



## Our county doesn't need **5** fossil fuel power plants

### EXISTING—

- 1 289-megawatt gas-fired **Panda Brandywine plant in Brandywine**
- 2 2,647-megawatt **Chalk Point coal/oil/gas-fired power plant in Eagle Harbor** (burning 82% coal, 16% gas and 1.5% oil in 2014)

### UNDER CONSTRUCTION—

- 3 661-megawatt gas-fired **CPV St. Charles plant under construction in Waldorf** (approved in 2012)

### PROPOSED—

- 4 755-megawatt gas-fired **Keys Energy Center in Brandywine**
- 5 990-megawatt gas-fired **Panda Mattawoman plant in Brandywine**

### NOT NEEDED—

Just a few years ago, in 2012, all three fossil fuel power plants within the DC beltway closed down, two in DC and one in Alexandria—in part because they were no longer needed to provide reliable electricity to the area.

The two existing power plants in Prince George's County have more unused capacity than the two additional proposed power plants in Brandywine would provide.

- *Panda Brandywine only operated at 38% capacity in 2014 and 40% in the first half of 2015.*
- *Chalk Point only operated at 13% capacity in 2014 and 12% in the first half of 2015. Chalk Point alone—even once their two coal units are retired—has more unused capacity than the two proposed Brandywine power plants combined.*

## AIR POLLUTION & HEALTH:

Pollutant	Facility-wide Emission Limit (tons per year)	
	PANDA MATTAWOMAN	KEYS ENERGY
Particulate Matter (PM)—Filterable	82.9	77.3
Particulate Matter less than 10 microns (PM10)—Filterable & Condensable	149.8	94.5
Particulate Matter less than 2.5 microns (PM2.5)—Filterable & Condensable	146.8	no limit
Sulfur Dioxide (SO <sub>2</sub> )	19.6	no limit
Nitrogen Oxides (NO <sub>x</sub> )	220.7	157.1
Carbon Monoxide (CO)	558.4	203.9
Volatile Organic Compounds (VOCs)	144.1	56.4
Sulfuric Acid Mist (SAM)	11.2	no limit
Greenhouse Gas (GHG) as Carbon Dioxide Equivalent (CO <sub>2</sub> e)	3,738,364 *	2,467,912 *

\*These numbers are incorrect and low, because EPA used the scientifically outdated lower number for methane's impacts on global warming (25x instead of 86x), and also didn't count methane leaks throughout the gas system leading to the power plant.

**EPA has designated Prince George's County as already having illegally high and unhealthy levels of ground-level ozone**, which triggers asthma attacks. Nitrogen oxide pollution contributes to ground level ozone, mostly on hotter summer days. In the summers, the prevailing winds blow from the southwest to the northeast (in winter, it's northwest to southeast). This means that in the summer, when the ozone levels are most dangerous, the plumes from four of the five power plants all line up from St. Charles to Brandywine, directing that pollution to the more populated areas of the county, around Upper Marlboro (which also is home to the county's landfill, the state's only sewage sludge incinerator and a possible new trash incinerator being explored by the county – all sources which are comparable to major power plants when it comes to air pollution). This presents a serious public health problem, as the clustering and lining up of the plumes during summer is especially dangerous.

**The U.S. Environmental Protection Agency's August 19th, 2015 comments on the Panda Mattawoman plant state the following concerns with their proposed air pollution permit:**

- *Panda's particulate matter (PM, or soot) emissions limits aren't strong enough.* PM contributes to heart attacks, aggravated asthma and other heart, lung and respiratory problems.
- *There are no limits on lead pollution*, even though the environmental review document discusses lead emissions. Lead causes numerous health problems including ADHD, learning disabilities, violent behavior, low birth weight, kidney problems and much more.
- *The proposed emissions limit for ammonia is about 5 times higher than the largest emitter of ammonia pollution in the state.*

- *On carbon monoxide pollution, EPA writes: “The emissions for Brandywine seem very high given the nature of the source.”*
- *Panda Mattawoman failed to look at all other pollution sources in the analysis of the cumulative effect of this new plant plus other sources such as Chalk Point.*

### **POWER PLANT CLUSTERS: ONE OF THE WORST—**

***If the additional power plants are all built, the Brandywine area will host more fossil fuel power plant capacity than 99.9% of all places in the U.S.*** Looking just at the communities with existing fossil fuel power plants, the proposed Brandywine area power plant cluster would be worse than 98% of such communities.

### **GLOBAL WARMING—**

Natural gas is primarily methane. *Methane is now understood to be 86 times more potent than carbon dioxide (CO<sub>2</sub>) for global warming, over a 20-year time frame.* Because so much methane leaks out of the gas system—from the fracking well, through the pipelines and distribution systems to the end uses like power plants—using natural gas is actually worse for the climate than burning coal. Moving from coal to gas is making it harder to stabilize climate change. *We need to move directly to conservation, efficiency, wind, solar and energy storage, not more fossil fuels.*

*Obama’s Clean Power Plan, released in August 2015, does not allow new gas-fired power plants (anything that started construction after Jan. 8, 2014) to qualify as a means to comply with this new law* aimed to address global warming pollution. Expanded use of existing power plants, like Chalk Point and Panda Brandywine is permitted, but the state will not be allowed to meet its new obligations using these new gas-fired power plants.

