

# **Completing the Work of the HEDD Technical Workgroup**

# Work Products

- **Goals**
  - Creditable Short Term (2009)
  - Long Term = Clean
- **HEDD Unit Definitions**
- **Emission Inventory**
- **HEDD Plan**
  - State-Owner/Operator Partnership Agreement Components
  - Other components

# Creditable

Looked at the emission difference between a Non-Ozone Exceedance Summer Day (6/4/05) and an Ozone Exceeding High Electric Demand Day (7/26/05)

# The Total Differential

|    |        | <b>Total EGU NOx (TPD)</b> |           |               |            |
|----|--------|----------------------------|-----------|---------------|------------|
|    |        | 6/4/2005                   | 7/26/2005 | $\Delta$ Tons | $\Delta$ % |
| MD | 84     | 218                        | 134       | 160%          |            |
| NY | 110    | 377                        | 267       | 242%          |            |
| PA | 233    | 404                        | 170       | 73%           |            |
| CT | 10     | 54                         | 44        | 423%          |            |
| MA | 47     | 74                         | 27        | 58%           |            |
| DE | 14     | 58                         | 44        | 329%          |            |
| NJ | 52     | 163                        | 111       | 215%          |            |
|    | 550    | 1348                       | 798       | 145%          |            |
|    |        | <b>PJM RTO Peak (MW)</b>   |           |               |            |
|    | 78,821 | 133,761                    |           |               |            |

# Breakout of the Differential

| Unit Sector            | $\Delta$ Tons |
|------------------------|---------------|
| Combustion Turbines    | 179           |
| Load Following Boilers | 252           |
| Baseload               | 367           |
|                        | <b>798</b>    |

# Short Term Goal Calculation

- Combustion turbines
  - Water Injection (40 % reduction)
- Boilers
  - SNCR (30 % reduction)

# State Reduction Responsibility

| State | NO <sub>x</sub><br>(Tons per Day) | % Reduction<br>From HEDD<br>Units |
|-------|-----------------------------------|-----------------------------------|
| CT    | 11.7                              | -25%                              |
| DE    | 6.3                               | -30%                              |
| MA    | 6.1                               | -26%                              |
| MD    | 23.9                              | -32%                              |
| NJ    | 19.8                              | -28%                              |
| NY    | 46.1                              | -26%                              |
| PA    | 22.2                              | -32%                              |
|       | <b>136.1</b>                      | <b>-28%</b>                       |

# HEDD Unit Definition

## Recommendation:

- Data from 2004, 2005, and preliminary 2006
- Use a 3 year average of operating time
- Start with units which operate  $\leq 50\%$  of the time
- Revise, as necessary, to make sure combustion turbines and load following boilers have been captured



# Massachusetts

| FACILITY_NAME                    | CODE  | UNITID |  | FACILITY_NAME                 | CODE  | UNITID |
|----------------------------------|-------|--------|--|-------------------------------|-------|--------|
| <b>Combustion Turbines</b>       |       |        |  | <b>Combustion Turbines</b>    |       |        |
| Deer Island Treatment            | 10823 | S42    |  | Waters River                  | 1678  | 2      |
| Deer Island Treatment            | 10823 | S43    |  | West Springfield              | 1642  | 10     |
| Doreen                           | 1631  | 10     |  | Woodland Road                 | 1643  | 10     |
| Framingham Station               | 1586  | FJ-1   |  | Masspower                     | 10726 | 1      |
| Framingham Station               | 1586  | FJ-2   |  | Masspower                     | 10726 | 2      |
| Framingham Station               | 1586  | FJ-3   |  | Pittsfield Generating         | 50002 | 1      |
| Kendall Square                   | 1595  | S6     |  | Pittsfield Generating         | 50002 | 2      |
| Medway Station                   | 1592  | J1T1   |  | Pittsfield Generating         | 50002 | 3      |
| Medway Station                   | 1592  | J1T2   |  | West Springfield              | 1642  | CTG1   |
| Medway Station                   | 1592  | J2T1   |  | West Springfield              | 1642  | CTG2   |
| Medway Station                   | 1592  | J2T2   |  | <b>Load Following Boilers</b> |       |        |
| Medway Station                   | 1592  | J3T1   |  | Blackstone                    | 1594  | 11     |
| Medway Station                   | 1592  | J3T2   |  | Blackstone                    | 1594  | 12     |
| Mystic                           | 1588  | MJ-1   |  | Brayton Point                 | 1619  | 4      |
| New Boston                       | 1589  | NBJ-1  |  | Canal Station                 | 1599  | 2      |
| Potter                           | 1660  | 3      |  | Cleary Flood                  | 1682  | 8      |
| Somerset                         | 1613  | 11     |  | Cleary Flood                  | 1682  | 9      |
| South Boston Combustion Turbines | 10176 | A      |  | Salem Harbor                  | 1626  | 4      |
| South Boston Combustion Turbines | 10176 | B      |  | West Springfield              | 1642  | 3      |
| Stony Brook                      | 6081  | 1      |  | Canal Station                 | 1599  | 1      |
| Stony Brook                      | 6081  | 3      |  | Kendall Square                | 1595  | 2      |
| Stony Brook                      | 6081  | 4      |  | Kendall Square                | 1595  | 3      |
| Stony Brook                      | 6081  | 5      |  | New Boston                    | 1589  | 1      |
| Waters River                     | 1678  | 1      |  |                               |       |        |



