

MANE-VU Technical Support Committee Update

OTC/MANE-VU Stakeholder Meeting: April 12, 2016

Hall of the States, Washington, DC

Overview

1. Action Plan & Schedule Updates
2. Inventory/Modeling
3. Contribution Analysis
4. 4-Factor Analysis

Regional Haze SIP Planning Schedule

IMPROVE Data Analysis	<ul style="list-style-type: none"> • Decisions on Methods • Calculations, QA, and TSD 	Complete Fall of 2015
Inventory Development & Analysis	<ul style="list-style-type: none"> • 2028 ERTAC EGU • 2011 Alpha 2 • 2028 Alpha 2 except mobile • 2025 mobile • Emissions Trends Analysis & TSD 	Depends on version Complete Complete Summer 2016 Depends on Changes
Modeling	<ul style="list-style-type: none"> • 2011 Base Case Modeling • 2028 Base Case Modeling • Scenario Modeling • Document Modeling Platform and Results 	Complete Summer & Fall 2016 Fall 2016
Four-Factor Analysis/Contribution Assessment	<ul style="list-style-type: none"> • Qc/d • 2002 Scaling • CALPUFF Assessment • 4-Factors for Sectors • 4-Factors for Sources • Calculate Emissions Reductions 	Summer 2016 Complete TBD Complete Fall 2016 Winter 2016
Updating RPGs	<ul style="list-style-type: none"> • Draft RPGs and Document 	Early 2017
Consultation	<ul style="list-style-type: none"> • Establish Consultation Process • Technical Consultation with FLMs, Contributing States, EPA • Policy Consultation 	Summer 2016 Fall 2016 Winter 2016-17
SIP Submission	<ul style="list-style-type: none"> • Rule Adoption • SIP Submission 	2017-2018 Summer 2018

Inventories

- ▶ **Regional Haze Inventories**

- ▶ 2011 MARAMA Alpha 2
- ▶ 2018 MARAMA Alpha 2 w/2018 EPA mobile
- ▶ 2028 MARAMA Alpha 2 w/2025 EPA mobile

- ▶ **Status:**

- ▶ 2011 is complete
- ▶ 2018 is complete
- ▶ 2028
 - ▶ Projections to 2028 are complete
 - ▶ ERTAC EGU v2.4 is being integrated
 - ▶ Need to run 2025 onroad emission factors through SMOKE-MOVES

Modeling 2028

- ▶ Annual 2028 draft Base Case may begin in May
- ▶ Inventories
 - ▶ Draft ERTAC v2.4
 - ▶ Onroad Mobile from Ozone NAAQS modeling from EPA
 - ▶ MOVES 2010 w/ Tier 3 Adjustments
 - ▶ Overestimates VMT
 - ▶ Completed Alpha 2 for other sectors

