



Implementation and Compliance Challenges Associated with the Clean Power Plan 111(d) Regulations - A Western Perspective

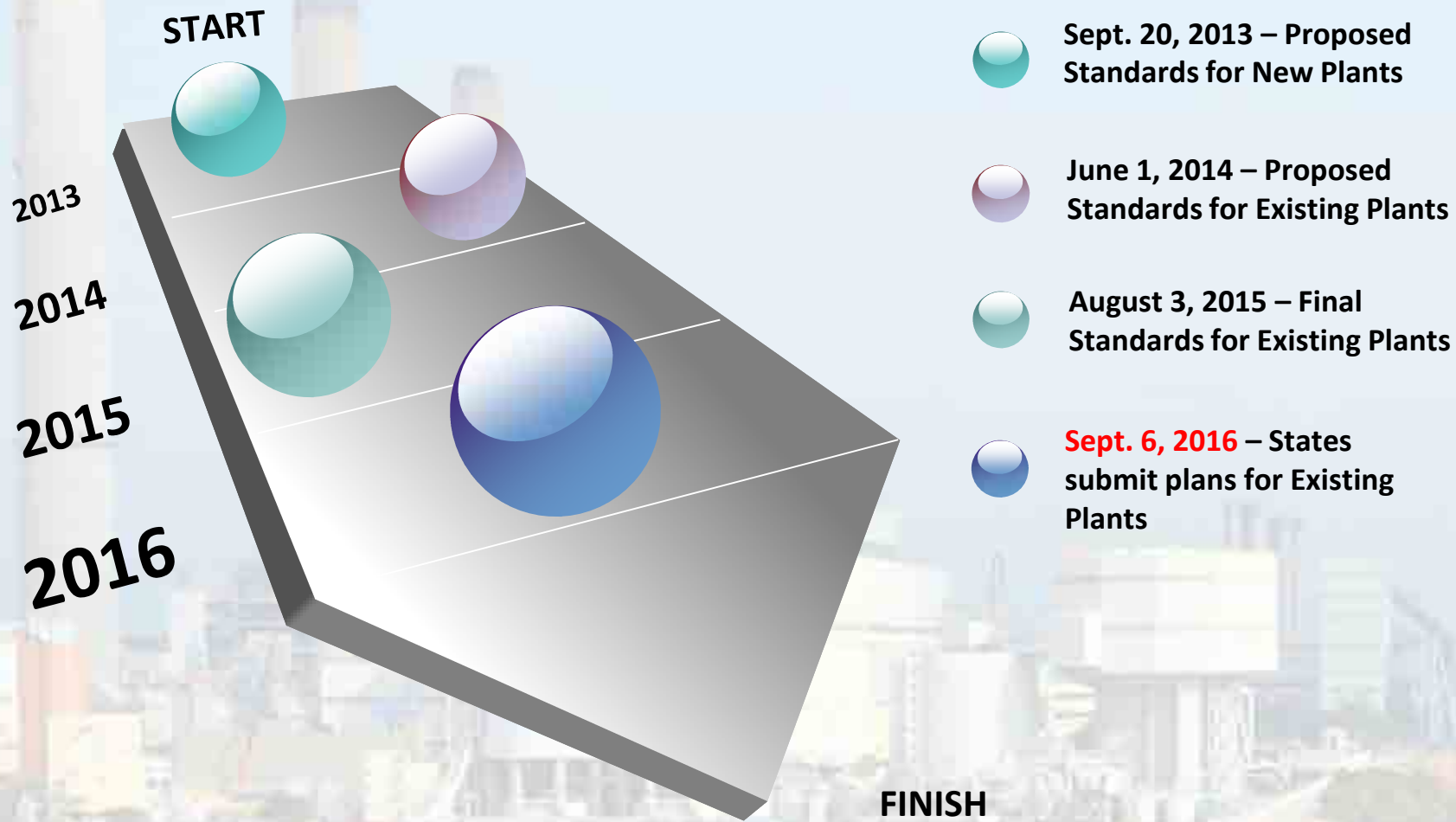
Air & Waste Management Association
Rocky Mountain States Section
August 27, 2015

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Today's Agenda

- Regulatory Timeline
- Applicability
- Building Blocks
- CO₂ Goals
- Plan Development
- Implementation Challenges

