Coal

(CO_2 released into the air)

How it Works: Coal plants burn coal to make steam. The steam is used to power a type of engine, called a "turbine". This turbine runs a generator to make electricity.

The Armstrong coal plant in Pennsylvania.
Source: www.industcards.com/st-coal-usa-pa.htm

When coal is burned, CO_2 is released by the plant. In this plant, the CO_2 escapes into the air because no equipment is added to capture the CO_2.

Availability	Experts say that the U.S. has enough coal to meet its needs for at least 50 to 100 years. PA is the 4th largest coal producing state in the U.S.
Reliability	Coal can provide steady and dependable electricity.
Limits to Use	Coal plants release a lot of CO_2. They can only be used to make 25% of the additional electricity needed for PA if we want to reduce the CO_2 released from all new plants by 50%. This would be about 15 TWh of the 60 TWh. Other types of plants must also be built.
Current Use	There are more than 1,000 of these plants working in the U.S. today.
Environmental Impacts (*Read Note Below)	• These plants produce a lot of solid waste (ash). Coal mining also produces waste products. The waste may contain a small amount of hazardous chemicals and radioactive materials. • Some solid waste produced by these plants can be recycled, such as to make concrete. The leftover waste is usually put in a landfill near the plant. Unlike disposal of household waste, the disposal of coal waste in landfills is not regulated by the federal government. • Coal mining near the surface disturbs the land, plants and animals. It also disrupts and pollutes streams. Underground mining can cause acidic water to leak into streams. If the mine collapses, it can also cause the ground to sink or shift.
Safety	These plants are quite safe for operators. Coal mining is dangerous for the miners. However, coal-mining related deaths have gone down over time. Mining now has stricter regulations and safer mining equipment.

** Note: Health, Water and Land Impacts are shown on a separate sheet*

Coal *(CO_2 is captured)*

How it Works: This is the same plant described in *"Coal, CO_2 released"*. But in this plant, additional equipment is added to capture the CO_2 before it escapes to the air. This CO_2 is turned into a liquid. A pipeline takes it from the plant and puts it permanently in rock formations more than half a mile (more than 2,500 feet) underground. This is shown in the diagram to the right. The rock formations will be tested ahead of time to make sure the CO_2 will stay trapped there. The CO_2 will also be monitored to make sure that it does stay in place. After a few decades, the CO_2 will dissolve (and become trapped) in the water in the rocks. Over thousands of years, it will likely change into solid minerals.

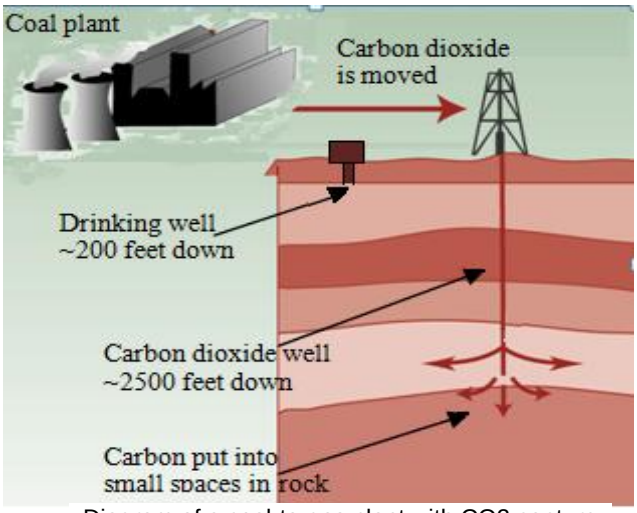

Diagram of a coal-to-gas plant with CO2 capture equipment. Modified from www.co2crc.com.au

