

HOUSE BILL 1042

M3

5lr2148

By: **Delegate Stein**

Introduced and read first time: February 13, 2015

Assigned to: Economic Matters

A BILL ENTITLED

1 AN ACT concerning

2 **Environment – Nitrogen Oxide Emissions – Pollution and Combustion Control**
3 **Technologies**

4 FOR the purpose of prohibiting certain nitrogen oxide emissions rates for certain affected
5 electric generating units from exceeding certain amounts; requiring the owner or
6 operator of an affected electric generating unit to submit a certain plan for approval
7 to the Department of the Environment and the U.S. Environmental Protection
8 Agency on or before a certain date; requiring that the plan include certain
9 information; requiring the owner or operator of an affected electric generating unit
10 to minimize nitrogen oxide emissions by operating and optimizing the use of certain
11 pollution and combustion control technologies beginning on a certain date; requiring
12 an owner or operator of an affected electric generating unit to continue to meet
13 certain emissions reduction requirements; requiring the owner or operator of certain
14 affected electric generating units to choose from certain emission control
15 requirements; requiring that a certain calculation be used to determine a certain
16 emission rate; requiring the owner or operator of an affected electric generating unit
17 to demonstrate the unit's compliance with certain provisions of this Act by using
18 certain information; prohibiting the owner or operator of an affected electric
19 generating unit from being required to submit a certain report if the unit's emissions
20 are below a certain rate; requiring the owner or operator of a certain affected electric
21 generating unit to submit a certain report for each day that the unit exceeds certain
22 emission rates; requiring that a certain report include certain information; stating
23 that an exceedance of a certain emissions rate is not a violation of certain provisions
24 of this Act if the provisions of a certain plan are met; requiring that compliance with
25 certain provisions of this Act be demonstrated by a certain emission monitoring
26 system; requiring that the owner or operator of an affected electric generating unit
27 submit a certain monthly report to the Department; requiring a certain report to
28 include certain information; defining certain terms; and generally relating to
29 pollution and combustion control technologies for nitrogen oxide emissions.

30 BY adding to

EXPLANATION: CAPITALS INDICATE MATTER ADDED TO EXISTING LAW.

[Brackets] indicate matter deleted from existing law.



1 Article – Environment

2 Section 2–10A–01 through 2–10A–07 to be under the new subtitle “Subtitle 10A.
3 Nitrogen Oxide Emissions”

4 Annotated Code of Maryland

5 (2013 Replacement Volume and 2014 Supplement)

6 SECTION 1. BE IT ENACTED BY THE GENERAL ASSEMBLY OF MARYLAND,
7 That the Laws of Maryland read as follows:

8 **Article – Environment**

9 **SUBTITLE 10A. NITROGEN OXIDE EMISSIONS.**

10 **2–10A–01.**

11 (A) IN THIS SUBTITLE THE FOLLOWING WORDS HAVE THE MEANINGS
12 INDICATED.

13 (B) “AFFECTED ELECTRIC GENERATING UNIT” MEANS ANY ONE OF THE
14 FOLLOWING COAL–FIRED ELECTRIC GENERATING UNITS:

15 (1) BRANDON SHORES UNITS 1 AND 2;

16 (2) C.P. CRANE UNITS 1 AND 2;

17 (3) CHALK POINT UNITS 1 AND 2;

18 (4) DICKERSON UNITS 1, 2, AND 3;

19 (5) H.A. WAGNER UNITS 2 AND 3;

20 (6) MORGANTOWN UNITS 1 AND 2; AND

21 (7) WARRIOR RUN.