Regulatory Deadlines - Completed/Proposed



Clean Power Plan - Source Applicability

1

EGU combusting 250 MMBtu/hr

2

Fossil fuels more than 10 percent

3

CT – over 90% natural gas

4

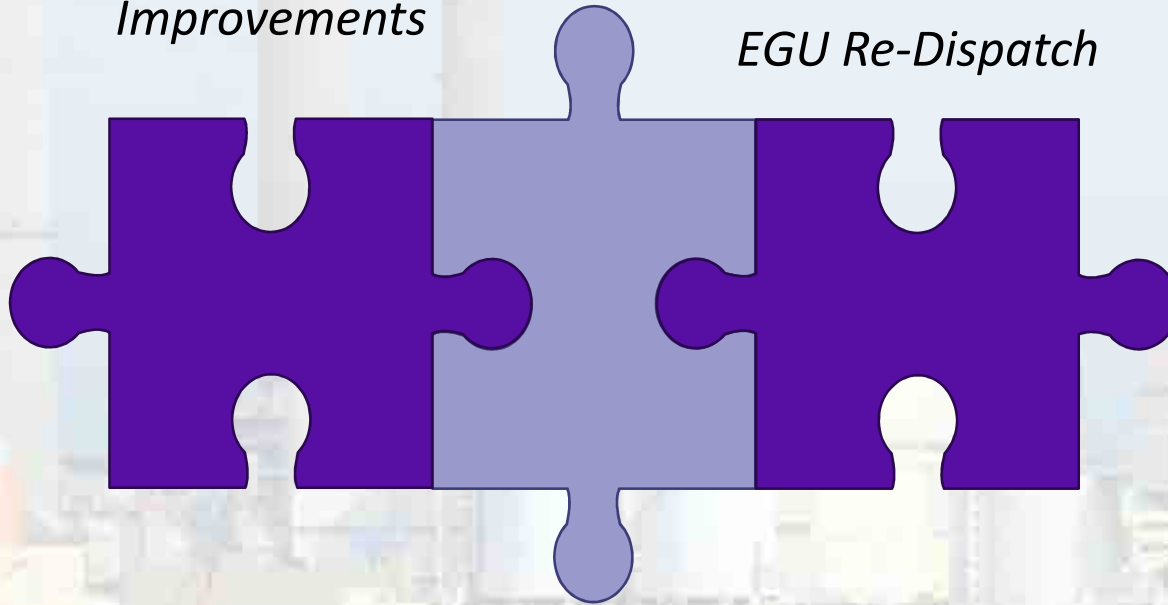
Sells > 219,000 MWh; >1/3 of output

Potential Building Blocks to Meet CO₂ Final Goals

*Heat Rate
Improvements*

*Renewable
Energy*

EGU Re-Dispatch



Changes to Goals



- Two source categories -
 - Steam generating units (1,305 lb/MWh)
 - Combustion turbines (771 lb/MWh)
- Equivalent state goals (both rate-based and mass-based)
- Alaska and Hawaii not included
- Reductions begin in 2022
- Eight-year interim periods
 - 2022-2024
 - 2025-2027
 - 2028-2029
- Final goal in 2030

Proposed State CO₂ Goals

State	Old Final Goal (lbs/MWh)	New Final Goal (lbs/MWh)	Step 1 Goal (lbs/MWh)	Step 2 Goal (lbs/MWh)	Step 3 Goal (lbs/MWh)
Arizona	702	1031	1263	1149	1074
California	537	828	961	890	848
Colorado	1108	1174	1476	1332	1233
Idaho	228	771	877	817	784
Montana	1771	1305	1671	1500	1380
Nevada	647	855	1001	924	877

Proposed State CO₂ Goals

State	Old Final Goal (lbs/MWh)	New Final Goal (lbs/MWh)	Step 1 Goal (lbs/MWh)	Step 2 Goal (lbs/MWh)	Step 3 Goal (lbs/MWh)
New Mexico	1048	1146	1435	1297	1203
Oregon	372	871	1026	945	896
Utah	1322	1179	1483	1339	1239
Washington	215	983	1192	1088	1021
Wyoming	1714	1299	1662	1492	1373

