

# NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

## Division of Air Resources

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Mr. Richard Ruvo  
Director, Air and Radiation Division  
United States Environmental Protection Agency Region 2  
290 Broadway  
New York, New York 10007-1866

Dear Mr. Ruvo:

The New York State Department of Environmental Conservation (NYSDEC) is hereby submitting the additional information requested by the United States Environmental Protection Agency (EPA) for "New York State Implementation Plan Revision for Regional Haze; Second Implementation Period."

New York submitted "New York State Implementation Plan Revision for Regional Haze; Second Implementation Period" to EPA on May 12, 2020. On October 7, 2021, EPA sent a request to DEC for some additional information and clarifications on four items:

1. Finch Paper four-factor analysis and Single Source Reasonably Available Control Technology (RACT) SIP submittal.
2. Add 2017 NEI data to Section 7 Emission Inventory.
3. Update on sources identified by the Federal Land Managers.
4. Separate out state measures that are part of the long-term strategy from those necessary for reasonable progress.

Finch Paper, LLC's Title V permit renewal was issued on December 20, 2021. The source-specific SIP revision will be submitted separately after undergoing a 30-day public comment period.

The following documents are enclosed in response to the other requests:

1. New York Regional Haze Inventory Supplement;
2. Regional Haze SIP Enforceability;
3. Federal Land Manager Four-Factor Analysis Emissions Update; and,
4. New York Regional Haze State Regulations Supplement

Should you or your staff have any questions regarding this submission, please do not hesitate to contact Mr. Robert D. Bielawa, Chief, SIP Planning, at (518) 402-8396.

Sincerely,



Christopher M. LaLone, P.E.  
Director  
Division of Air Resources

Enclosures

- c: C. LaLone
- M. LaFarr
- M. Sheehan
- K. Wieber, EPA R2

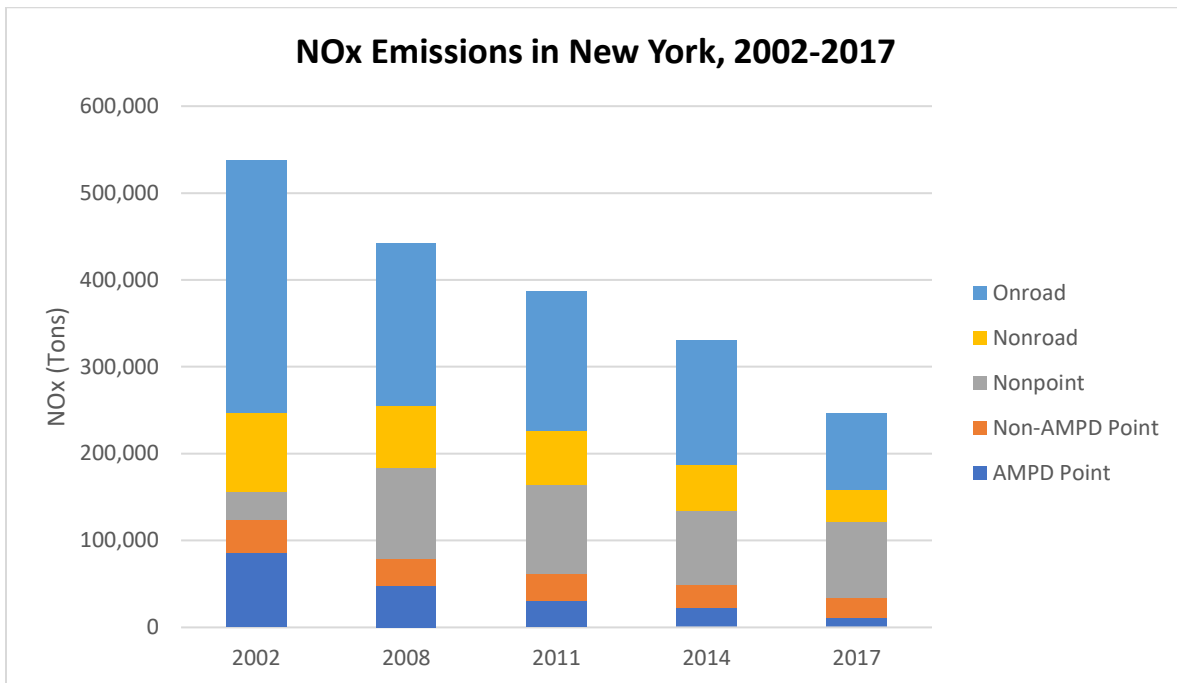
## New York Regional Haze Inventory Supplement

AMPD Point from EPA's Air Markets Program Data; 2002 non-point SO<sub>2</sub> data from NYS inventory; all other data from National Emissions Inventories.

**Table 7-1 - NO<sub>x</sub> Emissions in New York for all Source Categories, 2002 – 2017 (Tons)**

| Category       | 2002           | 2008           | 2011           | 2014           | 2017           |
|----------------|----------------|----------------|----------------|----------------|----------------|
| AMPD Point     | 85,989         | 47,556         | 31,075         | 22,214         | 11,422         |
| Non-AMPD Point | 37,655         | 31,881         | 19,973         | 27,532         | 22,507         |
| Nonpoint       | 32,643         | 104,493        | 65,602         | 84,469         | 88,034         |
| Nonroad        | 90,526         | 71,121         | 59,491         | 53,071         | 36,664         |
| On-road        | 290,698        | 187,043        | 173,269        | 143,495        | 88,311         |
| <b>Total</b>   | <b>537,513</b> | <b>442,093</b> | <b>349,410</b> | <b>330,782</b> | <b>246,938</b> |

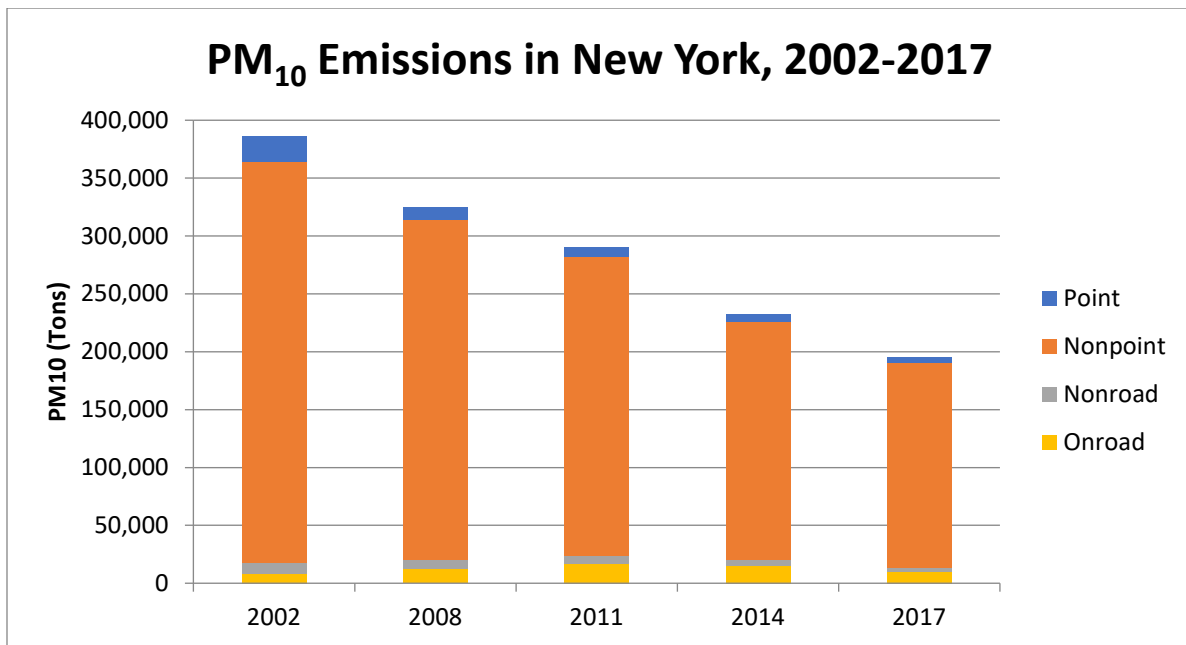
**Figure 7-1 - NO<sub>x</sub> Emissions in New York for all Source Categories, 2002 – 2017**



