European Commission (2002) indicated that there are three main forms of renewable energy sources for heat: biomass, solar and geothermal and these energies can be of help to sustainable development. Out of Biomass we generate biogas, solar panels are used to tap into solar power for sustainable use.

Biogas primarily consists of carbon dioxide and methane. Biogas as an energy source is one of the renewable energy sources that aids in effectively reducing the detrimental environmental impact of fossil fuels. Obaideen et al. (2022) purported that biogas has several advantages when we compare it to the natural gas. Due to that, it is currently used in several environments beginning from small scale in households to large scale in several industries, including power plants. According to Obaideen et al. (2022), biogas has really had direct impacts and contributes to 12 out of the 17 SDGs. It doesn’t emit impurities thus making it safe and causes less harm to the environment because they escape into the atmosphere. Biogas can be beneficial because if biogas is compressed it can be to fuel vehicles. It can be used as a replacement for natural gas – when biogas is cleaned up and upgraded to natural gas level and standard, it's then known as biomethane and can be used in a similar way to methane; this can include for cooking and heating.

According to Kuşkaya et al (2023), “Solar energy is amongst the cleanest forms of energy having the potential of 6500 TW that is capable enough to meet a substantial portion of the world's energy demand.” Solar energy are generated from the sun with the use of Solar panels. Solar energy has several advantages which are helpful to sustainable development growth. Some of its advantage is that it reduces carbon dioxide emission and other toxic gas emissions like Sulphur dioxide, it helps mitigate the depletion of natural resources, it provides some level of energy independence and security, since individuals or institutions can own their own panels and tend not to depend on a community grid or national grid to generate energy for use in the household or institutions, it helps preserve and enhance the quality of water resources since there are no toxic materials or by-products emitted that might hurt the water resources.

According to UNFC, Geothermal energy harnesses the Earth's internal heat to generate electricity or provide heating and cooling. It is considered as a clean and sustainable energy source that can be used in various residential, commercial, and industrial applications. Geothermal energy is a power source that produces electricity with minimal environmental impact. Since geothermal energy is from the earth, it helps reduce air emissions from fossil fuels and also offsets the air emission of fossil fuel.

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