Availability	• There are suitable rock formations in much of PA and the rest of the U.S. Before use, they will be tested to make sure that they can safely hold the CO_2. • There are thousands of miles of gas pipelines in the U.S. today. CO_2 is moved through similar pipelines. CO_2 pipelines are already used in the U.S., but more need to be built.
Reliability	Capturing CO_2 does not make coal plants less dependable.
Limits to Use	Coal plants with CO_2 capture equipment could make all of the additional 60 TWh of electricity needed for PA.
Current Use	The U.S. Government is capturing CO_2 underground in 25 test sites across the U.S. today. A few large-scale CO_2 capture sites are currently being used in other countries.
Environmental Impacts (*Read Note Below)	• The waste made by these plants and the coal mining impacts are about the same as "Coal, CO_2 released" plants. • The CO_2 will cause little or no harm to living plants or animals once it is in the deep underground rock formations. Some CO_2 is also naturally found in the ground.
Safety	• If CO_2 gets in underground drinking water, the water can become contaminated. That risk is small because CO_2 wells will be built more than 10 times deeper than drinking water wells. • Unlike oil or gas, CO_2 cannot burn or explode. As with oil and gas pipelines, the chance of pipeline leaks is low. If lots of CO_2 did leak from a pipeline, it would usually mix into the air. But if the leak happened in a valley or tunnel, the CO_2 could build up for a while. In this case, people and animals could suffocate if the leak was large enough. • There is a small chance that CO_2 could leak out of an underground space. These leaks would be very slow. In almost all cases, the CO_2 would mix into the air before harming anyone. • The CO_2 in the ground can be monitored with equipment underground and on the surface. If the CO_2 starts to move to places where it should not be, there are ways that this could be fixed. For example, the leak could be plugged up or CO_2 could be moved to some other location. • Pumping CO_2 into the ground builds up underground pressure. This could increase the risk of small earthquakes in some areas. However, PA is not prone to earthquakes. • After a few decades, the CO_2 dissolves in the deep underground water. This reduces many of the risks. Leaks become very unlikely. CO_2 can no longer move to contaminate drinking water. It cannot move to places it should not be or cause earthquakes. • Once an underground space is full and closed, and shown to be secure, the government will take control and continue to monitor it for safety. Experts disagree on how long the government should continue to monitor it.

** Note: Health, Water and Land Impacts are shown on a separate sheet*

Coal-to-Gas

(CO_2 released into the air)

An Coal-to-gas Plant in Indiana
Source: coalgasificationnews.com

How it Works: Regular coal plants burn coal to make electricity. *Coal-to-gas plants* turn coal into gas. This gas is burned. Its heat is used to power a type of engine, called a "turbine". This turbine then runs a generator to make electricity. The left-over hot gas is used to make steam. The steam also powers a turbine connected to a second generator to make more electricity. Because *coal-to-gas plants* use two turbines, they are more efficient than coal plants.

When the gas made from coal is burned, CO_2 is released by the plant. In these plants, this CO_2 escapes into the air because no equipment is added to capture the CO_2.

Availability	Experts say that the U.S. has enough coal to meet its needs for at least 50 to 100 years. PA is the 4th largest coal producing state in the U.S.
Reliability	Coal can provide steady and dependable electricity.
Limits to Use	Coal-to-gas plants release a lot of CO_2. They can only be used to make 25% of the additional electricity needed for PA if we want to reduce the CO_2 released from all new plants by 50%. This would be about 15 TWh of the 60 TWh. Other types of plants must also be built.
Current Use	There are two coal-to-gas plants working in the U.S. today. Electric utility companies have plans to build more coal-to-gas plants in the near future.
Environmental Impacts (*Read Note Below)	• Coal-to-gas plants release less air pollution than regular coal plants. • These plants produce a lot of solid waste (ash). Coal mining also produces waste products. The waste may contain a small amount of hazardous chemicals and radioactive materials. • Some solid waste produced by these plants can be recycled, such as to make concrete. The leftover waste is usually put in a landfill near the plant. Unlike disposal of household waste, the disposal of coal waste in landfills is not regulated by the federal government. • Coal mining near the surface can disrupt and pollute streams. Underground mining can cause acidic water to leak into streams. If the mine collapses, it can also cause the ground to sink or shift.
Safety	These plants are quite safe for operators. Coal mining is dangerous for the miners. However, coal-mining related deaths have gone down over time. Mining now has stricter regulations and safer mining equipment.