### **ENVIRONMENTAL JUSTICE—**

*The community is 66% African-American within 10 miles of the two new power plants planned for Brandywine.* It’s a classic case of what is known in the field as environmental racism, where people of color are disproportionately impacted by polluting industries. The Civil Rights Act of 1964 makes it illegal for federally-funded entities (including the state of Maryland and the County) to take actions that have a discriminatory effect on racial minorities. Approving these power plants is a violation of the Civil Rights Act and would warrant the filing of a legal complaint with EPA’s Office of Civil Rights.

### **PROPERTY VALUES—**

*Research has shown that, compared to neighborhoods with similar housing and demographic characteristics, neighborhoods within two miles of power plants experienced 3–7% decreases in housing values and rents with some evidence of larger decreases within one mile and for large capacity plants.* The average gas-fired power plant is about 600 MW. Both of the proposed gas plants in Brandywine are larger, and with three power plants in the same community, much larger decreases in property values could be expected.

### **PIPELINES & POWER LINES—**

Multiple new gas pipelines are planned to bring natural gas up from Cove Point in Calvert County. These pipelines will destroy wetlands on their way to Brandywine, as Mattawoman Watershed Society and others have objected to. Additional power lines will likely also be needed, which could mean more herbicide spraying along rights-of-way.

**Cooling with sewer water?** An additional 10–15 mile pipeline would bring sewage effluent from WSSC's Piscataway sewage treatment plant to Brandywine to use as cooling water instead of fresh water. This pipeline requires approval from the Prince George's Department of Permits and Inspections, WSSC and the Maryland Highway Administration. Sewage effluent (the liquids that are separated out at a sewage treatment plant) is a highly contaminated solution containing disinfection byproducts, metals and numerous classes of discarded and excreted biologically active chemicals such as active pharmaceutical ingredients and personal care products, endocrine disrupting compounds, mutagenic cytotoxins and others. Cooling with this sewage effluent means evaporating this contaminated water into the air above Brandywine.

### **FRACKING—**

The majority of natural gas used in the U.S. comes from fracking, a highly controversial process used to shatter bedrock with a mixture of sand, water, toxic chemicals and pressure, to release gas from underground. This practice has contaminated groundwater and surface water in Pennsylvania, to the point where some residents cannot drink or shower in their well water, and some can even light it on fire. In the 2015 legislative session, Maryland put a two-year moratorium on fracking in the state, and will be considering a ban, as New York State recently adopted. There is shale gas under southern Prince George's County, so the prospect of fracking coming to our county is a real possibility if not banned by the county or state. However, even if fracking is prevented in the county or state, these power plants will still be supporting fracking in Pennsylvania by using gas brought here via pipelines.

### **PEAK GAS: CHEAP GAS IS OVER SOON—**

Gas consumption is rising due to temporarily cheap prices and a production surplus from fracking. Hundreds of new gas-fired power plants are proposed in the U.S., as are 30 liquefied natural gas (LNG) export terminals, and other major gas using facilities. This spike in demand is coming at the same time that shale gas production is starting to peak and is likely to level off and decline by the time these new power plants are built. This all adds up to gas prices shooting back up in the coming years, while clean wind and solar energy is becoming cheaper than gas. Increased gas prices means a repeat of what took place 10–15 years ago, as gas prices shot up and many of the 400 new gas-fired power plants built 10–20 years ago were idled because fuel was too expensive.

### TAXES—

Panda Mattawoman is making large promises of tax revenue for the county, based on their production and sale of electricity. These promises are most likely quite inflated, and based on assumptions that gas prices will stay low enough, and demand high enough, for the plant to operate at full capacity. More likely, they will build a power plant that will be uncompetitive within five or so years, leaving a hulking and unused third power plant marring Brandywine.

### JOBS—

*Natural gas is dead last in job creation in the energy sector.*

Job-years per Gigawatthour of production		Jobs per \$1 million ...		
			invested	output
Solar PV Residential (<1 MW)	1.31	Mass transit	22.3	11
Solar PV Large Commercial	0.97	Building retrofits	16.7	7
Solar PV Utility Scale	0.69	Solar	13.7	5.4
Nuclear	0.42	Wind	13.3	4.6
Solar Thermal—Concentrated	0.41	Smart Grid	12.5	4.3
Coal	0.11	Coal	6.9	1.9
Wind	0.1	Oil	5.2	0.8
<b>Natural gas</b>	<b>0.04</b>	<b>Natural gas</b>	<b>5.2</b>	<b>0.8</b>

The county would be far better off in job creation, clean air, climate impacts and more, if it were to incentivize solar and prevent large gas-fired power plants from competing with clean energy.

### PUBLIC INVOLVEMENT—

Residents are just recently waking up to the onslaught of fossil fuel power plants planned for the county. As the Maryland Office of People’s Counsel recently pointed out in their request for an extension of the comment deadline, tiny legal notices in newspapers is inadequate notification to alert people to public hearings, especially when several local papers have reduced their circulation or closed entirely, and people are relying more on Internet-based media.

### ALTERNATIVES—

A revolution in energy production is underway, where wind power is now cheaper to build than new gas-fired power plants, and solar is rapidly becoming the cheapest form of energy, undercutting everything within the next five years. The need for large centralized power plants and the accompanying power lines and pipelines will be over within the lifetime of these new proposed gas-fired power plants. Prince George’s County should be a leader in clean energy, not relying on fossil fuel power plants that will be increasingly phased out under policies like Obama’s Clean Power Plan.