Factors

- Ideal distance from major cities – Hong Kong is 50km away, Shenzhen 40km, so little energy is lot in transmission, but also a reasonable distance away in case of a nuclear accident
- Adequate supply of labour in the region, thus employing workers won't be much of a problem.
- Large areas of land needed for planned expansion in the future, so located near coastline where land can be reclaimed. China has ambitious plans to expand its nuclear capacity.
- Coastal locations also allow industry to use seawater to cool the nuclear power plant machinery, when large amounts of water are needed to do so. Hard rock in area also provides solid foundation for large, heavy installations, reducing risks of sudden crumbling of nuclear power plant which could be disastrous.
- In areas where there is little risk of earthquakes/ faulting

Other nuclear power stations

- **Ningde Nuclear Power Plant in Fujian** – Feb 18, 2008; it was built to ease the strain on energy supply in southeastern coastal area in significant amounts & aid environmental protection efforts in the region. It is also aimed to provide a boost to Fujian's economy.
- **Hongyanhe Nuclear Power Plant in Liaoning** – August 2007; expected to contribute to a Chinese plan to relief an old industrial base/ 'rust belt' in northeast China.
- **Taishan Nuclear Power Plant** – October 2009; aims to be a CO_2-free power plant, making it more environmentally friendly than other nuclear plants, and reducing 22.7 million tons of greenhouse gas emissions. It also aims to yield more than 12 billion RMB by meeting the electricity demand of a medium-sized city.

Opposing reasons

- Risks of radioactive material polluting the environment & harming wildlife – humans, esp. as it may cause cancer. Thus it is not sustainable as it is non-renewable and simultaneously life-threatening.
- More nuclear waste dumps where humans dispose radioactive wastes may be needed as demand increases, and they are required to be a safe distance away from society till they lose their significant radiation values. Many underground sites and other storage facilities constructed are insufficient to house the waste; they are filled within months. This may cost Chinese government a considerable sum of $ just to keep radioactive waste safe from humans.
- The energy source of nuclear energy is uranium, which is scarce. Its estimated supply will last us only for the next 30-60 years, but with increasing nuclear power demand in China, the amount of time taken for the Chinese to use up uranium may be much shorter.

Essay

As the human population increase, there has been an increase in demand for nuclear energy. This has brought many benefits to people and the environment, but at the same time some problems had surfaced.

Indeed, nuclear energy has brought much advantage to us. Nuclear power plants, for instance those in China have boosted the Chinese economy. For example, the Taishan Nuclear Power Plant which started construction works in October 2009 has been aimed at improving the country's economy – yield more than 12 billion RMB by meeting the electricity demand of a medium-sized city. This may in turn improve the living standards of locals as the regions gradually become richer; poverty will no longer be a problem.

Nuclear energy produces little pollution. Well-operated nuclear power plants don't release contaminants into the environment, compared to burning fossil fuels which release tons of greenhouse gases that contribute to global warming. This is extremely useful esp. when electricity demand is increasing fast & coal & fuel burning is the cheapest option. The Ningde Nuclear Power Plant in Fujian greatly eases the strain on energy supply in the coastal areas, and at the same time it will also help in environmental protection efforts carried out in the region.

Moreover, nuclear energy is a very reliable energy source. Nuclear plants need little fuel & thus have a reduced risk of shortages e.g. due to natural disasters. A million ton of uranium can generate much more energy than a hundred million tons of coal & fuel. It is also much safer using nuclear fuel than coal; mining the fuel needed to operate a nuclear plant will prevent hundreds of deaths, whereas ashes from a coal-burning plant will cause 30 deaths.

However, the use of uranium, a radioactive material will pose a threat to humans and the environment. Should the power plant collapse or have a leakage due to any reason, people in the surrounding area will be exposed to the extremely harmful radiation emitted. It is life-threatening to wildlife, especially humans as it may cause cancer after long-term exposure to it. It is thus unsustainable as it is also non-renewable, apart from being detrimental to our health. Risks of being exposed to radiation is greatly increased in China as the government plans to build 50 – 60 new nuclear plants by 2020 as it is a huge business opportunity for the country.

Furthermore, more nuclear waste dumps where humans dispose radioactive waste may be needed as demand for nuclear energy increases. They are also required to be a safe distance away from society till they lose their significant radiation values. Many underground sites & other storage facilities constructed have proved to be insufficient to house the waste, as they are filled within months. This will soon become a problem for China and the Chinese government will have to spend a considerable sum of money just to keep radioactive wastes away from humans.

With the sharp increase in nuclear power demand in China to meet the needs of the ever-growing Chinese population, Earth's scarce sources of uranium, which is used to produce nuclear energy, will soon be depleted. It is

estimated to last for another 30 – 60 years depending on the actual demands, but with China hungry for more energy consumption, the amount of time taken for uranium to be used up risk being much shorter.

In conclusion, nuclear energy has certainly brought us many benefits and fulfilling our demands for energy in the near future, but as these demands increases, we may use up natural resources sooner than we think. China for instance has a high demand for electricity, and its government plans to further utilize this energy source to meet its people's demands. The locals thus risk suffering health problems in the long run, despite the boost in their economy.