** Note: Health, Water and Land Impacts are shown on a separate sheet*

Coal-to-Gas

(CO_2 is captured)

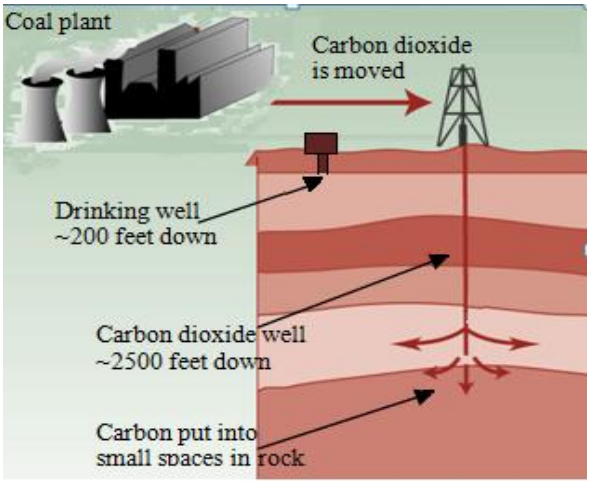

Diagram of a coal plant CO2 capture equipment.
Modified from www.co2crc.com.au

How it Works: This is the same plant described in *"Coal-to-gas, CO_2 released"*. But in this plant, additional equipment is added to capture the CO_2 before it escapes to the air. The capture equipment for a coal-to-gas plant can capture a little more CO_2 than the capture equipment of a coal plant. The CO_2 is turned into a liquid. A pipeline takes it from the plant and puts it permanently in rock formations more than half a mile (more than 2,500 feet) underground. This is shown in the diagram to the right. The rock formations will be tested ahead of time to make sure the CO_2 will stay trapped there. The CO_2 will also be monitored to make sure that it stays in place. After a few decades, the CO_2 will dissolve (and become trapped) in the water in the rocks. Over thousands of years, it will likely change into solid minerals.

Availability	• There are suitable rock formations in much of PA and the rest of the U.S. Before use, they will be tested to make sure that they can safely hold the CO_2. • There are thousands of miles of gas pipelines in the U.S. today. CO_2 is moved through similar pipelines. CO_2 pipelines are already used in the U.S., but more need to be built.
Reliability	Capturing CO_2 does not make coal-to-gas plants less dependable.
Limits to Use	Coal-to-gas plants with CO_2 capture equipment could make all of the additional 60 TWh of electricity needed for PA.
Current Use	The U.S. Government is capturing CO_2 underground in 25 test sites across the U.S. today. A few large-scale CO_2 capture sites are currently being used in other countries.
Environmental Impacts (*Read Note Below)	• The waste made by these plants and the coal mining impacts are about the same as "Coal-to-gas, CO_2 released" plants. • The CO_2 will cause little or no harm to living plants or animals once it is in the deep underground rock formations. Some CO_2 is also naturally found in the ground.
Safety	• If CO_2 gets in underground drinking water, the water can become contaminated. That risk is small because CO_2 wells will be built more than 10 times deeper than drinking water wells. • Unlike oil or gas, C_{O2} cannot burn or explode. As with oil and gas pipelines, the chance of pipeline leaks is low. If lots of C_{O2} did leak from a pipeline, it would usually mix into the air. But if the leak happened in a valley or tunnel, the C_{O2} could build up for a while. In this case, people and animals could suffocate if the leak was large enough. • There is a small chance that CO_2 could leak out of an underground space. These leaks would be very slow. In almost all cases, the CO_2 would mix into the air before harming anyone. • The CO_2 in the ground can be monitored with equipment underground and on the surface. If the CO_2 starts to move to places where it should not be, there are ways that this could be fixed. For example, the leak could be plugged up or CO_2 could be moved to some other location. • Pumping CO_2 into the ground builds up underground pressure. This could increase the risk of small earthquakes in some areas. However, PA is not prone to earthquakes. • After a few decades, the CO_2 dissolves in the deep underground water. This reduces many of the risks. Leaks become very unlikely. CO_2 can no longer move to contaminate drinking water. It cannot move to places it should not be or cause earthquakes. • Once an underground space is full and closed, and shown to be secure, the government will take control and continue to monitor it for safety. Experts disagree on how long the government should continue to monitor it.