**Table 7-2 - PM<sub>10</sub> Emissions in New York for all Source Categories, 2002 – 2017 (Tons)**

| Category     | 2002           | 2008           | 2011           | 2014           | 2017           |
|--------------|----------------|----------------|----------------|----------------|----------------|
| Point        | 22,820         | 10,761         | 7,481          | 6,088          | 4,446          |
| Nonpoint     | 346,232        | 294,408        | 187,835        | 205,769        | 177,146        |
| Nonroad      | 9,271          | 7,469          | 6,145          | 5,578          | 3,778          |
| On-road      | 8,059          | 12,402         | 17,099         | 15,006         | 9,699          |
| <b>Total</b> | <b>386,381</b> | <b>325,041</b> | <b>218,559</b> | <b>232,441</b> | <b>195,069</b> |

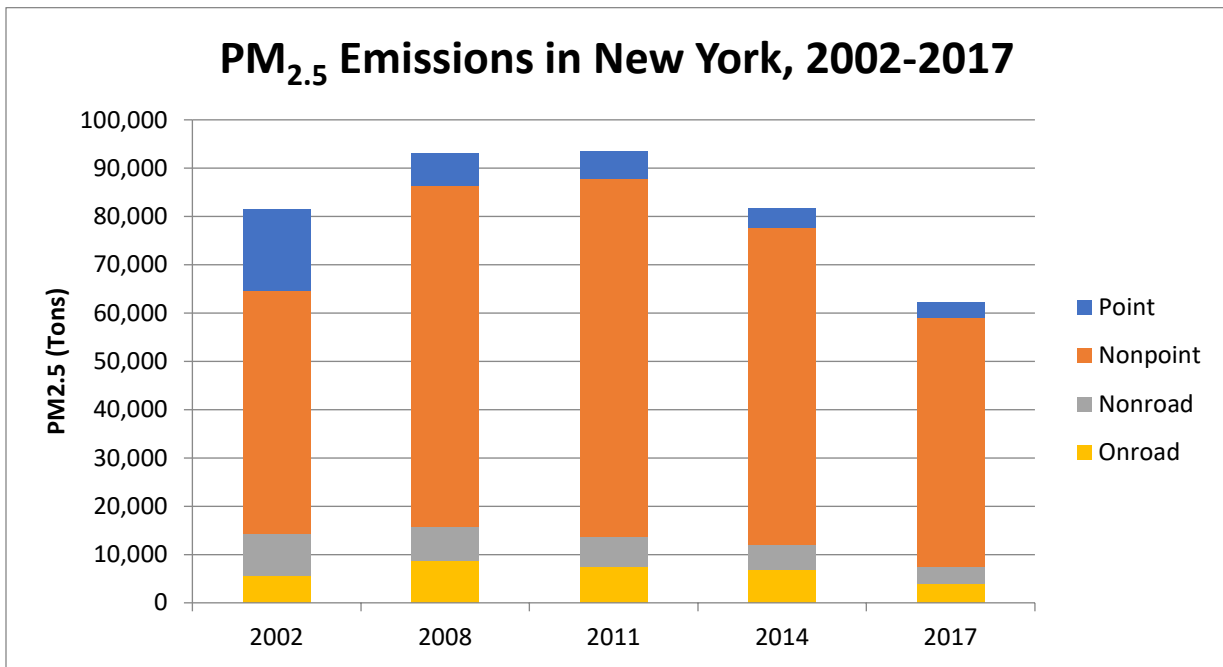
**Figure 7-2 - PM<sub>10</sub> Emissions in New York for all Source Categories, 2002 – 2017**



**Table 7-3 - PM<sub>2.5</sub> Emissions in New York from all Source Categories, 2002 – 2017 (Tons)**

| Category     | 2002          | 2008          | 2011          | 2014          | 2017          |
|--------------|---------------|---------------|---------------|---------------|---------------|
| Point        | 16,938        | 6,776         | 5,163         | 4,026         | 3,288         |
| Nonpoint     | 50,146        | 70,458        | 63,514        | 65,584        | 51,605        |
| Nonroad      | 8,796         | 7,101         | 5,828         | 5,282         | 3,574         |
| On-road      | 5,547         | 8,692         | 8,117         | 6,807         | 3,848         |
| <b>Total</b> | <b>81,427</b> | <b>93,027</b> | <b>82,621</b> | <b>81,699</b> | <b>62,315</b> |