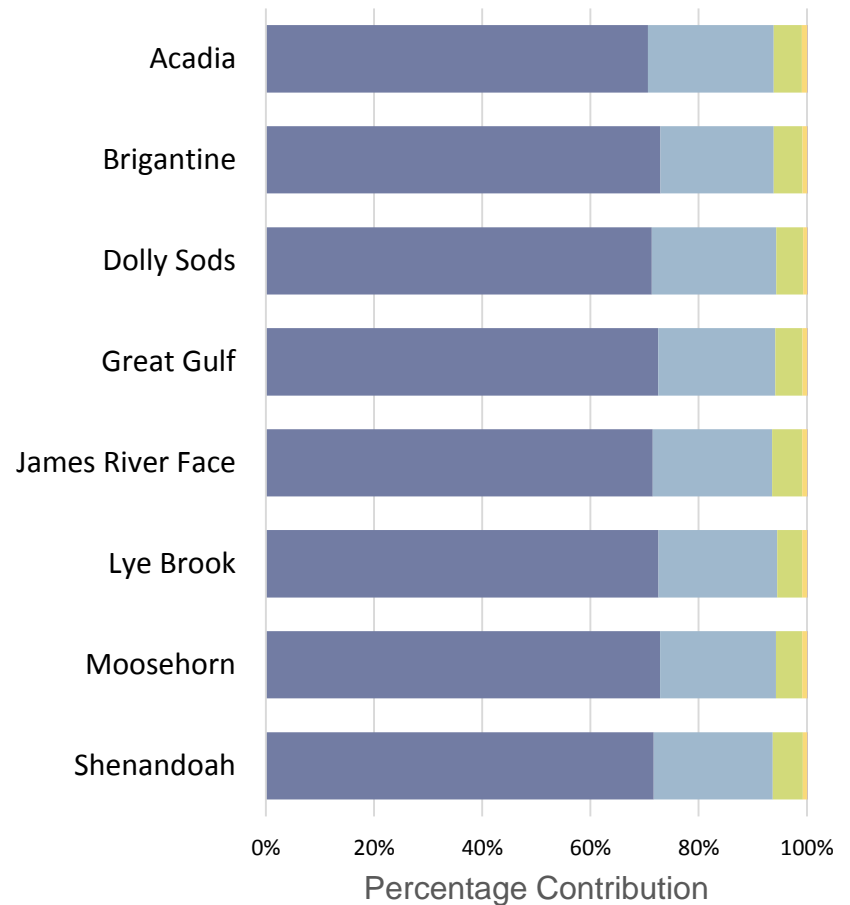
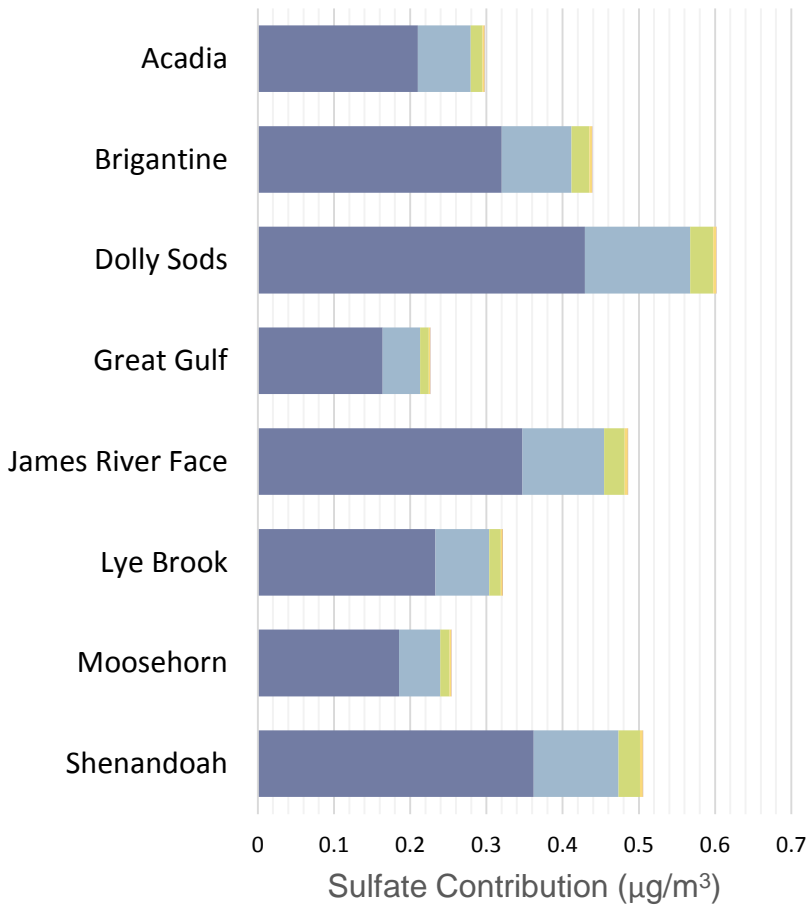
Contribution Assessment Work Plan

- ▶ Analyses to be Completed
- ✓ Met Adjusted Emissions/distance (Q^*c/d)
 - ✓ 2011 State Centroid
 - ✓ 2011 Point Source Location
 - 2018 Point Source Location
- ✓ 2002 SO₂ Ratio Scaling to 2011 & 2014
 - CALPUFF Modeling

