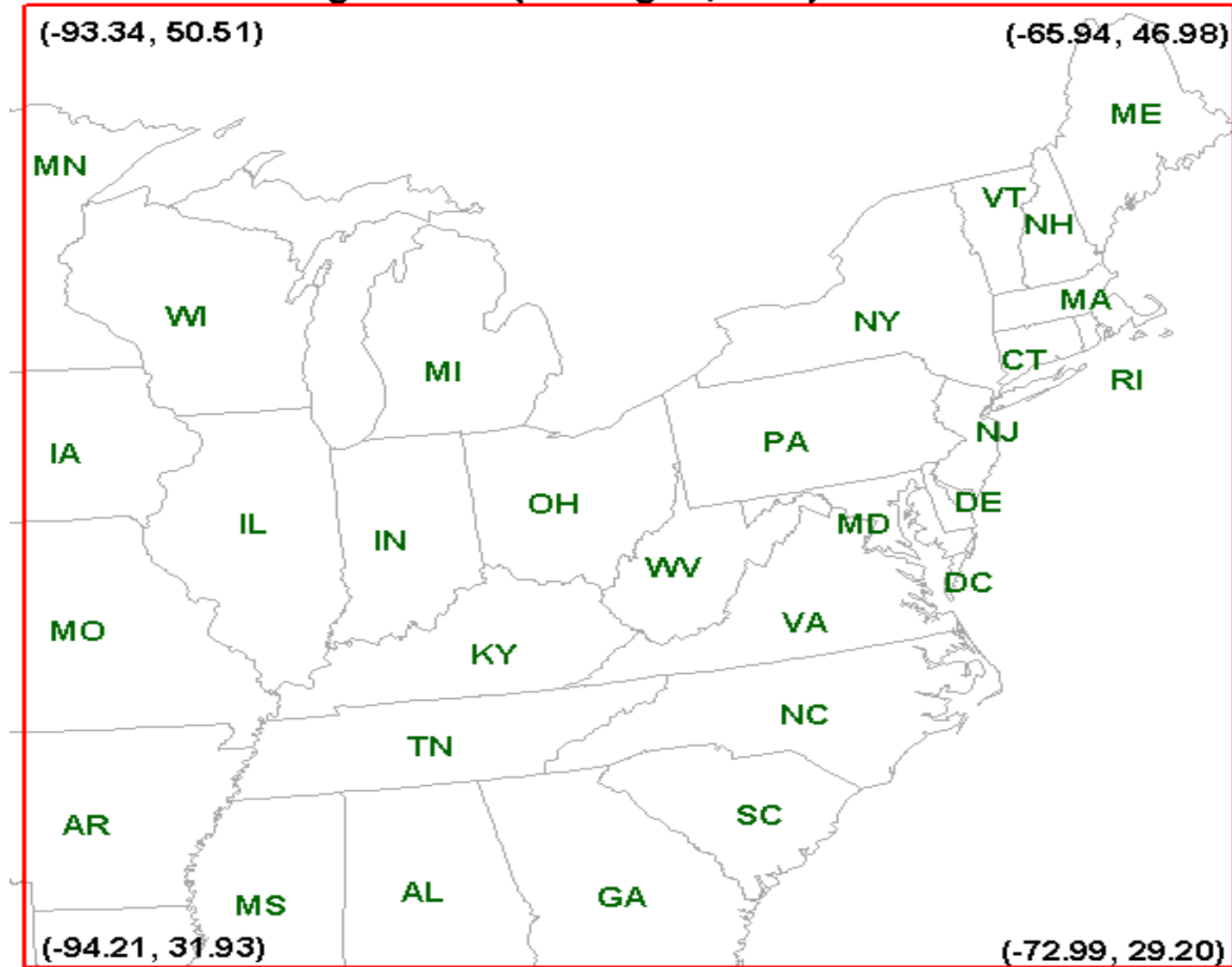


# SIP Steering Committee Modeling Update

February 7, 2007

# Modeling Domain