**Figure 7-3 - PM<sub>2.5</sub> Emissions in New York from all Source Categories**

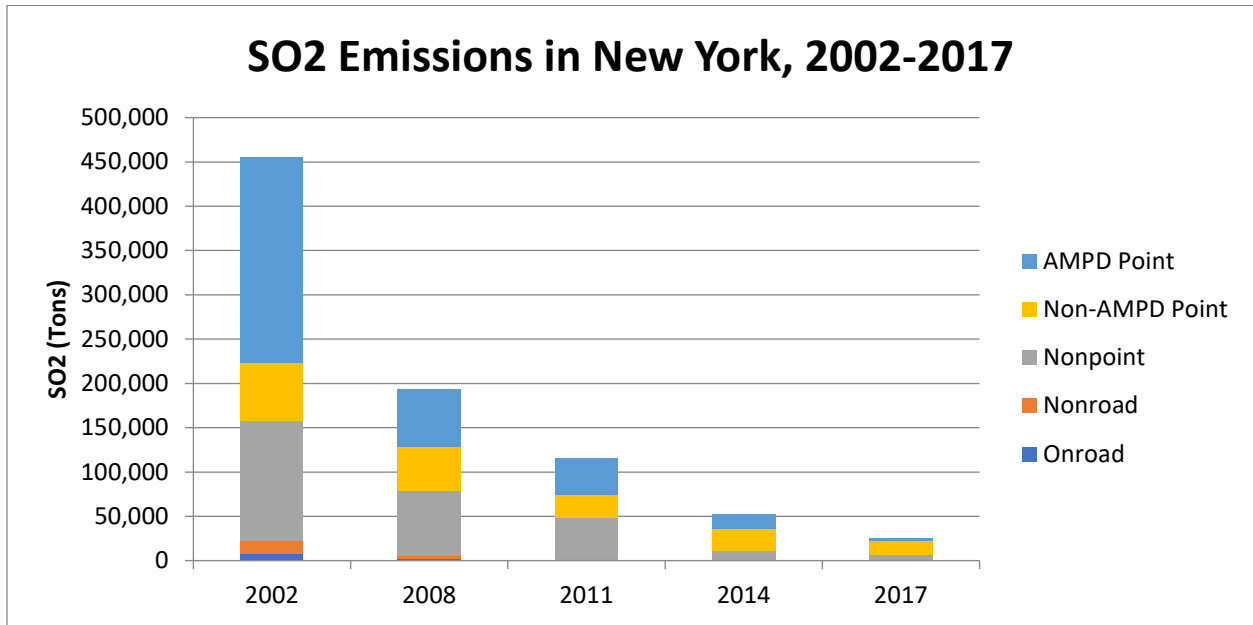


**Table 7-4 - SO<sub>2</sub> Emissions in New York from all Source Categories, 2002 – 2017 (Tons)**

| Category       | 2002           | 2008           | 2011           | 2014          | 2017          |
|----------------|----------------|----------------|----------------|---------------|---------------|
| AMPD Point     | 231,985        | 65,427         | 40,756         | 16,676        | 2,561         |
| Non-AMPD Point | 65,469         | 52,699         | 23,434         | 25,052        | 15,779        |
| Nonpoint       | 135,454        | 74,185         | 43,042         | 9,545         | 5,654         |
| Nonroad        | 14,256         | 3,385          | 171            | 98            | 92            |
| On-road        | 8,075          | 1,532          | 1,475          | 1,486         | 1,243         |
| <b>Total</b>   | <b>455,239</b> | <b>193,703</b> | <b>108,877</b> | <b>52,857</b> | <b>25,329</b> |

\*2002 Nonpoint data from NYS 2002 inventory

**Figure 7-4- SO<sub>2</sub> Emissions in New York from all Source Categories, 2002 – 2017**

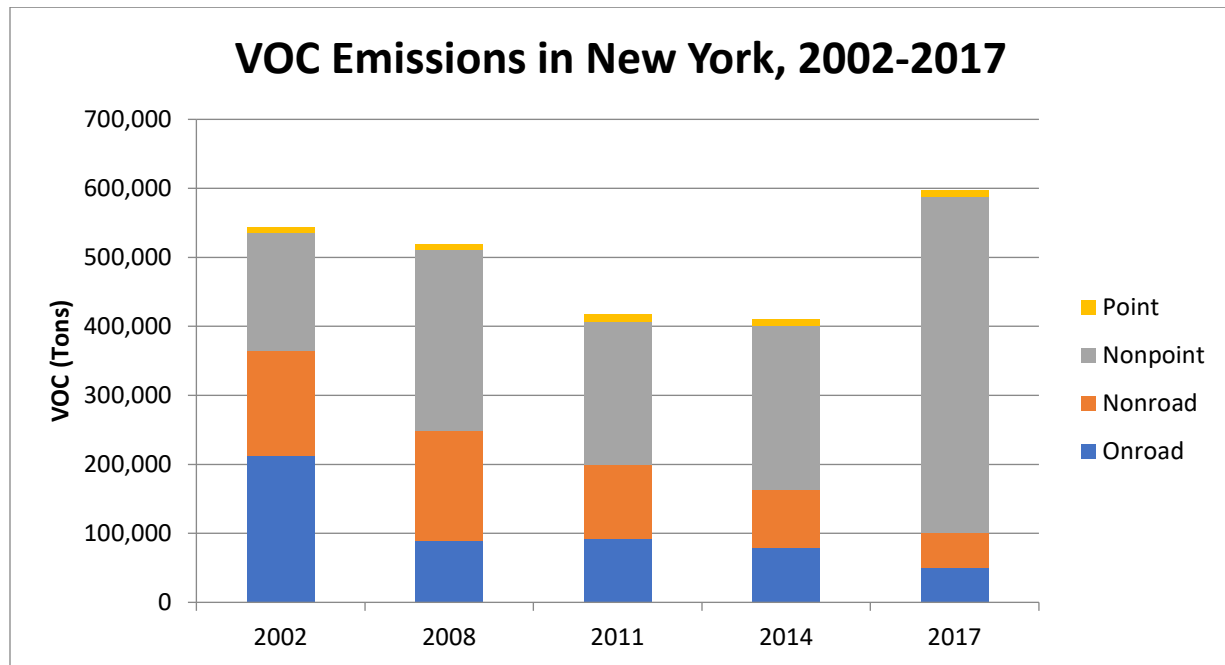


**Table 7-5 - VOC Emissions from all Source Categories in New York, 2002 – 2017 (Tons)**

| Category     | 2002           | 2008           | 2011           | 2014           | 2017           |
|--------------|----------------|----------------|----------------|----------------|----------------|
| Point        | 8,225          | 7,724          | 8,638          | 9,995          | 8,866          |
| Nonpoint     | 171,150        | 262,438        | 221,174        | 236,790        | 487,479*       |
| Nonroad      | 151,712        | 159,275        | 102,516        | 85,444         | 50,456         |
| On-road      | 212,929        | 90,130         | 86,980         | 78,344         | 50,699         |
| <b>Total</b> | <b>544,016</b> | <b>519,566</b> | <b>419,309</b> | <b>410,573</b> | <b>597,500</b> |

\*DEC believes there was no significant change in nonpoint VOC emissions from 2014-2017, the disparity is due to EPA modeling and methodology changes.