Adjusted Q/d

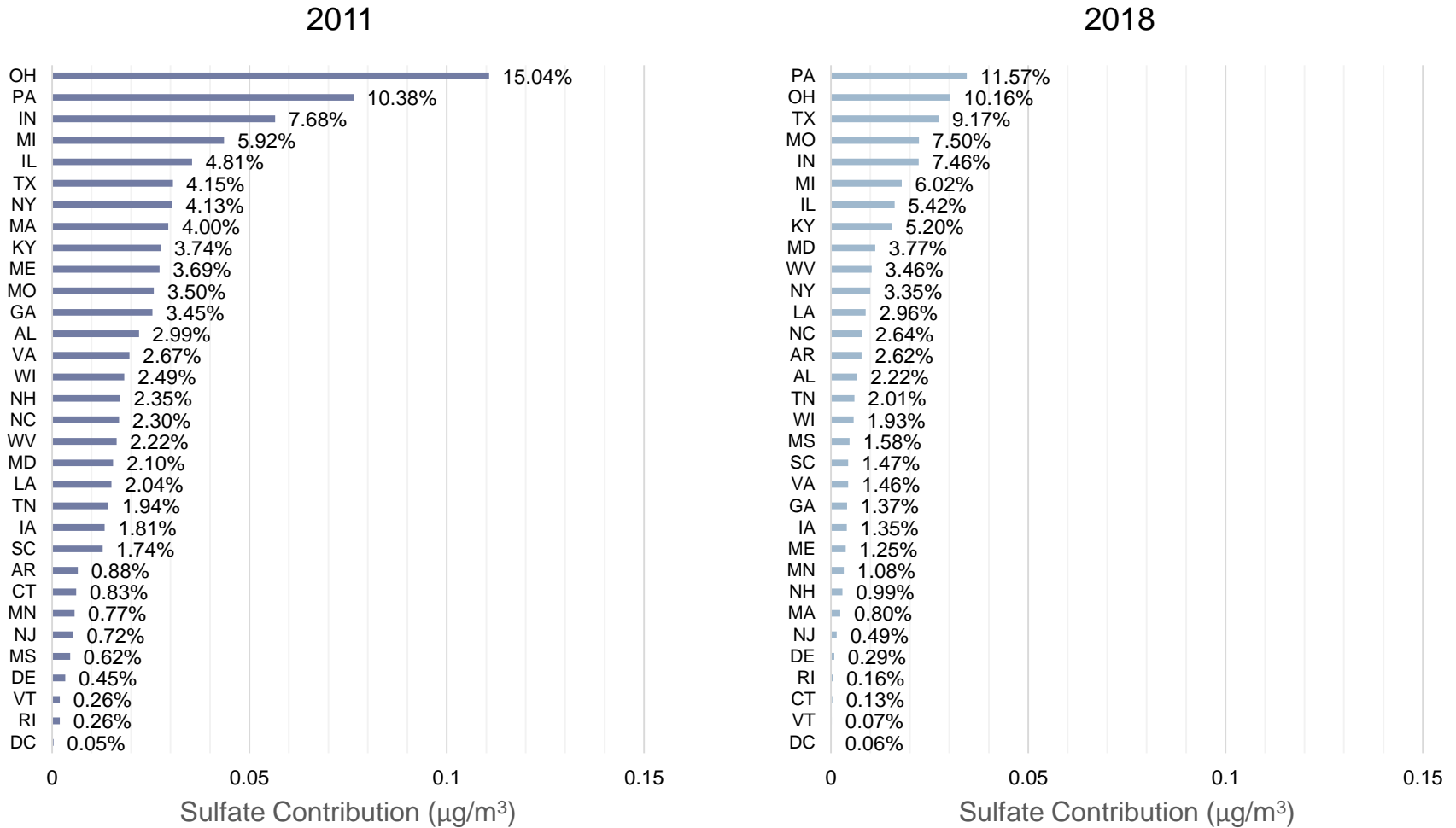
- ▶ Workgroup conducted a Q/d analysis, adjusted by a meteorological factor for Monitored Class I Areas
- ▶ Used the 2011 NEI v2 and 2018 Alpha 2 Inventories
- ▶ Relied on similar methodologies to the NESCAUM reports that looked at the 2002 & 2007 inventories
- ▶ Accepting comments until May 12, 2016

