

## Region 3 Plan Summary

**Title: Pennsylvania; Update of the Motor Vehicle Emissions Budgets and General Conformity Budgets for the Scranton/Wilkes-Barre 1997 8-Hour Ozone National Ambient Air Quality Standard Maintenance Area - (Revisions for the 8-Hour Ozone Maintenance Plan and 2002 Base Year Emissions Inventory)**

**Federal Register Dates: June 15, 2015 (final rule) 80 FR 34063; March 10, 2015 (proposed rule) 80 FR 12604**

**EPA Effective date: July 15, 2015**

**State Submittal Dates: May 28, 2014**

**Affected Areas: Scranton/Wilkes-Barre Area: Lackawanna, Luzerne, Monroe and Wyoming Counties**

**Background:** On March 10, 2015 (80 FR 12604), EPA published a notice of proposed rulemaking (NPR) for revisions to the Pennsylvania SIP. In the NPR, EPA proposed approval of an update to the MVEBs, updates to the point and area source inventories, and general conformity budgets for the construction of the Bell Bend Nuclear Power Plant. The formal SIP revision was submitted by Pennsylvania on May 28, 2014.

Pennsylvania's SIP revisions revised the MVEBs for the Scranton/Wilkes-Barre Maintenance Area to reflect the use of the MOVES model; made updates to the point and area source inventories; and established general conformity budgets for the construction of the Bell Bend Nuclear Power Plant.

### **Key Features:**

(EPA) is approving State Implementation Plan (SIP) revisions submitted by the Commonwealth of Pennsylvania (Pennsylvania). These revisions consist of an update to the motor vehicle emissions budgets (MVEBs) for nitrogen oxides (NO<sub>x</sub>) for the 1997 8-Hour Ozone National Ambient Air Quality Standard (NAAQS) maintenance SIP for the Scranton/Wilkes-Barre 1997 8-Hour Ozone NAAQS Maintenance Area (Scranton/Wilkes-Barre Maintenance Area or Area). These SIP revisions also include general conformity budgets for the construction of the Bell Bend Nuclear Power Plant. In addition, these SIP revisions include updated point and area source inventories for NO<sub>x</sub>. EPA is approving these revisions to the Pennsylvania SIP in accordance with the requirements of the Clean Air Act (CAA).

The SIP revisions consists of updated motor vehicle emissions budgets (MVEBs) for nitrogen oxides (NO<sub>x</sub>) for the 1997 8-Hour Ozone National Ambient Air Quality Standard (NAAQS) as well as a NO<sub>x</sub> general conformity budget for the construction of the Bell Bend Nuclear Power Plant. The updated budgets were calculated using the Environmental Protection Agency's (EPA) Motor Vehicle Emission Simulator model (MOVES2010a). The intention of the revised SIP is to replace the approved MOBILE6.2-based MVEBs with budgets based on MOVES2010a and to ensure that the SIP revisions still provide for attainment of the 1997 8-Hour Ozone NAAQS.

<b>Table 1. Summary of Point Source Inventory in tpsd for the Scranton/Wilkes-Barre Maintenance Area</b>				
	Current		Updated	
Year	2009	2018	2009	2018
NO <sub>x</sub>	9.4	10.5	7.7	5.8

The emissions estimates of NO<sub>x</sub> produced for the years 2004, 2009 and 2018 by MOVES2010a are provided in tons per summer day (tpsd) in Table 2.

<b>Table 2. Summary of Motor Vehicle Emissions in tpsd for the Scranton/Wilkes-Barre Maintenance Area</b>						
Model	MOBILE6.2			MOVES2010a		
Year	2004	2009	2018	2004	2009	2018
VOCs	31.6	23.3	14.3	N/A	N/A	N/A
NO <sub>x</sub>	66.1	46.9	21.6	77.0	57.3	28.5

<b>Table 3. Summary of Motor Vehicle Emissions in tpsd for the Scranton/Wilkes-Barre Maintenance Area</b>						
Model	MOBILE6.2			MOVES2010a		
Year	2004	2009	2018	2004	2009	2018
VOCs	31.6	23.3	14.3	N/A	N/A	N/A
NO <sub>x</sub>	66.1	46.9	21.6	77.0	57.3	28.5