| FACILITY_NAME              | CODE  | UNITID | FACILITY_NAME              | CODE | UNITID | FACILITY_NAME              | CODE | UNITID |
|----------------------------|-------|--------|----------------------------|------|--------|----------------------------|------|--------|
| <b>Combustion Turbines</b> |       |        | <b>Combustion Turbines</b> |      |        | <b>Combustion Turbines</b> |      |        |
| 59th Street                | 2503  | CT0001 | E F Barrett                | 2511 | U00008 | Gowanus                    | 2494 | CT03-8 |
| 74th Street                | 2504  | CT0001 | E F Barrett                | 2511 | U00009 | Gowanus                    | 2494 | CT04-1 |
| 74th Street                | 2504  | CT0002 | E F Barrett                | 2511 | U00010 | Gowanus                    | 2494 | CT04-2 |
| Arthur Kill                | 2490  | CT0001 | E F Barrett                | 2511 | U00011 | Gowanus                    | 2494 | CT04-3 |
| Astoria Gas Turbine Power  | 55243 | CT0005 | E F Barrett                | 2511 | U00012 | Gowanus                    | 2494 | CT04-4 |
| Astoria Gas Turbine Power  | 55243 | CT0007 | E F Barrett                | 2511 | U00013 | Gowanus                    | 2494 | CT04-5 |
| Astoria Gas Turbine Power  | 55243 | CT0008 | E F Barrett                | 2511 | U00014 | Gowanus                    | 2494 | CT04-6 |
| Astoria Gas Turbine Power  | 55243 | CT0010 | E F Barrett                | 2511 | U00015 | Gowanus                    | 2494 | CT04-7 |
| Astoria Gas Turbine Power  | 55243 | CT0011 | E F Barrett                | 2511 | U00016 | Gowanus                    | 2494 | CT04-8 |
| Astoria Gas Turbine Power  | 55243 | CT0012 | E F Barrett                | 2511 | U00017 | Hillburn                   | 2628 | 1      |
| Astoria Gas Turbine Power  | 55243 | CT0013 | E F Barrett                | 2511 | U00018 | Holtsville Facility        | 8007 | U00001 |
| Astoria Gas Turbine Power  | 55243 | CT2-1A | E F Barrett                | 2511 | U00019 | Holtsville Facility        | 8007 | U00002 |
| Astoria Gas Turbine Power  | 55243 | CT2-1B | East Hampton Facility      | 2512 | UGT001 | Holtsville Facility        | 8007 | U00003 |
| Astoria Gas Turbine Power  | 55243 | CT2-2A | Glenwood                   | 2514 | U00020 | Holtsville Facility        | 8007 | U00004 |
| Astoria Gas Turbine Power  | 55243 | CT2-2B | Glenwood                   | 2514 | U00021 | Holtsville Facility        | 8007 | U00005 |
| Astoria Gas Turbine Power  | 55243 | CT2-3A | Glenwood Landing Ene       | 7869 | UGT011 | Holtsville Facility        | 8007 | U00006 |
| Astoria Gas Turbine Power  | 55243 | CT2-3B | Gowanus                    | 2494 | CT01-1 | Holtsville Facility        | 8007 | U00007 |
| Astoria Gas Turbine Power  | 55243 | CT2-4A | Gowanus                    | 2494 | CT01-2 | Holtsville Facility        | 8007 | U00008 |
| Astoria Gas Turbine Power  | 55243 | CT2-4B | Gowanus                    | 2494 | CT01-3 | Holtsville Facility        | 8007 | U00009 |
| Astoria Gas Turbine Power  | 55243 | CT3-1A | Gowanus                    | 2494 | CT01-4 | Holtsville Facility        | 8007 | U00010 |
| Astoria Gas Turbine Power  | 55243 | CT3-1B | Gowanus                    | 2494 | CT01-5 | Holtsville Facility        | 8007 | U00011 |
| Astoria Gas Turbine Power  | 55243 | CT3-2A | Gowanus                    | 2494 | CT01-6 | Holtsville Facility        | 8007 | U00012 |
| Astoria Gas Turbine Power  | 55243 | CT3-2B | Gowanus                    | 2494 | CT01-7 | Holtsville Facility        | 8007 | U00013 |
| Astoria Gas Turbine Power  | 55243 | CT3-3A | Gowanus                    | 2494 | CT01-8 | Holtsville Facility        | 8007 | U00014 |
| Astoria Gas Turbine Power  | 55243 | CT3-3B | Gowanus                    | 2494 | CT02-1 | Holtsville Facility        | 8007 | U00015 |
| Astoria Gas Turbine Power  | 55243 | CT3-4A | Gowanus                    | 2494 | CT02-2 | Holtsville Facility        | 8007 | U00016 |
| Astoria Gas Turbine Power  | 55243 | CT3-4B | Gowanus                    | 2494 | CT02-3 | Holtsville Facility        | 8007 | U00017 |
| Astoria Gas Turbine Power  | 55243 | CT4-1A | Gowanus                    | 2494 | CT02-4 | Holtsville Facility        | 8007 | U00018 |
| Astoria Gas Turbine Power  | 55243 | CT4-1B | Gowanus                    | 2494 | CT02-5 | Holtsville Facility        | 8007 | U00019 |
| Astoria Gas Turbine Power  | 55243 | CT4-2A | Gowanus                    | 2494 | CT02-6 | Holtsville Facility        | 8007 | U00020 |
| Astoria Gas Turbine Power  | 55243 | CT4-2B | Gowanus                    | 2494 | CT02-7 | Hudson Avenue              | 2496 | CT0004 |
| Astoria Gas Turbine Power  | 55243 | CT4-3A | Gowanus                    | 2494 | CT02-8 | Hudson Avenue              | 2496 | CT0005 |
| Astoria Gas Turbine Power  | 55243 | CT4-3B | Gowanus                    | 2494 | CT03-1 | Narrows                    | 2499 | CT01-1 |
| Astoria Gas Turbine Power  | 55243 | CT4-4A | Gowanus                    | 2494 | CT03-2 | Narrows                    | 2499 | CT01-2 |
| Astoria Gas Turbine Power  | 55243 | CT4-4B | Gowanus                    | 2494 | CT03-3 | Narrows                    | 2499 | CT01-3 |
| E F Barrett                | 2511  | U00004 | Gowanus                    | 2494 | CT03-4 | Narrows                    | 2499 | CT01-4 |
| E F Barrett                | 2511  | U00005 | Gowanus                    | 2494 | CT03-5 | Narrows                    | 2499 | CT01-5 |
| E F Barrett                | 2511  | U00006 | Gowanus                    | 2494 | CT03-6 | Narrows                    | 2499 | CT01-6 |
| E F Barrett                | 2511  | U00007 | Gowanus                    | 2494 | CT03-7 | Narrows                    | 2499 | CT01-7 |
|                            |       |        |                            |      |        | Narrows                    | 2499 | CT01-8 |