Q/d: 2018 SO₂ Point Source Sector Impact

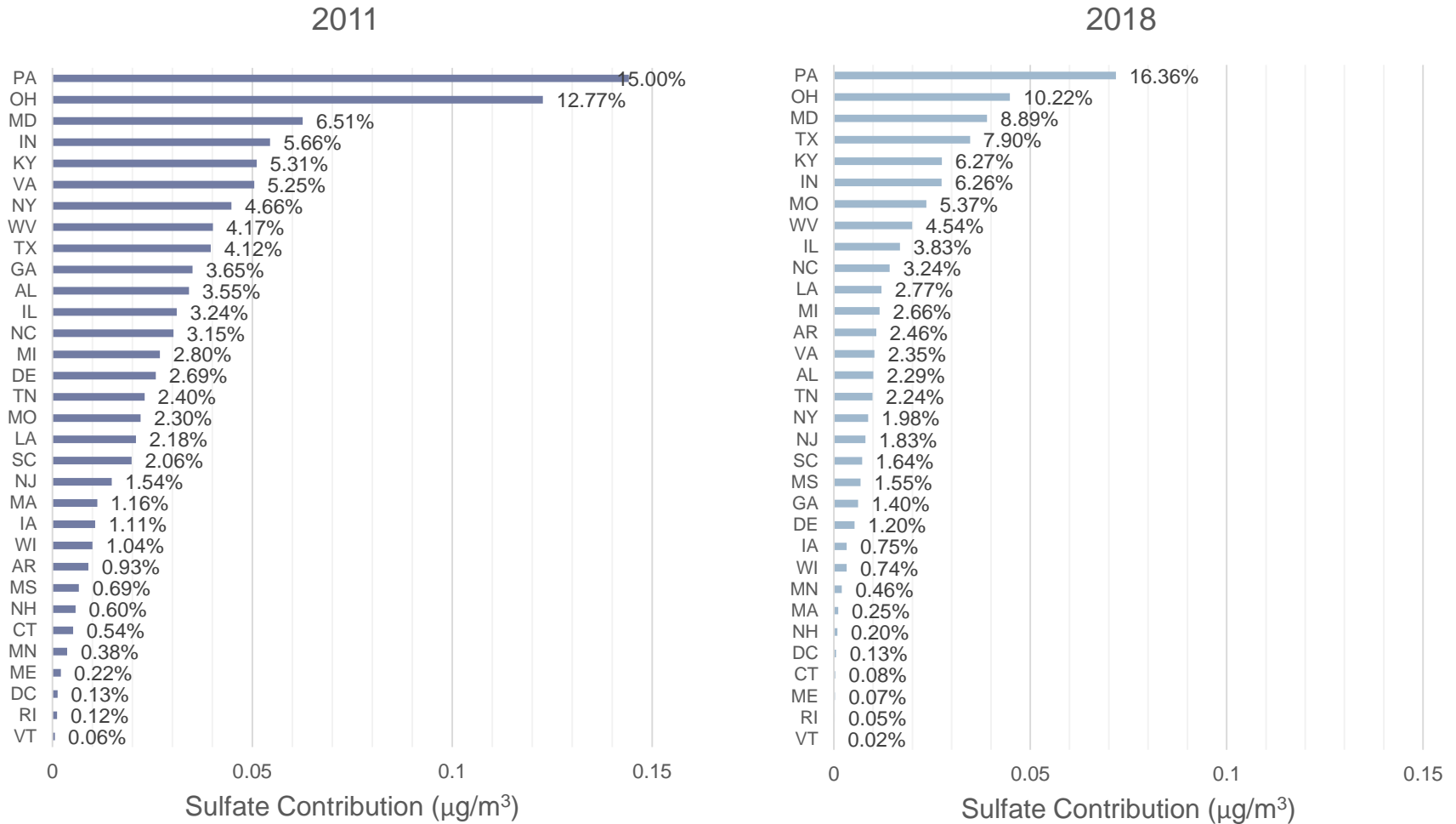


ERTAC EGUs Non-EGU Small EGUs Oil/Gas