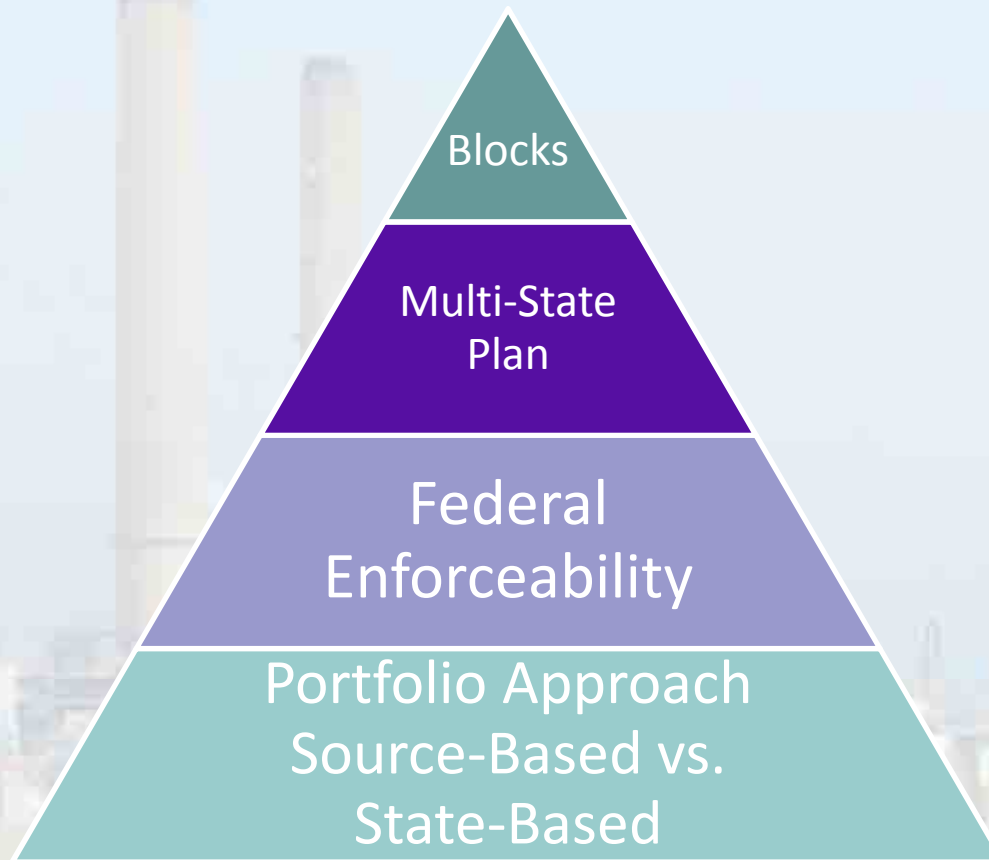
Baseline Emissions Final Goals

State	Old 2012 Baseline Rate (lbs/MWh)	New 2012 Baseline Rate (lbs/MWh)	Final Goal (lbs/MWh)	Total % Reduction
Arizona	1551	1552	1031	34
California	900	963	828	14
Colorado	1959	1973	1174	40
Idaho	858	858	771	10
Montana	2439	2481	1305	47
Nevada	1091	1102	855	22

Baseline Emissions Final Goals

State	Old 2012 Baseline Rate (lbs/MWh)	New 2012 Baseline Rate (lbs/MWh)	Final Goal (lbs/MWh)	Total % Reduction
New Mexico	1798	1798	1146	36
Oregon	1081	1089	871	20
Utah	1874	1874	1179	37
Washington	1379	1566	983	37
Wyoming	2331	2331	1299	44

Plan Development

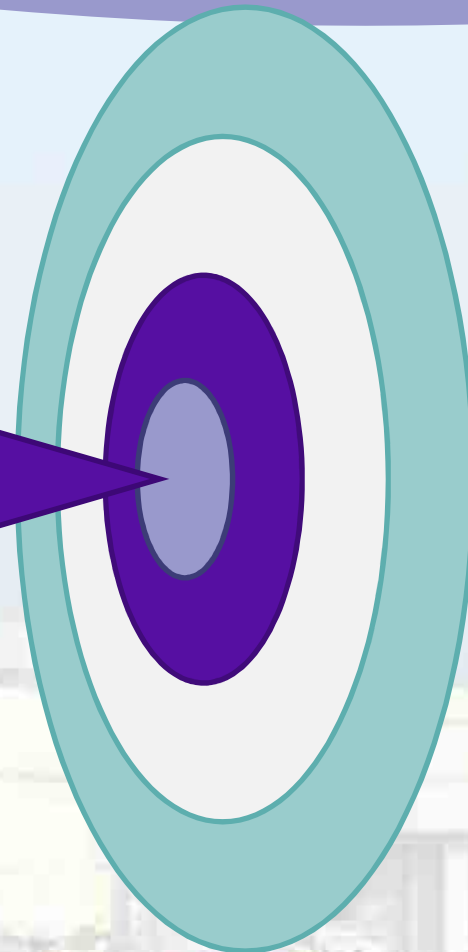


Schedule Challenges

2015 final rule – 2016 plan submittal



Hitting the target date for completing the plan and implementation.