22 (C) “OPERATING DAY” MEANS:

23 (1) (I) A 24–HOUR PERIOD BEGINNING AT MIDNIGHT OF ONE DAY
24 AND ENDING AT MIDNIGHT THE FOLLOWING DAY; OR

25 (II) AN ALTERNATIVE 24–HOUR PERIOD APPROVED BY THE
26 DEPARTMENT; AND

1 **(2) A PERIOD DURING WHICH TIME AN INSTALLATION IS OPERATING,**
2 **CONSUMING FUEL, OR CAUSING EMISSIONS.**

3 **(D) "OZONE SEASON" MEANS THE PERIOD BEGINNING MAY 1 OF ANY GIVEN**
4 **YEAR AND ENDING SEPTEMBER 30 OF THE SAME YEAR.**

5 **(E) "SYSTEM" MEANS AT LEAST TWO AFFECTED ELECTRIC GENERATING**
6 **UNITS WITHIN THE STATE THAT ARE OWNED, OPERATED, OR CONTROLLED BY THE**
7 **SAME PERSON AND ARE LOCATED:**

8 **(1) IN THE SAME OZONE NONATTAINMENT AREA AS SPECIFIED IN**
9 **TITLE 40, PART 81 OF THE CODE OF FEDERAL REGULATIONS; OR**

10 **(2) OUTSIDE OF ANY DESIGNATED OZONE NONATTAINMENT AREA AS**
11 **SPECIFIED IN TITLE 40, PART 81 OF THE CODE OF FEDERAL REGULATIONS.**

12 **(F) "SYSTEM OPERATING DAY" MEANS ANY DAY IN WHICH AN ELECTRIC**
13 **GENERATING UNIT IN A SYSTEM OPERATES.**

14 **(G) "30-DAY ROLLING AVERAGE EMISSION RATE" MEANS A VALUE IN**
15 **LBS/MMBTU CALCULATED BY:**

16 **(1) SUMMING THE TOTAL POUNDS OF POLLUTANT EMITTED FROM**
17 **THE UNIT DURING THE CURRENT OPERATING DAY AND THE PREVIOUS 29**
18 **OPERATING DAYS;**

19 **(2) SUMMING THE TOTAL HEAT INPUT TO THE UNIT IN MMBTU**
20 **DURING THE CURRENT OPERATING DAY AND THE PREVIOUS 29 OPERATING DAYS;**
21 **AND**

22 **(3) DIVIDING THE SUM OF ITEM (1) OF THIS SUBSECTION BY THE SUM**
23 **OF ITEM (2) OF THIS SUBSECTION.**

24 **(H) "30-DAY SYSTEM-WIDE ROLLING AVERAGE EMISSION RATE" MEANS A**
25 **VALUE IN LBS/MMBTU CALCULATED BY:**

26 **(1) SUMMING THE TOTAL POUNDS OF POLLUTANT EMITTED FROM**
27 **THE SYSTEM DURING THE CURRENT SYSTEM OPERATING DAY AND THE PREVIOUS 29**
28 **SYSTEM OPERATING DAYS;**

29 **(2) SUMMING THE TOTAL HEAT INPUT TO THE SYSTEM IN MMBTU**
30 **DURING THE CURRENT SYSTEM OPERATING DAY AND THE PREVIOUS 29 SYSTEM**
31 **OPERATING DAYS; AND**

1 **(3) DIVIDING THE SUM OF ITEM (1) OF THIS SUBSECTION BY THE SUM**
2 **OF ITEM (2) OF THIS SUBSECTION.**

3 **(I) “24-HOUR BLOCK AVERAGE EMISSION RATE” MEANS A VALUE IN**
4 **LBS/MMBTU CALCULATED BY:**

5 **(1) SUMMING THE TOTAL POUNDS OF POLLUTANT EMITTED FROM**
6 **THE UNIT DURING 24 HOURS BETWEEN MIDNIGHT OF ONE DAY AND ENDING THE**
7 **FOLLOWING MIDNIGHT;**

8 **(2) SUMMING THE TOTAL HEAT INPUT TO THE UNIT IN MMBTU**
9 **DURING 24 HOURS BETWEEN MIDNIGHT OF ONE DAY AND ENDING THE FOLLOWING**
10 **MIDNIGHT; AND**