**Figure 7-5 - VOC Emissions from all Source Categories in New York, 2002 – 2017**

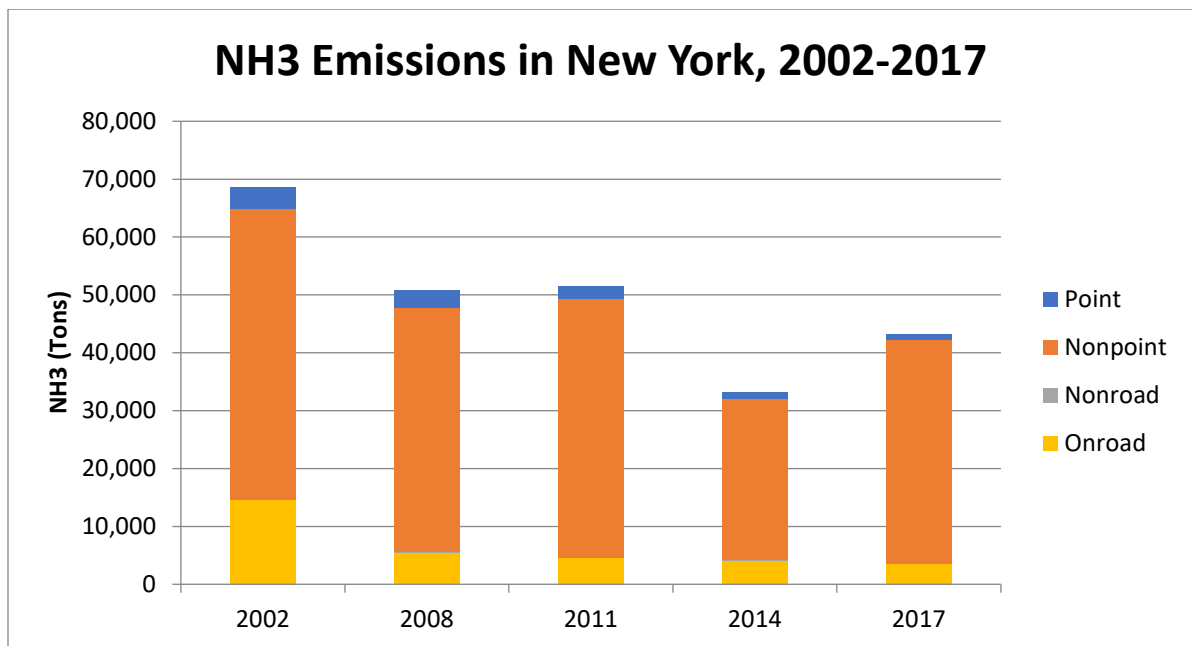


**Table 7-6 - NH<sub>3</sub> Emissions from all Data Categories in New York, 2002 – 2017  
(Tons)**

| Category     | 2002          | 2008          | 2011          | 2014          | 2017          |
|--------------|---------------|---------------|---------------|---------------|---------------|
| Point        | 3,680         | 3,033         | 2,002         | 1,142         | 1,015         |
| Nonpoint     | 50,195        | 42,104        | 44,714        | 27,812        | 38,600*       |
| Nonroad      | 79            | 87            | 87            | 96            | 77            |
| On-road      | 14,582        | 5,512         | 4,785         | 4,060         | 3,488         |
| <b>Total</b> | <b>68,536</b> | <b>50,737</b> | <b>51,588</b> | <b>33,110</b> | <b>43,180</b> |

\*DEC believes there was no significant change in nonpoint ammonia emissions from 2014-2017, the disparity is due to EPA modeling and methodology changes.

