

Illinois Pollution Control Board Hearing Regarding Dynege MPS Proposed Changes March 6, 2018

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Pollution Control Board

My name is Karyl Dressen and I live in Hillsboro, IL. I am a registered nurse and worked at the county health department for 21 years, part of that period in their asthma program. The Illinois Department of Public Health stated in their 2015-2020 Illinois State Asthma Plan that nationwide, the number of people diagnosed with asthma increased by 5.6 million from 2001 to 2011. Asthma was the 3rd leading cause of preventable hospitalizations and the leading cause of school absenteeism. For employed adults over 18, asthma resulted in over 14 million missed work days.

But we don't need statistics to know how prevalent asthma is. If you, your child, or another relative isn't affected by asthma, you probably know someone who is. My husband was diagnosed with asthma as an adult about 20 years ago. He currently takes oral medications for his asthma and uses 2 inhalers daily along with a rescue inhaler and nebulizer treatments as needed. We spent 3 hours last week in the office of his respiratory doctor due to a worsening of his asthma, during which he had labs drawn, a chest x-ray, IV corticosteroid infusion, and 3 different nebulizer treatments to help his breathing. Keeping asthma under control can be expensive for families and society in general, in terms of medical costs, and loss of productivity from missed school or work days, besides a frequently diminished quality of life.

The IDPH, in their May 2014 Chronic Disease Burden Update, cited air pollution as being a health hazard, with power plants being one source. The EPA recognized 6 commonly found air pollutants (including particulate matter, ozone, carbon monoxide, nitrous oxide, sulfur dioxide, and lead) as being able to cause serious health problems. IDPH stated that, in general, exposure to air pollutants can increase the likelihood of respiratory symptoms and breathing discomfort in sensitive groups.

I question why Dynege seeks changes in the state air pollution regulations, the Multi-Pollutant Standard, which controls emissions of sulfur dioxide, nitrous oxide and mercury. Their proposal seeks to change the MPS from a rate-based standard to an annual fleetwide cap for their entire downstate fleet of coal fired generating plants. The Chicago Tribune reported that under the new rules, Dynege could emit nearly double the amount of sulfur dioxide they emitted last year.

The conclusion is that the proposed changes would allow Dynege to keep their older, dirtier, cheaper to operate plants open which make them more profits, and possibly shutter their cleaner plants like Coffeen that have installed more up to date pollution controls.

Ramping up production at their dirtiest plants may increase the company's profits, but at what cost to the health of the people in Illinois?

I urge you not to take a step backwards on our air quality by weakening our clean air standards.

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Illinois Asthma State Plan 2015-2020

The Illinois Department of Public Health (IDPH) is pleased to share the *2015-2020 Illinois Asthma State Plan, Addressing Asthma in Illinois, 4th edition*. The asthma strategic plan is regularly updated to reflect innovation in the strategies and interventions designed to address asthma in Illinois.

Approximately 740,000 people in Illinois have asthma¹. In 2010, 183 people died from asthma². That is one person every two days. Of those who died from asthma, 48 percent were 35 to 64 years old at time of death². One in two children with asthma missed at least one day of school during the previous year due to their asthma and, during the past 12 months, Illinois adults with asthma were unable to work or carry out their usual activities for a total of 3,089,988 days^{3,4}.

The Illinois Asthma State Plan is a framework for action, collaboration, and communication. There are three priority areas within the plan with goals and objectives that have been developed by the Illinois Asthma Partnership (IAP). Each priority area addresses specific concerns and needs using a public health approach to reflect the plan's overarching goal to reduce the burden of asthma.

IDPH extends its appreciation to those who serve on the IAP and contributed their time and expertise to the development of this plan.

¹ Illinois Behavioral Risk Factor Surveillance System (BRFSS), Illinois Department of Public Health, 2013

² WONDER, U.S. Centers for Disease Control and Prevention, released 2012

³ BRFSS Asthma Call-back Survey, U.S. Centers for Disease Control and Prevention, 2007-2010

⁴ American Community Survey, U.S. Census Bureau, 2012. *Daily cost calculated based on the median household income for Illinois divided by 365.

National Asthma Data At-A-Glance

Asthma is on the rise. The number of people diagnosed with asthma increased by 5.6 million from 2001 to 2011⁵. Of the 25.9 million U.S. residents who reported having asthma in 2011, 12.7 million experienced an asthma attack during the previous year⁵. Asthma affects people of all races, sexes, and ages, living in every region of the U.S. It occurs more often among children (among boys more than girls), women, black people, people of Puerto Rican descent, people living in the Northeast, those living below the federal poverty level, and people with disabilities.