** Note: Health, Water and Land Impacts are shown on a separate sheet*

Wind

How it Works: Modern wind machines are much larger than the old windmills in Holland, or the metal windmills that pumped water for cattle in the American West. They are often between 100 and 300 feet high. That is about as tall as a 10 to 30 story building. The machines have blades that look like an airplane propeller. The wind turns the blades, and this runs a generator to make electricity.

Modern wind turbines in Somerset, PA
Source: www.solutions-site.org/

Availability	Wind farms work well when built in windy areas. PA has lots of wind on hilltops in the center of the state. However, even the best wind farms in PA only make 28% of the power that would be possible if the wind was always blowing. They cannot make 100% because sometimes the wind is not blowing. Wind farms are often located far away from where people live, since this is where it is the windiest. It is expensive to transmit the wind electricity across long distances.
Reliability	• Wind varies in strength, which can make it less dependable for making electricity. Because of this, wind farms cannot consistently make electricity. Natural gas plants must be built to "back up" or fill in electricity during times when it is not windy. In the future, we might use very large batteries to store electricity from wind, but that is very costly to do today. • On average, a newly built wind farm in PA can make about 0.5 TWh of electricity over the course of the year. The natural gas plant built to fill in electricity when it is not windy will have to make about 1.2 TWh over the course of the year.
Limits to Use	If many wind farms are built, there will be a lot of CO_2 released by the "back-up" natural gas plants. The more wind farms you build, the more indirect CO_2 that is released to the air. So wind farms can only be used to make up 28% of the additional electricity needed for PA if we want to reduce the CO_2 released from all new plants by 50%. This would be about 16.5 TWh of the 60 TWh.
Current Use	There are more than 100 wind farms working in the U.S. today.
Environmental Impacts (*Read Note Below)	• There is almost no solid waste from wind farms. • Wind farms with many machines require hundreds of acres. If the machines are built on farm land, most of it can still be used for farming. In forests, trees must be cleared to build the machines. This can disturb the plants and animals. On mountain ridges, wind farms can be very visible. • Wind farms make some low noise. It is less than the noise from most other power plants. But, since wind farms are in the country, the noise is often more noticeable. • The blades of wind machines sometimes strike and kill birds and bats. New wind machines are being located away from bird (migration) flight paths. Less is known about how to prevent bat deaths.
Safety	Wind farms present very few risks to people.

** Note: Health, Water and Land Impacts are shown on a Separate Sheet*

Natural Gas

How it works: Most of the natural gas in western PA is used to heat homes. But, it can also be used in power plants to make electricity. In the plant, natural gas is burned in a type of engine, called a "turbine". This turbine then runs a generator to make electricity. The left-over hot gas is used to make steam. The steam also powers a turbine connected to a second generator to make more electricity. Because it uses two turbines, the plant is more efficient.

Natural gas plant near Albany, New York.
Source: www.pseg.com

Natural gas comes from several sources. *Conventional* natural gas is found deep underground in sandstone and other sponge-like layers of rock. Gas wells are created by drilling down into these rocks, which causes the gas to naturally rise to the surface because of changes in pressure underground. One type of *unconventional* natural gas is shale gas. This natural gas is also found deep underground, but it is trapped inside hard layers of rock called shale. To get to this gas requires first drilling down deep underground. Next a hole is drilled sideways through the shale. A salty water solution is pushed down through the well at high pressure to break up the rock. This releases the natural gas from the rock, and the gas can then rise to the surface.