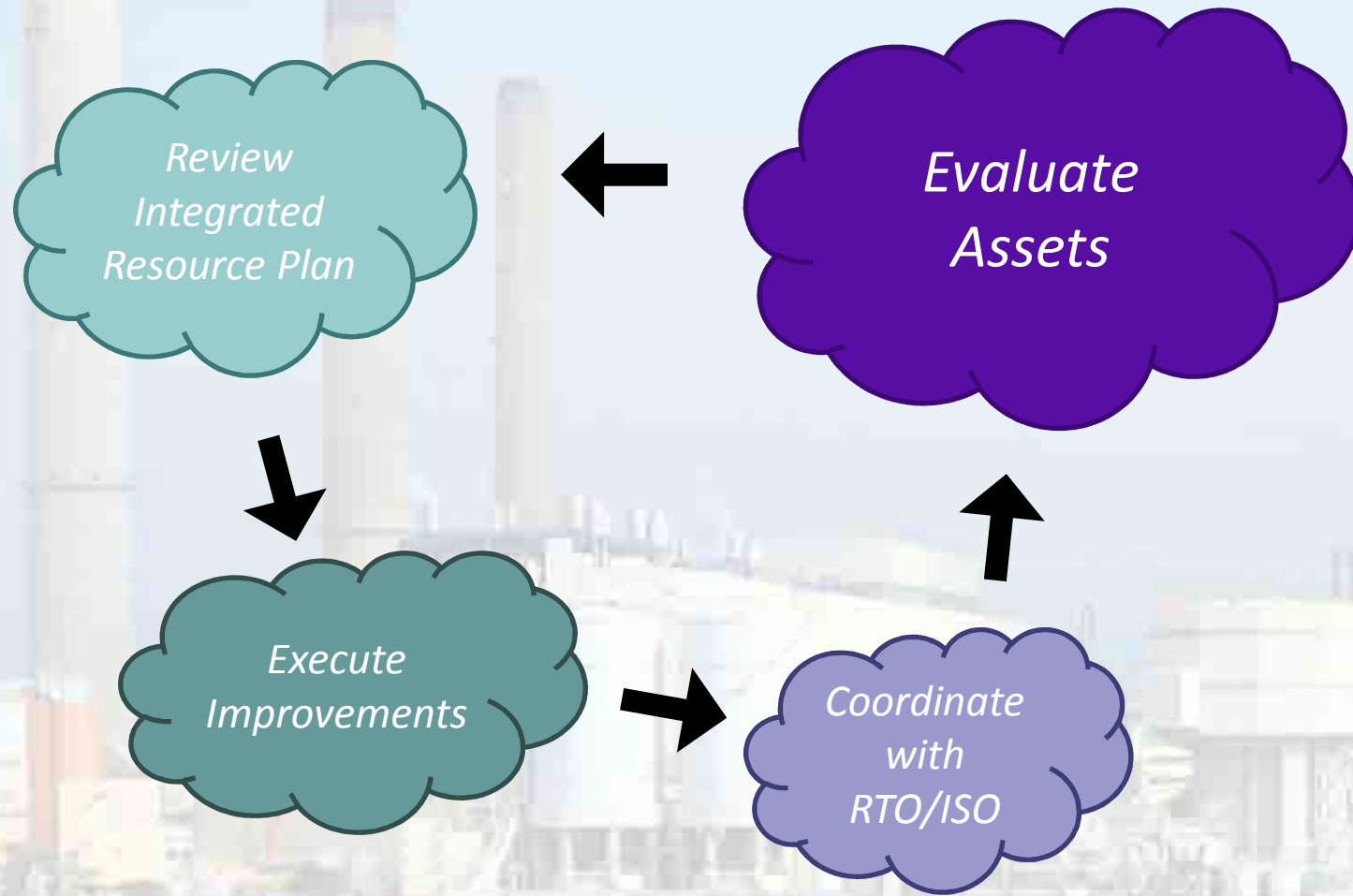


Plan Submittal Extension - September 6, 2018

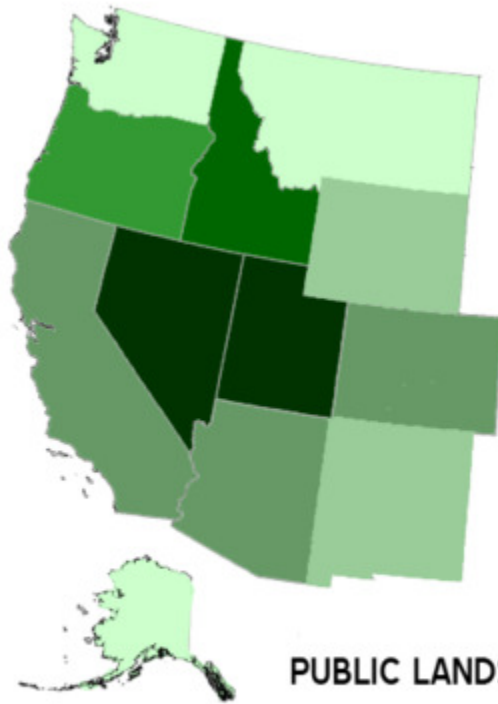
Extension Criteria

Final Plan Approach, Progress to Date	Why Time is Needed	Public Engagement
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Unit Dispatch Changes



Renewable Energy Development



	percentage of total land area	NFS land In million acres (1,000 sq km)	BLM land In million acres (1,000 sq km)
NEVADA	76.1%	5.9 (24)	48.0 (194)
UTAH	70.2%	8.2 (33)	29.9 (121)
IDAHO	60.5%	20.5 (83)	11.9 (48)
OREGON	46.2%	15.7 (64)	15.7 (64)
CALIFORNIA	35.4%	20.8 (84)	15.2 (62)
COLORADO	34.4%	14.5 (59)	8.4 (34)