Asthma affects approximately 6.8 million children in the U.S., is the third leading cause of preventable hospitalizations, and the leading health-related cause of school absenteeism. Children with asthma miss = twice as many school days as other children, on average. Other symptoms also may restrict activities and impair the quality of life for a child with asthma.

Among adults, asthma is the leading work-related lung disease. Employed adults 18 years of age and over missed 14.2 million work days due to asthma⁵. Keeping asthma under control can be expensive; it causes financial burdens, including lost work days; reduced productivity; lost income; and low quality of life for persons with asthma and disruption to family and caregiver routines.

Asthma's estimated total cost to society was \$56 billion in 2007 (2009 dollars), including medical expenses (\$50.1 billion per year), loss of productivity from missed school or work days (\$3.8 billion per year), and premature deaths (\$2.1 billion per year)⁶.

A Snapshot of National Asthma Data

In 2012,

- 18.7 million noninstitutionalized adults have asthma⁷
- 6.8 million noninstitutionalized children have asthma⁷
- 14.2 million patient visits to physician offices with asthma as primary diagnosis⁷
- 1.3 million patient visits to the hospital outpatient department with asthma as the primary diagnosis⁷
- 1.8 million patient visits to the hospital emergency department with asthma as the primary diagnosis⁷
- 3,345 asthma deaths occurred⁷

⁵ U.S. Centers for Disease Control and Prevention. National Center for Health Statistics. National Health Interview Survey, 2001-2011. Analysis by the American Lung Association Research and Program Services Division.

⁶ Barnett SB, Nurmagambetov TA. Costs of Asthma in the United States: 2002-2007. *Journal of Allergy and Clinical Immunology*, 2011; 127(1):145-52.

⁷ U.S. Centers for Disease Control and Prevention. Asthma Fast Stats. Page updated July 14, 2012 from <http://www.cdc.gov/nchs/fastats/asthma.htm>

CHRONIC DISEASE BURDEN UPDATE

This update focuses on Air Quality Index, and how air quality affects health.

Air pollution comes from many sources, including fires, wood stoves, road dust, crushing or grinding operations, and tailpipes. It also can form in the atmosphere from pollution from power plants, industries, cars, trucks and construction equipment. Pollutants in the air take many forms. They can be gases, solid particles or liquid. Air pollution can be a health hazard to the population.

The Environmental Protection Agency (EPA) recognizes six commonly found particle air pollutants (often referred to as particulate matter, ozone, carbon monoxide, nitrogen oxides, sulfur dioxide and lead). These pollutants are able to get deep into the body and cause serious problems ranging from aggravated asthma, to heart attacks, to early death in people with heart or lung disease. Ground-level ozone and airborne particles are the two pollutants that pose the greatest threat to human health in the United States. In general, exposure to air pollutants increases the likelihood of respiratory symptoms and breathing discomfort in sensitive groups. These symptoms include:

- Narrowing of the airways (bronchoconstriction)
- Asthma attacks
- Wheezing, chest tightness and shortness of breath

AQI Value	AQI Category	AQI Color
0 - 50	Good	Green
51 - 100	Moderate	Yellow
101 - 150	Unhealthy for Sensitive Groups	Orange
151 - 200	Unhealthy	Red
201 - 300	Very Unhealthy	Purple
301 - 500	Hazardous	Maroon

Daily Air Quality Standard

Source: <http://www.epa.gov/air/aqi/guide/>

AIR QUALITY AND YOUR HEALTH

EPA has the Air Quality Index (AQI) for reporting daily air quality. It tells how clean or polluted the air is and the associated health effects of concern. The EPA calculates the AQI for five major air pollutants regulated by the federal Clean Air Act - particle pollution, carbon monoxide, nitrogen dioxide, ground-level ozone and sulfur dioxide. As shown in the table, EPA has established national air quality standards for these pollutants to protect public health.

AVOID EXPOSURE TO UNHEALTHY AIR

Simple steps can be taken to reduce exposure to unhealthy air. In general, you can reduce risk by reducing prolonged or heavy exertion.

Prolonged exertion is an activity that occurs over several hours and makes you breathe slightly harder than normal. Reducing prolonged exertion means reducing the time you spend on this type of activity and changing the activity, such as walking instead of jogging or jogging for half your usual time.

Heavy exertion: Is more intense activities that cause you to breathe hard.

* For more information on how the AQI is calculated, see "Guidelines for the Reporting of Daily Air Quality—the Air Quality Index (AQI)" in the "Publications" section of