Availability	• Today, most natural gas used in PA comes by pipeline from the Gulf Coast. This natural gas is produced from conventional gas wells or transported from foreign countries (such as the Middle East) in large tanker ships. In the future, more natural gas will come from unconventional sources. • Experts say that the U.S. has enough natural gas to meet its needs for at least 100 years. Much of this is from unconventional sources, including gas shales.
Reliability	Natural gas can provide steady and dependable electricity.
Limits to Use	• The cost of electricity from natural gas plants is very dependent on the price of natural gas. The price varies with demand and supply. Demand for natural gas is expected to increase in the future. This will likely cause the price of natural gas to rise. • While gas plants release about half as much CO_2 as coal plants, it is still a lot. Therefore, they can only be used to make 63% of the additional electricity needed for PA if we want to reduce the CO_2 released from all new plants by 50%. This would be about 37.5 TWh of the 60 TWh.
Current Use	There are more than 350 of these plants working in the U.S. today.
Environmental Impacts (*Read Note Below)	• There is almost no solid waste from gas plants. • Natural gas pipelines sometimes must be built under private land. The landowner and pipeline company will have to agree about how to maintain the land around the pipeline. Drilling for natural gas can disturb local land, plants and animals. This is especially true in unpopulated areas, like parts of Alaska.
Safety	• These plants are quite safe for operators. It is rare for natural gas to leak from a pipeline. If it does occur, unlike CO_2, natural gas can burn or explode. Like CO_2, people can suffocate from natural gas. • All types of natural gas production must meet strict environmental and safety standards. Thus, drilling for gas shale should be just as safe as it is for other types of natural gas.

** Note: Health, Water and Land Impacts are shown on a separate sheet*

Nuclear

How it Works: Nuclear plants use uranium that has been slightly processed, or “enriched”. In a nuclear plant, the uranium atoms break apart and release heat that is used to make steam. The steam is used to power a type of engine, called a “turbine”. This turbine runs a generator to make electricity. Nuclear plants built in the future will have a more advanced design than existing ones. While existing plants are very safe, the new design is expected to make a nuclear accident virtually impossible.

Nuclear plant near Shippingport, PA
Source: www.nrc.gov

Availability	There is enough uranium available to power any new nuclear plants built in PA for the life of the plants.
Reliability	Nuclear power can provide steady and dependable electricity.
Limits to Use	Nuclear plants could make all of the additional 60 TWh of electricity needed for PA.
Current Use	The U.S. has 103 existing nuclear plants in operation. There are a few advanced nuclear plants in the world, but none operating in the U.S.
Safety	• Like coal plants, nuclear plants are safe for operators. All mining is dangerous for the miners. But mining uranium is generally much safer than mining coal. • Nuclear plants release almost no radiation into the air, ground or water. So, a person who lives near a plant gets almost no radiation. • The chance of a nuclear accident is very small. Nuclear material might leak into the air and water if there is an accident. But, nuclear plants cannot explode like an atomic bomb. • Unlike older plants in some parts of the world (Russia), all U.S. plants are built inside strong concrete buildings. These prevent leaks if there is an accident. There has been one accident at a U.S. commercial nuclear plant. It was in 1979 at the Three Mile Island plant in Central PA. The plant’s concrete building kept the radiation from leaking. No plant workers or people living near the plant were harmed. Plants have been fixed to be much safer since the accident. • Some people worry about terrorism involving a nuclear plant. The government, electric utility companies and other industries are working to make all industrial plants safer against terrorism. In France, Japan and England, portions of the nuclear fuel are separated and reused. This process changes the fuel into a product that could be used in nuclear weapons. By not reusing the fuel, the U.S. is trying to make terrorist acts more unlikely. However, if the U.S. reused the fuel, there would less hazardous nuclear waste produced by the plants.
Environmental Impacts (*Read Note Below)	• Uranium fuel must be mined, but the amount that is mined is much less than that of coal. • Nuclear plants do have a small amount of waste. It is much less than the waste from coal plants. • The leftover fuel (waste) from a nuclear plant will produce radiation for thousands of years. Radiation can cause cancer in people. Today, the leftover fuel is being stored in facilities next to the nuclear plants. The government has plans to permanently store the fuel in a central location either under or above ground. How soon that will happen is not clear. Engineers can design nuclear waste storage facilities that prevent radiation from getting out. It should be safe for hundreds to thousands of years. Of course, no one can be certain about the future thousands of years from now.