Ethanol Refueling

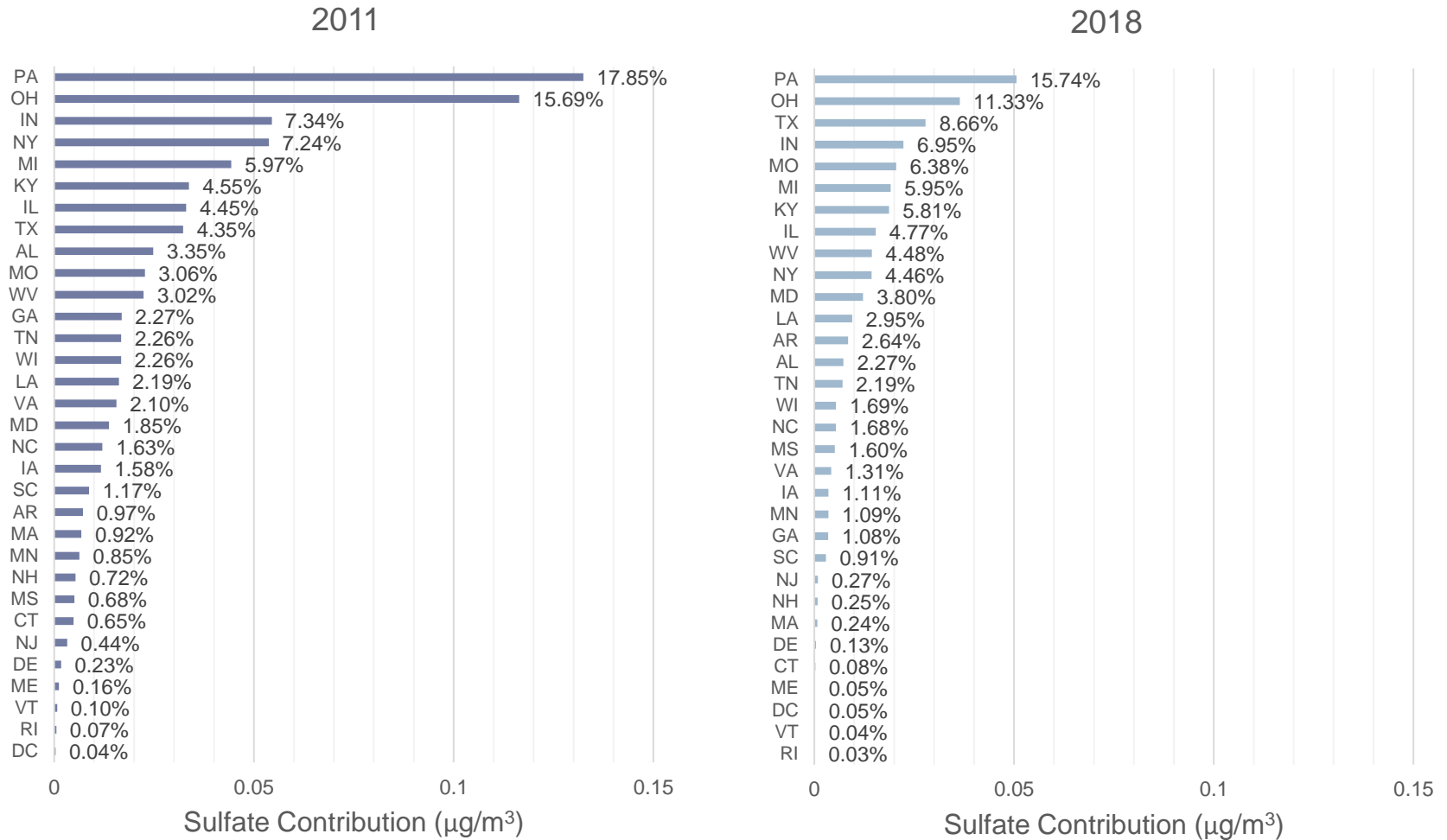
Q/d: State Aggregated Point Source SO₂ Impact on Acadia, ME