for Ozone, PM2.5 and Regional Haze

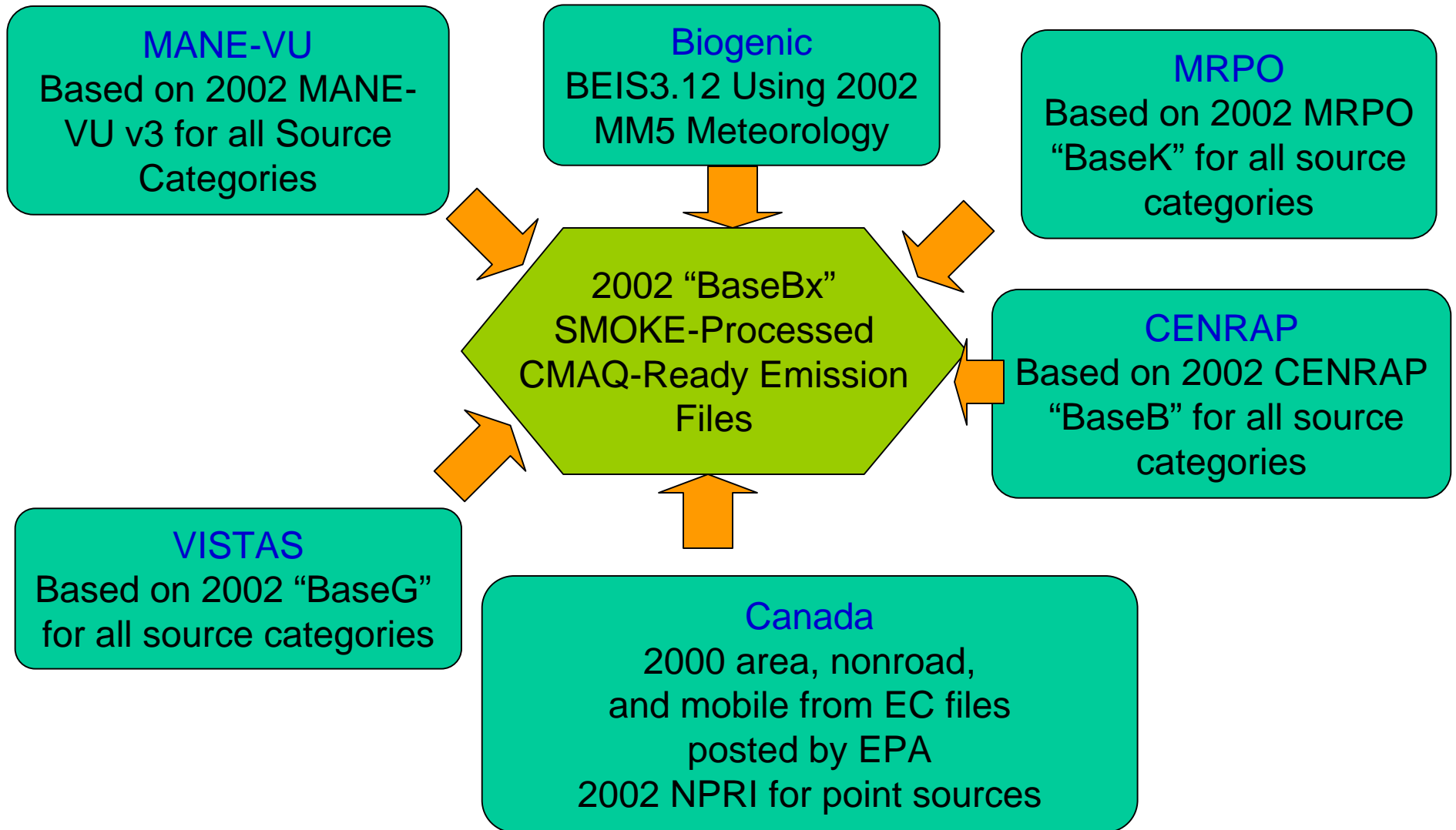
**Eastern Modeling Domain (12km grid, LCC)**