# New York

| FACILITY_NAME                   | CODE  | UNITID |
|---------------------------------|-------|--------|
| <b>Combustion Turbines</b>      |       |        |
| Narrows                         | 2499  | CT02-1 |
| Narrows                         | 2499  | CT02-2 |
| Narrows                         | 2499  | CT02-3 |
| Narrows                         | 2499  | CT02-4 |
| Narrows                         | 2499  | CT02-5 |
| Narrows                         | 2499  | CT02-6 |
| Narrows                         | 2499  | CT02-7 |
| Narrows                         | 2499  | CT02-8 |
| Northport                       | 2516  | UGT001 |
| Port Jefferson Energy Center    | 2517  | UGT001 |
| Ravenswood Generating Station   | 2500  | CT0001 |
| Ravenswood Generating Station   | 2500  | CT0004 |
| Ravenswood Generating Station   | 2500  | CT0005 |
| Ravenswood Generating Station   | 2500  | CT0006 |
| Ravenswood Generating Station   | 2500  | CT0007 |
| Ravenswood Generating Station   | 2500  | CT0008 |
| Ravenswood Generating Station   | 2500  | CT0009 |
| Ravenswood Generating Station   | 2500  | CT0010 |
| Ravenswood Generating Station   | 2500  | CT0011 |
| Ravenswood Generating Station   | 2500  | CT02-1 |
| Ravenswood Generating Station   | 2500  | CT02-2 |
| Ravenswood Generating Station   | 2500  | CT02-3 |
| Ravenswood Generating Station   | 2500  | CT02-4 |
| Ravenswood Generating Station   | 2500  | CT03-1 |
| Ravenswood Generating Station   | 2500  | CT03-2 |
| Ravenswood Generating Station   | 2500  | CT03-3 |
| Ravenswood Generating Station   | 2500  | CT03-4 |
| Shoemaker                       | 2632  | 1      |
| Wading River Facility           | 7146  | UGT007 |
| Wading River Facility           | 7146  | UGT008 |
| Wading River Facility           | 7146  | UGT009 |
| Wading River Facility           | 7146  | UGT013 |
| Wading River Facility           | 7146  | UGT014 |
| West Babylon Facility           | 2521  | UGT001 |
| 23rd and 3rd                    | 7910  | 2301   |
| 23rd and 3rd                    | 7910  | 2302   |
| Bayswater Peaking Facility      | 55699 | 1      |
| Bayswater Peaking Facility      | 55699 | 2      |
| Bethpage Energy Center          | 50292 | GT3    |
| Brentwood                       | 7912  | BW01   |
| Equus Freeport Power Generation | 56032 | 1      |