** Note: Health, Water and Land Impacts are shown on a separate sheet*

Solar Cell

A solar plant in Fresno, CA.
Source: www.nrel.gov

How it works: There are two ways to make electricity from sunlight. In the first, sunlight is absorbed into solar cells. The energy from sunlight is then turned directly into electricity. In deserts, a second way is used. The heat from the sun is used to make steam. The steam is used to power a type of engine, called a "turbine". This turbine runs a generator to make electricity. While the second way is cheaper, it cannot be used in PA because here the sun is not intense enough.

Many solar cells can be joined together on open land to make a large-scale solar power plant. On a smaller scale, solar cells can be put on the roofs of homes and businesses. Even though the State of PA may provide some rebates, the initial cost to the home- or business-owner would be very large.

Availability	There is no sunlight at night. There is less sunlight on cloudy days. In PA, the solar plants only make about 11% of their possible power. They cannot make 100% because the sun does not always shine at maximum strength or for 24 hours per day.
Reliability	• The dependability of solar cell power varies with the amount of sunlight. Because of this, solar plants cannot consistently make electricity. Natural gas plants must be built to "back up" or fill in electricity during times when it is not sunny. In the future, we might use very large batteries to store electricity from solar power, but that is very costly to do today. • On average, a newly built large-scale solar farm in PA can make 0.1 TWh of electricity over the course of the year. The natural gas plant built to fill in electricity when it is not sunny will have to make about 0.8 TWh over the course of the year.
Limits to Use	• If many solar plants are built, there will be a lot of CO_2 released by the "back-up" natural gas plants. The more solar plants you build, the more indirect CO_2 that is released to the air. So solar plants can only be used to make up 9% of the additional electricity needed for PA if we want to reduce the CO_2 released from all new plants by 50%. This would be about 5.1 TWh of the 60 TWh. • Solar cell power costs much more in Pennsylvania than in sunnier states like Arizona and California
Current Use	There are five large-scale solar cell plants working in the U.S. today (in Arizona and California).
Safety	These plants are quite safe for operators and for the people who live around them.
Environmental Impacts (*Read Note Below)	• While there is almost no solid waste from solar cell power, the cells are made of some toxic materials. There may be some pollution if they are not properly disposed of at the end of their lifetime. • Many solar cells must be put together to make a solar plant. Therefore, they use a lot of land. Unlike wind, this land cannot be used for other purposes.

** Note: Health, Water and Land Impacts are shown on a separate sheet*

Energy Efficiency

Energy efficient house in North Carolina
(renovated rather than newly constructed).
Source: www.newsweek.com

How it Works: Energy efficiency cuts the amount of electricity we use. Fewer power plants will be built if we use less electricity. Less CO_2 will then be released into the air.

Energy efficiency refers to using more efficient things. For example, people can use more efficient light bulbs. They can also buy more efficient refrigerators, air conditioners and other appliances. Buildings can also be better insulated. You can also cut electricity use through conservation. For instance, turning off the lights or buying fewer new things (which take electricity to be produced) is called conservation. Conservation is important, but is *not* what "energy efficiency" means.

To get better energy efficiency, you often spend money now to get the savings later. A $10 energy efficient light bulb costs more than a regular light bulb. But, it lasts 10 times longer and saves 50 to 80% of the electricity you would have used with regular light bulbs. If your house uses less electricity, your bills will go down. Yet, there may be a large initial cost to buy a new efficient appliance or insulation. Over time, you would recoup this cost from the money you save each month on your electric bill. So, you may save more money in the end than you initially spent.

Energy efficiency can help a lot. Vermont and California have programs to promote it. As a result, the average person in VT uses about 20% less electricity than the average person in PA. Californians use about 40% less.

