Pure, per se and natural monopolies

Sometimes market activities (production, buying, and selling) have unintended positive or negative effects outside the market's scope. These are called externalities. As a policy maker concerned with correcting the effects of gases and particulates emitted by and local power plant, answer the following questions: * What two policies could you use to reduce the total amount of emissions?

* Per our text book, the gases and particulates that are emitted by local power plants are a mixture of harmful chemicals. These chemicals are released and then pollute our air that we breathed every day, which cause us a negative externality. We all deserve to breathe fresh air, and not polluted air. Air pollution can cause people to suffer from several types of illnesses. Some of those illnesses may include: complications with asthma, pneumonia, or other lung disease, headaches, difficulty breathing, and it can even weaken one’s immune system. With this being said, and as a concerned policy maker, it is very important to come up with some ways to help eliminated some gases and particulates that are emitted by local power plants.

* There are many plants, as well as other factors, that play into the role of air pollution. One way I think we can correct the effects of gases and particulates emitted by a local power plant would be to eliminate how long, or how often they can run at a given time. I feel that power plants basically run around the clock. However, if they can only run half that time, then it will help on air pollution greatly. So, instead of working 24/7, they could have shifts. Some days they would be open for 12 hours at night and other days they would be open for 12 hours during the day. With these shifts, the plant

wouldn’t continuously be putting out coal and other particulates that they use to run their plant.

* Another policy would be to change the local power plant into an environmentally friendly plant, operating wise. Per our book, it mentioned that some plants have reduced emissions by switching to low-sulfur coal. I think by changing the type of pollutant they use to operate, that could cut down on the amount of air pollution as well. Our book also mentioned that some power plants have installed scrubbers in their smokestacks. Scrubbers help remove sulfur dioxide from emissions that power plants emit.

The plants could look into using more high efficiency equipment. By using high efficiency equipment, the plant would use less energy, which would not put out as much coal-like particulates when operating. Another way the local power plant could become environmentally friendly would be to plant more trees. Trees reduce the amount of carbon that is put off through the release of particulates emitted by power plants, and of course other air pollution. Also, trees can help breakdown the harmful particulates that are emitted into harmless compounds. * Why do you think they each would work?

* The reason I think that decreasing the hours the power plant operates would work is because the plant would not be putting off harmful chemicals into the air 24 hours a day, 7 days a week. I understand that even though the plant isn’t operating at that given time, particulates are still floating around in the air. However, I feel like it would still reduce the amount of air pollution if it were to only operate 12 hours a day and not 24 hours a day. I think that while the plant is operating, it is emitting more particulates at a faster rate than when it’s not operating. * The reason I think that planting

more trees would be beneficial and would work is because trees help filter a lot of air particles. Trees go through several different processes, such as photosynthesis, to help produce clean air for us to breathe. By planting more trees, that gives us cleaner air.

By changing the plants operating equipment to high efficiency equipment would use less energy. Less energy means that fewer pollutants would be emitted. * What would the benefits of each action be (besides emissions reduction)? * Of course, the most beneficial action of reducing the power plant's hours would be the reduction of emission. But, since we are already aware of that, I think another good benefit of regulating the power plant's hours would be cost. I think that the plant would save a lot of money by decreasing the amount of hours they operated. The cost could then go into buying more scrubbers for their smokestacks, or purchasing higher efficiency equipment.

* There could be several different benefits when becoming an environmentally friendly power plant. Trees are extremely beneficial in many ways. Not only will the trees help reduce the amount of air pollution a person takes in; it will also help with energy conservation, and save the plant money this way as well. Trees also help filter water. So, by having more trees, it would give the power plant a way to use less water and turn that into saving money, once again. Also, the trees will help turn the power plant into a better looking area.

* What would the costs of each action be? * The environmental cost of pollution is best known as external costs. This means that the cost of an individual is imposing on other people. I think the cost for the action if we

were to decrease hours of the operation for the power plant would be quite large. It could come down to the fact that workers may lose their job, or lose hours since the plant won't be operating as much. I don't think the plant itself will actually lose any money. I think they'll even out the cost with reducing the hours of operating and losing some workers' salaries. * I think the cost to purchase more trees and making the power plant more environmental friendly wouldn't be too large. Trees are not too expensive to buy. Plus the trees will help save money in several ways that I have mentioned above.

* How would you decide what was the best level of emission reduction? * To decide what is the best level of emission reduction, I would obviously hold a meeting to see hear different sides and arguments. However, I would probably start with the plan that would be less, cost wise, and go from there. I would start with the environmentally friendly action first. Even if it doesn't work out, the trees are going to be beneficial for plenty of reasons.

Also, there could be a downfall to the factor not operating like they're used to because of people losing their jobs. I would not like to take away somebody's job, so I would start with a way to try eliminating that routine and I think by becoming environmentally friendly, the local power plant could reduce the amount of harmful particulates it produces.