| FACILITY_NAME                 | CODE  | UNITID |
|-------------------------------|-------|--------|
| <b>Combustion Turbines</b>    |       |        |
| Freeport Power Plant No.      | 2679  | 5      |
| Glenwood Landing Energy       | 7869  | UGT012 |
| Glenwood Landing Energy       | 7869  | UGT013 |
| Harlem River Yard             | 7914  | HR01   |
| Harlem River Yard             | 7914  | HR02   |
| Hawkeye Energy Greenpoint     | 55969 | U-01   |
| Hell Gate                     | 7913  | HG01   |
| Hell Gate                     | 7913  | HG02   |
| North 1st                     | 7915  | NO1    |
| PPL Edgewood Energy           | 55786 | CT01   |
| PPL Edgewood Energy           | 55786 | CT02   |
| PPL Shoreham Energy           | 55787 | CT01   |
| PPL Shoreham Energy           | 55787 | CT02   |
| Port Jefferson Energy Center  | 2517  | UGT002 |
| Port Jefferson Energy Center  | 2517  | UGT003 |
| Pouch Terminal                | 7911  | PT01   |
| Vernon Boulevard              | 7909  | VB01   |
| Vernon Boulevard              | 7909  | VB02   |
| <b>Load Following Boilers</b> |       |        |
| 59th Street                   | 2503  | BLR114 |
| 59th Street                   | 2503  | BLR115 |
| 59th Street                   | 2503  | BLR116 |
| 59th Street                   | 2503  | BLR117 |
| 59th Street                   | 2503  | BLR118 |
| 74th Street                   | 2504  | 120    |
| 74th Street                   | 2504  | 121    |
| 74th Street                   | 2504  | 122    |
| AES Greenidge                 | 2527  | 4      |
| AES Greenidge                 | 2527  | 5      |
| AES Greenidge                 | 2527  | 6      |
| AES Westover (Goudey)         | 2526  | 12     |
| Astoria Generating Station    | 8906  | 20     |
| Astoria Generating Station    | 8906  | 50     |
| Bethlehem Energy Center       | 2539  | 1      |
| Bethlehem Energy Center       | 2539  | 2      |
| Bethlehem Energy Center       | 2539  | 3      |
| Bethlehem Energy Center       | 2539  | 4      |
| Bowline Generating Station    | 2625  | 1      |
| Bowline Generating Station    | 2625  | 2      |
| Charles Poletti               | 2491  | 1      |
|                               |       |        |

| FACILITY_NAME                 | CODE  | UNITID |
|-------------------------------|-------|--------|
| <b>Load Following Boilers</b> |       |        |
| Dynegy Danskammer             | 2480  | 1      |
| Dynegy Danskammer             | 2480  | 2      |
| Dynegy Roseton                | 8006  | 1      |
| Dynegy Roseton                | 8006  | 2      |
| East River                    | 2493  | 60     |
| East River                    | 2493  | 70     |
| Glenwood                      | 2514  | 50     |
| Hudson Avenue                 | 2496  | BLR071 |
| Hudson Avenue                 | 2496  | BLR072 |
| Hudson Avenue                 | 2496  | BLR081 |
| Hudson Avenue                 | 2496  | BLR082 |
| Lovett Generating Station     | 2629  | 3      |
| Lovett Generating Station     | 2629  | 5      |
| Northport                     | 2516  | 1      |
| Oswego Harbor Power           | 2594  | 5      |
| Oswego Harbor Power           | 2594  | 6      |
| Ravenswood Generating Station | 2500  | 30     |
| Ravenswood Generating Station | 2500  | BLR001 |
| Ravenswood Generating Station | 2500  | BLR002 |
| Ravenswood Generating Station | 2500  | BLR003 |
| Ravenswood Generating Station | 2500  | BLR004 |
| Rochester 7 - Russell Station | 2642  | 1      |
| Rochester 7 - Russell Station | 2642  | 3      |
| Trigen Energy - Syracuse      | 50651 | BLR1   |
| Trigen Energy - Syracuse      | 50651 | BLR2   |
| Trigen Energy - Syracuse      | 50651 | BLR3   |
| Trigen Energy - Syracuse      | 50651 | BLR4   |
| Trigen Energy - Syracuse      | 50651 | BLR5   |
| Huntley Power                 | 2549  | 63     |
| Huntley Power                 | 2549  | 64     |
| S A Carlson                   | 2682  | 10     |
| S A Carlson                   | 2682  | 12     |
| S A Carlson                   | 2682  | 9      |
| WPS Niagara Generation        | 50202 | 1      |
| Arthur Kill                   | 2490  | 20     |
| Arthur Kill                   | 2490  | 30     |
| Far Rockaway                  | 2513  | 40     |
| Glenwood                      | 2514  | 40     |
| Glenwood                      | 2514  | 50     |
| Ravenswood Generating Station | 2500  | 10     |
|                               |       |        |