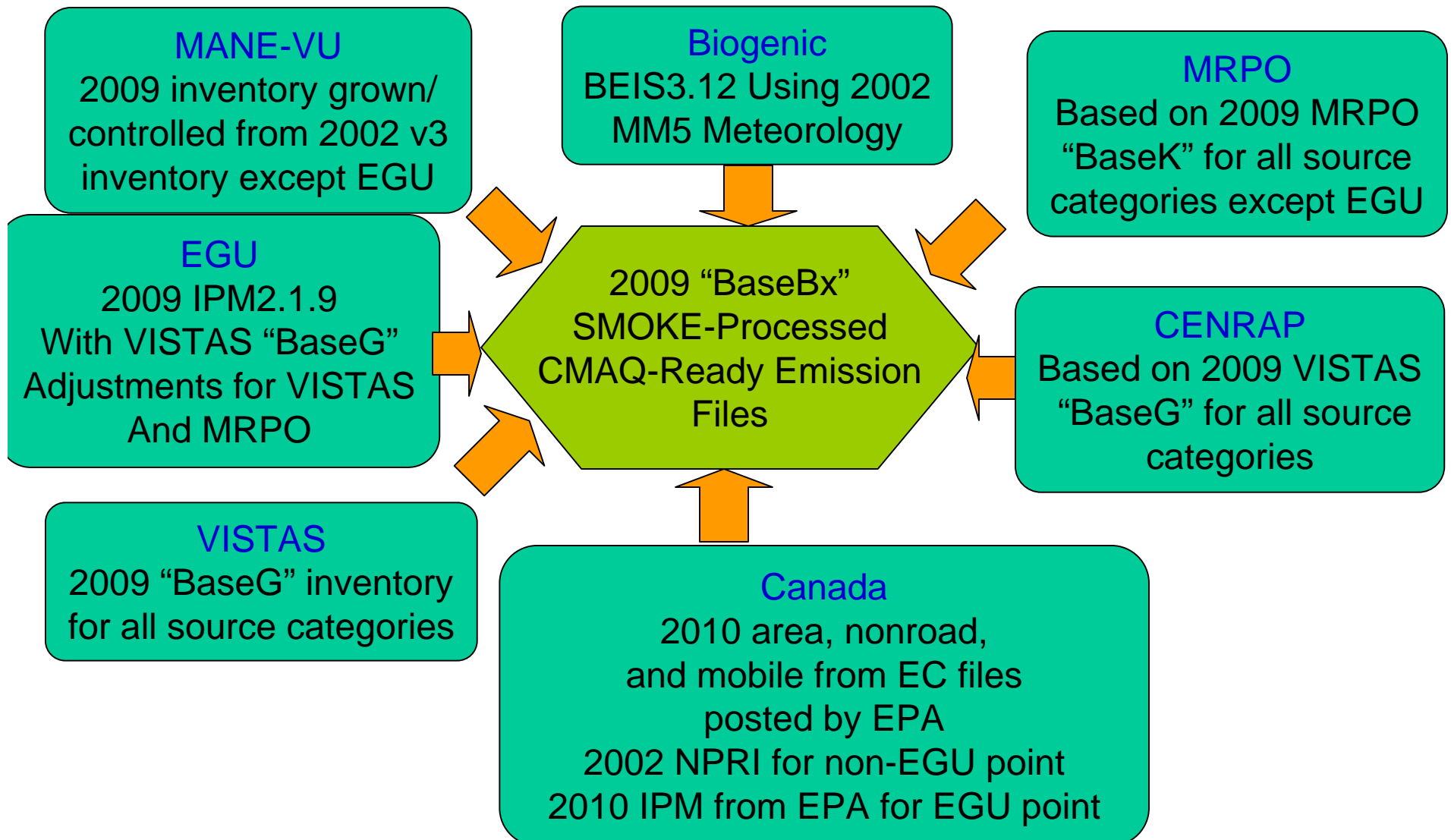
## Emission Inventories in the OTR Domain

<u>Region</u>	<u>2002</u>	<u>2009</u>
• OTC	Version 3 (BaseB1)	Version 3 (BaseB4)
• VISTAS	Version G	grown
• MRPO	Version K	grown
• CENRAP	Version B	grown
• Canada	Mixed 2000/2002	Mixed 2002/2010

# 2002 “BaseBx” OTC Emissions Processing



# 2009 “BaseBx” OTC Emissions Processing



## **2009 OTC Strategy Runs (B4 Emissions)**

- 2009 OTB/OTW run (VA DEQ)  
(OTB/OTW controls in all states in modeling domain)
- 2009 Beyond OTB/OTW run (NY DEC)  
(Beyond OTB/OTW controls in OTC states only)

Note: OTB/OTW mean “on the books ” or “on the way”

# Beyond OTB/OTW Control Measures

- On Road                      No Changes
- Area                              Consumer products except for VT  
                                        Portable fuel Containers except for VT  
                                        Asphalt Paving in 2009 except for DC,  
                                        MD, ME, PA, VT  
                                        Adhesives and sealants in 2009 except for  
                                        NH and DC  
                                        ICI Boilers reduction in 5-county region of  
                                        Philadelphia, PA, and MD, NY and NJ
- Non-EGU Point              Individual state regulations