Q/d: State Aggregated Point Source SO₂ Impact on Brigantine, NJ



Q/d: State Aggregated Point Source SO₂ Impact on Lye Brook, VT

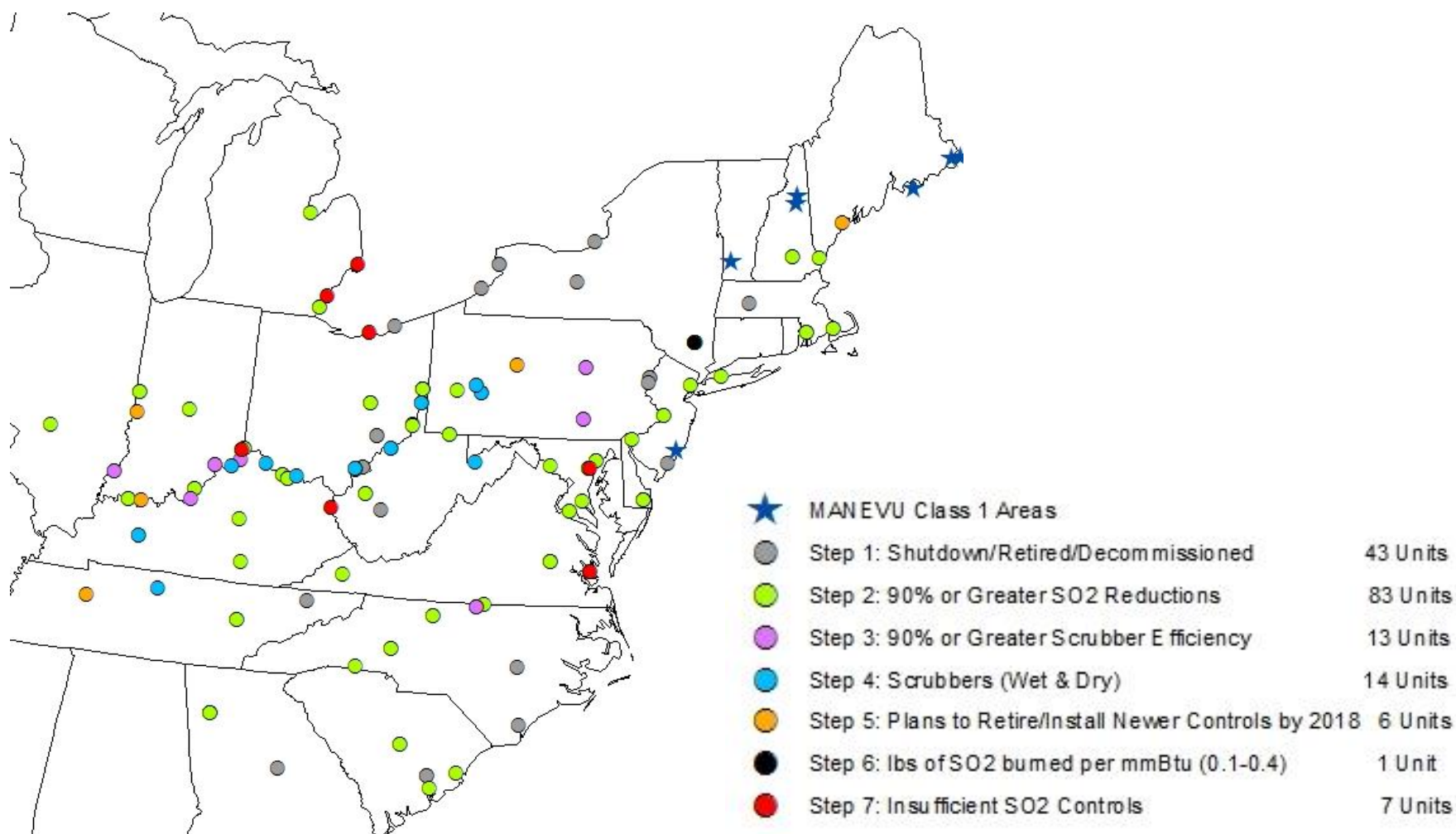


167 Stack Analysis

- ▶ 2008 Contribution Assessment found the 100 EGU stacks that most affected Monitored Class I Areas
- ▶ Resulted in 167 stacks, including duplicates
- ▶ The MANE-VU “Ask” was to reduce SO₂ from the stacks by 90%
- ▶ Reviewed the status of the stacks using 6 criteria
- ▶ Accepting comments until May 12, 2016



167 Stacks: Units



4-Factor Source Sector

- ▶ Collected data needed to conduct 4-factor analyses for the following sectors:
 - ▶ EGUs
 - ▶ ICI Boilers
 - ▶ Heating Oil
 - ▶ Residential Wood Combustion
 - ▶ Outdoor Wood Fired Boilers
- ▶ SO₂ and NO_x controls were considered

4-Factor Industrial Sources

- ▶ Used facility data from 2011 Q/d point sources
- ▶ 2011 aligns with base year inventory though there are retirements and fuel switches that have occurred
- ▶ Collecting data on top 50 sources that impact each Monitored Class I Area
- ▶ Data collected:
 - ▶ 2011 & 2014 SO₂ Emissions
 - ▶ Installed/Planned Controls
 - ▶ Permit Limits/Consent Decrees
 - ▶ Number and Size of Boilers
- ▶ Accepting comments on controls until May 12, 2016

4-Factor: Status of Data Collection

State	Total 2011 SO ₂	Avg. # of Class I Sites Affected	# of Facilities	# w/ Data Collected
MANE-VU				
MA	629.75	3.000	1	1
MD	24,040.44	2.333	3	2
ME	3,241.30	1.714	7	7
NH	435.94	1.000	2	2
NJ	124.41	1.000	2	2
NY	20,051.38	3.375	8	8
PA	16,609.24	3.385	13	13
LADCO				
IL	16,192.83	5.000	2	2
IN	43,920.93	3.667	12	
MI	9,742.48	3.000	3	
OH	40,272.23	3.909	11	1
VISTAS				
KY	7,688.43	2.333	3	
NC	11,420.96	2.333	3	3
TN	27,431.84	2.667	3	1
VA	8,343.09	2.167	6	6
WV	5,647.92	4.333	3	
Grand Total	235,793.17	3.061	82	46

Questions?

Acadia, ME



Brigantine, NJ