# New York

# New Jersey

| FACILITY_NAME                 | CODE | UNITID | FACILITY_NAME              | CODE | UNITID | FACILITY_NAME                 | CODE  | UNITID |
|-------------------------------|------|--------|----------------------------|------|--------|-------------------------------|-------|--------|
| <b>Combustion Turbines</b>    |      |        | <b>Combustion Turbines</b> |      |        | <b>Combustion Turbines</b>    |       |        |
| Bergen                        | 2398 | 3001   | Essex                      | 2401 | 22001  | Missouri                      | 2383  | 012001 |
| Burlington Generating Station | 2399 | 12001  | Essex                      | 2401 | 24001  | National Park                 | 2409  | 1001   |
| Burlington Generating Station | 2399 | 14001  | Essex                      | 2401 | 26001  | Salem                         | 2410  | 2001   |
| Burlington Generating Station | 2399 | 16001  | Essex                      | 2401 | 28001  | Sayville                      | 2390  | 012001 |
| Burlington Generating Station | 2399 | 18001  | Essex                      | 2401 | 4001   | Sayville                      | 2390  | 014001 |
| Burlington Generating Station | 2399 | 28001  | Forked River               | 7138 | 002001 | Sayville                      | 2390  | 015001 |
| Burlington Generating Station | 2399 | 30001  | Gilbert Generating Station | 2393 | 015001 | Sayville                      | 2390  | 016001 |
| Burlington Generating Station | 2399 | 32001  | Gilbert Generating Station | 2393 | 016001 | Sewaren Generating Station    | 2411  | 12001  |
| Burlington Generating Station | 2399 | 34001  | Gilbert Generating Station | 2393 | 017001 | Werner                        | 2385  | 009001 |
| Burlington Generating Station | 2399 | 4001   | Gilbert Generating Station | 2393 | 018001 | Werner                        | 2385  | 010001 |
| Carlls Corner Station         | 2379 | 002001 | Gilbert Generating Station | 2393 | 04     | Werner                        | 2385  | 011001 |
| Carlls Corner Station         | 2379 | 003001 | Gilbert Generating Station | 2393 | 05     | Werner                        | 2385  | 012001 |
| Cedar Station                 | 2380 | 002001 | Gilbert Generating Station | 2393 | 06     | West Station                  | 6776  | 002001 |
| Cedar Station                 | 2380 | 003001 | Gilbert Generating Station | 2393 | 07     | Bayonne Plant Holding, LLC    | 50497 | 1001   |
| Cedar Station                 | 2380 | 004001 | Gilbert Generating Station | 2393 | 9      | Bayonne Plant Holding, LLC    | 50497 | 2001   |
| Cumberland                    | 5083 | 004001 | Glen Gardner               | 8227 | 003001 | Bayonne Plant Holding, LLC    | 50497 | 4001   |
| Edison                        | 2400 | 1001   | Glen Gardner               | 8227 | 004001 | Essex                         | 2401  | 35001  |
| Edison                        | 2400 | 11001  | Glen Gardner               | 8227 | 005001 | Forked River                  | 7138  | 3001   |
| Edison                        | 2400 | 13001  | Glen Gardner               | 8227 | 006001 | Lakewood Cogeneration         | 54640 | 1001   |
| Edison                        | 2400 | 15001  | Glen Gardner               | 8227 | 007001 | Lakewood Cogeneration         | 54640 | 2001   |
| Edison                        | 2400 | 17001  | Glen Gardner               | 8227 | 008001 | Linden Generating Station     | 2406  | 5      |
| Edison                        | 2400 | 19001  | Glen Gardner               | 8227 | 009001 | Linden Generating Station     | 2406  | 6      |
| Edison                        | 2400 | 21001  | Glen Gardner               | 8227 | 010001 | Linden Generating Station     | 2406  | 7      |
| Edison                        | 2400 | 23001  | Kearny Generating Station  | 2404 | 15001  | Linden Generating Station     | 2406  | 8      |
| Edison                        | 2400 | 3001   | Kearny Generating Station  | 2404 | 16001  | Ocean Peaking Power, LP       | 55938 | OPP3   |
| Edison                        | 2400 | 5001   | Kearny Generating Station  | 2404 | 17001  | Ocean Peaking Power, LP       | 55938 | OPP4   |
| Edison                        | 2400 | 7001   | Mercer Generating Station  | 2408 | 7001   | Sherman Avenue                | 7288  | 1      |
| Edison                        | 2400 | 9001   | Mickleton                  | 8008 | 001001 | <b>Load Following Boilers</b> |       |        |
| Essex                         | 2401 | 10001  | Middle Street              | 2382 | 003001 | B L England                   | 2378  | 3      |
| Essex                         | 2401 | 12001  | Middle Street              | 2382 | 004001 | Deepwater                     | 2384  | 1      |
| Essex                         | 2401 | 14001  | Middle Street              | 2382 | 005001 | Howard M Down                 | 2434  | 5001   |
| Essex                         | 2401 | 16001  | Middle Street              | 2382 | 004001 | Hudson Generating Station     | 2403  | 1      |
| Essex                         | 2401 | 18001  | Middle Street              | 2382 | 005001 | Sewaren Generating Station    | 2411  | 1      |
| Essex                         | 2401 | 20001  | Missouri                   | 2383 | 010001 | Sewaren Generating Station    | 2411  | 2      |
| Essex                         | 2401 | 2001   | Missouri                   | 2383 | 011001 | Sewaren Generating Station    | 2411  | 3      |
|                               |      |        |                            |      |        | Sewaren Generating Station    | 2411  | 4      |

