



**WEST and Regional Haze - Past,
Present & Future**

WESTAR-WRAP Meeting

April 24, 2018

Portland, OR

Today's Discussion

- WEST Background
- Evolving landscape for electric utilities and what it means to programs like regional haze
- Significant regional haze issues and activities for WEST going forward

Who Is WEST Associates?

- Regional coalition of 13 cooperative, public and investor-owned electric utilities operating in 13 western states.
- Generates 35 percent of the electricity in 13 western states.
- Delivers 329,000 gigawatt hours of electricity on an annual basis to over 10 million customers.

WEST History

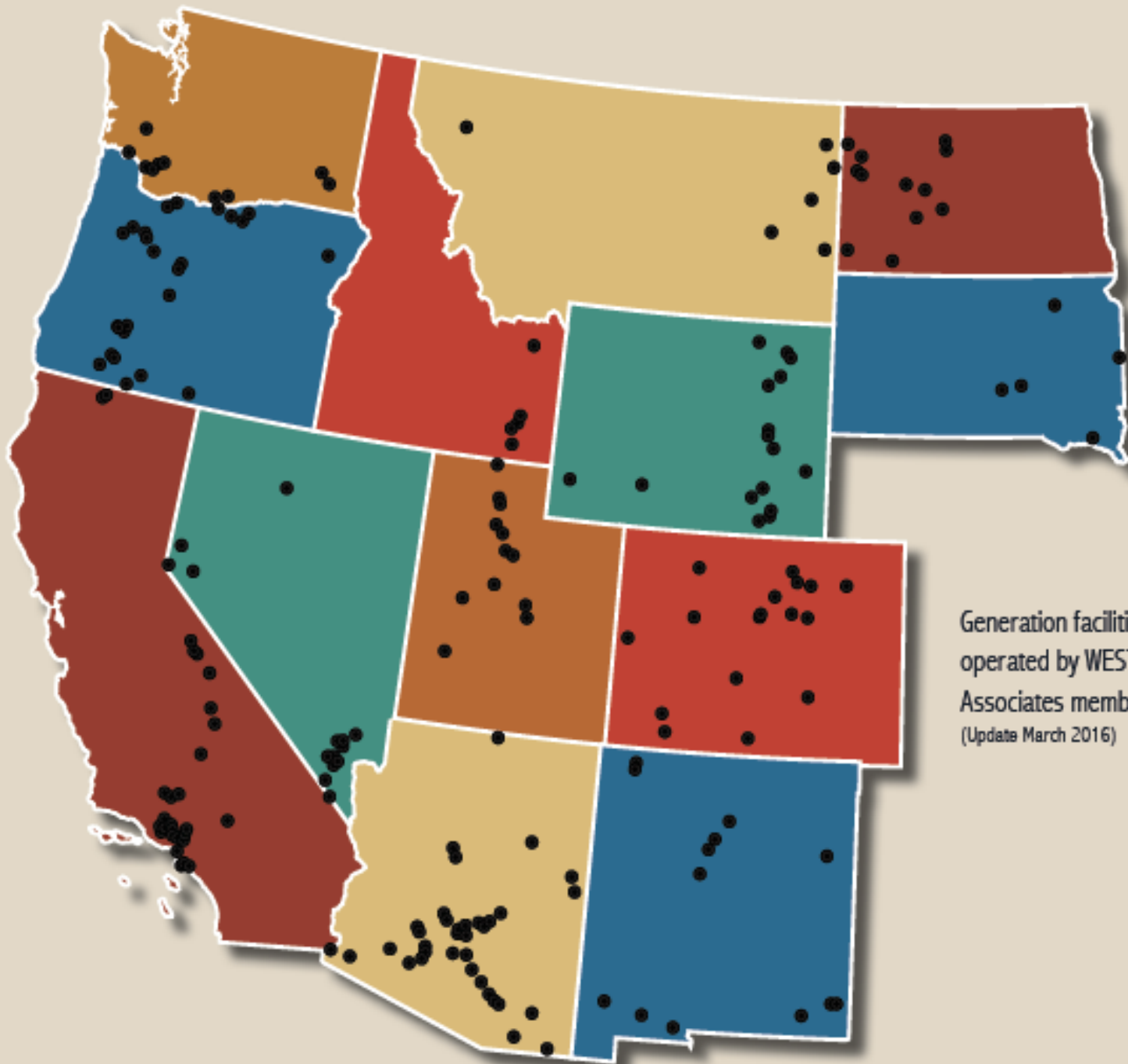
- WEST was founded in 1964 by 10 companies focused on the development of baseload generation and transmission in the western U.S.
- During the 1980s, WEST shifted its focus to emphasize public policy issues.
 - Communicate the perspective of western electric utilities in the debates regarding legislation and regulation.
 - Contribute to the body of technical knowledge concerning significant environmental proposals.