11 **(3) DIVIDING THE SUM OF ITEM (1) OF THIS SUBSECTION BY THE SUM**
12 **OF ITEM (2) OF THIS SUBSECTION.**

13 **2-10A-02.**

14 **THIS SUBTITLE APPLIES TO AN AFFECTED ELECTRIC GENERATING UNIT.**

15 **2-10A-03.**

16 **(A) (1) SUBSECTIONS (B), (C), AND (D) OF THIS SECTION DO NOT APPLY**
17 **TO THE OWNER OR OPERATOR OF AN AFFECTED ELECTRIC GENERATING UNIT**
18 **EQUIPPED WITH A FLUIDIZED BED COMBUSTOR.**

19 **(2) THE NITROGEN OXIDE 24-HOUR BLOCK AVERAGE EMISSION RATE**
20 **FOR AN AFFECTED ELECTRIC GENERATING UNIT EQUIPPED WITH A FLUIDIZED BED**
21 **COMBUSTOR MAY NOT EXCEED 0.10 LBS/MMBTU.**

22 **(B) (1) (I) ON OR BEFORE NOVEMBER 15, 2015, THE OWNER OR**
23 **OPERATOR OF AN AFFECTED ELECTRIC GENERATING UNIT SHALL SUBMIT A PLAN**
24 **FOR APPROVAL TO THE DEPARTMENT AND THE U.S. ENVIRONMENTAL**
25 **PROTECTION AGENCY.**

26 **(II) THE PLAN SHALL:**

27 **1. DEMONSTRATE HOW EACH AFFECTED ELECTRIC**
28 **GENERATING UNIT WILL OPERATE INSTALLED POLLUTION CONTROL TECHNOLOGY**
29 **AND COMBUSTION CONTROLS TO MEET THE REQUIREMENTS OF PARAGRAPH (2) OF**
30 **THIS SUBSECTION;**

1 **2. SUMMARIZE THE DATA THAT WILL BE COLLECTED TO**
2 **DEMONSTRATE COMPLIANCE WITH PARAGRAPH (2) OF THIS SUBSECTION; AND**

3 **3. COVER ALL MODES OF OPERATION, INCLUDING BUT**
4 **NOT LIMITED TO NORMAL OPERATIONS, START-UP, SHUT-DOWN, AND LOW**
5 **CAPACITY OPERATIONS.**

6 **(2) BEGINNING MAY 1, 2016, FOR EACH OPERATING DAY DURING THE**
7 **OZONE SEASON, THE OWNER OR OPERATOR OF AN AFFECTED ELECTRIC**
8 **GENERATING UNIT SHALL MINIMIZE NITROGEN OXIDE EMISSIONS FOR THE UNIT**
9 **AND THE UNIT'S EQUIPMENT AT ALL TIMES THE UNIT IS IN OPERATION WHILE**
10 **BURNING ANY COAL BY OPERATING AND OPTIMIZING THE USE OF ALL INSTALLED**
11 **POLLUTION AND COMBUSTION CONTROL TECHNOLOGIES CONSISTENT WITH:**

12 **(I) TECHNOLOGICAL LIMITATIONS;**

13 **(II) MANUFACTURERS' SPECIFICATIONS;**

14 **(III) GOOD ENGINEERING AND MAINTENANCE PRACTICES; AND**

15 **(IV) GOOD AIR POLLUTION CONTROL PRACTICES FOR**
16 **MINIMIZING EMISSIONS AS DEFINED IN TITLE 40, § 60.11(D) OF THE CODE OF**
17 **FEDERAL REGULATIONS.**

18 **(C) (1) (I) EXCEPT AS PROVIDED IN PARAGRAPH (2) OF THIS**
19 **SUBSECTION, THE NITROGEN OXIDE 30-DAY SYSTEM-WIDE ROLLING AVERAGE**
20 **EMISSION RATE FOR AN AFFECTED ELECTRIC GENERATING UNIT MAY NOT EXCEED**
21 **0.15 LBS/MMBTU DURING THE OZONE SEASON.**

22 **(II) TO CALCULATE THE 30-DAY SYSTEM-WIDE ROLLING**
23 **AVERAGE EMISSION RATE UNDER SUBPARAGRAPH (I) OF THIS PARAGRAPH, SYSTEM**
24 **OPERATING DAYS FROM THE PREVIOUS OZONE SEASON SHALL BE USED IF 29**
25 **SYSTEM OPERATING DAYS ARE NOT AVAILABLE FROM THE CURRENT OZONE SEASON.**