# Pennsylvania

| FACILITY_NAME                     | CODE  | UNITID |
|-----------------------------------|-------|--------|
| <b>Combustion Turbines</b>        |       |        |
| Croydon Generating Station        | 8012  | 11     |
| Croydon Generating Station        | 8012  | 12     |
| Croydon Generating Station        | 8012  | 21     |
| Croydon Generating Station        | 8012  | 22     |
| Croydon Generating Station        | 8012  | 31     |
| Croydon Generating Station        | 8012  | 32     |
| Croydon Generating Station        | 8012  | 41     |
| Croydon Generating Station        | 8012  | 42     |
| Mountain                          | 3111  | 31     |
| Mountain                          | 3111  | 32     |
| PEI Power Power Corporation       | 50279 | 2      |
| Portland                          | 3113  | 5      |
| Richmond                          | 3168  | 91     |
| Richmond                          | 3168  | 92     |
| Tolna                             | 3116  | 31     |
| Tolna                             | 3116  | 32     |
| Williams Generation Co (Hazleton) | 10870 | TURBIN |
| Handsome Lake Energy              | 55233 | EU-1A  |
| Handsome Lake Energy              | 55233 | EU-1B  |
| Handsome Lake Energy              | 55233 | EU-2A  |
| Handsome Lake Energy              | 55233 | EU-2B  |
| Handsome Lake Energy              | 55233 | EU-3A  |
| Handsome Lake Energy              | 55233 | EU-3B  |
| Handsome Lake Energy              | 55233 | EU-4A  |
| Handsome Lake Energy              | 55233 | EU-4B  |

| FACILITY_NAME                     | CODE  | UNITID |
|-----------------------------------|-------|--------|
| <b>Combustion Turbines</b>        |       |        |
| Handsome Lake Energy              | 55233 | EU-5A  |
| Handsome Lake Energy              | 55233 | EU-5B  |
| Hunlock Power Station             | 3176  | 4      |
| Ontelaunee Energy Center          | 55193 | CT1    |
| Ontelaunee Energy Center          | 55193 | CT2    |
| Williams Generation Co (Hazleton) | 10870 | TURB2  |
| Williams Generation Co (Hazleton) | 10870 | TURB3  |
| Williams Generation Co (Hazleton) | 10870 | TURB4  |
| <b>Load Following Boilers</b>     |       |        |
| Armstrong Power Station           | 3178  | 1      |
| Armstrong Power Station           | 3178  | 2      |
| Cromby                            | 3159  | 2      |
| Eddystone Generating Station      | 3161  | 3      |
| Eddystone Generating Station      | 3161  | 4      |
| Elrama                            | 3098  | 1      |
| Elrama                            | 3098  | 2      |
| Elrama                            | 3098  | 3      |
| Hatfields Ferry Power Station     | 3179  | 1      |
| Martins Creek                     | 3148  | 1      |
| Martins Creek                     | 3148  | 2      |
| Martins Creek                     | 3148  | 3      |
| Martins Creek                     | 3148  | 4      |
| Montour                           | 3149  | AUX1   |
| Montour                           | 3149  | AUX2   |
| New Castle                        | 3138  | 3      |

| FACILITY_NAME                       | CODE   |
|-------------------------------------|--------|
| <b>Load Following Boilers</b>       |        |
| New Castle                          | 3138   |
| Schuylkill                          | 3169   |
| Shawville                           | 3131   |
| Shawville                           | 3131   |
| Sunbury                             | 3152   |
| Sunbury                             | 3152   |
| Sunbury                             | 3152   |
| Sunbury                             | 3152   |
| Sunbury                             | 3152   |
| Sunbury                             | 3152   |
| Sunbury                             | 3152   |
| Sunbury                             | 3152   |
| Trigen Energy - Schuylkill          | 50607  |
| Trigen Energy - Schuylkill          | 50607  |
| Trigen Energy Corporation-Edison St | 880006 |
| Trigen Energy Corporation-Edison St | 880006 |
| Trigen Energy Corporation-Edison St | 880006 |
| Trigen Energy Corporation-Edison St | 880006 |
| Wheeler - Frackville                | 50879  |
| FPL Energy Marcus Hook, LP          | 55801  |
| FPL Energy Marcus Hook, LP          | 55801  |
| FPL Energy Marcus Hook, LP          | 55801  |
| Fairless Hills Generating Station   | 7701   |
| Grays Ferry Cogen Partnership       | 54785  |
| Mitchell Power Station              | 3181   |
| Mitchell Power Station              | 3181   |

# Delaware

| FACILITY_NAME                     | CODE  | UNITID | FACILITY_NAME                 | CODE  | UNITID |
|-----------------------------------|-------|--------|-------------------------------|-------|--------|
| <b>Combustion Turbines</b>        |       |        | <b>Load Following Boilers</b> |       |        |
| Christiana Substation             | 591   | 11     | Edge Moor                     | 593   | 5      |
| Christiana Substation             | 591   | 14     | Indian River                  | 594   | 2      |
| Delaware City                     | 592   | 10     | Indian River                  | 594   | 4      |
| Edge Moor                         | 593   | 10     | McKee Run                     | 599   | 1      |
| Indian River                      | 594   | 10     | McKee Run                     | 599   | 2      |
| Van Sant                          | 7318  | **11   | McKee Run                     | 599   | 3      |
| West Substation                   | 597   | 10     | NRG Energy Center Dover       | 10030 | 1      |
| NRG Energy Center Dover           | 10030 | 2      |                               |       |        |
| NRG Energy Center Dover           | 10030 | 3      |                               |       |        |
| Warren F. Sam Beasley Pwr Station | 7962  | 1      |                               |       |        |