A two tpsd safety margin was added for NO<sub>x</sub> emissions for the 2009 and 2018 MVEBs. The MVEBs are presented below in Table 4. The differences between the 2004 attainment year and the 2009 interim year and 2018 maintenance year for NO<sub>x</sub> are found below in Table 5. NO<sub>x</sub> Emissions and Differences for Years 2004, 2009, and 2018 in tpsd. Table 5 presents decreases in emissions which are significant in some categories between the attainment, interim and maintenance years. Because the 2009 and 2018 emissions are less than the 2004 attainment year emissions, a small portion of the excess emissions can be allocated to safety margins while the area can continue to attain the 1997 8-Hour Ozone NAAQS.

Additionally, there are three metropolitan planning organizations (MPOs) and one regional planning organization (RPO) that serve the four counties that comprise the Scranton/Wilkes-Barre Maintenance Area. To simplify the transportation conformity process for these MPOs, separate budgets will be given to each MPO. Table 6. MVEBs for Each MPO presents how the MVEBs will be allotted to each MPO.

A nuclear power plant will be constructed and will be known as the Bell Bend Nuclear Power Plant. Building this nuclear power plant will cause a significant amount of NO<sub>x</sub> emissions because of all of the nonroad equipment used for construction. These significant NO<sub>x</sub> emissions

will trigger the general conformity requirements of 40 CFR 93(B). The de minimus NO<sub>x</sub> threshold would be exceeded by the projected NO<sub>x</sub> emissions of this project; therefore this project is subject to the requirements of general conformity. The maximum emissions are expected to occur during the second year of construction; the maximum emissions are expected to be 167.7 tons per year (tpy) of NO<sub>x</sub>. The de minimus VOC emission threshold will not be exceeded by this project because the maximum VOC emissions that are expected to occur are 14.3 tpy which is much less than the de minimus emissions of 50 tpy. These SIP revisions include a general conformity budget for NO<sub>x</sub>. The general conformity budget is set for 1.0 tpsd. This 1.0 tpsd budget is factored into all of the inventory totals found in Table 5. With the addition of MVEBs, safety margins, and the general conformity budget the total emissions for 2009 and 2018 are significantly less than the attainment year emissions.

**Table 4. Revised MVEBs in tpsd for the Scranton/Wilkes/Barre Maintenance Area**

Year	2009	2018
VOCs	N/A	N/A
NO <sub>x</sub>	59.3	30.5

**Table 5. NO<sub>x</sub> Emissions and Differences for Years 2004, 2009, and 2018 in tpsd for the Scranton/Wilkes/Barre Maintenance Area**

Category	2004	2009	2004-2009	2018	2004-2018
Point	7.0	7.7	0.7	5.8	-1.2
Area	4.0	4.2	0.2	7.5	3.5
Nonroad	10.9	8.9	-2.0	5.6	-5.3
Mobile	77.0	59.3	-17.7	30.6	-46.4
Total	98.9	81.1*	-17.8*	50.5*	-48.4*

\*Totals include the 1.0 tpsd general conformity budget for the construction of the Bell Bend Nuclear Power Plant

**Table 6. MVEBs for Each MPO in tpsd for the Scranton/Wilkes/Barre Maintenance Area**

MPO	Scranton/Wilkes-Barre MPO		NEPA MPO		Northern Tier RPO	
	2009	2018	2009	2018	2009	2018
VOCs	17.99	11.80	6.19	4.64	0.99	0.54
NO <sub>x</sub>	42.67	21.90	14.10	7.10	2.50	1.60

**Table 7. Comparison of 2004, 2009, and 2018 Emissions After Reserving the Safety Margins and General Conformity Budgets**

Year	2004	2009	2004-2009	2018	2004-2018
Total Emissions	98.9	80.1	18.8	49.5	49.4
Emissions with addition of Safety Margins and General Conformity Budgets	98.9	83.1	15.8	52.5	46.4

EPA is approving an update to the MVEBs for the Scranton/Wilkes-Barre Maintenance Area, updates to the point and area source inventories for NO<sub>x</sub>, and general conformity budgets for the construction of the Bell Bend Nuclear Power Plant as revisions to the Pennsylvania SIP.

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