26 **(2) THE REQUIREMENTS UNDER PARAGRAPH (1) OF THIS**
27 **SUBSECTION DO NOT APPLY TO AN AFFECTED ELECTRIC GENERATING UNIT THAT IS**
28 **LOCATED AT AN ELECTRIC GENERATING FACILITY THAT IS THE ONLY FACILITY IN**
29 **THE STATE DIRECTLY OR INDIRECTLY OWNED, OPERATED, OR CONTROLLED BY:**

30 **(I) THE OWNER, INCLUDING A PARENT COMPANY, AFFILIATE,**
31 **OR SUBSIDIARY OF THE OWNER;**

1 **(II) THE OPERATOR; OR**

2 **(III) THE CONTROLLER OF THE FACILITY.**

3 **(D) AN OWNER OR OPERATOR OF AN AFFECTED ELECTRIC GENERATING**
4 **UNIT SHALL CONTINUE TO MEET THE OZONE SEASON NITROGEN OXIDE REDUCTION**
5 **REQUIREMENTS AND ANNUAL NITROGEN OXIDE REDUCTION REQUIREMENTS**
6 **UNDER COMAR 26.11.27.**

7 **2-10A-04.**

8 **(A) THIS SECTION APPLIES TO C.P. CRANE UNITS 1 AND 2, CHALK POINT**
9 **UNIT 2, DICKERSON UNITS 1, 2, AND 3, AND H.A. WAGNER UNIT 2.**

10 **(B) THE OWNER OR OPERATOR OF AN AFFECTED ELECTRIC GENERATING**
11 **UNIT SHALL CHOOSE ONE OF THE FOLLOWING EMISSION CONTROL REQUIREMENTS:**

12 **(1) NOT LATER THAN JUNE 1, 2020:**

13 **(I) INSTALL AND OPERATE A SELECTIVE CATALYTIC**
14 **REDUCTION CONTROL SYSTEM; AND**

15 **(II) MEET A NITROGEN OXIDE EMISSION RATE OF 0.09**
16 **LBS/MMBTU, AS DETERMINED ON A 30-DAY ROLLING AVERAGE DURING THE OZONE**
17 **SEASON;**

18 **(2) NOT LATER THAN JUNE 1, 2020, PERMANENTLY RETIRE THE**
19 **UNIT; OR**

20 **(3) NOT LATER THAN JUNE 1, 2020, SWITCH THE FUEL FOR THE UNIT**
21 **FROM COAL TO NATURAL GAS.**

22 **(C) TO CALCULATE THE 30-DAY SYSTEM-WIDE ROLLING AVERAGE**
23 **EMISSION RATE FOR THE REQUIREMENTS UNDER SUBSECTION (B)(1) OF THIS**
24 **SECTION, OPERATING DAYS FROM THE PREVIOUS OZONE SEASON SHALL BE USED IF**
25 **29 SYSTEM OPERATING DAYS ARE NOT AVAILABLE FROM THE CURRENT OZONE**
26 **SEASON.**

27 **2-10A-05.**

28 **(A) THE OWNER OR OPERATOR OF AN AFFECTED ELECTRIC GENERATING**
29 **UNIT SHALL DEMONSTRATE, TO THE DEPARTMENT'S SATISFACTION, THE AFFECTED**

1 ELECTRIC GENERATING UNIT'S COMPLIANCE WITH § 2-10A-03(B)(2) OF THIS
2 SUBTITLE BY USING:

3 (1) THE PLAN DEVELOPED IN ACCORDANCE WITH § 2-10A-03(B)(1)
4 OF THIS SUBTITLE; AND

5 (2) ANY ADDITIONAL DOCUMENTATION AVAILABLE TO AND
6 MAINTAINED BY THE OWNER OR OPERATOR OF THE AFFECTED ELECTRIC
7 GENERATING UNIT.

