



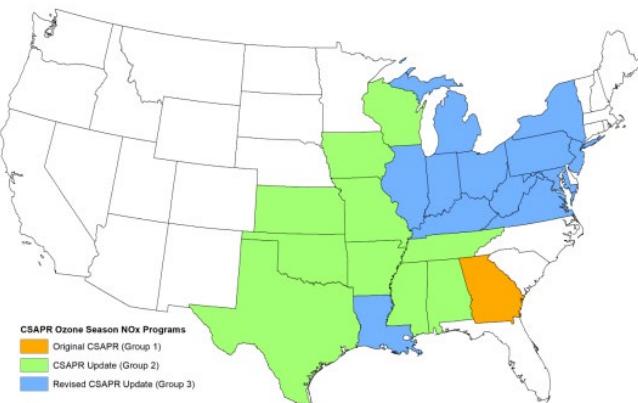
MARKET UPDATE

March 24, 2021

Cross-State Air Pollution Rule Update

On March 15, 2021, the U.S. Environmental Protection Agency (EPA) [finalized](#) the Revised Cross-State Air Pollution Rule (CSAPR) Update. The final rule, which takes effect in May, places additional NOx reduction requirements on power plants in 12 states (see table below). The revisions address previous court challenges asserting that regulations did not properly address the impact 21 states have on air quality in neighboring downwind states.

At the same time, the CSAPR Update did not mandate reductions above those already required the remaining nine states (AL, AR, IA, KS, MS, MO, OK, TX, and WI). This action fully resolves 21 states' remaining "good neighbor" obligations under the 2008 ozone national ambient air quality standards (NAAQS).



Market Impact

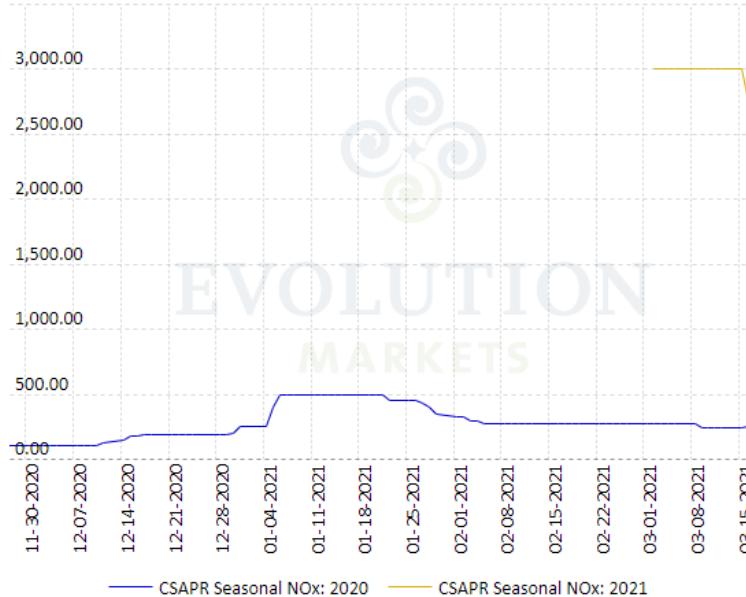
For the last few years, CSAPR Seasonal NOx would trade between \$60 and \$75 per allowance. Then on October 15, 2020, EPA proposed a revised CSAPR Update. Based on the Proposed Rule, EPA would split the current states regulated under CSAPR into two groups – Group 2 and Group 3. While the Group 2 NOx cap was unchanged, the revisions would reduce the NOx emissions cap on Group 3 states because of their impact on downwind states. The rule would also allow market participants to bank existing NOx allowances (vintage 2020 or earlier) into Group 3 at some unknown ratio.

Publication of the draft CSAPR revisions caused Sellers to pull their offers in order to evaluate the proposed rule. At the same time, Buyers still needed to purchase allowances for compliance in 2020. As a result, the price of Seasonal NOx jumped to \$500 and above to close out Q4. Prices are now \$1,500 bid / \$4,000 offered.

When the final CSAPR revisions were published this month, EPA incorporated some important changes. First, EPA established the conversion ratio from banked Seasonal NOx Group 3 allowances at 8:1. Eight banked allowances can be converted to one Group 3 allowance, with a maximum amount of Group 3 Allowances created through this conversion to be 21,777. EPA is also establishing a voluntary "safety valve" mechanism that will allow Group 3 sources to access additional Group 3 allowances by converting

banked Group 2 allowances that remain after creation of the initial bank at an 18:1 Ratio. This safety valve can be requested by sources during the month of February 2022 for 2021 compliance.

GRAPHS & CHARTS



and we have hot weather, it could be challenging to meet the current 2021 Budget.

Although the allocation budgets of Group 2 states are unchanged, these remaining ten states will have a smaller pool of allowances to trade with and hence liquidity will be reduced. Group 2 prices are currently \$250, largely because Group 2 allowances can be banked and converted into Group 3. Once the conversion has taken place, the Group 2 market is likely to drift down in price due to the lack of liquidity. However, prices are not expected to retrace any time soon to the \$60 - \$75 levels of last year.

Future Outlook

Below is a table of the Group 3 states and their new allocations starting 2021 and out to 2024+. To put this in perspective, the 2020 allocation for these states was approximately 160,000 allowances, compared to the 2021 allocation of 107,000. A one-time conversion of the bank to a maximum of 21,777 increases the supply to approximately 129,000 allowances for compliance in 2021.

NOx emissions in 2019 for these states was around 132,000. Emissions in 2020 was 111,000. It is difficult to determine how the pandemic affected 2020 emissions, but needless to say the market will be tight and reductions will have to be made. If the economy picks up this summer post-COVID 19,

Upwind State ▲	2021		2022		2023		2024+	
	Baseline ¹	Budget ²						
Illinois	9,368	9,102	9,368	9,102	8,413	8,179	8,292	8,059
Indiana	15,856	13,051	15,383	12,582	15,357	12,553	12,232	9,564
Kentucky	15,588	15,300	15,588	14,051	15,588	14,051	15,588	14,051
Louisiana	15,476	14,818	15,476	14,818	15,476	14,818	15,476	14,818
Maryland	1,501	1,499	1,267	1,266	1,267	1,266	1,350	1,348
Michigan	13,898	12,727	13,459	12,290	11,182	9,975	10,968	9,786
New Jersey	1,346	1,253	1,346	1,253	1,346	1,253	1,346	1,253
New York	3,469	3,416	3,469	3,416	3,474	3,421	3,456	3,403
Ohio	15,829	9,690	15,927	9,773	15,927	9,773	15,927	9,773
Pennsylvania	11,896	8,379	11,896	8,373	11,896	8,373	11,896	8,373
Virginia	4,664	4,516	4,274	3,897	4,361	3,980	4,025	3,663
West Virginia	15,165	13,334	15,165	12,884	15,165	12,884	15,165	12,884
Total	124,057	107,085	122,619	103,705	119,453	100,526	115,722	96,975

¹ Emissions projected in each state for each year in the absence of the Revised CSAPR Update Rule.

² Each state has a variability limit of 21%, meaning they can emit up to an assurance level of 121% of the budgets shown in the tables provided that they do not collectively exceed the regional budget and any available banked allowances.