

Chinese Energy

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China, Renewable Energy

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China is a country that borders many countries. From Afghanistan, Bhutan, Burma, India, Kazakhstan, North Korea and many more. China has a population of One billion, Three hundred ninety-seven million residents. Most of the population lives on about the Eastern half of this country. The west part of china has more mountains and is less populated. China covers about nine million square kilometers. The average elevation here would be about one thousand eight hundred meters (Central Intelligence Agency, 2017.) Chinas' terrain varies largely from one part to the next. One part can have mountains while another has plains and rolling hills. There are many natural resources here in China from coal to ore such as iron and strontium. China is known to have the world's largest hydropower potential in the world (Central Intelligence Agency, 2017.) Agriculture in China is about half of what they use their land for, fifty-four-point seven percent for agriculture, twenty-two-point three percent for forests and twenty-three percent is for other types of land uses that are used in China. China is in the top three leading country's that have taken over making Cereal crops and rice. The age structure for this Country is very spread out. About seventeen percent of the population is about zero to fourteen years of age. While about twelve percent of the population is about fifteen to twenty-four years old. The largest group of people would be in the twenty-five- to fifty-four-year-old group. There is about forty-six percent of the population at this age. Now the rest of the population twenty-four percent are in the fifty-five and over age range (Central Intelligence Agency, 2017.) China government is known as a communist approach of governing. China has become of the world's largest marketers for renewable energy at about twenty-three percent of all the energy it produces it produces almost a fourth renewable. The largest of its renewable energy services would be hydroelectricity. The largest producer of it would be the hydroelectric dam named Three Gorges Dam (China Energy, 2021.) It generates about twenty-two thousand five hundred MW of energy. This dam provides sixty more percent energy than the second largest dam in Brazil; the Itapúa dam (China Energy, 2021.) China is a large country with tons of manufacturing going on, now only less than a fourth of it is renewable energy. Coal is used for about fifty-eight percent of power within this country. China with as big as it should focus and increase the amount of renewable energy that is used to power the factors and citizens of China.

Family ties in China are one of the most important ties between people in China. It is tradition that the sons live with parents till death then inherit the home and land, the daughters are forgotten and not given any part of this sharing and giving of land, as their husband is responsible to take care of them. Parent in this culture have complete and absolute authority.

The father figure in the family is expected to show authority to the family but to be respectful to his wife. (Evason, 2015.) The children are to obey their parents, and to show respect and manners to their elders. (Evason, 2015.) The entire family is to consult with the elders before making large decisions, children are also supposed to care for their parents once the parents can't take care of themselves on their own (Evason, 2015.) Parts of the Chinese population believe that love can be shown through economical status and money and will care less about the relationship bond and bonding between the couple (Evason, 2015.) More and more mothers are staying less at the house and working more full-time jobs to make more money for their household. This leaves the children to be taken care and raised by the grandparents (Evason, 2015.) family time and time spent together is not something that happens that often as family's work hard to reach higher statuses by working and bringing in more income (Evason, 2015.) As time continues to go on, gender equality is being embraced and intertwined into their society. Women now days have some authority of what things happen within their family and are able to get jobs and are not forced to be stay at home mothers (Evason, 2015.) In the Chinese culture it is seen that marriage is one of the most important factors in one's life, it is seen as a step into adulthood (Evason, 2015.)

Those who live in China have a large variety of foods to consume such as cereals, fruit, veggies, livestock, dairy. Soybeans are also a staple for those who live in China (Wang, Lay, Yu, & Shen, 2016.) China has a large and expanding world of education. It is also known as one of the world's largest education systems. "The Chinese higher education institution as of now has over eight million graduates annually, which is more than the United states and India combined" (Education, 2020.) In China, it has an almost completely covered healthcare program that is funded by the public. It is funded via the employer and the employee payroll taxes. In China basic medical insurance covers visits, and medication. "In 2011 approximately ninety-five percent of the Chinese population was covered under one of the three medical insurance" (Roosa Tikkanen et al.) When it comes to jobs in China there is such a huge variety, From nurses, to scientists, to dentists and lecturers. The salaries vary as a dentist makes about one hundred thousand yearly (in US currency) to an architect which makes about forty-one thousand yearly. Overall, there are plenty wide-ranging jobs in China that make a wide arrange of salaries (Salaries, 2021.) The one big issue in China that affects its citizens would be the access to clean water and bathrooms. Now through the years there has been a large increase on improved sanitation but as of now only sixty-four percent of residents have access to improved and clean sanitation and about two percent of the population has been known to still have to defecate in the open (Closing the gap, 2015.) There are many issues with unreliable energy. Right now, China is dealing with one of the largest power shortages in over a decade (He, 2021.) prices for energy have continued to rise as the China population has risen and has created a problem. The China government depends a lot on fracking and oil energy, this has really hurt their society.

When it comes to energy use in China about fifty eight percent is produced by coal (EIA, 2020.) Now a problem with this is the fact that China is number one on top twenty countries and their emissions of CO₂ (In 2018.) In 2018 China produced 10.06 Gigatons of Carbon monoxide, which is twice the amount of CO₂ that the United states produced (USCUSA,2020.) The problem with CO₂ is the fact that it harms the atmosphere and the ozone layer that surrounds our

planet. Carbon dioxide is considered a greenhouse gas, a greenhouse gas are gases that trap heat inside the planet. The best way to reduce the production of greenhouse gases would be to lower the use of fossil fuels. Fossil fuels include gasoline, coal, oil, and natural gases. Greenhouse gases contribute to the rise in temperatures around the world, has the possibility to make weather more severe, and hurts agriculture.