8 (B) THE OWNER OR OPERATOR OF AN AFFECTED ELECTRIC GENERATING
9 UNIT MAY NOT BE REQUIRED TO SUBMIT A UNIT-SPECIFIC REPORT CONSISTENT
10 WITH SUBSECTION (C) OF THIS SECTION IF THE AFFECTED ELECTRIC GENERATING
11 UNIT EMITS AT LEVELS THAT ARE AT OR BELOW THE FOLLOWING RATES:

AFFECTED UNIT	24-HOUR BLOCK AVERAGE NOX EMISSIONS IN LBS/MMBTU
BRANDON SHORES	
UNIT 1	0.008
UNIT 2	
< 650 MWG	0.07
≥ 650 MWG	0.15
C.P. CRANE	
UNIT 1	0.30
UNIT 2	0.28
CHALK POINT	
UNIT 1 ONLY	0.07
UNIT 2 ONLY	0.33
UNITS 1 AND 2 COMBINED	0.20
DICKERSON	
UNIT 1 ONLY	0.24
UNIT 2 ONLY	0.24
UNIT 3 ONLY	0.24
TWO OR MORE UNITS COMBINED	0.24
H.A. WAGNER	
UNIT 2	0.34
UNIT 3	0.07
MORGANTOWN	
UNIT 1	0.07
UNIT 2	0.07

37 (C) (1) THE OWNER OR OPERATOR OF AN AFFECTED ELECTRIC
38 GENERATING UNIT SUBJECT TO § 2-10A-03(B)(2) OF THIS SUBTITLE SHALL SUBMIT

1 A UNIT-SPECIFIC REPORT FOR EACH DAY THAT THE AFFECTED ELECTRIC
2 GENERATING UNIT EXCEEDS ITS NITROGEN OXIDE EMISSION RATE UNDER
3 SUBSECTION (B) OF THIS SECTION.

4 (2) THE REPORT REQUIRED UNDER PARAGRAPH (1) OF THIS
5 SUBSECTION SHALL INCLUDE THE FOLLOWING INFORMATION FOR THE ENTIRE
6 OPERATING DAY:

7 (I) HOURS OF OPERATION FOR THE UNIT;

8 (II) HOURLY AVERAGES OF THE OPERATING TEMPERATURE
9 FOR INSTALLED POLLUTION CONTROL TECHNOLOGY;

10 (III) HOURLY AVERAGES FOR HEAT INPUT (MMBTU/HR);

11 (IV) HOURLY AVERAGES FOR OUTPUT (MWH);

12 (V) HOURLY AVERAGES FOR AMMONIA OR UREA FLOW RATES;

13 (VI) HOURLY AVERAGES FOR NITROGEN OXIDE EMISSIONS DATA
14 (LBS/MMBTU AND TONS);

15 (VII) MALFUNCTION DATA;

16 (VIII) THE TECHNICAL AND OPERATIONAL REASON THE RATE WAS
17 EXCEEDED, SUCH AS:

18 1. OPERATOR ERROR;

19 2. TECHNICAL EVENTS BEYOND THE CONTROL OF THE
20 OWNER OR OPERATOR, SUCH AS AN ACT OF GOD OR A MALFUNCTION; OR

21 3. DISPATCH REQUIREMENTS THAT MANDATE
22 UNPLANNED OPERATION, START-UPS AND SHUT-DOWNS, IDLING, AND OPERATION
23 AT LOW VOLTAGE OR LOW CAPACITY;

24 (IX) A WRITTEN NARRATIVE DESCRIBING ANY ACTIONS TAKEN
25 TO REDUCE EMISSION RATES; AND

26 (X) ANY OTHER INFORMATION THAT THE DEPARTMENT
27 DETERMINES IS NECESSARY TO EVALUATE THE DATA OR TO ENSURE THAT
28 COMPLIANCE IS ACHIEVED.

1 (D) (1) AN EXCEEDANCE OF THE EMISSIONS RATE UNDER SUBSECTION
2 (B) OF THIS SECTION, IS NOT A VIOLATION OF § 2-10A-03(B)(2) OF THIS SUBTITLE
3 IF THE PROVISIONS OF THE APPROVED PLAN REQUIRED UNDER § 2-10A-03(B)(1)
4 OF THIS SUBTITLE ARE MET.