# 2009 Design Values above 84 ppb for OTW and BOTW control scenarios (B4 emissions)

AIRS-ID	State	Monitor	2002 BASE	2009 OTB	2009 BOTB	8-hr Ozone Nonattainment Area
340290006	NJ	Colliers Mills	106.0	92	92	Philadelphia-Wilmin-Atlantic Ci,PA-NJ-MD-DE
90013007	CT	Stratford	98.3	90	90	New York-N. New Jersey-Long Island,NY-NJ-CT
361030009	NY	Holtsville	97.0	90	89	New York-N. New Jersey-Long Island,NY-NJ-CT
90093002	CT	Madison	98.3	89	88	New York-N. New Jersey-Long Island,NY-NJ-CT
340070003	NJ	Camden	98.3	88	88	Philadelphia-Wilmin-Atlantic Ci,PA-NJ-MD-DE
340155001	NJ	Clarksboro	98.3	88	88	Philadelphia-Wilmin-Atlantic Ci,PA-NJ-MD-DE
420170012	PA	Bristol	99.0	88	88	Philadelphia-Wilmin-Atlantic Ci,PA-NJ-MD-DE
90010017	CT	Greenwich	95.7	87	87	New York-N. New Jersey-Long Island,NY-NJ-CT
340071001	NJ	Ancora St. Hos	100.7	87	87	Philadelphia-Wilmin-Atlantic Ci,PA-NJ-MD-DE
421010024	PA	Northeast	96.7	87	87	Philadelphia-Wilmin-Atlantic Ci,PA-NJ-MD-DE
510130020	VA	Arlington Co.	96.7	86	86	Washington, DC-MD-VA
510590018	VA	Fairfax Co.	96.7	86	86	Washington, DC-MD-VA
340210005	NJ	Rider Univ.	97.0	86	86	Philadelphia-Wilmin-Atlantic Ci,PA-NJ-MD-DE
240251001	MD	Edgewood	100.3	85	85	Baltimore, MD
361030002	NY	Babylon	93.7	85	85	New York-N. New Jersey-Long Island,NY-NJ-CT
90011123	CT	Danbury	95.7	86	85	New York-N. New Jersey-Long Island,NY-NJ-CT
90019003	CT	Westport	94.0	85	85	New York-N. New Jersey-Long Island,NY-NJ-CT
90099005	CT	Hamden	93.3	85	85	New York-N. New Jersey-Long Island,NY-NJ-CT
340030005	NJ	Teaneck	91.7	85	85	New York-N. New Jersey-Long Island,NY-NJ-CT
361192004	NY	White Plains	91.3	85	85	New York-N. New Jersey-Long Island,NY-NJ-CT

## 2009 Design Values above 87 ppb for OTW and BOTW control scenarios (B4 emissions)

<b>AIRS-ID</b>	<b>State</b>	<b>Monitor</b>	<b>2002 BASE</b>	<b>2009 OTB</b>	<b>2009 BOTB</b>	<b>8-hr Ozone Nonattainment Area</b>
340290006	NJ	Colliers Mills	106.0	92	92	Philadelphia-Wilmin-Atlantic Ci,PA-NJ-MD-DE
90013007	CT	Stratford	98.3	90	90	New York-N. New Jersey-Long Island,NY-NJ-CT
361030009	NY	Holtsville	97.0	90	89	New York-N. New Jersey-Long Island,NY-NJ-CT
90093002	CT	Madison	98.3	89	88	New York-N. New Jersey-Long Island,NY-NJ-CT
340070003	NJ	Camden	98.3	88	88	Philadelphia-Wilmin-Atlantic Ci,PA-NJ-MD-DE
340155001	NJ	Clarksboro	98.3	88	88	Philadelphia-Wilmin-Atlantic Ci,PA-NJ-MD-DE
420170012	PA	Bristol	99.0	88	88	Philadelphia-Wilmin-Atlantic Ci,PA-NJ-MD-DE

## 2009 Massachusetts Design Values for OTW and BOTW control scenarios (B4 emissions)

Monitor	DVC	DVF 2009 OTW	DVF 2009 BOTW
TRURO	92.0	80	80
ADAMS	83.3	73	73
FAIRHAVEN	91.0	80	79
LAWRENCE	70.0	61	61
LYNN	90.0	82	82
NEWBURY	86.0	76	75
AGAWAM	83.0	72	72
CHICOPEE	92.0	80	80
AMHERST	74.7	65	65
WARE	86.3	75	75
STOW	85.7	74	74
MILTON	91.0	83	82
BOSTON (Long I)	88.7	80	80
BOSTON (Harris)	73.0	66	66
WORCESTER	84.0	72	72

## **Where We Are Now**

- Modeling to date indicates significant improvements in ozone air quality over the OTR from 2002 levels.
- Continued non-attainment is predicted over portions of the OTR, indicating the need for additional emissions reductions within and outside of the OTR.

# **OTC Control Strategy Sensitivity runs Underway for OTC March meeting**

- 2009 CALGRID Kitchen Sink Run (NH DES)
- 2009 CMAQ Run with 2012 CAIRPLUS (UMD)
- 2012 CMAQ Beyond OTB/OTW Run (NY DEC )

OTR states use Beyond OTB/OTW and non-OTR states use OTB/OTW

## **CALGRID Kitchen Sink Run (NH DES)**

OTR states with Beyond OTB/OTW controls, aggressive HEDD controls, voluntary mobile programs (diesel retrofit and smartways), and 2009 CAIR PLUS emissions based on a 0.12 lbs/MM Btu cap across domain