

Memorandum

To: Smog Division Personnel
From: Max Bookington, EPA Air Quality Division Head
Date: 6/16/2016
Re: Impact of rural Wind Farms

Do Wind Farms Exacerbate Smog?

Team, you may have heard rumors about the possibility of rural Wind Farms negatively impacting urban air quality. While no definitive studies have been published on the subject as of this date, we do know the following:

Air Quality

- In the last ten years, average AQI values May – August have risen, on average, 15% in the following states: Texas, Iowa, California, Illinois, Minnesota. In other states, AQI are up only 2%.
- Texas, Iowa, California, Illinois, and Minnesota are our nation’s leaders in wind energy production.
- Looking at specific local AQI values in those states, the average AQI in rural areas is up, on average, .5%, while in the metropolitan areas the average is up 20%.
- Several cities in those states now have periods in the summer months when, for up to four days at a time, the AQI values are between 101 and 150 (unhealthy for sensitive groups). Los Angeles had four weeks last summer when its AQI was between 151 and 200 for four or more days (unhealthy).

Asthma

- According to statistics from the CDC published this week, the number of patients in those same states diagnosed with asthma is up 17 – 20% over the last ten years. For children under the age of 10, asthma diagnosis is up 25 – 27%.
- Estimated yearly cost of asthma in the United States is around **\$56 billion** (mostly medical expenses).¹
- Indirect costs make up \$5.9 billion. This includes lost pay from sickness or death and lost work output from missed school or work days.²
- In 2009, the direct cost of asthma was approximately \$3,259 per person each year.³

¹ United States Environmental Protection Agency. Asthma Facts. March 2013.

http://www.epa.gov/asthma/pdfs/asthma_fact_sheet_en.pdf

² Barnett S and Numagambetov T. Costs of asthma in the United States: 2002-2007. JACI. 2011. Jan:127(1):145-152. DOI: <http://dx.doi.org/10.1016/j.jaci.2010.10.020>. [http://www.jacionline.org/article/S0091-6749\(10\)01634-9/abstract](http://www.jacionline.org/article/S0091-6749(10)01634-9/abstract)

³ *Id.*