**Figure 7-6 - NH<sub>3</sub> Emissions from all Source Categories in New York, 2002 – 2017**





| Facility                                    | Primary Units   | Permit Citation (Condition #)  | Description   | SO2 controls   | PM controls  | NOx controls   | Control Info Source              |
|---|---|--|---|--|--|--|----------------------------------|
| Lafarge                                     | Facility-level<br>41100   | 5-7, 23-27, 31-46<br>52-63   | Kiln system   | Wet Scrubber   | Baghouse   | SNCR   | Lafarge DEIS                     |
| Alcoa West                                  | Facility-level<br>S00001<br>S00002<br>B00002                              | 2-14 thru 2-23, 40<br>119-135<br>139-149<br>95-100   | Aluminum potlines<br>Anode baking furnace<br>Two package boilers        | Low-S fuel<br>Dry alumina injection<br>Low-S fuel                    | Baghouse<br>Baghouse   | Emission limit<br>Emission limit<br>LNB, FGR                                       | TV, PRR, BART docs               |
| IP Ticonderoga                              | Facility-level<br>RECOVB<br>RECAUST<br>POWERH                             | 6-8, 25-39<br>1-12 thru 1-13, 3-3 thru 3-4, 78 thru 89<br>1-10 thru 1-11, 2-1, 72-75<br>1-2 thru 1-9, 49-65, 92-94                           | Recovery furnace<br>Recasting area - lime kiln, etc.<br>Power boiler    | Staged combustion, Wet Scrubber<br>Wet scrubber<br>Wet scrubber      | ESP<br>scrubber<br>Multicyclone  | Staged combustion<br>Emission limit<br>LNB, OFA, FGR                               | TV, PRR                          |
| Finch                                       | Facility-level<br>400000<br>310000<br>300000                              | 5, 1-1, 7, 24-36<br>56-64<br>41-51<br>1-3  | Pulp mill + bleach plant<br>Wood-waste boiler<br>Four power boilers     | Packed bed tower, Gas Scrubber<br>Wet scrubber<br>Low-S fuel         | Dust collector, venturi scrubber   | Emission limit<br>Emission limit   | TV, PRR                          |
| RED-Rochester                               | Facility-level<br>U00015  | 25-45<br>122-187   | Boilers   | Low-S fuel   | Annual tune-ups, emission limits   | SCR  | CAMD, BART docs                  |
| Morton Salt                                 | Facility-level<br>MBG003  | 2, 3<br>4-19   | Boiler and eight building heaters                                       | Low-S fuel   | Emission limit   | LNB, FGR, oxygen trim  | ASF permit                       |
| Anchor Glass                                | Facility-level<br>000001<br>000006  | 5-7, 26-32<br>36-47<br>53-54   | Two melting furnaces<br>Boiler #6                                       | Dry scrubber<br>Low-S fuel   | Ceramic filtration<br>Emission limit   | SCR<br>Annual tune-ups, emission limit   | TV permit                        |
| Bowline Point                               | Facility-level<br>U10001<br>U10002  | 18-34<br>42-45<br>46, 1-1, 1-2   | Boiler 1<br>Boiler 2  | Low-S fuel<br>Low-S fuel   | Emission limit<br>Emission limit   | LNB, off-stoich. firing<br>LNB, OFA, FGR, off-stoich. firing                       | CAMD, PRR, TV permit             |
| Guardian Geneva                             | Facility-level<br>UFURNC<br>UCOMBU  | 2, 19, 21, 29, 30 1-2 thru 1-4, 3-1 thru 3-2<br>73, 76, 1-12 thru 1-54, 1-59 thru 1-62<br>42-43  | Glass melting regen. furnace<br>Misc combustion sources                 | Wet scrubber->replaced by dry scrubber<br>Low-S fuel                 | ESP<br>Emission limit  | Oxy-fuel firing, LNB, SCR<br>Emission limit  | PRR, TV permit                   |
| Lehigh                                      | Facility-level<br>OUKILN  | 5, 7, 1-1, 3-4 thru 3-10, 30-33, 36-78<br>85-89, 93-94, 97, 99-101, 1-3 thru 1-4, 3-18   | Kiln system   | Inherent dry scrubbing, wet lime in                                  | Baghouse, ESP  | SNCR   | BART docs, TV permit             |
| Wheelabrator Westchester                    | Facility-level<br>U0000A<br>U0000B<br>U0000C                              | 5-7, 24, 32-60<br>Contained in facility-level conditions<br>Contained in facility-level conditions<br>Contained in facility-level conditions | MSW combustor 1<br>MSW combustor 2<br>MSW combustor 3                   | Spray dryer absorber<br>Spray dryer absorber<br>Spray dryer absorber | Baghouse, activated carbon<br>Baghouse, activated carbon<br>Baghouse, activated carbon | SNCR<br>SNCR<br>SNCR   | PRR                              |
| Hempstead RRF                               | Facility-level<br>UUNITS  | 5-7, 29-37<br>40-56  | MSW combustors 1-3  | Acid gas scrubber  | Baghouse   | SNCR   | PRR                              |
| Northport                                   | Facility-level<br>UGT001<br>UTGB01  | 25-45<br>32<br>32, 49-52   | Peak-use combustion turbine<br>Four turbine/generator boiler sets       | Low-S fuel   | Emission limit<br>ESP  | LNB, SOFA  | CAMD, TV permit                  |
| Somerset                                    | Retired March 31, 2020  | Currently being demolished   |   |  |  |  | Mike Emery                       |
| East River                                  | Facility-level<br>ER0001<br>ER0002  | 32-47, 66, 68<br>72-76<br>77-122   | Very large boilers 60 + 70<br>Large boilers 115 through 119             | Low-S fuel<br>Low-S fuel   | Emission limits<br>Emission limits   | SCR, ammonia injection<br>Low NOx burners, SCR                                     | CAMD, TV permit                  |
| Ravenswood Gen                              | Facility-level<br>U00010<br>U00020<br>U00030                              | 26-43, 48, 63<br>49<br>50<br>51-52   | Boiler 1<br>Boiler 1<br>Boiler 3  | Low-S fuel<br>Low-S fuel<br>Low-S fuel                               | Emission limit<br>Emission limit<br>Emission limit                                     | CCOFA<br>CCOFA<br>CCOFA  | TV permit, PRR                   |
| Covanta Niagara                             | Facility-level<br>U110EF<br>U00001  | 5-7, 21-24, 26-30, 33-36, 52-70<br>92-168<br>88-91   | Four boilers<br>Two boilers   | Low-S fuel<br>Emission limits  | Emission limits<br>Emission limits   | LNB, FGR<br>SNCR   | PRR, TV permit                   |
| Cayuga Operating Co                         | Unit 2 shut down July 2018 and Unit 1 shutdown November 2019.             |  |   |  |  |  |                                  |
| Globe Metallurgical                         | Shut down indefinitely in 2018 due to market conditions according to SIP. |  |   |  |  |  |                                  |
| Black River Gen                             | Facility-level<br>U00001  | 3-4 thru 3-46; 28, 29, 45-47, 50<br>3-47 thru 3-64; 72; 76; 79; 81   | Boilers 1 - 3   | Emission limits  | Baghouse   | SOFA   | CAMD, PRR, TV permit, Bob Jacobs |
| Roseton                                     | Facility-level<br>UR0001<br>UR0002  | 24-75<br>78<br>79  | Boiler 1<br>Boiler 2  | Low-S fuel<br>Low-S fuel   | Dust collector<br>Dust collector   | BOOS, FGR<br>BOOS, FGR   | PRR                              |
| TGP Comp Station 245                        | Facility-level<br>R24502<br>R24504<br>R24505<br>R24507                    | 5-7, 32-34, 41-44, 52, 56, 58, 61-65, 69-71<br>76-77<br>78-79<br>80-86<br>88-96  | Five compressor engines<br>Compressor engine<br>Two ICEs<br>Gas turbine | Low-S fuel<br>Low-S fuel<br>Low-S fuel<br>Low-S fuel, emission limit |  | Low emissions combustion kit<br>Emission limit<br>Emission limit<br>Emission limit | PRR, TV permit                   |
| EF Barrett                                  | Facility-level<br>U00001<br>U00002  | 24-34<br>37-38<br>39-44  | Boiler 1<br>Boiler 2  | Low-S fuel<br>Low-S fuel   | Emission limits<br>Emission limits   | Emission limit<br>SOFA   | BART docs, TV permit             |
| Northeast Solite                            | Facility-level<br>U00001  | 5-7, 25-36<br>40-44  | Three rotary kilns  | Scrubber   | Emission limits  | Tangential firing  | PRR, TV permit                   |
| General Chemical<br>aka Chemtrade Solutions | Facility-level<br>UOOSN2<br>UOSN1A<br>10000B                              | 5-7, 24-29<br>33<br>34-40<br>32  | Drying equipment<br>Two production trains<br>Boiler                     | Low-S fuel   | Scrubber<br>Emission limits  | SCR<br>SCR<br>LNB  | PRR, TV permit                   |
| Onondaga Co RRF                             | Facility-level<br>1MBMWF  | 5-7, 21-22, 27-59<br>64-71   | Three MSW combustors  | Dry scrubber   | Baghouse   | SNCR   | PRR                              |
| Cargill Salt Watkins Glen                   | Facility-level<br>UBLR01<br>U00007<br>U00008                              | 2-3 thru 2-4<br>69-87<br>2-5 thru 2-7<br>2-8 thru 2-10   | Boiler<br>Rotary salt cooler<br>Fluid bed salt drier                    | Low-S fuel<br>Impingement plate scrubber<br>Venturi scrubber         | Emission limits<br>Emission limits   | Emission limits  | ASF permit                       |
| Norlite                                     | Facility-level<br>KILNSG  | 5-7, 23, 5-2, '5-124', 6-1<br>33-137, 5-13 thru 5-61, 6-2 thru 6-23  | Rotary Kilns  | Wet scrubber   | Multicyclone, baghouse   | Emission limits  | PRR, TV permit                   |
| Oswego Harbor Power                         | Facility-level<br>U00005<br>U00006  | 25-55<br>60-73<br>74-92  | Boiler 1<br>Boiler 2  | Low-S fuel<br>Low-S fuel   | ESP<br>ESP   | LNB, OFA, FGR<br>LNB, OFA, FGR   | BART docs                        |