# Maryland

| FACILITY_NAME              | CODE | UNITID | FACILITY_NAME                    | CODE | UNITID |
|----------------------------|------|--------|----------------------------------|------|--------|
| <b>Combustion Turbines</b> |      |        | <b>Combustion Turbines</b>       |      |        |
| Chalk Point                | 1571 | GT2    | Chalk Point                      | 1571 | **GT4  |
| Chalk Point                | 1571 | SMECO  | Chalk Point                      | 1571 | **GT5  |
| Dickerson                  | 1572 | GT2    | Chalk Point                      | 1571 | **GT6  |
| Dickerson                  | 1572 | GT3    | Rock Springs Generating Facility | 7835 | 1      |
| Morgantown                 | 1573 | GT3    | Rock Springs Generating Facility | 7835 | 2      |
| Morgantown                 | 1573 | GT4    | Rock Springs Generating Facility | 7835 | 3      |
| Morgantown                 | 1573 | GT5    | Rock Springs Generating Facility | 7835 | 4      |
| Morgantown                 | 1573 | GT6    | <b>Load Following Boilers</b>    |      |        |
| Perryman                   | 1556 | **51   | C P Crane                        | 1552 | 1      |
| Perryman                   | 1556 | CT1    | Chalk Point                      | 1571 | 3      |
| Perryman                   | 1556 | CT2    | Chalk Point                      | 1571 | 4      |
| Perryman                   | 1556 | CT3    | Herbert A Wagner                 | 1554 | 1      |
| Perryman                   | 1556 | CT4    | Herbert A Wagner                 | 1554 | 4      |
| Riverside                  | 1559 | CT6    | Riverside                        | 1559 | 4      |
| Westport                   | 1560 | CT5    | Vienna                           | 1564 | 8      |
| Chalk Point                | 1571 | **GT3  | R. Paul Smith Power Station      | 1570 | 9      |



# Emission Inventory

- CAMD
  - 2002 – need to adjust for use of default data
  - 2005 – Ok to use
- NEEDS Update
  - Comments submitted by the owners
- Crosswalk
  - Status ??

# Successes

- ✓ Creditable Short Term
- ✓ HEDD Unit Definitions
- ✓ Emission Inventory

# Remaining Tasks

## Discussing this Afternoon

- Potential actions by the owners to meet an emission reduction goal
- Elements of the State-Owner/Operator Partnership Agreement
- Long Term Strategy
  - Definition of Clean

# **Setting the Stage...**

**Estimated Emission Reduction  
Responsibility by Owner**

# Massachusetts

| Tons       | State | Company  |
|------------|-------|--|
| 1.4        | MA    | US Gen New England, Inc. (Owner/Operator) (Ended 03-JAN-05)<br>Dominion Energy Salem Harbor, LLC (Owner/Operator) (Started 03-JAN-05)  |
| 1.4        | MA    | Mirant Canal, LLC (Owner/Operator)   |
| 1.1        | MA    | US Gen New England, Inc. (Owner/Operator) (Ended 03-JAN-05)<br>Dominion Energy Brayton Point, LLC (Owner/Operator) (Started 03-JAN-05)   |
| 0.9        | MA    | Exelon New Boston, LLC (Owner/Operator)  |
| 0.7        | MA    | Braintree Electric Light Department (Owner) Hingham Municipal Lighting Plant (Owner) Hudson Light and Power Department (Owner) North Attleborough Electric Dept. (Owner) Taunton Municipal Lighting Plant (Owner/Operator) |
| 0.4        | MA    | Consolidated Edison Energy MA, Inc. (Owner/Operator)   |
| 0.3        | MA    | Peabody Municipal Light Plant (Owner/Operator)   |
| 0.0        | MA    | Braintree Electric Light Department (Owner/Operator)   |
| 0.0        | MA    | Mass. Water Resources Authority (Owner/Operator)   |
| 0.0        | MA    | Massachusetts Municipal Wholesale (Owner/Operator)   |
| <u>0.0</u> | MA    | Mirant Kendall, LLC (Owner/Operator)   |
| <b>6.1</b> |       |  |

# Connecticut

| Tons        | State | Company   |
|-------------|-------|---|
| 4.3         | CT    | Montville Power, LLC (Owner) NRG Montville Operations, Inc. (Operator)        |
| 3.0         | CT    | Middletown Power, LLC (Owner) NRG Middletown Operations, Inc. (Operator)      |
| 2.2         | CT    | Connecticut Jet Power, LLC (Owner) NRG Middletown Operations, Inc. (Operator) |
| 2.0         | CT    | PSEG Power Connecticut, LLC (Owner/Operator)                                  |
| <u>0.2</u>  | CT    | Norwalk Harbor Power Operations (Operator) Norwalk Harbor Power, LLC (Owner)  |
| <b>11.7</b> |       |   |