WEST Associates Mission

- Provide a western utility perspective that informs federal public policy;
- Explore western regional solutions that are supportive of western state interests;
- Foster a sound scientific basis for environmental policy;
- Sponsor technical work that improves the formulation and implementation of regulatory policy in the electric sector;
- Partner with western states to promote a strong state role in the development and implementation of federal policy; and
- Promote collaboration to advance ideas and technologies that support sustainable and resilient utility systems.

WEST Member Companies (2018)

- Arizona Electric Power Cooperative
- Arizona Public Service
- Basin Electric Power Cooperative
- Los Angeles Department of Water & Power
- Montana Dakota Utilities Co.
- NV Energy
- PacifiCorp
- PNM Resources
- Platte River Power Authority
- Portland General Electric
- Salt River Project
- Tucson Electric Power
- Xcel Energy, Inc.



Generation facilities
operated by WEST
Associates members.
(Update March 2016)

Regional Haze – Historically A “Signature Issue” for WEST

- Active participants in the Grand Canyon Visibility Transport Commission and Western Regional Air Partnership process to implement §309 of the Regional Haze Rule
- Several WEST companies significantly affected by outcomes on SIPs and FIPs; some remain in litigation
- WEST focus now on the proposed Regional Haze Rule Amendments and Guidance for the 2nd planning period
- But the context is changing

