



MARKET UPDATE

May 15, 2017

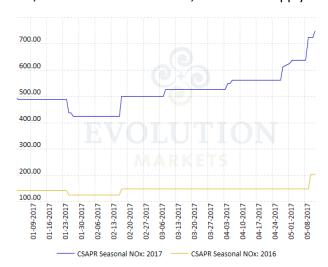
Cross State Air Pollution Rule

Market Status

Vintage 2017 Seasonal NOx prices have moved up since the beginning of Ozone Season, with a mid-market price of \$750 on May 15 compared to a mid-market price of \$625 on May 1. As buyers are forced to begin hedging their Ozone Season emissions, participants in the 2017 Seasonal NOx market have re-engaged.

The EPA finalized an <u>update</u> to the Cross-State Air Pollution Rule (CSAPR) Seasonal NOx Program back in September 2016. Starting in May 2017, this final rule reduces the Seasonal NOx Allocation, which is implemented with a 22-state allowance trading program.

The 2015 and 2016 Seasonal Allocations were approximately 628,000 tons and 603,000 tons, respectively. The 2017 allocation is 316,000 tons, which represents an approx 48% cut in allocations. Actual emissions in 2015 and 2016 were approximately 463,000 tons and 422,000 tons, respectively, which represents an approximate 2015/2016 bank of 346,000 tons. In the final rule, the EPA will apply a one-time ratio to the 2015/2016 bank to reduce it to approximately



99,700 tons. Although the exact ratio is not known, the EPA will take the full bank and divide it by 99,700. Based on the estimated bank, the ratio is expected to be around 3.5:1.

With a 2017 allocation of 316,000 tons — and a bank of allowances of 99,700 tons — the available allowances for compliance in 2017 is approximately 416,000 tons. Seasonal NOx emissions in 2016 were around 422,000 tons, so the 2017 market is short-to-flat and reductions will have to occur.

Future Outlook

The anticipated shortfall has driven prices for Vintage 2017 Seasonal NOx allowances from \$425 to \$750 since the beginning of the year. Seasonal NOx trading had been extremely thin

through April 2017 as market participants worried the new rule, which is being challenged in court, would be overruled. However once the Ozone Season is upon us, market participants have begun to engage the market. Also initially hindering the market has been the delay in the publication by the EPA of the Conversion Ratio of banked NOx allowances to Vintage 2017 allowances. Although the Conversion Ratio has not been calculated and published by the EPA, market participants believe the ratio will be in an acceptable range around 3.5:1. The EPA has indicated that the conversion of banked NOx to vintage 2017 to occur in the late-July to early-August timeframe to accommodate any adjustments to the final bank.

Based on the 2017 final allocation and 2016 emissions data, the program is slightly short allowances. However, with 2017 prices above \$700, one can anticipate that electric power generation units will reduce their emissions by running pollution controls more aggressively, switching to a lower NOx emitting fuel when possible, or retiring some units. In any case, reductions in emissions will have to occur. Typically in a new emissions program, buyers come to the market early to hedge their emissions, while sellers tend to be more conservative and hold off selling until their surplus is known. Prices will typically go up during this demand/supply imbalance then level off at some point. Summer weather in the affected region will be a key factor in this year's market as there is not a large bank of allowances to smooth out a sudden spike in demand if one occurs.