ARIZONA	32.2%	11.3 (46)	12.2 (49)
WYOMING	29.5%	9.2 (37)	18.4 (75)
NEW MEXICO	29.4%	9.4 (38)	13.5 (55)
MONTANA	26.5%	17.0 (69)	8.0 (32)
ALASKA	25.7%	22.0 (89)	87.0 (352)
WASHINGTON	22.7%	9.3 (37)	0.4 (1.6)

PUBLIC LANDS HELD BY THE NATIONAL FOREST SERVICE AND THE BUREAU OF LAND MANAGEMENT

Source: <http://www.wildlandfire.com/docs/2007/western-states-data-public-land.htm>

CO₂ Emission Reduction Credit



Colorado will not be able to take full credit for positive impacts from its Clean Air, Clean Jobs Act.

Interstate Effects

Idaho (10%)

EGU Improvements

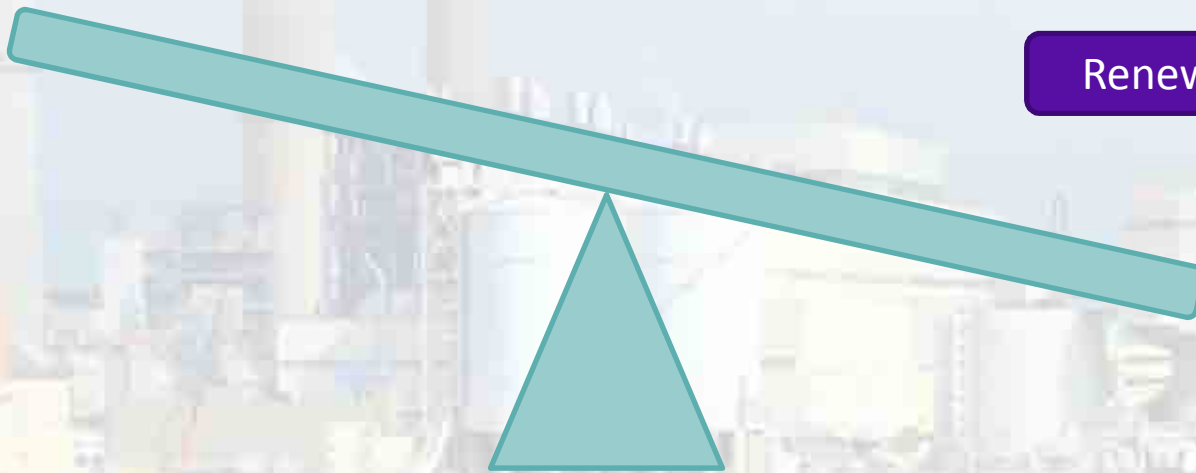
Renewables

Washington (37%)