| Facility                                   | DEC ID     | Year/Inventory | SO2 (lbs)  | NOx (lbs) |
|--|------------|----------------|--|-----------|
| Lafarge Building Materials                 | 4012400001 | 2014 NEI       | 9,164,035  | 3,694,000 |
|  |            | 2018           | 157,494  | 1,149,296 |
|  |            | 2019           | 117,000  | 1,364,400 |
|  |            | 2020           | 117,417  | 1,117,346 |
| Alcoa Massena Operations (West Plant)      | 6405800003 | 2014 NEI       | 4,980,003  | 363,202   |
|  | 6405800178 | 2018           | 4,811,337  | 254,688   |
|  |            | 2019           | 4,874,052  | 200,228   |
|  |            | 2020           | 4,889,632  | 230,223   |
| International Paper Ticonderoga Mill       | 5154800008 | 2014 NEI       | 2,174,116  | 1,258,872 |
|  |            | 2018           | 1,268,753  | 1,153,715 |
|  |            | 2019           | 1,225,042  | 1,085,743 |
|  |            | 2020           | 887,406  | 989,010   |
| Finch Paper LLC                            | 5520500005 | 2014 NEI       | 691,133  | 2,459,222 |
|  |            | 2018           | 603,577  | 1,450,228 |
|  |            | 2019           | 370,534  | 2,539,068 |
|  |            | 2020           | 277,931  | 2,648,538 |
| RED-Rochester LLC at Eastman Business Park | 8269900126 | 2019 Repower   | -  | 4,514,000 |
|  |            | 2018           | 1,508,666  | 796,325   |
|  |            | 2019           | 10,670   | 517,637   |
|  |            | 2020           | 4,672  | 480,722   |
| Morton Salt Division                       | 9563200007 | 2014 NEI       | 2,745,682  | 434,019   |
|  |            | 2018           | Minor facility: emission data not required to be reported. |           |
|  |            | 2019           |  |           |
|  |            | 2020           |  |           |
| Anchor Glass Container Corp                | 8070400036 | 2014 NEI       | 753,295  | 985,297   |
|  |            | 2018           | 765,339  | 1,010,320 |
|  |            | 2019           | 692,875  | 901,306   |
|  |            | 2020           | 1,171,537  | 1,618,255 |
| Bowline Point Generating Station           | 3392200003 | 2014 NEI       | 292,814  | 2,224,411 |
|  |            | 2018           | 210,859  | 660,584   |
|  |            | 2019           | 19,241   | 363,409   |
|  |            | 2020           | 47,624   | 810,731   |
| Guardian Geneva Float Glass Facility       | 8320500041 | 2014 NEI       | 414,997  | 1,655,063 |
|  |            | 2018           | 200,459  | 462,515   |
|  |            | 2019           | 264,107  | 542,672   |
|  |            | 2020           | 251,426  | 515,668   |
| Lehigh Northeast Cement Company            | 5520500013 | 2014 NEI       | 160,875  | 1,233,429 |
|  |            | 2018           | 50,531   | 963,600   |
|  |            | 2019           | 139,386  | 823,223   |
|  |            | 2020           | 47,213   | 730,967   |

|   |            |           |           |           |
|---|------------|-----------|-----------|-----------|
| Wheelabrator<br>Westchester LP                | 3551200031 | 2014 NEI  | 206,638   | 1,920,727 |
|   |            | 2018      | 218,440   | 1,986,791 |
|   |            | 2019      | 241,209   | 2,087,146 |
|   |            | 2020      | 191,784   | 1,782,591 |
| Hempstead<br>Resource<br>Recovery<br>Facility | 1282001727 | 2014 NEI  | 139,852   | 1,888,553 |
|   |            | 2018      | 98,671    | 2,127,561 |
|   |            | 2019      | 356,241   | 2,081,924 |
|   |            | 2020      | 120,237   | 2,120,015 |
| Northport<br>Power Station                    | 1472600130 | 2017 CAMD | 568,200   | 1,111,800 |
|   |            | 2018      | 1,423,673 | 1,888,373 |
|   |            | 2019      | 505,404   | 1,333,884 |
|   |            | 2020      | 116,165   | 1,728,715 |
| Somerset<br>Operating<br>Company<br>(Kintigh) | 9293800003 | 2017 CAMD | 1,845,400 | 565,000   |
|   |            | 2018      | 3,052,053 | 1,006,848 |
|   |            | 2019      | 1,899,075 | 803,872   |
|   |            | 2020      | 920,803   | 495,443   |
| Con Ed-East<br>River<br>Generating<br>Station | 2620600012 | 2017 CAMD | 150,000   | 1,370,000 |
|   |            | 2018      | 193,456   | 1,662,807 |
|   |            | 2019      | 90,720    | 1,581,048 |
|   |            | 2020      | 35,159    | 1,485,042 |
| Ravenswood<br>Generating<br>Station           | 2630400024 | 2017 CAMD | 121,000   | 1,549,400 |
|   |            | 2018      | 373,348   | 1,758,322 |
|   |            | 2019      | 61,364    | 716,544   |
|   |            | 2020      | 10,826    | 1,210,205 |
| Covanta Niagara<br>LP                         | 9291100113 | 2014 NEI  | 450,413   | 1,711,106 |
|   |            | 2018      | 208,702   | 1,342,636 |
|   |            | 2019      | 147,253   | 1,256,998 |
|   |            | 2020      | 224,810   | 1,358,837 |
| Cayuga<br>Operating<br>Company, LLC           | 7503200019 | 2017 CAMD | 1,011,400 | 620,800   |
|   |            | 2018      | 1,538,632 | 165,633   |
|   |            | 2019      | 689,813   | 275,180   |
|   |            | 2020      | 0.84      | 92.48     |
| Globe<br>Metallurgical Inc                    | 9291100078 | 2014 NEI  | 1,145,457 | 803,354   |
|   |            | 2018      | 961,783   | 887,323   |
|   |            | 2019      | 1.68      | 281       |
|   |            | 2020      | 0         | 0         |
| Black River<br>Generation LLC                 | 6224000009 | 2014 NEI  | 516,040   | 553,526   |
|   |            | 2018      | 14,772    | 819,347   |
|   |            | 2019      | 34,200    | 669,800   |
|   |            | 2020      | 149,600   | 741,400   |
| Roseton<br>Generating LLC                     | 3334600075 | 2017 CAMD | 527,600   | 504,000   |
|   |            | 2018      | 1,527,695 | 1,020,041 |
|   |            | 2019      | 30,037    | 166,884   |
|   |            | 2020      | 20,802    | 128,753   |

|  |            |           |  |           |
|--|------------|-----------|--|-----------|
| TGP Compressor Station 245                                 | 6215600018 | 2014 NEI  | 10,049   | 1,012,121 |
|  |            | 2018      | 1,941  | 156,372   |
|  |            | 2019      | 3,158  | 213,972   |
|  |            | 2020      | 554  | 121,596   |
| E. F. Barrett Power Station                                | 1282000553 | 2017 CAMD | 82,800   | 1,541,600 |
|  |            | 2018      | 131,469  | 1,884,554 |
|  |            | 2019      | 81,311   | 1,643,055 |
|  |            | 2020      | 47,831   | 1,597,252 |
| Northeast Solite Corporation                               | 3514800084 | 2014 NEI  | 461,804  | 423,060   |
|  |            | 2018      | 665,895  | 610,029   |
|  |            | 2019      | 787,497  | 668,639   |
|  |            | 2020      | 525,436  | 481,355   |
| General Chemical LLC                                       | 7313200009 | 2014 NEI  | 116  | 1,070,861 |
|  |            | 2018      | 124  | 117,635   |
|  |            | 2019      | 113  | 90,830    |
|  |            | 2020      | 106  | 65,761    |
| Onondaga County Resource Recovery Facility                 | 7314200028 | 2014 NEI  | 32,154   | 986,026   |
|  |            | 2018      | 42,156   | 1,199,842 |
|  |            | 2019      | 18,592   | 1,151,060 |
|  |            | 2020      | 21,468   | 1,208,519 |
| Cargill Salt Co.- Watkins Glen Plant                       | 8442400001 | 2011 NEI  | 1,817,668  | 369,710   |
|  |            | 2018      | Minor facility: emission data not required to be reported. |           |
|  |            | 2019      |  |           |
|  |            | 2020      |  |           |
| Norlite Corporation  | 4010300016 | 2011 NEI  | 249,879  | 161,484   |
|  |            | 2018      | 207,657  | 141,787   |
|  |            | 2019      | 239,514  | 131,941   |
|  |            | 2020      | 150,183  | 76,966    |
| Oswego Harbor Power  | 7351200030 | 2011 NEI  | 746,759  | 203,281   |
|  |            | 2018      | 267,415  | 138,572   |
|  |            | 2019      | 188,195  | 113,411   |
|  |            | 2020      | 262,747  | 155,024   |
| *2018, 2019, and 2020 data source: DEC Air Facility System |            |           |  |           |
|  |            |           |  |           |

## New York Regional Haze Supplement

Regulations adopted during the first implementation period are considered existing measures and are still necessary to maintain “reasonable further progress.” Regulations adopted during the second implementation period are considered part of New York’s long-term strategy.