# New York

| Tons        | State | Company   |
|-------------|-------|---|
| 13.8        | NY    | Astoria Generating Company, LP (Owner) Astoria Operating Services, Inc. (Operator)  |
| 8.6         | NY    | NRG Oswego Harbor Power Operations (Operator) Oswego Harbor Power, LLC (Owner)  |
| 7.9         | NY    | Astoria Gas Turbine Operations, Inc. (Operator) Astoria Gas Turbine Power, LLC (Owner)  |
| 7.6         | NY    | Dynegy Power Corporation (Owner/Operator)   |
| 7.0         | NY    | Mirant Bowline, LLC (Owner/Operator)  |
| 0.4         | NY    | Consolidated Edison of New York (Owner/Operator)  |
| 0.3         | NY    | Jamestown Board of Public Utilities (Owner/Operator) (Ended 17-MAR-05) City of Jamestown (Owner/Operator) (Started 17-MAR-05) |
| 0.1         | NY    | Consolidated Edison of New York (Owner) KeySpan Corporation (Operator)  |
| 0.1         | NY    | Mirant NY-Gen, LLC (Owner/Operator)   |
| 0.1         | NY    | Arthur Kill Power, LLC (Owner/Operator) Arthur Kill Power, LLC (Owner)  |
| 0.0         | NY    | Mirant Lovett, LLC (Owner/Operator)   |
| 0.0         | NY    | Huntley Power, LLC (Owner/Operator) NRG Huntley Operations, Inc. (Operator)   |
| 0.0         | NY    | KeySpan Corporation (Owner/Operator)  |
| 0.0         | NY    | PSEG Power New York, Inc. (Owner/Operator)  |
| 0.0         | NY    | WPS Niagara Generation, LLC (Owner/Operator)  |
| <b>46.1</b> |       |   |

# New Jersey

| <b>Tons</b> | <b>State</b> | <b>Company</b>                                      |
|-------------|--------------|---|
| 16.3        | NJ           | PSEG Power, LLC (Owner/Operator)                    |
| 2.2         | NJ           | PSEG Fossil LLC (Owner/Operator)                    |
| 0.4         | NJ           | Reliant Energy New Jersey Holdings (Owner/Operator) |
| 0.9         | NJ           | Conectiv Atlantic Generation, LLC (Owner/Operator)  |
| 0.0         | NJ           | Atlantic City Electric Company (Owner/Operator)     |
| <u>0.0</u>  | NJ           | City of Vineland (Owner/Operator)                   |
| <b>19.8</b> |              |   |



# Pennsylvania

| <b>Tons</b> | <b>State</b> | <b>Company</b>   |
|-------------|--------------|--|
| 8.4         | PA           | Exelon Generating Company (Owner/Operator)                       |
| 8.4         | PA           | PPL Martins Creek, LLC (Owner/Operator)                          |
| 3.5         | PA           | Allegheny Energy Supply Company, LLC (Owner/Operator)            |
| 1.8         | PA           | Reliant Energy Mid-Atlantic Power Holdings, LLC (Owner/Operator) |
| 0.1         | PA           | Trigen - Philadelphia Energy Corp (Owner/Operator)               |
| 0.0         | PA           | Procter & Gamble Company (Owner/Operator)                        |
| <u>0.0</u>  | PA           | Williams Generation (Owner/Operator)                             |
| <b>22.2</b> |              |  |

# Delaware

| <b>Tons</b> | <b>State</b> | <b>Company</b>  |
|-------------|--------------|---|
| 4.5         | DE           | Conectiv Delmarva Generation, LLC (Owner/Operator)  |
| 1.6         | DE           | City of Dover (Owner/Operator) DE Operating Services, LLC (Operator)  |
| <u>0.2</u>  | DE           | Conectiv Delmarva Generation, LLC (Owner/Operator) (Ended 04-AUG-05) Indian River Power, LLC (Owner/Operator) (Started 04-AUG-05) |
| <b>6.3</b>  |              |   |

# Maryland

| Tons        | State | Company  |
|-------------|-------|--|
| 10.0        | MD    | Mirant Mid-Atlantic, LLC (Owner/Operator) (Ended 17-OCT-05)<br>Mirant Chalk Point, LLC (Owner/Operator) (Started 17-OCT-05)  |
| 4.3         | MD    | Constellation Energy Commodities Group, Inc. (Owner/Operator)  |
| 3.6         | MD    | Mirant Mid-Atlantic, LLC (Owner/Operator)  |
| 0.5         | MD    | Allegheny Energy Supply Company, LLC (Owner/Operator)  |
| 3.7         | MD    | Constellation Energy Commodities Group, Inc. (Owner/Operator) (Ended 21-NOV-05)<br>Constellation Power Source Generation Inc. (Owner/Operator) (Started 21-NOV-05) |
| 1.8         | MD    | Vienna Operations, Inc. (Operator) (Ended 04-AUG-05)<br>Vienna Power, LLC (Owner/Operator)   |
| <u>0.0</u>  | MD    | Mirant Mid-Atlantic, LLC (Operator)<br>South Maryland Electric Cooperative (Owner)   |
| <b>23.9</b> |       |  |

**LUNCH**