These are big issues for a society, but since China is number one in CO₂ production, they would have it worse. The use of fossil fuels has not made much change of the last few years but, that is because of the type of change that is needed to go from non-renewable energy to renewable energy. Renewable energy is far more expensive and harder to produce than non-renewable energies such as coal or oil. Another issue that that China faces is smog. Smog is caused by manufacturing pollution such as factories (Morrison et al, 2021.) Smog is much more toxic in the inner cities where there are more factories, and citizens. Towards the outer cities there is less smog because of less civilization but there will always be pollution around the surrounding areas. With all the pollution that has been going on in china it has affected the land and its inhabitants in different ways. In China, the fourth most important reason of death in China is air pollution (MARCHISIO, 2019.) Research done by multiple studies has shown that air pollution in places like china have seen damages in health, labor, educational outcomes, even social lives, and daily behavior. If China can change its use of oil, coal, and other fossil fuels there will be many pluses to this change. From longer life expectancy to more cleaner air quality. There are plenty different types of renewable energy that would work well for a country like China. China already has one of the largest hydropower dams in the world that produces large quantity of energy. Now there are also solar, wind, geothermal renewable energies that could allow China to create just as much energy as it does with non-renewable energies.

Renewable energy is important not just in China but all around the world. Renewable energy has many positives from reducing pollution, to help use less important fuels, and it is more reliable. But as of now about twenty-eight percent of the world uses renewable energy (IEA,2021.) There are a few solutions that could help the world, and China be greener. One solution that would help China be greener would be increasing the capacity to store energy made by renewable sources. Another solution would be to find ways to make renewable energy sources cheaper. When renewable energy sources make energy, they sometimes make energy when it is not needed, so then it goes to waste, the use of battery's and storing devices would make better use of the energy and help make the use of windmills, solar panels less expensive. One company that is helping make this development possible is World Bank (Vinci,2021.) World bank is an international financial institution. They provide loans and grants to low- and middle-class countries for the use of capital projects (World Bank, 2021.) World Bank has made a push to finance about seventeen Gigawatts of battery storage for renewable energy machines. A gigawatt is about a million of a watt. World bank is putting forward about a billion dollars to help with this project (Vinci,2021.) Executive director of California solar and storage association said that "Energy storage is actually the true bridge to clean-energy future" (Cheryl Katz, December 15 et al, 2020.) Prices on battery's have dropped significantly in the last few years which has made storing energy and cheaper and simpler. With the price of batteries dropping the price of renewable energy will drop as well. "Adding storage also makes renewable energy more profitable" was what Wesly Cole said, he is an energy analysisist with the national renewable energy Laboratory (Cheryl Katz, December 15 et al, 2020.) With more storage it helps make the machines run less, therefore dropping the price of renewable energy machines and their energy.

Adding storage to the use of renewable energy machines will help make renewable energy plants less expensive and more accessible to more countries. This solution would work well as it has become cheaper and cheaper to produce these batteries but storing the batteries and excess energy could become an issue.

Another solution that can help China, and all other countries around the world be greener and help increase the renewable energy that is used worldwide; would be to make renewable energy cheaper. As of now it costs upwards of fifteen thousand to twenty thousand dollars to get a renewable energy program and machines up and working (Folk, 2020.) If money that is used for fossil fuel production such as fracking, or mining is shifted to the renewable energy department money would be saved. The renewable energy industry would expand in large extents. As technology continues to expand and become greater and greater, the price of these renewable energy sources will continue to fall, just as the prices and accessibility to batteries that would be used to store excess energy. This solution would be great, but there is no guarantee that prices will continue to drop. Also, another issue is that our world really does depend on fossil fuels and if taking some money from the fossil fuel industry might become a huge issue, from scarcer resources to higher prices on what is available. One way to possibly help the owners and managers of these businesses in the oil and fracking industry to get on board to shifting funding from fracking to renewable energies could be to offer jobs and raises in those jobs. These jobs would help sustain and maintain the renewable energy sources, instead of jobs in the oil and fracking industry. This would not only help them go along with the shift, but it would allow them to not become jobless and still be able to support themselves and not left out to dry. One way that Chinese citizens could help the renewable energy problem now, would be to petition and market the many benefits of renewable energy. This petition could be key, how it can help their society in the long run. Petitions can help rally support to help get the prices to lower faster and make renewable energy cheaper.

These possible solutions can help China become more green and more productive. Adding more storage for excess energy helps drive costs down so machines are not always rung, they also allow any part of the country to use energy when its needed. Having renewable energy at lower costs is also another great solution. Having it at lower costs helps more people be able to afford using renewable energy sources over fossil fuel energy sources. Also driving prices down will also help the country use the money for more pressing issues that China faces. The best solution would be to increase the storage capacity when it comes to storing renewable energy. Storing renewable energy allows these source areas to not be used all the time, which also helps the lifespan of these renewable energy products. Having excess storage also allows more people to have energy and not have to worry if energy is tight as there will be able to use the excess energy to their advantage. One way this can be funded is if companies who work with money such as loan or grant banks, allow the use of funds to help run these projects. World Bank has made a push to finance about seventeen Gigawatts of battery storage for renewable energy machines. World bank is putting forward about a billion dollars to help with this project (Vinci,2021.) This is just one example of a company that is making a push to help with the expansion of renewable energy and the expansion of storage with these products.

Renewable energy is an important part of our society, most countries have added it to their energy production. One country that has added renewable energy and has flourished because of this is Germany. Last year renewable energy such as solar, wind, and hydropower overtook the use of fossil fuel energy (Wettengel, 2021.) With the use of renewable energy sources Germany has dropped their emissions level down to a forty-two percent. When statics were pulled from the public power grid, about forty-nine percent of households used energy from renewable energy sources (Wettengel, 2021.) This allowed the country to be cleaner and more productive than other countries, as it was able to make more energy that is cleaner and safer for the environment.

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