
 - Data-driven



Human Capital Management

- Aging workforce
- Growing percentage of retirement eligibles in mission-critical crafts
- New leadership program for mid-level leaders
- New student program
 - Increase pool of young people interested in our industry

Purpose of Strategic Roadmap

- Create vision that can tie together strategy, capital budgets, annual targets and initiatives



Draft Destinations and Definitions



Contact

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