Availability	Energy efficient appliances are in stores now.
Reliability	Most energy efficient products are as dependable as those they replace.
Limits to Use	• We could buy all efficient products. We could insulate all of our buildings. But, we will always need some electricity to live comfortably. Some power plants will need to be built even if we do our best to cut electricity use. • You may be able to cut your household's electricity use by up to 20% (by buying efficient things) at little extra cost in the long-run. The government may give incentives for buying efficient products. This helps to get larger savings.
Current Use	Energy efficient appliances are in stores now. Most have an "energy efficiency" rating. Much more can also be done to better insulate and cool buildings. But, people must learn about these options and take action on them.
Safety	Energy efficient appliances and buildings are as safe as those they replace.
Environmental Impacts (*Read Note Below)	Because energy efficiency cuts the amount of electricity we use, fewer power plants will be built. Building power plants can make pollution and disturb the surrounding land, plants and animals. Energy efficiency would reduce these negative effects.

** Note: Health, Water and Land Impacts are shown on a separate sheet*

Biomass-and-Coal

Biomass-coal power plant in Dunkirk, NY
Source: www.ens-newswire.com

How it Works: This plant is very similar to the one described in *"Coal, CO_2 released"*. But in this plant, some biomass is mixed in with the coal. Biomass comes from farm crops, paper mills, and wood chips. In these mixed plants, biomass is substituted for 10% of the coal. The coal-biomass mixture is burned to make steam. The steam is used to power a type of engine, called a "turbine". This turbine runs a generator to make electricity.

Biomass fuel is made from trees and other plants. Plants and trees take in CO_2 from the air when they are alive. So, most of the CO_2 released into the air when biomass is burned is not a new addition. It was in the air recently and is just recycled back into the air. This is different than the "new" CO_2 released by power plants that burn coal and natural gas. The CO_2 trapped in these "fossil fuels" has not been in the air for millions of years. So, a biomass-coal plant releases less CO_2 than a coal plant (CO_2 released) because the biomass adds no "new" CO_2 to the air. The more biomass in the mixture, the less CO_2 released by the power plant.

Availability	Experts say that the U.S. has enough coal to meet its needs for at least 50 to 100 years. Biomass can be found everywhere in the U.S. But, many types of biomass are traditionally used for other things, such as for food (from farm crops). This means that electricity companies will have to compete with other buyers of the biomass "fuel".
Reliability	Biomass- coal power can provide steady and dependable electricity.
Limits to Use	• If biomass-coal plants made up much of our electricity, we would need to begin to grow biomass. Growing biomass is expensive. So, the cost of electricity from biomass will go up with each biomass-coal plant built in PA. Lots of land would be used up. • While these mixture plants release less CO_2 than Coal plant (CO_2 released), they still release a lot of CO_2. So, biomass-and-coal plants can only be used to make about 18% of the additional electricity needed for PA if we want to reduce the CO_2 released from all new plants by 50%. This would be about 10.5 TWh of the 60 TWh. Other types of plants must also be built.
Current Use	There are dozens of biomass-coal power plants working in the U.S. today. Many are small and make a small amount of electricity. But, larger biomass-coal plants do exist in the U.S.
Environmental Impacts (*Read Note Below)	• Biomass is sometimes grown especially to make fuel. Chemicals used to grow biomass can pollute the soil and water. • Some biomass comes from woody waste products. But, on a larger scale, new trees or plants will need to be grown for biomass. This could mean that farms will grow less food, driving food prices up. Land may need to be cleared in the U.S. or abroad to grow more biomass or food. This could cause soil erosion and disturb the animals and plants. • The coal mining impacts and the waste made by these plants are about the same as "Coal, CO_2 released" plants. But, they are slightly less because these plants use slightly less coal.
Safety	• These plants are quite safe for operators. Coal mining is dangerous for the miners. • The biomass will be transported by trucks to the power plant. This will greatly increase truck traffic, which can cause accidents.

** Note: Health, Water and Land Impacts are shown on a separate sheet*