Electricity Generation Trends on the 11-State Western Grid

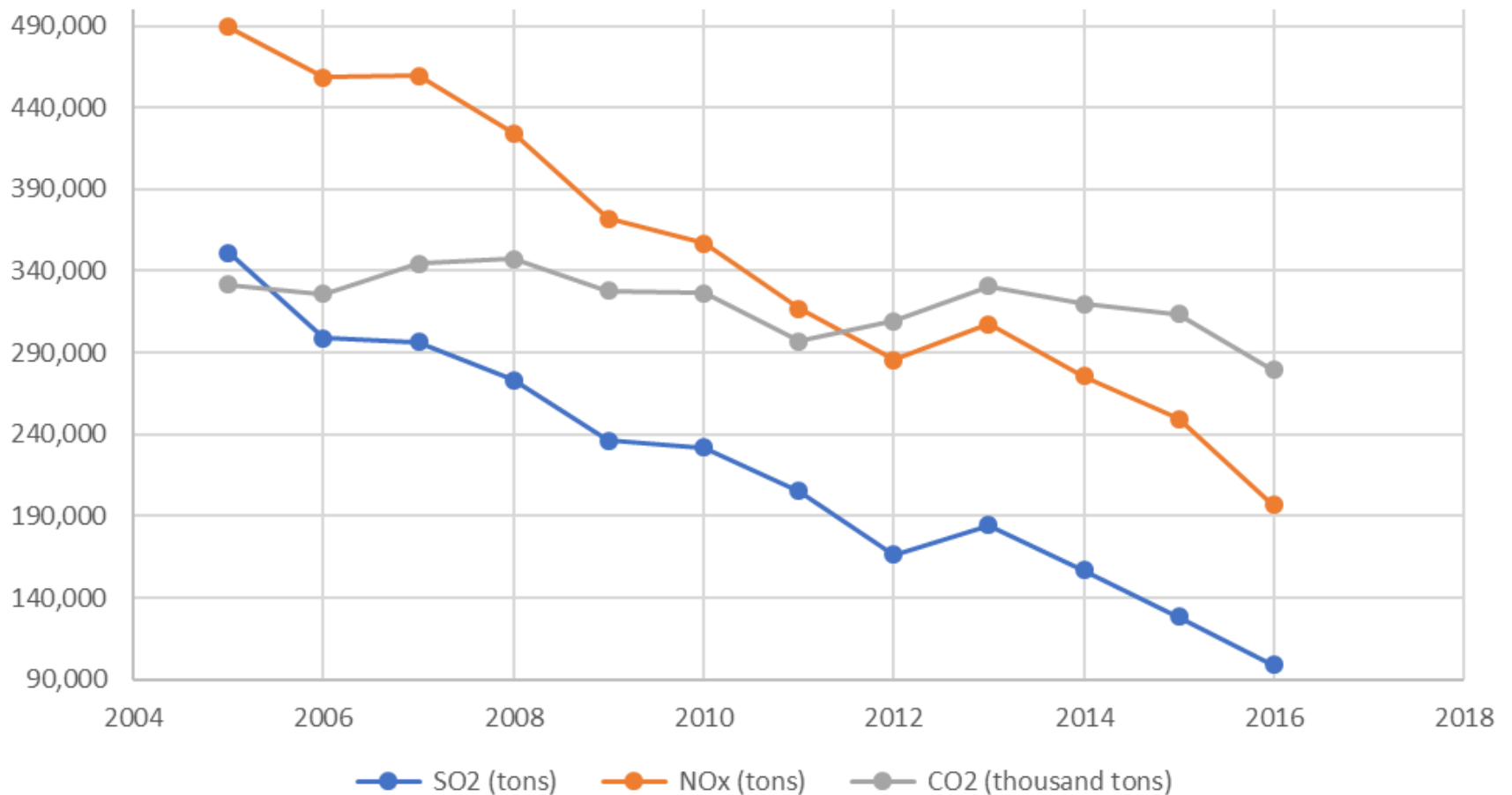
- No increase in total generation since 2008
- 2017 vs. 2008
 - Coal **-26%**
 - Nuclear **-18%**
 - Hydro + Natural Gas **-4%**
 - Renewables **+205% (3X)**

(P. Cummins, CNEE)

Western U.S. Electricity Sector Emissions on the Eleven State Western Grid

Western US Electricity Sector Emissions

Source: US EPA Clean Air Markets Data



Significant Variables for EGUs

- The evolving electricity resource portfolio
 - The future of existing coal generation
 - The role of natural gas
 - The pace and regional distribution of renewable energy development
 - The role of distributed generation
 - The development and deployment of storage
- Electrification of transportation
- State regulatory models
- The nature of the electric grid
- The nature of the western electricity market

Regional Haze Second Decadal Review– WEST Policy Concerns

- Preserving the central role of the states assigned by Congress.
- “Natural conditions” in Class I Federal areas is an important guidepost, but its role needs clarification.
- “BART sources” should not be a focus.
- “Reasonably attributable visibility impairment” (RAVI) should be reconsidered.
- The four factor analysis – role and process.
- Improved focus on the diverse and broad range of significant sources affecting visibility conditions in Class I Federal areas (e.g., smoke, emissions from sources beyond U.S. borders, etc.).

WEST Identified Areas of Concern In the Proposed Guidance

- Corrections and adjustments – the URP, baseline and natural conditions.
- Visibility impairment in “natural conditions.”
- Treatment of international emissions – in need of a methodology.
- Significance of the regional modeling platforms.
- Consideration of visibility in the screening process and the four factor analysis.
- Other aspects of the four factor analysis (e.g., treatment of sources already subject to controls, use of the \$/dv metric, etc.).

WEST Focus Going Forward

1. Support efforts with EPRI and WESTAR
 - a) Second year of support for the EPRI project on the contribution of international emissions to visibility impairment; and
 - b) Support the WESTAR EGU emissions inventory project.
2. Reconsideration of amendments to the regional haze regulations:
 - a) What should be addressed ?
3. Support state primacy consistent with the CAA.

Questions?