### Regulations Adopted During First Implementation Period:

- 6 NYCRR Part 210: Emissions and Labeling Requirements for Personal Watercraft Engines

Part 210, “Emissions and Labeling Requirements for Personal Watercraft Engines,” establishes an emissions reduction program for personal watercraft engines. Adopted in 2003, this regulation reduces emissions of NO<sub>x</sub>, PM and hydrocarbons past the levels achieved by federal standards.

This regulation includes lower emission certification levels beginning with model year 2006 and which become increasingly stringent; requires test procedures for new and in-use engines which guarantee compliance with the standards; establishes an environmental label program; and extends emission warranty requirements. Manufacturers must ensure that the emissions of their entire product line meet the corporate average requirement. CARB’s average requirement declines through the 2008 model year.

- 6 NYCRR Part 212: Process Operations

DEC revised Part 212: General Process Emission Sources in June 2015 to reorganize it into four subparts: General Provisions (212-1), Allowable Emissions from Process Operations (212-2), Reasonably Available Control Technology for Major Facilities (212-3), and Control of Nitrogen Oxides for Hot Mix Asphalt Production Plants (212-4).

Part 212-3, which applies to both NO<sub>x</sub> and VOC emissions, requires major stationary sources to apply RACT to all emission points of NO<sub>x</sub> and VOC emissions. The definition of a major stationary source depends on the location of the source within the State. Sources located in the New York 10-30 Metropolitan Area and Orange County have a lower major source emission threshold (25 tons per year for both contaminants) than major sources located outside these areas (100 tons per year for NO<sub>x</sub> and 50 tons per year for VOCs). The 2015 rulemaking clarified the term “Lower Orange County” with a list of regulated Orange County towns.

Part 212-4, which applies to NO<sub>x</sub> emissions, requires all hot-mix asphalt plants after 2012 to install low NO<sub>x</sub> burners upon burner replacement or apply for a NO<sub>x</sub> variance. All existing hot mix asphalt plant had until 2020 to upgrade to low NO<sub>x</sub> burners or apply for a variance.

- 6 NYCRR Part 215: Open Burning

Part 215 was revised and published in the New York State Register during the previous planning period. The new version became effective October 14, 2009. This revised regulation allows (in any town with a total population less than 20,000) for the burning of downed limbs and branches (including branches with attached leaves or needles) less than six inches in diameter and eight feet in length between May 15<sup>th</sup> and the following March 15<sup>th</sup>. The burning of all other household generated wastes is prohibited. DEC has found that the strengthened rule has reduced the impacts of pollutants such as dioxins, PM and CO. Exemptions from this rule include restricted categories such as camp fires, agricultural burning, prescribed burning, and ceremonial fires.

- 6 NYCRR Part 217: Motor Vehicle Emissions

Part 217, "Motor Vehicle Emissions," effective October 30, 2002, includes provisions that curb NO<sub>x</sub>, PM, hydrocarbon and CO emissions from motor vehicles in New York State. Part 217 includes motor vehicle inspection and maintenance (I/M) programs as well as additional requirements for heavy-duty motor vehicles.

Subpart 217-3 contains anti-idling provisions for heavy duty vehicles. Heavy-duty vehicles with a gross vehicle weight rating (GVWR) greater than 8,500 lbs. and designed for transporting persons or properties, are not permitted to idle for more than five minutes while the vehicle remains motionless, unless specifically exempted.

Subpart 217-5, effective since June 1, 1999, requires all heavy-duty diesel vehicles (HDDVs) requiring registration in the 9-county New York Metropolitan Area (except for buses, municipally owned vehicles and other vehicles exempted in the subpart) to pass an annual diesel emissions inspection test. Beginning June 1, 2000, buses and municipally owned vehicles were also held to this requirement. This schedule also applies statewide for vehicle subject to roadside or random inspection along public highways and quasi-public locations.

Subpart 217-6 covers statewide enhanced motor vehicle inspection and maintenance program requirements.

- After January 1, 2011, no owner, operator, or lessee shall operate any model year 1996 and newer non-diesel motor vehicle with a GVWR of 8,500 pounds or less with a malfunctioning onboard diagnostic system as defined by the Subpart, unless an emission inspection waiver has been issued by the Department of Motor Vehicles.
- After January 1, 2012, no owner, operator, or lessee shall operate any model year 1997 and newer diesel motor vehicle with a GVWR of 8,500 pounds or less with a malfunctioning onboard diagnostic system as defined by the Subpart, unless an emission inspection waiver has been issued by the Department of Motor Vehicles.

- 6 NYCRR Subpart 220-1: Portland Cement Plants  
DEC targeted the reduction of NO<sub>x</sub> emissions with 6 NYCRR Subpart 220-1, "Portland Cement Plants." NO<sub>x</sub> is created during fuel combustion for the energy-intensive formation of cement. The state investigated RACT controls to identify a feasible way to meet these reductions.

There are currently two Portland Cement plants in New York State (both have a dry kiln). Upon the introduction of NO<sub>x</sub> RACT in 1995, DEC promulgated revisions to Part 220 that required owners of these facilities to submit a plan that identified RACT and included a schedule for installation of RACT. An all-inclusive regulation could not be established, as the variation in technology demanded a distinct analysis and application of NO<sub>x</sub> controls that were reasonably available at the time.

DEC retains the same approach, where each plant owner will be required to perform a RACT analysis that will identify the level of control technology and include a schedule for installation.

- 6 NYCRR Subpart 220-2: Glass Manufacturing  
DEC implemented Subpart 220-2 to limit the emissions of NO<sub>x</sub> formed by the high temperatures required in glass melting furnaces. New York State currently does not contain specific emission limitation requirements, the facilities determine what the appropriate emission limit should be and New York State approves it or denies it.

There are several alternate control technology options to reduce NO<sub>x</sub> from glass furnaces. These include combustion modifications (low NO<sub>x</sub> burners, oxy-fuel firing, oxygen-enriched air staging), process modifications (fuel switching, batch preheat, electric boost), and post-combustion modifications (fuel reburn, selective catalytic reduction (SCR), selective non-catalytic reduction (SNCR)). Oxy-firing has proved to be the most effective control measure by reducing NO<sub>x</sub> emissions up to 85 percent, as well as reducing energy consumption, increasing production rates and improving glass quality.