5 (2) FOR PURPOSES OF PARAGRAPH (1) OF THIS SUBSECTION, AN
6 EXCEEDANCE OF THE EMISSIONS RATE OF SUBSECTION (B) OF THIS SECTION
7 INCLUDES:

8 (I) START-UP AND SHUT-DOWN;

9 (II) DAYS WHEN THE UNIT WAS DIRECTED BY THE ELECTRIC
10 GRID OPERATOR TO OPERATE AT LOW CAPACITY;

11 (III) DAYS WHEN THE UNIT WAS DIRECTED BY THE ELECTRIC
12 GRID OPERATOR TO OPERATE IN ACCORDANCE WITH ANY EMERGENCY GENERATION
13 OPERATIONS REQUIRED BY THE ELECTRIC GRID OPERATOR, INCLUDING
14 NECESSARY TESTING OF THE EMERGENCY OPERATIONS; AND

15 (IV) AN EXCEEDANCE OCCURRING DURING OPERATIONS WHICH
16 IS DEEMED CONSISTENT WITH THE UNIT'S TECHNOLOGICAL LIMITATIONS,
17 MANUFACTURERS' SPECIFICATIONS, GOOD ENGINEERING AND MAINTENANCE
18 PRACTICES, AND GOOD AIR POLLUTION CONTROL PRACTICES FOR MINIMIZING
19 EMISSIONS.

20 **2-10A-06.**

21 COMPLIANCE WITH THE NITROGEN OXIDE EMISSION RATE LIMITATIONS IN §§
22 2-10A-03(A)(2) AND (C)(1), 2-10A-04(B)(1)(II), AND 2-10A-05(B) OF THIS
23 SUBTITLE SHALL BE DEMONSTRATED BY A CONTINUOUS EMISSION MONITORING
24 SYSTEM THAT IS INSTALLED, OPERATED, AND CERTIFIED IN ACCORDANCE WITH
25 TITLE 40, PART 75 OF THE CODE OF FEDERAL REGULATIONS.

26 **2-10A-07.**

27 (A) (1) ON OR AFTER MAY 31, 2016, THE OWNER OR OPERATOR OF AN
28 AFFECTED ELECTRIC GENERATING UNIT SHALL SUBMIT A MONTHLY REPORT TO THE
29 DEPARTMENT DETAILING THE STATUS OF COMPLIANCE WITH THIS SUBTITLE
30 DURING THE OZONE SEASON.

31 (2) EACH SUBSEQUENT MONTHLY REPORT SHALL BE SUBMITTED TO
32 THE DEPARTMENT NOT LATER THAN 30 DAYS FOLLOWING THE END OF THE
33 CALENDAR MONTH DURING THE OZONE SEASON.

1 **(B) MONTHLY REPORTS DURING THE OZONE SEASON SHALL INCLUDE:**

2 **(1) DAILY PASS OR FAIL OF THE NITROGEN OXIDE EMISSION RATES**
3 **UNDER § 2-10A-05(B) OF THIS SUBTITLE;**

4 **(2) THE REPORTING INFORMATION REQUIRED UNDER § 2-10A-05(C)**
5 **OF THIS SUBTITLE;**

6 **(3) THE 30-DAY SYSTEM-WIDE ROLLING AVERAGE EMISSION RATE**
7 **FOR EACH AFFECTED ELECTRIC GENERATING UNIT TO DEMONSTRATE COMPLIANCE**
8 **WITH § 2-10A-03(C)(1) OF THIS SUBTITLE; AND**

9 **(4) BEGINNING JUNE 1, 2020, THE DAILY 30-DAY ROLLING AVERAGE**
10 **HEAT INPUT CALCULATED IN LBS/MMBTU TO DEMONSTRATE COMPLIANCE WITH**
11 **THE REQUIREMENTS UNDER § 2-10A-04(B)(1)(II) OF THIS SUBTITLE.**

12 SECTION 2. AND BE IT FURTHER ENACTED, That this Act shall take effect
13 October 1, 2015.