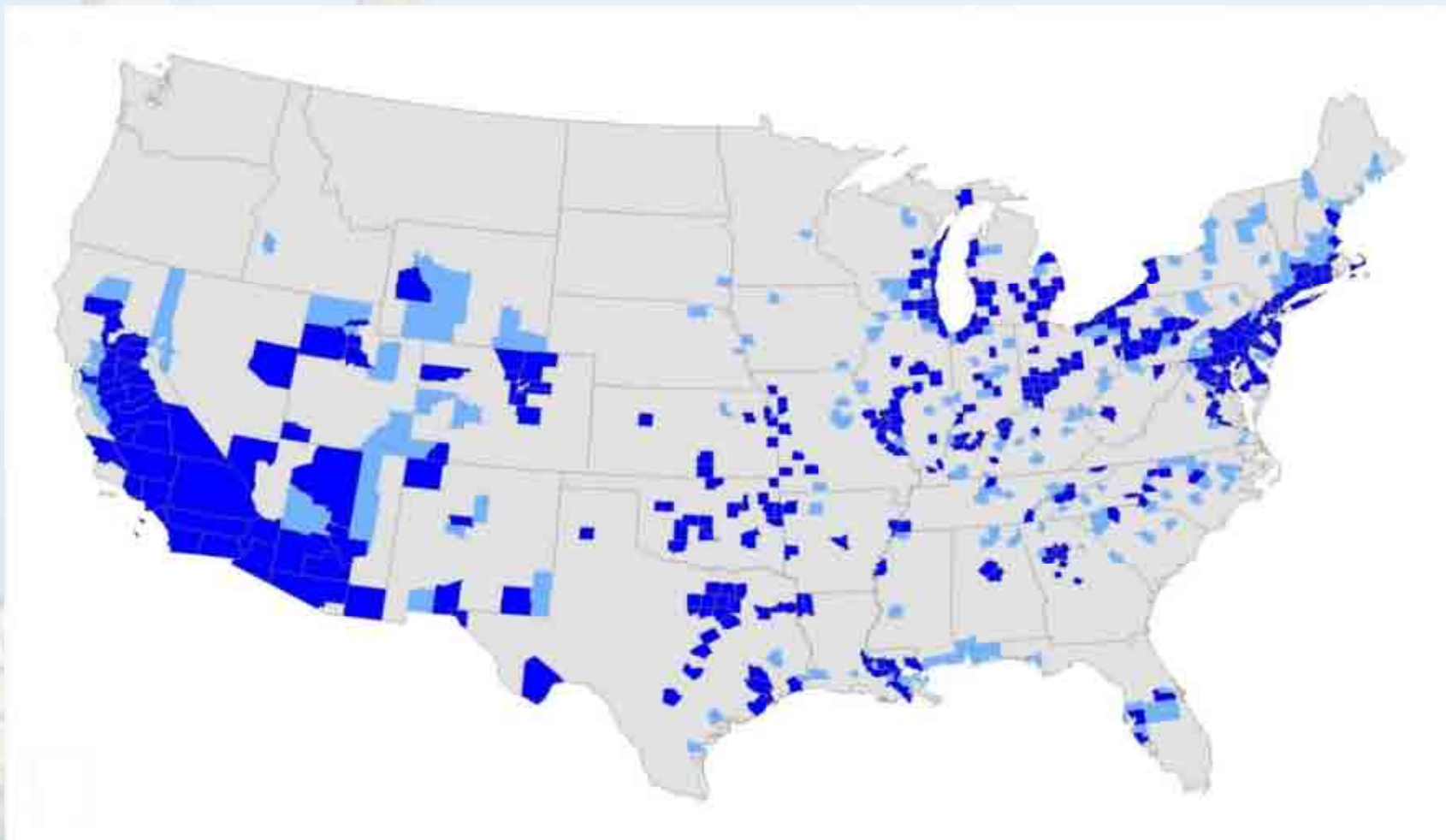
EGU Improvements

Re-Dispatch

Renewables



Proposed Ozone Nonattainment Areas



Thank You

**Do you have
any questions?**

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