- Diesel Emissions Reduction Act of 2006 (DERA)/6 NYCRR Part 248  
New York State enacted DERA, which provided emissions reductions beginning in 2008, and additional reductions in 2009 and 2010 and contributes to the attainment of the PM NAAQS. This initiative requires thousands of state-owned or operated heavy duty diesel vehicles (HDDV's) to use ultra-low sulfur diesel (ULSD) fuel and best available retrofit technology (BART). These ULSD and BART requirements also apply to all HDDV's of prime contractors doing work on behalf of state agencies or public authorities. BART includes emission control equipment to reduce the release of air contaminants. The benefit will be seen with existing engines which are not expected to be replaced with new, cleaner engines for some time. DEC later promulgated 6 NYCRR Part 248, "Use of Ultra

Low Sulfur Diesel Fuel and Best Available Retrofit Technology for Heavy Duty Vehicles," with an effective date of July 30, 2009 to implement DERA. The current version of 6 NYCRR Part 248 became effective on February 9, 2013. In March 2014, DERA was amended to extend the BART compliance date to December 31, 2015.

### Regulations Adopted/Underway During 2<sup>nd</sup> Implementation Period

- 6 NYCRR Part 219: Incinerators

The existing Subpart 219-4 was revised to better reflect the current cremation technology and reduce emissions from new crematories constructed in New York. Subparts 219-5 and 219-6 were phased out, by requiring that units subject to these subparts be regulated by more stringent standards. Furthermore, a new Subpart 219-10 was adopted to set a limit on NO<sub>x</sub> emissions from municipal waste combustors. These revisions were adopted February 12, 2020.

- 6 NYCRR Part 222: Distributed Generation Sources

A distributed generation (DG) source is a stationary reciprocating or rotary internal combustion engine that feeds into the distribution grid or produces electricity for use at the host facility or both. This measure will apply to owners and operators of DG sources where the potential NO<sub>x</sub> emissions are below the major source threshold set forth in paragraph 201-2.1(b)(21) of Part 201.

DEC adopted Part 222, "Distributed Generation Sources", along with attendant revisions to 6 NYCRR Part 200, "General Provisions", on November 1, 2016. The new rule took effect on December 1, 2016. On March 1, 2017, an Article 78 petition was filed challenging various aspects of Part 222. On July 26, 2017, a Stipulation and Order was issued whereby the Department agreed to propose a new rule to replace the adopted rule pursuant to the State Administrative Procedure Act (SAPA).

Consistent with this Order, on February 24, 2020, DEC adopted new Part 222. New Part 222 applies to economic dispatch sources with output ratings of 200 horsepower (hp) or greater in the NYMA. Economic dispatch includes DG sources enrolled in demand response programs sponsored by the NYISO or distribution utilities that receive capacity or energy payments or both. In addition, price-responsive generation sources, defined in Part 222 as DG sources used to provide electricity when the cost of electricity supplied by the distribution utility is high, are also covered under the definition of economic dispatch sources. Subject economic dispatch sources will be required to meet emission control requirements beginning May 1, 2021.

- 6 NYCRR Part 243: CSAPR NO<sub>x</sub> Ozone Season Group 2 Trading Program and 6 NYCRR Part 244: CSAPR NO<sub>x</sub> Annual Trading Program

In New York State there are two CSAPR NO<sub>x</sub> regulations, Part 243 "CSAPR NO<sub>x</sub> Ozone Season Group 2 Trading Program," and Part 244, "CSAPR NO<sub>x</sub> Annual



Trading Program,” that make explicit the allocation method New York uses to distribute federal CSAPR NO<sub>x</sub> allowances to regulated EGUs and NYSERDA.

After setting aside 5% of New York’s CSAPR budget for new sources, Parts 243 and 244 allocate NO<sub>x</sub> allowances based on recent emissions (the average of the last three years for which data are available) and provide 10% of the CSAPR budget plus any remaining allowances to NYSERDA, who uses the proceeds of the sale of those excess allowances to promote energy efficiency and renewable energy technologies.

The CSAPR Part 244 program is designed to reduce ozone and PM<sub>2.5</sub> in New York State and downwind states by limiting emissions of NO<sub>x</sub> year-round from fossil fuel-fired electricity generating units.

- 6 NYCRR Part 245: CSAPR SO<sub>2</sub> Group 1 Trading Program  
CSAPR SO<sub>2</sub> allowances are regulated by New York State under Part 245, “CSAPR SO<sub>2</sub> Group 1 Trading Program.” This regulation uses the same method as New York State’s CSAPR NO<sub>x</sub> regulations, Part 243 and 244, to distribute federal SO<sub>2</sub> CSAPR allowances to regulated EGUs and the New York State Energy Research and Development Authority (NYSERDA). Part 245 is designed to reduce PM<sub>2.5</sub> in New York State and downwind states by limiting emissions of SO<sub>2</sub> year-round from fossil fuel-fired electricity generating units.
- 6 NYCRR Part 247: Outdoor Wood Boilers (in progress still)  
The existing Part 247 is being updated to conform to the emission standards and certification requirements of the federal NSPS rule effective May 15, 2015.

#### Regulations adopted since May 2020

- 6 NYCRR Part 225: Fuel Consumption and Use  
Part 225, “Fuel Consumption and Use,” contains methods by which to reduce sulfur associated with different types of fuel use.

Subpart 225-1 regulates the sulfur content of solid and liquid fuels fired throughout New York State. A revised Subpart 225-1 was adopted on January 20, 2021. The revisions clarified that all emission sources that fire solid or liquid fuels are required to meet the sulfur-in-fuel standards of this subpart. Also, the rule will propose to lower the sulfur content limit of waste oil.

A revised Subpart 225-2 was adopted on March 3, 2020 and addresses the use of waste fuels for energy recovery. The revisions lower limits on PCBs and lead while adding limits for cadmium, chromium, and arsenic. The revisions also include removing outdated regulatory references, remove outdated work practices, expanding the number of facilities allowed to burn waste oil, and update the rule to complement Title V criteria.

- 6 NYCRR Part 227: Stationary Combustion Installations

Subpart 227-1 regulates PM emissions from stationary combustion sources. Revisions to this subpart were proposed in 2019 and adopted on January 19, 2021. These revisions included updated permit references and rule citations; revised particulate matter emission limits; updated monitoring, recordkeeping, and reporting requirements, and updated definitions.

Subpart 227-2 regulates NO<sub>x</sub> emissions from stationary combustion installations. This subpart was revised in 2010.

On December 11, 2019, the state adopted Subpart 227-3 to include lower emission limits for simple cycle combustion turbines, compliance option updates, administrative updates, and updated monitoring, recordkeeping, and reporting requirements.

- 6 NYCRR Part 231

A revised Part 231 was adopted on January 19, 2021, to conform to changes under the federal New Source Review (NSR) rule, the Supreme Court ruling on *Utility Air Group v. EPA* (2014), and *Sierra Club v. Environmental Protection Agency*, 705 F.3d 458 (D.C. Cir. 2013). The Part 231 revisions specifically included changes to NSR applicability based on emissions of greenhouse gases and requirements for PM<sub>2.5</sub>.