

A Few Simple Facts About the Proposed Coal Plant in Linden

A Massachusetts company, SCS Energy, has proposed a modern 750-megawatt coal power plant in Linden, NJ (Union County), called PurGen One.

The coal plant will capture its own carbon dioxide gas (CO₂), plus CO₂ from other emitters, compress the CO₂ into a liquid, pipe it 70 miles out to sea, and then pump it a mile and a half beneath the floor of the Atlantic Ocean. During the life of the plant, it will bury a trillion pounds (500 million tons) of CO₂. This is called "carbon capture and sequestration" or CCS for short. It is a huge experiment and the people of Linden (and all of northern NJ, plus Staten Island) are the guinea pigs – and so are the fish in the sea.

1. This coal plant will make bad air pollution worse

- Union, Hudson, Middlesex and Essex Counties already fail to meet minimum federal health standards for air pollution. The NJ Department of Environmental Protection (DEP) estimates that soot alone is causing 594 deaths (plus 16,590 cases of asthma) each year in these counties. Furthermore, in addition to soot, there are hundreds of other chemicals in the air that exceed levels that the DEP considers safe.
- The cancer risk from 187 toxic air contaminants in Union county is already 41% above the national average. In Hudson, the risk is 86% above average; in Essex, it's 33% above and in Middlesex 17% above.
- US Environmental Protection Agency has identified 2,312 major "environmental hazards" in New Jersey. Ranking counties by the number of these hazards per square mile, Hudson is #1, Union is #2, Essex is #3, and Middlesex is #4. Along with Staten Island, these are the counties that would be most directly impacted by a new coal plant in Linden. **These counties already have far more than their fair share of pollution and the health problems that go with it.**
- Based on a similar modern coal plant being built in Indiana, we can estimate that PurGen One will add 11.3 million pounds (5,662 tons) of air pollution to Union County each year, including 104 tons of volatile organic compounds (VOCs), 2,877 tons of nitrogen oxides, 67 tons of sulfuric acid mist and 532 tons of soot (fine and ultrafine particles).

2. The PurGen coal plant will create new environmental injustices.

In 2004, New Jersey state government designated Linden an "environmental justice" community because Union County is excessively polluted and is 22.7 percent Black (56% higher than the statewide average) and 25.1% Hispanic (57% higher than the statewide average). So the PurGen One power plant will be adding new contamination to an area where Blacks, Hispanics, and

people of below-average income are already disproportionately burdened by pollution. This is unjust.

3. Today, there is only one actual sub-seabed CCS experiment ongoing; called "Sleipner," it has been conducted since 1996 in the North Sea. In Norway, the Sleipner project has been pumping one million tons of CO₂ per year (1/10th of the size of the PurGen proposal) into the Utsira formation, a geologic layer beneath the North Sea. Now it turns out that the Utsira formation has been leaking. And Sleipner's CO₂ has moved through the formation at a rate 25 times as fast as was predicted. Furthermore, a study by the Norwegian Petroleum Directorate has reversed previous estimates of CO₂ storage capacity in the Utsira formation from "able to store all European emissions for hundreds of years" to "not very suitable."

4. At least 1.8 million people live within 10 miles of the proposed coal plant. This is about the most densely populated region of the United States. Collecting and processing a trillion pounds (500 million tons) of CO₂ in such a densely-populated area could pose serious public health hazards. CO₂ is odorless, colorless, tasteless, and heavier than air. If it escapes, CO₂ can form an invisible puddle that excludes oxygen, asphyxiating everything in its path, including plants, animals, and people. In 1986, in Cameroon, CO₂ escaped from a lake and smothered 1,746 people in their sleep. Can a trillion pounds of liquid CO₂ be processed in Linden without any accidents or leaks?

5. Coal is the most-polluting and most environmentally damaging energy source, bar none. It destroys the land, pollutes water, and creates massive amounts of toxic by-products, some of which take the form of deadly air pollution, and some of which take the form of solid waste. Over its 50-year lifetime, the PurGen One plant will process at least 98 million tons of coal. Toxic chemicals in the coal will be released into the environment as solid wastes. These will include 816 tons of arsenic, 15 tons of cadmium, 11.4 tons of mercury, 1,702 tons of nickel, 395 tons of radioactive thorium, 3,018 tons of chromium, and 1,088 tons of toxic lead. Because of PurGen One, these toxicants will be mined from deep in the earth and eventually distributed into the environment that we (and other creatures) inhabit. Maybe 100 years ago no one would have given this a second thought – but today we know better. Toxic chemicals released into the environment can eventually get into the food chain. Because of all this, plans for at least 101 coal power plants in the US have been canceled in the last few years. The coal industry is getting desperate. Their response is a PR campaign for so-called "clean coal" – meaning their untested plan to capture and bury CO₂ below ground.

The purpose of CCS – the *only* purpose, really – is to salvage the coal industry by diverting investment away from clean, renewable sources of energy. (We can invest in coal with “carbon sequestration” (CCS) or we can invest in renewable, **truly**-clean energy like conservation, solar and wind, but we can't afford to invest in both.)

6. CCS will be exceedingly expensive and every dollar spent on CCS is a dollar that cannot be spent on renewable sources of clean energy like solar, wind and geothermal. To make a real dent in the global-warming problem by burying CO2 in the ground would require massive investment. A consultant to the Linden coal plant has said we might need to bury 2 trillion tons of CO2 this century. That would require 4,000 projects the size of the Linden coal plant, which is currently estimated to cost \$5 billion. Four thousand projects, each costing \$5 billion, would require an investment of \$20 trillion – half again as large as the annual gross domestic product (GDP) of the United States.

Even if these costs could be cut in half, an investment of \$10 trillion is stupendously large. (The entire bank bailout has so far cost \$2 trillion.) And even if we spend the \$10 or \$20 trillion, we will still inevitably run out of affordable coal because coal is not a renewable resource. Then we'll have to invest again – in conservation, solar, wind and geothermal power.

7. SCS Energy has been misleading the people of Linden, claiming that the coal plant will bring 150 jobs and an investment in Linden of \$4.5 to \$5 billion. The truth is, the vast bulk of the money would be spent far from Linden. The major manufactured components of the plant, and related engineering services, would be provided by companies located in Indonesia, in the Netherlands, in England, in Louisiana, in Georgia, in Texas, and in other places far from Linden. **If the company is not telling the truth about the money, what else are they not telling the truth about?**

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All sources of information for this fact sheet can be found online at

<http://tinyurl.com/lmgqfv>

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