

COAL-FIRED POWER PLANT EMISSIONS FACTSHEET

TAYLOR RESIDENTS UNITED FOR THE ENVIRONMENT (TRUE) & WILDLAW¹

WHAT ARE COAL-FIRED POWER PLANTS?

Coal-fired power plants are power plants or energy conversion centers that utilize coal to produce electricity.

HOW DO COAL-FIRED POWER PLANTS WORK?

Coal from mines is transported to the power plant and crushed into a fine powder. The powder is then mixed with air and blown into the furnace, which quickly catches on fire. Millions of gallons of water are pumped into the furnace to create steam, which is then used to spin turbines. The spinning turbines turn shafts inside generators, creating electricity.

WHAT ARE THE DIFFERENT TYPES OF COAL?

The different types of coal are ANTHRACITE, BITUMINOUS, SUB-BITUMINOUS, and LIGNITE. Environmentally, Anthracite is the best quality, Bituminous and Sub-bituminous are medium quality, and Lignite is the worst.

WHAT KIND OF AIR POLLUTION IS MADE BY COAL-FIRED POWER PLANTS?

MERCURY (Hg)

Mercury is a metal that is found in air, water, and soil. It exists in several forms: elemental or metallic mercury, inorganic mercury compounds, and organic mercury compounds.

SULFUR DIOXIDE (SO₂)

Sulfur dioxide is a colorless gas with a pungent odor. It is a liquid when under pressure, and it dissolves in water very easily.

NITROGEN OXIDES (NO_x)

Nitrogen oxides are a mixture of gases that are composed of nitrogen and oxygen. Two of the most important nitrogen oxides are nitric oxide and nitrogen dioxide; both are nonflammable and colorless to brown at room temperature. Nitric oxide is a sharp sweet-smelling gas at room temperature, whereas nitrogen dioxide has a strong, harsh odor and is a liquid at room temperature, becoming a reddish-brown gas above 70°F.

PARTICULATE MATTER (PM)

Particulate Matter, also known as particle pollution, is a complex mixture of extremely small particles and liquid droplets. Particle pollution is made up of a number of components, including acids (such as nitrates and sulfates), organic chemicals, metals, and soil or dust particles.

LEAD

Lead is a bluish-gray metal found in small amounts in the earth's crust. Lead can be found in all parts of our environment. Much of it comes from human activities including burning fossil fuels, mining, and manufacturing.

CARBON DIOXIDE (CO₂)

Carbon Dioxide is a colorless, odorless, non-poisonous gas that is a normal part of air and, is product of fossil fuel combustion. It is a greenhouse gas that contributes to global warming.

HOW CAN THIS POLLUTION AFFECT YOUR HEALTH?

Pollution from coal-fired power plants can cause the following health problems:

- Asthma
- Bronchitis
- Breathing Difficulties
- Shortness of Breath
- Severe Airway Obstruction
- Eye, Nose, & Throat Irritation
- Lung Damage
- Anemia
- Diarrhea & Vomiting
- Drowsiness & Tiredness
- Dizziness & Unconsciousness
- Convulsions & Tremors
- Nausea
- Shyness
- Irritability
- Loss of Controlled & Purposeful Activity
- Weakness in Fingers, Wrists, & Ankles
- Changes in Vision or Hearing
- Brain Damage
- Kidney Damage
- Heart Attack (Non-Fatal)
- High Blood Pressure
- High or Irregular Heart Beat
- Damage to Unborn Children including Miscarriage
- Decrease in Sperm Production which may lead to Infertility
- Skin Rashes
- Spasms
- Coma
- DEATH

Taylor County ranks among the worst Counties in Florida in:

- Asthma Hospitalizations
- Lung Cancer Deaths
- Chronic Lower Respiratory Disease Hospitalizations

NOW ASK YOURSELF, HOW CLEAN IS YOUR AIR?

¹Factsheet created by Shereitte C. Stokes IV, Florida A&M University, for TRUE and WildLaw. This activity was funded by ATSDR/MHPF (Grant # U50/ATU473408-03).